



RIBBLE VALLEY
BOROUGH COUNCIL

19 DEC 2011

FOR THE
ATTENTION OF

For office use only

Application No: 320111066 P

Date received

Fee paid £

Receipt No:

Council Offices, Church Walk, Clitheroe, Lancashire, BB7 2RA Tel: 01200 425111 www.ribblevalley.gov.uk

Application for listed building consent for alterations, extension or demolition of a listed building Planning (Listed Buildings and Conservation Areas Act) 1990

Publication of planning applications on council websites

Please note that with the exception of applicant contact details and Certificates of Ownership, the information provided on this application form and in supporting documents may be published on the council's website.

If you have provided any other information as part of your application which falls within the definition of personal data under the Data Protection Act which you do not wish to be published on the council's website, please contact the council's planning department.

Please complete using block capitals and black ink.

It is important that you read the accompanying guidance notes as incorrect completion will delay the processing of your application.

1. Applicant Name and Address

Title: First name:

Last name:

Company (optional):

Unit: House number: House suffix:

House name:

Address 1:

Address 2:

Address 3:

Town:

County:

Country:

Postcode:

2. Agent Name and Address

Title: First name:

Last name:

Company (optional):

Unit: House number: House suffix:

House name:

Address 1:

Address 2:

Address 3:

Town:

County:

Country:

Postcode:

3. Description of Proposed Work

Please describe the proposals to alter, extend or demolish the listed building(s):

POINTING TO EXISTING BRIDGE,
THE EXISTING POINTING IS A MIXTURE OF RECESSED, RIBBON AND FLUSH.
IT IS PROPOSED TO REPOINT USING FLUSH POINTING ONLY AS RECORDS
INDICATE THIS AS THE TYPE OF POINTING USED HISTORICALLY.
ONLY AREAS OF THE BRIDGE THAT ARE NOT FLUSH POINTING AND ARE,
MISSING, LOOSE OR FRIABLE WILL BE REPOINTED.

3. Description of Proposed Work (continued)

Has the work already started without consent?

☐ Yes

☒ No

If Yes, please state when the work was started (DD/MM/YYYY):

(date must be pre-application submission)

Has the work been completed without consent?

☐ Yes

☐ No

If Yes, please state the date when the work was completed (DD/MM/YYYY):

(date must be pre-application submission)

4. Site Address Details

Please provide the full postal address of the application site.

Unit:

House number:

House suffix:

House name:

RIBCHESTER BRIDGE

Address 1:

B6245 BLACKBURN ROAD

Address 2:

Address 3:

Town:

County:

Postcode (optional):

Description of location or a grid reference (must be completed if postcode is not known):

Easting: 366 23 7

Northing: 435 638

Description:

3-SPAN MASONRY ARCH BRIDGE

5. Related Proposals

Are there any current applications, previous proposals or demolitions for the site?

☐ Yes

☒ No

If Yes please describe and include the planning application reference number(s), if known:

Description	Reference number

6. Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application?

☐ Yes

☒ No

If Yes, please complete the following information about the advice you were given (This will help the authority to deal with this application more efficiently).

Please tick if the full contact details are not known, and then complete as much as possible: ☐

Officer name:

Reference:

Date (DD/MM/YYYY):

(must be pre-application submission)

Details of pre-application advice received?

7. Neighbour and Community Consultation

Have you consulted your neighbours or the local community about the proposal?

☒ Yes

☐ No

If Yes, please provide details:

PARISH COUNCIL MEETING 17/10/11

8. Council Employee / Member

Is the applicant or agent related to any member of staff or elected member of the council?

☐ Yes

☒ No

If Yes, please provide details:

9. Materials

Please provide a description of existing and proposed materials and finishes to be used in the building (demolition excluded):

	Existing (where applicable)	Proposed	Not applicable	Don't Know
External walls			☒	☐
Roof covering			☒	☐
Chimney			☒	☐
Windows			☒	☐
External doors			☒	☐
Ceilings			☒	☐
Internal walls			☒	☐
Floors			☒	☐
Internal doors			☒	☐
Rainwater goods			☒	☐
Boundary treatments (e.g. fences, walls)			☒	☐
Vehicle access and hard standing			☒	☐
Lighting			☒	☐
Others (add description) BRIDGE	MIXTURE OF POINTING MATERIALS AND FINISHES	REPOINT USING EASIPOINT HISTORIC LIME MORTAR, FLUSH FINISH	☐	☐

Are you supplying additional information on submitted drawings or plans?

☒ Yes☐ No

If Yes, please state plan(s)/drawing(s) references:

DRAWING 1027/2A

EASIPOINT HISTORIC MORTAR DATA SHEET

BAT SURVEY

ABI REPORT

RECENT PHOTOGRAPHS SHOWING DEFECTS
LAND PLAN

10. Demolition

Does the proposal include the partial or total demolition of a listed building?

☒ Yes ☐ No

If Yes, which of the following does the proposal involve?

a) Total demolition of the listed building: ☐ Yes ☒ No

b) Demolition of a building within the curtilage of the listed building: ☐ Yes ☒ No

c) Demolition of a part of the listed building: ☒ Yes ☐ No

If the answer to c) is Yes:

i) What is the total volume of the listed building?(cubic metres)

ii) What is the volume of the part to be demolished?(cubic metres)

iii) What was the (approximate) date of the erection of the part to be removed? (MM/YYYY) (date must be pre-application submission)

Please provide a brief description of the building or part of the building you are proposing to demolish:

REPOINTING OF EXISTING JOINTS

Why is it necessary to demolish or extend (as applicable) all or part of the building(s) and or structure(s)?

TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE BRIDGE AS A HIGHWAY STRUCTURE CAPABLE OF CARRYING 40T

11. Listed Building Alterations

Do the proposed works include alterations to a listed building?

☒ Yes ☐ No

If Yes, do the proposed works include: (you must answer each of the questions)

a) Works to the interior of the building? ☐ Yes ☒ No

b) Works to the exterior of the building? ☒ Yes ☐ No

c) Works to any structure or object fixed to the property (or buildings within its curtilage internally or externally)? ☐ Yes ☒ No

d) Stripping out of any internal wall, ceiling or floor finishes (e.g. plaster, floorboards)? ☐ Yes ☒ No

If the answer to any of these questions is Yes, please provide plans, drawings, photographs sufficient to identify the location, extent and character of the items to be removed, and the proposal for their replacement, including any new means of structural support and state references for the plan(s)/drawing(s):

REPOINTING OF EXISTING JOINTS

12. Listed Building Grading

Please state the grading (if known) of the building in the list of Buildings of Special Architectural or Historic interest? (Note: only one box must be ticked)

Grade I ☐

Ecclesiastical Grade II ☐

Grade II ☒

Ecclesiastical Grade II* ☐

Grade II* ☐

Don't know ☐

Ecclesiastical Grade I ☐

13. Immunity From Listing

Has a Certificate of Immunity from Listing been sought in respect of this building?

☐ Yes

☒ No

☐ Don't know

If Yes, please provide the result of the application:

14. Certificates

One Certificate A, B, C, or D, must be completed with this application form

CERTIFICATE OF OWNERSHIP - CERTIFICATE A**Certificate under Regulation 6 of the Planning (Listed Buildings and Conservation Areas) Regulations 1990**

I certify/The applicant certifies that on the day 21 days before the date of this application nobody except myself/ the applicant was the owner (*owner is a person with a freehold interest or leasehold interest with at least 7 years left to run*) of any part of the land or building to which the application relates.

Signed - Applicant:

Or signed - Agent:

Date DD/MM/YYYY:



05/10/2011

CERTIFICATE OF OWNERSHIP - CERTIFICATE B**Certificate under Regulation 6 of the Planning (Listed Buildings and Conservation Areas) Regulations 1990**

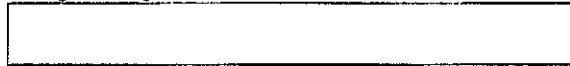
I certify/ The applicant certifies that I have/the applicant has given the requisite notice to everyone else (as listed below) who, on the day 21 days before the date of this application, was the owner (*owner is a person with a freehold interest or leasehold interest with at least 7 years left to run*) of any part of the land or building to which this application relates

Name of Owner	Address	Date Notice Served

Signed - Applicant:

Or signed - Agent:

Date DD/MM/YYYY:

**CERTIFICATE OF OWNERSHIP - CERTIFICATE C****Certificate under Article 7 of the Town and Country Planning (General Development Procedure) Order 1995 & Regulation 6 of the Planning (Listed Buildings and Conservation Areas) Regulations 1990**

I certify/ The applicant certifies that:

§ Neither Certificate A or B can be issued for this application

§ All reasonable steps have been taken to find out the names and addresses of the other owners (*owner is a person with a freehold interest or leasehold interest with at least 7 years left to run*) of the land or building, or of a part of it, but I have/ the applicant has been unable to do so

The steps taken were:



Name of Owner	Address	Date Notice Served

Notice of the application has been published in the following newspaper (circulating in the area where the land is situated):



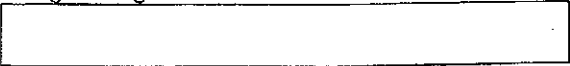
On the following date (which must not be earlier than 21 days before the date of the application):



Signed - Applicant:

Or signed - Agent:

Date DD/MM/YYYY:



14. Certificates (continued)

CERTIFICATE OF OWNERSHIP - CERTIFICATE D

Certificate under Regulation 6 of the Planning (Listed Buildings and Conservation Areas) Regulations 1990

I certify/ The applicant certifies that:

§ Certificate A cannot be issued for this application

§ All reasonable steps have been taken to find out the names and addresses of everyone else who, on the day 21 days before the date of this application, was the owner (*owner is a person with a freehold interest or leasehold interest with at least 7 years left to run*) of any part of the land to which this application relates, but I have/ the applicant has been unable to do so

The steps taken were:

--

Notice of the application has been published in the following newspaper (circulating in the area where the land is situated):

--

On the following date (which must not be earlier than 21 days before the date of the application):

--

Signed - Applicant:

--

Or signed - Agent:

--

Date DD/MM/YYYY:

--

15. Planning Application Requirements - Checklist

Please read the following checklist to make sure you have sent all the information in support of your proposal. Failure to submit all information required will result in your application being deemed invalid. It will not be considered valid until all information required by the Local Planning Authority has been submitted.

3 copies of a completed and dated application form: ☐

3 copies of other plans and drawings or information necessary to describe the subject of the application: ☐

3 copies of a plan which identifies the land to which the application relates drawn to an identified scale and showing the direction of North: ☐

3 copies of the completed, dated Ownership Certificate (A, B, C, or D - as applicable): ☐

16. Declaration

I/we hereby apply for planning permission/consent as described in this form and the accompanying plans/drawings and additional information.

