



DOMIS CONSTRUCTION

FACADE QUALITY CONTROL MANAGEMENT PLAN

VICTORIA HOUSE

FEBRUARY 2023 REV 4



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PLAN SUMMARY

This Quality Control Management Plan has been developed for Victoria House Site Elevation Fabrication Works associated to the use of the Alsecco Ecomin 400 External Thermal Insulation Composite System and the Technal External Glazing System.



QUALITY CONTROL PLAN

Introduction

The purpose of this document is to describe the quality control management strategy for the selection, design, manufacture, and construction of the external façade of Victoria House.

Design Concept

As part of the proposed facade treatment, the following components will be used:

- Brick Slip facade
- Curtain walling, Metal doors, windows and louvres

Using our preferred supply chain, we will procure and install these products and components. Quality control is essential for component construction and installation to achieve the desired results. In order to ensure quality finishes, a number of policies will be implemented, such as the preparation of an facade engineers details which includes specification information and the implementation of a subcontractor's quality plan.

In order to ensure that the specifications are followed, the facade engineer and architect are responsible for checking all design information. Before work can begin, full scale mock-up samples must be approved by the architect in collaboration with MCC planning department. For this reason, the VMU design was agreed (Condition 3a) in order to demonstrate the abutment and interface details between the components. This included interface quality control and is noted within the VMU Quality Control Tracker.

Roles & Responsibilities

The key team members included in managing the quality of facade materials for Victoria House are:

- Main Contractor- Domis Construction
- Facade Engineer- Bryden Wood
- Architects- Simpson Haugh Architects
- Facade Installer- Complete Wall Solutions
- Brick Slip System- Alsecco
- Aluminium Windows & Doors- Lancashire Double Glazing
- Curtain Walling/Louvres- Lancashire Double Glazing

Domis Construction Limited

Responsible for the delivery of Victoria House, Domis only partner with people and businesses that we trust and have worked with previously, from planning stage to project handover.

An overview of our Quality Control procedure and system Fieldview can be found on page 9/10.

Key factors are taken into consideration throughout the Domis procurement process, these include:

- Quality Management
- Standard of Workmanship
- Track Record of relevant project experience
- Adequacy of skilled and experienced staff
- Resources
- Adherence to programme
- Past relationships

QUALITY CONTROL PLAN

Facade Consultant

Bryden Wood have been employed by Domis as the dedicated facade consultant for Victoria House and other various projects. They have been responsible for the development of SHA Stage 3 information to form the Stage 5 site installation information.

Bryden Wood's responsibilities include:

- Review and develop the Architect's, Alsecco and Subcontractor design information.
- Co-ordinate and seek comments, advice on the Façade Performance and quality specification from all interested parties.
- Review and develop information in line with Alsecco facade design details, calculations (Acoustic/ Structural/ Thermal) and the buildability of the proposed designs, including interface details.
- Development of wind analysis, and review the structural calculations, including engineer's movement and tolerance report and ensure full compliance within the subcontractor designs
- Review of the access & maintenance strategy for the façade and the suitability of operational & maintenance issues and the replacement of materials during service.
- Review subcontractor's QA procedures on-site, verify compliance with specification and good standards. Carry out reasonable audits in the subcontractors manufacturing facilities and on site, to check their QA procedures.
- Together with the Project Team ensure compliance with specification, including but not limited to façade detailing, junctions, tolerance to ensure compliance with the project specification and relevant UK standards, Building Regulations, and the approved fire strategy.
- Review of the façade system(s) to ensure specification, and quality compliance, warranty insurance as well as the contractor's warranties and their design life/life expectancy of materials used in the facade system.
- Attendance at Design Meetings during the design development stages.
- Review and comment on the Façade details and subcontractor design details, technical submissions, samples, VMU for compliance with the technical and quality requirements.
- Review façade structural calculations for the various systems & thermal calculations (U-value, 2D, condensation risk and 3D point thermal bridging).
- Attend design/ installation co-ordination meetings during the Stage 5 phase to provide input, resolve interface issues or material changes and ensure compliance with the design intent. Review testing proposals where applicable. Attendance at site inspections, witnessing site testing and providing reports.

