



27 Dale Street Manchester

Quality Management Process.

Prepared By

Barnfield Construction Ltd

Kenyon Road

Lomeshaye Ind Estate

Nelson

Lancs



Barnfield
construction

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The team and their responsibilities

Client,

Kamani properties
Patrick Topham

Kamani properties are the Clients for the project

Clients Agent

Jenkins Design
Mr M Hesford

Whilst not carrying out any design works the Client and their agents Jenkins Design are passionate about the appearance on the project and are involved at each stage both in terms of design and construction. Monthly meetings are held and chaired by the Clients Agent where design updates and quality inspections are discussed and implemented. Any deviance from the agreed scheme will not be permitted by the Client. Jenkins Design roles include ensuring that the terms of the contract are adhered to which include complying with the requirements of Manchester city planning dept.

Architect

F. C. H.
Mr Gareth Jones

FCH have been appointed as project Architects and are responsible for the concept and detail designs for the project including liaison with Manchester City planning department in ensuring that the project is constructed in accordance with the planning permission.

They have been integral to maintaining the key design principles within the planning approved drawings and documentation. Further to developing the detailed design drawings for the façade systems and interfaces, we have retained a central role in reviewing all specialist façade sub-contractor information.

A crucial part of maintaining the high-quality façade design has been the development and sign-off of the mock-up sample panel, which forms a benchmark moving onto the building installation.

Main Contractor

Barnfield Construction
Mr S Riley
Contracts Director

Mr Glenn Noakes
Site Manager

Barnfield construction have overall design responsibility for the project but have procured the services of specialist subcontractors and the project architect. It is Barnfields contractual responsibility to deliver the project in accordance with the Employers requirements that include complying with the planning requirements of Manchester City

Aztec roofing
Mr Ian Winnard
Managing Director

Site supervisor TBC

Aztec Roofing will design and install the ceramic rain screen on Little lever street and Bunsen street.

AGF
Mr S Holt
Contracts manger

Site supervisor TBC

AGF will design and install the curtain walling to Dale street and Little lever street, the vertical windows to Little lever and Bunsen street, the 5th floor glazing including parapet glazing and also the Corten fins to Dale street and Little lever street.

Enclosed is a separate document prepared by AGF that specifically covers in greater detail the stages of their installation from design to actual installation

Red Rose Dry lining
Mr M Edger
Director

Mr I Duckworth
Site supervisor/installer

Red Rose Dry lining have been appointed to design and install the SFS installation that forms the base structure for the Ceramic rain screen on Little lever street and Bunsen street.

Set In Stone will be carrying out the installation of the lower level stonework and brickwork on Dale Street, Little Lever Street and Bunsen Street elevations. Please refer to Appendix C regarding their methodology statement for further information.

Set In Stone Yorkshire
M A Meehan
Director

Coordination and management of the key parties

As noted above Barnfield are ultimately contractually responsible for the delivery of the project and as such responsible for the interface management of the project. Barnfield will be assisted in this by the involvement of FCH. They will also be reliant on the contractual responsibilities under the respective subcontract packages of the key subcontractors.

Each subcontractor will be in turn responsible for their own design which will be coordinated with other subcontractors by the exchange of drawings and attendance in design team meetings which will be chaired by Barnfield and also attended by FCH. Each stage of the façade works will be discussed and analysed to ensure that the final proposals incorporated in the working drawings reflect the details provided and approved on the sample panel. The final drawings provided by each subcontractor will be reviewed and approved by FCH and confirmed by Barnfield.

Off site management

Each subcontractor will be responsible for the procurement and manufacture of all the constituent parts of the façade. The main focus will be on the materials that for the visual appearance of the building. However the materials forming the support structure cannot be ignored.

It is critical that the support structure materials are procured in a manner so that they are delivered to site from the manufacturers in a sequence required to coordinate with the erection programme, thus eliminating any unnecessary double handling. The materials ideally will be delivered in cut lengths that fit with the approved drawings and ready for installation.

The facing materials are more critical in that any defects in manufacture or transportation will ultimately affect the onsite works. It is therefore critical that the materials are ordered in sufficient time to afford the contractors the ability to inspect the components before delivery and ensure that they are adequately stored and protected.

Subcontract selection

As a result of how the project has evolved the subcontractors who had input into the sample panel are the contractors that have been engaged to deliver the finished article. They were selected based on past projects successfully completed for Barnfield and more specifically their track record of similar work.

