

General Inspection Report



Structure Name: FINCHINGFIELD

Identifier: 26

Financial Year: 2022/23

Planned Inspection Date: 15/07/2022

Inspection Date: 15/07/2022

Inspector: [REDACTED]

Submitted Date: 07/10/2022

Report Status: Approved

Submission Count: 1

BCI Average: 85.78

BCI Critical: 58.00

Report Print Date: 13/12/2022

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Additional Inspection Documents

[No additional inspection documents found. To add additional inspection documents upload the document to the inspection folder on BridgeStation's file system]

Structure Summary

Name:	FINCHINGFIELD		
Identifier:	26	Element Hierarchy Status:	Compliant
Structure Type:	Bridge	Carried:	THE CAUSEWAY
BPRN Structure:	No	Crossed:	FINCHINGFIELD .

Authority:	Essex County Council	Restrictions:	[None]
Owner:	ECC (Essex Highways)	Assessment Status:	31/03/2010 (BD21: Initial Assessment)
Maintaining Authority:	ECC (Essex Highways)	Assessed Capacity:	10 t
		HB Rating:	0 Units
Easting/Northing:	568462, 232837		
Year of Construction:	1800		

No. of Spans:	1	Latest Inspection:	SUI - 11/08/2022
Primary Deck Form:	01 - Arch (solid spandrel)	BCI Average (Latest Condition):	85.78
Primary Deck Material:	Multiple Primary Materials	BCI Critical (Latest Condition):	58.00

Structure Condition Index Key:	Very Good	Good	Fair	Poor	Very Poor
	>=90 & <=100	>=80 & <90	>=65 & <80	>=40 & < 65	>=0 & <40

Last Data Change: Structure Details

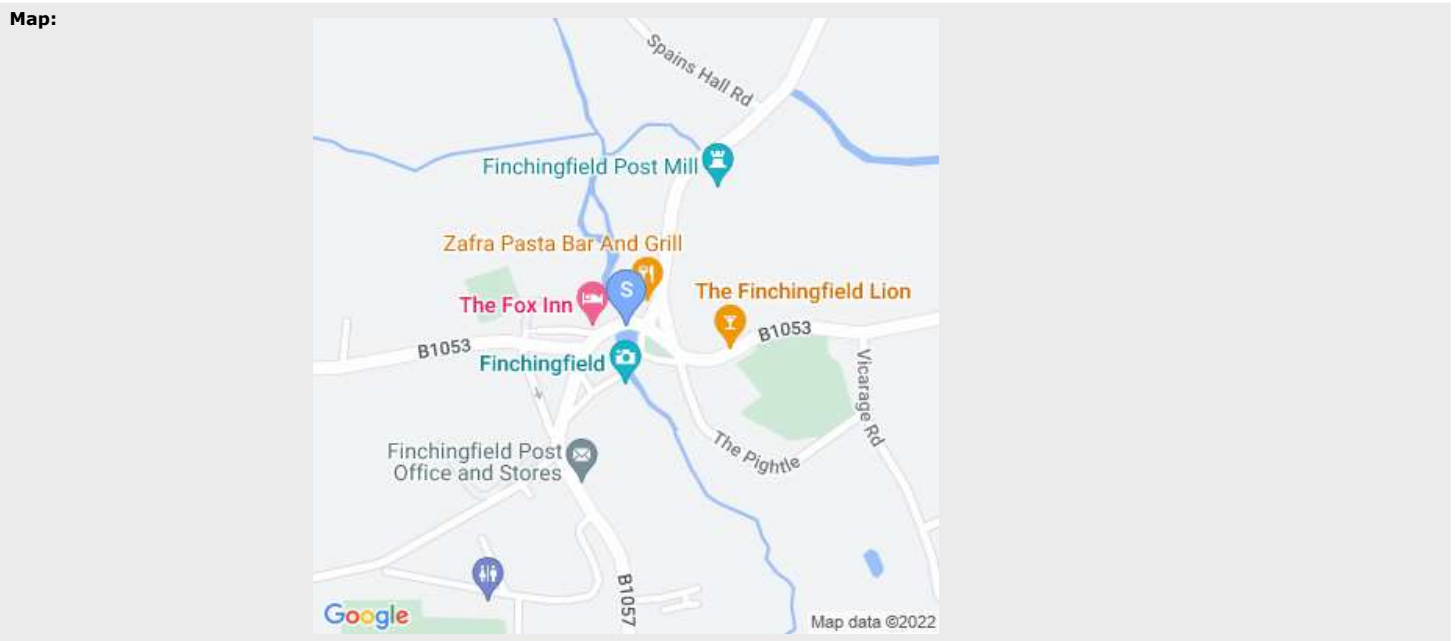
Description: Finchingfield Bridge (OSGR TL 684 328) is a single span arch structure. The original brick arch (0.33m thick arch barrel) was extended in 1912 by adding a 1.65m wide concrete arch (0.7m thick) on the downstream (south side); the arches have clear spans of approximately 4.3 m. There are two tie rods spanning transversely through the structure, tying the barrels of the original brick arch and the concrete extension together.