Interface Management

The main interfaces on the building are:

- Alsecco critical system interfaces.
- Window to facade interface (mastic).
- Metal Flashings and Cill interface to facade.

The VMU sample panel with these interfaces has been built within the Domis compound and officially inspected and signed off by Angela Leckie and David Roscoe along with Simpson Haugh Architects and Domis Senior Management.

Inspections, comments, feedback and photos can be found on the 'Quality Control Tracker' on pages 07 & 08.

QUALITY CONTROL PLAN

Tolerances

Together Domis as Principal Contractor, Bryden Wood, Alsecco and Complete Wall Solutions will inspect and control the dimensional accuracy of the facade to ensure all works are completed within the acceptable tolerances.

Brick Slip setting out dimensions have been defined and co-ordinated with Simpson Haugh Architects led by Bryden Wood to ensure that all interface elements are consistent and to the highest standard of quality as well as to maintain the correct dimensional accuracy within the permitted tolerances for the brick slips and also at abutments with areas of curtain walling and windows.

Ensuring On-Site Quality & Rectifying Damage

To ensure that the facade finish is completed to a high standard, the following documents have been prepared and implemented on site:

- Facade Engineers Details (Appendix 3)
- Victoria House- Quality Control Management (Appendix 4)

Regular and thorough inspections will be performed by Domis, managed and recorded using Fieldview.

Alsecco will undertake weekly documented inspections which are passed to Domis via Complete Wall Solutions.

The Facade Engineers Details and the Victoria House- Quality Control Management describe the exact detail and quality measure required.

Components and Materials are carefully stored to prevent damage, Alsecco requirements and to protect from inclement weather.

Domis have a centralised Materials Hub in which we can order materials in bulk and store them safely until they are required on site. Reducing the amount of packaging and waste on site as well as any accidental damage/soiling/chipping/contamination to the materials.

In the event that any components or materials are damaged, they will be thoroughly inspected prior to use. Repairs are to be authorised by the Facade Engineer and recorded in a schedule or the as built drawings so to be included in the maintenance manual at handover.

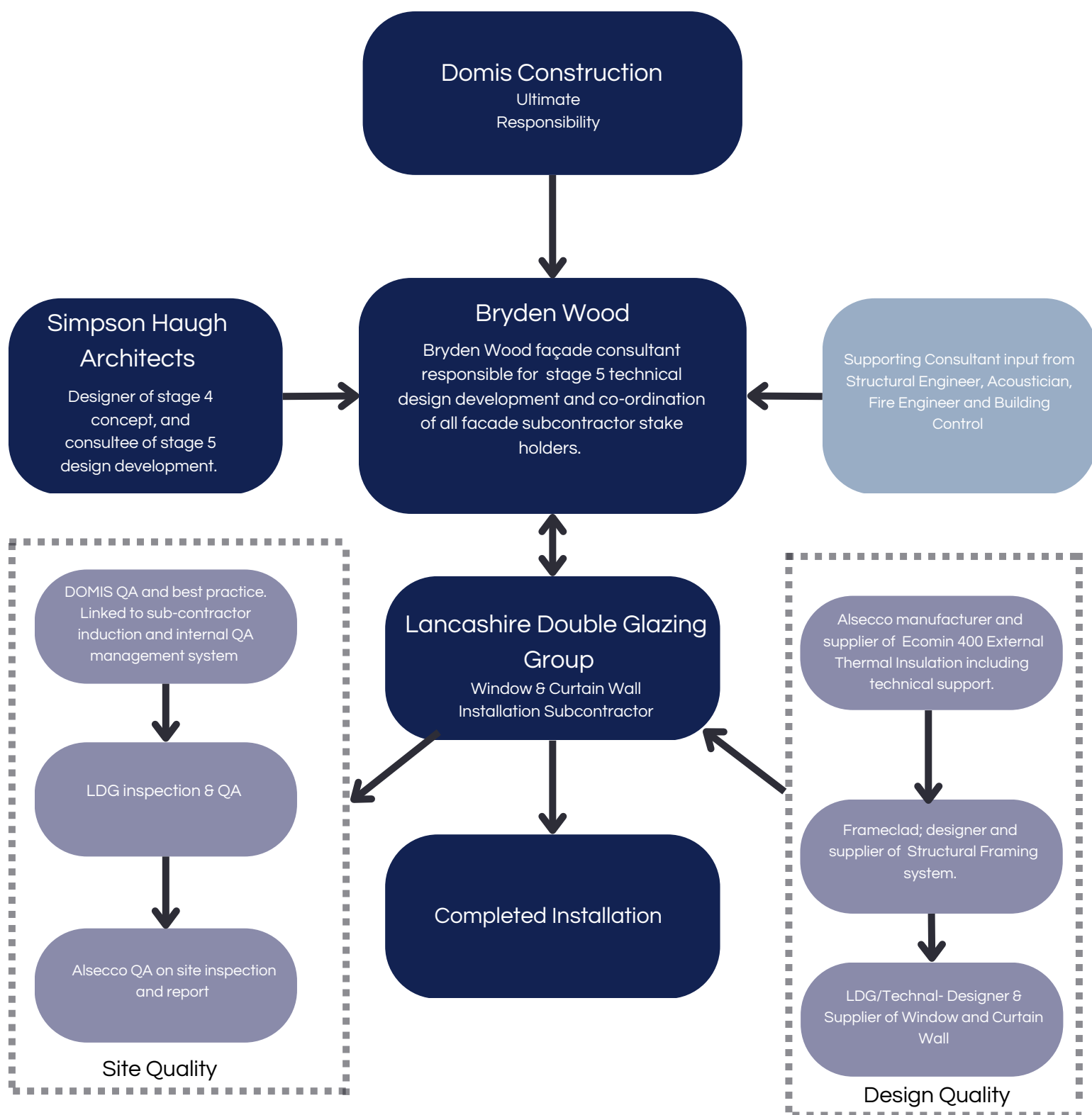
Any items that are badly damaged in a way that would impair the appearance or performance will be rejected and replaced.

