



ERIC WRIGHT
CONSTRUCTION

PART OF THE **ERIC WRIGHT** GROUP



Client:

Great Places

Project:

Ancoats Dispensary

Old Mill St, Manchester M4 6EB

Restoration Contractor:

Stone Central

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1. Project Details	
Project Address:	Ancoats Dispensary Old Mill St Manchester M4 6EB
Client: 	Great Places Housing Group 2a Derwent Avenue Manchester M21 7QP
Principal Contractor: 	Eric Wright Construction Sceptre House, Sceptre Way Bamber Bridge Preston PR5 6AW
Masonry Contractor: 	Stone Central Dutch Barn Hill Lane Bold WA9 4SJ

Site Key Contacts:

Eric Wright		
Project Operations Manager	Myles Rogerson	07917574049
Project Manager	James Friedmann	07585969788
Site Manager	Michael Looby	07592636506
Health and Safety Lead	Phil Strood	
Stone Central		
Supervisor	Melvin Spencer	
Buttress		
Architect	Paul Nelson	
Ridge		

Structural Engineer	Ben Marsden	
Manchester City Council		
Listed Building Officer	Paul Mason	

Method Statement Form	
Date:	20/02/23
Revision:	001
Title:	Stone Central Outline Method Statement

2. Description

This is an Outline Method Statement with more of an overview of the works being done on the existing façade in relation to its listed aspect.

The schedule of works outlines the works to be done by Stone Central on the existing façade as well as work being done at the hub storage unit where stone has been cleaned, sorted through and stored ready for work to commence on site.

The works will mainly consist of small hand tools to remove graffiti as well as restore existing stone ready to be brought to site for install.

3. Location & Surrounding Area

Ancoats Dispensary, Old Mill Street, Ancoats, Manchester, M4 6EB

The site is located to the south of Old Mill Street and adjacent to Lampwick Lane in New Islington in Manchester.

The area outlined in red below shows the location of the site.



4. Schedule of works: Restoration of NW Façade

Cleaning:

Identify Areas to be cleaned, any paint or graffiti that is to be removed is to have a paint softener applied to the surface and allowed to dwell for 30mins. Clean the area using the ThermoTech Cleaning system as per the manufacturer's recommendations. Waste materials are to be removed from site and disposed of as hazardous waste and waste packaging to be removed from site.

Replacement Works:

Cut out of mortar joints around the defective brick to ease the pressure on the adjacent units, then cut out the brick using hand tools or a smaller breaker. Once the voids have been cleaned out well with wet clean water bed the replacement brick in place and point to the approved finish in line with the repointing specification and approved sample.

Stone / Terracotta / Brick Special restoration works

Cut back the defective section, restore the stonework back to its original line and profile and float to the required finish.

Stone Descaling / Dressing works

Areas of loose masonry to be removed using hand tools and then tool marks to be eased out through using carborundum stones, abrasive pads or phosphor bronze brushes.

Fixing removal restoration works

Redundant fixings are to be either removed by stitch drilling using a small diameter drill bit or to be cored out then after removing dust or debris infill hole back to its original line and profile using a restoration mortar.

Crack repair works

Small cracks where movement is unlikely to occur again are to be opened up using a stone cutting blade on a 5" grinder, after crack is cleaned infill the crack back to original line. For brickwork bed joints are to be ground out to a depth of 40mm and stainless steel threaded bar set in an epoxy based mortar a minimum of 15mm back from the front face of the brick.

Repointing:

Using a drag or small chisel attempt to remove the mortar by hand, any areas with residual strength are to be cut out using a 5" grinder fitted with a part worn stone cutting blade, once cleaned and raked out repoint a section of stonework using lime-based mortar to match the original material used.

Materials:

As shown in appendixes 3/4 the materials used for the works are all logged and in the heritage tracker and conservation sample tracker, these have been identified, restored following the methods above and will be loaded via the process outlined below.

Access & Egress

All Materials to be brought to site in line with the site logistics plan, following this as shown in appendix 2 the stone will be brought onto site via Old Mill Street and loaded via NW loading bays 2&3, these will then be moved from the loading bay onto the fourth or fifth floors and moved along the terrace scaffold to the area it is required.

Completion:

On completion of our works the areas will be left clean and tidy. A quality inspection will be carried out with the Principal Contractor and a Company representative on completion of our works. All warning barriers and signs will be removed

5. Schedule of works: Tower Rebuild

Cleaning:

Identify Areas to be cleaned, any paint or graffiti that is to be removed is to have a paint softener applied to the surface and allowed to dwell for 30mins. Clean the area using the ThermoTech Cleaning system as per the manufacturer's recommendations. Waste materials are to be removed from site and disposed of as hazardous waste and waste packaging to be removed from site.

Replacement Works:

Cut out of mortar joints around the defective brick to ease the pressure on the adjacent units, then cut out the brick using hand tools or a smaller breaker. Once the voids have been cleaned out well with wet clean water bed the replacement brick in place and point to the approved finish in line with the repointing specification and approved sample.

Stone / Terracotta / Brick Special restoration works

Cut back the defective section, restore the stonework back to its original line and profile and float to the required finish.

Stone Descaling / Dressing works

Areas of loose masonry to be removed using hand tools and then tool marks to be eased out through using carborundum stones, abrasive pads or phosphor bronze brushes.

Fixing removal restoration works

Redundant fixings are to be either removed by stitch drilling using a small diameter drill bit or to be cored out then after removing dust or debris infill hole back to its original line and profile using a restoration mortar.

Crack repair works

Small cracks where movement is unlikely to occur again are to be opened up using a stone cutting blade on a 5" grinder, after crack is cleaned infill the crack back to original line. For brickwork bed joints are to be ground out to a depth of 40mm and stainless steel threaded bar set in an epoxy based mortar a minimum of 15mm back from the front face of the brick.

Repointing:

Using a drag or small chisel attempt to remove the mortar by hand, any areas with residual strength are to be cut out using a 5" grinder fitted with a part worn stone cutting blade, once cleaned and raked out repoint a section of stonework using lime-based mortar to match the original material used.

Materials:

As shown in appendixes 3/4 the materials used for the works are all logged and in the heritage tracker and conservation sample tracker, these have been identified, restored following the methods above and will be loaded via the process outlined below.

Access & Egress

All Materials to be brought to site in line with the site logistics plan, following this as shown in appendix 2 the stone will be brought onto site via Old Mill Street and loaded for the Tower via loading bay 1 to the roof levels and upper level of tower loaded via 5th floor and roof levels.

Tower Materials are to be loaded via external scaffold feed from loading bay/hoists and then with a clear run they are moved to tower from the loading point to 4th and 5th floor terrace scaffold as works progress.

Scaffolding

As shown in Appendix 3, progressive bricklayer/stonemason scaffold to be sheeted, brick is to be guarded around the area of the tower to allow for re-construction. Back

propping required where the tower scaffold encroaches onto the roof areas at the rear. Access is to be required internally at some points of the tower, this will be done through access via the slab below. As shown in Appendix 3 stone masons require a lifting rail for the heavier items and this will be done with either a running rail system in conjunction with a block and tackle as Appendix 3 photos show and allow for this to be moved progressively with the scaffold at each lift.

Completion:

On completion of our works the areas will be left clean and tidy. A quality inspection will be carried out with the Principal Contractor and a Company representative on completion of our works. All warning barriers and signs will be removed

6. Schedule of works: Restoration of NE Façade

Cleaning:

Identify Areas to be cleaned, any paint or graffiti that is to be removed is to have a paint softener applied to the surface and allowed to dwell for 30mins. Clean the area using the ThermaTech Cleaning system as per the manufacturer's recommendations. Waste materials are to be removed from site and disposed of as hazardous waste and waste packaging to be removed from site.

Replacement Works:

Cut out of mortar joints around the defective brick to ease the pressure on the adjacent units, then cut out the brick using hand tools or a smaller breaker. Once the voids have been cleaned out well with wet clean water bed the replacement brick in place and point to the approved finish in line with the repointing specification and approved sample.

Stone / Terracotta / Brick Special restoration works

Cut back the defective section, restore the stonework back to its original line and profile and float to the required finish.

Stone Descaling / Dressing works

Areas of loose masonry to be removed using hand tools and then tool marks to be eased out through using carborundum stones, abrasive pads or phosphor bronze brushes.

Fixing removal restoration works

Redundant fixings are to be either removed by stitch drilling using a small diameter drill bit or to be cored out then after removing dust or debris infill hole back to its original line and profile using a restoration mortar.

Crack repair works

Small cracks where movement is unlikely to occur again are to be opened up using a stone cutting blade on a 5" grinder, after crack is cleaned infill the crack back to original line. For brickwork bed joints are to be ground out to a depth of 40mm and stainless steel threaded bar set in an epoxy based mortar a minimum of 15mm back from the front face of the brick.

Repointing:

Using a drag or small chisel attempt to remove the mortar by hand, any areas with residual strength are to be cut out using a 5" grinder fitted with a part worn stone cutting blade, once cleaned and raked out repoint a section of stonework using lime-based mortar to match the original material used.

Materials:

As shown in appendixes 3/4 the materials used for the works are all logged and in the heritage tracker and conservation sample tracker, these have been identified, restored following the methods above and will be loaded via the process outlined below.

Access & Egress

All Materials to be brought to site in line with the site logistics plan, following this as shown in appendix 2 the stone will be brought onto site via Old Mill Street and loaded via point 2 as shown in the loading strategy, these will then be moved from the loading bay onto the fourth or fifth floors and moved along the terrace scaffold to the area it is required.

Completion:

On completion of our works the areas will be left clean and tidy. A quality inspection will be carried out with the Principal Contractor and a Company representative on completion of our works. All warning barriers and signs will be removed

7. Schedule of works: Restoration Window Opening Alterations

Cleaning:

Identify Areas to be cleaned, any paint or graffiti that is to be removed is to have a paint softener applied to the surface and allowed to dwell for 30mins. Clean the area using the ThermoTech Cleaning system as per the manufacturer's recommendations. Waste materials are to be removed from site and disposed of as hazardous waste and waste packaging to be removed from site.

Replacement Works:

Cut out of mortar joints around the defective brick to ease the pressure on the adjacent units, then cut out the brick using hand tools or a smaller breaker. Once the voids have been cleaned out well with wet clean water bed the replacement brick in place and point to the approved finish in line with the repointing specification and approved sample.

Stone / Terracotta / Brick Special restoration works

Cut back the defective section, restore the stonework back to its original line and profile and float to the required finish.

Stone Descaling / Dressing works

Areas of loose masonry to be removed using hand tools and then tool marks to be eased out through using carborundum stones, abrasive pads or phosphor bronze brushes.

Fixing removal restoration works

Redundant fixings are to be either removed by stitch drilling using a small diameter drill bit or to be cored out then after removing dust or debris infill hole back to its original line and profile using a restoration mortar.

Crack repair works

Small cracks where movement is unlikely to occur again are to be opened up using a stone cutting blade on a 5" grinder, after crack is cleaned infill the crack back to original line. For brickwork bed joints are to be ground out to a depth of 40mm and stainless steel threaded bar set in an epoxy based mortar a minimum of 15mm back from the front face of the brick.

Repointing:

Using a drag or small chisel attempt to remove the mortar by hand, any areas with residual strength are to be cut out using a 5" grinder fitted with a part worn stone cutting blade, once cleaned and raked out repoint a section of stonework using lime-based mortar to match the original material used.

Materials:

As shown in appendixes 3/4 the materials used for the works are all logged and in the heritage tracker and conservation sample tracker, these have been identified, restored following the methods above and will be loaded via the process outlined below.

Access & Egress

All Materials to be brought to site in line with the site logistics plan, following this as shown in appendix 2 the stone will be brought onto site via Old Mill Street and loaded via point 2 as shown in the loading strategy, these will then be moved from the loading bay onto the fourth or fifth floors and moved along the terrace scaffold to the area it is required.

Propping:

As shown in appendix 6/7 the temporary works design undertaken is to facilitate the window alterations and will be used on windows throughout similar to the way shown in appendix 7, these have been checked by our temporary work engineer.

