

# **Principal Inspection Report**

Structure Name: Broadmead Road Viaduct

**Identifier:** B4

BCI Average (Latest Condition): 81.64

BCI Critical (Latest Condition): 9.72

Financial Year: 2023/24

**Planned Inspection Date:** 14/11/2023

**Inspection Date:** 14/11/2023

**Inspector:** Mario Inacio

**Submitted Date:** 13/11/2024

Report Status: Approved

**Submission Count:** 1

BCI Average: 81.88

BCI Critical: 9.72

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# **Additional Inspection Documents**

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Site Location Plan	B4 Broadmead Road Viaduct_Location Plan.pdf	Click to View
General Arrangement Drawings	B4 Broadmead Road Viaduct_North Elevation General Arrangement.pdf	Click to View
General Arrangement Drawings	B4 Broadmead Road Viaduct_South Elevation General Arrangement.pdf	Click to View
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Defect Location Plan	B4 Broadmead Road Viaduct_Column & Crosshead Defect Diagrams.pdf	Click to View
Defect Location Plan	B4 Broadmead Road Viaduct_West Chambers & Support Wall Defect Diagrams.pdf	Click to View
Defect Location Plan	B4 Broadmead Road Viaduct_East Chambers & Support Wall Defect Diagrams.pdf	Click to View
Defect Location Plan	B4 Broadmead Road Viaduct_North Elevation Defect Diagram.pdf	Click to View
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Defect Location Plan	B4 Broadmead Road Viaduct_South Parapet (North Face) Defect Diagrams.pdf	Click to View
Defect Location Plan	B4 Broadmead Road Viaduct_Carriageway & Footway Defect Diagram.pdf	Click to View



#### **Structure Summary** Broadmead Road Viaduct В4 Identifier: **Element Hierarchy Status:** Compliant Structure Type: Bridge Broadmead Road Railway: **BPRN Structure:** Crossed: Yes **Authority:** Redbridge Restrictions: Other Restriction (Other Restriction) Local Authority 01/07/1989 (BD21: Initial Owner: Assessment Status: Assessment) **Maintaining Authority:** Local Authority 40 t **Assessed Capacity:** 0 Units **HB Rating:** Easting/Northing: 540840, 191370 Year of Construction: 1937 No. of Spans: PI - 14/11/2023 31 **Latest Inspection:** 81.64 11 - Slab (Solid) **Primary Deck Form: BCI Average (Latest Condition):** Insitu Reinforced Concrete **Primary Deck Material: BCI Critical (Latest Condition):** 9.72 **Structure Condition** Very Good Fair Very Poor Index Key: >=0 & <40 >=90 & <=100 >=80 & <90 >=65 & <80 >=40 & < 65 Last Data Change: Element Details **Description:** $\mbox{R-C}$ continuous slab on transverse support beams and columns founded on $\mbox{R-C}$ spread Comments: Railway span columns strengthened. P2 barrier installed to protect weak footways. Works completed 3/91 cost £97k Мар:

First Physio 

A7009

S

Toms convenience Store

Woodbridge High School 

Beauty treatments by Elena

Mallards Rd



## **Summary Photographs:**



**General overview of the South elevation, looking NW.** GI of 2023.



**General overview of the North elevation, looking NW.** GI of 2023.

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**Inspection Type:** 

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General overview of the soffit (photo taken from span 2), looking NE. GI of 2023.



General overview of a typical soffit (photo taken from span 3), looking SW. GI of 2023.

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General overview of the carriageway surface, looking SE. GI of 2023.

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# **CSS Inspection Proforma**

## **Inspection Details**

Inspection Type:PrincipalFinancial Year:2023/24Inspector:Mario InacioInspection Date:14/11/2023

Risk Assessment Reviewed and Updated:

All Above Ground Elements Inspected: Yes Photographs: Yes

**Inspection Methodology:** The inspection was undertaken during daylight and night time hours. The inspection

was carried out over multiple shifts. The spans over the LUL rail lines were inspected under several night possessions. The structure was inspected using a camera, measuring wheel and hand tools. The inspection of the soffit and high reaches of the bridge was carried out with aid of scissor lift, scaffold tower and a ladder to inspect the cross beams, columns, external elevations and concrete deck slabs. The topside chainage was from East to West. The west chamber was inspected under confined space working. Full PPE was worn during this inspection.

#### **Special Instructions:**

Inspection Condition			
Condition	Index	Score	Rating
Average (14/11/2023)	81.88	1.96	Good
Critical (14/11/2023)	9.72	4.70	Very 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: Mario Inacio
Inspector's Comments By: Mario Inacio

Checker's Comments By:

Engineer's Comments By: Mani Karuppiah

Inspection Sign-off History						
Change Date	User Name	Action	Old Status	New Status	Comments	
13/11/2024	Diane Walker	Inspection compliant	Submitted	Approved		
13/11/2024	Diane Walker	Inspection submitted	Draft	Submitted		

Structure Details			
Bridge Name:	Broadmead Road Viaduct	Identifier:	B4
Authority:	Redbridge	Structure Type:	Bridge
Owner:	Local Authority	Easting:	540840
Maintaining Authority:	Local Authority	Northing:	191370
Overall Structure Length (m):	227 00	Average Width (m):	18 76

## **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)
Broadmead Road Viaduct	1	227.00	17.50						
Approach Ramp - East	1	30.00	18.80						
Span 01	1	5.94	18.80						
Span 02	1	5.94	18.80						
Span 03	1	5.94	18.80						
Span 04	1	5.94	18.80						
Span 05	1	5.94	18.80						
Span 06	1	5.94	18.80						
Span 07	1	5.94	18.80						
Span 08	1	5.94	18.80						
Span 09	1	5.94	18.80						
Span 10	1	5.94	18.80						
Span 11	1	5.94	18.80						
Span 12	1	5.94	18.80						
Span 13	1	5.94	18.80						

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Structure Name:	Broadmead	Road Viaduct		Identifier:	B4
Span 14	1	5.94	18.80		
Span 15	1	5.94	18.80		
Span 16	1	5.94	18.80		
Span 17	1	5.94	18.80		
Span 18	1	5.94	18.80		
Span 19	1	5.94	18.80		
Span 20	1	5.94	18.80		
Span 21	1	8.46	18.80		
Span 22	1	8.45	18.80		
Span 23	1	8.86	18.80		
Span 24	1	5.94	18.80		
Span 25	1	5.94	18.80		
Span 26	1	5.94	18.80		
Span 27	1	5.94	18.80		
Span 28	1	5.94	18.80		
Approach Ramp - West	1	30.00	18.80		

## **Construction Details:**

Span/Wall/Gantry	Construction	Form/Material	
Approach Ramp - East	Primary Deck (Primary deck element (Room #1))		
Approach Ramp - East	Primary Deck (Primary deck element (Room #2))		
Approach Ramp - East	Primary Deck (Primary deck element (Room #3))		
Approach Ramp - West	Primary Deck (Primary deck element (Room #1))		
Approach Ramp - West	Primary Deck (Primary deck element (Room #2))		
Approach Ramp - West	Primary Deck (Primary deck element (Room #3))		
Approach Ramp - West	Primary Deck (Primary deck element (Room #4))		
Approach Ramp - West	Primary Deck (Primary deck element (Room #5))		
Span 01	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 02	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 03	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 04	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 05	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 06	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 07	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 08	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 09	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 10	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 11	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 12	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 13	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 14	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 15	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 16	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 17	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 18	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 19	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 20	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 21	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 22	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 23	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Denort Status:	approved	Submitted Date	13/11/2024



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Span 24	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 25	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 26	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 27	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	
Span 28	Primary Deck (Primary Deck Element)	11 - Slab (Solid) / Insitu Reinforced Concrete	



## **General View Photographs**



**Photograph #1**General view of North elevation



Photograph #2
General view of South elevation facing East

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Photograph #3
General view of South elevation facing West



**Photograph #4**General view of Westbound carriageway surfacing

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**Photograph #5**General view of Eastbound carriageway surfacing



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**Element Conditions** 

Approach Ramp - East

**Deck Elements** 

**Element Name** Works Priority No Defect Cost £k Ext 1 Primary deck element (Room #1)

Comment

Overall, the deck slab appears in good condition. No visible defects

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #2)	2	В	2.2		L	0.5

Comment

There were multiple minor spalling exposing the reinforcement on the deck soffit, measured 100x1250x15mm.

Monitor defect at the next scheduled inspection

**Remedial Works** 

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #2)	2	С	2.3		L	

Comment

There was minor longitudinal hairline crack on the deck soffit up to 3.65m in length.

Monitor defect at the next scheduled inspection

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #3)	2	С	2.2		L	
_							

There was isolated area of 300x500mm minor spalling on the deck soffit and honeycombing, measured area 1000x400mm.

Monitor defect at the next scheduled inspection

**Remedial Works** 

[none]

Load	-bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

Comment

The foundations were not visible for inspection. However, there were no signs of distress such as settlement, rotation or

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
9	Abutments (inc arch springing)	1	Α				
Comm	ent						

Overall, appears in good condition

**Remedial Works** 

[none]

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No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Eastern support wall	3	С	2.2		M	1

#### Comment

There were multiple hollow section areas and spalling exposing the reinforcement on the Western face of East support wall, measured 220x500mm, 370x850mm, 1070x460mm, 230x80mm, 180x120mm, 410x200x20mm and 200x120x5mm.

Note: Photograph were taken prior to concrete been breaking up.

#### **Remedial Works**

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Northern pier wall	3	В	2.2	$\square$	М	1

#### Comment

There were multiple spalling exposing the reinforcement on all chambers wall, measured 800x300x15mm on room #1, 800x250x20mm room #2 and 2No. on partition wall 250x250x40mm and 250x400x10mm room #3 and honeycombing on top of pier wall, measured 2200x300mm.

## Remedial Works

Refer to element above for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Northern pier wall	2	С			L	

#### Comment

There was isolated area of drummy section at base of wall, measured 1000x800mm.

Monitor defect at the next scheduled inspection

#### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Southern pier wall	3	В	2.2		М	0.6

#### Comment

There were multiple spalling exposing the reinforcement on chambers No.1 & 2, measured 200x150x20mm room #1, 200x300x40mm room #1 and 250x125x20mm room #2

#### **Remedial Works**

Refer to element above for remedial works recommendation

Dura	pility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

### Comment

The waterproofing membrane was not visible for inspection and there was no access to inspect the soffit of the approach slab. Confined space inspection required

### Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion joints	3	С	10.3	$\square$	M	10

## Comment

There was longstanding moderate tracking and flow of binder on both eastbound and westbound carriageway surfacing leading to extensive water leakage onto the elements below. This is consistent with 2023 GI.

## Remedial Works

Replace the existing asphalt plug joint at both ends

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion joints	3	С	10.1	$\square$	M	

## Comment

There was a longstanding area of de-bonding and loss of top surface on the Eastbound carriageway expansion joint leading to extensive leakage onto the elements below. This is consistent with 2023 GI

## **Remedial Works**

Undertake repairs to the defective areas of surfacing using an approved bituminous material.

Cost included on element #18 above



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No Element Name Sev Ext Defect Works Priority Cost £k

19 Finishes: deck elements 1 A 

Comment

No visible defects

**Inspection Type:** 

Remedial Works

[none]

NoElement NameSevExtDefectWorksPriorityCost £k20Finishes: substructure elements1A□

Comment

No visible defects

**Remedial Works** 

[none]

NoElement NameSevExtDefectWorksPriorityCost £k21Finishes: parapets/safety fences5C4.1□L

Comment

There were multiple location with loss of galvanised protection noted on both parapets. This is consistent with 2023 GI

Monitor defect at the next scheduled inspection

Remedial Works

[none]

NoElement NameSevExtDefectWorksPriorityCost £k21Finishes: parapets/safety fences2E5.2□L

#### Comment

There was moss growth, algal and general staining throughout both RC parapet walls. Refer to photograph #22. This is consistent with 2023 GI

Monitor defect at the next scheduled inspection

**Remedial Works** 

[none]

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	В	2.2	☑	М	2	
_								

Comment

There were multiple location where spalling exposing the reinforcement was noted on the Southern RC parapet coping. The defects measured  $600 \times 70 \times 35$  mm at Ch.29.3m from East,  $70 \times 200 \times 20$  mm,  $50 \times 130 \times 30$  mm and  $40 \times 330 \times 50$  mm. Also, 50 mm x 320 mm x full depth spalling on the external face of South parapet noted.

