



23261

FALINGE PARK – ROCHDALE

AUGUST 2023

Brunel House Milnrow Rochdale OL16 3NJ

t: 01706 343961 e: office@healeyconsulting.co.uk

REPORT ON STRUCTURE

CONTENTS

1.00 INTRODUCTION

2.00 DESCRIPTION

3.00 DISCUSSION

4.00 CONCLUSIONS & RECOMMENDATIONS

5.00 EXCLUSIONS

APPENDIX A Vandalism Photographs

APPENDIX B Survey Photographs

APPENDIX C Sketch Details

APPENDIX D Data Sheets

1.00 INTRODUCTION

- 1.01** Further to a request from Chris Hilton of ABM (Lancashire) Ltd, we visited the above public park to inspect and comment upon the structural condition of a brickwork retaining wall that forms the rear boundary to the ornamental gardens of the former hall. Photograph 1.

Our report is solely concerned with this aspect and has been carried out on a purely visual basis.

We have not inspected parts of the wall which are covered, unexposed or inaccessible and such parts are assumed to be in good repair and condition.

- 1.02** The report does not purport to express an opinion about or to advise upon the condition of any uninspected parts and should not be taken as making any implied representation or statement about such parts.
- 1.03** This report has been carried out for guidance of the person named above and where recommendations are made these should not be used as a specification for carrying out the works.
- 1.04** For the purposes of this report all references to left, right, front and rear should be taken as viewing the wall from the former ornamental garden area of Falinge Hall.
- 1.05** This report was deemed necessary following vandalism. The attached vandalism photographs show some areas of clear vandalism but also areas of damage caused mainly by trees. Some of the vandalised damage had been repaired at the time our survey.
- 1.06** This report has been carried out for the person named overleaf to be used in connection with their purchase, selling or repair of the property and should not be copied or sold to any other persons without the agreement of Healey Consulting.

This report remains the property of Healey Consulting and is copyright.

2.00 DESCRIPTION

- 2.01** The retaining wall has a minimum thickness of 330mm, this can be measured at the head of the wall. The wall is likely to be thicker below ground level. The park garden is on the low side of the wall. The high side is a wooded area with numerous trees close to the rear of the wall.
- 2.02** In appearance the wall, when viewed from the ornamental garden, consists of a central recessed area, in which there are three archways. These comprise of a large central arch with smaller archways other side, photographs 2 & 3.
- 2.03** There is a small courtyard surrounded by brickwork immediately in front of the wall, photograph 4.
- 2.04** The wall extends both to the left and to the right. At each end is a single recessed area, each accessed via a single brick arch, photographs 5 & 6, are of the left and right respectively.
- 2.05** The wall, between each set of recessed arch ways, is approximately 2.5m high when viewed from the gardens.
- The retained height varies between approximately 0.9m and 1.5m.
- 2.06** The wall is capped with a concrete coping. This is not original.
- 2.07** There is a central keystone to each arch.

3.00 DISCUSSION

- 3.01** The main focus of our report was centred around the central, three arched recess. Areas of the wall and the arches are showing significant signs of distress. The distress if left unattended is likely to become a danger to the public.
- 3.02** On the left of first of the three arches, there is stepped cracking in the boundary wall. Photographs 7, 8, 9 & 10.
- 3.03** Where the wall steps up to cover the arch, there is further stepped cracking and horizontal displacement of the bed joints which extend beyond the arch key stone. Photographs 11, 12, 13 & 14.
- 3.04** Above the keystone of the first arch there is a vertical crack in the brickwork, photograph 15.
- 3.05** The arch brickwork has lost compression and areas of the arch masonry are loose, photographs 16, 17 & 18.
- 3.06** At the rear of the wall there is a large silver birch tree, photographs 19, 20 & 21. The roots to this tree are clearly affecting the wall and have damaged the rear of the shelter, photographs 22, 23 & 24. This damage is not reflected internally within the shelter, photographs 25 & 26.
- 3.07** The remaining arches are in need of repointing. There are areas of plant growth which will need to be removed and treated prior to repointing. Photographs 27, 28, 29 & 30.
- 3.08** The long length of wall between the central arches and the end shelters are generally considered to be within acceptable tolerances for plumb. These sections are in need of patch pointing, photographs 31, 32 & 33.
- 3.09** The two end shelters are deemed to be in a reasonable condition., these simply need to be maintained, photographs 34, 35 & 36.
- 3.10** The low-level wall bounding the small courtyard in front of the 3 arch shelter has been repaired in the recent past, photographs 37, 38 & 39.
- 3.11** We have attached a sketch detail of the above defects in Appendix C.

4.00 CONCLUSIONS & RECOMMENDATIONS

- 4.01** The two long lengths of wall between the central arch and the end arches are generally in a reasonable structural condition.

There is plant growth in some of the mortar joints. This should be removed, and the areas patch pointed.

- 4.02** The central arch arrangement has been affected by tree growth. There is a particularly large silver birch tree to the left of the arch which has caused damage to both the front and rear of the wall.

Stepped cracking to the left of the arch which will need to be stitched with helical bar and the area repointed. See elevation drawing.

- 4.03** There is vertical displacement of the bed joints either side of the first arch. This, along with the damage to the rear has been caused by the silver birch tree.

This tree needs to be removed and the roots killed.

The horizontal joint can only be repointed/ the brickwork to the rear of the wall will need to be locally rebuilt and stitched. See sketch.

- 4.04** The vertical crack above the arch should be stitched with helical bar.
- 4.05** The loose arch masonry needs to be made good and pinned. See sketch.
- 4.06** The shrubbery behind the wall should be managed to prevent further damage to the wall.
- 4.07** Any loose copings should be re-bedded.

EXCLUSIONS

Please note the following exclusions to our report.

Please satisfy yourself that condition of the items excluded are known prior to purchase.

We do not cover:

- Electric Services
- Gas Services
- Water Services
- Rain Water Goods
- Drainage.
- Damp & timbers.
- Roof Finishes
- Windows – unless structural, e.g., bay windows where structural mullions are present.
- External areas – e.g., detached garages, outbuildings and garden retaining walls unless they appear to offer support to the building, or we are specifically requested to do so.
- Cost Estimates for remedial works.
- For any works carried out to or adjacent to a party wall, the client is advised to seek legal advice with regards to The Party Wall etc Act 1996, and to appoint the services of a qualified Party Wall Surveyor.
- Asbestos.

SIGNED... *P. Healey*.....

PAUL MICHAEL HEALEY
BSc (Hons) C.Eng M.I. Struct.E. M.a.P.S.