Completion:

On completion of our works the areas will be left clean and tidy. A quality inspection will be carried out with the Principal Contractor and a Company representative on completion of our works. All warning barriers and signs will be removed

8. Project Arrangements

Welfare: Provided by Eric Wright

Washing & Drying Room	✓
Drinking Water & Cups	✓
Toilets	✓
Canteen seating, Microwave & Kettle Facilities	✓
First Aid Box in the site office	✓

Arrival:

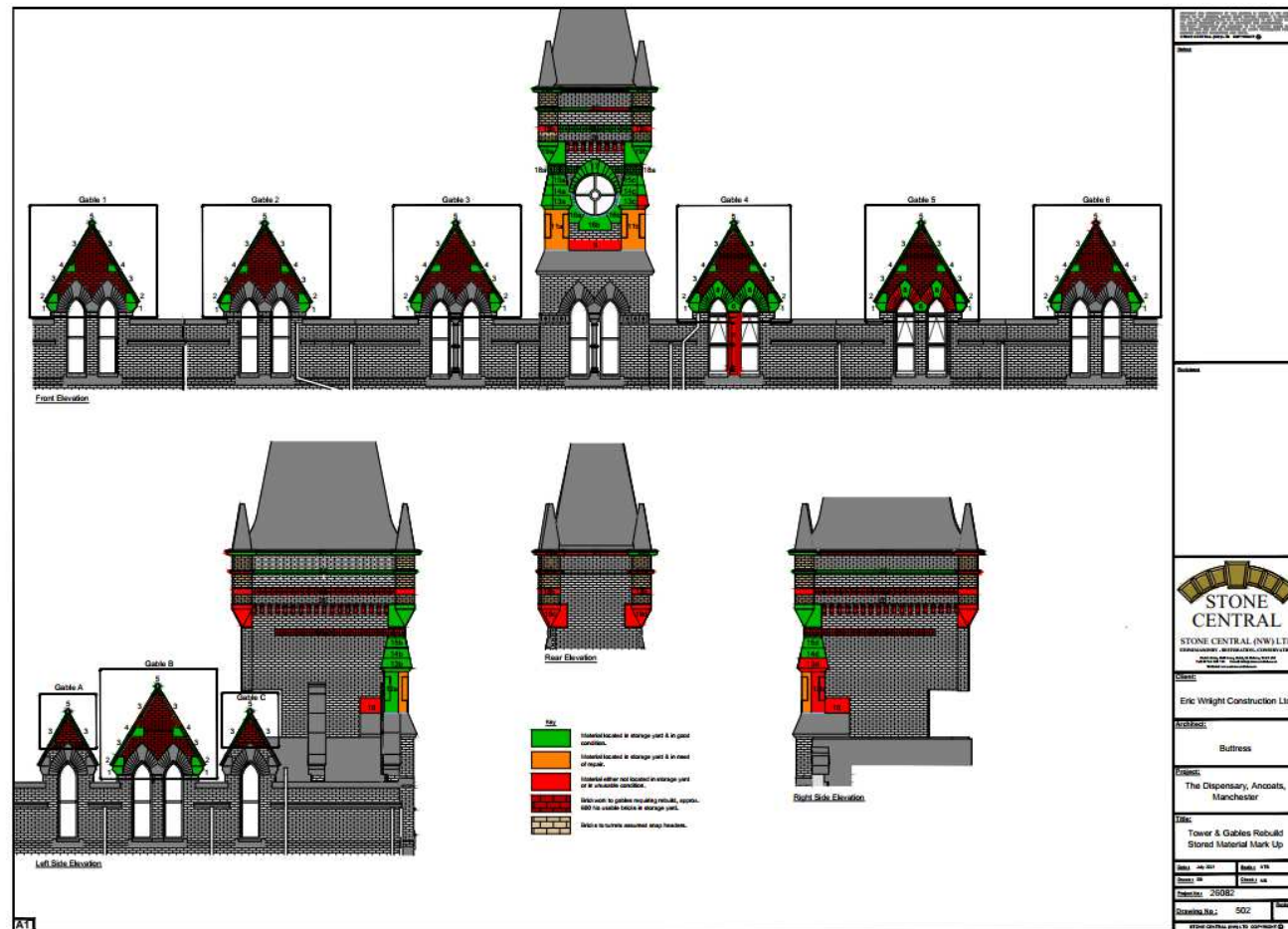
Upon arrival to site, contact Eric Wright and Stone Central Site Managers, and attend site induction within site office. All Welfare provisions and emergency procedures will be detailed within this induction. Stone Central supervisor will then deliver the site specific plan of work and risk assessment to operatives. All equipment and vehicles will be stored/parked in line with the Eric Wright Logistics / traffic management plan provided

Access & Egress:

Pedestrian access/egress and Vehicle and delivery access will be via Old Mill St. Vehicles must adhere to the 5mph speed limit and one way system. (See marked up plan)



1. Stored Material Mark-up

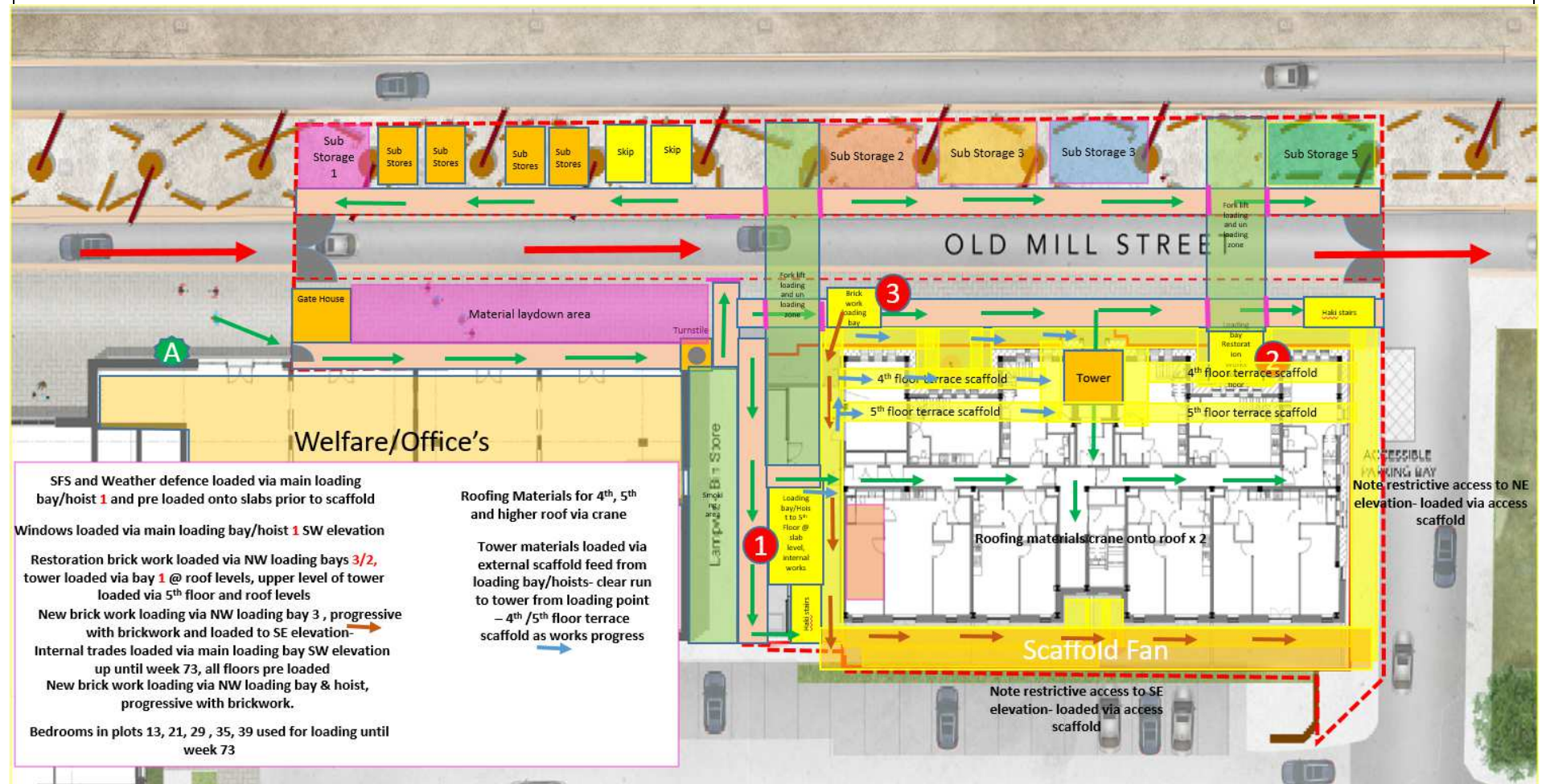


10. Appendices

2. Stored Material Sorting



3. Loading Strategy



4. Conservation Sample Tracker

Contract	Ancoats Dispensary	Sheet no	1
Contract no	CN210005		17.10.23

Item	Photo	Description	Proposed Materials	Comments	Status	Date
1		Stone pinnacle string	Terracotta	 Terracotta - B22075-1170	Approved	19.10.22
2		Tower Coping	Natral Stone	 Blaxter stone	Approved	19.10.22

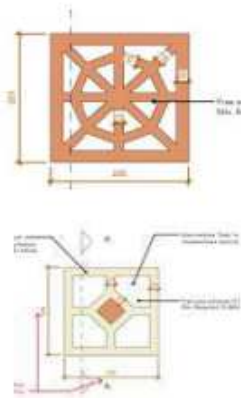
3		Bullet string	Terracotta	 Terracotta - B22075-1170	Approved	19.10.22
4		Corbled brick	Furness Natral Orange Brick Special	 Furness Natral Orange Brick	Approved	19.10.22
5		Chamfered corner stone	Natral Stone	 Blaxter stone	Approved	19.10.22

6		Tower column / Plinth	Natural Stone		Approved	19.10.22
				Blaxter stone		
7		Chamfered brick	Furness brick		Approved	19.10.22
				Furness Natural Orange Brick		
8		Stone kneelers	Terracotta		Approved	19.10.22
				Terracotta - B22075-1170		

9		Terracota tile	Terracotta	 Terracotta - B22075-1170	Approved	19.10.22
10		Trefolli Stonework	Terracotta	 Terracotta - B22075-1170	Approved	19.10.22
11		Coping Stone	Natral Stone	 Blaxter stone	Approved	19.10.22

		Mortar	Lime Mortar as site sample		Approved	19.10.22
12		Brick	Furness Natral Orange Brick	 Furness Natral Orange Brick	Approved	19.10.22
13		voussoir	Terracotta	 Terracotta - B10068-1100  Terracotta - B22075-1170	Approved	19.10.22

14		Key Stone	Terracotta		Approved	19.10.22
				Terracotta - B22075-1170		
15		Dark brick banding	Furness Natral Orange Brick Tinted			
				Furness brick approved 19.10.22 - tinted sample requested		
16		Stone string	Terracotta		Approved	19.10.22
				Terracotta - B22075-1170		

17		roll moulding	Natural Stone		Approved	19.10.22
				Blaxter stone		
18		New Airbricks	Terracotta		Approved	19.10.22
				Terracotta - B22075-1170		
				Terracotta - B22075-1170		
19		Dormer/Apex copings	Terracotta		Approved	19.10.22
				Terracotta - B22075-1170		

20		Replacement cills	Natural Stone		Approved	19.10.22
	REPAIRS					
1		Thermatech cleaning sample to remove algae and surface soiling	N/A	Happy with the cleaning samples using the thermatech method.	Approved	21/09/2022

2		Brick replacement using a new Furness Brick-	Furness Brick	Happy with the brick replacement with the Furness Orange but not keen on the use of reclaimed brick	Approved	ERIC WRIGHT GROUP 21/09/22
3		Sample of paint removal using Thermatech and paint softener	N/A	Happy with the cleaning samples using the thermatech method and paint softener.	Approved	21/09/22
4		Raking out sample for the brickwork and pointing samples to the brickwork for agreement of a mortar colour.	Lime Mortar	Happy with the colour of sample A, would like to see a smoother/brushed finish as current sample pointing has trowel marks	Approved	05/10/22

5		Crack repair on stone string		Happy with the repair	Approved	ERIC WRIGHT GROUP 21/09/2022
6		Restoration of a brick special		Happy with the repair, just to confirm this is a repair not a replacement.	Approved	21/09/2022
7		Hole restoration to brick		Unable to comment on the repair as the area needs cleaning, just to confirm the repair will be as per the brick special repair using restoration mortar. Approved - as brick special repair, would prefer bricks be replaced where possible	Approved	19/10/2022

8		Redressing sample to a cill		To be reviewed again concerns raised that water will not shed from the cill. Rubbing down of the weathered cill approved after Stone central second attempt	Approved	ERIC WRIGHT GROUP 05/10/2022
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5. Heritage Tracker

Item Description	Location Found	Date	Photo Reference	New Location
Coping Stone	South West Elevation - Top lift of scaffold (3rd Floor)	21.03.22		Pallet 1 - Ground Floor
Stone arch	North East Elevation - Underneath scaffold (Ground Floor)	21.03.22		Pallet 1 - Ground Floor
Coping Stone	South East Elevation - (Top lift of scaffold)	01.04.22		Pallet 1 - Ground Floor
Hopper	South West Elevation - Top lift of scaffold (3rd Floor)	06.04.22		Pallet 1 - Ground Floor - Note: 1no hopper to be saved to be measured
Tower Pinnacle	North West Elevation - Top Lift	14.04.22		Pallet 2 - Ground Floor

Archway Stonework	North West Elevation - Internal Wall - Level 1	14.04.22		Pallet 2 - Ground Floor
Gable End Finial	Within Area 2 - GF	20.04.22		Pallet 3 - Ground Floor
Tower Stonework	Within Area 2 - GF	20.04.22		Pallet 3 - Ground Floor
Stonework / Copings x 4	Within Area 2 - GF	20.04.22		Pallet 3 - Ground Floor
Stonework	Within Area 2 - GF	20.04.22		Pallet 4 - Ground Floor

