



APPENDIX D

METHOD STATEMENT FOR THE REMOVAL OF REDUNDANT FIXINGS TO BRICKWORK



METHOD STATEMENT

Norman Shaw North

Removal of Redundant Fixings to Brickwork

DATE: September 2021
RAMS No: 01
Rev No: 02

Principal & Specialist Contractors in Restoration, Conservation & New Build Masonry

E: info@stonewest.co.uk T: 020 8684 6646 F: 020 8684 9323 Web: www.stonewest.co.uk

Stonewest Ltd, 4 Dean Stanley Street, Westminster, London. SW1P 3HA

**Method Statement: Norman Shaw North Project
Removal of Redundant Fixings to Brickwork**



a) REVISIONS

Review/Revision	Date	Reviewed By	Date of Re-issue	What Has Changed
Draft Rev 01	May 2021	Mr J McCarthy	04/09/2021	n/a
		Den Daley (Wates) & (Leon Turrell)	07.09.2021	Further Methodology Clarifications
Draft Rev 02	October 2021	Mr J McCarthy	11/10/21	Removal of Plug Brick Repair Option

b) APPROVALS

Approved By	Title	Signature
Mr J McCarthy	Senior Project Manager	

c) CIRCULATION

RAMS No.	Rev No.	Issued to:	Location:
No. 000	000	Stonewest Ltd	Head Office, London
No. 01	000	Wates	Wates Office
No. 02	000	Wates	Wates Office



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

CONTENTS

No.	Details
1.	Related Documents
2.	Nature of Works
3.	Personnel & Responsibilities
4.	Method of Work
5.	Risk & Controls
6.	Access & Egress
7.	Lighting
8.	Plant & Equipment
9.	Health & Welfare
Appendices	
A	Health & Safety Method Statement Briefing Register
B	Risk Assessments

NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

1.0 RELATED DOCUMENTS

Stonewest Safety Management System incorporating Health & Safety Policy
(Available upon request).

2.0 NATURE OF WORKS

Works will consist of various methods that involve the removal of redundant scaffolding tie fixings from the brick facades of the Grade (1) listed Norman Shaw building in Westminster, London SW1. The repair methodology will consist of two options:

- a) Whole brick replacement with a suitable matching brick sourced from salvaged (Chimney demolition works).
- b) Whole brick replacement with an suitable, approved new handmade Lambs brick – if an insufficient quantity of salvaged bricks available.

***It must be noted that at this point final quantities of suitable salvaged bricks cannot be pre-determined prior to chimney stack deconstruction.**

If sufficient quantities of existing bricks cannot be salvaged, a mix of both new and salvaged bricks may be required to carry out all the tie repairs.

Samples of new Lambs handmade bricks have been issued for approval. Built exemplars comprising of new Lambs bricks will be produced for review as required.

It is to be noted that the building may have several 'old' type scaffolding tie fixings embedded within the bricks on Norman Shaw North. Modern scaffold tie fixings are in screw form (Excalibur bolts) that are used in preference to the raw bolt types that expand (when the bolt is inserted and tightened).



Excalibur Ring Bolt



Excalibur 'Hex' Head

Pull out tests have been carried out by the scaffold contractor to confirm if the brick is suitable to determine the best fixing solution.



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

Option A & B - Full Replacement Bricks (Stretchers)

Bricks containing existing expanding type fixings - including the in-situ wire netting fixings will receive a full new replacement brick. The brick will be sourced either from the salvaged bricks from chimney demolition works or from the new handmade bricks supplied by Lambs

New handmade bricks will be chosen from the approved range of bricks (based on colour and texture) agreed with the Architect and approved through planning condition discharge.

The brick to be replaced will be removed carefully using hand tools. The Restorer will ensure that no damage to the abutting bricks occurs in the process of removal. Loose or residual mortar attached to the remaining bricks will be carefully removed using hand tool techniques.

New bricks will be bedded in and re-pointed in a like for like mortar to match the existing in terms of strength, colour and aggregate composition. An approved bedding / mortar recipe will be produced prior to the start of the works and will form part of the exemplars / mock-ups carried out prior to commencement.

Mortars chosen for use on the project will be produced based on analysis of the existing. This will be carried out prior to commencement of the works and offered to BDP for approval.

Works shall be carried out according to the methodology as specified. The site specific risks will be identified and recorded on a Risk Assessment sheet. A register of any changes to the planned methodology shall be maintained and managed of which records will be kept on site.

Prior to works commencing, a task briefing shall be communicated to the work operative/party. This will be recorded on a Wates "Start Right" form and records shall be maintained and also kept on site. The brickwork methodology will be briefed to the site supervisor, who will then brief the operative/s carrying out the works. At the end of the shift the work area/s shall be tidied and any unsecured or waste materials will be removed.

If any major changes to the agreed method of work need to be implemented, the proposed change(s) needs to be approved by the Principal Contractors' Project Management team. Once the change(s) have been approved the relevant RAMS and task briefing form(s) need to be amended by appending hand written details of any new tasks that are identified and the control methods to be put in place. For minor changes the RAMS and task brief sheet can be amended by the Manager/Supervisor in charge of the works. The amended task briefing form needs to be briefed to the relevant staff and signed to acknowledge the brief has been undertaken and most of all understood.

Stonewest Ltd will not allow any works to proceed or allow any personnel on site unless they have undertaken both the Wates main contractors and Stonewest Ltd's site inductions and have signed the approved RAMS at the site office.