Signed - Applicant:

--

Or signed - Agent:

--

Date (DD/MM/YYYY):

05/10/2011

(date cannot be pre-application)

17. Applicant Contact Details

Telephone numbers

Country code:

National number:

Extension number:

--

--

--

Country code:

Mobile number (optional):

--

--

Country code:

Fax number (optional):

--

--

Email address (optional):

--

18. Agent Contact Details

Telephone numbers

Country code:

National number:

Extension number:

--

--

--

Country code:

Mobile number (optional):

--

--

Country code:

Fax number (optional):

--

--

Email address (optional):

--

19. Site Visit

Can the site be seen from a public road, public footpath, bridleway or other public land? ☒ Yes ☐ No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact? (Please select only one)

☒ Agent

☒ Applicant

☐ Other (if different from the agent/applicant's details)

If Other has been selected, please provide:

Contact name:

--

Telephone number:

--

Email address:

--

Ribchester Bridge – Heritage Statement

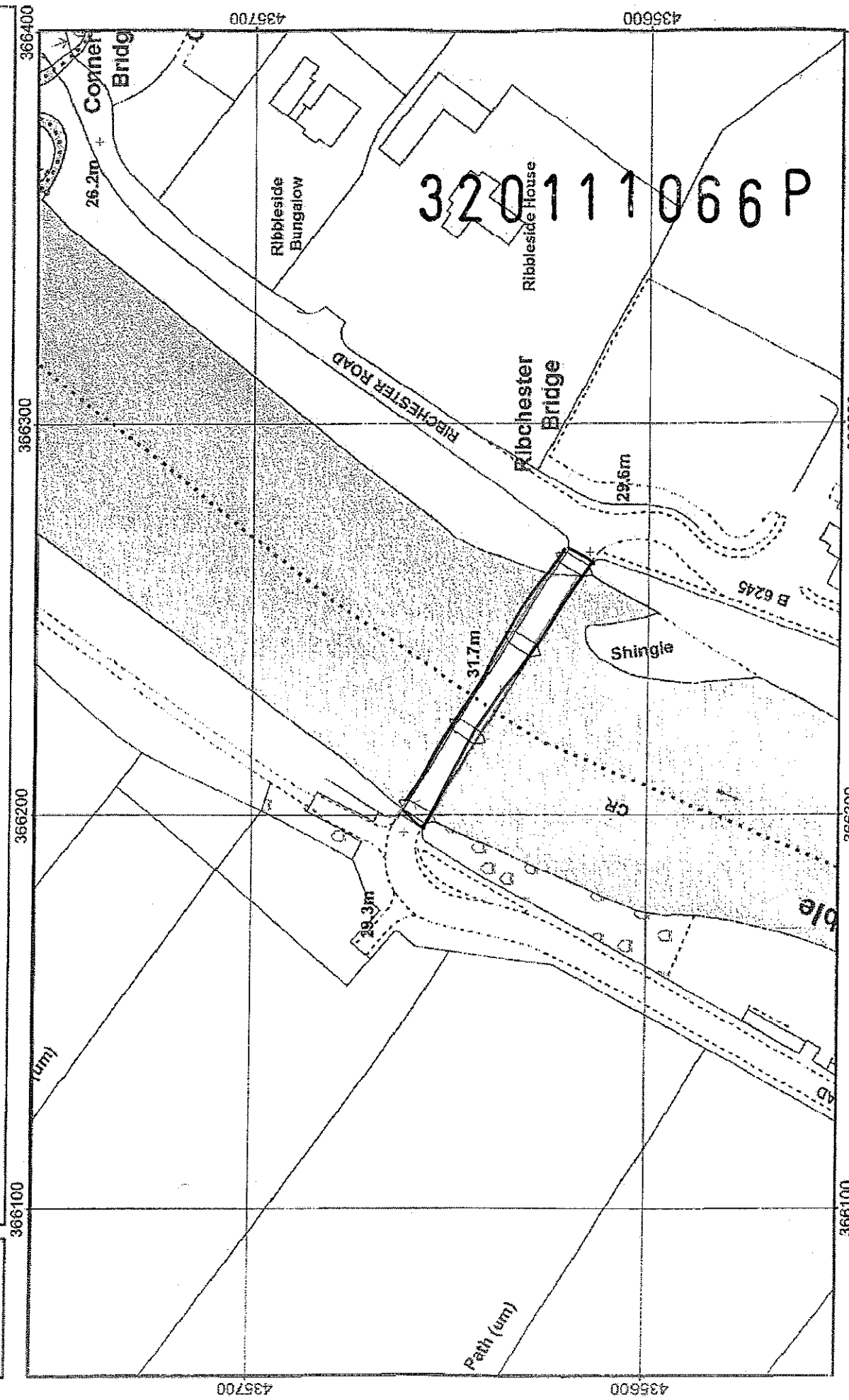
Ribchester Bridge is a 3 span ashlar sandstone masonry segmental arch with triangular cutwaters carrying Blackburn Road over the River Ribble. The bridge is grade 2 listed building. The bridge was believed to have been constructed between 1775 and 1789. The original bridge over the River Ribble at Ribchester was situated 80m upstream and constructed on the site of the old Roman Ford in 1669. This bridge was washed away in 1772.

The proposed works should have no impact upon the heritage asset other than to safeguard the bridge for future use. Care has been taken to ensure that the mortar and finish chosen for the re-pointing of the structure is both historically and structurally suitable.

320111066P



Ribchester Bridge



Scale 1:1250

LCC Map Ref: 73003

Created: 14/11/2011

(Scale correct when printed on A4 Landscape)

By David Griffiths

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Ribble Valley Borough Council

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DESIGN AND ACCESS STATEMENT PRO-FORMA

From the 10 August 2006, planning applications relating to certain types of developments are required to be submitted with a design and access statement. When submitting an application, failure to provide a design and access statement of sufficient standard may result in a delayed registration of the application.

What Applications Need to be Accompanied by a Design and Access Statement?

Most planning applications have to be accompanied by a design and access statement, the exceptions being:

- material change in the use of land or buildings, unless it also involves operational development;
- engineering or mining operations;
- development of an existing dwellinghouse, or development within the curtilage or a dwellinghouse for any purpose incidental to the enjoyment of the dwellinghouse, where no part of that dwellinghouse or curtilage is within a designated area or is a listed building. 'Designated Areas' include: • Conservation Areas; • Sites of Special Scientific Interest (SSSI); and • Areas of Outstanding Natural Beauty (AONB)

Process

What factors have you considered when deciding upon the use, design, scale, layout and materials used in the proposed development?

No changes are being made to the existing structure. Historic lime mortar is being used to maintain the structure.

Use

What will the extension/development be used for and justify why this is necessary?

It will continue to be used as a highway bridge carrying B6245 Blackburn Road. The works are required to enable this use to be continued safely.

Amount

What is the proposed size of the extension/development and why is this necessary and appropriate for the setting of the development?

The bridge is an appropriate size to carry B6245 Blackburn Road over River Ribble.

Layout

Why have you chosen the layout specified in the planning application and how did you eliminate alternative options?

The existing layout is to be maintained. No alternative options have been considered.

Scale

Is the scale of the extension/development in keeping with the context of the site and in what way?

The existing bridge is an appropriate size to carry B6245 Blackburn Road over River Ribbles. It is currently an appropriate size and scale to carry out this function.

Landscaping

If appropriate, specify the boundary treatments and any landscaping included in the development. You may need to justify why certain materials or planting have been used?

N/A

Appearance

Specify how the extension/development fits in terms of its appearance and include details of materials to be used

Appropriate historic lime mortar will be used on the bridge.

Access

Explain how the extension/development will be accessed by vehicles and people. You should consider the need for access by all members of society and emergency vehicles

The bridge will provide support to B6245 Blackburn Road. Access is currently available to all members of society and emergency vehicles. The works are required to maintain this access.

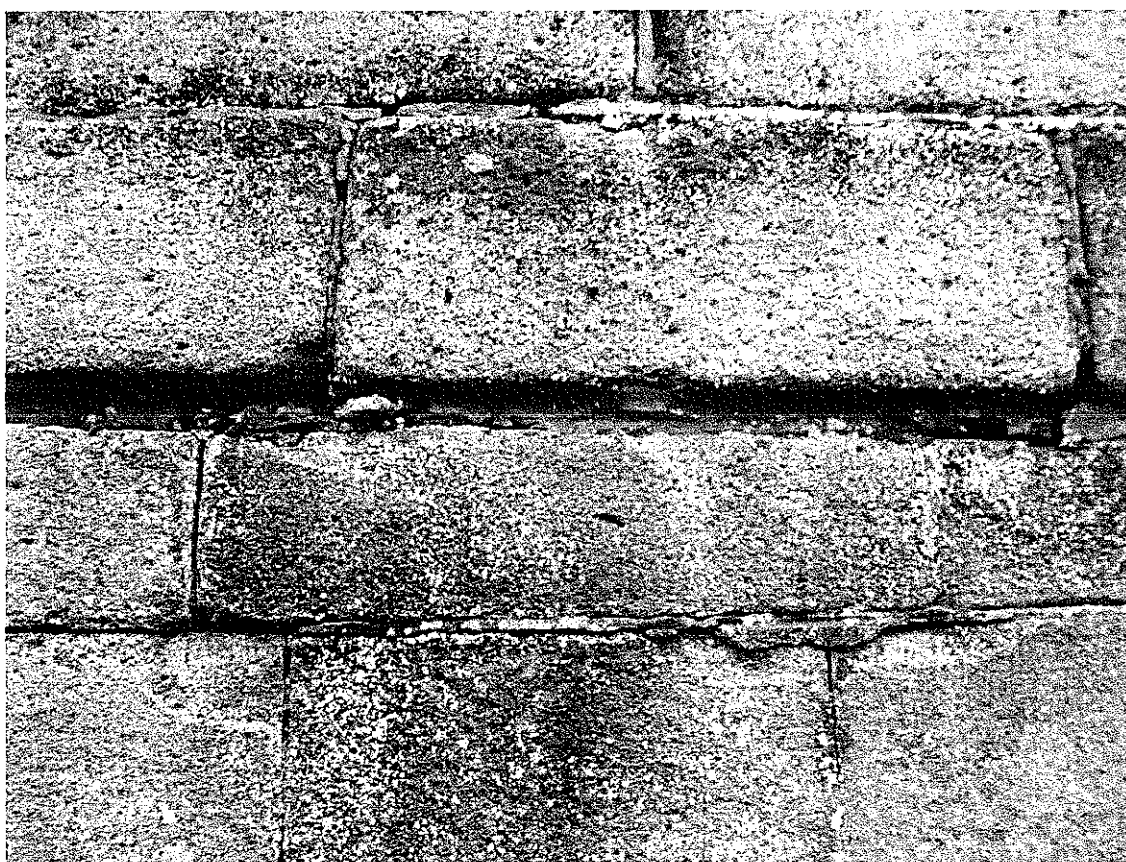
Ribchester Bridge is a 3 span masonry arch carrying Blackburn Road over the River Ribble. The bridge is grade 2 listed building.