Stonework	Within Area 2 - GF	20.04.22		Pallet 5 - Ground Floor
Tower Stonework	Within Area 2 - GF	20.04.22		Pallet 5 - Ground Floor
Tourette Spire	Within Area 2 - GF	20.04.22		Pallet 5 - Ground Floor
Stonework	Within Area 2 - GF	22.04.22		Pallet 5 - Ground Floor
Stonework	Within Area 2 - GF	22.04.22		Pallet 5 - Ground Floor

Ancoats Dispensary



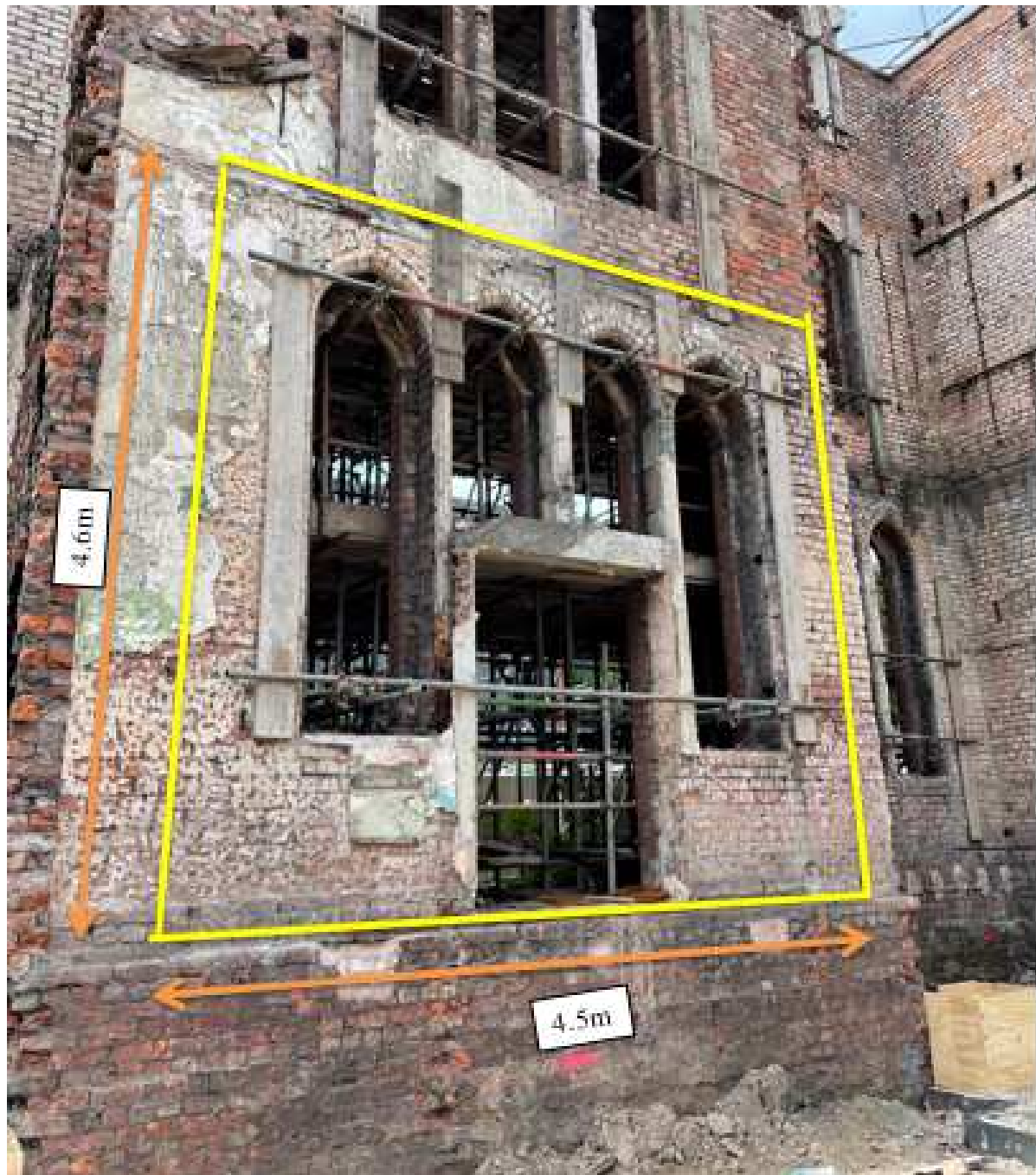
DATE: 01/05/22

Stonework	Within Area 2 - GF	22.04.22		Pallet 6 - Ground Floor
Coping Stone	Within Area 2 - GF	22.04.22		Pallet 6 - Ground Floor
Archway Stonework x2	Within Area 2 - GF	29.04.22		Pallet 7 - Ground Floor
Tiled Floor	Within Area 2 - GF	03.05.22		Note: Picture taken for heritage record, tiles not to be saved

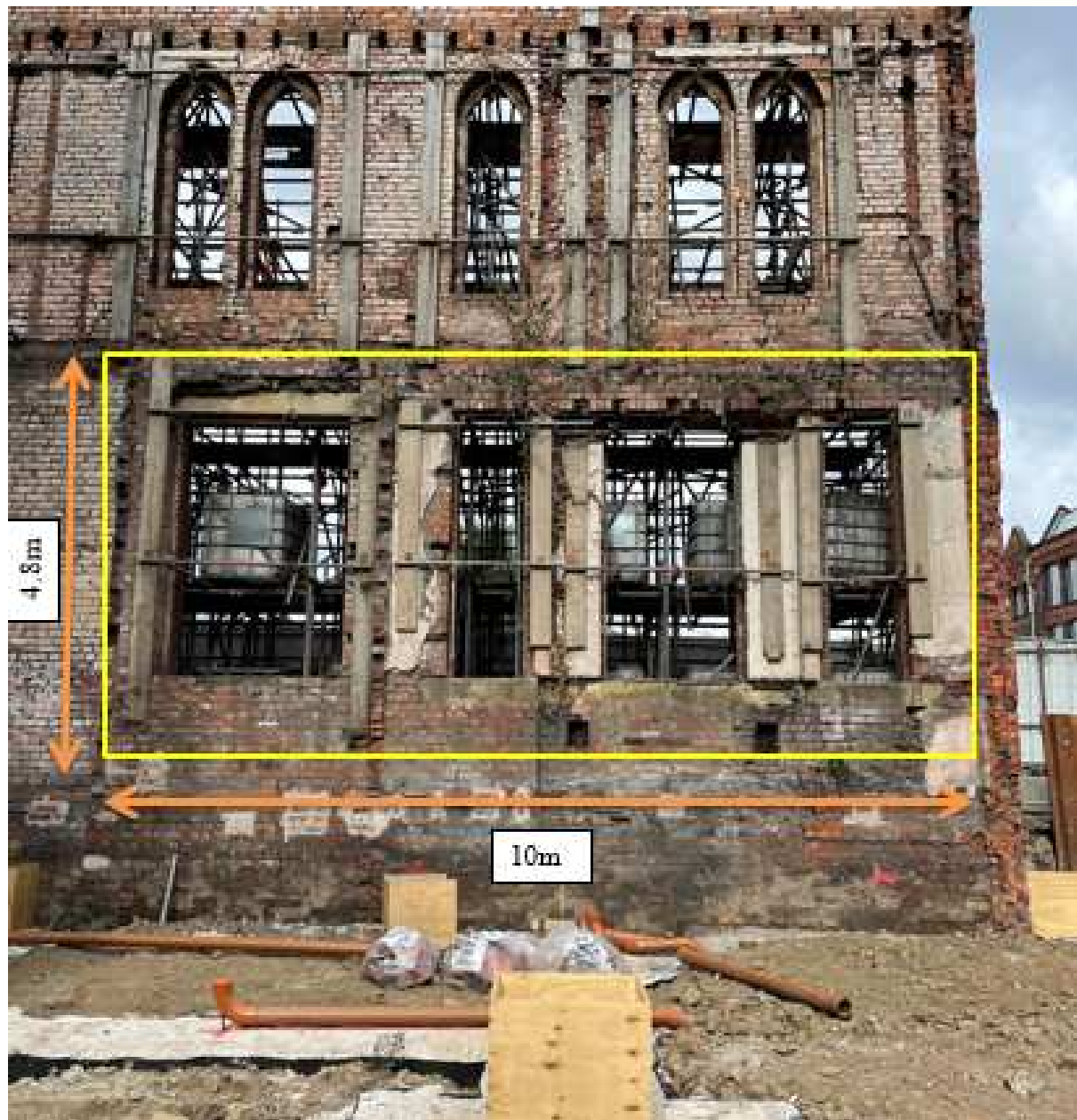
7. Elevation Intervention Elevation



8. Temporary Works Propping









Eric Wright Construction

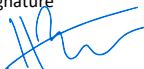
Ancoats Dispensary

**T10 – Façade Propping & Needling
CAT3 Check**

Document Control

Project Number	Client Code	Work Item	Document Code	Sequential Number
P1763	EWC	T10	CAL	001

Document Ref: P1763-EWC-T10-CAL-001-A

Rev No Date	Status	Prepared by Name Signature	Checked by Name Signature	Approved by Name Signature
A 16/01/23	Submitted for Information	H. Brady 	S. Karri 	H. Brady 

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This calculation has been prepared for the sole use and reliance of Eric Wright Construction. This report shall not be relied upon and/or transferred to any other parties without the express written authorisation of P&S Consulting Engineers Ltd. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party.

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1.0 Introduction

Eric Wright Construction Ltd (EWC) have been awarded the remediation contract to bring the historic Ancoats Dispensary back into use as a residential development.

As part of the works openings and work to the retained façade brickwork is required that necessitate propping and needling temporary works to support the upper structure.

The propping and needling has been designed by others. EWC have commissioned P&S Consulting Engineers Ltd (PaSCoE) to act as the independent category 3 checker for the temporary works design.

2.0 Information Provided

The following information has been provided to in order for us to undertake the design check:

68628-100 T2

210005-BA-ZZ-XX-DR-A-(05)210-Proposed Intervention Elevations Sheet 1 of 2-C1

210005-RDG-XX-ZZ-DR-S-0051 (1)