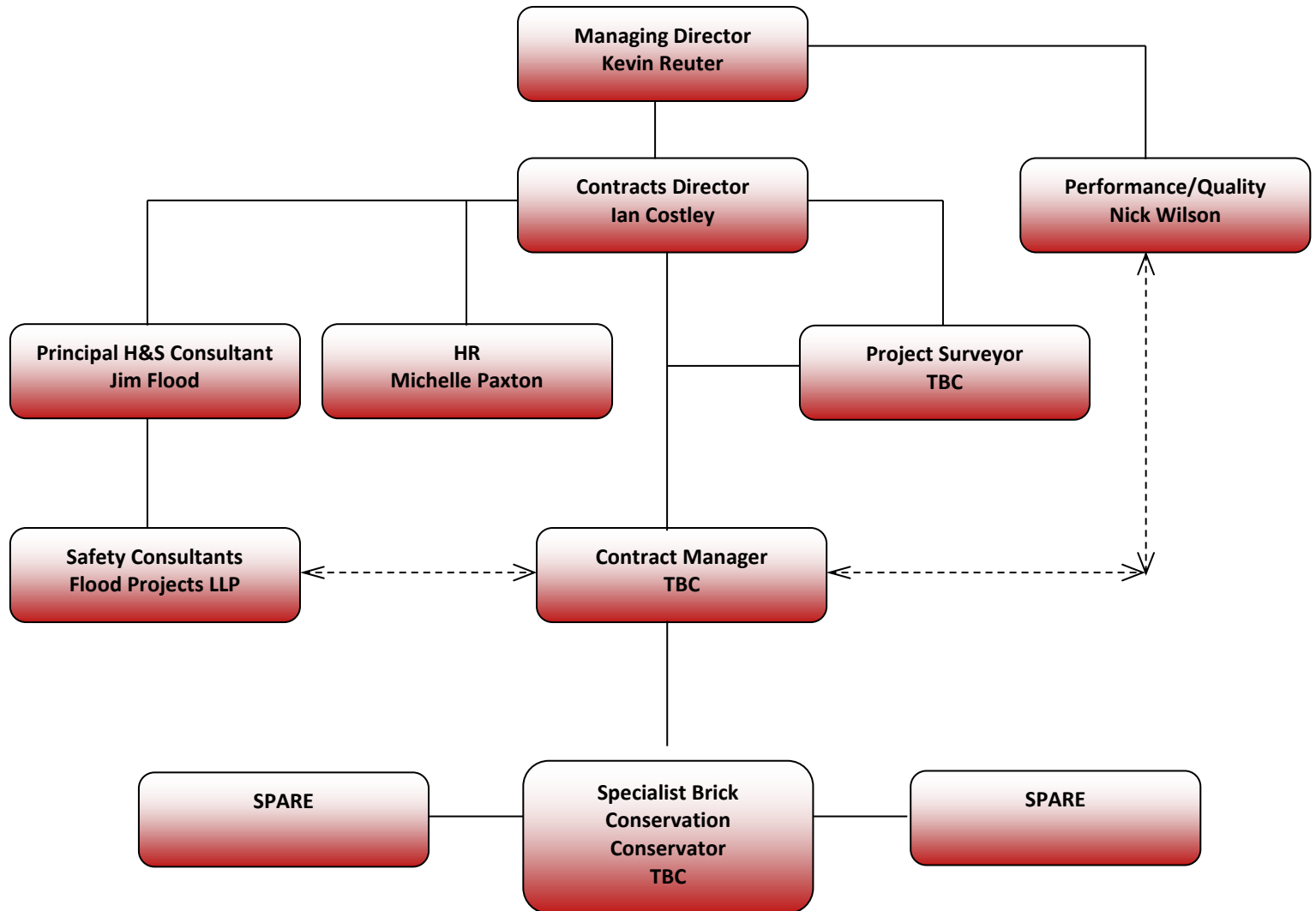


NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

3.0 PERSONNEL & RESPONSIBILITIES

3.1 OVERALL MANAGEMENT STRUCTURE



3.2 CONTACT DETAILS

Kevin Reuter	Managing Director	Stonewest	HQ. 02086846646 Mob.	nwilson@stonewest.co.uk
Ian Crossley	Contracts Director	Stonewest	HQ. 02086846646 Mob. 07910 356 149	icrossley@stonewesthk.co.uk
TBC	Contracts Manager	Stonewest	HQ. 02086846646 Mob. TBC	tbc@stonewest.co.uk
TBC	Site Supervisor	Stonewest	HQ. 02086846646 Mob. TBC	tbc@stonewest.co.uk
Jim Flood	Safety Consultant	Flood Partnership	HQ. 01371859090	tbc@fpartnership.co.uk



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

3.3 ROLES & RESPONSIBILITIES

Contracts Director

TBC

Tel: 020 8684 6646 HQ

Mobile: TBC

Overall responsibility for managing the contract and delegating duties to the contract team. Responsible for all surveying and planning services, liaison with all the Managers, Officers and Contractors involved in the contract on behalf of Stonewest Ltd. Also responsible for quality control and overall project management. Responsible for day to day Site Management and quality control, liaison with the Client at site level and maintenance of site records, and site safety risk assessments.

Contracts Manager

TBC

Tel: 020 8684 6646 HQ

Mobile: TBC

Responsibility for managing the contract and delegating duties to the contract team. Responsible for all surveying and planning services, liaison with all the Managers, Officers and Contractors involved in the contract on behalf of Stonewest Ltd. Also responsible for quality control and overall project management. Responsible for day to day Site Management and quality control, liaison with the Client at site level and maintenance of site records, and site safety risk assessments.

Site Supervisor / Foreman

TBC

Tel: 020 8684 6646 HQ

Mobile: TBC

Responsible for onsite works and all site deliveries. Liaison with the Project Management Team and ensuring that all works are carried out safely in relation to the approved RAMS. Also responsible for quality control issues.



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

3.4 PERSONNEL

1. All Operatives and Staff will attend the Main Contractors Wates site induction prior to commencing works on site
2. The Stonewest Manager/Supervisor will ensure that adequate precautions have been taken to ensure a safe working environment.
3. All operatives and supervision will have suitable training including CSCS certification.
No CSCS no induction.
4. Copies of certificates to be taken and added to the project file retained in the site offices.
5. All plant operators and banksmen/slingers will have the necessary certificates.
6. All operatives will receive the appropriate Method Statement briefings by Stonewest before commencing an area of work.
7. Upon completion of these briefings all operatives will 'sign up' to the Method Statements agreeing that they have read, understood and will comply with the methods and procedures that must be adopted for the works.
8. Weekly toolbox talks will be given to all the operatives involved in the works and as the situation demands.
 - i. The subject matter of each tool box talk will be tailored to suit the current/ future operations.
 - ii. Records of all such training will be held in the Stonewest, copies available if necessary.
 - iii. Daily task briefings will be implemented in the form of Wates "Start Right" forms
9. Stonewest personnel will be made aware that are areas within the building that are of out of bounds. These areas will be clearly defined by signage and anyone found entering without authorisation will be disciplined.