DATED: 15th August 2023

Brunel House
63 Dale Street
Milnrow
Rochdale
OL16 3NJ

APPENDIX A

Vandalism Photographs

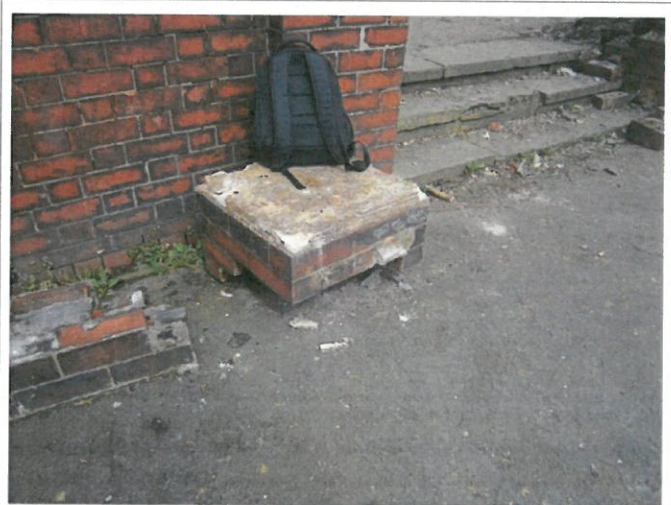




1



2



3



4



5



6



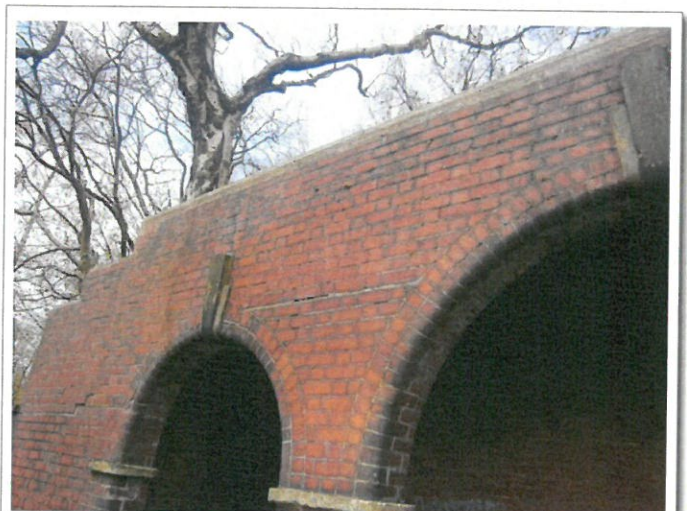
7



8



9



10



11



12

Vandalism

Falinge Park

Photos



13



14



15



16



17



18

Vandalism

Falinge Park

Photos



19



20