Remedial Works

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	2	В	2.3		L	

## Comment

Isolated area of crack on top of South parapet coping, measured 480mm in length x 2mm wide

## **Remedial Works**

Seal crack using an approved cementitous material

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	3	В	13.1	$\square$	М	1.5

### Comment

There was isolated area of impact damage on the South parapet bottom rail and North parapet vertical infill.

## **Remedial Works**

Repair/ replace section of damaged parapet on both parapets

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No	Element Name		Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing		3	В	9.4	$\square$	М	1.5	

#### Comment

Isolated area of full width transverse crack noted on Westbound carriageway surfacing

#### Remedial Works

Break out the area of to the carriageway surfacing and repair with a suitable mastic asphalt patch repair.

	ment Name	500	Ext	Defect	Works	Priority	Cost £k
24 Carr	riageway surfacing	2	D	9.2	$\square$	L	0.1

## Comment

There was uneven surfacing along the Eastbound carriageway.

Monitor defect during next schedule inspection

Carriageway surfacing

## **Remedial Works**

Seal the cracks through the surfacing using an appropriate cementitous material

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/verge/footbridge surfacing	2	D	5.2		L		

Minor vegetation and debris accumulation at interface with parapet along the whole length. This is consistent with 2023 GI

Monitor defect at the next scheduled inspection

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	
Comn	nent						
There	were multiple cracked paving slabs on the Southern footway surfacing at Ch.35m						

Monitor defect during next schedule inspection **Remedial Works** 

[none]

Othe	r Bridge Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
33	Emhankments	1	Α	0			

## Comment

No visible defects noted during the inspection.

## **Remedial Works**

[none]

Ancil	lary Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
39	North and South access doors	3	D	1.1	☑	L	1
Comi	ment						

There was surface corrosion on the Southern and Northern access doors. This is likely due to loss of protective coating and weathering. This is consistent with 2023 GI

## **Remedial Works**

Abrade, treat and repaint the affected area of corrosion to the access doors on the North and South approach elevations.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
39	North and South access doors	2	С			L	0.3	

There was non-offensive graffiti on the North access door. This is due to vandalism

## Remedial Works

Remove graffiti from the North access door under routine maintenance



oci acca	broadmed vidade				Ident			
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
39	Airbrick	3	Е	3.6	☑	L	0.3	

#### Comment

There was a missing airbrick on the Southern infill blockwork wall. This is consistent with 2023 GI

### **Remedial Works**

Replace the missing airbrick on the Southern infill blockwork wall under routine maintenance.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
39	Infill blockwork wall.	2	В	2.3		L		

## Comment

There were 3No. 1mm vertical shrinkage cracks with associated leachate staining on the Northern infill blockwork wall.

This is consistent with 2023 GI

Monitor defect at the next scheduled inspection

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
39	Infill blockwork wall.	3	С	2.2	$\square$	L	1

### Comment

There were multiple areas of spalling exposing the reinforcement on the Southern and Northern infill blockwork wall. The defects measured 95x95x10mm, 160x150x10mm and 165x155x10mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

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Span 01

|--|

реск	tiements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	4	С	2.2		Н	2	

#### Comment

There multiple severe spalling area exposing the reinforcement on the deck soffit, and isolated area on the external face at North end, measured 140x230x40mm, 1300x1100x65mm, 800x600x55mm and 300x300x40mm

#### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	2	В	2.3		L		
_								

Minor shrinkage crack noted on the deck soffit up to 4.8m in length.

Monitor defect during next schedule inspection

#### **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

#### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6) East of span	3	С	2.2	$\square$	М	1

#### Comment

There were multiple spalling exposing the reinforcement on the columns #2 and #3, measured 460x170x20mm, 600x500x70mm, 850x560x20mm and 900x150x30mm.

### Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6) West of span	1	Α	0			

## Comment

The Western columns where visible appears in good condition.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
12	Cross head/capping beam	3	С	2.2	$\square$	М	1	
C	a mile							

There were multiple spalling exposing the reinforcement on the cross head between C1 to C5, measured 265x1360x50mm, 180x500x50mm and 250x260x10mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

Dura	bility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
15	Superstructure Drainage	1	Α	0			

Overall, the drainage downpipe at South end appear in serviceable condition. Refer to photograph #57

## **Remedial Works**

[none]

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Structi	ire Name:	Broadmead Road Viaduct				Ident	ifier:	
No	Element Na	me	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofin	g	1	Α	0			
Comn	nent							

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	4	С	4.1		L	1	

### Comment

There was loss and flaking paintwork on the deck soffit.

### **Remedial Works**

Strip to defective area of paintwork and apply a proprietary protective paint system to the deck soffit

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	2	В		$\square$	L	0.1
Comn	nent						
Isolate	ed area of non-offensive graffiti within public view noted on the deck soffit						
Reme	dial Works						
Remov	re graffiti from the deck soffit under routine maintenance						

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	С			L	0.1

#### Comment

There was minor non-offensive graffiti on the Northern face of C3.

#### **Remedial Works**

Remove graffiti from the column under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	D	5.2		L	
Comm	ent						
There	was moss growth, algal and general staining throughout both RC parapet walls.						
Monito	r defect during next schedule inspection						

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С		$\square$	L	0.1

## Comment

There was minor non-offensive graffiti on the Northern parapet post at Ch.30m

## **Remedial Works**

Remove graffiti from the parapet post

Safety	' Elements									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
23	Handrail/parapets/safety fences	2	В	2.2	$\square$	L	0.3			
Comm	ent									
There was spalling on North parapet post internal and external face, measured 90x220x40mm at Ch.37.2m and 150x230x130mm.  Remedial Works										
Undert concre	ake patch repairs with an appropriate cementitious material, ensuring that it is suff te.	ciently `ŀ	keyed-ir	n' to the pare	ent					
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			

D

2.2

### Commen

23

There was localised deep spalling exposing the reinforcement on the parapet post between span #1 and approach ramp at North, measured 160x1005x160mm. Also, an isolated spalled area exposing the reinforcement on the external face at South, measured 160x130x20mm

### **Remedial Works**

Refer to element #1 for remedial works recommendation

Handrail/parapets/safety fences

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1

М

No Element Name
Sev Ext Defect Works Priority Cost £k

23 Steel Parapets (North and South)
2 C 1.1 L 3

#### Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

#### **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			

#### Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	D	5.2		L	

#### Comment

There was minor vegetation growth and debris accumulation at interface with South parapet.

Monitor defect during next schedule inspection

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/yerge/footbridge surfacing	2	С	3.5		L		

#### Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.38m

Monitor defect during next schedule inspection

### **Remedial Works**

[none]



Span 02

Deck	Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Drimany Dock Floment	4	C	2.2	V	н	3

#### Comment

There is minor spalling exposing the reinforcement on the external face at the South end and an isolated area of spalling on the deck soffit, measuring 150x150x25mm and 303x30x20mm.

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	3	В			L		

There was an isolated area of fire damage noted on the deck soffit, measured 600x600mm

Monitor defect during next schedule inspection

### **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			
Comn	nent						
sliding	undations were not visible for inspection, however there were no signs of disti i. Idial Works	ress such as se	ttlemen	t, rotation or			
[none							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	1	Α	0			
_							

#### Comment

Overall, all columns were in good condition. No visible defects

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	2	В	2.3		L	
Comme	ent						
2No. of	full height shrinkage crack on the western elevation between C4 and C5.						

Monitor during next schedule inspection

**Remedial Works** 

[none]

Durab	oility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

## Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	2	В			L	
Comm	ent						
Isolate	d area of dirty staining on the deck soffit due to fire damage recorded. Refer to phot	ograph	#75				
	defect during next schedule inspection						
Remed	lial Works						
[none]							



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
20	Finishes: substructure elements	1	Α	0		•		

Comment

No visible defects noted

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	D	5.2		L	

Comment

There was moss growth, algal and general staining throughout both RC parapet walls. Refer to span #1 photograph

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Safety	Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	В	2.2	$\square$	М	

#### Comment

There were isolated areas where spalling exposed the reinforcement on the South and North RC parapet coping, measuring 70x370x70mm and 40x300x70mm at Ch.40m.

### **Remedial Works**

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1	$\square$	L	

#### Comment

There were multiple location where surface corrosion was noted on South and North parapet posts. This is consistent with 2023 GI

Refer to span #1 photograph

### **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post. For cost refer to span #1

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

## Comment

Overall, both North and South steel parapet appears in good condition. No visible defects noted. Refer to span #1 photograph

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	D	5.2		L	

### Comment

There was minor vegetation growth and debris accumulation at interface with South parapet. Refer to span #1 photograph

Monitor defect during next schedule inspection

## Remedial Works

[none]

 Report Status:
 Approved
 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
 14/11/2024



Inspection Type:	
Structure Name:	
Span 03	

Deck	Lienents							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	3	В	2.2		М	0.4	

#### Comment

There was multiple spalling exposing the reinforcement on external face at South end and on the deck soffit, measured 80x70x15mm, 100x530x35mm and 150x200x5mm.

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	2	В	2.3		L		
_								

#### Comment

Minor shrinkage cracks on the deck soffit up to 4.6m in length.

Monitor defect during next schedule inspection

### **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

#### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	1	Α	0			
Comm	ent						
Overall	, all columns were in good condition. No visible defects						
Remed	dial Works						
[none]							
No	Flement Name	Sev	Fyt	Defect	Works	Priority	Cost fk

0

### Comment

12

Overall, appears in good condition. No visible defects

Cross head/capping beam

### **Remedial Works**

[none]

Durab	ility Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
17	Waterproofing	1	Α	0					
Comment									
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or								

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	3	В			L	0.15

## Comment

There is an offensive graffiti on the deck soffit. This is due to vandalism

### **Remedial Works**

Remove graffiti under routine maintenance

 Report Status:
 Approved
 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
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14/11/2023

Principal Inspection Report **Inspection Date:** 14/11/2023 **Inspection Type: Structure Name:** Broadmead Road Viaduct Identifier:

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
20	Finishes: substructure elements	1	Α	0					
Comm	ent								
No visible defects noted									
Remedial Works									
[none]									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
21	Finishes: parapets/safety fences	2	D	5.2		L			

## Comment

There was moss growth, algal and general staining throughout both RC parapet walls. Refer to span #1 photograph

Monitor defect during next schedule inspection

### **Remedial Works**

[none]

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	В	2.2	$\square$	L	0.2	
Comm	nent							
Isolate	Isolated area of 130x90x20mm spalling exposing the reinforcement on external face at South end.							

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1		L	

#### Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #1 photograph

#### **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post. For cost refer to span #1

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			
Comn	nent						
photog	dial Works	oted. R	efer to s	span #1			
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	D	5.1		L	

### Comment

There was minor vegetation growth and debris accumulation at interface with South parapet. Refer to span #1 photograph

Monitor defect during next schedule inspection

## **Remedial Works**

[none]



14/11/2023 Identifier:

Span 04 **Deck Elements** 

No **Element Name** Sev Ext Defect Works **Priority** Cost £k V 1 3 В 2.2 0.5 Primary Deck Element

Comment

There were multiple areas of spalling exposing the reinforcement on both external face and an isolated area on the deck soffit measuring 100x100x20mm, 160x160x25mm, 160x150x20mm and 50x50x20mm. Also, a hollowness area was noted, measuring 1900x90mm

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No **Element Name** Works Priority Cost £k 1 2 D 1.1 П Primary Deck Element

Comment

Surface corrosion on the holding down bolts and plates.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

No **Element Name** Defect Works Priority Cost £k Sev Ext Primary Deck Element В 2.3 П Comment

Multiple shrinkage cracks noted on the deck soffit up to 4.5m in length.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

**Remedial Works** 

[none]

**Element Name** No Ext Defect Works Priority Cost £k 11 Columns (1-6) 0

Comment

Overall, all columns were in good condition. No visible defects

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	С	2.2		М	0.3

Comment

Spalling exposing the reinforcement on cross head between C4 and C5 west face, measured 290x900x40mm.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

Dural	pility Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
17	Waterproofing	1	Α	0					
Comn	Comment								
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or								

dampness on the deck soffit.