Site inspection and quality control

It is the responsibility of each subcontractor to inspect, snag and sign off each section of their works, prior to a final formal snag being carried out by Barnfield and FCH. However this process should take place in stages through the installation process. The following key stages will need to be covered by inspections

- Material delivery to site
- Inspection of key material as unpacked
- Inspection of key material as erected.
- Dimensional check of critical components
- Weekly general inspections
- Final inspection of completed areas
- Final site sign off of completed works

APPENDIX A

AGF Quality Management Process

Architectural Glazing and Facades Quality Management Process

The team and their Roles and Responsibilities Including role of original architect in sign off and Interface Management (between component materials) and Contractual Responsibility for this are highlighted in the documented information below

Architectural Glazing and Facades Ltd is an aluminium fabrication and installations company located in Preston, Lancashire which undertakes bespoke glazing projects primarily to serve the supply chain needs of the fenestration and facades industry for projects in the Education, Health, Heritage and Industrial Sectors- aluminium windows and doors; curtain walling as well as structural glazing.

Architectural Glazing and Facades Quality Management System covers Estimating, Design, Production and Installation, facilitated by Quantity Surveying from the initial inquiry through to contract completion and customer care. The ISO 9001 Quality Management system was last externally audited in March 2020 with no major and no minor non conformities identified.

Estimating

Enquiries are received telephonically or electronically by our Estimator Dominic Wright. The query is then entered into a quotations management system and all companies are credit checked. Quotations are established utilising aluminium system software either recommended for the project or the system specified by the client. Consultation with the Design team during this process is undertaken to ensure technical issues are taken into consideration where applicable. Throughout this process consultation and communication is undertaken between Architectural Glazing and Facades to ensure pricing is undertaken to ensure the best suited quality product, finish and design of the systems is priced.

On confirmation a project is to proceed, a meeting is held between Estimating, Design and Production to discuss the project with regards to design, procurement of materials, timelines and production requirements to ensure the product will be produced and delivered timeously.

Design

The Design team undertake production drawings utilising construction drawings supplied from the Architect/client taking into account structural calculations, glass calculations, U Value calculations and fixing calculations. Calculations are verified and compared against pre-defined CAD drawings from the Aluminium Frame Supplier. Window reference numbers are utilised as per supplied client documents wherever possible. Each design element is detailed for production utilising specialist software. Drawings are verified with the Architect/Client. Material take off is utilising Supplier System Software to calculate same and the system generates reference documentation for each element and these documents are issued to the Production Manager

Orders are placed for materials by the design team with the respective system suppliers,

Production

Aluminium that is delivered by System Suppliers is offloaded by Architectural Glazing and Facades trained forklift operators

Off Site Management - How would material quality be maintained off site in the manufacturing and assembly stages

The aluminium arrives in stillages and is protected in a cardboard covering.

The delivered aluminium is stored in a designated area in the factory to ensure no damage to the material.

The aluminium is then prepped for production with each aluminium component being taped to prevent damage, scratches etc during production.

Supplementary materials which are lower volume and size deliveries, are received in protective packaging and stored in a designated access controlled store room to avoid damage.

Documentation issued to production include printed drawings, cutting labels, optimisation lists and assembly cutting sheets.

Prior to production the Designer and a Factory Floor representative to meet to discuss the documentation and manufacture of components as a measure to ensure understanding of the design requirements and implementation of production methods.

For each project the Production Manager monitors all requirements for each project including metal order delivery dates, glass orders, fixings, EPDM, pressings, Site equipment requirements, trickle vents, panic gear, and target dates for all stages of the process.

Workbenches in the factory at each assembly stage are fitted with brush surfaces to protect the components.

Inspection and Sign Off Flow Chart

See Quality Monitoring Flowchart attached.

Paperwork for each frame includes quality control sign off for various stages of the production process ensuring each product under manufacture is quality controlled. Stages include:

- Cut
- CNC
- Sash
- Main Frame
- Gear
- Hang
- Bead
- QC

Completed windows and doors are securely strapped onto frames and curtain walling is securely strapped onto wooden pallets. Architectural Glazing and Facades have a

designated holding area for completed products awaiting delivery. This designated area allows for protection from damage to the manufactured items from damage.

The factory has a flow through process where deliveries are received at one end of the factory and the completed item is dispatched at the other end of the factory ensuring a continuous production flow eliminating confusion between stages of production and ensuring a quality process flow.