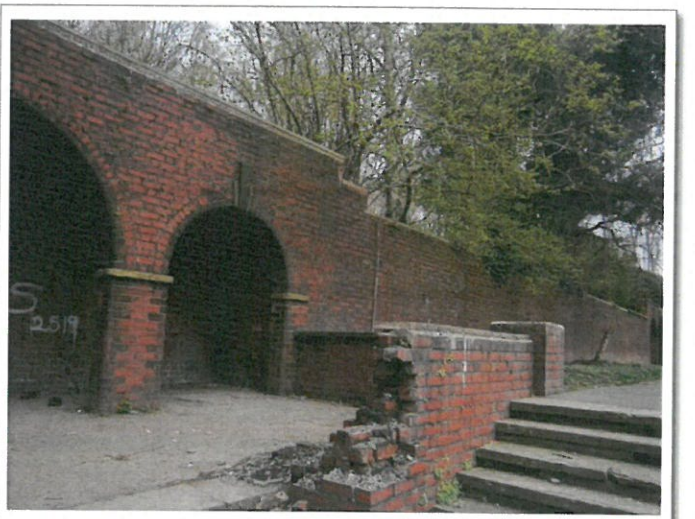
21



22



23



24



25



26



27



28



29



30



31



32



33



34



35



36



37



38



39



40



41



42



43

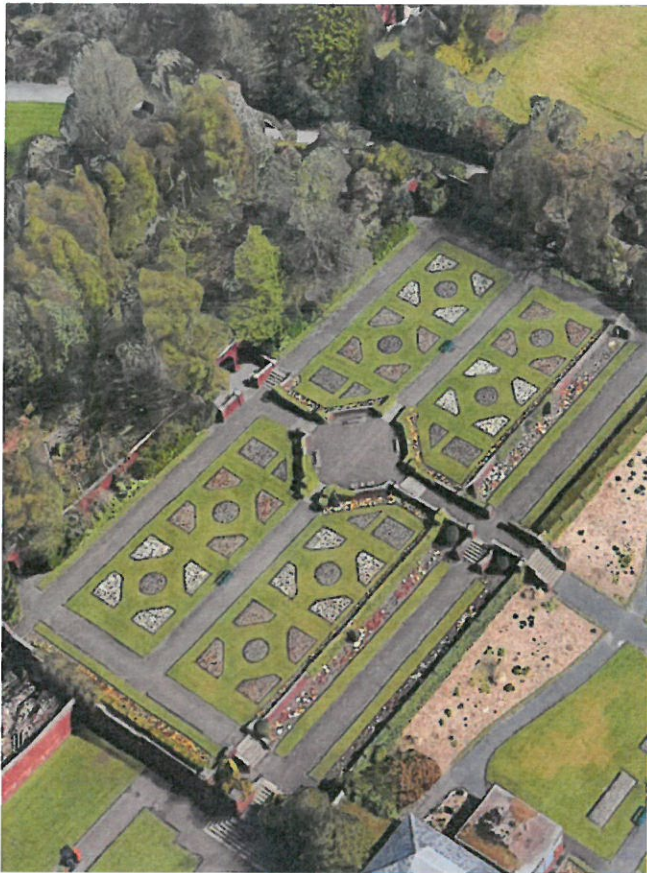


44

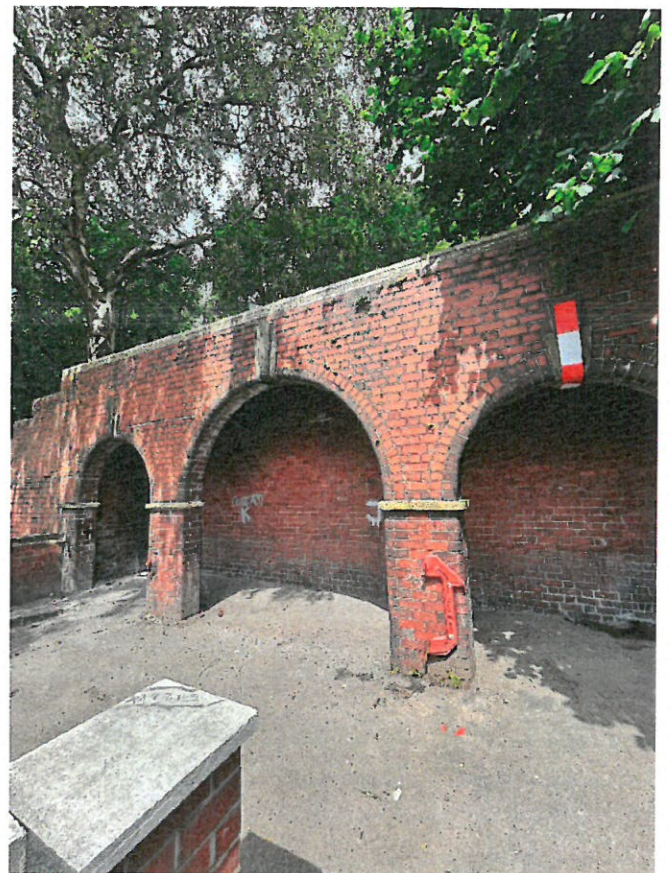
APPENDIX B

Survey Photographs





Photograph 1



Photograph 2



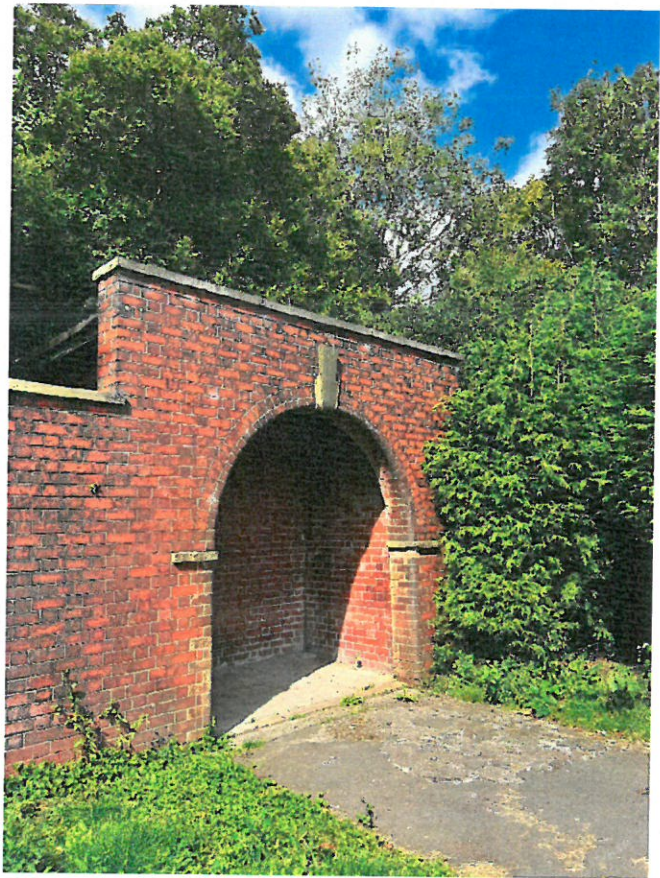