The bridge was identified as requiring maintenance pointing in the 2011/12 Programme. An inspection was carried out in August 2011 to ascertain the full extent of works required. The pointing to the spandrels (outside faces) and the underside of the bridge was found to be in a worse state than had been previously thought. Due to budgetary cuts (£1m taken from the bridges budget) the scheme was moved into 2012/13 programme.

The inspection carried out in August 2011 found large areas of open joints and loose mortar. It was also identified that some of the more recent repairs that have been carried out to the bridge have not used the correct historic mortar or the correct finish.

The photographs below show areas of defective mortar and mortar loss that is typical of that throughout the bridge. Mortar is either missing or where present is loose or has become disconnected from the surrounding masonry.







EASIPOINT

HISTORIC MORTAR

320111066 P



Historic Colour Range

Dark Grey, Sandstone, Standard, Dark Brown,
Light Grey, Brick Red, Yorkstone

Product Details/Classification

EasiPoint Historic is a dry packed blend of lime complying with BS EN 459-1, GGBS complying with BS6699, selected silica sands and natural aggregates complying with BS EN 13139 together with additives to provide water resistance, thixotropic properties, workability and colour.

EasiPoint Historic is a traditional hydrated lime, sand, GGBS mortar.

BENEFITS

- ✓ **Fast Application**
- ✓ **Cost Effective**
- ✓ **Cement Free**
- ✓ **Complete Joint Fill**
- ✓ **Stain-free & Colour Consistent**

Description

Designed for gun-injection, EasiPoint Historic provides a cement-free mortar for pointing soft brick or stonework.

Consistent in both colour and finish, EasiPoint Historic mortars are pumped deep into the joint, providing a complete fill and a degree of flexibility. The mortar is porous allowing the passage of water through the mortar joint.

EasiPoint Historic can be injected into joints as narrow as 5mm and will penetrate to a depth in excess of 100mm, allowing for the deepest of joints.

A standard range of seven colours is readily available. Bespoke blends, where exact matching is required, can also be formulated.

Specification Outline

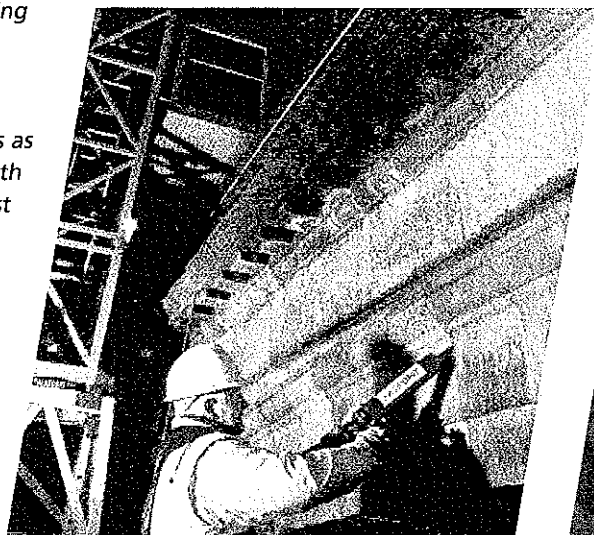
Pointing shall be carried out using EasiPoint Historic Mortar as manufactured by EasiPoint Marketing Ltd. The product must be stored, handled and used strictly in accordance with the manufacturer's instructions.

Quality Assurance

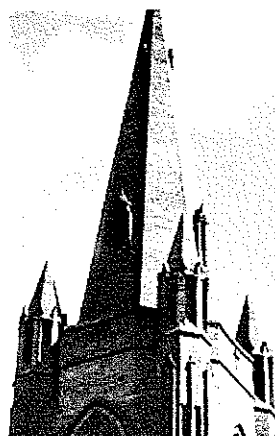
EasiPoint Mortars are manufactured under a quality system conforming to BS EN ISO 9001:2000

Typical Properties @ 20°C

Compressive Strength	8N/mm ²
Initial Set	3 hours
Pot Life	30 mins
Density	2,050Kg/m ³



HISTORIC MORTAR



Instructions for Use

Joint Preparation

In order to ensure adequate bonding of the new mortar to the masonry, it is important that the old mortar is removed, to a minimum depth of twice the joint width, and that any residual dust is removed from the joint.

If the masonry is porous, joints should be wetted down prior to repointing to prevent excessive suction.

Mixing

Place 4.00/4.5 litres of clean water in mixing tub and gradually add dry EasiPoint mortar whilst mixing (the quantity of water will vary with the colour used). Mix in a wide shallow pan using a low speed drill and EasiPoint Blender.

Mix until a consistency of stiff cream is achieved, adding a little extra water if required. Allow mortar to stand for approx 5 minutes. Remix with the addition of a small amount of water if necessary. Check correct consistency by filling the tube, the mortar should hang from the end of the nozzle when the tube is shaken.

Placing

Keeping the nozzle just clear of the wall inject mortar into the joint, slightly overfilling, working from the top of the wall downwards.

The mortar should be tooled off after it has formed a semi-dry surface skin and lost its initial sheen. The time this takes depends upon the absorbency of the masonry.

EasiPoint Historic may be placed at temperatures between 5°C and 35°C. Do not carry out jointing work if rain is expected.

Precautions

Health and Safety

EasiPoint Historic is alkaline when mixed with water and should not come into contact with skin or eyes. Avoid inhalation of dust during mixing and wear safety glasses, dust mask and gloves. If skin contact occurs wash thoroughly with clean water. Should eye contact occur rinse immediately with plenty of clean water and seek medical advice.

Full Health and Safety Data are given in a Product Safety Data Sheet.

Fire

EasiPoint Standard is non-flammable.

Yield

Each 25kg bag of EasiPoint Historic will yield approx. 13.5 litres of mixed material.

Storage and Shelf Life

This product must be stored in unopened bags, kept clear of the ground in cool, dry conditions, protected from excess draught and frost. When kept under these conditions between temperatures of 5-45°C the shelf life of the material will be 6 months from the date of manufacture.

Packaging and Ordering

EasiPoint Historic is supplied in 25kg valvesack bags.

Product Code

EA201 Dark Grey	EA205 Light Grey
EA202 Sandstone	EA208 Brick Red
EA203 Standard	EA209 Yorkstone
EA204 Dark Brown	

For further information and sales please contact:

EasiPoint Marketing Ltd
Restoration House
Drumhead Road
Chorley North Industrial Estate
Chorley, Lancs
PR6 7DE

Tel: 01257 224900

Fax: 01257 224901

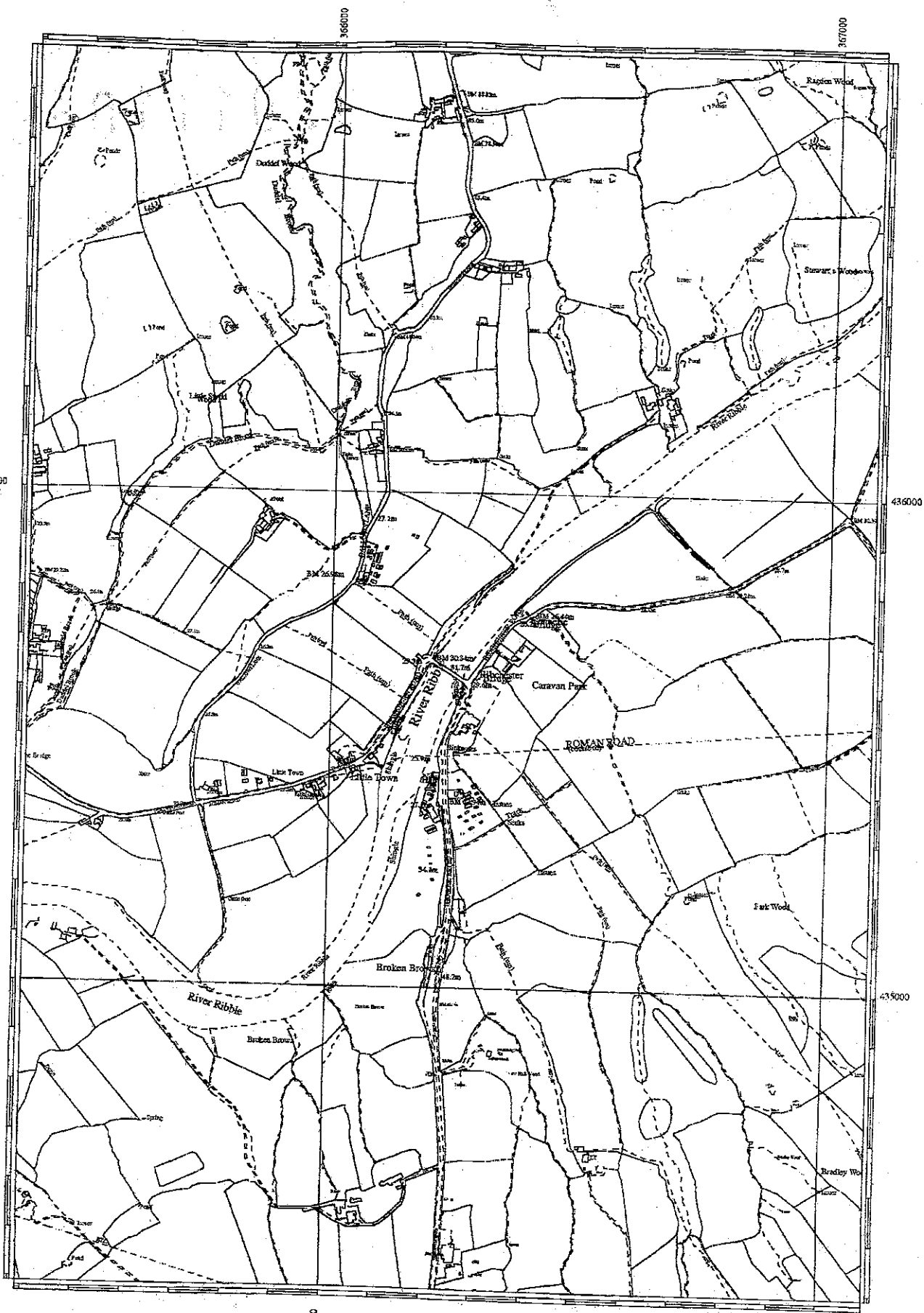
EasiPoint Marketing Ltd products are guaranteed against defective materials and manufacture. Products are sold subject to the EasiPoint Marketing Ltd Terms and Conditions of Sale, copies of which are forwarded on invoice and are available on request. EasiPoint Marketing Ltd endeavours to ensure that the above data and any further advice is correct, however, it cannot accept any direct or indirect liability for the use of its products as such usage is beyond its control.