How any damage to materials / panels would be prevented during transportation to site and during on site assembly

A delivery date is confirmed by the Installations Manager with the client / contractor. Trained factory floor operatives load the completed frames onto Architectural Glazing and Facades delivery vehicle ensuring compliance with weight restrictions of the vehicle and all health and safety guidelines. The delivery vehicle is monitored by means of a tachograph confirming compliance with driver hours, speed and driving rules and regulations.

A Delivery Note is generated with two copies issued per delivery. One copy is issued with the delivery and the second signed copy is retained as confirmation of the delivery in good order.

Site operatives offload the delivered frames aided by Architectural Glazing and Facades delivery driver.

Installation

Architectural Glazing and Facades Installation Manager supervises the installation of manufactured products for each project. Qualified and experienced subcontractors are appointed to undertake the on-site installation and their appointment is based on the information supplied to our online EL Direct PQQ system

Sub-Contractor Selection and management

Subcontractors request or are invited to complete Architectural Glazing and Facades EL Direct Subcontractor Management System. Specific questions have been identified by Architectural Glazing and Facades with regards to environmental protection, health & safety, insurance equal opportunities and diversity, policy statements and their own quality control. Prior to appointment by Sub Contractor Quality Plan or Subcontract Order, submitted PQQ information is to ensure all necessary documentation and affiliations required are within date and health and safety requirements are met.

How making good any damage would be managed

The Installations manager is the interface between the subcontractor and Main Contractor/client and attends to any query immediately should any problem arise. The Installations manager will immediately contact the production manager to arrange for a replacement of the damaged item to be manufactured immediately and will manage the installation process to avoid any unnecessary delays.

Architectural Glazing and Facades Installation Manager has a wealth of experience in attending to challenges arising from unforeseen site conditions and is the first to advise on viable solutions with the main contractor/ client.

Tape can be removed from the installed manufactured items once installations are complete (dependant site instruction). With all protection measures in place from delivery of materials to complete installation there is minimal room for damage to any component. Should damage occur, Architectural Glazing and Facades are able to address the damage immediately and are able to repair timeously.

Customer care is a primary focus of our Quality Management system and is discussed monthly at the company operations meeting to identify means to facilitate, improve the customer care process and to share in the positive feedback received from contractors and clients alike. Customer feedback forms are issued at the completion of each project and information received from these forms are evaluated in order for Architectural Glazing and Facades to identify any areas that may require improvement.

Samples and Detailed Design and Verification Process before Case Officer.

If samples/mock ups are required these would normally be requested/ordered prior to any work starting on site.