Photograph 3



Photograph 4



Photograph 5



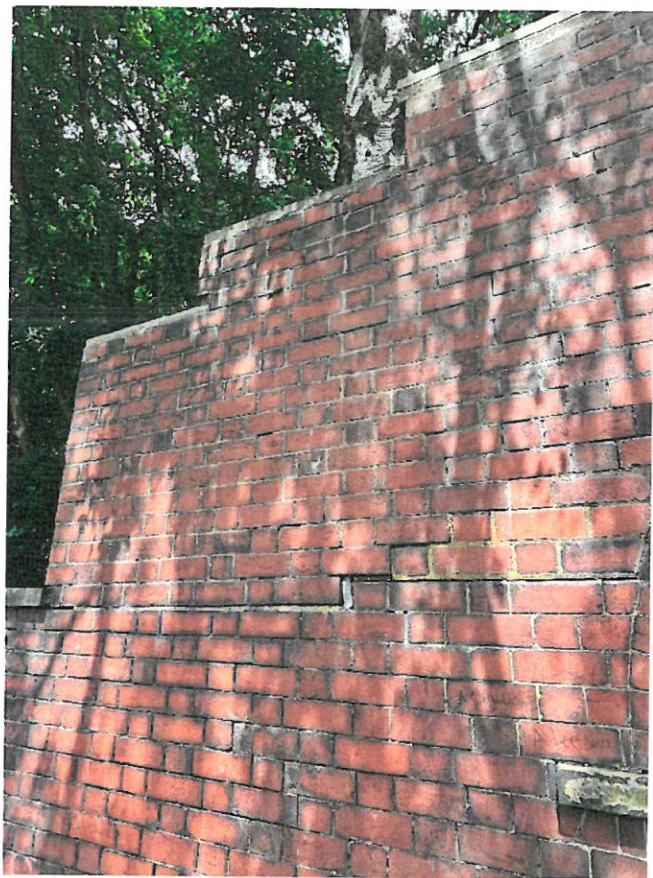
Photograph 6



Photograph 7



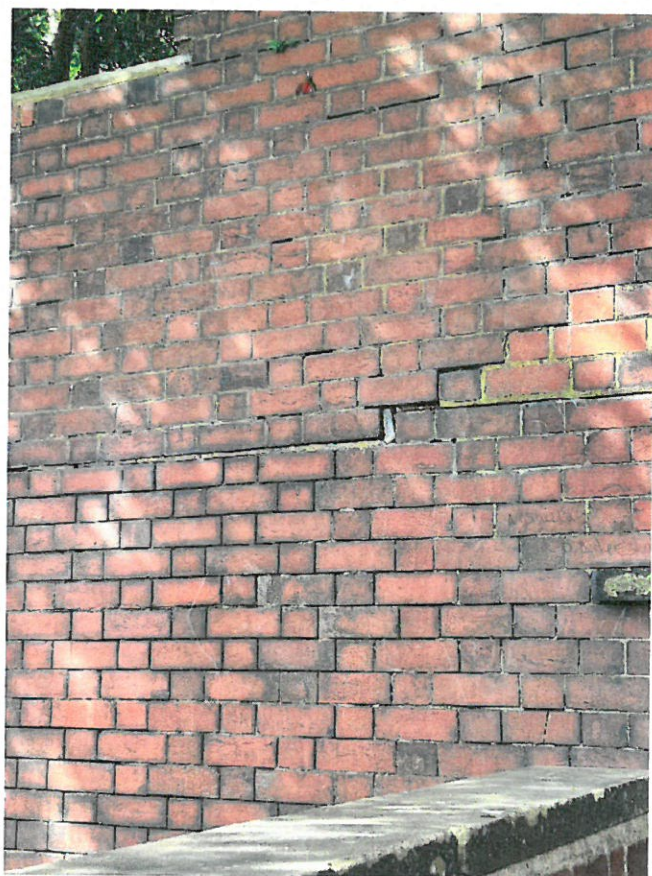
Photograph 8



Photograph 9



Photograph 10



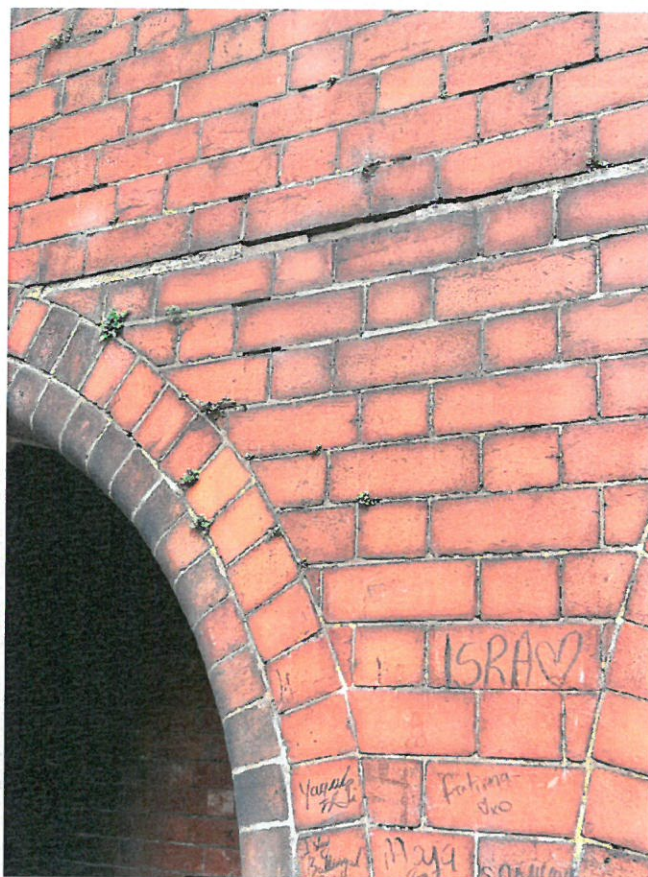
Photograph 11



Photograph 12



Photograph 13



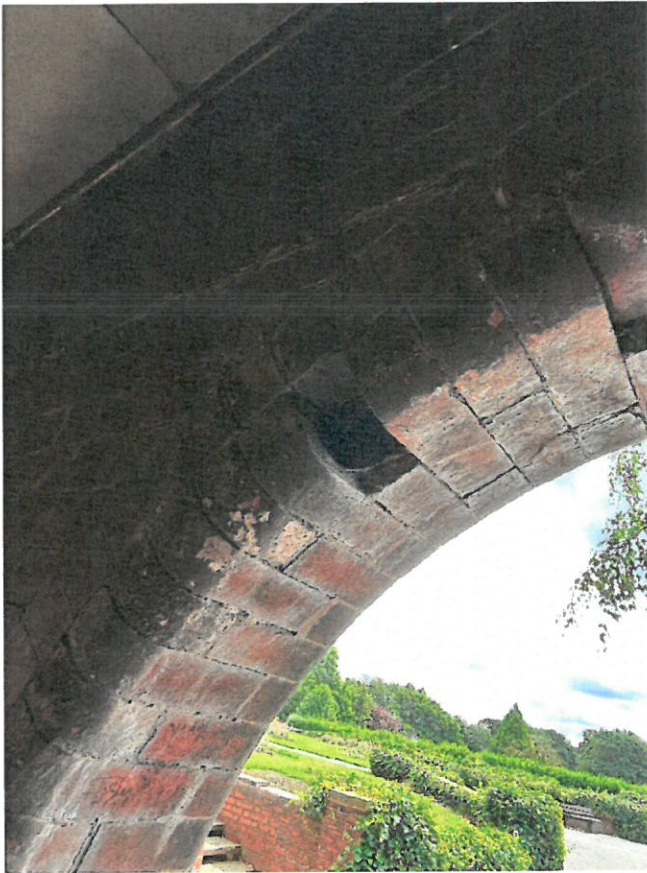
Photograph 14



Photograph 15