**Remedial Works** 

[none]

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0

П

No **Element Name** Ext Defect Works Priority Cost £k

Comment

No visible defects noted

Finishes: deck elements

**Remedial Works** 

[none]

19

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Comm	ent						

No visible defects noted

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
21	Finishes: parapets/safety fences	2	D	5.2		L		

Comment

There was moss growth, algal and general staining throughout both RC parapet walls. Refer to span #1 photograph

Monitor defect during next schedule inspection

Remedial Works

[none]

Safet	y Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
23	Handrail/parapets/safety fences	3	В	2.2	$\square$	М	0.3		
Comr	nent								
Spalli	ng exposing the reinforcement on North RC parapet coping and on external face at S	South, me	easured	30x150x60n	nm				
and 150x430x15mm.									
Reme	dial Works								

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Paranets (North and South)	2	С	1.1		L		

Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #1 photograph

**Remedial Works** 

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			
Comm	ent						

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

Refer to span #1 photograph

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	D	5.2		L	

Comment

There was minor vegetation growth and debris accumulation at interface with South parapet. Refer to span #1 photograph

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

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 Inspection Type:
 Principal Inspection Report
 Inspection Date:
 14/11/2023

 Structure Name:
 Broadmead Road Viaduct
 Identifier:
 B4

Span 05

# **Deck Elements**

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	С	2.2	☑	M	0.5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the North and South edges measuring 160x370x35mm, 180x200x25mm and 180x200x25mm. Also, an isolated spalled area exposing the reinforcement on the deck soffit, measuring 100x100x20mm

#### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

#### Comment

Minor shrinkage crack up to 1.2m in length noted on the deck soffit.

Monitor defect during next schedule inspection

#### **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			
C							

#### -----

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-2)	4	С	2.2		Н	1.5

#### Comment

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring 400x120x25mm, 450x260x15mm, full height x  $350 \times 60mm$ , 390x390x70mm, 470x100x55mm and 600x100x50mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Column (3-4)	4	С	2.2		Н	1.5	
<b>6</b>	<b>-</b>							

### Comment

There were multiple areas of deep spalling exposing the reinforcement on both C3 and C4, measured 1001x200x45mm, 450x100x40mm,470x160x60mm, 1020x280x50mm and 1090x400x60mm

## Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Column (5-6)	2	В	2.3		L	

### Comment

There was an isolated 300x1-2mm vertical crack on C5 south face.

Monitor defect during next schedule inspection

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	В	2.2	$\square$	M	0.35

## Comment

There was deep spalling exposing the reinforcement on the cross head between C5 and C6 and an isolated area of spalling on the west face between C3 and C4, measuring 640x190x65mm and 230x20x5mm

### **Remedial Works**

Refer to element #1 for remedial works recommendation

## **Durability Elements**



Principal Inspection Report Inspection Date: 14/11/2023 Inspection Type: Structure Name: Broadmead Road Viaduct **Identifier**:

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
15	Superstructure Drainage	5	Е	8.1	$\square$	М	0.3	

#### Comment

The carriageway gully was fully blocked with debris and silt.

#### Remedial Works

Clear fully blocked carriageway gully under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

### Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion Joints	3	С	10.1		М	2.5

#### Comment

There was debonding and cracks between the plug joint and road surface on Westbound carriageway leading to extensive leakage onto the elements below. This is consistent with 2023 GI

#### **Remedial Works**

Undertake repairs to the defective areas of expansion joint using an approved bituminous material.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
18	Movement/expansion Joints	3	D	10.3	☑	M	2.5	
_								

#### Comment

Longstanding tracking and flow of the binder of expansion joint on Eastbound carriageway leading to extensive leakage onto the elements below. Also, pothole forming noted.

#### Remedial Works

Undertake repairs to the defective areas of expansion joint using an approved bituminous material.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	1	Α	0				

## Comment

Overall, no visible defects recorded

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Commo	ent						
Overall	no visible defects						
Remed	ial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k

# Finishes: parapets/safety fences

21

There was moss growth, algal and general staining throughout both RC parapet walls. Refer to span #1 photograph

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	С	2.2	$\square$	М	1	
Comr	nent							

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 50x650x60mm, 550x100x40mm and 50x200x25mm.

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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D

5.2

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1		L	

## Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #1 photograph

### **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k					
24	Carriageway surfacing	1	Α	0								
Comm	Comment											
photog	Overall, both North and South steel parapet appears in good condition. No visible defects noted. Refer to span #1 photograph Remedial Works											
[none]												
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k					
25	Footway/verge/footbridge surfacing	2	D	5.2		L						

#### Comment

There was minor vegetation growth and debris accumulation at interface with South parapet. Refer to span #1 photograph

Monitor defect during next schedule inspection

## **Remedial Works**

[none]



Principal Inspection Report Inspection Date: **Inspection Type:** Structure Name: Broadmead Road Viaduct Identifier:

Span 06 **Deck Elements** 

Defect No **Element Name** Sev Ext Works **Priority** Cost £k V 1 4 С 2.2 2 Primary Deck Element

Comment

There was multiple areas of spalling exposing the reinforcement on the external face at South end, measuring 150x910x25mm. Also, an area of deep spalling spalling exposing the reinforcement noted on the deck soffit, measuring 1400x1300x75mm, 600x1300x50mm and 600x2200x45mm

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

**Element Name** No Works Priority Cost £k 1 В 2.3 П L Primary Deck Element

Comment

2No. of shrinkage crack up to 1100mm and 1300mm in length on the deck soffit.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Load-	bearing Substructure									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
8	Foundations	1	Α	0						
Comm	nent									
The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.  Remedial Works										
[none]										
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
11	Columns (East of Span)	3	С	2.2		М	1			

11 Columns (East of Span)

Comment

C1-C3

There were multiple areas of spalling exposing the reinforcement on C1, C2 and C3 north and east face, measuring 720x130x30mm, 500x160x40mm, 520x120x20mm, 1205x260x40mm and 570x320x50mm

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (East of Span)	3	В	2.2		М	0.5
Comm	nent						

C4-C6

There was 2No. areas of spalling exposing the reinforcement on C4 SW face and North face, measuring 700x160x70mm and 450x140x30mm

Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (West of Span)	1	Α	0				

Comment

Overall, no visible defects to all columns on West side

**Remedial Works** 

[none]

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3

С

2.2

N

1.1

0.5

Ext Works Cost £k No **Element Name** Sev Defect Priority

Comment

12

(East of Span)

There was 2No. areas of spalling exposing the reinforcement on the cross head between C2 and C3, measuring 160x320x20mm and 1000x300x40mm

**Remedial Works** 

Refer to element #1 for remedial works recommendation

Cross head/capping beam

No **Element Name** Ext **Defect** Works **Priority** Cost £k 12 Cross head/capping beam 1 0

(West of Span)

Overall, no visible defects to all cross heads on West side

Remedial Works

[none]

Durab	ility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			
Comm	nent						
	ndition of the waterproofing was not visible for inspection. However, there was no s less on the deck soffit.	igns of w	vater se	epage or			
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k

Comment

Minor rust staining noted on the deck soffit.

Finishes: deck elements

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Comm	nent						
Overal	l, no visible defects						
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С	5.2		L	

Comment

There was minor moss growth and dirty staining on top of Southern parapet coping. Refer to photograph #137

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Safety	Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
23	Handrail/parapets/safety fences	3	В	2.2	$\square$	М	0.4		
Comm	ent								
Multiple areas of spalling exposing the reinforcement on South parapet coping, measured 50x200x50mm at Ch.62.8m and 90x200x80mm.									
Remed	lial Works								
Refer to	o element #1 for remedial works recommendation								



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	В	2.3		М	0.3

#### Comment

There was isolated crack just below the coping on external face of North parapet, measured 400mm in length x 5mm wide.

#### **Remedial Works**

Undertake crack repairs using an appropriate cementitious material

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1	$\square$	L	3

### Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

### **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	4	В	9.4	$   \overline{\checkmark} $	М	0.5	

#### Comment

There was an isolated area where a pothole has formed on the Eastbound carriageway surfacing, measuring 750x1400x10mm

### **Remedial Works**

Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/verge/footbridge surfacing	2	D	5.2		L		
Comn	nent							

There was minor vegetation growth and debris accumulation on both South and North footway at interface with RC parapet

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/yerge/footbridge surfacing	2	В	3.5		L		

## Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.66m

Monitor defect during next schedule inspection

### **Remedial Works**

[none]



Principal Inspection Report **Inspection Date:** 14/11/2023 Inspection Type: Structure Name: Broadmead Road Viaduct Identifier:

Span 07

**Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Drimany Dody Flament	1	C	2.2	∀	н	2.5

#### Comment

There were 2No. areas of spalling exposing the reinforcement on the North external face, measuring 80x360x80mm and 60x60x30mm. In addition, multiple areas of deep spalling exposing the corroded reinforcement noted on the deck soffit, measuring 1900x650x55mm, 3800x1900x70mm, 1700x1700x70mm and 300x500x25mm

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Flement	2	В	2.3		L		

#### Comment

Minor shrinkage crack up to 2.8m in length noted on the deck soffit.

Monitor defect during next schedule inspection

### **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			
Comn	nent						
The fo	undations were not visible for inspection, however there were no signs of distress s	uch as se	ttlemen	t, rotation o	r		
sliding							

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	2	В	2.2		L	0.2

There was an area of 100x120x10mm minor spalling exposing the reinforcement on C1 north face and an area of 90x90x5mm shallow spalling on east face. No visible defects to the other columns

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
12	Cross head/capping beam	3	В	2.2	$\square$	М	0.4	
<u> </u>								

There were isolated areas of spalling exposing the reinforcement on the underside of cross head between C2 to C5, measuring 400x310x40mm, 460x310x40mm and 100x100x10mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

Dura	pility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			
Com	ment						
No de	efects observed during this inspection.						
Rem	edial Works						
Inone	.]						

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No Element Name

Sev Ext Defect Works Priority Cost £k

20 Finishes: substructure elements

1 A 0 □

Comment

No defects observed during this inspection.

Remedial Works

[none]

NoElement NameSevExtDefectWorksPriorityCost £k21Finishes: parapets/safety fences2C5.2L

Comment

There was minor moss growth and dirty staining on the Northern RC parapet coping and wall. Refer to span #6 photograph

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Safety	Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	С	2.2	$\square$	M	1

#### Comment

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 430x70x100mm at Ch.67m, 55x230x35mm, 50x70x30mm and 50x300x40mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1	$\overline{\checkmark}$	L	

#### Comment

There were multiple areas where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #6, element #23 for photograph view and cost

## **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	4	В	9.4		М	0.5

### Comment

There was an isolated area where a pothole has formed on Eastbound carriageway surfacing, measuring 750x1400x10mm

## Remedial Works

Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	D	5.2		L	
Comm	ent						

There was minor vegetation growth and debris accumulation on South footway at interface with RC parapet wall. Refer to span #6 photograph

Monitor defect during next schedule inspection

Remedial Works

[none]

 Report Status:
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Inspection Type: 14/11/2023 **Structure Name:** Broadmead Road Viaduct Identifier:

Span 0	8							
Deck E	lements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	3	С	2.2		М	0.7	

#### Comment

There was 190x210x25mm spalling exposing the reinforcement on external face at North end, and multiple areas of spalling on the deck soffit, measuring 850x350x35mm, 900x500x45mm, 450x250x28mm and 250x350x22mm

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
1	Primary Deck Element	2	В	2.3		L				
Comm	Comment									
Minor	shrinkage crack up to 3.1m in length noted on the deck soffit.									

Monitor defect during next schedule inspection

### **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

#### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	3	В	2.2	$\square$	М	0.25

### Comment

There was isolated area of spalling exposing the reinforcement on C6 east face, measured 520x180x40mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
12	Cross head/capping beam	1	Α	0				

Overall, no visible defects noted throughout the cross head.