All exposed surfaces are to be thoroughly cleaned to remove any blemishes, grouting mortar, staining, etc. The manufacturers guidance is to be followed at all times throughout the cleaning process and all measures should be taken to protect adjacent surfaces from any damage that could be caused during the cleaning process.

The Facade Engineer and Alsecco are responsible for reviewing and checking that all works are completed in line with their specification.

OVERVIEW OF GENERAL PROCESS

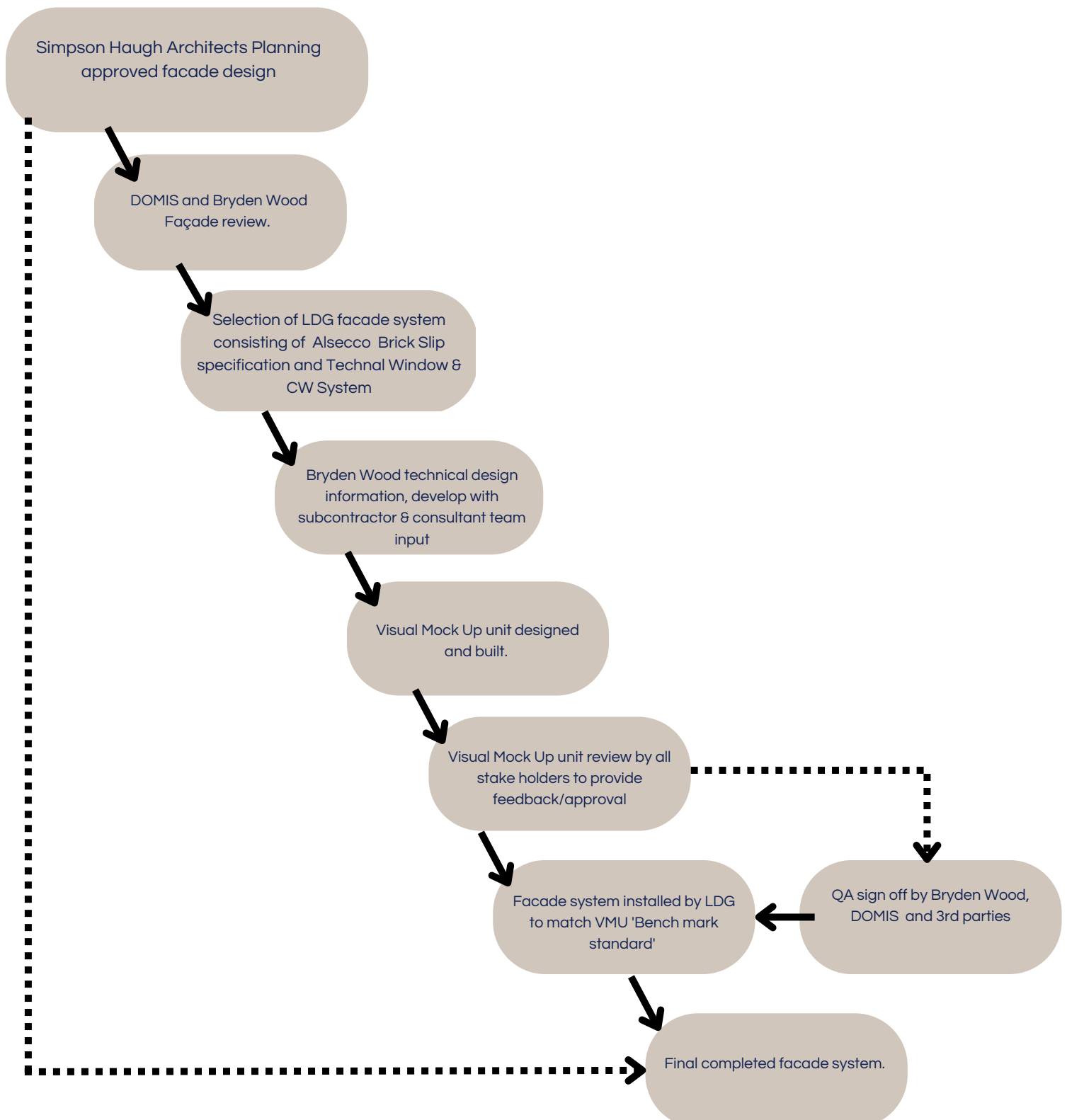
Below is an overview of the design and site quality control process and responsibilities for the brick slip system facade on Victoria House and the parties involved.



FACADE QUALITY CONTROL PROCESS

Quality Control of the Facade on Victoria House is critical to ensure that the facade is in line with the approved planning design intent, and quality aspirations of all parties. This also provides a facade that can be securely and safely maintained over future years.

A summary of the process from initial design to completion of the final facade is shown below.



QUALITY CONTROL TRACKER

Number	Title & Date	QC Image	Inspected By	Accepted	Not Accepted	Next Steps
1	VMU 19/08/2022		MCC represented by Angela Leckie & Dave Roscoe. Simpson Haugh Maivi Giang & Nick Owen	Brick slip colour, Facings & Profile (Review Black aspect with SHA & Alsecco). Pointing- 2-3mm recess pointing. Mortar