4.0 METHOD OF WORKING

All activities will be carried out in accordance with the safe method of work statements prepared for each activity which will reflect Stonewest Ltd's Health and Safety Policy.

General

1. The works areas are in various areas around the site, to various facades of Norman Shaw building.
2. Appropriate signage (if and where applicable) will be erected in prominent positions warning others of our works that are taking place within the established work zones/locations.
3. PPE: A minimum requirement of hard hats, high visibility vests, steel toed boots, suitable gloves, safety eye protection glasses/goggles or an appropriate face mask to be worn when working. Specific tasks will require additional measures of which will be highlighted in the appropriate Risk and COSHH assessment for that task.

Option (A & B) Whole Brick Replacement.

1. Verify existing netting fixings that are redundant jointly with the project architect and Wates management. A site survey is to be implemented to identify the exact locations of all redundant scaffold tie fixings to the facades of the Norman Shaw building. The locations of all redundant netting tie fixings should be recorded on elevation drawings for records and archive purposes.
2. Before any individual bricks are cut out, all bricks are to be clearly marked with a durable marker identifying each brick to be replaced. Each brick will be measured to ensure reconstruction gets re-indented to its original stature using an approved matching brick type.



3. With reference to the approved brick repair location drawings and schedules and to the approved method of cutting out of any bricks can work commence. There are two method of cutting out an individual brick as follows:

Method (a) the Conservation Restorer using a mechanical rotary 9” angle grinder equipped with a 3mm thick diamond tipped cutting disc, will carefully cut into the centre of the mortar joint (pointing) surrounding the whole brick and slightly beyond into the bedding mortar to an approximate depth of 20-30mm. An additional operative will be in attendance holding the hoover hose over or adjacent to the angle grinder collecting any airborne dust particles to their best ability. Both operatives will always be wearing full PPE during these tasks including breathing respirators (**BS EN 136**) equipped with suitable P2 or P3 dust filters of which can be changed on regular basics.

Method (b) the Conservation Restorer using a handheld Arbortech machine equipped with the appropriate reciprocating blade: **Please refer to Addendum** for details.

The Conservation Restorer with the use of traditional masonry hand tools, for example: a bolster, cold chisel or pointing chisel, will be placed to the top of the mortar recently cut joint (pointing) above the cut where the grinder or Arbortech machine was recently inserted and by slightly tapping the bolster/chisel with enough force to release the mortar without damaging the bottom arris of the above brick. Once the top sections of mortar joint (pointing) has been removed the remaining bottom section/s can be carefully cut out using the same method as just explained above.

4. To cut the brick out in its entirety the Conservation Restorer will use a mini handheld breaker to break out indivual brick/s without damaging adjacent surrounding brickwork. This mini breaker is a lightweight handheld machine equipped with mini a chisel, point or punch. During this process it may be necessary to use handheld masonry chisels or alike to remove segments of brick that require a gentler approach near edges of adjacent good bricks. The Conservation Conservator with many years of experience will decide the best method practicable ensuring damage isn't occurred to adjacent brickwork.
5. Replacement bricks will be unpacked from pallets and carefully placed in a wheelbarrow or similar using softening to protect the bricks whilst in transit. This could be by using cardboard or polystyrene. They will be taken to the work area/s and placed on the working levels or platforms. Under no circumstances should the working platforms be overloaded. It is recommended just a few bricks at any time should be stored on these working platforms and carefully stacked behind brick guards/mesh that will prevent materials from falling.
6. Manual handling will always be kept to a minimum as noted above and not exceeding the height of the brick guards/toe boards in place.
7. The Conservation Restorer will always ensure bricks are laid matching the existing bond/s, ensuring the face of any inserted brick is flush and face level with adjacent bricks, at no point should any bricks be proud or sunken. The approved premixed bedding mortar will be laid on within the cut-out opening using a bricklayer's trowel feed/taken from a spot board or mortar bucket. The trowel will score a line through the centre of the just laid mortar to ensure it is spread evenly. Buttering the brick ends (sides) with mortar that will affix to the bricks beside them. Using the handle of the bricklaying trowel to knock each brick into place and to release any trapped air that may be within the mortar or behind the just inserted brick. Using a builder's line and level to check the brickwork is true both vertically and horizontally. Also ensuring the newly indented brick/s match adjacent bed joint heights. Any excess mortar will be carefully removed with the bricklayer's trowel then the joint will be raked back with a tool suitable for the job to a minimum depth of 10mm deep. This is to allow pointing mortar to be applied later and formed to match the existing surrounding pointing type prior to samples offered.



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

8. Repointing will be carried out by the Conservation Restorer offering samples using specific aggregates formulated for mortar pointing mixed with an approved hydraulic, typically using Natural Hydraulic Lime (NHL). When the approved pointing sample has been chosen it will be mixed to a consistency that will be manageable for the Conservation Restorer brick pointer to apply within the recently raked back brick joints. Mortar will be placed on a hawk of which will be placed beneath the bottom of the previously raked back brick joint/s. The approved pointing mortar can then be pushed into the pre-dampened bed joints using a trowel called a "slasher". This is typically approximately 7" long by the width of the brick joint at approximately 6 or 7mm depending. The slasher will then be run along the applied mortar back and forth making a continuous smooth straight line of the applied pointing mortar within the brick bedding joint. This will be suitable for weathered pointing or normal flush pointing. Excess mortar will be carefully removed using suitable hand trowels. A soft bristle brush (broom head) will normally be used to soften any sharpness to the newly applied pointing and will also remove any surplus mortar. Lime mortar pointing is characteristic to buildings of this period, a typical gauge is as follows: 1 part NHL 3.5 to 3 parts fine graded sharp sand put through a sieve to remove any large stone particles from the mortar before water is added. Both sand and lime can be supplied from Buildbase builders merchants based in Peckham, South East London.
9. At the end of any shift all surplus materials will be taken to an agreed temporary storage area ready for removal from site.
10. Temporary protection will be in place as work proceeds using Hessian or Polythene as and where necessary. Close monitoring will take place of daily temperature recording. Bricklaying can only commence when the temperature is 3°+ and rising.