### **Remedial Works**

[none]

Durability Elements											
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
17	Waterproofing	1	Α	0							
Comn	Comment										
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or										
dampı	dampness on the deck soffit.										
Dama	dial Morks										

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			

### Comment

Overall, no visible defects noted

### **Remedial Works**

[none]



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Comm	ent						
Overal	I, no visible defects noted						
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С		$\square$	L	0.1

## Comment

There was isolated area of non-offensive graffiti on the Northern RC parapet wall.

## **Remedial Works**

Remove graffiti from the North parapet wall

Safety	Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
23	Handrail/parapets/safety fences	2	В	2.2		L	0.3		
Comm	ent								
There was $100 \times 50 \times 20$ mm isolated area of spalling exposing the reinforcement on external face at South end and on parapet coping at Ch.79m, measured full height x 50 x 50mm <b>Remedial Works</b>									
Refer to element #1 for remedial works recommendation									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
23	Steel Parapets (North and South)	2	С	1.1	$\square$	L			

### Comment

No

There were multiple areas where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #6, element #23 for photograph view and cost

## Remedial Works

**Element Name** 

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

24	Carriageway surfacing	4	В	9.4	☑	М	0.3
Comm	ent						
There	was isolated area of pothole forming on Eastbound carriageway surfacing, measured	750x14	00x10m	nm			
Reme	dial Works						
Break	out the area around the defective surfacing and repair with a suitable mastic asphal	t patch r	epair.				
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	D	5.2		L	

Defect

Ext

Works

Priority

Cost £k

## Comment

There was minor vegetation growth and debris accumulation on South footway at interface with RC parapet wall. Refer to span #6 photograph

Monitor defect during next schedule inspection

### **Remedial Works**

[none]



**Inspection Date:** Inspection Type: Structure Name: Broadmead Road Viaduct Identifier: Span 09

**Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Flement	4	C	2.2	$\square$	н	13

Comment

There was 100x150x25mm area of spalling exposing the reinforcement on external face at North end, and multiple deep spalling on the deck soffit, measuring 800x700x70mm, 400x400x35mm and 450x550x25mm.

**Remedial Works** 

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

Comment

Minor shrinkage crack up to 2.8m in length noted on the deck soffit.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
1	Primary Deck Element	2	С	1.1		L				
Comment										
Surface corrosion noted on the holding down bolts and plates.										

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Load-	-bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	3	С	2.2	☑	М	0.5

There were multiple areas of spalling exposing the reinforcement on C6 east face and north face, measuring 350x180x40mm, 270x110x40mm and 400x350x30mm.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			

Overall, no visible defects noted throughout the cross head.

**Remedial Works** 

[none]

Durab	ility Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
17	Waterproofing	1	Α	0					
Comm	nent								
The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.  Remedial Works									
[none]									

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0

П

No Element Name Sev Ext Defect Works Priority Cost £k

Comment

19

Overall, no visible defects noted

Finishes: deck elements

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			

Comment

Overall, no visible defects noted

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С	5.2		L	

Comment

There was minor moss growth and dirty staining on the Northern RC parapet coping and wall. Refer to span #6 photograph

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Safet	y Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	С	2.2	$\square$	М	0.5
_							

Comment

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measured 150x300x40mm at Ch.54.9m, 40x200x30mm, 50x200x30mm and 100x100x25mm on external face at South

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1		L	

Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #6, element #23 for photograph view and cost

Remedial Works

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	4	В	9.4	$\square$	М	0.5
Comp	nent						

-

There was an isolated area where a pothole formed on the Eastbound carriageway surfacing, measuring 750x1400x10mm

**Remedial Works** 

Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	

Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.87m

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



Span 10

Deci	KE	em	en	τς

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	D	2.2		М	1

## Comment

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit, measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Load-	bearing Substructure							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
8	Foundations	1	Α	0				

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	4	D	2.2	$\square$	Н	1.5

## Comment

C1-C3

There were multiple spalling exposing the reinforcement on columns (C1-C4) throughout, measured 560x160x40mm, full height x 370x50mm, 570x190x30mm, 1430x190x30mm and 560x300x30mm.

#### Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (1-6)	4	С	2.2	$   \overline{\checkmark} $	Н	1.5	

## Comment

C4-C6

There were multiple spalling exposing the reinforcement on columns (C4-C6), measuring 750x140x20mm, 1650x200x40mm, 950x40x20mm, 1150x140x20mm and 1040x240x70mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	С	3.3		М	0.5

# Comment

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C2-C4, measured 1100x310x40mm, 450x190x40mm and 1050x310x50mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

Durability Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
15	Superstructure Drainage	5	Е	8.1	☑	М		

## Comment

The carriageway gully was fully blocked with debris and silt. Refer to span #5 photograph

## **Remedial Works**

Clear fully blocked carriageway gully under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

## Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

# **Remedial Works**

[none]

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14/11/2023 Principal Inspection Report Inspection Date: Inspection Type: Structure Name: Broadmead Poad Viaduct Idontifion

Structu	broadmead Road Vidadet					Idelit	illei.		
No	Element Nam	ie	Sev	Ext	Defect	Works	Priority	Cost £k	
18	Movement/exr	pansion Joints	3	С	10.1	$\square$	М	2.5	

### Comment

There was moderate loss of road surface adjacent to joint on Westbound carriageway. This is consistent with 2023 GI

#### Remedial Works

Movement/expansion Joints

Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion Joints	3	С	10.3	$\square$	М	2.5

## Comment

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

## **Remedial Works**

Replace the existing expansion joints under cyclic maintenance

		_						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	1	Α	0				

#### Comment

Overall, no visible defects

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	D			L	

## Comment

There was widespread of seepage staining on the columns throughout.

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С		$\square$	L	0.1

# Comment

There was minor non-offensive graffiti on the Northern RC parapet wall.

# **Remedial Works**

Remove non-offensive graffiti from the Northern RC wall

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	В	2.2	☑	М	0.15	
Comr	ment							

There was an isolated area of spalling exposing the reinforcement on North parapet coping, measuring 15x100x10mm.

# **Remedial Works**

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	2	С	1.1	$\square$	L	0.3

# Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Refer to span #6, element #23 for photograph view.

# **Remedial Works**

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	4	В	9.4	$\overline{\checkmark}$	М	0.5
Comm	ent						

There was an isolated area where a pothole formed on the Eastbound carriageway surfacing, measured 750x1400x10mm

# **Remedial Works**

Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.

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No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	

## Comment

There was cracked paving slabs on the Southern footway surfacing at  ${\rm Ch.94m}$ 

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



Principal Inspection Report **Inspection Date:** 14/11/2023 Inspection Type: Structure Name: Broadmead Road Viaduct Identifier:

Span 11 **Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Dock Floment	3	C	2.2	$\square$	М	0.6

## Comment

There was an area of spalling exposing the reinforcement on external face at North and South end, measuring 100x450x50mm and 160x1360x50mm. Also, same defect noted along the edge of deck soffit at South, measured 350x300x35mm and 700x300x35mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	2	В	2.3		L		

#### Comment

Minor shrinkage crack up to 3.5m in length noted on the deck soffit.

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			
Comn	nent						
sliding	undations were not visible for inspection, however there were no signs of distress : . dial Works	such as se	ttlemen	t, rotation o	r		
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (East of Span)	4	D	2.2	$\square$	Н	1.5

## Comment

C1-C3

There were multiple spalling exposing the reinforcement on columns (C2-C3) throughout, measured 1400x200x40mm, full height x200x40mm, 700x200x55mm , 1250x250x40mm and 570x190x40mm.

# **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
11	Columns (East of Span)	4	С	2.2	☑	Н	1			
Comment										
C4-C6	C4-C6									
There were multiple areas of spalling exposing the reinforcement on columns (C4-C5) throughout, measuring										

730x180x30mm, 700x200x50mm, 1500x310x50mm and 1600x210x40mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (East of Span)	2	В	2.3		L	

There was isolated area of 1200x1mm vertical crack on C2 east face.

Monitor defect during next schedule inspection

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (West of Span)	1	Α	0			
Comm	nent						
Overal	I, no visible defects noted on all columns at West of span.						
Reme	dial Works						
[none]							



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
12	Cross head/capping beam	3	С	2.2		M	1				

### Comment

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C2 to C6, measuring 700x100x50mm, 1100x170x50mm, 1200x260x50mm and 1000x300x50mm

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			
Comn	nent						

Overall, no visible defects noted on cross heads at West of span.

## **Remedial Works**

[none]

Durab	pility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

## Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			
Comm	ent						
Overal	l, no visible defects						
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	D			L	

## Comment

Seepage staining noted on the columns and cross heads. Refer to photographs #218-221

Monitor defect during next schedule inspection

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
21	Finishes: parapets/safety fences	2	В	1.1		L			
Comment									
There	was minor iron pyrite staining on RC parapet wall.								

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Safet	y Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	В	2.2		М	0.2

# Comment

There was an isolated area of spalling exposing the reinforcement on South parapet coping and North external face, measuring 50x190x30mm and 50x300x25mm.

# **Remedial Works**

Refer to element #1 for remedial works recommendation

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Α

0

Ext Defect Works Priority Cost £k No **Element Name** Sev П

Comment

23

Overall, both South and North steel parapets appears in good condition. No visible defects noted

**Remedial Works** 

[none]

No **Element Name** Defect Works **Priority** Cost £k 24 0 Carriageway surfacing

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	С	9.6	$\square$		2

Comment

There were uneven paving slabs slabs which over time will lead to trip hazards on the North footway.

**Remedial Works** 

Re-bed the uneven paving slabs on North footway.

Steel Parapets (North and South)

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/verge/footbridge surfacing	2	В	3.5		L		

Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.103m

Monitor defect during next schedule inspection

**Remedial Works** 

[none]





Span 12 **Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	В	2.2		M	0.3

## Comment

There was an isolated area of spalling exposing the reinforcement on external face at South, measured 130x1000x50mm.

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

## Comment

Minor shrinkage crack up to 0.9m in length noted on the deck soffit.

# **Remedial Works**

Monitor defect during next schedule inspection

Load-	Load-bearing Substructure								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
8	Foundations	1	Α	0					
Comment									
The fo	The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or								

sliding.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (1-6)	1	Α	0				

## Comment

Overall, no visible defects noted on all columns.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			
Comm	ent						
Overal	I, no visible defects noted throughout the cross heads.						

**Remedial Works** 

[none]

Dural	pility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			
Comn	nent						
Overal	II, no visible defects						
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Comn	nent						
Overal	II. no visible defects						

# **Remedial Works**

[none]

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No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
21	Finishes: parapets/safety fences	2	С	5.2		L		

## Comment

There was minor moss growth and dirty staining on the RC parapet coping and wall. Refer to span #11 photograph #226

Monitor defect during next schedule inspection

Finishes: parapets/safety fences

# **Remedial Works**

[none]

Safety	Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	В	2.2	$\square$	М	

## Comment

Multiple areas of spalling exposing the reinforcement on North parapet coping and external face, measured 40x200x20mm, 140x400x45mm and 160x100x20mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				
C								

## Comment

Overall, both South and North steel parapets appears in good condition. No visible defects noted. Refer to span #11 photographs

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

### Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #11 photographs

# **Remedial Works**

[none]

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	1	Α				
Comn	nent						
Overa	II, appears in good condition.						
Reme	dial Works						

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Span 13

Deck I	Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	3	С	2.2	$\square$	М	0.5	

## Comment

There were multiple spalling areas on the deck soffit and along the edge at South end, measuring 2200x2000x55mm, 300x300x35mm and 450x350x35mm.

## **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	
Comm	ent						
Minor	shrinkage crack up to 1.95m in length noted on the deck soffit.						
Monito	r defect during next schedule inspection						

Remedial Works

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

## **Remedial Works**

**Element Name** 

[none]

No

11	Columns (1-6)	1	Α	0				
Comm	ent							
Overal	l, no visible defects noted on all columns.							
Reme	dial Works							
[none]								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	

Ext

Defect

0

Works

**Priority** 

Cost £k

# Comment

12

Overall, no visible defects noted throughout the cross heads.