EWG-Q-F-452 - Temporary Works Control Sheet - Stone Central Prop & Needle REV A

P4352-SHD-00-ZZ-RP-C-0100 Issue 5 - Ancoats Dispensary Condition Survey

3.0 Existing Structure

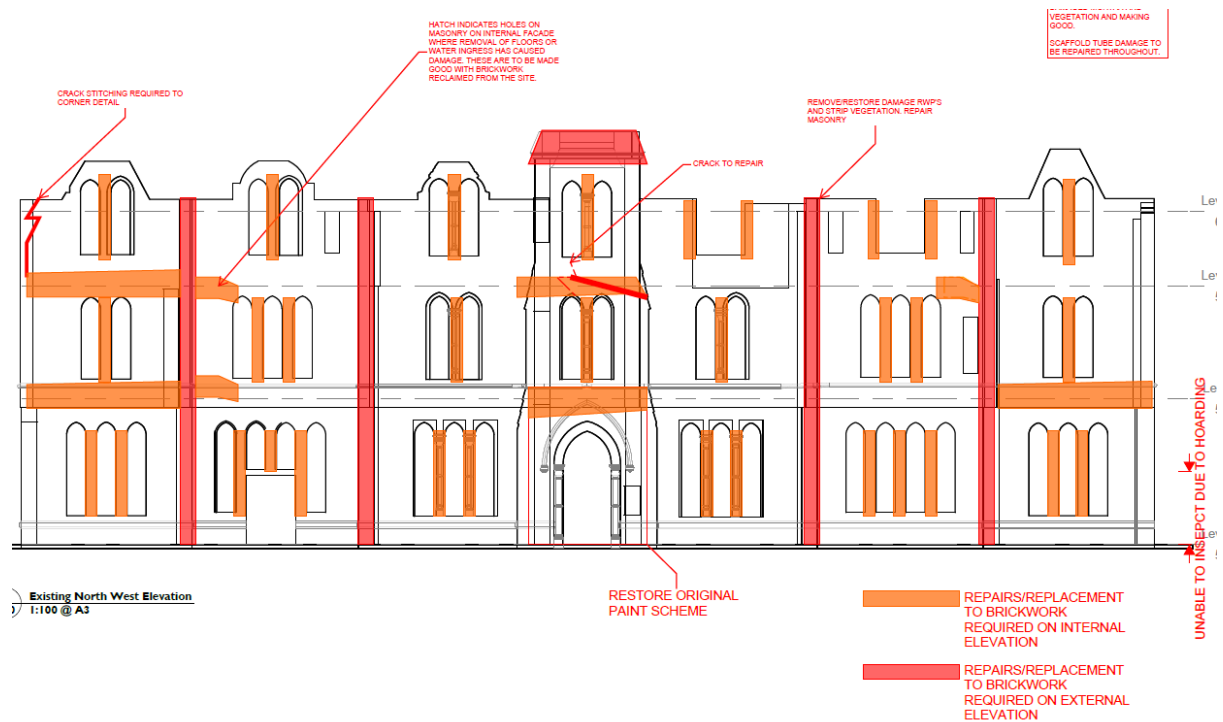


Figure 1 – Annotated North Elevation

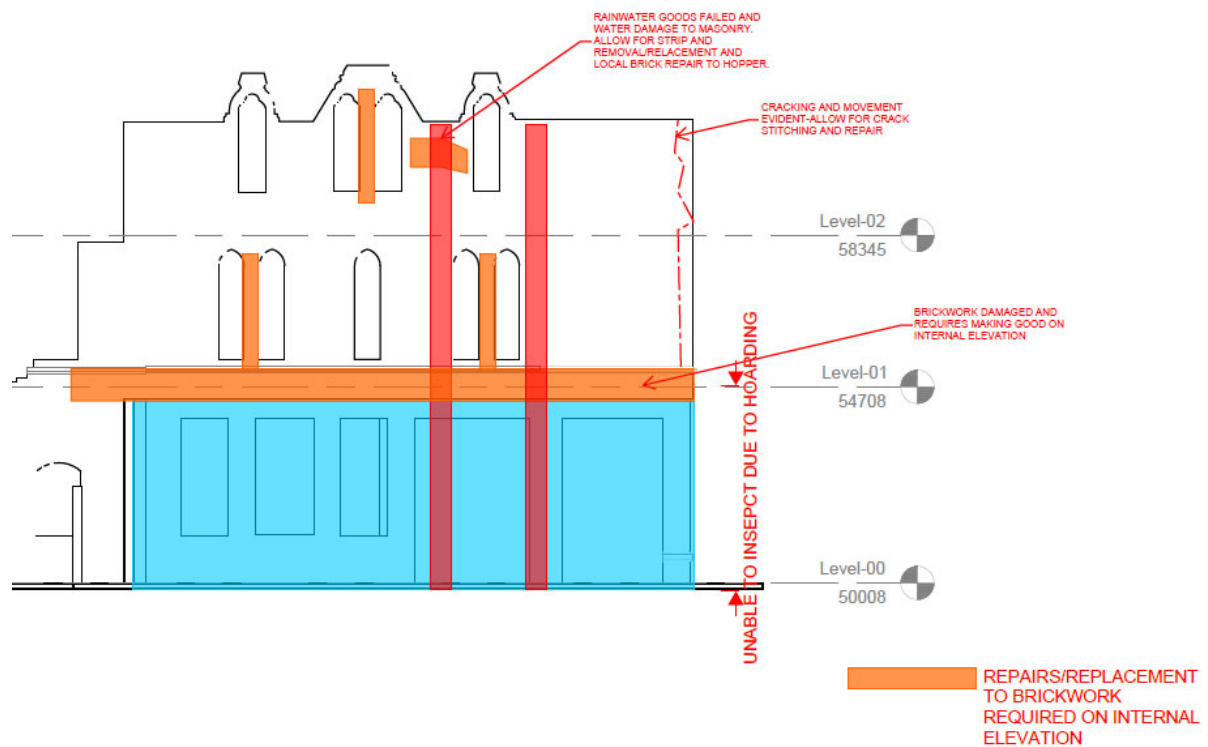


Figure 2 – Annotated East Elevation

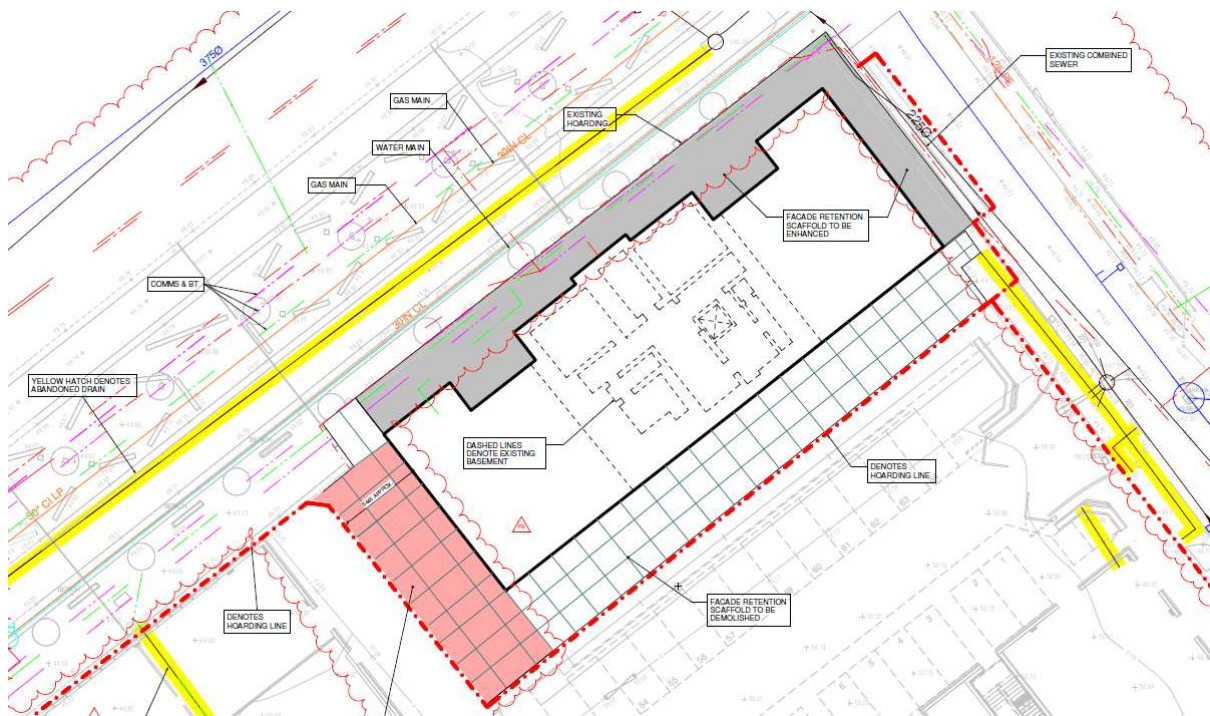


Figure 3 – Plan showing assumed extent of the basement

Notes from the scheme designer regarding the walls:

Dead Load (self-weight):

- Wall thickness varying on plan and height of the building. Typically, the wall thickness reduces with height.
- Where a narrow wall thickness would provide a more onerous design for a particular load case / combination / restraint fixing, use a 9" thick wall for the self-weight
- Where a thicker wall thickness would provide a more onerous design for a particular load case / combination / restraint fixing, use a 13.5" thick wall for the self-weight
- An alternative to the above would be to precisely calculate wall self-weight using the survey info to determine wall area (accounting for openings) and wall thicknesses dependant on location on plan and height

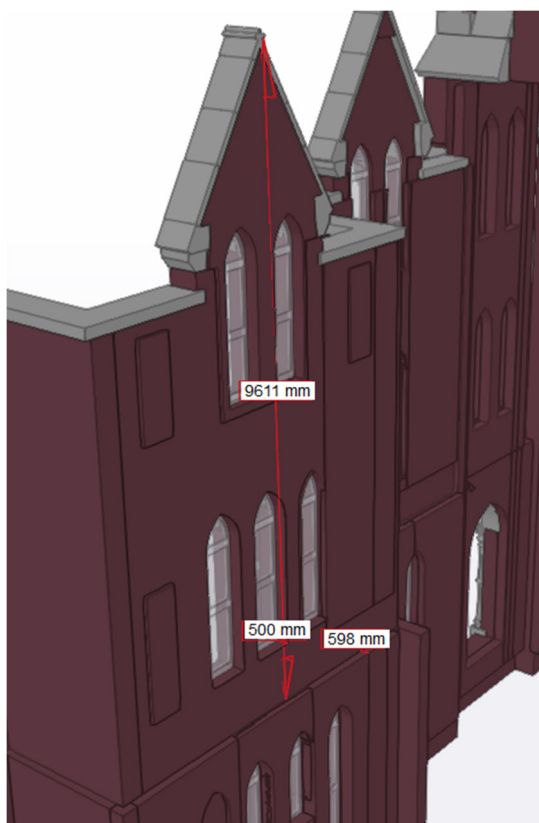


Figure 4 – Extract from BIM model for NW Elevation

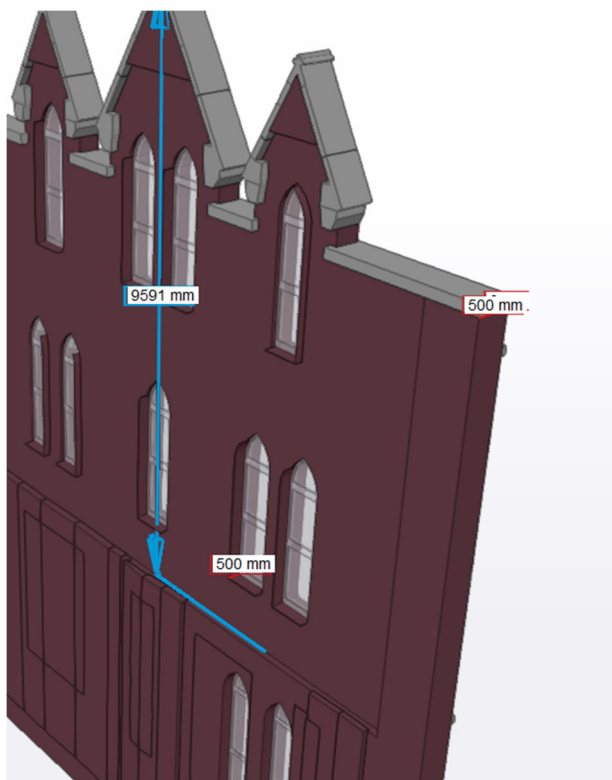


Figure 5 – Extract from BIM model NE Elevation

Wall is typically 500mm thick (as modelled) and 9.6m to the peak of the top of stone.

The weight of the façade per metre run:

$$H = 9.6\text{m}$$

$\gamma_b = 22 \text{ kN/m}^3$ Assumption for clay brick unit weight conservatively taken to the full height of the gable.

$$\text{s.w. Façade, } G_{k,f} = 0.5 \times 22 \times 9.6 = 106\text{kN/m}$$

Loads shown on the design drawings = 110kNm or 137kN/m > 106kN/m ...OK!

4.0 Proposed Temporary Works

A propping and needling design has been proposed on drawing 68628-100 T2. The drawing contains the following general notes:

DRAWING NOTES 1. Copyright The Copyright and/or Design Right of this drawing is vested in MGF Design Services Ltd and any reproduction or copying without permission will be construed as an infringement of our Rights and remedial action will be taken. 2. Basis of Design This design has been prepared from information supplied to MGF by, or on behalf of the Customer (ref. below), who must ensure requirements have been correctly interpreted. 210005-BA-ZZ-XX-DR-A-(05)210 210005-RDG-XX-ZZ-DR-S-0051 (1) == Where available, this drawing should be read in conjunction with the MGF Design Reference as noted below. == MGF Design Ref. Equipment detailed has been verified in accordance with the MGF Technical File (Technical Guidance for UniShore) available for download from our website. For the latest information on MGF products please visit www.mgf.ltd.uk 3. Loading This design considers loading from information supplied to MGF and, where applicable,	calculations in accordance to relevant standards and codes of practice. All loads and reactions detailed are unfactored unless noted otherwise. If loading more onerous than that shown, this design is void and the customer must inform MGF for a redesign. 4. Foundations / Support Where MGF equipment is supported / anchored / tied to an existing structure or ground, the Customer must ensure that the existing structure or ground is adequate to safely support the imposed loads. This design has not made any allowance for differential settlement of supports / foundations. 5. Anchors / Fixings Any necessary design and supply of anchors and fixings are the responsibility of the customer. The customer must ensure suitable fixings to resist the imposed loads as detailed. 6. Eccentricity The customer must ensure that all legs are erected plumb and loaded concentrically. For general tolerances this design considers a maximum total eccentricity of 25mm in one axis. If this is exceeded on site the customer must contact MGF immediately. 7. Installation & Removal The customer must ensure stability during erection and dismantling of the temporary supports. Additional temporary supports, struts and tubes may be required to aid stability during erection & dismantling. It is the customer's responsibility to produce a method statement for the safe installation and removal of the temporary supports. 8. Bracing The stability of the temporary works may be dependent on bracing being installed. The system must not be loaded until all detailed bracing is installed.	9. Working At Height / Safe Access & Egress Suitable edge protection and means of safe access & egress must be provided. 10. Deflections The customer must check and advise of any deflection limitations prior to commencing works. Excessive deflection can lead to structural cracks and damage to the existing brickwork / masonry. 11. Packing Where packing is required, the customer is to ensure it is adequate to transfer the load effectively. 12. Existing Wall It is the customer's responsibility to ensure the existing wall is capable of spanning between needles / supports. The customer must verify this prior to commencing works. 13. Loose Masonry All loose or damaged masonry must be removed. The customer must be aware of the risk of loose or damaged masonry falling between needles / supports. Suitable controls must be in place to mitigate risks to operatives. 14. Accidental Impact The customer must ensure suitable controls are in place to prevent impact / collisions with the temporary works. No allowance has been made for loading due to accidental impact. 15. Global Stability The integrity and global stability of the existing structure is the customer's responsibility. This has not been considered as part of the temporary works design. The customer should monitor the existing structure for signs of movement.
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Figure 6 – Drawing Notes

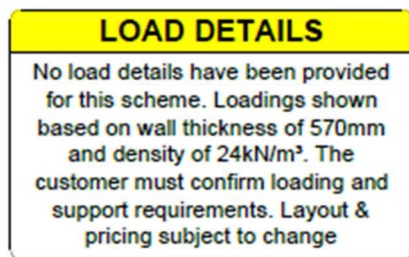


Figure 7 – Load information

Considering each elevation in isolation for the subsequent sections.