Colour Metal Work (Window/Cill/ Punched Screen)- Colour & Profile	To be implemented on the VMU and reviewed by MCC further in terms of quality. Mastic Colour- To be reviewed and agreed with SHA Mastic- Bleeding out to window to be eliminated with improved thorough adoption of 2-3mm recess Mastic bead thickness to be reduced and minimised. Punched Metal Panel- 10mm recess to be perimeter. Cill returns to be solid. MCC Best Practice Mastic examples have been provided in Appendix 2 (Pages 18-22)	The items that have not been accepted will be improved and applied within the next 3 weeks.
2	VMU 19/10/2022		MCC represented by Angela Leckie & Dave Roscoe. Simpson Haugh Maivi Giang & Nick Owen	Window reveal mastic and colour – MCC happy with colour and with vertical application to reveal. MVHR Window Head detail explained by SHA and noted by MCC. Punch Panel consistent 10mm gap to interface.	Return fold to cill – increase depth to elevation. DOMIS to review with LDG and confirm min weathering distance with Alsecco. Cill mastic interface to be removed and reapplied to provide consistent quality and size as provide to reveal interface. MCC require inspection to sign off. Solid infill to rear of punch panel, design change discussed with MCC – MCC comment preference for glass and comfortable to be formalised in a NMA 'Map Up'	The items that have not been accepted will be improved and applied within the next 3 weeks.