www.easipoint.co.uk

320111066 P

CONTENTS

Section		Page No
1	Location Plan	1
2	Bridge Elevations - Photographs	2
3	Bridge Approaches - Photographs	3
4	Inspection Procedure	4
5	Inspection Results	5
6	Photographs of Defects	11
7	Sketches of Defects	23
	Appendix A - Special Inspection Report	28
	Appendix B - Special Investigation Report	30
	- Addendum No. 1 to Special Investigation Report	32



Lancashire
County
Council

**COUNTY SURVEYORS
DEPARTMENT**
Cuthbert Harding Esq. CEng FICE FIMM MInst
COUNTY SURVEYOR AND ENGINEER

Maps
Technical Services

TITLE: RIBBESDALE BRIDGE
SCALE: 1 : 10000
DATE: 15-MAY-1998
USER: ON SITE

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2.0 BRIDGE ELEVATIONS



2.1 NORTH ELEVATION



2.2 SOUTH ELEVATION

9 880111056

3.0 BRIDGE APPROACHES



3.1 EASTBOUND APPROACH



3.2 WESTBOUND APPROACH

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4.0 INSPECTION PROCEDURE

4.1 Inspection

Lancashire County Council's Highway Consultancy undertook the Principal Inspection of Ribchester Bridge on 9 May 1996. The weather conditions during the inspection were cold and dry.

The conditions of the parapets and carriageway surfacing was inspected closely from road level. The condition of the masonry arches were closely inspected from the stream.

A check was made on the foundations for scour.

4.2 Components not inspected

The foundations were not exposed for the purpose of the inspection but their condition could be evaluated by noting the presence and extent of defects in the superstructure. The presence or otherwise of any cracking was noted. From this the occurrence of any settlement or rotation, and hence the integrity of the foundations, was assumed.

4.3 Explanatory Notes on Inspection Results

The inspection results are presented in tabular form using the component headings given in BE 11/94. The suggested time scales for recommendations/actions are based on priorities given in Appendix A of BA 63/94.

4.4 Special Inspection

A Special Inspection was undertaken with the Principal Inspection to enable the bridge to be assessed in accordance with BD 21/93.

See Appendix A for results of Special Inspection.

5.0 INSPECTION RESULTS

COMPONENTS	INSPECTION RESULTS	PHOTO (P) No & SKETCH (S) No	PAGE No	RECOMMENDATIONS/ACTION	TIMESCALE
1. Foundations	The foundations were not exposed but the general condition of the arch indicates their integrity to be sound. No indications of undermining were noted.			No action. Monitor.	
2. Invert	There are no visible paved inverts or aprons, the river bed being stony.			No action.	
3. Piers	<u>East Pier, West Pier</u> The piers comprise of large coursed masonry blockwork with generally well pointed joints. Complete loss of mortar at water level. Small areas of lichen growth and leaching over faces of both piers. <u>West Pier</u> Vegetation and debris around bottom of pier.	P1, S3 P2, S2 P2, P3	11, 25 11, 24 11, 12	Deep point joints. Remove lichen. Remove vegetation and debris.	M L L

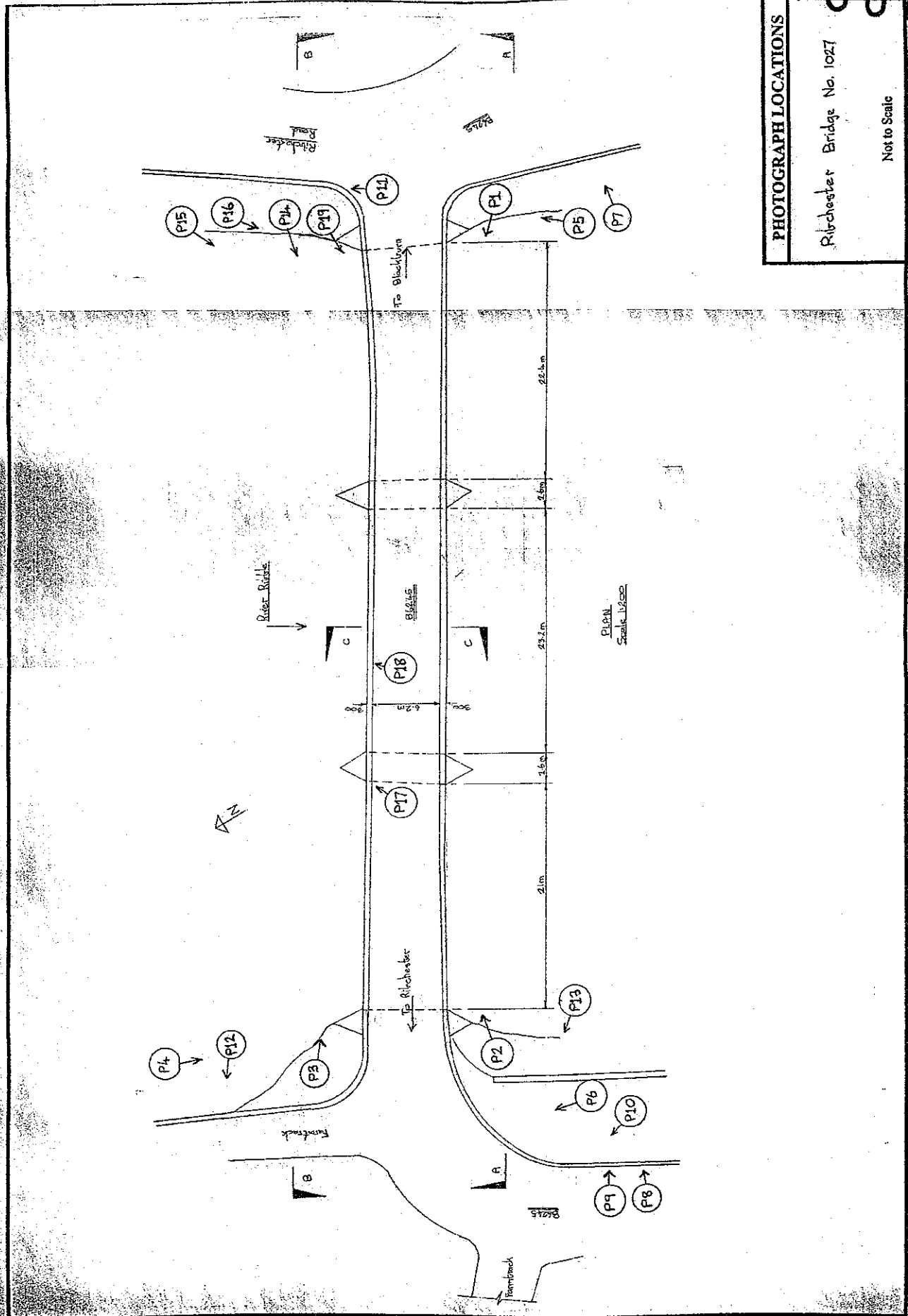
COMPONENTS	INSPECTION RESULTS	PHOTO (P) No & SKETCH (S) No	PAGE No	RECOMMENDATIONS/ACTION	TIMESCALE
6. Wingwalls	<u>All Wingwalls</u> The wingwalls comprise of large coursed masonry blockwork with generally well pointed joints. Areas of lichen growth, leaching, mortar loss and cracked mortar especially around the stringer.	P4, S2	12, 24	Remove lichen. Re-point mortar.	L M
	<u>South East Wingwall</u> Stones dislodged above stringer due to accident damage. Some leeching at cracks.	P5, P6, S1 P5, S1	13, 23 13, 23	Monitor. Monitor.	
7. Retaining Walls	All retaining walls comprise large square coursed jointed masonry. Generally areas of cracked mortar and mortar missing especially from the copings.	P7, S4	14, 26	Re-point mortar. Deep point at copings.	M M
	Some vegetation present on the north east and south west training walls.	P8, S4	14, 26	Remove vegetation.	L
	Occasional hairline cracks through the walls.	P9, S5	15, 27	Monitor.	

COMPONENTS	INSPECTION RESULTS	PHOTO (P) No & SKETCH (S) No	PAGE No	RECOMMENDATIONS/ACTION	TIMESCALE
	Generally on all walls facing the river there is occasional leaching at the joints. <u>North East Retaining Wall</u> Visual signs of small horizontal displacement over the middle portion of the wall. No cracking apparent in the wall. <u>North West Retaining Wall</u> Visual signs of small horizontal displacement over the middle portion of the wall. Crack of width 6mm present in the wall assumed to have been formed in its early life as there area no signs of recent cracking. <u>Retaining wall in front of south west training wall</u> Vegetation present on gabion wall.	P10, S4 P11, S4 P12, S4 P13	15, 26 16, 26 16, 26, 18	Monitor. Monitor. Monitor. Remove vegetation.	L