4.1 North West Elevation

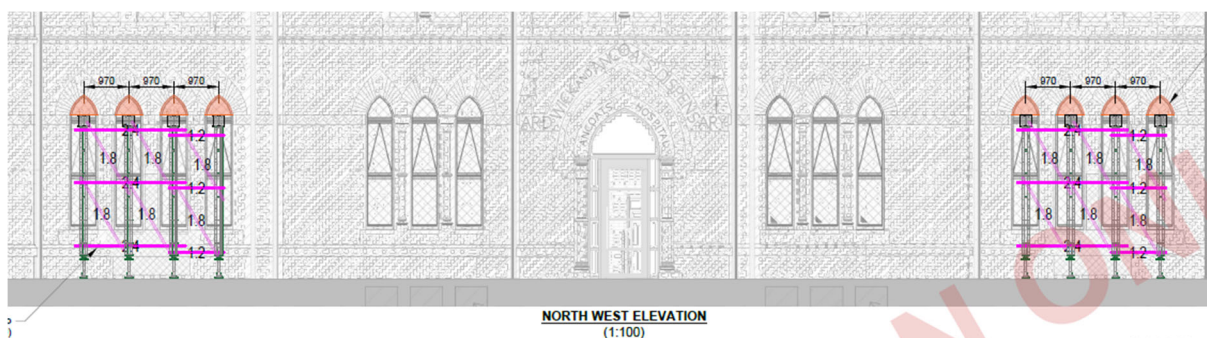


Figure 8 – NW Elevation Propping

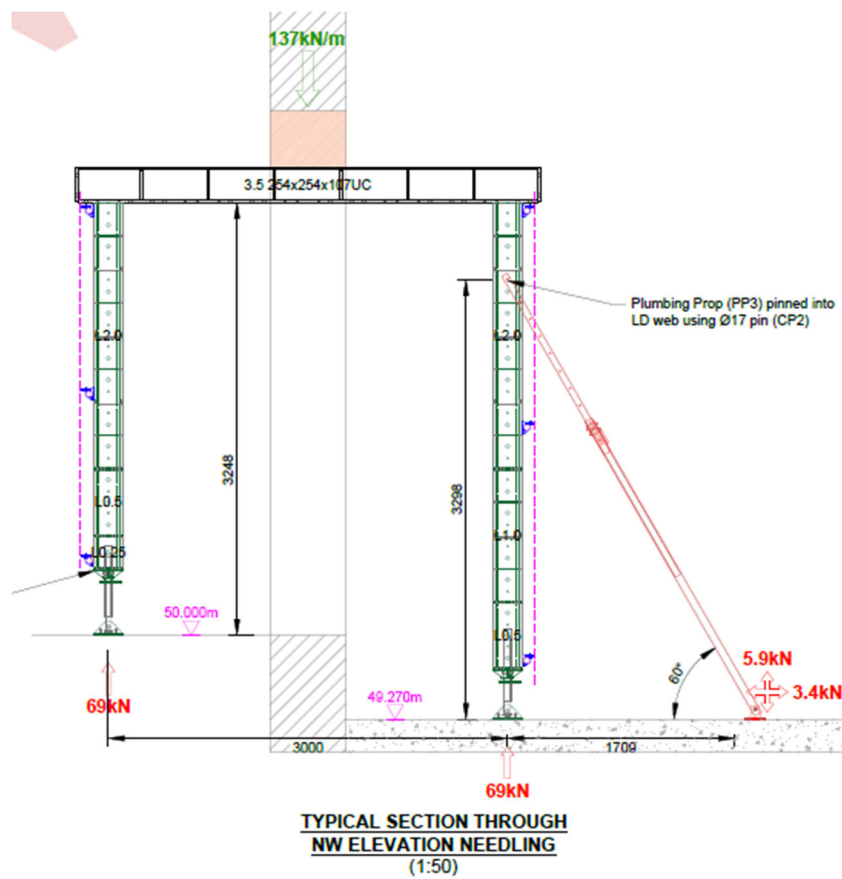


Figure 9 – NW Typical Section

4.2 North East Elevation

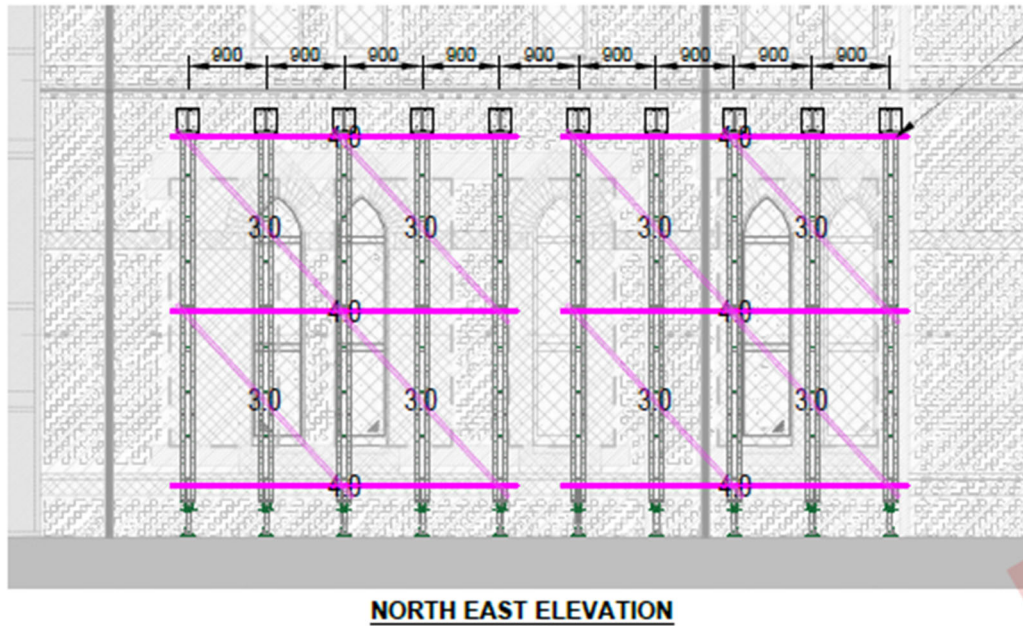


Figure 10 – NE Elevation Propping

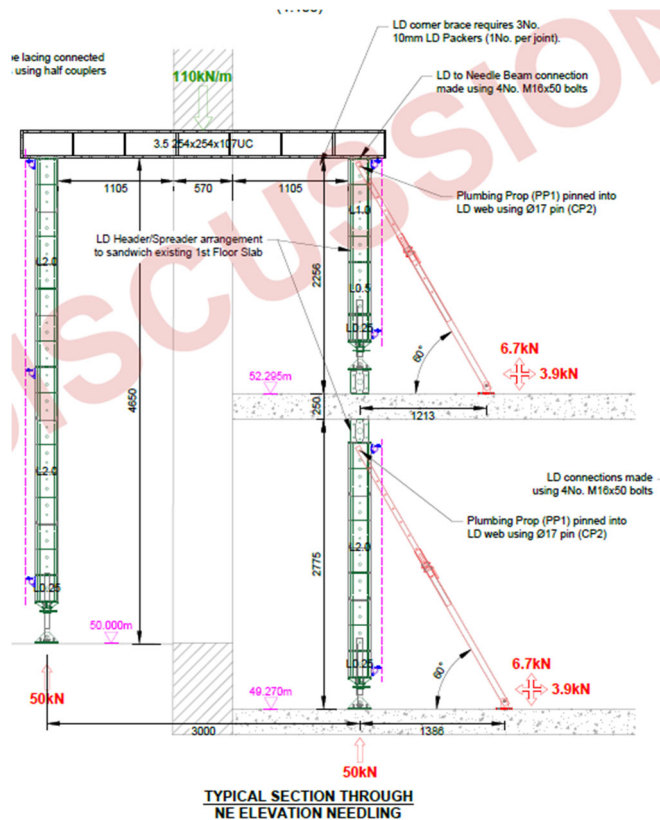


Figure 11 – NE Typical Section

4.3 Equipment

MGF Unishore Light Duty props with UC grillage needle beams.

2.2 PROP AXIAL CAPACITY

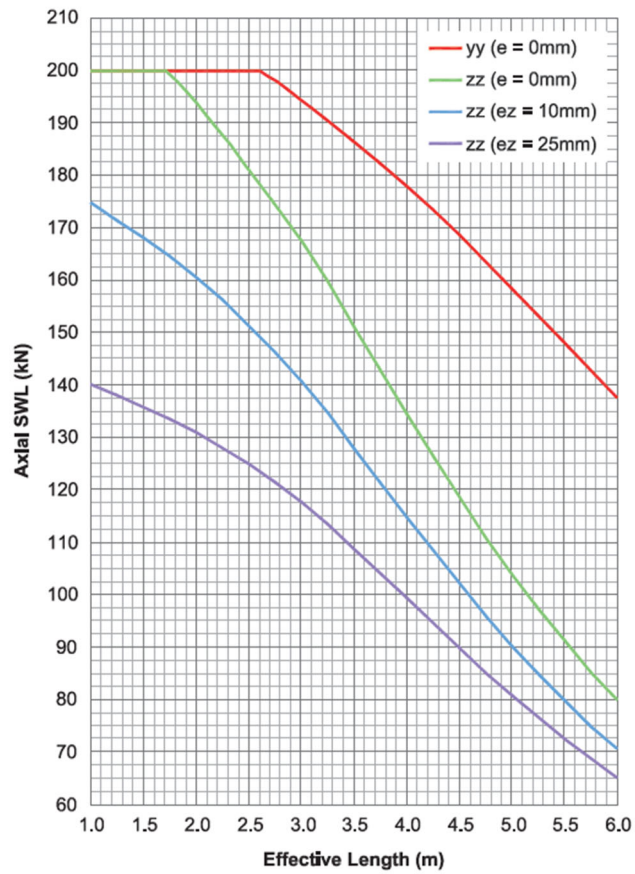


Figure 12 – Prop Capacity

2.4 COMPONENTS

LIGHT DUTY SCREW JACK

Bolts to the prop end plate providing fine length adjustment. Bar can be pinned to a UniShore prop web or the light duty screw jack base plate with CP1 (Ø30mm pin). Suitable for reversing loads. Bar design prevents over extension.

Product Code	LSJ
Weight (kg)	15.8
Axial Compression (kN):	
Concentric (e = 0mm)	200
Eccentric (e = 25mm)	160
Axial Tension (kN)	100
Bar Material Grade	EN16T

Note: Ensure screw jack assembly and threads are greased prior to use to aid load release.

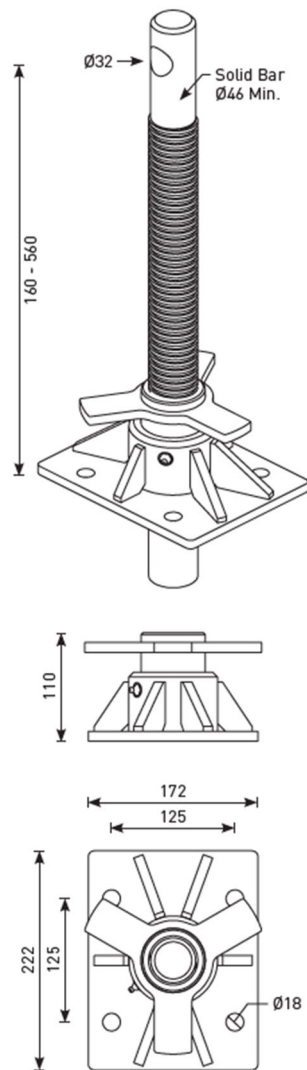


Figure 13 – LSJ

LIGHT DUTY PLUMBING PROP

Provides a light duty push pull solution for plumbing and alignment purposes. Comes complete with base plate. Pinned to the web of the prop extension using high grade Ø17mm pin (CP2).

Product Code	PP1
Weight (kg)	19.3
Max. Axial Load (kN)	10

Note: Plumbing Prop capacity limited by pinned connection to LD prop and is valid for max. prop extension for push pull loading.