Cross head/capping beam

# **Remedial Works**

**Durability Elements** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
17	Waterproofing	1	Α	0					
Comn	nent								
The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.  Remedial Works									
[none]	I								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
19	Finishes: deck elements	1	Α	0					

# Comment

Overall, no visible defects

# **Remedial Works**

[none]



Defect

5.2

C

Works

**Priority** 

L

Cost £k

No **Element Name** Sev Ext Defect Works Priority Cost £k 20 Α 0 П Finishes: substructure elements Comment Overall, no visible defects **Remedial Works** [none]

21 Finishes: parapets/safety fences

No

Comment

There was minor moss growth and dirty staining on the Northern RC parapet coping and wall. Refer to span #11

Monitor defect during next schedule inspection

**Element Name** 

## **Remedial Works**

photograph #205

[none]

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	В	2.2	☑	М	0.5	
Comr	ment							

Multiple spalling exposing the reinforcement on on both parapet coping and external face of North parapet, measured 40x170x40mm, 50x350x50mm and 100x100x20mm. Also, spalling on South parapet at Ch.104m, measured 50x150x20mm noted.

## **Remedial Works**

For remedial works recommendation refer to element #1

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

### Comment

Overall, both South and North steel parapets appears in good condition. No visible defects noted. Refer to span #11 photographs

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				
Comm	nent							

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #11 photographs

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/verge/footbridge surfacing	1	Α					

# Comment

Overall, appears in good condition.

# **Remedial Works**

[none]

 Report Status:
 Approved
 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
 14/11/2024



Span 14 **Deck Elements** No **Element Name** Sev Ext Defect Works Priority Cost £k П 1 Primary Deck Element 2 В 2.3 Comment Minor shrinkage crack up to 1.2m in length noted on the deck soffit.

Minor areas of spalling also noted

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	1	Α	0			
Comm	ent						
Overal	I, no visible defects noted on all columns.						
Reme	dial Works						

[none]

No **Element Name** Ext Defect Works Priority Cost £k 12 0 Cross head/capping beam

## Comment

Overall, no visible defects noted throughout the cross heads.

# **Remedial Works**

[none]

Durab	ility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			
Comm	ent						
dampn	ndition of the waterproofing was not visible for inspection. However, there was r ess on the deck soffit. <b>dial Works</b>	no signs of w	ater se	epage or			
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			

# Comment

Overall, no visible defects

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Comm	nent						
Overal	l, no visible defects						
Reme	dial Works						
[none]							



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С	5.2		L	

## Comment

There was minor moss growth and dirty staining on the Northern RC parapet coping and wall. Refer to span #11 photograph #226

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	С	2.2	☑	М	0.5	
Comn	nent							

There were multiple spalling exposing the reinforcement on both parapet coping and external face of North and South parapet, measured 50x190x50mm, 70x700x70mm, 200x500x20mm, 100x100x20mm and 110x90x20mm.

# **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

### Comment

Overall, both South and North steel parapets appears in good condition. No visible defects noted. Refer to span #11 photographs

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			

#### Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #11 photographs

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	1	Α				

# Comment

Overall, appears in good condition.

# Remedial Works

[none]



Span 15

Deck l	Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Flement	3	С	2.2	$\square$	М	1

## Comment

There were areas of spalling exposing the reinforcement on external face at North, measuring 800x150x50mm and 150x200x25mm. In addition., multiple spalling areas on the deck soffit, measured 1700x1700x40mm, 800x500x40mm and 400x200x15mm.

## **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

#### Comment

Minor shrinkage crack up to 2.6m in length noted on the deck soffit.

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

Load-	bearing Substructure								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
8	Foundations	1	Α	0					
Comn	nent								
sliding	The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.  Remedial Works								
-									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
11	Columns (1-6)	3	С	2.2	☑	М	0.5		

# Comment

C1-C4

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (1-6)	3	D	2.2	$\square$	М	1	
C								

# Comment

C5-C6

There were multiple areas of spalling exposing the reinforcement on column (C5) throughout, measuring 850x180x40mm, 400x190x40mm, 600x120x40mm and 1000x330x40mm.

# **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
12	Cross head/canning heam	2	В	2.2	$\square$	L	0.15	

# Comment

There was an isolated area of spalling exposing the reinforcement on the cross head underside between C3 and C4.

# Remedial Works

Refer to element #1 for remedial works recommendation

# **Durability Elements**



N

8.1

No	Element Nar	mo.	Sev	Ext	Defect	Works	Priority	Cost £k	
Structure Name:		Broadmead Road Viaduct				Identifier:		B	

Comment

15

The gully on Eastbound and Westbound carriageway were completely blocked with silt and trapped debris.

**Remedial Works** 

Clear blocked gully under routine maintenance

Superstructure Drainage

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

# Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion Joints	3	С	10.1	$\square$	М	2

### Comment

There was moderate loss of road surface adjacent to joint on Westbound carriageway. This is consistent with 2023 GI

## **Remedial Works**

Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair on both expansion joint at North and South

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
18	Movement/expansion Joints	3	С	10.3		М	1.5	

## Comment

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

## **Remedial Works**

Replace the existing expansion joint on Eastbound carriageway

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			
Comm	ent						
Overal	l, no visible defects						
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			

# Comment

Overall, no visible defects

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С	1.1		L	
Commo	ent						
There w	vas minor surface corrosion on the steel parapet post.						

Monitor defect during next schedule inspection **Remedial Works** 

[none]

Safet	y Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	В	2.2		М	0.35

## Comment

There were areas of spalling exposing the reinforcement on both parapet copings, measuring 40x280x50mm, 90x40x20mm at Ch.122m on South and 90x300x40mm on North.

# **Remedial Works**

Refer to element #1 for remedial works recommendation



No **Element Name** Ext Defect Works Priority Cost £k Sev

П

Α

0

Comment

Overall, both South and North steel parapets appears in good condition. No visible defects noted. Refer to span #11 photographs

**Remedial Works** 

Steel Parapets (North and South)

[none]

23

No **Priority** Cost £k **Element Name Defect** Works 0 24 Carriageway surfacing 1

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #11 photographs

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	1	Α				
Comm	ent						
Overall	, appears in good condition.						
Remed	lial Works						
[none]							



Span 16			
Structure Name:	Broadmead Road Viaduct	Identifier:	B4

#### **Deck Elements** Defect No **Element Name** Sev Ext Works **Priority** Cost £k V 3 В 2.2 0.3 Primary Deck Element

## Comment

There were areas of spalling exposing the reinforcement on the deck soffit and external face at North, measuring 50x300x50mm, 150x140x15mm and 400x600x30mm.

## Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	
Comm	nent						
Minor	shrinkage crack up to 1.3m in length noted on the deck soffit.						
	or defect during next schedule inspection  dial Works						

Load-	bearing Substructure							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
8	Foundations	1	Α	0				

## Comment

[none]

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (East of Span)	4	D	2.2		Н	2.5
Comm	ont						

C2-C6

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and 1000x160x30mm.

## Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (West of Span)	1	Α	0			

# Comment

Overall, all columns were in good condition. No visible defects

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	2	В	2.2	$\square$	L	0.3

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C3-C5. Note: Columns on East of span. No defects on cross heads at West of span throughout

# **Remedial Works**

Refer to element #1 for remedial works recommendation

Dural	bility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## **Remedial Works**

[none]

Approved **Submitted Date:** 13/11/2024 **Report Status:** Submission Count: 14/11/2024 **Print Date:** 



No **Element Name** Sev Ext Defect Works Priority Cost £k 19 Α 0 П Finishes: deck elements Comment Overall, no visible defects

**Remedial Works** 

No **Element Name** Ext Defect Works **Priority** Cost £k 20 Finishes: substructure elements C ī

Seepage staining on cross heads and columns at East of span. Refer to photograph #259

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С	5.2		L	

Comment

There was minor moss growth and dirty staining on the Northern RC parapet coping and wall. Refer to photograph #288

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Safety	Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	С	2.2	$\square$	M	1

There were multiple spalling on both parapet, worse measured 30x250x30mm, 200x370x50mm, 120x70x50mm at Ch.122.6m and 180x130x50mm on the base of North parapet at Ch.124m.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	1	Α	0			

Comment

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

**Remedial Works** 

[none]

[mone]								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	С	5.2		L	

Comment

Minor vegetation along the length of South footway at interface with parapet.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	

## Comment

There was cracked paving slabs on the Southern footway surfacing at  ${\rm Ch.131m}$ 

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



Snan	17	

Deck	Elemen	ts	

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	С	2.2	$\square$	М	0.6

## Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North and South, measuring 140x230x5mm and 90x70x20mm. Also, multiple spalling areas noted on the deck soffit, measuring 1500x600x50mm, 600x400x35mm and 600x500x30mm.

## **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
11	Columns (1-6)	1	Α	0					
Comment									
Overall, all columns were in good condition throughout. No visible defects noted									
Remedial Works									

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
12	Cross head/capping heam	1	Α	0				

### Comment

Overall, no visible defects noted throughout

## **Remedial Works**

[none]

Dural	pility Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
17	Waterproofing	1	Α	0					
Comment									
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or								
dampı	dampness on the deck soffit.								
Domo	dial Works								

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	2	В	1.1		L	

# Comment

Minor iron pyrite staining on the deck soffit.

Monitor defect during next schedule inspection

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	В	1.1		L	
Comm	ent						
Minor i	ron pyrite staining noted on C5 north face.						
	r defect during next schedule inspection						
[none]							

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No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С	5.2		L	

## Comment

There was minor moss growth and dirty staining on the Northern RC parapet coping and wall. Refer to span #16 photograph #288

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	С	2.2	☑	М	0.5	
Comi	nont.							

#### Comment

There were multiple areas of spalling exposing the reinforcement on both parapet coping and external faces, measuring 50x450x60mm at Ch.133.7m, 170x50x20mm at Ch.131m, 100x300x20mm and 150x140x20mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

#### Comment

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

Refer to span #16 photograph

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			
Comm	ent						

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #16 photograph

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/yerge/footbridge surfacing	2	В	5.2		L		

# Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.137m

Monitor defect during next schedule inspection

# Remedial Works

[none]

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**Inspection Date:** 14/11/2023 Inspection Type: **Structure Name:** Broadmead Road Viaduct Identifier:

# Span 18 **Deck Elements**

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	В	2.2	$\square$	М	0.2

## Comment

There was an area of 100x300x25mm spalling exposing the reinforcement on external face at South end end. 150x150x15mm spalling on the deck soffit also noted.

## **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

Minor shrinkage crack up to 3.6m in length noted on the deck soffit.

## **Remedial Works**

Monitor defect during next schedule inspection

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (1-6)	1	Α	0				

Overall, all columns were in good condition throughout. No visible defects noted

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			
Comm	ent						

Overall, no visible defects noted throughout

**Remedial Works** 

[none]

Dural	bility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

# Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	2	В	1.1		L	
Comme	ent						
Minor in	on pyrite staining on the deck soffit.						

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

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No Element Name Sev Ext Defect Works Priority Cost £k

20 Finishes; substructure elements 1 A 0 □

Comment

Overall, no visible defects

**Remedial Works** 

[none]

NoElement NameSevExtDefectWorksPriorityCost £k21Finishes: parapets/safety fences1A0□

Comment

Overall, no visible defects

Remedial Works

[none]

Safety	/ Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	3	В	2.2		М	0.3

## Comment

There were multiple areas of spalling exposing the reinforcement on South parapet coping external face, measuring 180x180x15mm, 35x300x40mm, 50x300x25mm at Ch.137.8m and 100x90x20mm on external face of North parapet.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No Element Name Sev Ext Defect Works Priority Cost £k
23 Steel Parapets (North and South) 1 A 0 □

Comment

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

Refer to span #16

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

# Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #16 photograph

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	

Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.142m

Monitor defect during next schedule inspection

Remedial Works

[none]



**Structure Name:** Snan 10

Span	.9							
Deck E	lements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	3	С	2.2	$\square$	М	0.6	

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 200x140x20mm and 240x200x20mm. Also, multiple spalling areas noted on the deck soffit and along the edge, measuring 1900x2800x70mm, 800x400x40mm and 1900x350x35mm.

