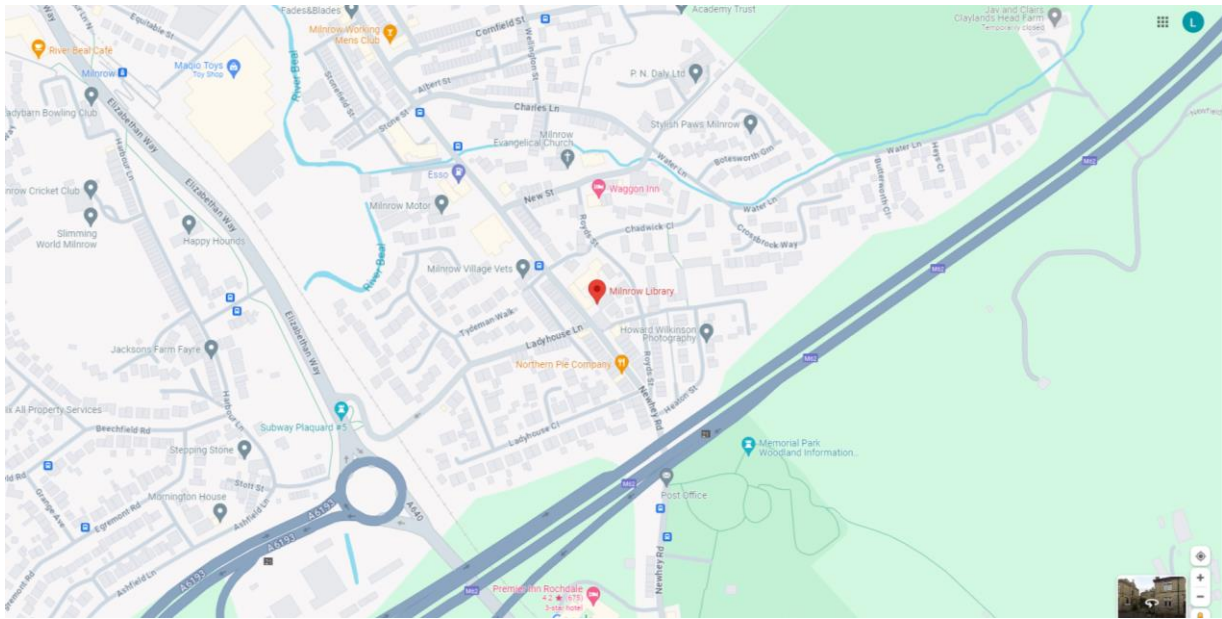


PROJECT:	Milnrow Library – Masonry Works				
JOB NO:	J2665	REV No.:	2	DATE:	16.7.24
OPERATION:	Masonry repairs, indents, and other associated works.				
COMPILED BY:	Steve Wallace (0777 354 4494) Lucy Riley (0161 621 5860) Bryn Lisle				
REFERENCED DOCUMENTS:					
DESCRIPTION OF WORKS:	The works covered by this method statement sets out a safe system of work for stone repairs and indents at Milnrow Library Manchester				
Monitoring:	These works will be subject to suitable monitoring and supervision to ensure the effective implementation of this safe system of work. Bryn Lisle will visit the site at suitable intervals. A Site Supervisor will always be available on site while we have workers engaged here. The works are liable for random site inspection and audit by our independent Health and Safety Advisors.				
Management:	Bryn Lisle - Maysand Ltd				
Supervision:	Pete Harwood Training Requirements/Standards: - Holds a Site Supervisors Safety Training Scheme certificate (SSSTS).  - Holds a Construction Skills Certification Scheme (CSCS) card. 				
Operatives:	Training Requirements/Standards: - Holds a Health and Safety Awareness.  - Holds a Construction Skills Certification Scheme (CSCS) card. 				
PROGRAMME	It is anticipated that the works on site detailed in this method statement will last up to 24 weeks. The delivery of this programme will be as directed to enable the effective co-ordination of activities on site. We have assumed that there will be easy access to our work areas and that we will not be subject to inclement weather.				
LOCATION:					

<u>Security</u>	The general security afforded to the site will be maintained by Maysand. Their arrangements will not be compromised by the activities of our workers during the tasks covered in this method statement.
<u>Materials storage</u>	Maysand will prevent unauthorised access to the materials storage areas we use. We expect to maintain a secure tool chest on the project for the duration of our work.
<u>Work Area</u>	Our work areas are to be secure. Maysand will set up the site to prevent unauthorised access.
<u>Permits required</u>	n/a
<u>Access and Egress</u>	All routes are to be maintained as fit for purpose. This includes routes over, under or adjacent temporary structures, propping arrangements, or openings. In addition to access and egress for our employees, consider that we need to deliver equipment and materials to work areas. All routes within our work areas are to be kept free from trip hazards so far as is reasonably practicable.