The abutments are of brick construction but the foundation details are unknown. The wingwalls either side of the bridge extend a considerable distance beyond the abutments. The northwest and southeast wingwalls are of brick construction and the southwest wingwall is a brick-faced reinforced concrete wingwall founded on a reinforced concrete base slab that extends 1.5m into the pond. The north bridge parapet is of brick construction and the south parapet is a brick-faced reinforced concrete parapet dowelled into the concrete deck. On the northeast side of the bridge, there is no wingwall and the parapet directly butts against an adjacent building belonging to G. W. Hardy and Son Funeral Directors.

The clear width between parapets of the bridge is 3.82m, which is sufficient for single way traffic only; there is no footway provision over the bridge. Due to the narrow width of the bridge, the parapets and the adjoining building have been struck by vehicles on a number of occasions.

The brick arch has been assessed in accordance with BD 21 and has been found to have assessment capacities of 13 tonnes GVW (modified MEXE analysis) and 3 or 10 tonnes (LimitState Ltd); the alternative ratings indicated by the LimitState assessments depend on whether the arch barrel and fill act in a composite manner.

Comments: Structures Hierarchy: STR 2



Summary Photographs:



20210818_132844.jpg

Southern Elevation

CSS Inspection Proforma

Inspection Details

Inspection Type:	General	Financial Year:	2022/23
Inspector:	[REDACTED]	Inspection Date:	15/07/2022
Risk Assessment Reviewed and Updated:	<input type="checkbox"/>		
All Above Ground Elements Inspected:	-	Photographs:	Yes
Inspection Methodology:	Inspection carried out on foot. Water level up to 0.5m and all areas accessible on day of inspection.		
Special Instructions:			

Inspection Condition

Condition	Index	Score	Rating
Average (15/07/2022)	87.87	1.66	Good
Critical (15/07/2022)	58.00	3.00	Poor

Note: Index, Score and Rating are given up to the date of inspection. Previous conditions are used where required to produce a set of conditions based on as many elements as possible.
 Average and Critical Conditions labelled 'Projected' need to be confirmed by signing off the inspection before they are shown elsewhere.

Inspection Signatures

Inspected By:	[REDACTED]
Inspector's Comments By:	[REDACTED]
Checker's Comments By:	[REDACTED]
Engineer's Comments By:	[REDACTED]

Inspection Sign-off History

Change Date	User Name	Action	Old Status	New Status	Comments
07/10/2022	[REDACTED]	Inspection submitted	Draft	Submitted	

Structure Details

Bridge Name:	FINCHINGFIELD	Identifier:	26
Authority:	Essex County Council	Structure Type:	Bridge
Owner:	ECC (Essex Highways)	Easting:	568462
Maintaining Authority:	ECC (Essex Highways)	Northing:	232837
Overall Structure Length (m):	4.89	Average Width (m):	1.63

Dimension Details:

Span Name	Qty	Span Length (m)	Max Width (m)	Min Width (m)	Internal Headroom (m)	Measured Headroom (A) (m)	Signed Headroom (A) (m)	Measured Headroom (B) (m)	Signed Headroom (B) (m)
FINCHINGFIELD - Span 1	1	4.30	1.63			1.80			