Comment

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	
Comm	ent						

Minor shrinkage crack up to 0.8m and 1.5m in length on the deck soffit.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

Load-	-bearing Substructure							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
8	Foundations	1	Α	0				
_								

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or

# **Remedial Works**

**Element Name** 

[none]

No

	Element Name		-^-	20.000			COSC EIK
11	Columns (1-6)	1	Α	0			
Comm	ent						
Overal	, all columns were in good condition throughout. No visible defects noted						
Remed	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			

Defect

Fyt

В

1.1

Works

Priority

Cost fk

## Comment

Overall, no visible defects

# **Remedial Works**

Durahility Flamont

[none]

Durat	onity Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			
Comn	nent						
dampr	ondition of the waterproofing was not visible for inspection. However, there was ness on the deck soffit. Idial Works	s no signs of w	ater se	epage or			
[none]	1						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k

## Comment

19

Minor iron pyrite staining on the deck soffit.

Finishes: deck elements

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



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Ext

Defect

0

Works

**Priority** 

Cost £k

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	1	Α	0			
Comm	nent						
Overal	l, no visible defects						
Reme	dial Works						
[none]							

Commont

No

21

Overall, no visible defects

**Element Name** 

Finishes: parapets/safety fences

**Remedial Works** 

Inspection Type: Structure Name:

[none]

Safet	Safety Elements										
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
23	Handrail/parapets/safety fences	3	С	2.2	☑	М	0.5				
Comr	ment										

Spalling exposing the reinforcement on South parapet coping and external face at North, measuring 50x920x55mm at Ch.141.2m, 30x200x80mm at Ch.145m on South parapet and 200x1000x30mm on North.

**Remedial Works** 

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

Comment

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

Refer to span #16 photograph

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			
Comm	nent						

Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #16 photograph

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	С	3.5		L	

## Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.149m and Ch.150m

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



Structure Name: Broadmead Road Viaduct Identifier:

Span 20

**Deck Elements** 

**Inspection Type:** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	С	2.2		М	0.5

Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 250x700x50mm and and 200x200x20mm. Also, multiple spalling areas exposing the reinforcement on the deck soffit, measuring 350x250x30mm, 1100x900x45mm and 300x450x45mm

Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

 No
 Element Name
 Sev
 Ext
 Defect
 Works
 Priority
 Cost £k

 1
 Primary Deck Element
 2
 C
 2.3
 □
 L

Comment

Multiple minor shrinkage crack up to 0.6m, 1.2m and 2.6m in length noted on the deck soffit.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
1	Primary Deck Element	2	В	1.1		L			
Comm	ent								
Minor surface corrosion noted on the holding down bolts and plate									
MOTITO	r defect during next schedule inspection								
Reme	dial Works								

Load-	-bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

Comment

[none]

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	4	Е	2.2	$\square$	Н	4

Comment

C1-C3

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	4	D	2.2		М	1.5

Comment

C4-C6

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm, 900x130x30mm and 900x130x30mm.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

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No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	4	С	2.2	$\square$	М	1.5

#### Comment

There were multiple areas of severe spalling exposing the reinforcement on the cross heads between C1-C5, measuring 480x170x30mm, full width x 310x40mm, 1000x250x35mm and 480x330x25mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

Durab	pility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
15	Superstructure Drainage	4	Е	8.1		М	0.4

## Comment

The gully on Eastbound and Westbound carriageway were completely blocked with fallen leaves and trapped debris. Refer to span #15 photograph for a typical representation

## **Remedial Works**

Clear blocked carriageway gully under cyclic maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

### Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion Joints	3	С	10.3		М	2.5

## Comment

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

## **Remedial Works**

Replace the existing expansion joints on Westbound carriageway

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			
Comm	ent						
No visi	ble defects						
Remed	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k

П

L

Deignity

D

# Comment

20

Significant seepage staining on cross heads and columns

Finishes: substructure elements

Monitor defect during next schedule inspection

Element Name

# **Remedial Works**

[none]

NO	Element Name	Sev	EXT	Derect	WOLKS	Priority	COST EK	
20	Finishes: substructure elements	2	В			L	0.1	
Comme	ent							
Non-off	ensive graffiti noted on east face between C3 and C4.							
Remed	ial Works							
Remove	graffiti from cross head under routine maintenance							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
21	Finishes: paranets/safety fences	2	D	4.1		L		

## Commont

Multiple areas of loss of galvanized protection leading to surface corrosion on both North and South parapet post.

## **Remedial Works**

See Element 23 for remedial works.

# **Safety Elements**

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No Element Name

Sev Ext Defect Works Priority Cost £k

23 Handrail/parapets/safety fences

3 B 2.2 ✓ M 0.5

## Comment

There were multiple spalling exposing the reinforcement on South parapet coping, post, internal and external face, measured 90x340x50mm, 50x160x90mm, 150x180x15mm and 160x170x130mm at Ch.152m. Also, 100x50x30mm minor spalling noted on North parapet post at Ch.155m

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

#### Comment

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

Refer to span #16 photograph

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			

#### Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #16 photograph

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
25	Footway/yerge/footbridge surfacing	1	Α					

## Comment

Overall, appears in good condition

# **Remedial Works**

[none]

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Span	21
------	----

**Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	4	D	2.2	$\square$	Н	5

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit throughout, the worse areas measured 700x350x25mm, 600x300x30mm, 900x900x30mm, 1700x1300x40mm, 300x350x40mm, 650x600x50mm, 300x250x30mm, 2620x2600x50mm, 700x400x30mm, 1000x600x40mm, 1000x700x40mm and 650x450x30mm

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (East of Span)	4	С	2.2	$\square$	M	1

## Comment

C1-C3

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout, measuring 600mm  $\times$  full width  $\times$  45mm, 1560 $\times$ 360 $\times$ 50mm, 1100 $\times$ 200 $\times$ 50mm, 760 $\times$ 370 $\times$ 40mm and 660 $\times$ 100 $\times$ 50mm.

#### Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (East of Span)	4	D	2.2	$   \overline{\checkmark} $	Н	2	

## Comment

C4-C6

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 1600x150x30mm,  $550mm \times full$  width  $\times 45mm$ , 730x100x30mm,  $1800mm \times full$  width  $\times 60mm$ , 700x100x25mm and 1000x150x35mm

# **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (West of Span)	3	В	2.2	☑	М	0.5

## Comment

There were spalling with exposed reinforcement on the column support, measured approximately 520x130x25mm and  $500mm \times full$  height  $\times 30mm$ .

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Trestle (additional strengthening)	1	Α	0				

## Comment

Overall, it was in good condition. No visible defects

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	В	2.2	$\overline{\checkmark}$	М	0.35

## Comment

There was 2No.areas of spalling exposing the reinforcement on the cross head between columns (C1-C4), measuring 430x150x50mm and 300x300x30mm

## Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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		_					
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	С	2.2		M	0.5

## Comment

There were multiple spalling exposing the reinforcement on the Eastern face of cross head, measured 350x200x30mm, 500x400x30mm, 400x300x40mm and 350x200x40mm

# **Remedial Works**

[none]

Dural	pility Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
17	Waterproofing	1	Α	0					
Comment									
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or								
dampi	dampness on the deck soffit.								
D	dial Moules								

#### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	1	Α	0				

### Comment

No visible defects

# **Remedial Works**

**Element Name** 

[none]

No

20	Finishes: substructure elements	1	Α	0							
Comm	ent										
Overal	, no visible defects										
Reme	Remedial Works										
[none]											
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
21	Finishes: parapets/safety fences	2	D			L	0.4				

Defect

Works

Priority

Cost £k

## Comment

There was non-offensive graffiti noted on both RC parapet wall, at Ch.159.3m on South parapet. This is due to vandalism

# **Remedial Works**

Remove the non-offensive graffiti on both RC parapet walls under routine maintenance

Safet	y Elements								
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
23	Handrail/parapets/safety fences	2	В	2.2		L	0.15		
Comn	nent								
There was minor spalling on South RC parapet wall and post, measured 100x100x50mm									
Remedial Works									
Undertake patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
23	Handrail/parapets/safety fences	3	D	3.2		М	2.5		
C	mont								
Comn	nent								

# Remedial Works

Rake out areas of defective mortar and repair using an approved cementitious material

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	3	В	13.1	$\square$	L	0.15	
Comn	nent							
Isolate	Isolated area of minor impact damage noted on the South parapet vertical infill at East end							
Reme	dial Works							
Repair	/ replace damaged parapet infill							

 Report Status:
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 Submitted Date:
 13/11/2024

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 Print Date:
 14/11/2024



Structure Name: Broadmead Road Viaduct Identifier: B

No Element Name Sev Ext Defect Works Priority Cost £k

П

0

24 Carriageway surfacing Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	С	9.6		L	

Comment

There were uneven paving slabs on the Northern footway surfacing, up to 3-4mm.

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



Works

V

**Priority** 

Cost £k

5

Snan 2	2

Deck E	lements			
No	<b>Element Name</b>	Sev	Ext	Defect

1	Primary Deck Element	4	D	2.2	$\square$
Comm	ent				
There v	were multiple areas of spalling exposing the severely corroded reinforcement on the de-	ock soff	it through	nout worse	

areas measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm, 2400x1120x60mm, 1200x600x45mm, 1400x1300x45mm and 1500x800x45mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			
Comn	nent						

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	3	С	2.2		М	0.5

## Comment

There were multiple areas of spalling exposing the corroded reinforcement at the bottom and the top of C6 south face and on the column concrete plinth/ upstand throughout, measuring 2No. of 400x250x20mm, 600x200x20mm, 670x90x15mm and 500x450x15mm.

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			
Comm	ent						
Overal	l, no visible defects noted						
Reme	dial Works						

Dura	bility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

# Comment

[none]

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	2	D			L		
Comn	ent							
Dirty a	nd weathering staining noted throughout. Refer to element #1 photograph							
Monito	r defect during next schedule inspection							

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
20	Finishes: substructure elements	1	Α	0				

Overall, no visible defects noted

# **Remedial Works**

[none]



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	D		☑	L	0.2

### Comment

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.167.1m

## **Remedial Works**

Remove graffiti from RC parapet wall

Safety	y Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	2	В	2.2	☑	L	0.2

## Comment

There was minor spalling on South RC parapet wall, measured 100x100x50mm. Refer to span #21 photograph

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	3	В	13.1	☑	L	
_							

#### Comment

Isolated area of minor impact damage noted on the South parapet vertical infill at East end. Refer to span #21 for photograph

# **Remedial Works**

Repair damage to south parapet infill

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

## Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #21 for photograph

## **Remedial Works**

[none]

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	1	Α				
Comn	nent						
Overa	II, appears in good condition.						
Reme	dial Works						



Structure Name:

Span	23							
Deck	Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Element	3	D	2.2		М	3	

#### Comment

There were multiple areas of spalling exposing the corroded reinforcement on the deck soffit throughout, the worst areas measured 1000x700x45mm, 1500x1300x60mm, 900x800x50mm, 650x750x50mm, 750x650x50mm, 350x300x40mm, 800x800x40mm, 800x800x50mm and 1100x800x40mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			
Comn	nent						
The fo sliding	undations were not visible for inspection, however there were no signs of distress ${\bf s}$ .	uch as se	ttlemen	t, rotation o	r		

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (1-6)	3	D	2.2	$\overline{\checkmark}$	M	1.3	

## Comment

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C1-C3 North and South face, 700x80x45mm, 1200x200x45mm, 870x170x35mm, 1400x200x40mm, 700x200x30mm and 1000x150x30mm

#### Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	В	2.2	$\square$	М	0.3

There were multiple areas of spalling exposing the reinforcement on the cross head underside throughout the whole length, the worst areas measured 450x280x40mm, 800x300x40mm and 300x300x20mm between C4-C6.