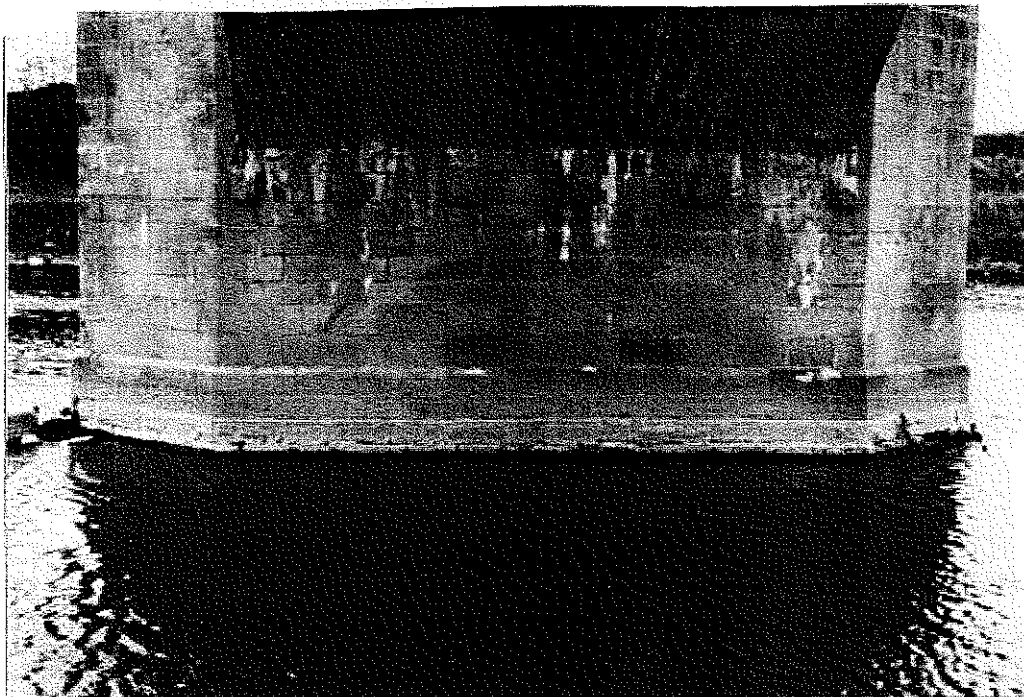
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COMPONENTS	INSPECTION RESULTS	PHOTO (P) No & SKETCH (S) No	PAGE No	RECOMMENDATIONS/ACTION	TIME SCALE
16. Arch Barrels	The arch barrels comprise sawn masonry blocks square to the abutments.				
	The joints are generally 12mm thick or less.				
16.1 Arch Rings	Extensive areas of leaching, lichen growth and mortar loss on all arches with stalactite formations towards the top of the arches.	P14, S3	18, 25	Monitor leaching. Remove lichen. Re-point mortar.	L M
	Generally loss of mortar, cracked mortar, leaching and areas of lichen growth on all arch rings.	P15, S2	19, 24	Re-point mortar. Monitor leaching. Remove lichen.	M L
17. Spandrels	The spandrels comprise squared coursed generally well pointed masonry.				
	Generally all spandrels have mortar missing, cracked mortar, leaching and areas of lichen growth.	P16, S2	19, 24	Re-point joints. Monitor cracks. Remove lichen.	M L
	Above span 1 north there is cracked mortar indicating small horizontal movement of masonry blocks due to traffic loading.	P16, S2	19, 24	Monitor.	

COMPONENTS	INSPECTION RESULTS	PHOTO (P) No & SKETCH (S) No	PAGE No	RECOMMENDATIONS/ACTION	TIMESCALE
20. Waterproofing	The amount of leaching underneath all arches indicates that there is no waterproofing membrane to this structure.			Monitor.	
21. Surfacing	The surfacing over the bridge shows no signs of defects.			No action.	
24. Parapets	The parapets comprise of large coursed masonry blockwork with half round masonry copings. Generally there are large areas of mortar loss especially at coping level, areas of cracked mortar, some hairline cracks going through the parapet and small areas of lichen growth to both parapets. Accident damage to the north parapet has caused lateral movement of upto 15mm to the east end of the parapet. Because of the mass of masonry the capacity of the parapet is probably not affected to any great extent.	P17, P18, S1, S2 P19, S2	20, 23, 24 21, 24	Re-point mortar. Deep point mortar around copings. Monitor cracks. Remove lichen. Monitor.	M M L



6.0 PHOTOGRAPHS OF DEFECTS

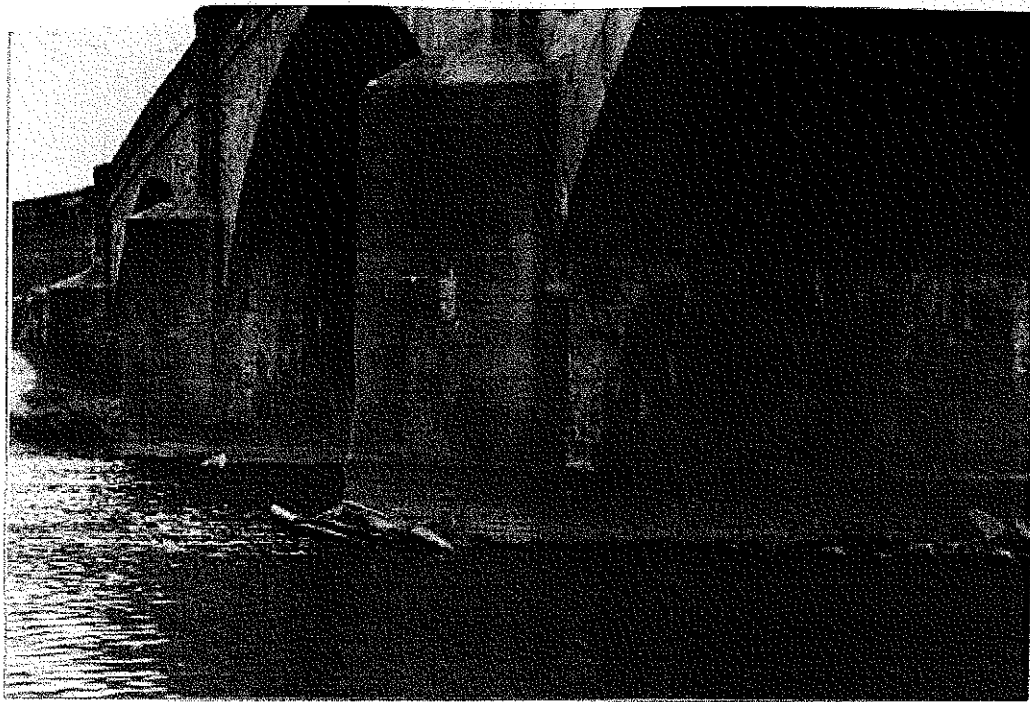


P1, East Pier - Complete loss of mortar at water level

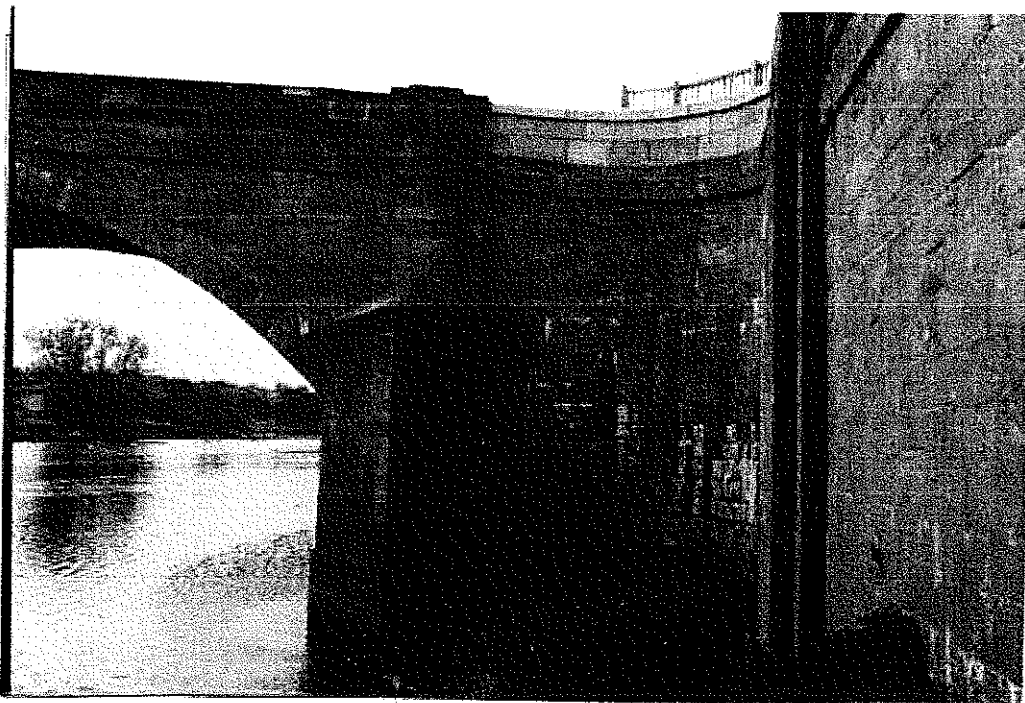


P2, East and West Piers - Areas of lichen growth and leaching. Vegetation at bottom of West Pier.

320111066 P



P3 West Pier - Debris at bottom of pier.



P4, North West Wingwall - Areas of lichen growth, leaching, mortar loss and cracked mortar.

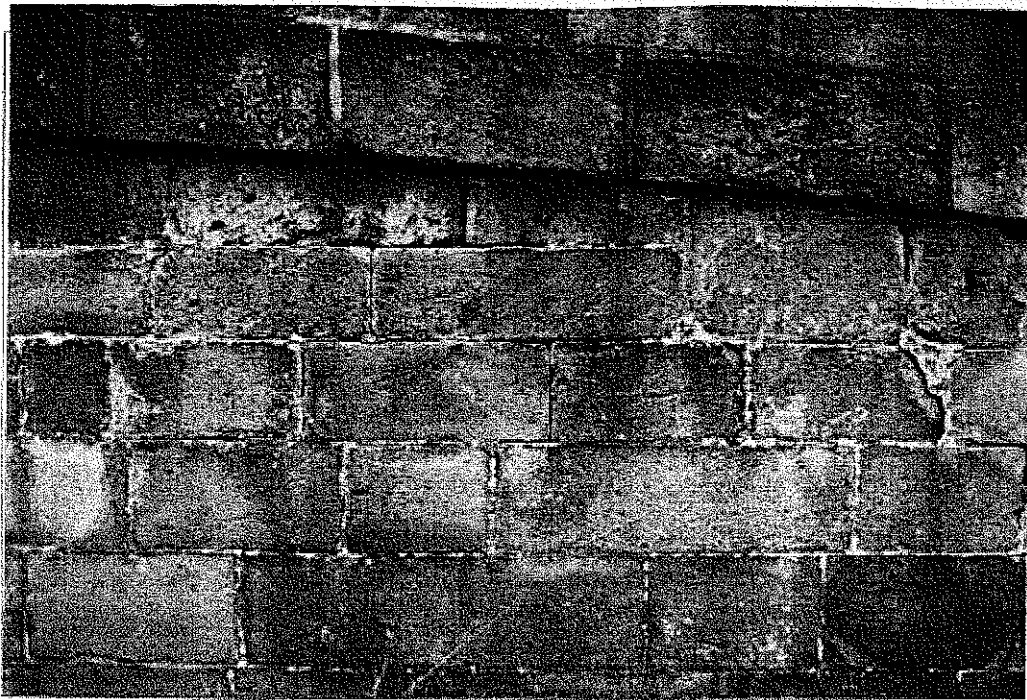


P5 South East Wingwall - Dislodged stones above stringer.



P6. South West Wingwall - Areas of mortar loss especially around stringer.

320111066 P



P1 South East Retaining Wall - Areas of mortar loss and cracked mortar.



P2 South West Retaining Wall - Vegetation present on wall.



P9 South West Retaining Wall - Occasional hairline cracks in wall.



P10 South West Retaining Wall - Areas of leaching and mortar loss.

