

First Street Development, Manchester - QUALITY CONTROL PLAN

MCC PLANNING PRE-COMMENCEMENT CONDITION DISCHARGE QUALITY CONTROL PLAN



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1. Introduction

The purpose of this plan is to set out the quality control procedure for the design, manufacture, delivery and installation of the UCW& Brick / Terracotta Cladding systems to First Street South, Manchester project. This document is intended to provide the basis of the Quality Control Plan for all stages leading to the provision of the completed façade at First Street South. Quality control procedures are put in place to ensure design, manufacture, and installation will comply with the architect and façade consultant specification for the project produced by SimpsonHaugh (10227-SHP-STAGE3-spec-18-06-19) and Wintech Performance Specification 'For the installation of curtain wall, window, door, sloped glazing, rainscreen, brickwork, louvre, balustrade and cladding systems' ref 04469/CJE/HT/48894/WL Issue 03

Much of the design documentation already exists as part of the original submitted design, therefore procedures referred to in this document provide a means for reviewing current design, assessing performance of current design, provide a satisfactory means of reviewing installation techniques proposed, review and monitoring of façade fabrication off site, review and monitoring of subcontractor install on site. The procedures will augment the appointed façade contractor's standard procedures which will be project specific in nature. Lead designer SimpsonHaugh, will make a large contribution to the façade's quality control via sampling, factory visits, reviewing and commenting on subcontractor design information.



2. Roles and Responsibilities

The design and construction team members all have important roles and responsibilities in managing the quality of the façade materials for First Street South:

Principle Contractor

Downing Construction Limited (DCL) are the principle contractor with overall responsibility for the delivery of the project, this includes the selection and management of all subcontract package contractors as described in Section 2 above. A copy of the DCL on site delivery team organogram showing names and roles of key personnel is contained in the appendix 8

Architects

Simpsonhaugh were responsible for the development of the design, from inception through the planning process then up to and including RIBA Plan of work Stage 3 the signing of Building Contract. Soon after the signing of the building contract they were appointed by DCL as the project architect and lead designers. They are responsible for the development of the design from stage 4 information through to project completion. They are also responsible as lead designer for reviewing and commenting on sub-contractor design information and coordination of information from other design team members. This includes building product specification and selection. Continuity of personnel throughout the Architectural design stages has ensured that the design intent of the original concept has been maintained and has not been diluted within the process.

Simpsonhaugh statement;

‘As Lead Designer and Architect, SimpsonHaugh developed the design intent drawings for the façade including where visual mock-ups and proto-types are required to provide a physical benchmark for the rest of the scheme to be judged against from a quality perspective. This body of work is backed-up with a specification that was developed between the Architect and Façade Engineer to ensure the final product not only replicates design intent from visual perspective but offers a robust solution.

During the tender, detailed design and manufacture of the façade, SimpsonHaugh will provide comment on the specialist sub-contractor design information for general compliance with the design intent. In addition to this the quality of the proposed solution will be assessed through material sampling prior to fabrication.

Similarly, during the construction phase, regular site visits will be undertaken to review, as far as is reasonably practicable, the quality of the façade components and workmanship.’

Mathew Ayres
Architect

Appointed façade contractor

The appointed subcontractor to deliver the façade will as part of their quality management system a thorough inspection and review will take place on each element of works throughout the various stages of production as detailed in this document. Regular factory visits will take place to inspect the manufacturing process and the quality of the panels and components that are under production or have been completed in the previous period. Inspection intervals will commence as early as possible following appointment as part of the project quality plan. A copy of the project sample and approval programme for the façade cladding system are contained later in this document.

QA plans are reviewed against the project specification and drawings to ensure they remain current throughout the project.

3. Subcontractor Selection and Management

Downing Construction Limited operate an approved supply chain database.

All contractors tendering for involvement on the First Street South project will be assessed using a number of criteria before they can achieve approved status on our data base of approved supply chain companies.

All contractors on our supply chain are assessed and go through our approval process at six-month intervals. We also monitor and score the performance of all contractors with whom we place orders as well as undertaking regular credit checks at intervals not exceeding 3 months prior to the placing of any order. Contractors undertaking works have their performance reviewed at maximum 6 monthly intervals or at the end of each work package completed.