QUALITY CONTROL TRACKER

Number	Title & Date	QC Image	Inspected By	Accepted	Not Accepted	Next Steps
3	VMU 15/11/2022		MCC represented by Angela Leckie & Dave Roscoe. Simpson Haugh Maivi Giang & Nick Owen	Revised solid cill return to facade detail. Reinstalled interface black mastic which provides a consistent finish with no undulation at bed joint.	N/A- All items accepted.	Turley's to submit updated QCMP to MCC enabling condition 3c to be discharged.

FIELDVIEW QA FORM

Fieldview is as an app on tablets and phones that allows those on site to immediately access drawings and information. It is also used to digitise forms and paperwork to be more environmentally friendly and for better document sharing and control.

The below 'Fieldview QA-Alsecco Brickslips' form will be completed by the Domis Site Management team in order to sign off any completed works, this includes the external wall, window and curtain wall. The form is split into three sections: Insulation, Render Coat and Brick Slips. Each section requires a separate inspection and sign off. This process involves the Domis Site Management team and subcontractor supervisor/manager inspecting the completed works together to ensure all items are installed correctly and to the highest standard. Photos are taken and added to the form as evidence that the inspection has taken place.

In the case that a snag is found, this is added to the form along with photographic evidence. This automatically notifies the subcontractor supervisor/manager that further work is required in this area.

In addition to the Domis on site quality checks using the example Fieldview form below for the wall build up, our subcontractors undertake their own QA procedures. These are presented to Domis for verification and sign off. An example of this procedure is included within Appendix 1 for our window and curtain wall manufacturer and installer, Lancashire Double Glazing Group Ltd (LDG).

LDG have two fundamental QA procedures, off site manufacture and on-site installation.

The Off-site manufacture QA incorporates everything from the initial production paperwork, right through to the install of the fixing brackets and ready to be delivered to site.

On-site installation QA is split into three elements:

- Pre-install checks- The focus of this QA check is mainly on datums and gridlines.
- Pre-glaze Checks- This involves inspecting the frames are line and levelled and checking that the EPDM has been installed correctly.
- Glazing Checks- Inspecting the glazing beads and gaskets as well as ensuring the operation of the window.

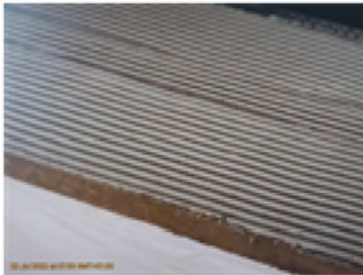
The Domis QA together with the Subcontractor QA ensures that all aspects of quality have been reviewed, agreed and signed off by the relevant parties.

FIELDVIEW QA FORM

QA- Alsecco Brick Slip

Form Reference	F226281.188
Owned By	Ged Carter (Domis Property Group)
Date	22/07/2022 06:56:39
Status	Completed and signed off
Location	Victoria House

Form Location	Victoria House
Gridlines	Sample
Location	Sample panel in courtyard

Insulation				
#	Check Item	Present & Correct	Photos	Photo Location G/L
1	Is the insulation board in good condition? i.e True corners, dry, no pieces missing. Completely dry.	Yes		
2	Base track installed correctly, as per best practise document?	Yes	 22/07/2022 07:00:43	
3	Has a 10mm x 10mm notch trowel been used to apply the adhesive?	Yes	 22/07/2022 06:59:05	

FIELDVIEW QA FORM

4	Has a minimum of 50% adhesive bond been achieved?	Yes		
5	Have corners been toothed?	Yes		
6	Have boards been cut in an "L" around openings achieving a minimum 200mm cut in all directions (boards installed in horizontal orientation) ?	Yes		
7	Where "L" cannot be achieved in horizontal orientation have boards been rotated around opening to avoid cuts less than 200mm?	N/A		N/A
8	Minimum of 200mm board overlapping bond achieved?	Yes		
9	Have boards been tamped level and plumb?	Yes		
10	Has foam sealing tape been installed under compression between insulation and system interfaces.	Yes		
11	Any Gaps larger than 10mm must be filled with a tapered slither of insulation.	Yes		