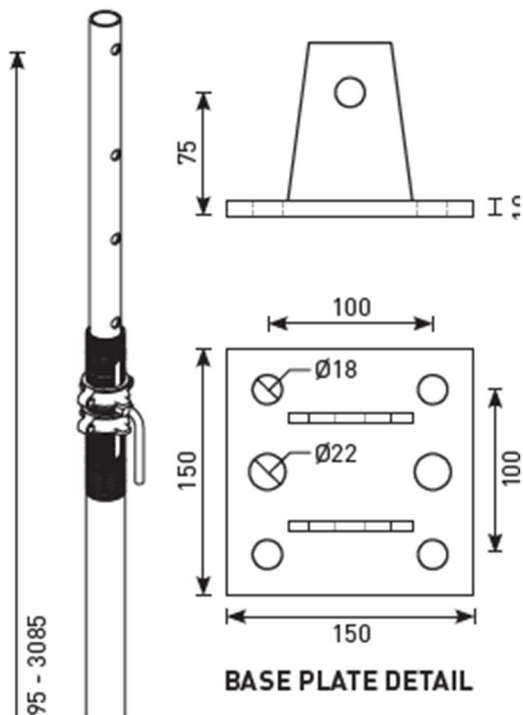


Figure 14 – LD Plumbing Prop

Gross Section Properties			
	B152	B203	B254
Area (cm ²)	91	121	152
Weight (kg/m)	37	60	107
I _{yy} (cm ⁴)	2210	6120	17500
I _{zz} (cm ⁴)	706	2060	5930
r _y (cm)	6.85	8.96	11.3
r _z (cm)	3.87	5.20	6.59
Min. Yield (N/mm ²)	355		

Figure 15 – UC Needle Beam Properties

5.0 Design

5.1 Check Calculations

UDL from existing wall = 137kN/m max

Props at maximum 970mm c/c

Point load = $137 \times 0.97 = 133\text{kN}$

Needle span = 3.0m

Modelling the UC:

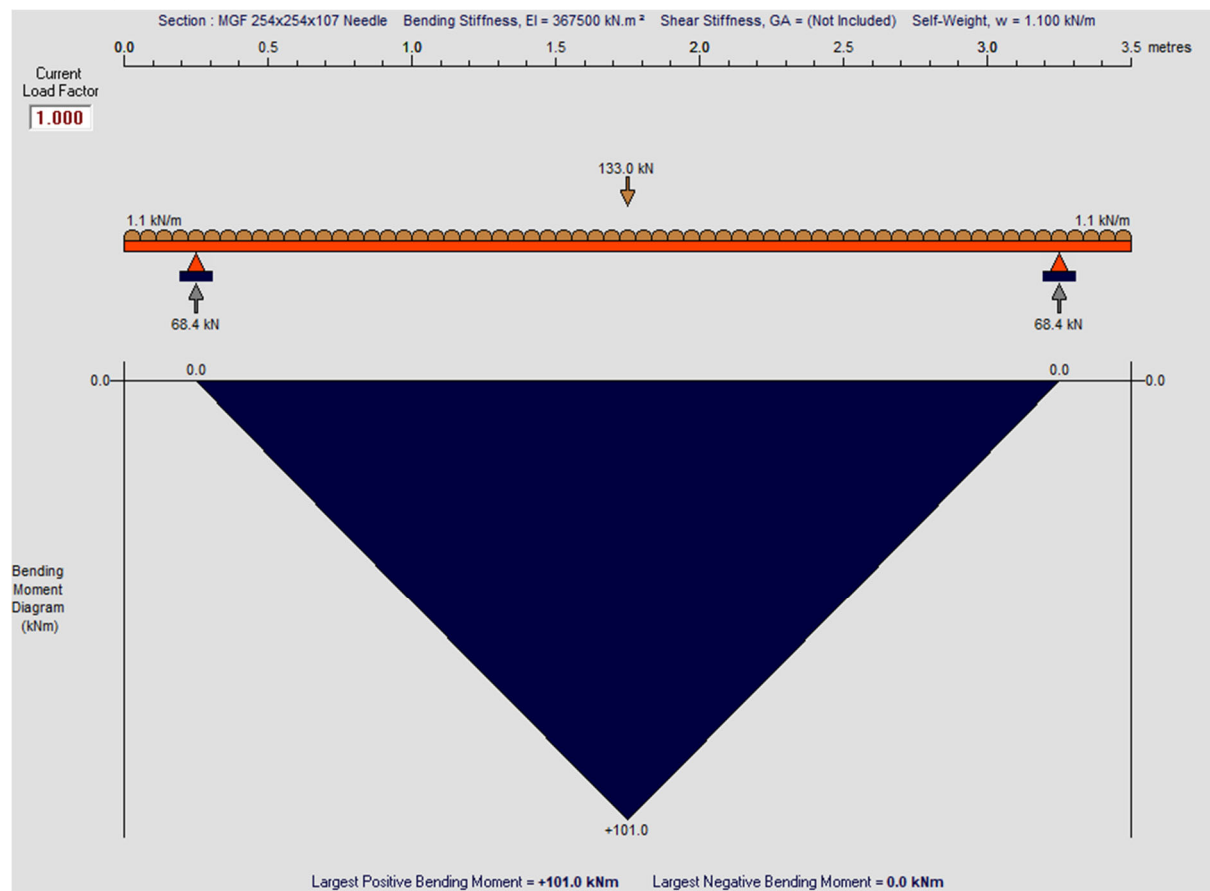


Figure 16 – SLS Needle Bending Moment Diagram

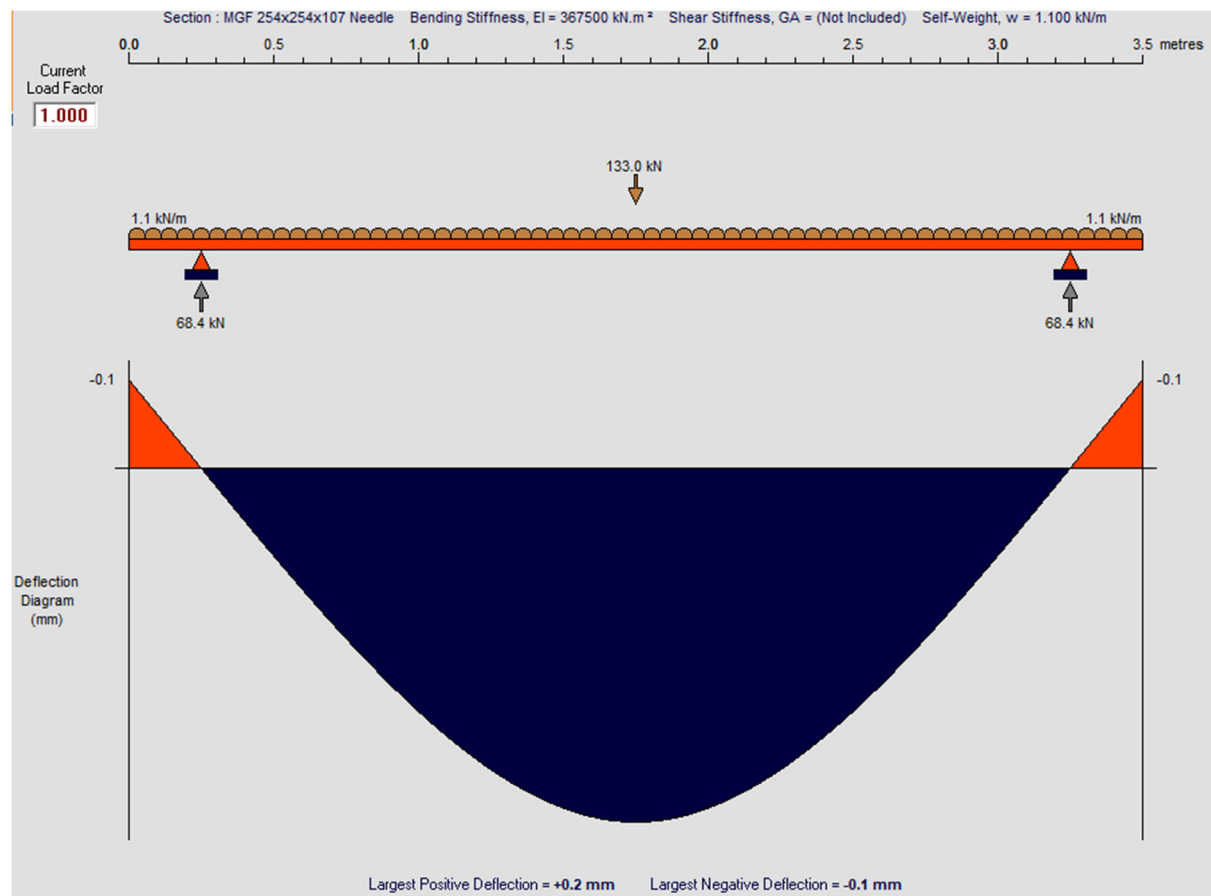


Figure 17 – SLS Needle Deflection Diagram

SLS Moment = 101kNm

ULS Moment = 101 x 1.5 = 152 kNm

Universal columns (UC) ▾ Buckling resistance moment with S355 ▾

Print design data Export to excel

Section designation	C ₁ (¹)	Buckling Resistance Moment M _{b,Rd} (kNm) for length between lateral restraints (m)											
Cross-section resistance (kNm)		1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0	6.0	7.0	8.0	
Classification	2.00	645	645	645	645	645	645	645	645	645	645	645	
Class = 1	2.50	645	645	645	645	645	645	645	645	645	645	645	
254 x 254 x 107	1.00	511	511	511	507	493	480	467	442	418	395	373	
	1.13	511	511	511	511	511	500	488	466	444	423	402	
M _{b,y,Rd} = 511	1.35	511	511	511	511	511	511	511	499	480	462	444	
M _{b,z,Rd} = 240	1.50	511	511	511	511	511	511	511	511	500	484	467	
	1.77	511	511	511	511	511	511	511	511	511	511	502	
	2.00	511	511	511	511	511	511	511	511	511	511	511	
Class = 1	2.50	511	511	511	511	511	511	511	511	511	511	511	

Figure 18 – Blue Book Buckling moment of resistance

M_{R,cd} = 480 kNm >> 152kNm based on no end restraint ...OK!

SLS Deflection = 0.2mm < L/500 = 0.6mm ...OK!

Reaction Load = 69kN

Prop axial capacity and component axial capacity = 200kN in compression ...OK!

Axial capacity of the plumb/bracing props = 10kN

2.5% of the vertical load = $2 \times 69 \times 2.5\% = 3.5\text{kN}$

Resolve for 60-degree prop angle = 7kN < 10kN ...OK!

Vertical load = 6.1kN

5.2 Prop Foundations

Loads imposed on the permanent works shall be approved by the Permanent Works Designer.

Reaction load from the props external to the building are onto the existing footpath/road/stoned up area to the perimeter of the building.

Max outrigger load = 69kN

It is recommended to adopt HDPE pads or hardwood timber spreaders beneath the props.

Without detailed assessment based on the current site condition of the supporting surfaces it is recommended to ensure a minimum 150mm of competent compacted stone/ road construction/ footpath build-up with a minimum 800x800mm square mats.

5.3 Timber Infill

The window reveals require a timber infill to be scribed to suit the existing gothic arch profile of the windows that can adequately transfer the vertical load from the walls to the needle beam below.

It is proposed to transfer the load using a timber infill formed using plywood ribs braced with timber noggins and faced with a thin plywood rolled over the profile. The gap between the falsework and the brickwork will then be filled with dry-packed mortar to create uniform contact with the brickwork.

To ensure uniform support the needles shall be doubled up through the windows mitigating the risk of rotation over the support should the load be applied eccentrically.