# **Remedial Works**

Refer to element #1 for remedial works recommendation

Durab	ility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
15	Superstructure Drainage	1	Α	0			

Overall, no visible defects. Refer to cross head photograph

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

# Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

# **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
18	Movement/expansion Joints	3	В	10.1		М	1	

# Comment

There was loss of road surface adjacent to joint on Westbound carriageway. This is consistent with 2023 GI

# **Remedial Works**

Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair on Eastbound expansion joint

**Submitted Date:** 13/11/2024 **Report Status:** Approved **Submission Count:** 14/11/2024 **Print Date:** 



 Inspection Type:
 Principal Inspection Report
 Inspection Date:
 14/11/2023

 Structure Name:
 Broadmead Road Viaduct
 Identifier:
 B4

Structure Name: Broadmead Road Viaduct Identifier: B

No Element Name Sev Ext Defect Works Priority Cost £k

3

С

10.3

N

2.5

## Comment

18

Longstanding tracking and flow of binder noted on Westbound carriageway joint leading to extensive leakage onto the elements below

#### **Remedial Works**

Replace the existing expansion joints on Westbound carriageway

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	2	С			L		

## Comment

Dirty and weathering staining noted throughout. Refer to element #1 photograph

Monitor defect during next schedule inspection

Movement/expansion Joints

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	С			L	

## Comment

Minor seepage staining noted on the cross heads. This is due to water seepage through the carriageway expansion joint. Refer to cross head photograph

Monitor defect during next schedule inspection

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
21	Finishes: parapets/safety fences	2	D		$\overline{\checkmark}$	L		

### Comment

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.171m

## **Remedial Works**

Remove graffiti from RC parapet wall

Safet	y Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	2	В	2.2	$\square$	L		
Comment								
There	There was 50x150x75mm spalling exposing the reinforcement on South RC parapet wall at Ch. 171m.							

There was 50x150x75mm spalling exposing the reinforcement on South RC parapet wall at Ch.171m.

# **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Handrail/parapets/safety fences	3	С	3.2		М	2	

## Comment

Isolated area of joint mortar loss along the bottom of Southern RC wall at Ch.175.7m and Northern RC parapet wall at Ch.165.3m to 168m

Monitor defect during next schedule inspection

# Remedial Works

**Remedial Works** 

Rake out areas of defective mortar and repair using an approved cementitious material

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	3	В	13.1	$\square$	L	0.3	
Comment								
Isolated area of minor impact damage noted on the South parapet vertical infill at East end. Refer to span #21 for								
photograph								

Repair damage to south parapet infill

 Report Status:
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 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
 14/11/2024



Principal Inspection Report 14/11/2023 **Inspection Type: Inspection Date:** 

No Elen	nent Name	Sev	Ext	Defect	Works	Priority	Cost £k	
Structure Nan					Ident	ifier:		В4

0

## Carriageway surfacing Comment

24

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #21 for photograph

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	

## Comment

There was cracked paving slabs on the Southern footway surfacing at  ${\rm Ch.181m}$ 

Monitor defect during next schedule inspection

**Remedial Works** 

[none]

13/11/2024 Report Status: Approved **Submitted Date: Submission Count: Print Date:** 14/11/2024



Span 24

Deck	Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Deck Flement	4	C	2.2	$\square$	Н	1.5	

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

### Comment

Minor shrinkage crack up to 3.5m in length noted on the deck soffit.

### **Remedial Works**

Monitor defect during next schedule inspection

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (East of Span)	4	D	2.2	$\square$	Н	4

### Comment

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C2-C4, 1900x120x30mm, 3560x300x40mm, 1200x150x50mm, 1200x250x50mm, 3200x400x25mm and 3400x80x35mm.

### **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
11	Columns (West of Span)	1	Α	0				

## Comment

Overall, all columns were in good condition. No visible defects

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	3	С	2.2	$\square$	М	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C1-C3, measuring 300x485x15mm, full width x1100x20mm and full width x700x20mm

## Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	2	В	2.3		L	

## Comment

Minor full height shrinkage noted on cross heads between C2 and C3. Note: Crack associated with leachate. All other cross heads were in good condition

### **Remedial Works**

Monitor defect during next schedule inspection

## **Durability Elements**



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
15	Superstructure Drainage	1	Α	0			
Comm	ent						
Overall	, no visible defects						
Remed	lial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k

0

## Comment

17

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

### **Remedial Works**

Waterproofing

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			
Comn	nent						
Overa	II, no visible defects						
Reme	dial Works						

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	С			L	0.15

### Comment

There was non-offensive graffiti within public view of column C4. This is due to vandalism

### **Remedial Works**

Remove graffiti from the column under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
21	Finishes: parapets/safety fences	2	D		$\square$	L	0.3		
Comment									
There v	There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.185.7m. This is due to vandalism								

# **Remedial Works**

Remove graffiti from RC parapet walls

Safet	y Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	2	В	2.2		L	

# Comment

There was minor spalling on South RC parapet wall and post, measured 100x100x50mm and 220x70x45mm. Refer to span #21 photograph

## **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
23	Steel Parapets (North and South)	1	Α	0							
Comm	Comment										
Overall, both North and South steel parapet appears in good condition. No visible defects noted.											
Remed	lial Works										
[none]											

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

### Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

# **Remedial Works**

[none]

Report Status: Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



Structure Name: Broadmead Road Viaduct Identifier: B

No Element Name Sev Ext Defect Works Priority Cost £k

2

D

5.2

П

25 Footway/verge/footbridge surfacing Comment

There was vegetation growth and debris accumulation on both footway surfacing at interface with RC parapet.

Monitor defect during next schedule inspection

Remedial Works

[none]

NoElement NameSevExtDefectWorksPriorityCost £k25Footway/verge/footbridge surfacing2B3.5□L

Comment

There was cracked paving slabs on the Southern footway surfacing at  ${\rm Ch.185m}$ 

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



Inspection Date: 14/11/2023
Identifier: B4

Span 25

**Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	С	2.2		Н	1

### Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

### Comment

Minor shrinkage crack up to 1mm and 1.3m in length noted on the deck soffit.

### **Remedial Works**

Monitor defect during next schedule inspection

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
1	Primary Deck Element	2	D	1.1		L				
Comm	Comment									
Minor surface corrosion noted on the holding down bolts and plate										

Remedial Works

Monitor defect during next schedule inspection

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding.

## **Remedial Works**

**Element Name** 

[none]

No

11	Columns (1-6)	1	Α	0			
Comm	ent						
Overal	, all columns were in good condition. No visible defects						
Reme	dial Works						
[none]							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k

**Defect** 

2.3

Works

**Priority** 

Cost £k

### Comment

[none]

12

Minor full height shrinkage cracks noted on cross head between C2 and C3. All other cross heads were in good condition

### **Remedial Works**

Monitor defect during next schedule inspection

Cross head/capping beam

Durability Elements											
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
17	Waterproofing	1	Α	0							
Comment											
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or										
dampness on the deck soffit.											
Reme	edial Works										



0

П

Structure Name: Broadmead Road Viaduct Identifier: B

No Element Name Sev Ext Defect Works Priority Cost £k

Comment

Overall, no visible defects

Finishes: deck elements

**Remedial Works** 

[none]

19

NoElement NameSevExtDefectWorksPriorityCost £k20Finishes: substructure elements2EI0.5

Comment

There was widespread of non-offensive graffiti on the columns throughout. This is due to vandalism. Refer to span #26 photograph

**Remedial Works** 

Remove non-offensive graffiti from the columns under routine maintenance

Comment

Minor dirt staining noted.

Monitor defect during next schedule inspection

**Remedial Works** 

Remove non-offensive graffiti under routine maintenance

Safety Elements										
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
23	Handrail/parapets/safety fences	3	В	2.2	☑	М	0.2			
Comn	Comment									
There was isolated spalling exposing the reinforcement on the Northern RC parapet wall, measured 140x300xx15mm,										

There was isolated spalling exposing the reinforcement on the Northern RC parapet wall, measured 140x300xx15mm, 220x70x45mm and 70x230xx60mm at Ch.192m.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

Comment

Overall, both North and South steel parapet appears in good condition. No visible defects noted. Refer to span #24 photograph

Remedial Works

[none]

NoElement NameSevExtDefectWorksPriorityCost £k24Carriageway surfacing1A0□

Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted. Refer to span #24 for photograph

Remedial Works

[none]

No Element Name

Sev Ext Defect Works Priority Cost £k

25 Footway/verge/footbridge surfacing

1 A

Comment

No visible defects on footway surfacing

Remedial Works

[none]



Span 26

Inspection Type: Structure Name:

**Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	3	В	2.2		M	0.25

### Comment

Isolated area of spalling exposing the reinforcement on external face at North end and on the deck soffit, measuring 300x300x25mm and 400x300x25mm.

### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

### Comment

Multiple shrinkage cracks noted on the deck soffit, length varies from 0.6m, 0.7m, 1.1m and 1.3m.

### **Remedial Works**

Monitor defect during next schedule inspection

Load-	bearing Substructure									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
8	Foundations	1	Α	0						
Comr	Comment									
The fo	The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or									
sliding	sliding.									

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	3	В	2.2		М	0.2

### Comment

There was an isolated area of spalling exposing the reinforcement on C2 west face, measuring 140x140x20mm. All other columns were in good condition.

### Remedial Works

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	2	В	2.3		L	

### Comment

Minor full height shrinkage crack noted on cross head between C4 and C5. All other cross heads were in good condition.

Monitor during next schedule inspection

## **Remedial Works**

[none]

Dural	bility Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
17	Waterproofing	1	Α	0			

### Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	1	Α	0				
Comn	Comment							
Overall, no visible defect								
Remedial Works								
[none								

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No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
20	Finishes: substructure elements	2	С		abla	L	0.5	

### Comment

There was isolated area of non-offensive graffiti on the columns. This is due to vandalism. Refer to column photograph

### **Remedial Works**

Remove non-offensive graffiti from the columns under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k		
21	Finishes: parapets/safety fences	2	С			L			
Comm	Comment								
Minor o	lirt staining noted.								
	r defect during next schedule inspection								
[none]									

Safet	y Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Handrail/parapets/safety fences	2	В	2.2		L	
_	_						

### Comment

There was minor spalling on the Northern parapet coping external face.

Monitor defect during next schedule inspection

**Element Name** 

## **Remedial Works**

[none]

No

23	Steel Parapets (North and South)	1	Α	0	,
Comm	ent				
photog	, both North and South steel parapet appears in good condition. No visible defects no raph <b>dial Works</b>	ted. Re	fer to spa	n #24	
[none]					

Sev Ext Defect Works

Priority

Cost £k

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
24	Carriageway surfacing	1	Α	0				

## Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
25	Footway/verge/footbridge surfacing	2	В	3.5		L				
Comment										
There was cracked paving slabs on the Southern footway surfacing at Ch.199m										
Monito	r defect during next schedule inspection									

Monitor defect during next schedule inspection
Remedial Works
[none]



Inspection Type: **Structure Name:** Span 27

Deck	Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary Dock Floment	3	В	2.2	☑	М	0.25	

### Comment

There was isolated area of spalling exposing the reinforcement along the edge of deck soffit at North end, measuring 450x200x40mm and 300x200x35mm.

### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	2	В	2.3		L	

Multiple shrinkage cracks noted on the deck soffit, length varies from 1.3m, 2.3m and 4.3m.

Monitor defect during next schedule inspection

Load-bearing Substructure										
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
8	Foundations	1	Α	0						

### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	2	В	2.2	$\square$	L	0.15

Isolated area of spalling on the C4 west face, measuring 90x70x10mm.

### **Remedial Works**

Undertake patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
12	Cross head/capping beam	1	Α	0			

### Comment

Overall, no visible defect. Refer to element #1 photograph

## **Remedial Works**

[none]

Durability Elements										
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
17	Waterproofing	1	Α	0						
Comment										
The co	The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or									

dampness on the deck soffit.

## **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
19	Finishes: deck elements	1	Α	0				

### Comment

Overall, no visible defect

### **Remedial Works**

[none]

Report Status: Approved **Submitted Date:** 13/11/2024 **Submission Count:** 14/11/2024 **Print Date:** 



14/11/2023

Structur	e Name: Broadmeda Roda vladact				Idelit	illei.		
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
20	Finishes: substructure elements	2	Е		$\square$	L	0.5	

### Comment

There was widespread of non-offensive graffiti on the columns and cross heads throughout. This is due to vandalism.

Refer to element #1 photograph

### **Remedial Works**

Remove non-offensive graffiti from the columns under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
21	Finishes: parapets/safety fences	2	С		$\square$	L		

### Comment

Non-offensive graffiti noted on the Southern RC parapet wall at Ch.203m. This is due to vandalism.