5.0 Operative competencies required:

Operatives – CSCS, English Heritage Card and Conservation Conservator's Diplomacy
Site Supervisor – CSCS and SSSTS

6.0 RISKS & CONTROLS

Please refer to the attached risk assessments and COSHH assessments that are applicable to these works attached in Appendices B and C.

7.0 ACCESS & EGRESS

7.1 To and From Site

1. To enter site from designated access point, sign in show ID card at security desk.
2. Report to Wates site office within the property and prepare for work using the welfare facilities.
4. Repeat when leaving and hand in ID card to security when leaving.

7.2 Around Site

1. Access ways are to be kept free from obstructions at all times around the work area.
2. The work area will be isolated with barrier tape and signage whilst the works are in progress within the trial area.
3. The movement of equipment and materials is to be by suitable plant wherever possible.



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

8.0 LIGHTING

1. Safety and emergency lights have been installed throughout the Site.
2. Task lighting will be provided by Stonewest. These are to confirm to Wates requirements and have current PAT test certification.

9.0 PLANT & EQUIPMENT

9.1 OPERATORS OF PLANT & EQUIPMENT

Operators of plant and equipment are to be appropriately trained. Their certificates of training are to be checked before they start work on site by the Site Supervisor or the Working Foreman. All relevant certificates will be kept in the safety file on site and available upon request.

9.2. PLANT AND EQUIPMENT

Plant and equipment supplied to site is to be checked by competent persons before they are delivered to site. Before plant equipment is used on site they are to be checked by the Operator and the Working Foreman to ensure they are in good order. Site plant and equipment is to be checked by the Safety Officer when inspecting the site. Site plant and equipment found not to be in good order will be taken out of use and removed from site. Operatives are to report plant and equipment defects immediately to the Site Management.

All plant will be PAT tested and marked prior to delivery to site.

9.3 PLANT TO BE USED:

- 110v / 18v battery operated handheld mechanical breakers
- 110v 18v battery operated handheld mechanical pistol drill
- 110v mixing drum (if necessary)
- 110v power extension leads
- 110v / 18v battery operated Arbortech machine

9.4 SITE ELECTRICS

110v electrical power.

9.5. STORAGE

Dry temporary storage for tools chest and mortar mixing materials.

10.0 HEALTH AND WELFARE

10.1 WASTE MANAGEMENT

Stonewest Ltd acknowledge their responsibility for the management of materials and waste control/segregation on site.

- All waste disposals shall be carried out by registered carriers and removed to registered disposal sites.
- General non-hazardous waste will be disposed of through the skips provided on site.



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

- All relevant Waste Carrier and Waste Management Licenses for all waste will be made available for inspection prior to its removal from site.
- Waste Transfer Notes for all skips and lorries will be made available on a regular basis.
- Hazardous ('Special') Waste; Stonewest shall have in place measures to dispose of Hazardous Waste in line with their 'Duty of Care' and all other relevant legislative requirements. Documentary evidence shall be provided to support this.

10.2 HAZARDOUS MATERIALS & SUBSTANCES

1. In accordance with the COSHH Regulations made under the Health and Safety at Work etc. Act 1974, the health of persons exposed to substances hazardous to health in the workplace will be protected. These regulations impose duties upon employers and their employees.
2. Substances hazardous to health in the workplace are either materials or products imported into the workplace or products produced by the processes. Stonewest will ensure that the exposure of employees to substances hazardous to health is either prevented or, where this is not reasonably practical, adequately controlled.
3. So far as is reasonably practicable the prevention or adequate control of exposure will be secured by measures other than personal protective equipment.
4. Where measures taken do not prevent or provide adequate control of exposure in addition to taking those measures, Stonewest will provide employees with, and ensure proper use of, suitable protective equipment that will adequately control their exposure.
5. A library of COSHH assessments will be available in the site safety file for inspection.
6. The substances expected to be encountered during the course of the cleaning works are noted in the Appendix but the list is not limited.
7. Asbestos. Although all asbestos should have been removed during the demolition process operatives are made aware that the opening up of or working on existing building may from time to time uncover suspicious substances including asbestos. As part of the Stonewest Induction, operatives are made aware of the procedures they have to follow should a suspicious substance be uncovered.

10.3 ACCIDENTS

All accidents, dangerous occurrences or near misses are to be reported to Flood Projects LLP and Stonewest Limited's Project Manager Mr. Gary Earl as well as adhering to the requirements of RIDDOR regulations. All accidents are to be entered into the site accident book and copied to Head Office.

Nearest Hospital:

St Thomas' Hospital
Lambeth Palace Road,
London, SE1 7EH
Tel: 020 71887188

10.4 WELFARE

- Location of Site Offices – Wates site management.
- Changing Facilities, Toilets / Washing facilities – as explained within by Wates site induction.
- Trained First Aider – TBC



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

11.0 PERSONAL PROTECTIVE EQUIPMENT

All site personnel are required to wear all appropriate clothing and equipment at all times whilst working within the site. Specific Personal Protective Clothing and Equipment is required for differing systems and these are clearly described in the technical literature for each system.

11.1 HEALTH AND WELFARE

- a) Safety helmets are to be worn at all times on site.
- b) Safety footwear – steel cap footwear will be worn by all persons on site.
- c) Gloves are **mandatory** – appropriate gloves are to be worn at all times.
- d) Overalls – appropriate overalls are to be worn by persons on site where required.
- e) Eye protection is **mandatory** on all Wates sites. For specific eye protection types refer to manufactures guide manual.
- f) Dust masks FFP3 types are to be used when working masonry. See manufactures guide manual for specific types for tasks being carried out. Face Fit Testing to be carried out before any cutting out works can commence by an approved trained tester.
- g) Ear protection will be worn when noise levels are above 80db (A). See manufactures guide manual for specific types for tasks being carried out.
- h) Hi-visibility vests are to worn **at all times on site**.

Further guidelines with regards to wearing protective clothing and equipment will be read before using substances of a hazardous nature. This information will be contained in the COSHH Safety Data Sheets. COSHH Assessment sheets will be supplied to the site before materials are used.