This performance review is then inputted on to our performance management data base which collates scores across all of our projects. This performance information is then available to staff to review prior to placing future orders with those contractors. This process also allows us to manage our supply chain and ensuring a consistent high standard of performance from commencement of project to handover.

Criteria under which subcontractor appointment is made;

1. Health & Safety performance history.
2. Quality Management
3. Financial management
4. Standard of workmanship
5. Staff profile and experience
6. Review of relevant previous projects completed
7. Adherence to programme
8. Sufficiency of resource
9. Past projects for DCL
10. Current company work load
11. References/ Awards received

4.0 Downing Construction Limited QA procedures

As part of internal quality control procedures, Downing Construction Limited as Main Contractor will appoint a specialist Façade Consultant to assist in the efforts to ensure the external makeup and fabric of the building meet performance criteria as set out in the Architects design and specifications. This appointment will be made in a timely manner to allow the specialist consultant review all submitted design spec and performance criteria and comment as necessary before and during manufacture. The consultant will closely work with the lead architect and will attend Façade Design Team Meetings during the course of the project.

4.1 Appointed Façade Consultant

A specialist Façade Consultant will be appointed from the outset of the project by Downing Construction Limited as the Main Contractor. The appointed consultant will provide technical expertise to ensure effective quality management from commencement to completion. The appointed consultant will offer comment on quality control through reviewing subcontractor design drawings, commenting on samples, detailing, joint detailing to ensure all meet design criteria and comply with Architects and Façade specification documents. Scope will also include factory visits during manufacture to ensure compliance with the architect's specification.

4.2 Façade consultant responsibilities

Attend facade specific design workshops with the design team, review and comment upon design proposals to date, assess and review facade system and construction options.

Technical input and advice will include input on items such as the following:

- Overall cladding concept discussion
- Constructability & buildability
- Finishes
- Interface principles
- Dimensional implications of critical interfaces
- Thermal performance / U & g-values
- Acoustic performance
- Weathertightness
- Weathering characteristics
- Design life, durability & robustness
- Water management
- Jointing strategy
- Procurement strategy

4.3 Interface with Sub-Contractor

Appointed Façade consultant will assist Downing Construction Limited appointed facade sub-contractor with development of the façade detailing to meet design criteria Attend Design Team Meetings with the successful specialist façade sub-contractor and the project team.

Provide technical comments and advice during design workshops, in relation to the package design of each element and interfaces between these elements, in order to help ensure the selected specialist designing sub-contractors maintain compliance with the minimum requirements contained within the performance-based documentation. Comment on assembly drawings and technical documentation provided by the specialist contractor. Items of reference will include but not be limited to the following: cladding zones, tolerance & movement requirements, fixings, materials compliance and compatibility, weathering, durability, airtightness, U-value/g-value compliance, cold bridging, acoustics, fire/ smoke, interface practicality and maintenance of vapour tightness.