Construction Details:

Span/Wall/Gantry	Construction	Form/Material
FINCHINGFIELD - Span 1-26/42606/01 - Brickwork	Primary Deck (Primary Deck - Concrete)	01 - Arch (solid spandrel) / Insitu Reinforced Concrete
FINCHINGFIELD - Span 1-26/42606/01 - Brickwork	Primary Deck (Primary Deck - Masonry)	01 - Arch (solid spandrel) / Brickwork

General View Photographs



South Elevation
General View Photos



North Elevation
General View Photos



Above Structure - Facing West
General View Photos

Element Conditions

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Deck Elements

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck - Masonry	2	E	3.6	<input type="checkbox"/>	L	

Comment

- Minor weathering affecting approximately 60% of brick faces.
- There are multiple historic mortar repairs which are generally in good condition.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck - Masonry	3	B	3.6	<input type="checkbox"/>	M	

Comment

At the Northern end of East Haunch, patch of moderately weathered brickwork (1m x 0.25m) with 1no. missing brick to arch ring.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck - Concrete	1	A	0	<input type="checkbox"/>		

Comment

Concrete arch is generally in good condition. However, 2no. lengths of rebar have been left protruding from northern side of deck.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
5	05/Tie beam/rod	1	A	0	<input type="checkbox"/>		

Comment

Only Tie Rod end plates were visible for inspection were generally in good condition.

Remedial Works

[none]

Load-bearing Substructure

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	A	0	<input type="checkbox"/>		

Comment

The foundations were not visible for inspection. There were no signs of distress that signify fault to the foundations.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
9	09/Abutments(inc.arch spring)	2	B	3.6	<input type="checkbox"/>	L	

Comment

The abutments were mostly below water level on day of inspection with only 300mm exposed.

- Exposed abutments showed few small isolated patches of weathered brick work
- Concrete finish at South west (under concrete arch) has failed. Revealed brickwork is in good condition.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
10	10/Spandrel wall/head wall	1	A	0	<input type="checkbox"/>		

Comment

Spandrels' are generally in good condition. North Spandrel appears to have been rebuilt and is in good condition.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
10	Buttress	3	C	3.6	<input type="checkbox"/>	M	
Comment							
Both Buttresses had moderate weathering to brickwork.							
Remedial Works							
[none]							

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
10	Buttress	4	B	5.1	<input type="checkbox"/>	H	
Comment							
Weeds/ Shrub growing from South West buttress. Plant is Buddleia (Butterfly Bush) and will likely contribute to deterioration of brickwork.							
Remedial Works							
Remove vegetation and prevent from further growth.							

Durability Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	17/Water proofing	2	C		<input type="checkbox"/>	L	
Comment							
Waterproofing is unlikely to be present over arch. All elements were dry on day of inspection. However, historic seepage through brickwork evident in leachate and calcite deposits on brick faces.							
Remedial Works							
[none]							

Safety Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	23/Handrail/parapet/saf.fences	3	C	3.2	<input type="checkbox"/>	M	
Comment							
<ul style="list-style-type: none"> - South parapet has moderate loss of pointing to lower courses of inside face. - Minor deterioration of pointing to lower courses of brickwork on inside face of parapet. 							
Remedial Works							
Repoint Parapet.							

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	23/Handrail/parapet/saf.fences	3	C	13.1	<input type="checkbox"/>	M	
Comment							
<ul style="list-style-type: none"> - West end of inside face has suffered impact causing moderate gouges and spalls to brickwork. - East end of inside face has suffered impact causing gauges to brickwork and 2.4m of coping brickwork now missing. - At North East corner, several bricks were missing to soldier course, likely caused by a vehicle impact. 							
Remedial Works							
Brickwork repairs to be carried out to parapets.							