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

APPENDICES

Appendix A - Health & Safety Method Statement Briefing Register

Appendix B - Risk Assessments

**Appendix A
Briefing Register**



I have read/ had this RAMS & COSHH read to me, I confirm understanding and agree to work in accordance with its contents:

Health & Safety Method Statement Briefing Register			
Project:	Norman Shaw	Date:	May 2020
Trade Contractor:	Stonewest Ltd	Method Statement Title:	Brick Works
Name (Print)		Signature	Company
Name: _____ Print _____ Position: _____			

Appendix B
Risk Assessments





NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

ADDENDUM

Use Of Arbortech Saw

In addition to the options as outlined above we include the use of the Arbortech Saw for cutting out and extraction of bricks. Arbortech Saw:

Method: The Conservation Conservator using a mechanical Arbortech Saw equipped with general purpose and plunge blades, will carefully cut into the centre of the mortar joint (pointing) surrounding the whole brick and slightly beyond into the bedding mortar to an approximate depth of 20-30mm. The equipment comes with a 'Dust boot' attachment protecting the user from breathing in silica dust. The operative will always be wearing full PPE during these tasks including breathing respirators (**BS EN 136**) equipped with suitable P2 or P3 dust filters of which can be changed on regular basics.

The Arbortech saw enables the user to cut deep, square, with high precision and no overcut.

The Arbortech saw is proficient in accurate cutting into mortar joints when the mortar is softer than the brick. This would include historic brickwork incorporating lime based mortars and mortars which have reduced cohesive strength due to loss of lime binder over time.

Where bricks have been adversely affected by weathering and other decay mechanisms over time we would not recommend use of the Arbortech saw due to the possibility of damage to vulnerable brick arises. This would also apply where cementitious mortars are present that are harder than the brickwork. In these instances we would recommend using methodologies as previously detailed.

During this process it may be necessary to use handheld masonry chisels or alike to remove segments of brick that require a gentler approach near edges of adjacent good bricks. The Conservator with many years of experience will decide the best method practicable ensuring damage isn't occurred to the brickwork.

Bricks to be removed will be photographed prior to removal. Each brick will be numbered and this will be recorded on a marked up elevation drawing showing its exact location.

Bricks to be retained will be laid aside on pallets and stored in a designated area to ensure no damage occurs. The bricks will be stored with softening and wrapped in polythene until required.

The bricks will be reinstated back into the location from where they came and re-laid in the same orientation as before with the exposed face outward.

Finally a photographic record will again be taken of the re-laid brickwork in-situ, for reference.

The Conservator will always ensure bricks are laid matching the existing bond/s, ensuring the face of any inserted brick is flush and face level with adjacent bricks, at no point should any bricks be proud or sunken. The approved premixed bedding mortar will be laid on within the cut-out opening using a bricklayer's trowel feed/taken from a spot board or mortar bucket. The trowel will score a line through the centre of the just laid mortar to ensure it is spread evenly. Buttering the brick ends (sides) with mortar that will affix to the bricks beside them. Using the handle of the bricklaying trowel to knock each brick into place and to release any trapped air that may be within the mortar or behind the just inserted brick. Using a builder's line and level to check the brickwork is true both vertically and horizontally. Also ensuring the newly indented brick/s match adjacent bed joint heights. Any excess mortar will be carefully removed with the bricklayer's trowel then the joint will be raked back with a tool suitable for the job to a minimum depth of 10mm deep. This is to allow pointing mortar to be applied later and formed to match the existing surrounding pointing type prior to samples offered.

Repointing will be carried out by the Conservator offering samples using specific aggregates formulated for mortar pointing mixed with an approved hydraulic, typically using Natural Hydraulic Lime (NHL). When the approved pointing sample has been chosen it will be mixed to a consistency that will be manageable for the



NORMAN SHAW NORTH PROJECT

Removal of Redundant Fixings to Historic Brickwork

Conservator brick pointer to apply within the recently raked back brick joints. Mortar will be placed on a hawk of which will be placed beneath the bottom of the previously raked back brick joint/s. The approved pointing mortar can then be pushed into the pre dampened bed joints using a trowel called a "slasher". This is typically approximately 7" long by the width of the brick joint at approximately 6 or 7mm depending. The slasher will then be run along the applied mortar back and forth making a continuous smooth straight line of the applied pointing mortar within the brick bedding joint. This will be suitable for weathered pointing or normal flush pointing. Excess mortar will be carefully removed using suitable hand trowels. A soft bristle brush (broom head) will normally be used to soften any sharpness to the newly applied pointing and will also remove any surplus mortar. Lime mortar pointing is characteristic to buildings of this period, a typical gauge is as follows: 1 part NHL 3.5 to 3 parts fine graded sharp sand put through a sieve to remove any large stone particles from the mortar before water is added. Both sand and lime can be supplied from Buildbase builders merchants based in Peckham, South East London.

At the end of any shift all surplus materials will be taken to an agreed temporary storage area ready for removal from site.

Temporary protection will be in place as work precedes using Hessian or Polythene as and where necessary. Close monitoring will take place of daily temperature recording. Bricklaying can only commence when the temperature is 3° + and rising.



APPENDIX E

SCAFFOLD PULL TEST REPORT



Norman Shaw North- Scaffolding Pull Tests undertaken by DBR

DBR Project Ref: 2120

Works commencement date: 12th October 2020

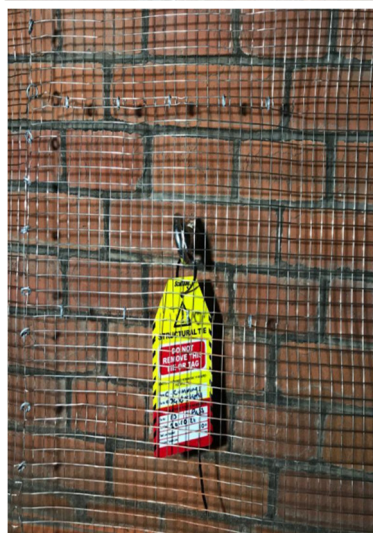
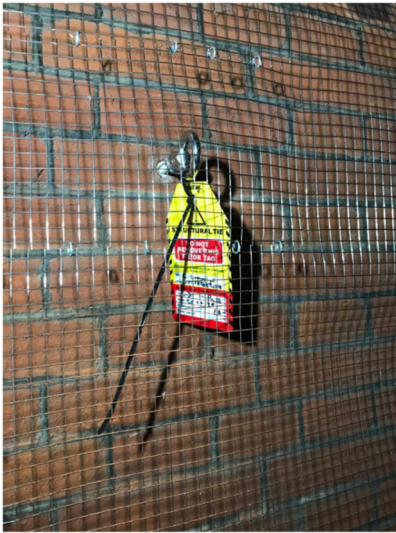
Works completion date: 22nd October 2020