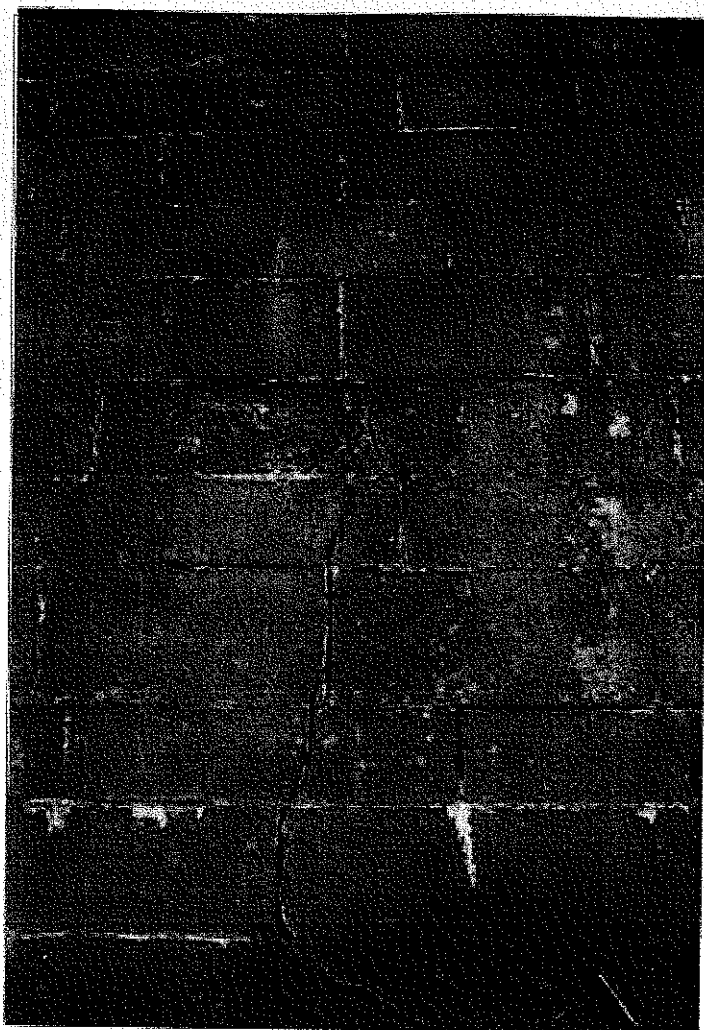
320111066P



P11.
North East Retaining
Wall - Signs of
small horizontal
displacement.

35011100058

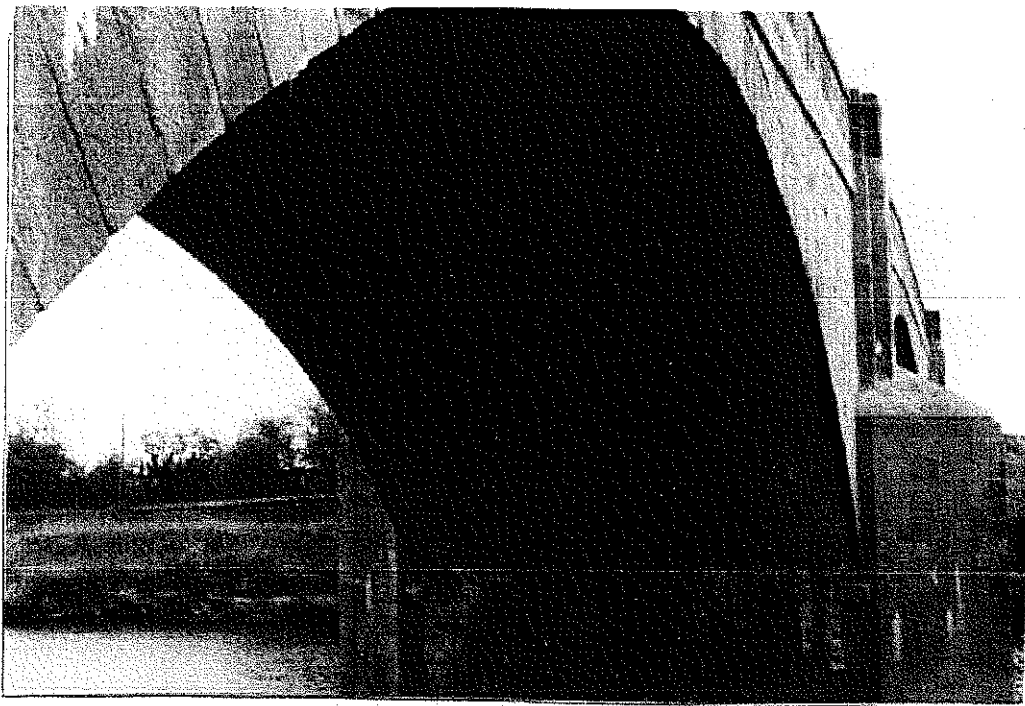
FIG. 12.
North West Retaining
Wall - Crack in wall
indicating signs of
small horizontal
displacement.



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P13 Retaining Wall in front of South West Retaining Wall - Vegetation present on Gabion Wall.



P14 Arch Barrel span 1 - Extensive areas of leaching, lichen growth and mortar loss.

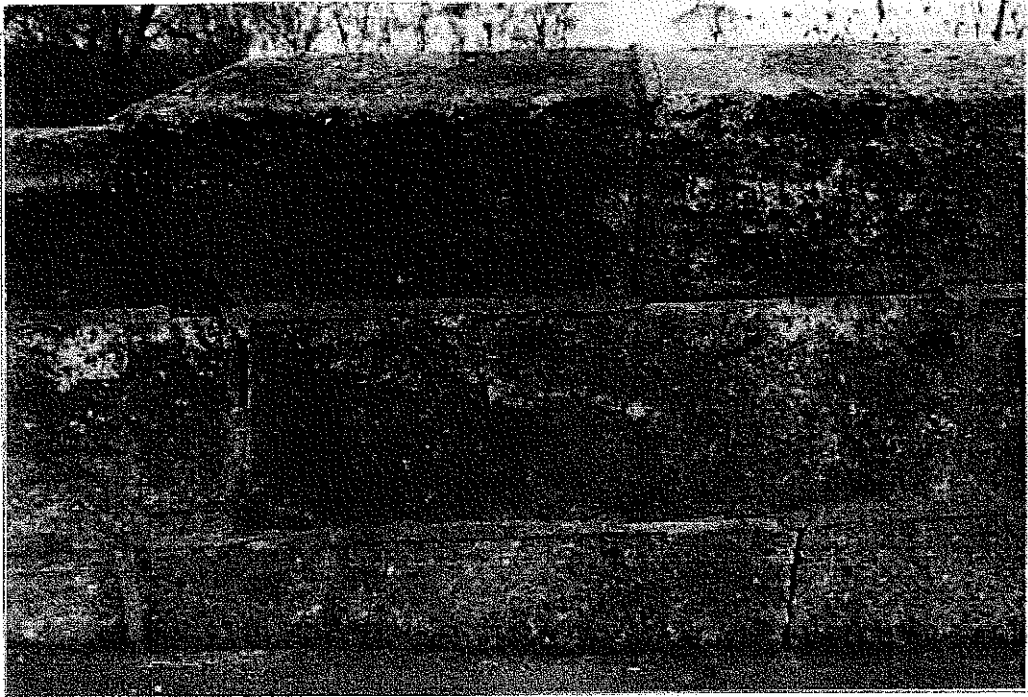


P15. Arch Ring, span 1, north - Loss of mortar, cracked mortar, leaching and areas of lichen growth.



P16. Spandrel, span 1, north - Areas of mortar loss, cracked mortar, leaching and lichen growth. Small horizontal displacement of masonry blocks.

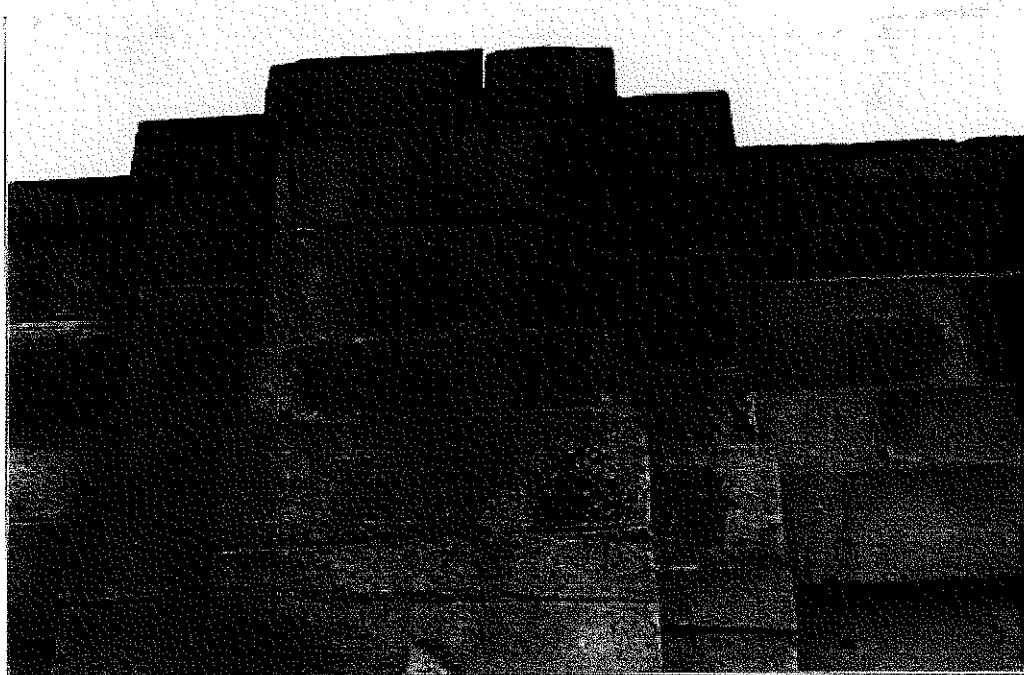
320111066P



V17 North Parapet - Areas of mortar loss and lichen growth.



V18 North Parapet - Hairline crack in parapet.



919 North Parapet - Accident damage causing lateral movement of masonry blocks.

320111066P



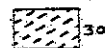
Bulging



Drummy



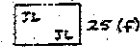
Efflorescence



Erosion: depth of erosion (mm)



Fractures and cracks: hairline or dimension (mm)
step between planes of fracture (mm)



Joint loss (mortar): depth (mm), friable (f)



Leached deposits: calcium carbonate, silicates and gels
'st' denotes stalactites



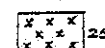
Missing brickwork



Missing masonry



Repairs



Spalling and depth (mm)



Surface deposits (dirt, soot etc.)