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	24/Carriageway surfacing	1	A	0	<input type="checkbox"/>		
Comment							
Carriageway is in good condition.							
Remedial Works							
[none]							

Other Bridge Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
26	26/Invert/river bed	2	B	7.1	<input type="checkbox"/>	L	
Comment							
Minor patch of scour 300mm ² located at north west corner, 190mm in front of abutment. Scour patch has a 150mm difference in depth to surrounding area.							
Remedial Works							
[none]							

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
27	27/Aprons	1	A	0	<input type="checkbox"/>		

Comment

The aprons were in good condition.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
31	31/Wing walls	3	C	3.6	<input type="checkbox"/>	M	

Comment

South East wingwall had areas of moderate erosion to brickwork, reaching depths up to 35mm.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
31	31/Wing walls	3	B	3.2	<input type="checkbox"/>	M	

Comment

Moderate loss of pointing up to depths of 40mm in a 0.5m x 1m area.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
31	31/Wing walls	3	B	5.1	<input type="checkbox"/>	H	

Comment

Weeds/ Shrub growing at end of South West wingwall/ retaining wall. Shrub is most likely Buddleia (Butterfly Bush) and could potentially contribute to deterioration of brickwork.

Remedial Works

Remove vegetation and prevent from further growth.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
31	31/Wing walls	2	B	3.5	<input type="checkbox"/>	L	

Comment

South East wingwall had a historic vertical crack extending 1.7m (full height including both sides of wingwall parapet), open 1mm to 1.5mm.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
32	32/Retaining walls	1	A	0	<input type="checkbox"/>		

Comment

South West Wingwall/ Retaining Wall is generally in good condition. Vegetation growing from wall as raised under Wingwall.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
33	Embankments	1	A	0	<input type="checkbox"/>		

Comment

The embankments were in good condition.

Remedial Works

[none]

Ancillary Elements

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
35	35/Approch rails/barriers/walls				<input type="checkbox"/>		

Comment

The approach rail was generally in good condition.

Remedial Works

[none]

Archive

Deck Elements

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck - Concrete (Archived on 07/10/2022)	1	A	0	<input type="checkbox"/>		

Comment

[none]

Remedial Works

[none]

Load-bearing Substructure

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	08/Foundations (Archived on 07/10/2022)	1	A	0	<input type="checkbox"/>		

Comment

The foundations were not visible for inspection. There were no signs of distress that would suggest defects to the foundations.

Remedial Works

[none]

Inspector's Comments:

Please tick here if you believe that span length, span width and/or form of construction needs reviewing by the bridge manager. Please include appropriate comments in inspection comment section below

Structure is in fair condition.

Delays in submitting inspection report delays in rectifying element errors on BridgeStation.

Inspector's Name: [REDACTED]

Checker's Comments:

[none]

Checker's Name:

Engineer's Comments:

In generally Fair condition, but no significant change from previous inspections.
Scheme underway to rebuild the structure in coming years

Engineer's Name: [REDACTED]

Defect View Photographs

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Deck Elements



West Haunch
 - Minor weathering affecting approximately 60% of brick faces.
 - There are multiple historic mortar repairs which are generally in good condition.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck - Masonry	2	E	3.6	L	N	

Comment	Remedial Works
- Minor weathering affecting approximately 60% of brick faces. - There are multiple historic mortar repairs which are generally in good condition.	[none]



East Haunch
 - Minor weathering affecting approximately 60% of brick faces.
 - There are multiple historic mortar repairs which are generally in good condition.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck - Masonry	2	E	3.6	L	N	

Comment	Remedial Works
- Minor weathering affecting approximately 60% of brick faces. - There are multiple historic mortar repairs which are generally in good condition.	[none]

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Deck Elements



East Haunch, Northern End - Moderate Weathering to Brickwork

At the Northern end of East Haunch, patch of moderately weathered brickwork (1m x 0.25m) with 1no. missing brick to arch ring.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck - Masonry	3	B	3.6	M	N	

Comment	Remedial Works
At the Northern end of East Haunch, patch of moderately weathered brickwork (1m x 0.25m) with 1no. missing brick to arch ring.	[none]



Reinforced Concrete Arch
null

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck - Concrete	1	A	0		N	

Comment	Remedial Works
Concrete arch is generally in good condition. However, 2no. lengths of rebar have been left protruding from northern side of deck.	[none]