Scope of works undertaken by DBR:

- Provide all necessary access equipment “cherry picker “minimum boom reach 30.000 mts
- Provide and erect all necessary safety barriers minimum chapter 8 and safety signage whilst operating the “cherry picker”
- Erect temporary compound using Herras Fencing panels to enable safe storage of “cherry picker “when not in use
- “Cherry Picker “ to be electrically powered in lieu of diesel due to sensitive noise receptors
- Provide all necessary battery-operated drills and ancillary consumables to carry out tests
- Provide Calibrated testing rig to undertake pull out test of minimum 10mm anchors to a load of not less than 10Kn
- Where required remove and replace sections of existing netting in other to carry out the test
- Leave all test fixing in position
- Where possible undertake a pull out test to at least 3 number per elevation of existing primary fixings on the netting to achieve a strength of 10Kn
- All works are to be undertaken out of hours weekdays 21.00 to 06.00 hours and weekends 08.00 to 18.00 hours
- Welfare facilities will be provided by Wates Construction
- Provide extra over cost for working under COVID 19 restrictions
- Provide a detailed report including drawings, results in tabular format of all areas tested- Post completion note: Pull test tags have been installed at each pull test location, example of tag in photos below.
- Pull test existing locations for testing were confirmed by Wates management. New fixing locations for pull tests after install were also confirmed by Wates management.
- Remove all equipment on completion of the works



Photos of works undertaken:



Norman Shaw North Pull Tests

South Elevation

<u>Number</u>	<u>New or Existing</u>	<u>KN</u>
1	New	10.1KN
2	New	10.1KN
3	New	10.1KN
4	New	10.1KN
5	New	10.1KN
6	New	10.1KN
7	New	10.1KN
8	Existing	10.1KN
9	Existing	10.1KN
10	Existing	10.1KN

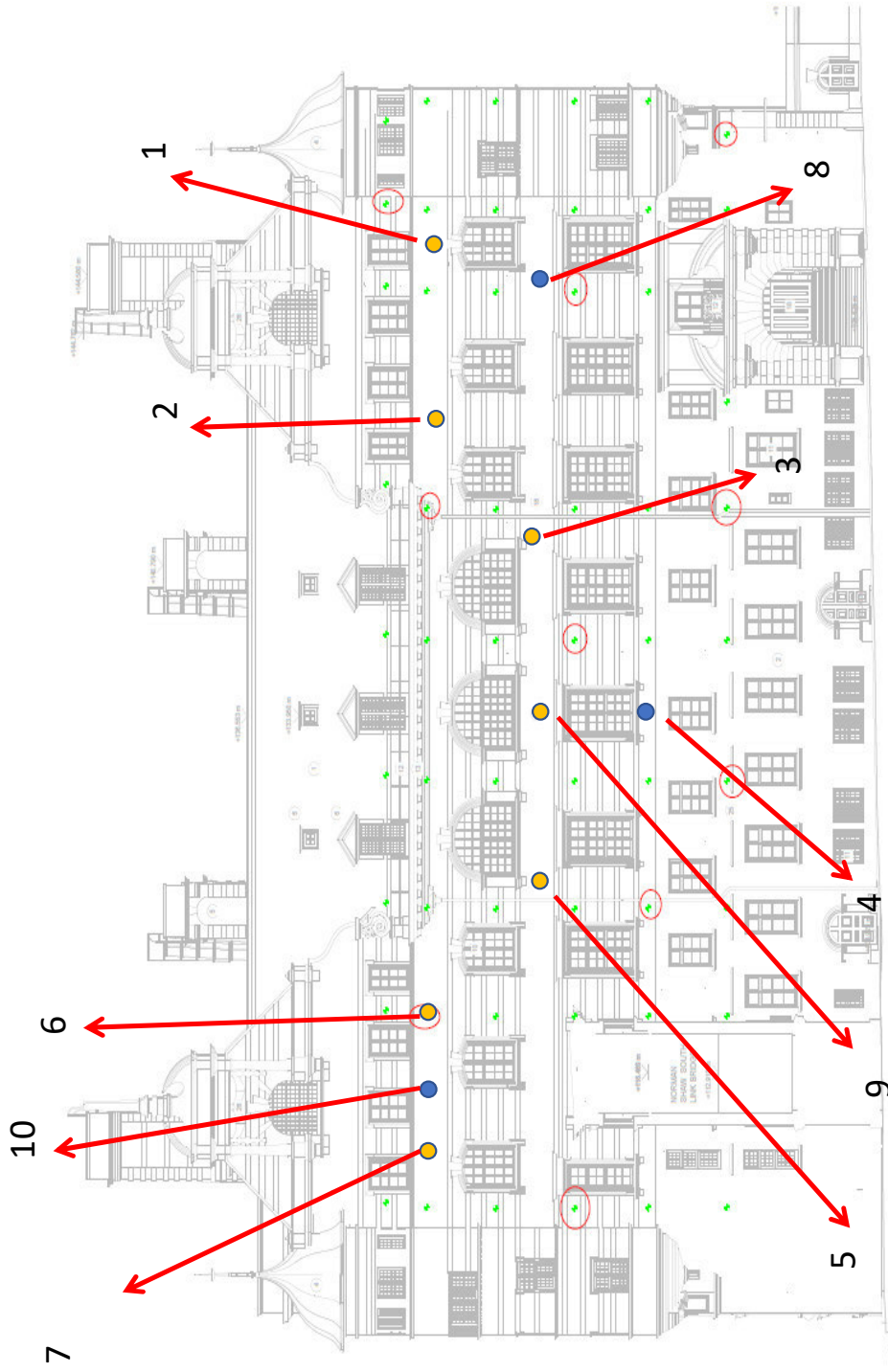
West Elevation

11	New	10.1KN
12	New	10.1KN
13	New	10.1KN
14	New	10.1KN
15	New	10.1KN
16	New	10.1KN
17	New	10.1KN
18	Existing	10.1KN
19	Existing	10.1KN
20	Existing	10.1KN