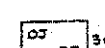
Vegetation



Active water seepage



Wet and damp areas



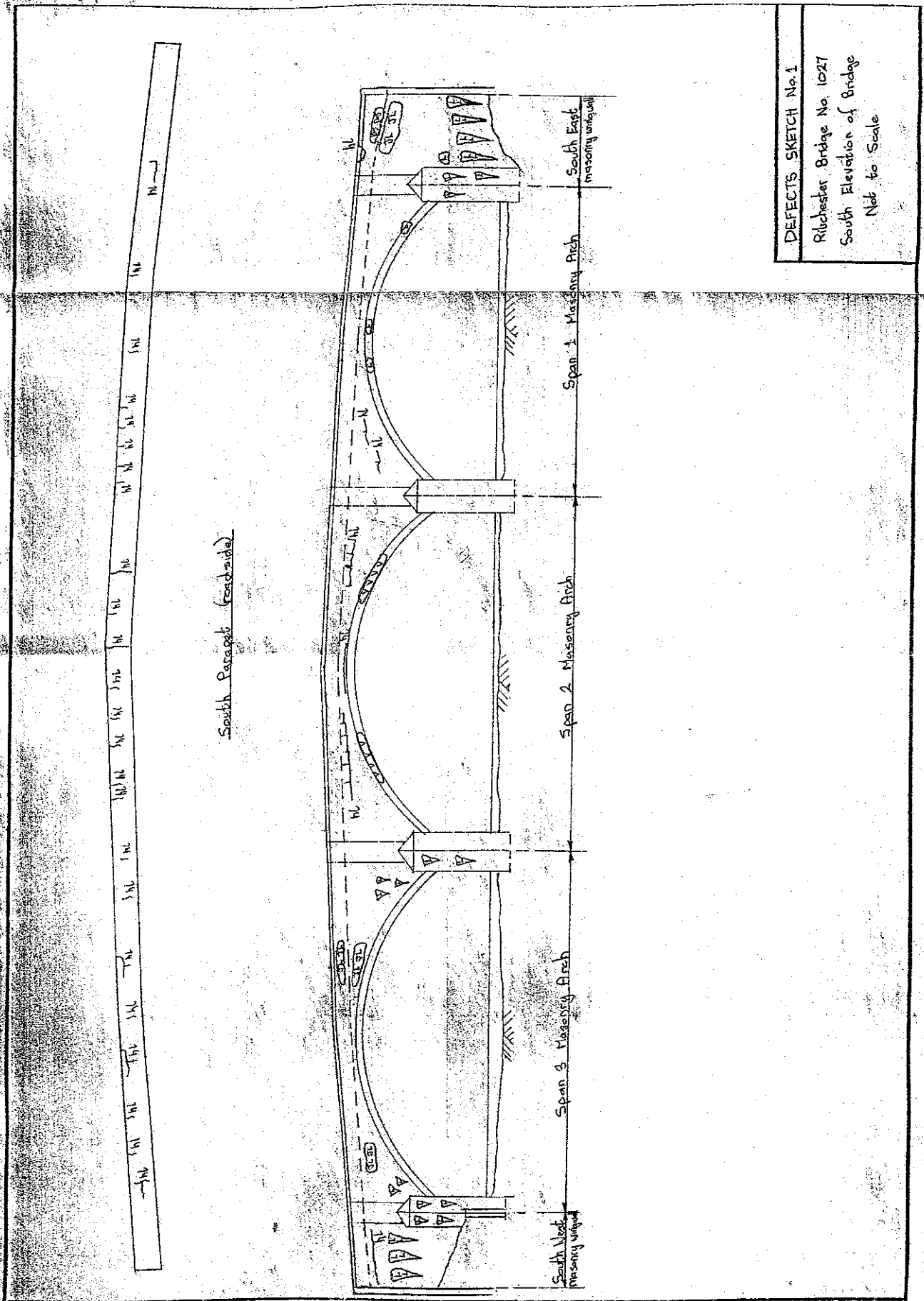
Open joints: depth (mm)



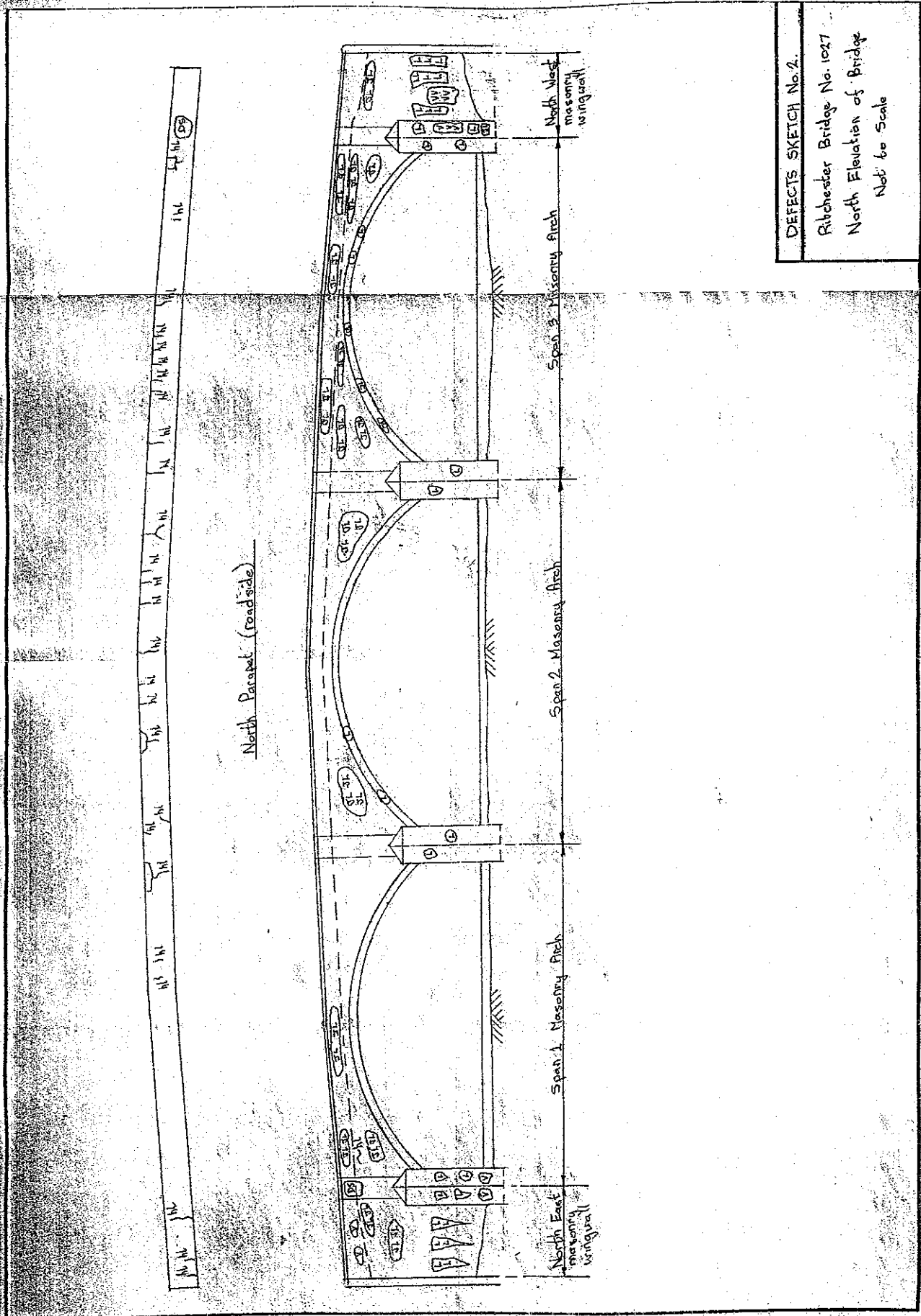
Dislodged Stone

STANDARD DEFECT NOTATION

Brick and Masonry Structures
and Structural Units



320111066 P

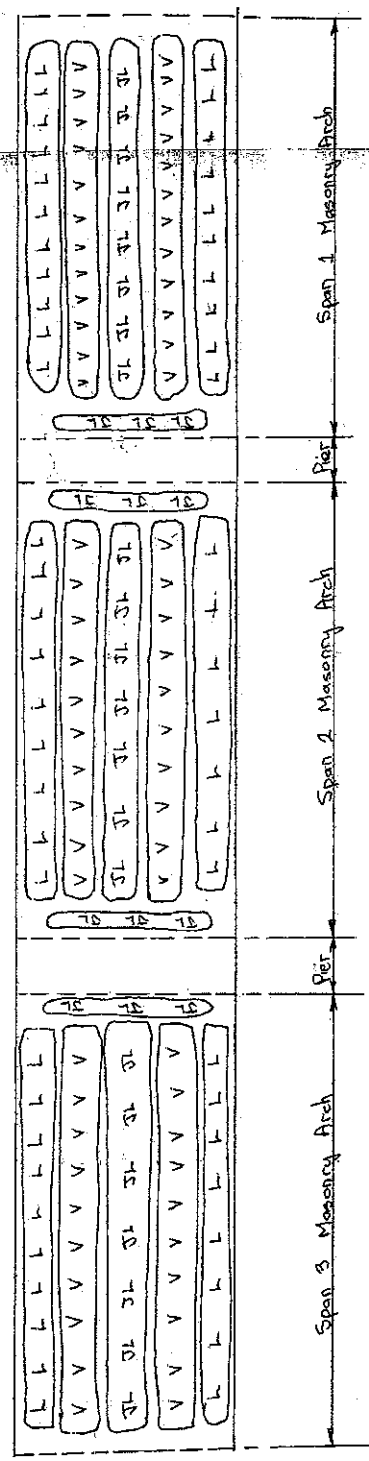
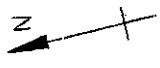


DEFECTS SKETCH No. 2.