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Load-bearing Substructure



South West - Failure of Render
 Concrete finish at South West (under concrete arch) has failed. Revealed brickwork is in good condition.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
9	Abutments (inc arch springing)	09/Abutments(inc.arch spring)	2	B	3.6	L	N	

Comment	Remedial Works
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The abutments were mostly below water level on day of inspection with only 300mm exposed. - Exposed abutments showed few small isolated patches of weathered brick work - Concrete finish at South west (under concrete arch) has failed. Revealed brickwork is in good condition.	[none]
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Weathered Brickwork Example
 Exposed abutments showed few small, isolated patches of weathered brick work

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
9	Abutments (inc arch springing)	09/Abutments(inc.arch spring)	2	B	3.6	L	N	

Comment	Remedial Works
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The abutments were mostly below water level on day of inspection with only 300mm exposed. - Exposed abutments showed few small isolated patches of weathered brick work - Concrete finish at South west (under concrete arch) has failed. Revealed brickwork is in good condition.	[none]
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FINCHINGFIELD - Span 1-26/42606/01 - Brickwork
Load-bearing Substructure



South East Buttness - Moderately Weathered Brickwork
 Both Buttnesses have moderate weathering to brick work.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
10	Spandrel wall/head wall	Buttness	3	C	3.6	M	N	

Comment	Remedial Works
Both Buttnesses had moderate weathering to brickwork.	[none]



South West Buttness - Vegetation
 Weeds/ Shrub growing from South West abutment. Plant is Buddleia (Butterfly Bush) and will likely contribute to deterioration of brickwork.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
10	Spandrel wall/head wall	Buttness	4	B	5.1	H	N	

Comment	Remedial Works
Weeds/ Shrub growing from South West buttness. Plant is Buddleia (Butterfly Bush) and will likely contribute to deterioration of brickwork.	Remove vegetation and prevent from further growth.

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Durability Elements



Crown - Example of Historic Seepage
 Seepage through brickwork evident in leachate and calcite deposits on brick faces.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
17	Waterproofing	17/Water proofing	2	C		L	N	

Comment	Remedial Works
Waterproofing is unlikely to be present over arch. All elements were dry on day of inspection. However, historic seepage through brickwork evident in leachate and calcite deposits on brick faces.	[none]



South Parapet
 Moderate loss of pointing to lower courses of inside face.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	23/Handrail/parapet/saf.fences	3	C	3.2	M	N	

Comment	Remedial Works
- South parapet has moderate loss of pointing to lower courses of inside face. - Minor deterioration of pointing to lower courses of brickwork on inside face of parapet.	Repoint Parapet.

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Safety Elements



South Parapet - West Side

West end of inside face has suffered impact, causing moderate gouges and spalls to brickwork.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	23/Handrail/parapet/saf.fences	3	C	13.1	M	N	

Comment

- West end of inside face has suffered impact causing moderate gouges and spalls to brickwork.
- East end of inside face has suffered impact causing gouges to brickwork and 2.4m of coping brickwork now missing.
- At North East corner, several bricks were missing to soldier course, likely caused by a vehicle impact.

Remedial Works

Brickwork repairs to be carried out to parapets.

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Safety Elements



South Parapet - East Side
 East end of inside face has suffered impact causing gauges to brickwork and 2.4m of coping brickwork now missing.