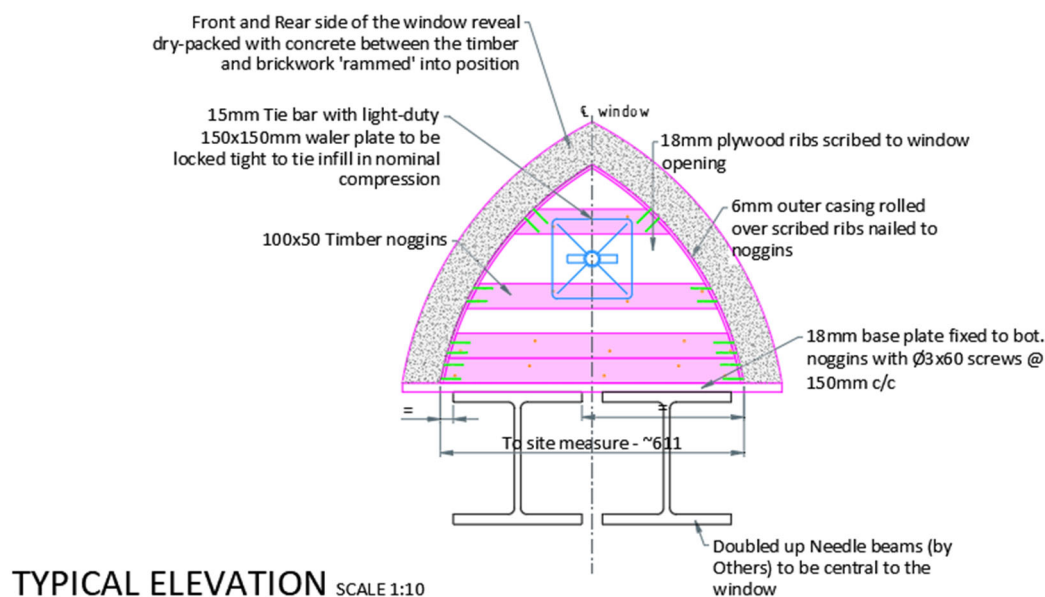


Figure 19 – Elevation

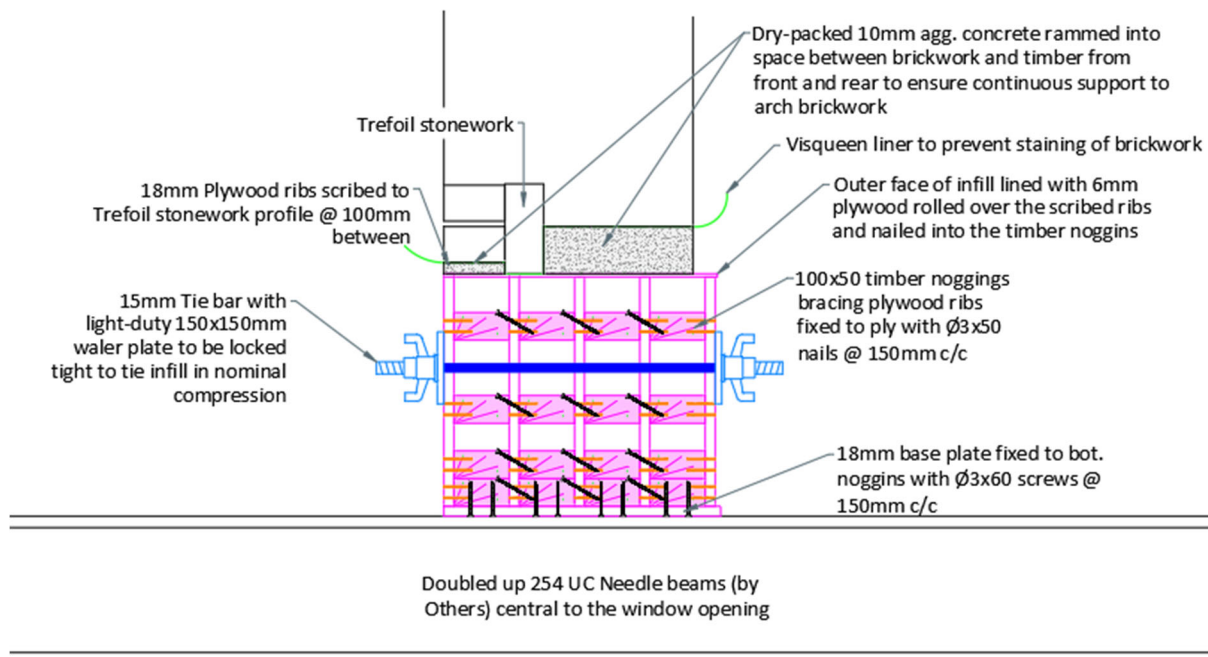


Figure 20 – Typical Section

Load = 137kN/m

Props @ 970mm

Total load to be supported = 133kN

UDL along the section = $133/0.5 = 266\text{kN/m}$

UDL on the overall outer face in the vertical direction = $266/0.611 = 435\text{kN/m}^2 = 0.44\text{N/mm}^2$

Typical dry pack mortar 1-day Strength = $20\text{N/mm}^2 > 0.44\text{N/mm}^2 \dots \text{OK!}$

Compressive strength parallel to the grain for a Finnish birch sanded plywood = 9.6N/mm^2

Panel shear = 1.58N/mm^2

Bearing on the needles below:

$P = 133000 / 18 \times 254 \times 5 \times 2 = 5.82/2 = 2.9\text{N/mm}^2 < 9.6\text{N/mm}^2 \dots \text{OK!}$

The ply is fully restrained against buckling with noggins, a base plate and through tie to ensure it acts as a grillage.

The spacing of the ribs is such that the bricks span from rib to rib and does not rely on the 6mm facing ply which has been adopted to improve uniform contact only.

The infill is in pure compression with the doubled up needles providing continuous support to the underside of the base plate.

6.0 Summary

6.1 Propping Checks

The proposed propping system is suitable for the anticipated loads.

Reaction load from the props external to the building are onto the existing footpath/road/stoned up area to the perimeter of the building.

It is recommended to adopt HDPE pads or hardwood timber spreaders beneath the props.

Without detailed assessment based on the current site condition of the supporting surfaces it is recommended to ensure a minimum 150mm of competent compacted stone/ road construction/ footpath build-up with a minimum 800x800mm square mats.

6.2 Timber Infills

A timber infill design has been detailed on the sketch found in Appendix A.

The design requires doubling up of the needles through the windows to ensure continuous support for the infills and mitigate

Plywood to be Finnish Birch 18mm or similar approved.

Timber to be C24 grade.

Dry packing to be proprietary dry pack mortar (Parex Drypack C or similar approved) or semi-dry 10mm aggregate concrete cured to min 20N/mm² prior to loading.

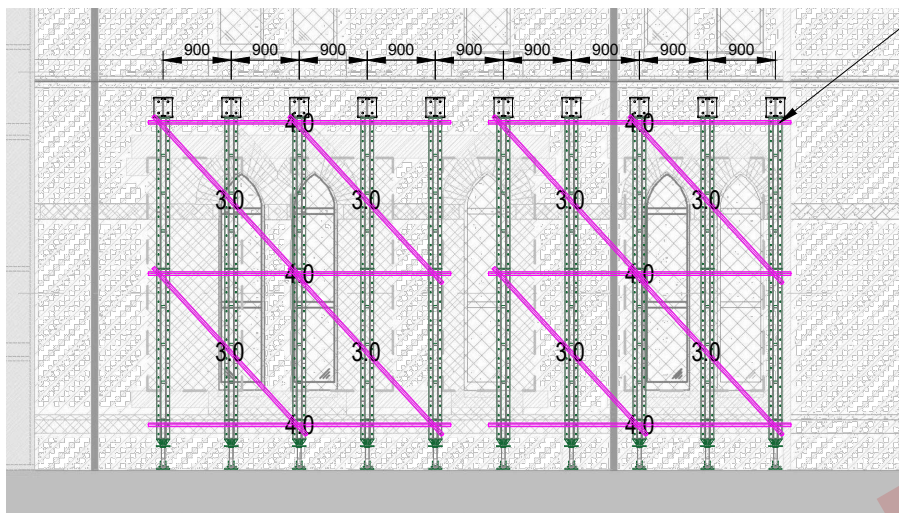
APPENDIX A

68628-100 T2	-	MGF PROPPING & NEEDLING DRAWING
P1763-EWC-T10-SKT-001_A	-	TIMBER INFILL SKETCH



Scaffold tube bracing connected to lacing using swivel couplers (SC50)

NORTH WEST ELEVATION
(1:100)



Scaffold tube lacing connected to LD props using half couplers

NORTH EAST ELEVATION
(1:100)

UNISHORE LIGHT DUTY		
CODE	ITEM	Weight (kg)
LE0140	140mm Ext.	6.10
LE0250	250mm Ext.	7.30
LE0500	500mm Ext.	10.20
LE1000	1000mm Ext.	17.20
LE2000	2000mm Ext.	30.50
LSJ	Screw Jack	15.80
LRPA	Raking Prop Adaptor	15.60
LSJB	Base Plate	6.20
LPB	Pivot Block	13.80
LAP	Anchor Plate	7.40
PP1	Plumbing Prop	19.30

SCALED DRAWINGS

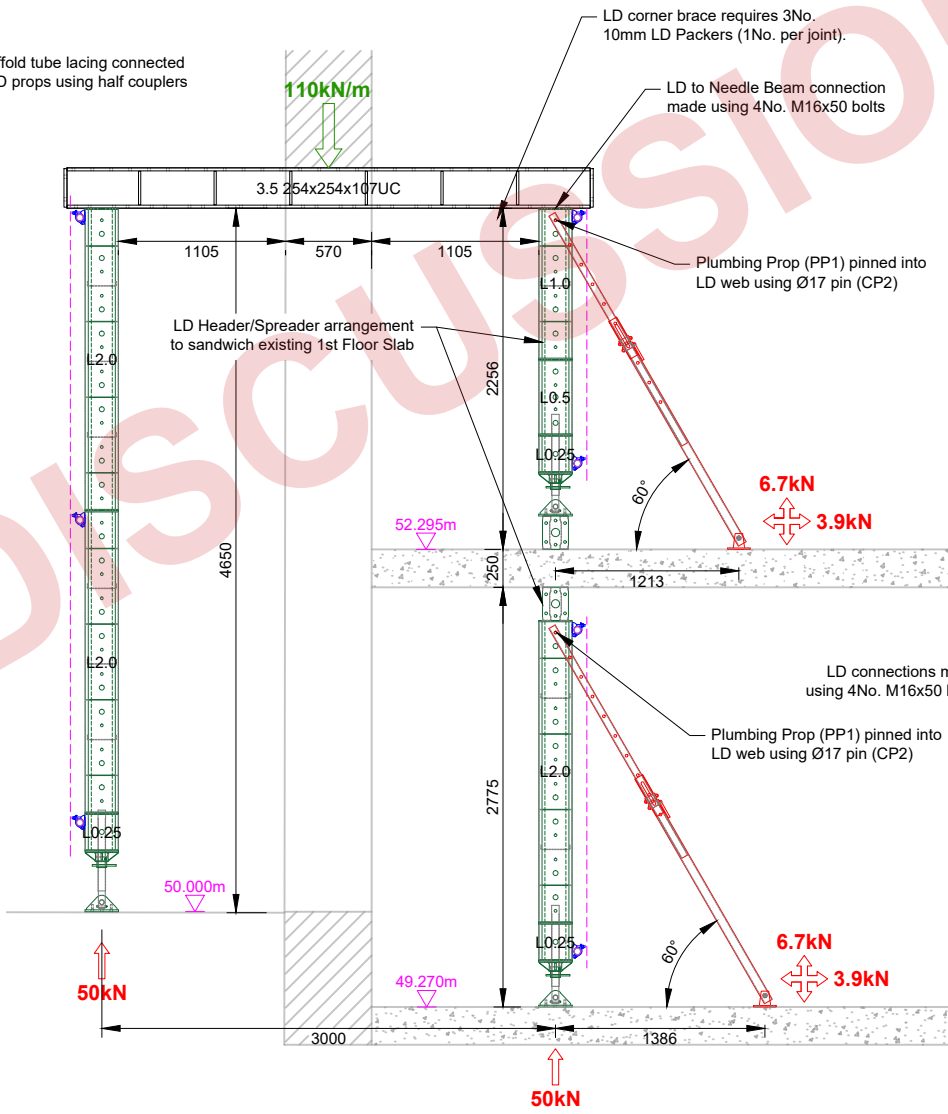
Layout created from scaled drawings. The customer must check and confirm layout and fit of equipment is suitable to avoid onsite discrepancies and potential re-designs. It is recommended full structural details / CAD drawings are provided.

CONCEPTUAL SCHEME

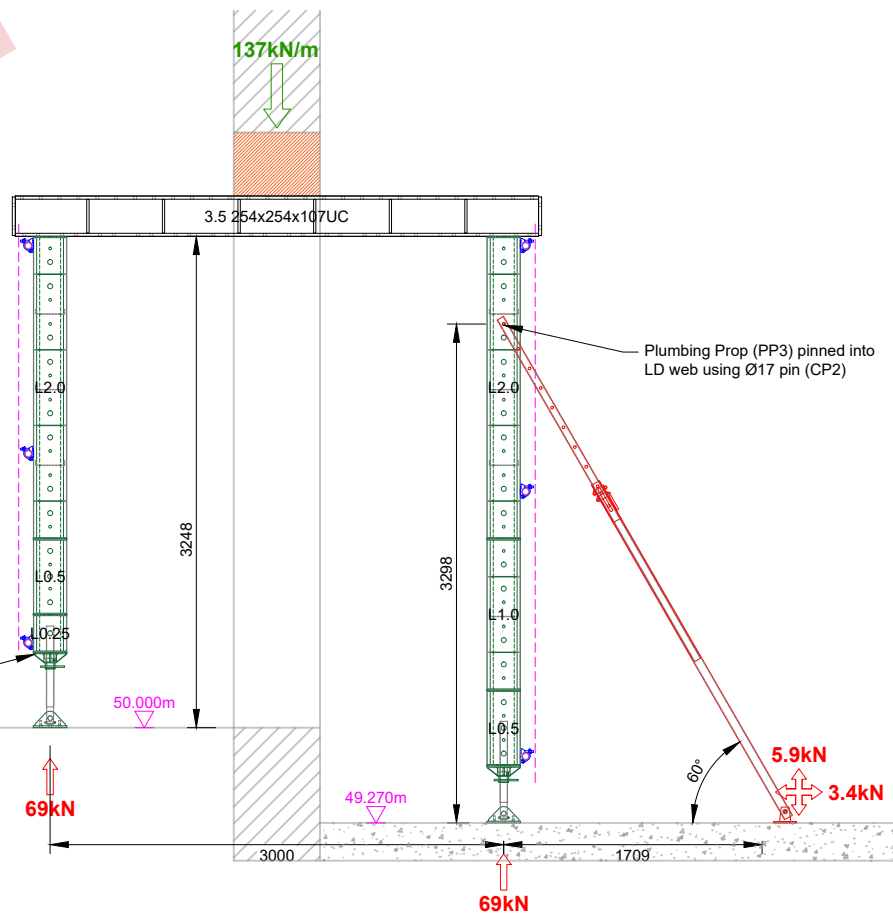
For discussion purposes only. Equipment specified subject to change. Pricing subject to change