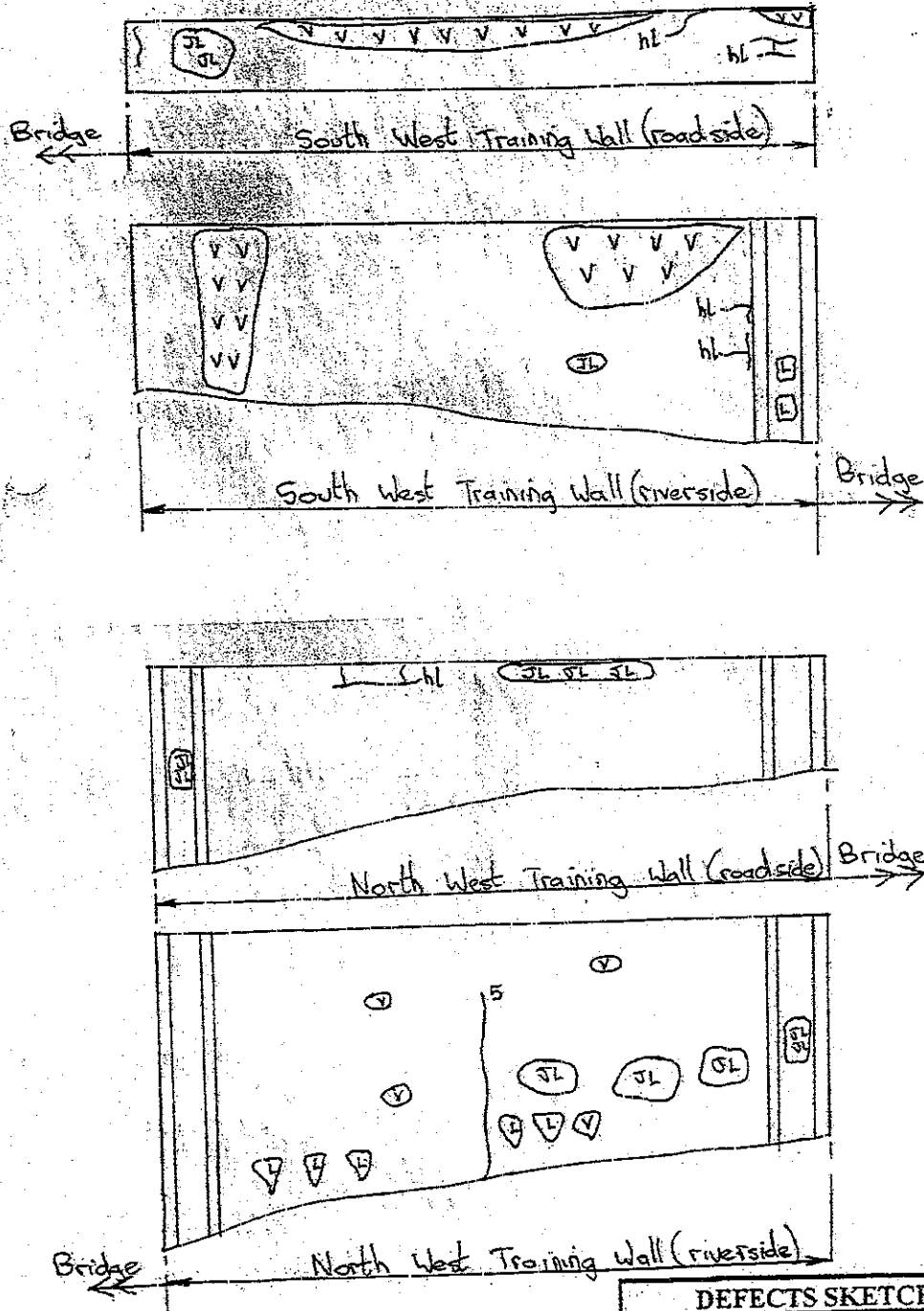
Ritchester Bridge No. 1027

North Elevation of Bridge

Not to Scale



DEFECTS SKETCH No. 3
Ritchester Bridge No. 1027
Masonry Arch Soffits
Looking from above
Not to Scale



DEFECTS SKETCH No. 4

Ritchester Bridge No. 627
 South West and North
 West training walls
 Not to Scale

320111066P

APPENDIX A

SPECIAL INSPECTION REPORT

NEWTON BRIDGE No. 4260

SPECIAL INSPECTION REPORT

INSPECTION FOR ASSESSMENT

APPENDIX A

1. Introduction

Ribchester Bridge No. 1027 carries the B6245 over the River Ribble Grid Ref. (366240,435640). The structure is a three span masonry arch. The east span comprises a 22.4m span 6.2m wide masonry arch. The centre span comprise a 23.2m span 6.2m wide masonry arch. The west span comprises a 21m span 6.2m wide masonry arch.

2. Method of Inspection

A visual inspection of all the structures was carried out for signs of defects. A record drawing was available for Ribchester Bridge. However due to a lack of relevant information and the age of the drawing it was agreed by the client that an additional General Arrangement drawing be produced. Taped measurements were recorded to determine dimensions for completion of the assessment.

3. Findings of the Inspection

This information is based on the inspection of the bridge.

a) Foundations

The foundations were not exposed for the purpose of a visual inspection but their integrity was confirmed by checks of the alignment and plumb of the abutments and piers.

b) Substructure

East and West Abutments and piers

Areas of mortar loss and lichen growth were apparent but these defects are not considered major defects and will not reduce the integrity of the abutments.

c) Wingwalls and training walls

Areas of mortar loss, leeching, vegetation and some cracking of the mortar was noted but these defects were not considered major defects and will not reduce the integrity of the walls.

320111066P

(d) Superstructure (All Spans)

Arch Rings

Areas of lichen growth, leeching, 50% mortar loss and slight cracks in the masonry were noted but these defects were not considered significant enough to affect the strength of the arches.

Spandrels

Areas of mortar loss, cracking of mortar joints and some displacement of masonry were noted but these defects were not considered significant enough in the short term to affect the integrity of the spandrels.

Parapets

Areas of vegetation, mortar loss, cracking of mortar joints, cracking and displacement of the masonry and minor accident damage were noted but these were not considered significant enough to affect the integrity of the parapets.

4. Conclusions

A number of minor defects were found during the inspection but none were significant enough to reduce the overall integrity of the bridge. A condition factor of 1.0 will be used in the assessment of the bridge.

As the superstructure, substructure and spandrels show no appreciable distress they can be assessed as satisfactory by inspection.

APPENDIX B

SPECIAL INVESTIGATION REPORT

320111066 P

APPENDIX B

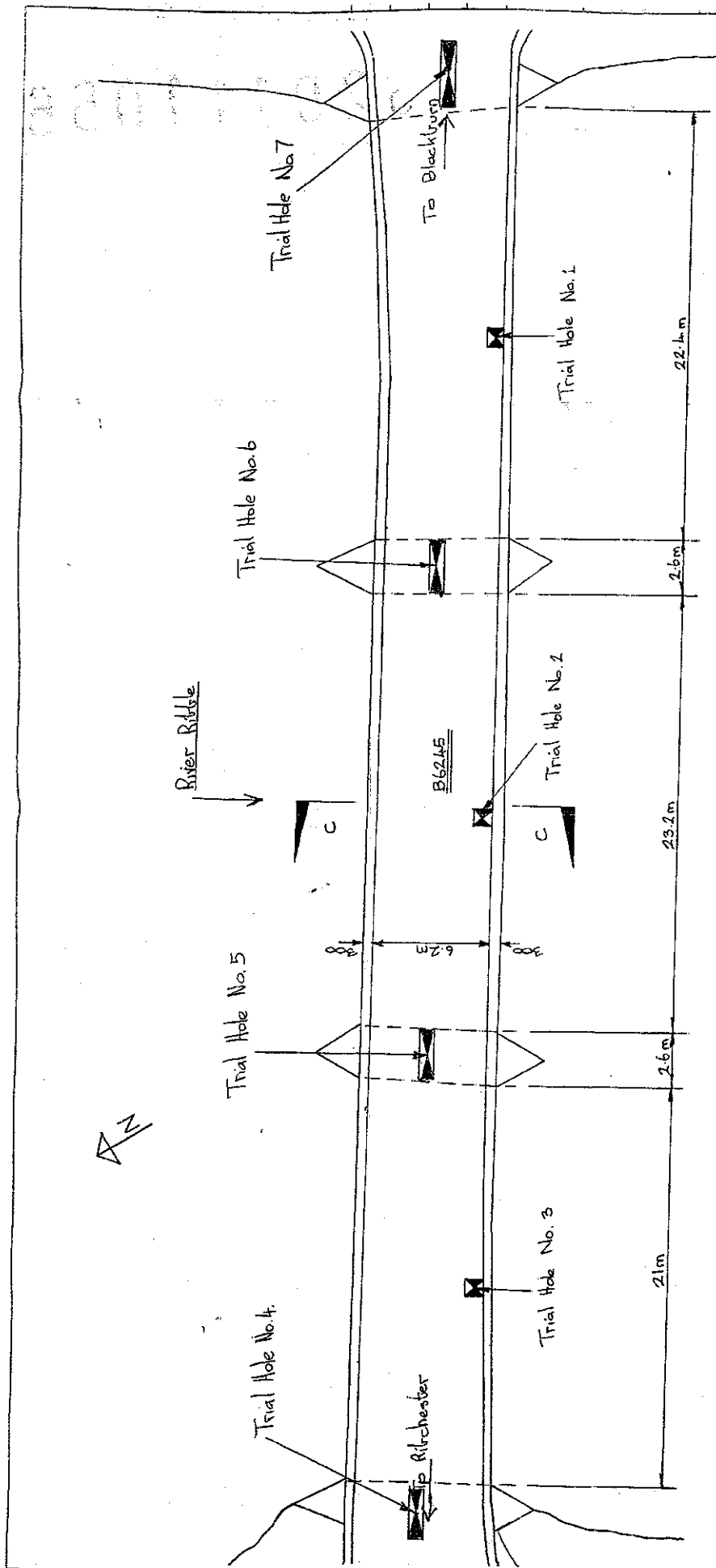
SPECIAL INVESTIGATION

INTRODUCTION

A Special Investigation was performed on the bridge in June 1997 to determine the thickness of the arch barrel on all three structures. The position of the trial holes are shown on the drawing on the next page.

RESULTS

	Trial Hole No. 1	Trial Hole No. 2	Trial Hole No. 3
Arch Barrel Thickness	550mm	500mm	350mm



PLAN
Scale 1:200

TRIAL HOLES 1, 2 and 3 PERFORMED IN JUNE 1997
(SEE APPENDIX B)

TRIAL HOLES 4, 5, 6 and 7 PERFORMED IN MARCH 1999
(SEE APPENDIX No. 1 TO APPENDIX B)

PROJECT TITLE	Environment Lancashire County Council	Drawn By	Checked By
PROJECT FILE	HIGHWAY CONSULTANCY	Drawn By	Checked By
SPECIAL INVESTIGATION DETAILS			
POSITION OF TRIAL HOLES			
Drawn By	D. Siddle	Checked By	W. S. Walker
Date	June 1999	Drawn By	W. S. Walker
Scale	1:200	Drawn By	W. S. Walker

320111066P *Public Works Bridge*

APPENDIX B

ADDENDUM No. 1

SPECIAL INVESTIGATION

INTRODUCTION

A Special Investigation was performed on the bridge in March 1999 to determine the level of haunching from carriageway level at the piers and abutments. The position of the trial holes are shown on the drawing on the next page.

RESULTS

	Trial Hole No. 4	Trial Hole No. 5	Trial Hole No. 6	Trial Hole No. 7
Level of haunching from carriageway	800mm	2000mm	1500mm	900mm