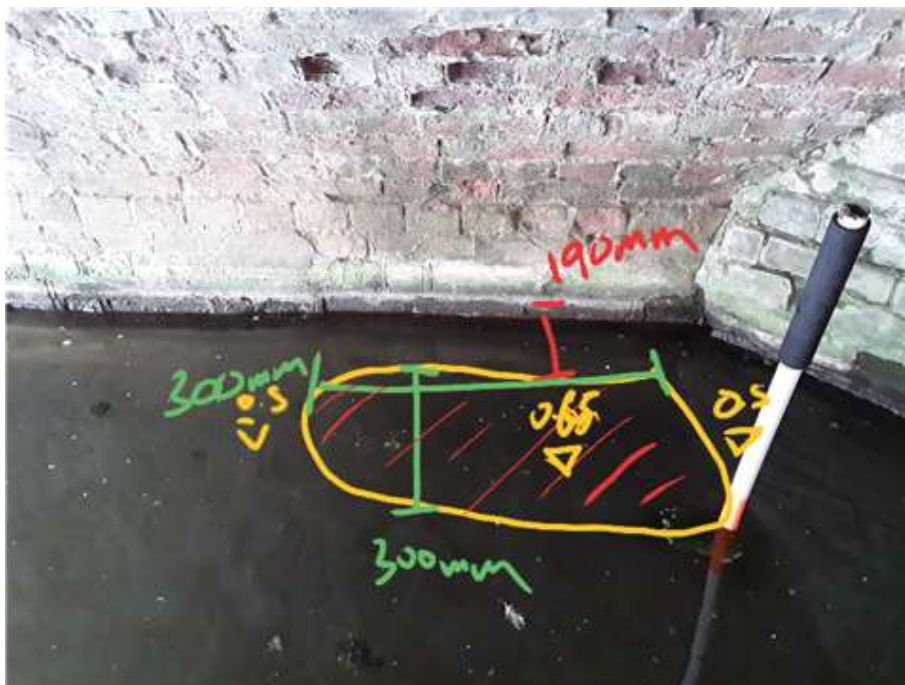
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	23/Handrail/parapet/saf.fences	3	C	13.1	M	N	

Comment

- West end of inside face has suffered impact causing moderate gouges and spalls to brickwork.
- East end of inside face has suffered impact causing gauges to brickwork and 2.4m of coping brickwork now missing.
- At North East corner, several bricks were missing to soldier course, likely caused by a vehicle impact.

Remedial Works

Brickwork repairs to be carried out to parapets.



Minor Scour - North West
 Minor patch of scour 300mm² located at North West corner, 190mm in front of abutment. Scour patch has a 150mm difference in depth to surrounding area.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
26	Invert/river bed	26/Invert/river bed	2	B	7.1	L	N	

Comment

Minor patch of scour 300mm² located at north west corner, 190mm in front of abutment. Scour patch has a 150mm difference in depth to surrounding area.

Remedial Works

[none]

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Other Bridge Elements

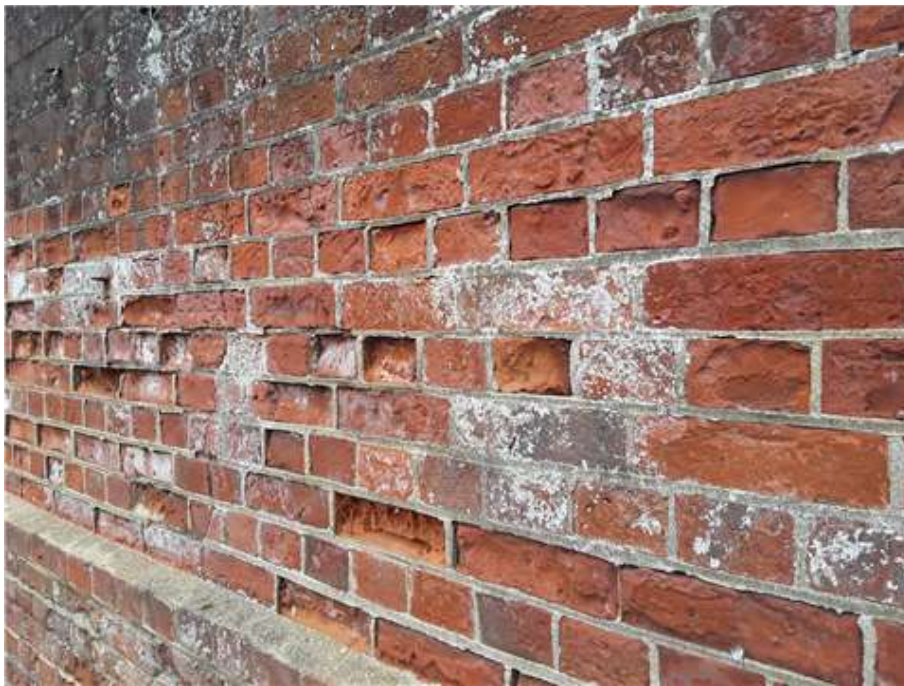


South East Wingwall

South East wingwall has areas of moderate erosion to brickwork reaching depths up to 35mm.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
31	Wing walls	31/Wing walls	3	C	3.6	M	N	