North Elevation

21	New	N.A	Not undertaken due to machine failure
22	New	N.A	Not undertaken due to machine failure
23	New	N.A	Not undertaken due to machine failure
24	New	10.1KN	
25	New	10.1KN	
26	New	10.1KN	
27	New	10.1KN	
28	Existing	N.A	Not undertaken due to machine failure
29	Existing	10.1KN	
30	Existing	10.1KN	

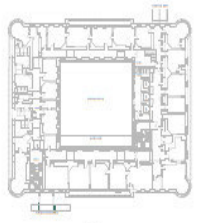
● Pull tests to existing fixings x3



● New fixings x7

South Elevation – NSN

GENERAL NOTES:
 1. THE PROPOSED SCAFFOLDING SHALL BE INSTALLED IN ACCORDANCE WITH THE SCAFFOLDING REGULATIONS 2005 AND THE SCAFFOLDING REGULATIONS (CONSTRUCTION) 2005.
 2. THE PROPOSED SCAFFOLDING SHALL BE INSTALLED IN ACCORDANCE WITH THE SCAFFOLDING REGULATIONS (CONSTRUCTION) 2005 AND THE SCAFFOLDING REGULATIONS (CONSTRUCTION) 2005.
 3. THE PROPOSED SCAFFOLDING SHALL BE INSTALLED IN ACCORDANCE WITH THE SCAFFOLDING REGULATIONS 2005 AND THE SCAFFOLDING REGULATIONS (CONSTRUCTION) 2005.
 4. THE PROPOSED SCAFFOLDING SHALL BE INSTALLED IN ACCORDANCE WITH THE SCAFFOLDING REGULATIONS 2005 AND THE SCAFFOLDING REGULATIONS (CONSTRUCTION) 2005.
 5. THE PROPOSED SCAFFOLDING SHALL BE INSTALLED IN ACCORDANCE WITH THE SCAFFOLDING REGULATIONS 2005 AND THE SCAFFOLDING REGULATIONS (CONSTRUCTION) 2005.



SECTION

TENDER
 GKR SCAFFOLDING LIMITED



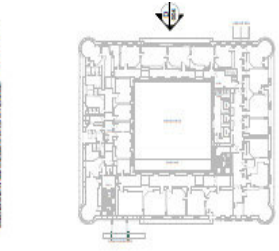
CLIENT
 NORMAN SHAW BUILDING

PROPOSED TIE LOCATION
 ELEVATION B

PROJ. NO. GKR-T-119-002
 REV. 00

GENERAL NOTES

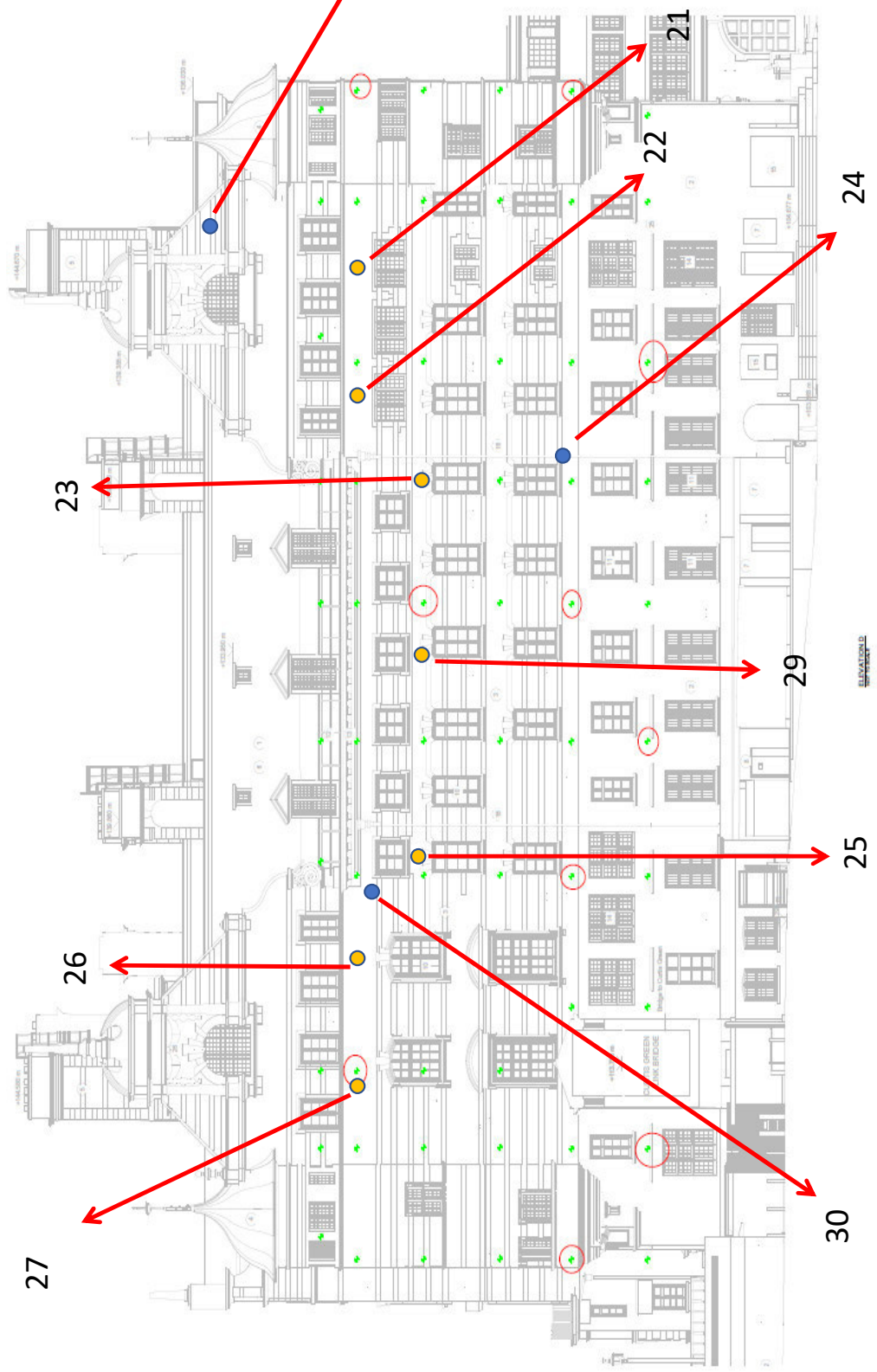
1. THIS DRAWING IS THE PROPERTY OF GKR SCAFFOLDING LIMITED AND IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF GKR SCAFFOLDING LIMITED.
2. THIS DRAWING IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.
3. ALL WORK MUST BE DONE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND REGULATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL AND THE PROTECTION OF ALL ADJACENT STRUCTURES AND SERVICES.