Photograph 16



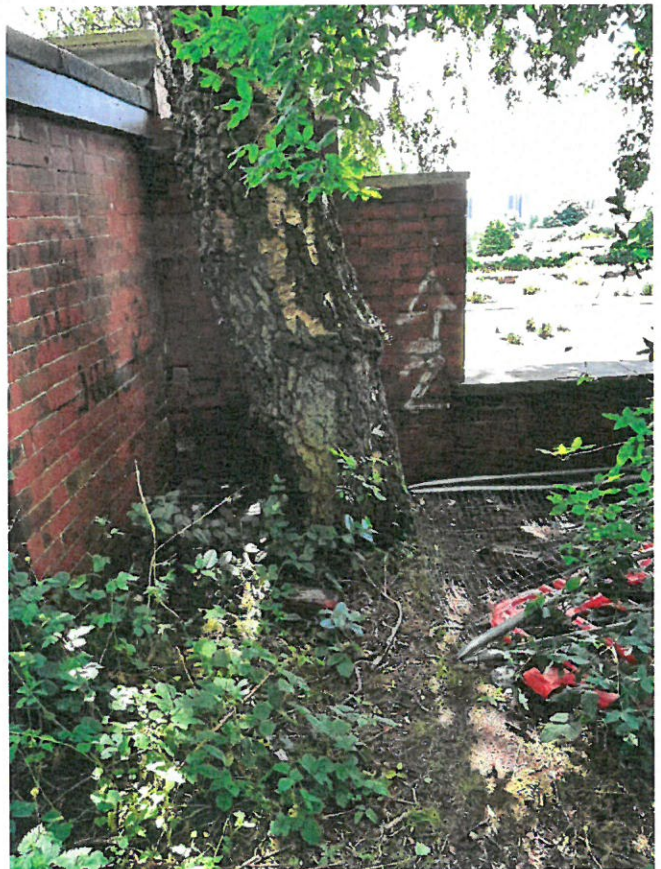
Photograph 17



Photograph 18



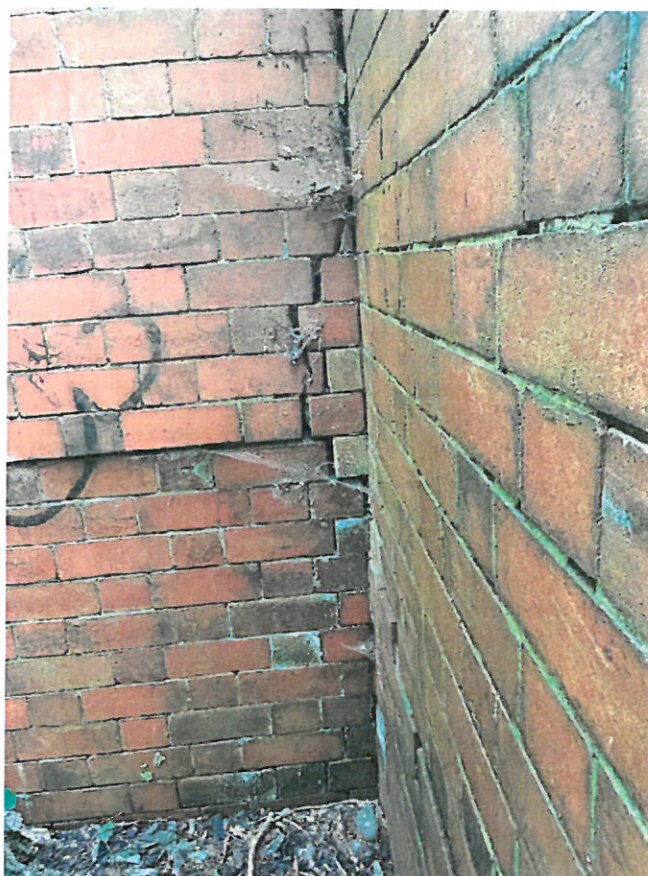
Photograph 19



Photograph 20



Photograph 21



Photograph 22



Photograph 23



Photograph 24



Photograph 25



Photograph 26



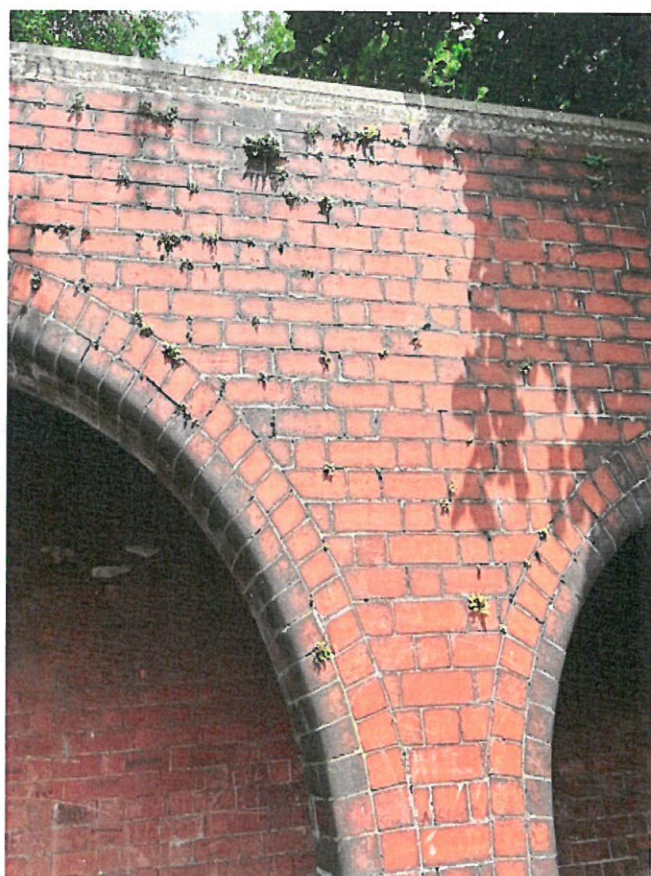
Photograph 27



Photograph 28



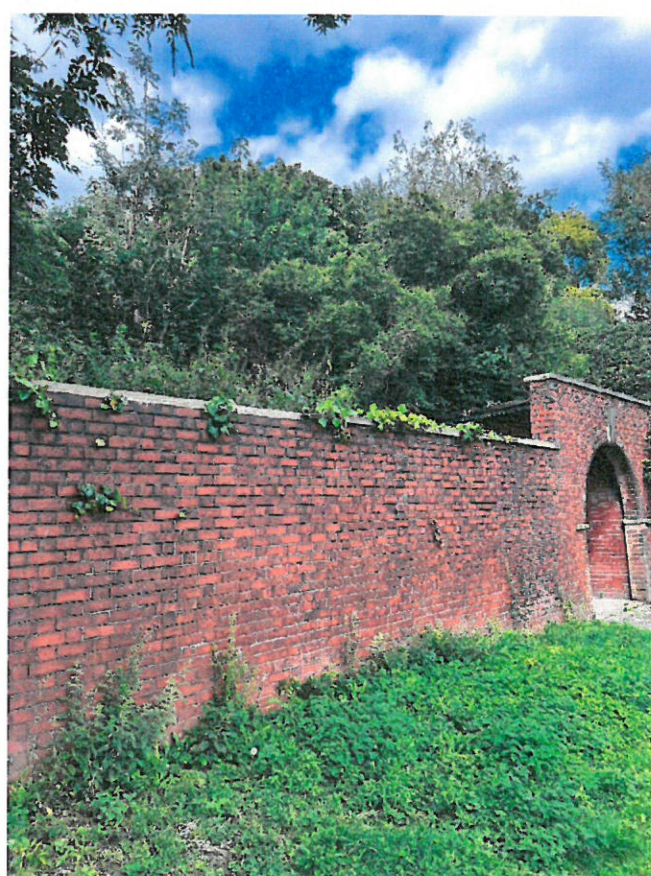