Insulation Sign off



Ged Carter (Domis Property Group)

22/07/2022 07:45:55

FIELDVIEW QA FORM

RENDER COAT				
#	Check Item	Present & Correct	Photos	Photo Location G/L
1	Is the mesh within the top third of basecoat?	Yes	 22/07/2022 07:43:16	
2	Has Alsecco Dammflex sealant been used at window/door abutments?	Yes		
3	Has a minimum of 8 fixings per square meter been installed?	Yes		
4	Has 1 fire fixing been installed per square meter?	Yes		
5	250mm x 250mm stress patches used where required?	Yes		
6	Corner beads installed correctly?	Yes	 22/07/2022 07:43:25	
7	Has a 300mm x 300mm piece of mesh been used at internal corners?	Yes		
8	Day joints - The last 100mm of the mesh must be pressed back against the insulation boards, with the excess basecoat being removed	Yes		
Render Coat Sign Off				



Ged Carter (Domis Property Group)

22/07/2022 07:46:01

FIELDVIEW QA FORM

Brick Slips				
#	Check Item	Present & Correct	Photos	Photo Location G/L
1	Has a 10mm x 10mm notch trowel been used to apply the adhesive?	Yes		
2	Has the bonding mortar been applied to the back of each slip?	Yes		
3	Are the bed joints and perps 10mm?	Yes		
4	Are the bricks line levelled?	Yes		
5	Has half bond been achieved?	Yes		

#	Check Item	Present & Correct	Photos	Photo Location G/L
6	Brick face clear of any residual adhesive?	Yes		

Brick Slips Sign Off



Ged Carter (Domis Property Group)

22/07/2022 07:46:36

Once checks complete change status of form in top right hand corner and make sure you sync your tablet when you return to the project office

APPENDIX 1 - LDG WINDOW QA FORM

DOC REF 05a Window Inspection Sheet

Pre Install QA Checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed Out
Check Grid lines are clearly marked and fit for purpose				
Datum Levels are clearly marked and fit for purpose				
Spot Check aperture's for plumb and level				
Hold point				
Pre Glaze QA checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed out
Captive gasket installed and free from damage				
Glass support/ Bridging packers are installed and at correct location				
EPDM to perimeter of frame – correctly clipped in at all points				
Frame installed level and plumb				
Frame installed as per drawing detail and to Grid and Datum Lines				
Frame installed free from damages, scratches and marks				
EPDM adhered to CP board to provide weather seal				
Trickle Vent installed free from damage, scratches and marks				
Drainage slots and drainage chambers clear free from debris				
Hold point				
Glazing QA checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed out
Glass and panel orientation correct				

APPENDIX - LDG WINDOW QA FORM

DOC REF 05a Window Inspection Sheet

Glass and panel installed free from damage, marks and scratches				
Glazing beads installed free from damage, marks and scratches				
Glazing wedge gasket installed free from nips				
Window operation				
Shroud installation including perforated panel – installed plum to datum levels, free from damage and fixed at correct points in accordance with CI drawings				
Hold Point				
Handover to EWC				
Sign off				
Glass protection film applied externally and internally to cover glass and low tact tape in situ to protect frames				

Project Name: 1880 – MLDC - Flour

Project Number: 108506

Window Reference(s)

Window Location(s)

DOC REF 05a Window Inspection Sheet

Sign on behalf of EWC

Sign on behalf of LDG Contracts

.....

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Date

Date



APPENDIX 1- LDG CURTAIN WALLING QA FORM

DOC REF 05b Curtain Walling Inspection Sheet

Pre Install QA Checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed Out
Check Grid lines are clearly marked and fit for purpose				
Datum Levels are clearly marked and fit for purpose				
Spot Check aperture's for plumb and level				
Drawings supplied are Construction Issue				
Hold Point				
Pre Glaze QA checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed out
All brackets and Fixings are installed as per LDG drawings				
All fixings are tightened to the correct torque settings				
Frame installed as per drawing detail and to Grid and Datum Lines				
Frame installed free from damages, scratches and marks				
EPDM installed and as per LDG detail and fully bonded to structure				
Transom screws installed to correct torque settings				
Gaskets are mastic sealed in place to Transom and Mullion ends				
Glass location supports/ blocks installed and in correct location				
Balancer flashings are installed as per LDG detail				
Mastic seal is applied from frame to structure				
Hold Point				