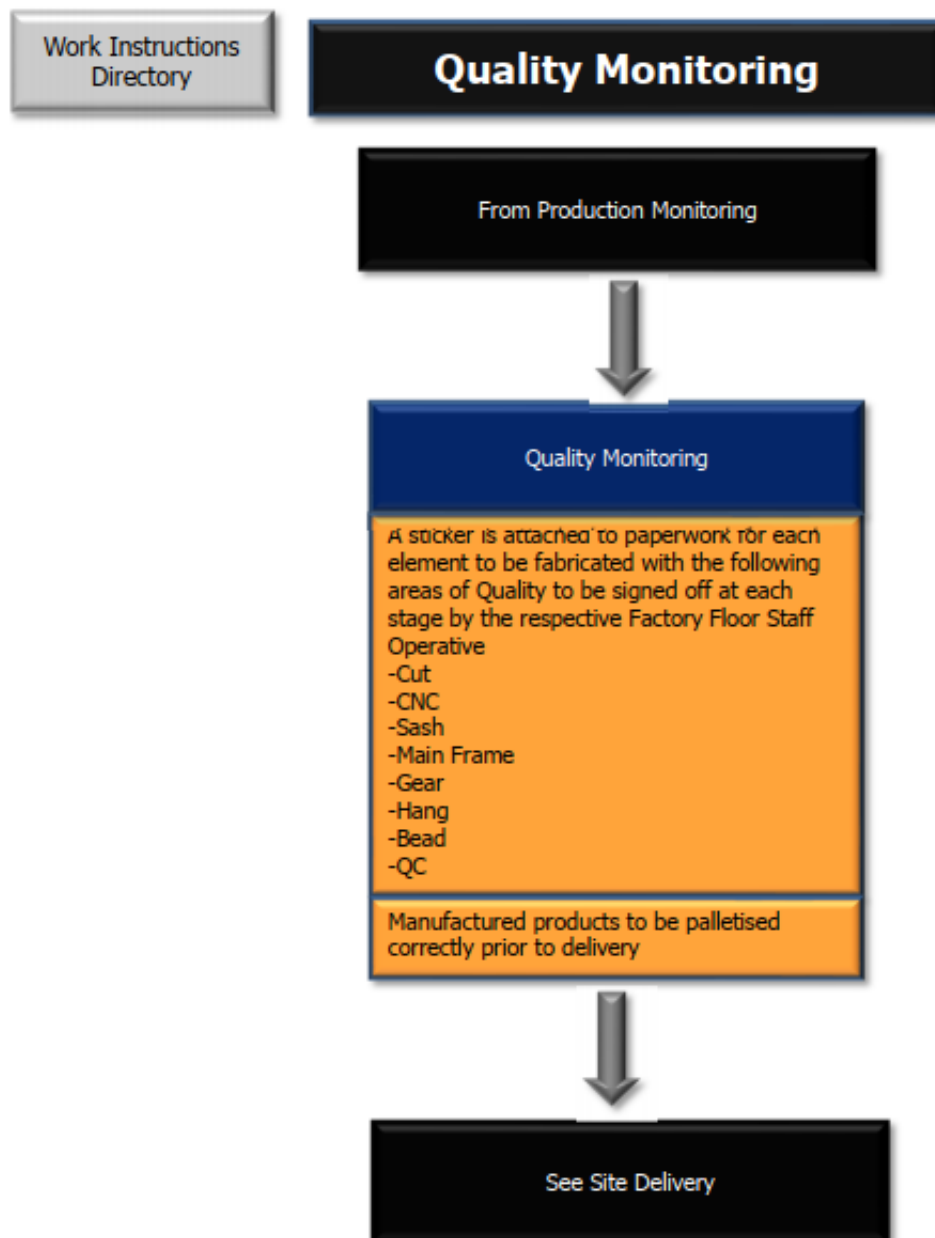
Initial design drawings would be completed through our Design department for approval by the appropriate parties on the project.

Once designs are submitted, Architectural Glazing and Facades would await comment or approval from the Architect or Principal Contractor.

Once everything has been returned with approval material orders would be placed with suppliers and site start confirmation would be agreed.

APPENDIX B

AGF Quality Monitoring



APPENDIX C

Set In Stone Stonework Methodology



SET IN STONE

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Date 15th July, 2020

Stonework Fixing Methodology (Ground Floor)

1. Check level and alignment of foundations and structure to ensure stone fixing to solid structure
2. Position stone as near to work area as possible using forklift and/or pallet truck
3. Check datums and gridlines to set out stonework for correct alignment in accordance with drawing plans
4. Tie back stone to blockwork using stainless steel brackets plugged and screwed to blockwork and dowels to top bed of stone
5. Bed stone using specified lime/sand/cement mortar
6. Drill bottom bed of stone to accept dowel from fixing bracket
7. Ensure all stonework is level and plumb
8. Plan stonework to ensure satisfactory alignment and appearance
9. Build walls up to level and arrange scaffold lift installation
10. Point up stonework and clean off as build progresses
11. Protect stonework from weather with covering of hessian at end of each day
12. Ensure access is closed off at end of each day and site is secured at perimeter.

Yours faithfully

Mr. A. Meehan

Director

Set in Stone.co.uk Ltd

Set in Stone Yorkshire.co.uk Ltd

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Tel: 07947 248835 |



SET IN STONE

YORKSHIRE.CO.UK LTD

Date 28th July, 2020

Brickwork Fixing Methodology (Ground Floor)

1. Check level and alignment of foundations and structure to ensure brickwork fixing to solid structure
2. Position Bricks as near to work area as possible using forklift and/or pallet truck
3. Check datums and gridlines to set out Brickwork for correct alignment in accordance with drawing plans
4. Build sample panel for approval
5. Bed bricks using specified sand/cement mortar
6. Ensure all brickwork is level and plumb
7. Build walls up to level and arrange scaffold lift installation
8. Point up brickwork and clean off as build progresses
9. Protect brickwork from weather with covering of hessian at end of each day
10. Ensure access is closed off at end of each day and site is secured at perimeter.

Yours faithfully

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Mr. A. Meehan

Director

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