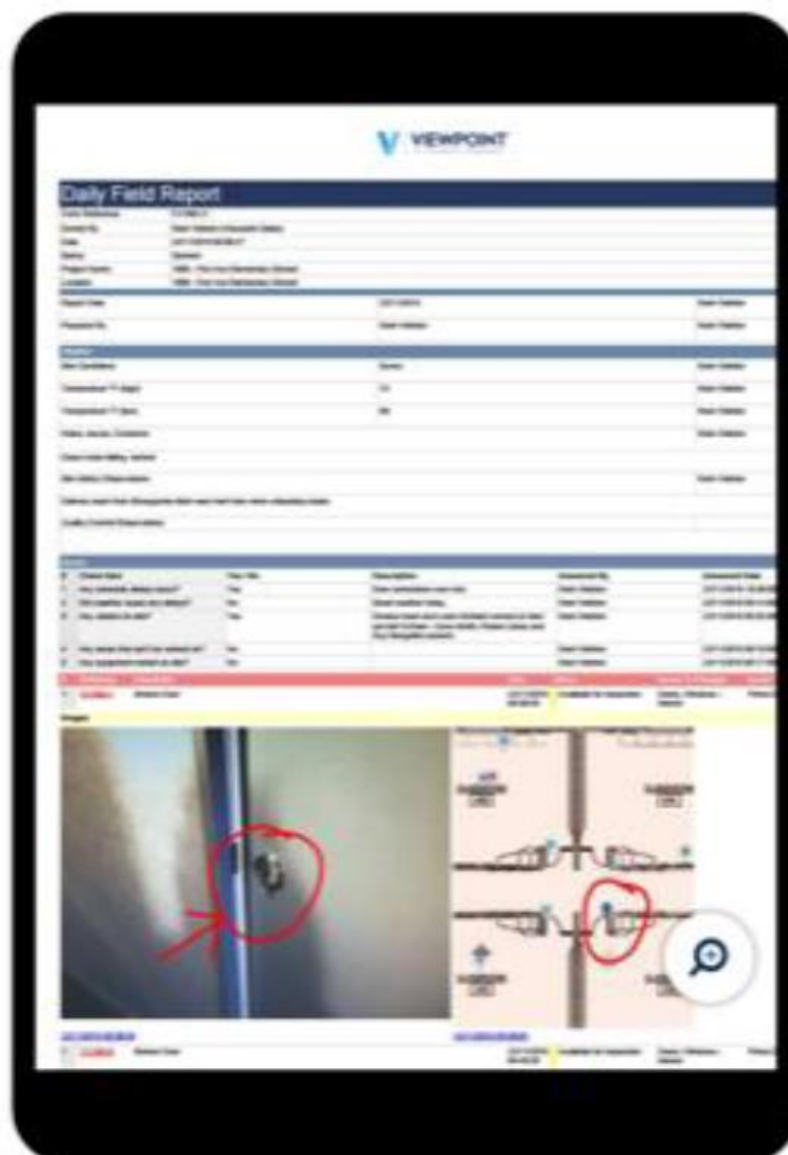
4.4 Inspections during installation

The appointed façade consultant will attend site meetings to establish benchmarks for quality control and assisting the Architect in reviewing progress during construction. This meeting will be combined with on-site inspections to review the quality of installation and sample viewing, including technical reports issued highlighting any issues evident. Also to be undertaken during the course of the project;

- Regular site inspections prior to first installation, and an agreed timescale thereafter.
- Site inspection reports to be issued to the Project Team within three days of Inspection.
- Site inspection reports to be logged onto project information sharing platform 'Field View'
- All items to remain concurrently on sequential reports issued until satisfactorily addressed

5.0 DCL On Site Information control and communication

Downing Construction Limited will use Asite software system to track information flow, maintain drawing register, ensure all parties have access to the relevant up to date drawing and specification revisions. Training will be provided as necessary to the Project Team. A supplementary provision of mobile apps though tablet and mobile apps for the recording on defects, access to current to design drawings on site. Example screenshot from Field View VIEWPOINT live site;



5.1 DCL On-Site QA procedures

- Designated Supervisors responsible for reviewing installation
- Inspection using Field View mobile app for logging issues in real time
- Checklists used with samples of checklists provided. Façade consultant to advise and review checklists
- Review of works procedures on the correct use of components
- Field View used for registering and reporting non-compliances
- Non-Compliance form issued to contractor where necessary
- Review of subcontractor QA systems and their checklists
- Maintenance of register calibration records of equipment and plant used during installation
- Field View will ensure a record will be available showing all items have been inspected and non-compliances discharged satisfactorily. Items remain viewable once closed for future reference.

6. Façade Contractor Quality Assurance Plan

Quality assurance process will commence immediately on appointment of façade subcontractor as part of the design process.

Project design will pick up from Stage 3 design and further develop the project design.

Initially, weekly Façade Design Team Meetings will take place, running alongside fortnightly Project Design Team meetings for co-ordination of all element of the overall project design.

6.1 Façade Contractor inspection Test Plan

Focchi Ltd Site Inspection & test Plan document (ITP) will be implemented on site to monitor and record all façade works as the installation progresses. This document will provide an audit trail in relation to the Quality Control of all phases of the works, from delivery to façade unit installation. This document makes references, where necessary, to comply with both sub-contract clauses and consultant specification, together with the relevant standards and CWCT Technical Notes.

This document will be updated by the Focchi Quality Manager, reporting to the Project Manager as indicated in the Focchi Site Organisation Chart. The overall quality of the installation will be assessed daily by the Focchi Site Team, which will give technical support to the installation teams as required

7. Inspection and sample approval Process

8. Appendix

DCL Organogram

Façade contractor accreditations and standards Forms - To be provided subcontractor appointed.