SEQUENCE:

Prior to Site Attendance

1. **Asbestos:** Maysand are to seek sight of the Asbestos Register and draw attention to sections of the document that are relevant to our works as applicable.
2. **Site Rules:** Maysand will draw the attention of our workers to the Site Rules. These may include the need for Permits that are relevant to our works.

Preparation

1. Maysand management team will assess the site to ensure it is in a satisfactory condition for works to commence.
2. All Maysand employees engaged on this site are to attend a Site Induction when at least the following arrangements are to be made known:
 - a. Site Rules
 - b. Welfare arrangements
 - c. Emergency and First Aid arrangement
 - d. Arrangements for the storage of materials, plant, and equipment
 - e. Arrangements for the storage and removal of waste
 - f. Environmental considerations
3. This method statement is to be effectively communicated to all those engaged with undertaking the work. They are to be offered the opportunity to provide feedback.
4. All those engaged with this task are to sign the declaration confirming their acceptance and understanding of this safe system of work prior to the commencement of operations on site.
5. Close liaison with other parties will be required to ensure effective and safe co-ordination of onsite activities. To help achieve this standard, a supervisor will be available.
6. Services such as security cables, telecoms, electricity, gas, or others are to be made safe by suitably qualified people prior to us beginning work in the area. Where it is not practical to terminate supplies outside our work area, then the 'live' services will be clearly marked.

Task

Stone Indent Repairs

1. Locate area of repair
2. Mark up with chalk and pencil. Indicate the reference number given to the repair.
3. Carefully cut out defective area of stone to minimum depth of 125mm or as indicated in the Specification. square to the face and with sharp arise.
4. Use light hand tools or, with prior approval, disc cutters to minimise vibration.
5. Cut new stone sawn square to provide joint width no greater than 2mm, worked and finished to conform with existing detail.

Indenting Masonry

6. Supply and fix stone indents dimensioned in accordance with the schedule. Full stones would normally be bedded in a sand, lime cement mortar and shall incorporate suitable non ferrous metal fixings where required. Small indents to be placed in polyester grout/resin.
7. On completion of the fixing, the bed joint shall be repointed to match as near as possible surrounding stonework. All final tooling shall be done by hand tools only.
8. Fix stone into position with minimum 6mm diameter stainless steel dowels secured in annulus of polyester or epoxy resin. Avoid getting resin on adjacent stone faces.
9. Point up with lime mortar finished flush with the face.
10. Mortar colour to match stone as closely as possible.

Remove and refix Copings.

11. Locate area of copings to be lifted.
12. Check for any previous damage and record any damage by way of marked up drawing and photos before lifting starts.
13. Locate the lifting block above the coping to be lifted.
14. Once the block is in position proceed to lift the copings.
15. Cut out the mortar joints to assist in releasing the coping.
16. Using a heavy-duty jemmy bar carefully lift one end of the coping and insert a timber chock.
17. Pass a min 1T sling under the coping and secure to the hook on the block.
18. Carefully lifting the coping on the chain block and continue to ease the coping from the bed joint with the jemmy bar.
19. Once released lift the coping to clear the adjoining copings and transport the stone along the wall and then lower onto timber skids sitting on top of the in-situ coping stone.
20. Clean any mortar from the bed and perpend joints by hammer and chisel ensuring not to damage the stone.
21. Once a run of copings has been up lifted and moved clean off any mortar on the brickwork.
22. Lay a new lead DPC on to the brickwork.
23. Once the run of lead has been laid then proceed to uplift the copings in reverse order using the technique outlined above. When the coping is suspended above the final position lower the coping on the wall. Once on the wall carefully bar up each end and remove the slings.

Repointing

24. Using Hand tools cut out defective pointing.
25. Once old pointing cut out clean area with clean water, so area is free from dust.
26. Wet down area and point up in NHL 3.5 lime mix to match existing pointing.
27. Once pointing starts to set, tap back with stiff bristle brush.
28. Once pointing turns green brush off to match existing finish.
29. If required cover pointing from weather with hessian sheeting.