Photograph 29



Photograph 30



Photograph 31



Photograph 32



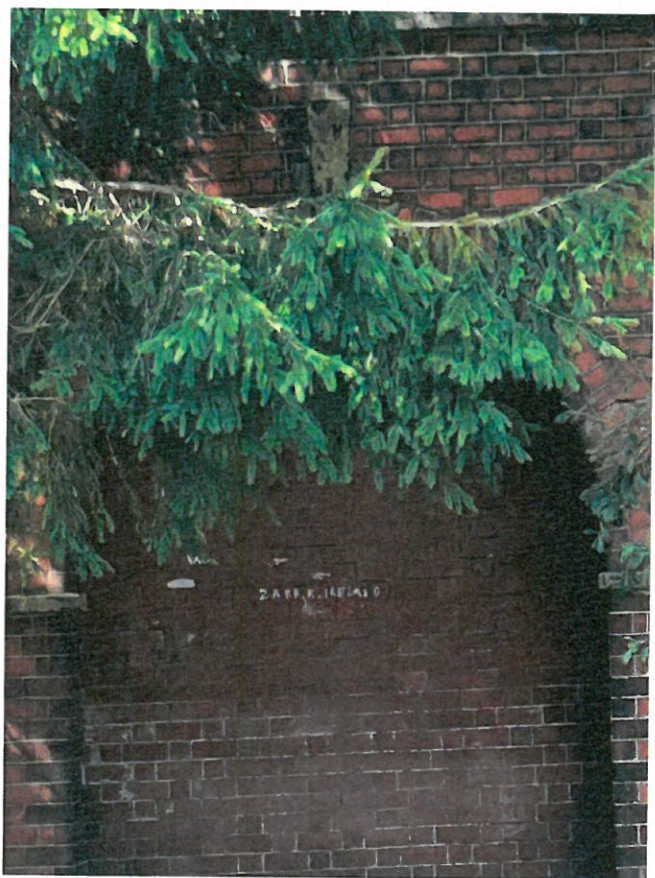
Photograph 33



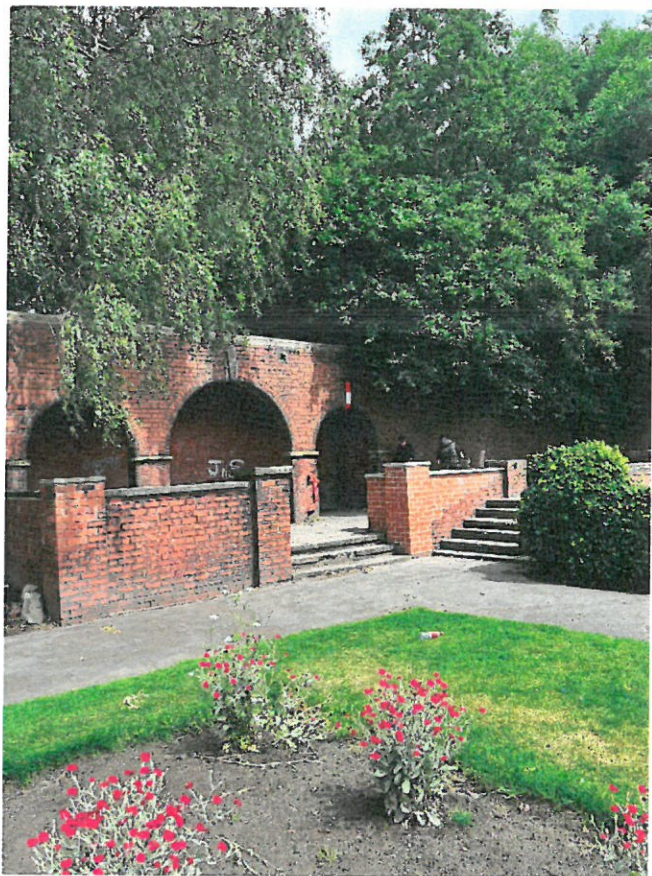
Photograph 34



Photograph 35



Photograph 36



Photograph 37



Photograph 38

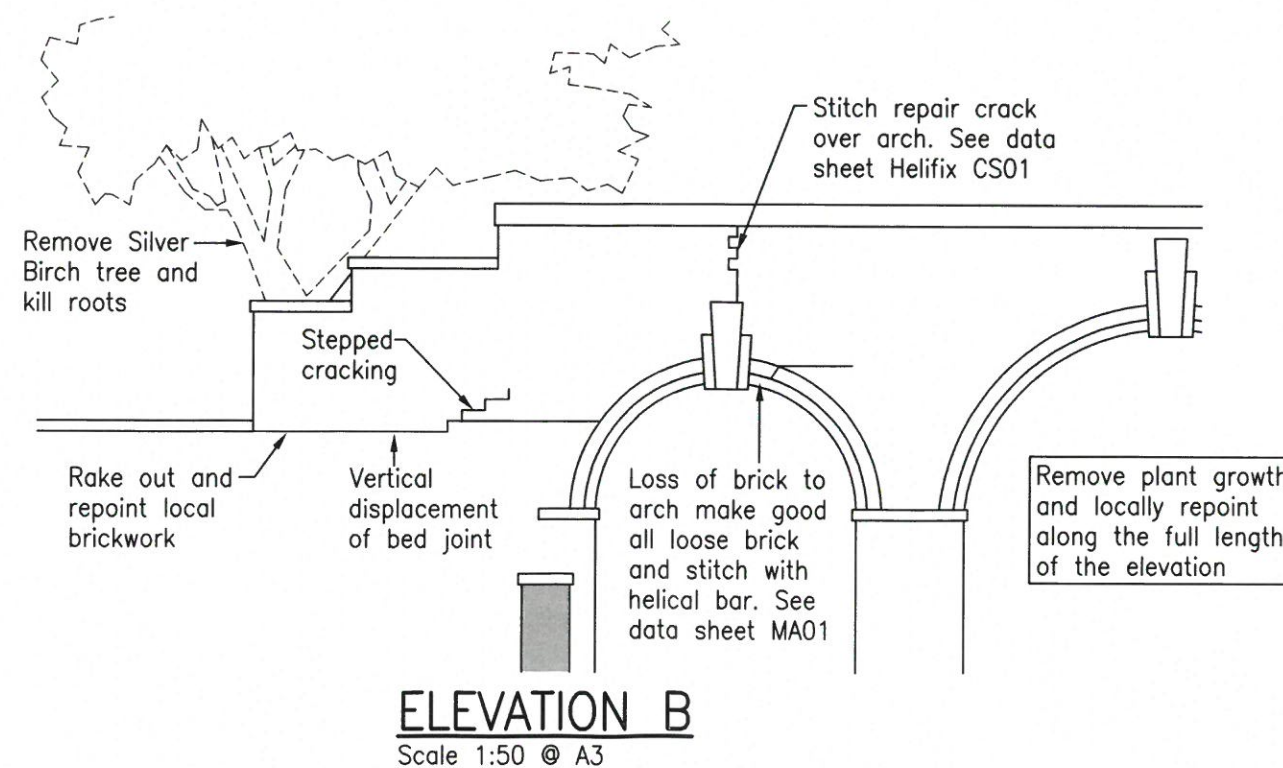
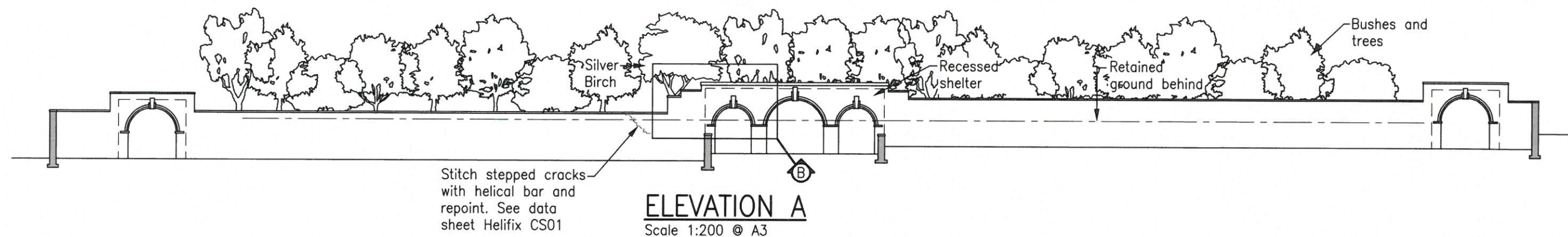
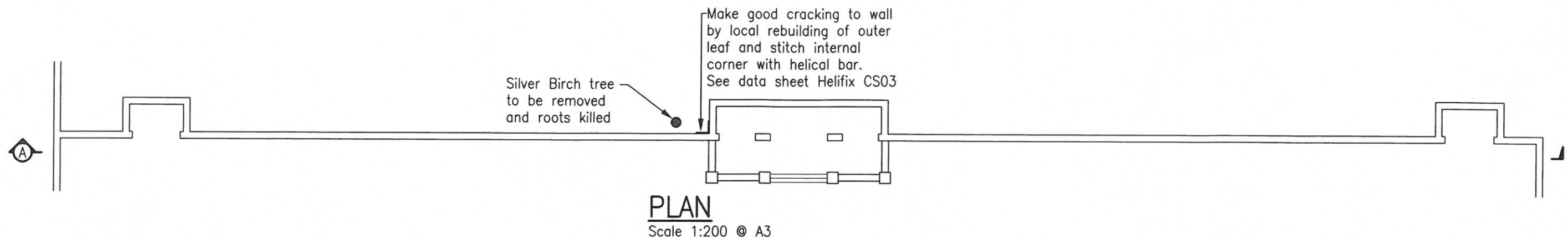