Comment	Remedial Works
South East wingwall had areas of moderate erosion to brickwork, reaching depths up to 35mm.	[none]



South East Wingwall - Example of Weathered Brickwork

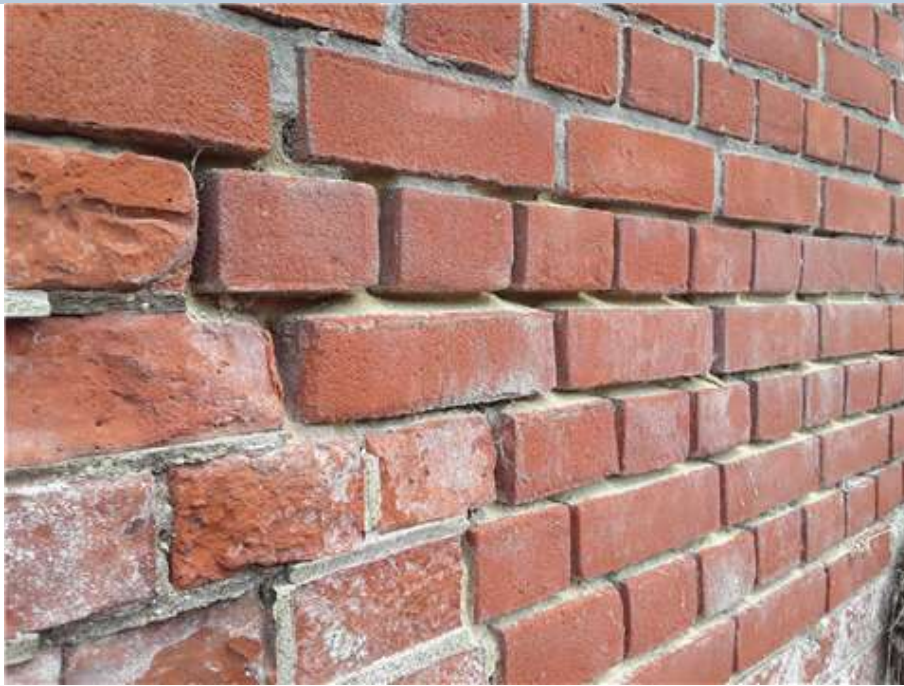
South East wingwall has areas of moderate erosion to brickwork reaching depths up to 35mm.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
31	Wing walls	31/Wing walls	3	C	3.6	M	N	

Comment	Remedial Works
South East wingwall had areas of moderate erosion to brickwork, reaching depths up to 35mm.	[none]

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Other Bridge Elements



South East Wingwall - Moderate Deterioration of Pointing
 Moderate loss of pointing up to depths of 40mm in a 0.5m x 1m area.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
31	Wing walls	31/Wing walls	3	B	3.2	M	N	

Comment	Remedial Works
Moderate loss of pointing up to depths of 40mm in a 0.5m x 1m area.	[none]



20220715_140521.jpg
 Upload/Link Photos to : 31 - 31/Wing walls

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
31	Wing walls	31/Wing walls	3	B	5.1	H	N	

Comment	Remedial Works
Weeds/ Shrub growing at end of South West wingwall/ retaining wall. Shrub is most likely Buddleia (Butterfly Bush) and could potentially contribute to deterioration of brickwork.	Remove vegetation and prevent from further growth.

FINCHINGFIELD - Span 1-26/42606/01 - Brickwork

Other Bridge Elements



South East Wing Wall - Vertical Crack

South East wingwall has a vertical crack extending 1.7m (full height including both sides of wingwall parapet), open 1mm to 1.5mm.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
31	Wing walls	31/Wing walls	2	B	3.5	L	N	

Comment	Remedial Works
South East wingwall had a historic vertical crack extending 1.7m (full height including both sides of wingwall parapet), open 1mm to 1.5mm.	[none]