Doff Cleaning

30. Ensure that all areas close and vulnerable areas sheeted up.
31. The doff cleaner is to be inspected by the operative to ensure the machine is suitable for its purpose.
32. The operative will record evidence of this in his plant register. The checks will be carried out every week and a record are to be kept.
33. With machine checked for compliance 2 operative will move the machine to as close as is practicable to the work area.
34. The machine will be moved into position and the pipework will be connected in sections on the ground ready to be taken to the work area.
35. Operatives will ensure no other people are in the proximity of the work area.
36. Operatives are to ensure they have all their protective equipment on prior to switching on machine.
37. Working from the top down we are to carefully clean down the stonework by carefully directing the water onto the surface of the stone at low pressure.
38. The stonework to be initially cleaned using High Pressure Steam (DOFF system) to remove any surface deleterious.

39. The steam cleaning is only be undertaken by personnel who can demonstrate they have previous experience in the steam cleaning of Listed Building Structures
40. The steam cleaning is to be carried out using nozzle pressures operating between 1300 and 1800psi and at temperatures between 120 and 140 degrees centigrade.
41. To maintain full temperature at the nozzle, consideration must be given keeping the high-pressure hoses as short as possible ideally no more than 10 meters and fitting insulation (pipe lagging) if necessary. This is normally appropriate for hose lengths greater than 30m, or under cold prevailing weather conditions.
42. The steam cleaning is intended to remove all surface deleterious of the stone. This may require more than one cleaning cycle.
43. The steam cleaning work should commence at the uppermost level of each element and continue downward in a methodical sequence, this will (a) reduce the need for re-rinsing and (b) will reduce the exposure of surfaces to contaminated water.
44. No chemical cleaning additives are to be added to the water.
45. No chemical cleaning solutions or gels are to be applied to the bronzes to aid the steam
46. Cleaning operation.
47. After each cleaning period the stonework should be gently and thoroughly washed down to clear any dirty water from the structure to ensure no contamination of the fabric of the stone occurs.
48. Test cleaning
49. Adjustment of the water volume, pressure and temperature controls should be made on a test area in order to set the optimum operating set up. The distance of the nozzle from the bronze surface should not be less than 120mm, maintaining an appropriate distance of the nozzle from the work, achieving a balance in order to obtain an effective cleaning result without abrading the substrate. Consideration may also be given to differing nozzle specification i.e. aperture and spray angle: for this form of cleaning a fan shaped nozzle should be used.
50. Running the equipment
51. Precautions should be made to avoid accidental or malicious spillage; containment measures and bunding should be provided to ensure no spillage of fuel or oils contaminates the stonework or the surrounding areas.
52. All machines capable or likely to emit oil, exhaust deposits or drip fuel are to be placed on suitable protective sheeting (drip trays). The transfer of fuel to the DOFF Machine should be carried out using a 20 litre Jerry can with 'clip on' spout or other purpose-made refuelling canister.
53. Inspection after steam cleaning
54. The surface of all the stonework is to be fully inspected after the steam cleaning to identify any areas of active pitting corrosion. The location of these areas is to be recorded both photographically and in writing.

Take Down and Rebuild Masonry

55. Prior to our work commencing the Main Contractor is to isolate all services and make safe the structure.
56. Attend site to carry out a dimensional survey of the existing structure and to produce numbered elevations drawings of the existing together with sections to facilitate the subsequent re-building work. Elevation drawing to be supplied by yourselves.
57. Each stone will be given a unique reference number and this will be recorded on the working drawings prior to the start of the take down
58. Initially compile a schedule of condition which identifies existing visible defects in the masonry.
59. Progressively dismantle existing masonry by firstly cutting out existing joints by hand tools and beds and carefully separating the stone units using hand tools assisted using appropriate lifting equipment.
60. As the works proceed a unique reference number will be applied to each unit and this will be recorded on the pre dismantle drawing for cross reference.
61. A photographic library will be updated as the works proceed to show the construction and layout. Detailed areas will have numerous photos to show the exact setting out and construction.
62. Clean joints and beds of residual mortar and number stones in accordance with working drawings.
63. Masonry units to be placed on the scaffold on timber skids and suitably protected with hessian and 'softening' ready for the rebuild phase.