APPENDIX 1- LDG CURTAIN WALLING QA FORM

Glazing QA checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed out
Glass orientation correct				
Glass installed free from damage, marks and scratches				
Pressure Plate screws installed to correct torque				
Gaskets are checked for twist and are not nipped				
Capping's are installed and fully clamped to the pressure plate housing				
Hold Point				
Handover to Explore				
Sign Off				
Glass protection film applied externally and internally to cover glass and low tack tape in situ to protect frames				

Project Name: 1880 – MLDC - Flour

Project Number: 108506

Curtain Walling Reference(s)

Curtain Walling Location(s)

Sign on behalf of LDG Contracts

.....

Date.....

Sign on behalf of Main Contractors

.....

Date

APPENDIX 1 - LDG DOOR QA FORM

DOC REF 05c Door Inspection Sheet

Pre Install QA Checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed Out
Check Grid lines are clearly marked and fit for purpose				
Datum Levels are clearly marked and fit for purpose				
Spot Check aperture's for plumb and level				
Hold point				
Pre Glaze QA checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed out
Door Outer frame installed plumb and level as per detailed Construction issued drawings				
Threshold is correctly packed and fixed down				
Door leaf's are located correctly on Floor pin at bottom on threshold				
Door leaf's are clamped tight and all screws are present and nipped up with the clamp block				
Check EPDM is adhered to frame and structure as drawing detail if applicable				
Frame and door leaf's installed free from damages, scratches and marks				
Check all draft seals are installed and secure in channels				
Captive gaskets are installed to door leaf's				
Drainage slots and drainage chambers clear free from debris				

APPENDIX 1 - LDG DOOR QA FORM

DOC REF 05c Door Inspection Sheet

Hold Point				
Glazing QA checks	LDG Pass (P) Fail (F)	MC Pass (P) Fail (F)	Defect	Date Closed out
Glass Packers are installed and in correct location				
Glass and panel orientation correct				
Glass and panel installed free from damage, marks and scratches				
Glazing beads installed free from damage, marks and scratches				
Glazing wedge gasket installed free from nips				
Door operation to include handle operation, locks work correctly				
Door opens and closes free and door speeds are set to correct closing force				
Silicone seal is applied				
Hold Point				
Handover to EWC				
Sign off				
Glass protection film applied externally and internally to cover glass and low tact tape in situ to protect frames				

Project Name: 1880 – MLDC - Flour

Project Number: 108506

Door Reference(s)

Door Location(s)

Sign on behalf of LDG Contracts

.....

Date

Sign on behalf of EWC

.....

Date

APPENDIX 1- LDG PROCESSING CHECKLIST

LDG Processing Checklist

Description		Manufacture Issue		Fit Date	Production Paperwork	Profiles	Paint Order	Accessories	Hardware	Glass
Phase 1 Curtain Walling & Auto Doors	Material Order	01	Task Done (Y / N / NA)		-	-	-	-	-	-
	Manufacture	01	Date							
			Initials							
	Material Order		Task Done (Y / N / NA)		-	-	-	-	-	-
	Manufacture		Date							
			Initials							
	Material Order		Task Done (Y / N / NA)		-	-	-	-	-	-
	Manufacture		Date							
			Initials							
	Material Order		Task Done (Y / N / NA)		-	-	-	-	-	-
	Manufacture		Date							
			Initials							

APPENDIX 1- LDG PROCESSING CHECKLIST

DONE =	Y
OUTSTANDING =	N
NOT APPLICABLE =	NA

Ceramics	Aluminium Panels	Louvers	Special Infills	Winding Gear / AOV's	Auto Door Gear	Brackets	Pressings	Ancillaries (Fixings / EPDM / Mastic)	Straps or Lugs	Manifestations	Other
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX 2- MCC VMU BEST PRACTICE



APPENDIX 2- MCC VMU BEST PRACTICE



APPENDIX 2- MCC VMU BEST PRACTICE