LOAD DETAILS

No load details have been provided for this scheme. Loadings shown based on wall thickness of 570mm and density of 24kN/m³. The customer must confirm loading and support requirements. Layout & pricing subject to change



TYPICAL SECTION THROUGH NE ELEVATION NEEDLING
(1:50)



TYPICAL SECTION THROUGH NW ELEVATION NEEDLING
(1:50)

DRAWING NOTES

- Copyright**
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- Basic of Design**
This design has been prepared from information supplied to MGF by, or on behalf of the Customer (ref. below), who must ensure requirements have been correctly interpreted.
210005-BA-ZZ-XX-DR-A-(05)210
210005-RDG-XX-ZZ-DR-S-0051 (1)
Where available, this drawing should be read in conjunction with the MGF Design Reference as noted below.
MGF Design Ref.
Equipment detailed has been verified in accordance with the MGF Technical File (Technical Guidance for UniShore) available for download from our website. For the latest information on MGF products please visit www.mgf.ltd.uk
- Loading**
This design considers loading from information supplied to MGF and, where applicable,

- calculations in accordance to relevant standards and codes of practice. All loads and reactions detailed are unfactored unless noted otherwise. If loading more onerous than that shown, this design is void and the customer must inform MGF for a redesign.
- Foundations / Support**
Where MGF equipment is supported / anchored / tied to an existing structure or ground, the Customer must ensure that the existing structure or ground is adequate to safely support the imposed loads. This design has not made any allowance for differential settlement of supports / foundations.
 - Fixings**
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The customer must ensure that all legs are erected plumb and loaded concentrically. For general tolerances this design considers a maximum total eccentricity of 25mm in one axis. If this is exceeded on site the customer must contact MGF immediately.
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 - Bracing**
The stability of the temporary works may be dependent on bracing being installed. The system must not be loaded until all detailed bracing is installed.

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- Packing**
Where packing is required, the customer is to ensure it is adequate to transfer the load effectively.
- Existing Wall**
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- Loose Masonry**
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- Accidental Impact**
The customer must ensure suitable controls are in place to prevent impact / collisions with the temporary works. No allowance has been made for loading due to accidental impact.
- Global Stability**
The integrity and global stability of the existing structure is the customer's responsibility. This has not been considered as part of the temporary works design. The customer should monitor the existing structure for signs of movement.



RESIDUAL RISKS

Where possible, risks are eliminated from this proposal during the design process. For any residual risks please read all notes. If in doubt, contact MGF

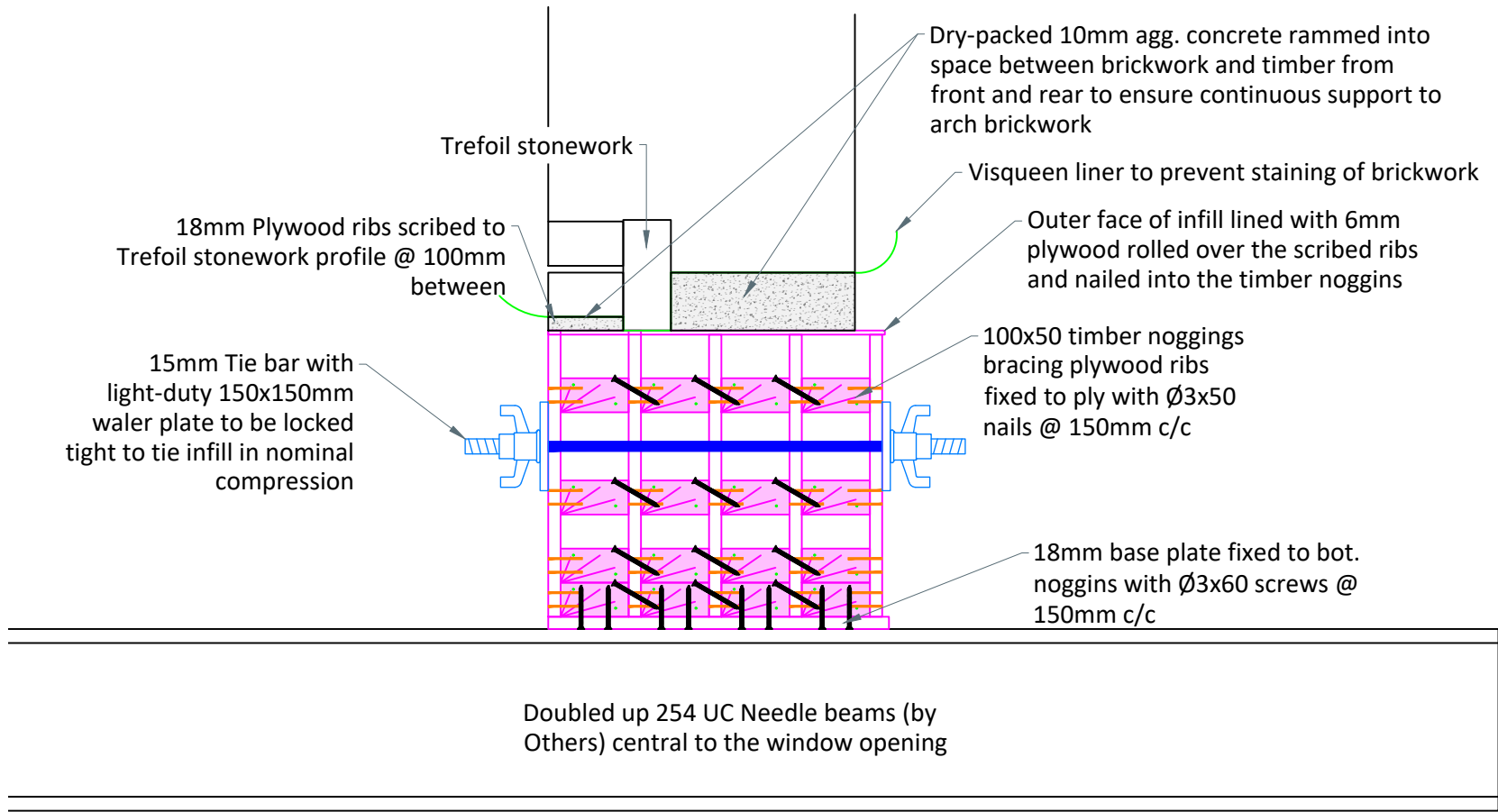


STRUCTURAL SUPPORT SOLUTIONS

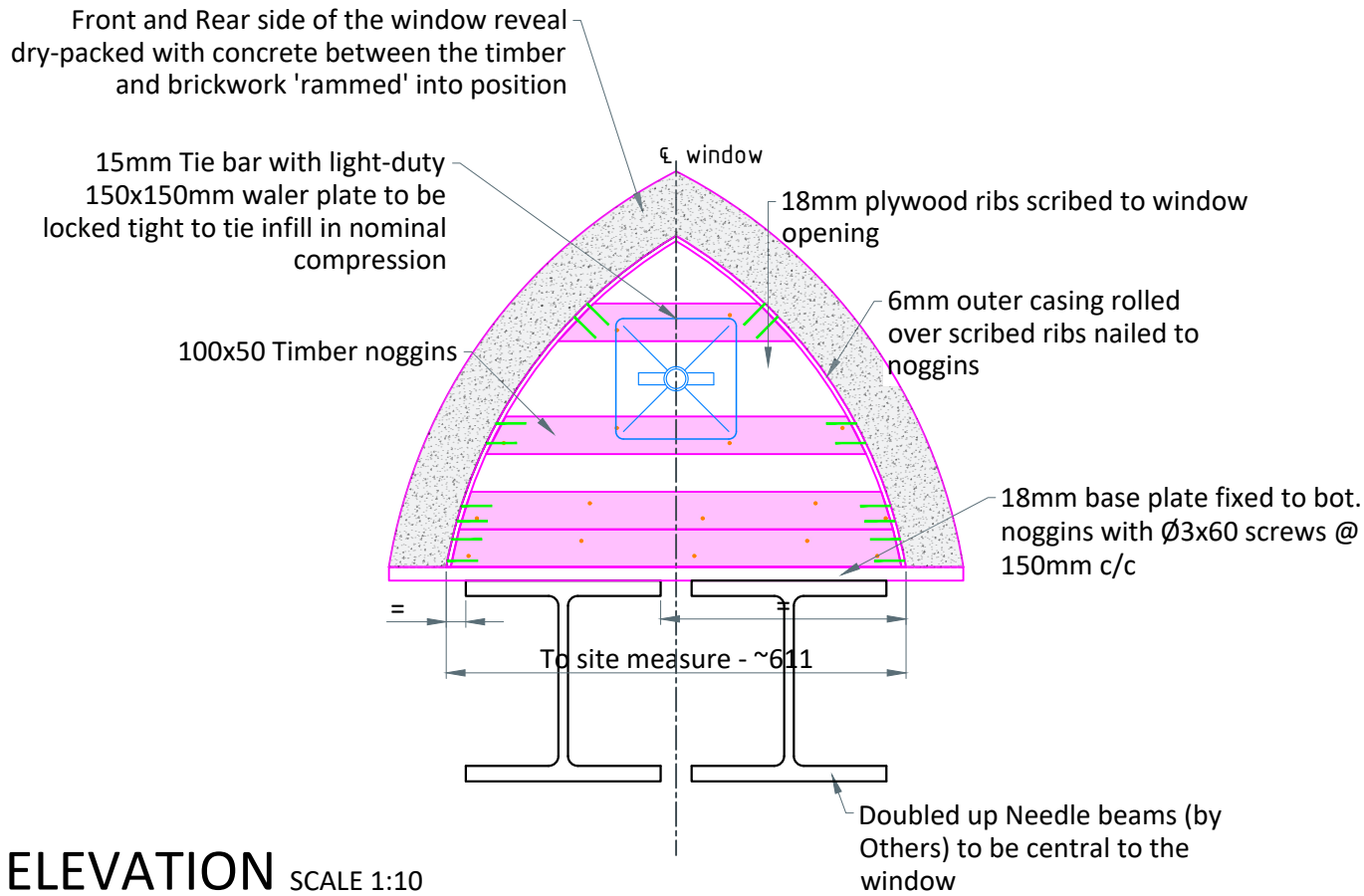
MGF Design Services Ltd.
Foundation House, Wallwork Road, Astley, Manchester, M29 7JT
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T2	Levels/arrangement change as per customer request	10.10.22	JAG	JAG	SB
T1	Issued for Discussion Only	03.10.22	JAG	JAG	SB
Issue	Issue Description	Date	Designed	Drawn	Checker

Customer					
Eric Wright Construction Ltd.					
Site					
Ancoats Dispensary, Old Mill Street M4 6EB					
Scheme					
Needling to Facade					
Drawing Title				Sheet	A3
NW & NE Sections/Elevations				Scale	Varies
Issue Status				CONCEPTUAL	
Drawing No.				Rev.	T2
68628 - 100					



TYPICAL SECTION SCALE 1:10



TYPICAL ELEVATION SCALE 1:10

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
Notes below are residual hazards/risks specific to this design and associated with this type of work.
CONSTRUCTION
C1. The infills shall be fabricated to suit a site measure of each window.
C2. Drypack to cure to 20N/mm ² prior to loading.
OPERATIONS, MAINTENANCE
O1. Infill Design Load 137kN/m
DEMOLITION, REMOVAL
N/A
Refer to general notes and the principal contractor for more information about the risks associated with this work.

- NOTES
- All dimensions in millimeters. All levels in metres.
 - This drawing is to be read in conjunction with all other Engineer's, Architects and Specialist's drawings, the specifications, bill of quantities and contract documents.
 - Plywood to be Finnish Birch or similar approved.
 - Timber to be C24 Grade UNO.
 - Dry packing to be proprietary dry pack mortar (Parex Drypack C or similar approved) or semi-dry 10mm aggregate concrete cured to min 20N/mm² prior to loading.

Rev.	Date	Description of Revisions	Drawn	Ck'd	App
A	16/01/23	SKETCH	HB	SK	HB

Status **SKETCH**

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Tel: 01772 254322
mail@pascoe-ltd.co.uk

Project Title

ANCOATS DISPENSARY

Drawing Title

T10 - WINDOW PROPPING TIMBER INFILLS

Drawn By	Henry Brady	Sig.		Date	16/01/23
Checked By	Sudhakara Karri	Sig.		Date	16/01/23
Approved By	Henry Brady	Sig.		Date	16/01/23
Scale	As Shown (A3)	Sheet	1 of 1		

Drawing Number	Revision
P1763-EWC-T10-SKT-001	A