Photograph 39

APPENDIX C

Sketch Details





REV	DATE	BY	DETAILS OF REVISION
ARCHITECT / CLIENT			
ABM Ltd			
PROJECT			PROJECT NO.
FALINGE PARK			HC-23261
ROCHDALE			DRAWING NO.
			(80)-01
			REVISION
TITLE			DRAWN BY
PLAN & ELEVATION			JTB
			DATE
			14.08.23
			SCALE
			SHOWN@A3
HEALEY CONSULTING			
Brunel House			
63 Dale Street			
Minton			
Rochdale			
OL16 3NU			
Tel: 01706 343981			
Fax: 01706 343981			
email: office@healeyconsulting.co.uk			
copyright: Healey Consulting			



DO NOT SCALE FROM THIS DRAWING. USE GIVEN DIMENSIONS ONLY. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY DIMENSIONAL DISCREPANCIES TO BE REPORTED BACK TO HEALEY CONSULTING PRIOR TO PROCEEDING WITH CONSTRUCTION

A3 size drawing sheet (420mm x 297mm)

APPENDIX D

Data Sheets

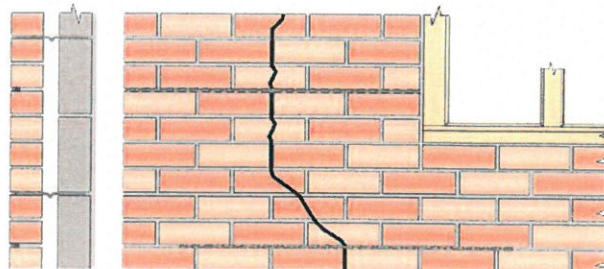


Crack Stitching a Cavity Wall using HeliBars

METHOD STATEMENT

1. Using a twin-bladed, diamond-tipped wall chaser and vacuum attachment, cut slots into the horizontal mortar joints, to the specified depth and at the required vertical spacing. Ensure that NO mortar is left attached to the exposed brick surfaces in order to provide a good masonry/grout bond.
2. Remove ALL dust and mortar from the slots and thoroughly flush with water. Where the substrate is very porous or flushing with water is inappropriate, use HeliPrimer WB. Ensure the slot is damp or primed prior to commencing step 5.
3. Mix HeliBond cementitious grout using a power mixer and load into the Helifix Pointing Gun CS.
4. Fit appropriate mortar nozzle.
5. Inject a bead of HeliBond grout, approx. 15mm deep, into the back of the slot.
6. Push the 6mm HeliBar into the grout to obtain good coverage.
7. Inject a second bead of HeliBond grout over the exposed HeliBar and iron it into the slot using a finger trowel. Inject additional HeliBond as necessary, leaving 10-15mm for new pointing.
8. Point up the remaining slot with a suitable matching mortar and make good the crack using an appropriate Helifix bonding agent depending on the width of the crack.
9. Clean tools with clean, fresh water.

N.B. Pointing may be carried out as soon as is convenient after the HeliBond has started to gel.



RECOMMENDED TOOLING

- For cutting slots up to 40mm deepTwin-bladed cutter with vacuum attachment
- For mixing HeliBond3-jaw-chuck drill with mixing paddle
- For injection of HeliBond into slotsHelifix Pointing Gun CS with mortar nozzle
- For smoothing pointingStandard finger trowel

Specification Notes

The following criteria are to be used unless specified otherwise:

- A. Depth of slot into the masonry to be 25mm to 40mm.
- B. Height of slot to be equal to full mortar joint height, with a minimum of 8mm. For thin mortar joint specifications refer to the Helifix Technical Dept.
- C. HeliBar to be long enough to extend a minimum of 500mm either side of the crack or 500mm beyond the outer cracks if two or more adjacent cracks are being stitched using one rod.
- D. Normal vertical spacing is 450mm (6 brick courses).
- E. Where a crack is less than 500mm from the end of a wall or an opening the HeliBar is to be continued for at least 100mm around the corner and bonded into the adjoining wall or bent back and fixed into the reveal, avoiding any DPC.
- F. In hot conditions ensure the masonry is well wetted or primed to prevent premature drying of the HeliBond due to rapid de-watering. Ideally additional wetting of the slot, or priming with HeliPrimer WB, should be carried out just prior to injecting the HeliBond grout.
- G. Do not use HeliBond when the air temperature is +4°C and falling or apply over ice. In all instances the slot must be thoroughly damp or primed prior to injection of the HeliBond grout.

The above specification notes are for general guidance only and Helifix reserves the right to amend details/notes as necessary.