DATE: 10/10/2023	SCALE: 1:100	PROJECT: NORMAN SHAW BUILDING
TENDER		CLIENT: Wates
GKR SCAFFOLDING LIMITED		SITE: NORMAN SHAW BUILDING
PROPOSED TIE LOCATION ELEVATION D		DATE TITLE: 10/10/2023
GKR-T-119-004		REV: 00

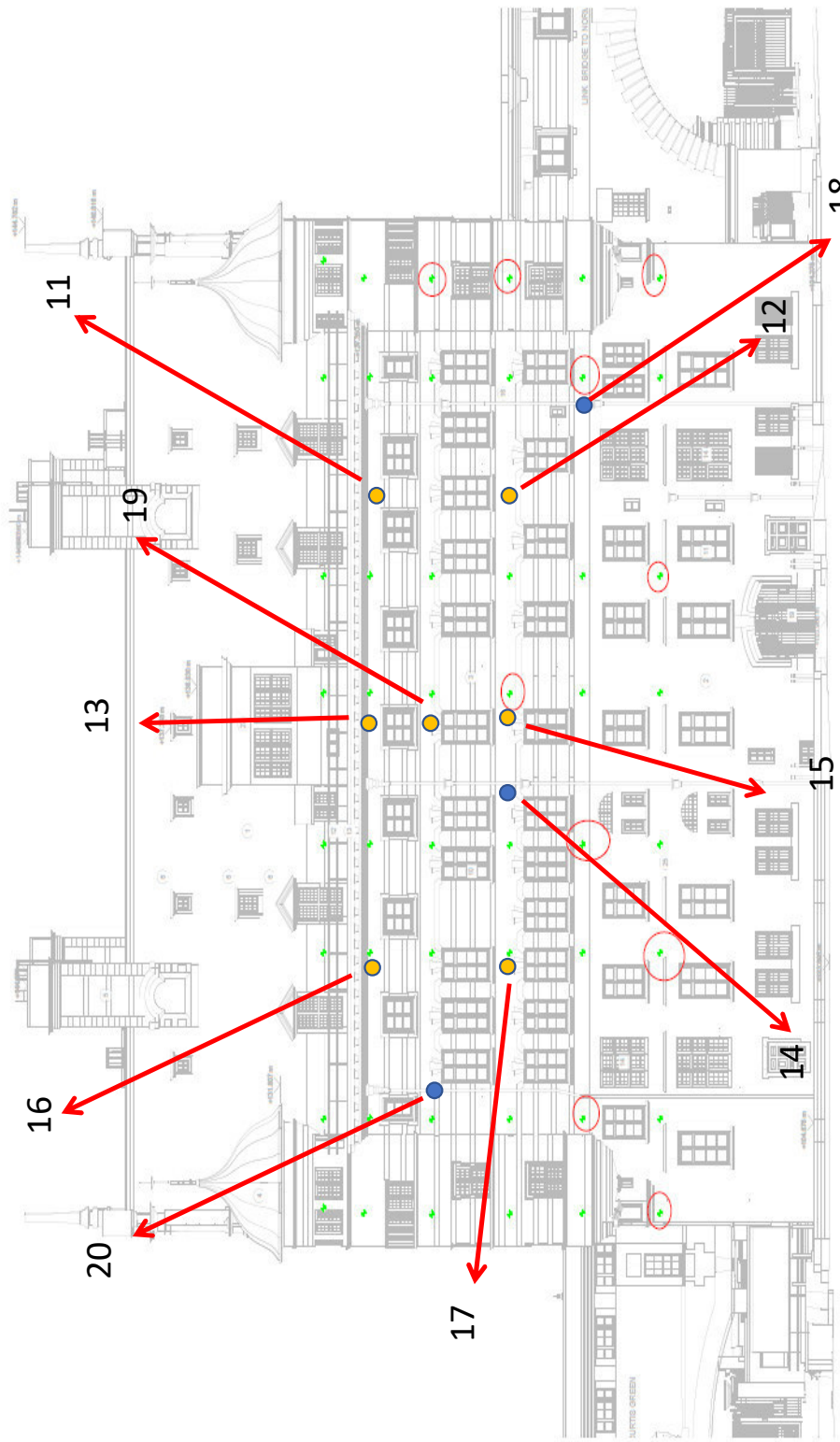
● Pull tests to existing fixings x3

● New fixings x7



North Elevation – NSN

● Pull tests to existing fixings x3

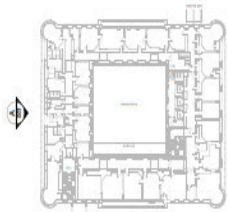


● New fixings x7

West Elevation – NSN

IMPORTANT NOTES

1. THIS DOCUMENT IS THE PROPERTY OF GKR SCAFFOLDING LIMITED. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED IN THE TITLE. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF GKR SCAFFOLDING LIMITED.
2. ALL DIMENSIONS ARE AS SHOWN ON THE DRAWINGS UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE AS SHOWN ON THE DRAWINGS UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE AS SHOWN ON THE DRAWINGS UNLESS OTHERWISE SPECIFIED.



SCALE: 1:500

TENDER

GKR SCAFFOLDING LIMITED

CLIENT

wates

NORMAN SHAW BUILDING

PROPOSED TIE LOCATION
ELEVATION A

FORM NO. GKR-T-119-001

REV 00