64. As work proceeds, introduce any temporary propping and shoring to the masonry to maintain the stability of the components being dismantled.
65. Maysand to introduce temporary propping and shoring of masonry to maintain the stability of the components being dismantled and the overall structure.
66. Existing cramps and other masonry fixings are to be removed as work proceeds. As work proceeds, and where practical, remove architectural fitting and hand to the CA.
67. Hold points have been identified to allow for the inspection of the structure by the Architect and Structural engineer. Modification to the work may flow from these inspections.
68. A steel restraint system is to be designed by the SE that will sit internally behind the cantilever section of the oriel window. The SE will come to site and undertake a survey and develop the restraint system.
69. The fabrication of the steelwork will be off site.
70. Once the steelwork is completed this will be delivered to site and fitted by the steelwork contractor.
71. Once steelwork is finished this will release the rebuild phase to commence.
72. Uplift from the store and return masonry units to work area for rebuilding in proper sequence by referencing to the take down drawings and photographs.
73. Units are to be bedded on lime mortar and incorporate stainless steel cramps and dowels inserted as the work proceed.
74. On a suitable structure and in accordance with working drawings rebuild the reclaimed stone units to reproduce the existing elevation as detailed on working drawings.
75. Masonry to be protected by hessian as works proceed.
76. On completion of fixing work point up the beds and joints to the whole of the works.
77. Once all the works are complete the masonry should be fully washed down to remove dust and superficial mortar.

Note

78. Whilst every care will be taken to avoid damage to the masonry during these works we cannot be responsible for any damage that may occur.
79. **Completion.**
80. On completion of our works the areas will be left clean and tidy.
81. A quality inspection of our works will be undertaken.
82. All warning barriers and signs used to protect our work will be removed.
83. Handover the areas to the host organisation.

RESOURCES:



Training Matrix.xlsx

Plant & Equipment:	250Kg Duke hoist Doff machine. Chain blocks and slings. Drills Breakers Multi Tools Angle Grinders
Materials:	Sand, Lime New Stone Resins SS dowels and bars

METHOD STATEMENT

Welfare:	 Facilities are to be made available by the host organisation for site personnel. Any abuse of facilities provided by Maysand will result in disciplinary proceedings being instigated.
Waste:	 Materials are to be stored with work planned and undertaken to minimise waste. Skips will be provided by Equans. When segregation of waste is required, this will be done prior to depositing waste in skips.
PPE:	The following are always required while on site:  The following will be available on site and used as task specific: 
First Aid:	 Maysand will send at least one first aider to the site. All Maysand injuries must be reported to the supervisor who will then inform the Principal Contractor without delay.  All emergency procedures and security arrangements will be outlined by the host organisation.  The site fire and evacuation plan are to be discussed during the site induction. In the event of an accident report this to the site manager and Bryn Lisle at the Maysand office or mobile 07808 917833. Each machine will always have an emergency spills kit adjacent to deal with any spillages. Any spillages to be dealt with immediately and reported to Bryn Lisle
<u>AMENDMENTS:</u> Any change in the operation or deviation from the above method and system of work found by personnel on site is to be discussed with the responsible manager prior to the change being made and at the earliest opportunity. Amendments are to be confirmed by them and distributed as below.	

Assessments:

Several assessments have been undertaken to develop the detail in the safe system of work set out in this method statement. These have included generic and specific assessments. During the work, we will undertake dynamic assessments. We will monitor and review the original assessments to confirm continued suitability or amend these as identified. Should there be a conflict between the control measures identified in our assessments and the Site Rules, the later will prevail.

Risk Assessments - Exterior work in Summer / Winter - Site housekeeping - General Hand tools - Stonework - Use of mobile tower - Portable Electrical Equipment 	CoSHH Assessments - Sand / Lime - Dust - Epoxy resin 
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METHOD STATEMENT

Noise Assessments  NOISE EXPOSURE ASSESSMENT.docx 	Vibration Assessments  HAND ARM VIBRATION SYNDRO 
Manual Handling Assessments • Stonework • Rubble 	Other

By signing this register, you confirm that the contents of this Method Statement Revision: 01 have been made known to you, that you understand the safe system of work and you will report any anticipated deviation from this to Bryn Lisle or Steve Wallace prior to making changes.

Ensure that if this document is amended or reviewed, it is re-circulated to the people listed below who are still engaged with the tasks.

	Print Name	Sign	Date
Contracts Manager:	Bryn Lisle		
Site Manager:			
Operative:			