GENERAL NOTES

If your application differs from this repair detail or you require specific advice on your particular project, call the Helifix Technical Sales Team on **020 8735 5222**. Our Technical Department can provide you with a full support service including:

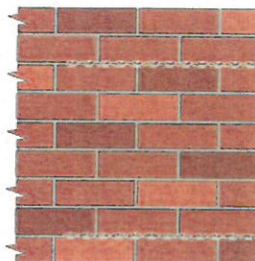
- Advice, assistance and recommendations on all structural repair matters
- Devising and preparing complete repair proposals for specific situations
- An insurance-backed warranty via our Approved Installers scheme

Repair of a Crack Near a Corner in a Cavity Wall using HeliBars

METHOD STATEMENT

1. Using a twin-bladed, diamond-tipped wall chaser with vacuum attachment, cut slots into the horizontal mortar joints to the specified depth and at the required vertical spacing. Ensure that NO mortar is left attached to the exposed brick surfaces in order to provide a good masonry/grout bond.
2. Remove ALL dust and mortar from the slots and thoroughly flush with water. Where the substrate is very porous or flushing with water is inappropriate, use HeliPrimer WB. Ensure the slot is damp or primed prior to commencing step 6.
3. Cut the 6mm HeliBar to the required length and bend to fit in the slots.
4. Mix HeliBond cementitious grout using a power mixer and load into the Helifix Pointing Gun CS.
5. Fit the appropriate mortar nozzle.
6. Inject a bead of HeliBond grout, approx. 15mm deep, into the back of the slot.
7. Push the 6mm HeliBar into the grout to obtain good coverage.
8. Inject a second bead of HeliBond grout over the exposed HeliBar and iron it into the slot using a finger trowel. Inject additional HeliBond as necessary, leaving 10-15mm for new pointing.
9. The crack within the wall should be weather-proofed using an appropriate Helifix bonding agent e.g. HeliBond or CrackBond, depending on the width of the crack and the surface made good or left ready for any decoration.
10. Clean tools with clean, fresh water.

N.B. Pointing may be carried out as soon as is convenient after the HeliBond has started to gel.



RECOMMENDED TOOLING

For cutting slots up to 40mm deep	Twin bladed cutter with vacuum attachment
For mixing HeliBond	3-jaw-chuck drill with mixing paddle
For injection of HeliBond into slots	Helifix Pointing Gun CS with mortar nozzle
For smoothing pointing	Standard finger trowel

Specification Notes

The following criteria are to be used unless specified otherwise:

- A. Depth of slot into the masonry to be 35mm to 40mm.
- B. Height of slot to be equal to full mortar joint height, with a minimum of 8mm. For thin mortar joint specifications refer to the Helifix Technical Dept.
- C. HeliBar to be long enough to extend a minimum of 500mm either side of the crack or 500mm beyond the outer cracks if two or more adjacent cracks are being stitched using one rod.
- D. Normal vertical spacing is 450mm (6 brick courses).
- E. Where a crack is less than 300mm from the end of a wall or an opening the HeliBar is to be continued for at least 250mm around the corner and bonded into the adjoining wall.
- F. In hot conditions ensure the masonry is well wetted or primed to prevent premature curing of the HeliBond due to rapid de-watering. Ideally additional wetting of the slot, or priming with HeliPrimer WB, should be carried out just prior to injecting the HeliBond grout.
- G. Do not use HeliBond when the air temperature is +4°C and falling or apply over ice. In all instances the slot must be thoroughly damp or primed prior to injection of the HeliBond grout.

The above specification notes are for general guidance only and Helifix reserves the right to amend details/notes as necessary.

GENERAL NOTES

If your application differs from this repair detail or you require specific advice on your particular project, call the Helifix Technical Sales Team on 020 8735 5222. Our Technical Department can provide you with a full support service including:

- Advice, assistance and recommendations on all structural repair matters
- Devising and preparing complete repair proposals for specific situations
- An insurance-backed warranty via our Approved Installers scheme

MA01

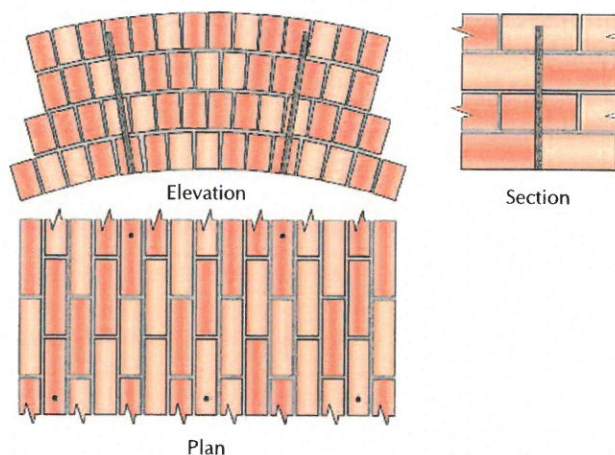
Masonry Arch Pinning of Separated Brick Rings, through Brick Faces, using CemTies

METHOD STATEMENT

1. Mark locations for the pins onto the underside of the arch at the required spacing.
2. Drill 14mm clearance holes (16mm if the CemTie is longer than 450mm) to the required depth and at the specified spacing.
3. Clean out ALL dust from the hole and thoroughly flush with water. Where the substrate is very porous or flushing with water is inappropriate, use HeliPrimer WB. Ensure the hole is damp or primed prior to commencing step 8.
4. Attach the required length of CemTie pinning nozzle to the gun.
5. Mix HeliBond cementitious grout with a power mixer and load into the Helifix Pointing Gun HD.
6. Pump grout to fill the nozzle.
7. Wind the CemTie into the nozzle and ensure that it is fully covered in grout.
8. Insert the nozzle to the full depth of the drilled hole and pump the grout.
9. Make good all holes at the surface with brick dust or matching mortar.
10. Clean tools with clean, fresh water.

N.B. If there is a lot of movement in the arch then the ties will have to be installed in phases. After each phase the ties should be left for 24 hours for the grout to achieve initial set. After 24 hours continue with the next phase.

For all structural bridge or tunnel repairs refer to the Helifix Technical Department.



RECOMMENDED TOOLING

- For drillingSDS rotary hammer drill 650/700w
 For mixing HeliBond3-jaw-chuck drill with mixing paddle
 For insertion of the CemTiesHelifix Pointing Gun HD with pinning nozzle
 or Pneumatic Pointing Gun

Specification Notes

The following criteria are to be used unless specified otherwise:

- A. Place CemTies on a staggered 450mm x 450mm grid.
- B. Depth of hole to be CemTie length +25mm.
- C. Where arch rings are badly delaminated and/or brickwork is very loose, the CemTies will have to be installed in phases. In this case consideration should be given to using extra ties to help stabilise the brickwork prior to installing the first phase of CemTies. Depending on the condition of the brickwork it may be possible to use Helifix DryFix ties for this purpose.
- D. In hot conditions ensure the masonry is well wetted or primed to prevent premature drying of the HeliBond due to rapid de-watering. Ideally additional wetting of the hole or priming with HeliPrimer WB should be carried out just prior to inserting the CemTie.
- E. Do not use HeliBond when the air temperature is +4°C and falling or apply over ice. In all instances the hole must be thoroughly damp or primed with HeliPrimer WB prior to injection of the HeliBond grout.

The above specification notes are for general guidance only and Helifix reserves the right to amend details/notes as necessary.

GENERAL NOTES

If your application differs from this repair detail or you require specific advice on your particular project, call the Helifix Technical Sales Team on **020 8735 5222**. Our Technical Department can provide you with a full support service including:

- Advice, assistance and recommendations on all structural repair matters
- Devising and preparing complete repair proposals for specific situations
- An insurance-backed warranty via our Approved Installers scheme