### **Remedial Works**

Remove non-offensive graffiti from RC parapet wall

Safety	/ Elements										
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
23	Handrail/parapets/safety fences	2	В	2.2		L					
Comm	ent										
There	was minor spalling on the Northern parapet coping external face.										
Monitor defect during next schedule inspection  Remedial Works											
[none]											
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
23	Steel Parapets (North and South)	1	Α	0							

### Comment

Overall, both North and South steel parapet appears in good condition. No visible defects noted. Refer to span #24 photograph

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
24	Carriageway surfacing	1	Α	0						
Comn	Comment									
Overa	ll, both Eastbound and Westbound carriageway surfacing appears in good condition.	No visib	le defec	ts noted.						
_	P 1 mr 1									

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	С	3.5		L	

### Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.202m and Ch.206m

Monitor defect during next schedule inspection

## **Remedial Works**

[none]



Structure Name:
Span 28

**Inspection Type:** 

Deck	Elements	

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary Deck Element	4	С	2.2	$\overline{\mathbf{A}}$	Н	2

### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Load-	bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

### Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or sliding

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Columns (1-6)	3	С	2.2		M	0.7

### Comment

There were multiple areas of spalling exposing the reinforcement on the cross head between C3-C4, measuring 630x150x50mm, 260x100x50mm and 630x630x50mm. All other columns were in good condition

### **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
12	Cross head/capping beam	3	С	2.2		М	1	

### Comment

There were multiple areas of spalling exposing the reinforcement on the cross head between C1-C4, measurin140x400x35mm, 200x300x30mm, full width x2105x55mm and full widthx460x40mm.

### **Remedial Works**

**Durability Elements** 

Refer to element #1 for remedial works recommendation

Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
Superstructure Drainage	1	Α	0			
ent						
ble blockage noted. Refer to element #1 photograph						
dial Works						
Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
Waterproofing	1	Α	0			
ı	Element Name Superstructure Drainage sent ble blockage noted. Refer to element #1 photograph dial Works  Element Name	Element Name Superstructure Drainage 1 tent ble blockage noted. Refer to element #1 photograph dial Works Element Name Sev	Element Name Superstructure Drainage 1 A stent ble blockage noted. Refer to element #1 photograph dial Works  Element Name Sev Ext	Sev Ext Defect Superstructure Drainage 1 A 0  sent ble blockage noted. Refer to element #1 photograph dial Works  Element Name Sev Ext Defect	Element Name Superstructure Drainage 1 A 0 □  Intent ble blockage noted. Refer to element #1 photograph dial Works  Element Name Sev Ext Defect Works	Element Name Superstructure Drainage 1 A 0 □  superstructure Drainage 1 A Defect Works Priority  lent ble blockage noted. Refer to element #1 photograph dial Works  Element Name Sev Ext Defect Works Priority

## Comment

The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.

## Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
18	Movement/expansion Joints	3	С	10.1		M	4

### Comment

There was longstanding moderate tracking and flow of binder on both eastbound and westbound carriageway surfacing leading to extensive water leakage onto the elements below. This is consistent with 2023 GI.

### Remedial Works

Replace the existing asphalt plug joint at both ends

 Report Status:
 Approved
 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
 14/11/2024



14/11/2023

0

П

No **Element Name** Ext Defect Works Priority Cost £k

Comment

19

Overall, no visible defects. Refer to element #1 photograph

Finishes: deck elements

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	Е		Ø	L	1

Comment

There was widespread of non-offensive graffiti on the columns and cross heads throughout. This is due to vandalism.

**Remedial Works** 

Remove non-offensive graffiti from the columns under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
21	Finishes: naranets/safety fences	2	С			L		

Comment

Minor dirt staining noted.

Monitor defect during next schedule inspection

Remedial Works

[none]

Safet	y Elements									
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k			
23	Handrail/parapets/safety fences	3	В	2.2		L				
Comment										
There	There was isolated area of spalling exposing the reinforcement on South parapet coping at Ch.207.8m, measured									
E0v24	0v40mm and E0v200v60mm on the North paranet coping at Ch 200 4m									

50x240x40mm and 50x280x60mm on the North parapet coping at Ch.209.4m.

**Remedial Works** 

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
23	Steel Parapets (North and South)	1	Α	0				

Comment

Overall, both North and South steel parapet appears in good condition. No visible defects noted. Refer to span #24 photograph

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
24	Carriageway surfacing	1	Α	0			

Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	С	3.5		L	

### Comment

There were cracked paving slabs on the Southern footway surfacing at Ch.209m and Ch.213m

Monitor defect during next schedule inspection

**Remedial Works** 

[none]



14/11/2023 Inspection Type: Structure Name: Identifier:

Approach Ramp - West

**Deck Elements** 

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #1)	3	В	2.2	☑	L	0.4

Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 225x225x25mm, 50x50x15mm, 70x50x20mm and 200x50x15mm.

Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #2)	3	С	2.2		М	0.7

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit. The worst areas measured 800x800x35mm, 400x600x30mm and 400x400x20mm.

### **Remedial Works**

Refer to element #1 above for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #3)	3	С	2.2	$\square$	М	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 800x800x35mm, 400x600x30mm and and 400x400x20mm.

### Remedial Works

Refer to element #1 above for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
1	Primary deck element (Room #4)	3	В	2.2	$   \overline{\checkmark} $	L	0.3

There was isolated area of spalling exposing the reinforcement on the deck soffit, measuring 1700x200x10mm.

### Remedial Works

Refer to element #1 above for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
1	Primary deck element (Room #5)	1	Α	0				
Comm	ent							

Overall, room #5 deck soffit appears in good condition. No visible defects recorded during the inspection

## **Remedial Works**

[none]

Load	-bearing Substructure						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
8	Foundations	1	Α	0			

## Comment

The foundations were not visible for inspection, however there were no signs of distress such as settlement, rotation or

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
9	Abutments (inc arch springing)	1	Α	0			

## Comment

Overall, the abutment wall appeared in good condition. No visible defects recorded. Refer to room #4 and #5 for general

## **Remedial Works**

[none]

**Submitted Date:** 13/11/2024 **Report Status:** Approved Submission Count: 14/11/2024 **Print Date:** 



No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Western support wall	4	D	2.1		Н	5

### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

### **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Northern pier wall	3	В	2.2	☑	L	0.2

### Comment

There was an isolated area of spalling area exposing the reinforcement on the Northern pier wall, measuring 110x60x10mm, 1300x600x10mm and 190x190x30mm. Noted in room #1 and #5.

### **Remedial Works**

Refer to element #1 for remedial works recommendation

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
11	Southern pier wall	3	В	2.2		L	0.35

### Comment

Isolated area of spalling exposing the reinforcement at bottom of pier, measuring 280x750x30mm and 200x550x40mm. Noted in room #3 and #5

### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Durability Elements											
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k				
17	Waterproofing	1	Α	0							
Comm	Comment										
The condition of the waterproofing was not visible for inspection. However, there was no signs of water seepage or dampness on the deck soffit.											
Dome	dial Works										

**Remedial Works** 

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
19	Finishes: deck elements	1	Α	0			

### Comment

Overall, no visible defects

# Remedial Works

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
20	Finishes: substructure elements	2	D		$\square$	L	1

### Comment

There were areas of widespread non-offensive graffiti on both piers and abutment wall in room #3. This is due to vandalism.

## **Remedial Works**

Remove graffiti from room #3 under routine maintenance

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
21	Finishes: parapets/safety fences	2	С			L	0.3

## Comment

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.214.3m. This is due to vandalism

# Remedial Works

[none]

## **Safety Elements**



3

В

2.2

M

0.3

Structure Name: Broadmead Road Viaduct Identifier: I

No Element Name Sev Ext Defect Works Priority Cost £k

### Comment

23

There was 2No. areas of spalling exposing the reinforcement on the Southern parapet coping external face and 2No. on internal face, measured 80x270x40mm at Ch.214.3m and 50x550x40mm at Ch.222.3m

### **Remedial Works**

Handrail/parapets/safety fences

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
23	Steel Parapets (North and South)	1	Α	0			

### Comment

Overall, both North and South steel parapet appears in good condition. No visible defects noted.

### **Remedial Works**

[none]

No El	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
<b>24</b> Ca	Carriageway surfacing	1	Α	0			

### Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

### **Remedial Works**

[none]

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
25	Footway/verge/footbridge surfacing	2	В	3.5		L	

### Comment

There were minor cracked paving slab on the Southern footway at Ch.218m.

Monitor defects during next schedule inspection

### **Remedial Works**

[none]

Other	bridge Elements						
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
33	Embankments	1	Α	0			
Comm	ent						
No visi	ble defects at both ends						
Reme	dial Works						
[none]							

Ancilla	ry Elements							
No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
39	North and South access doors	2	Е	1.1		L		

### Comment

There was surface corrosion on the Northern access door.

### **Remedial Works**

Monitor defect during next schedule inspection

Flement Name

	Element Nume	500	LAC	Deicee	WOIKS	1 1101111	COSC ZK
39	Airbrick	3	В		$\square$	L	0.3
Comme	ent						
There w	as a missing airbrick on the Northern infill blockwork wall.						
Remed	ial Works						
Replace	missing airbrick						

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k
39	Infill blockwork wall	2	С		$\square$	L	0.3

## Comment

Moderate non-offensive graffiti on the Northern blockwork wall. This is due to vandalism

## **Remedial Works**

Remove graffiti under routine maintenance

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Driority

Works

14/11/2023 Inspection Type: Principal Inspection Report **Inspection Date:** 

Structi	ire Name:	Broadmead Road Viaduct				Ident	tifier:		В4
No	Element Na	ime	Sev	Ext	Defect	Works	Priority	Cost £k	
39	Infill blockwo	ork wall	2	В	2.2		L	0.1	

### Comment

There was an isolated area of spalling exposing the reinforcement on the North blockwork wall, measuring 100x100x15mm.

## **Remedial Works**

Undertake patch repair with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

No	Element Name	Sev	Ext	Defect	Works	Priority	Cost £k	
39	Infill blockwork wall	2	В	2.3		L		

Minor 1mm vertical shrinkage crack on the Southern infill blockwork wall.

### **Remedial Works**

Monitor defect during next schedule inspection



### **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

The structure overall is in VERY POOR condition with a BCI average score of 82.03 (previously GI 2023/03/22 average score: 83.54) and the BCI critical score of 9.72 previously GI 2023/03/22 critical score: 22.12). The BCI Crit. scores have changed due to significant defects recorded during the Principal/Special Inspection and BCI Ave. have slightly reduced.

The superstructure and substructure elements were found to be in poor condition with significant areas of spalling exposing the underlying reinforcement on multiple spans along the whole length, The worst areas noted on the columns were below the defective carriageway expansion joints due to significant seepage through the joints causing damage to the spans over the Railway tracks. As mentioned in the previous 2023 GI, it is likely that these defects (significant deep spalling exposing the reinforcement and cracks) have reduced the functionality (load carrying capacity) of the support columns and the main deck slab, therefore its recommended an assessment is undertaken to assess capacity of the structure under vehicle loading then carry out an appropriate repairs based on the findings.

The carriageway surfacing was in fair condition overall with minor to moderate defects recorded which should be addressed under cyclic maintenance.

The expansion joints on Eastbound and Westbound carriageway surfacing were in poor condition with debonding and cracks between the plug joint and road surface, also longstanding tracking and flow of the binder were noted.

The Northern and Southern RC parapet were in fair condition overall, with isolated areas in poor condition with spalling exposing the reinforcement mainly on the parapet coping and posts. The steel parapet were in fair condition with minor surface corrosion and moderate impact damage on the South parapet bottom rail and North parapet vertical infill.

Repairs throughout the structure should be undertaken in order to ensure the structure remains in serviceable. See works required section below for full details:

Inspector's Name: Mario Inacio

**Checker's Comments:** 

[none]

Checker's Name:

**Engineer's Comments:** 

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Enfield council were commissioned by Redbridge council to undertake a Principal Inspection which included a full hammer tap survey of the whole structure.

For the purposes of the inspection and report, the structure comprises of 28 spans which includes a pedestrian subway at the east end of the structure and an additional approach ramp at each end. Housed within the ramps are several chambers. At the time of the inspection the northside chambers within the east approach ramp was leased out by Redbridge council and therefore access was not granted for inspection.

The inspection was carried out over numerous shifts during day and night time hours. Engineering Hours night shifts were required at night to inspect the LUL spans of the structure.

Access was gained to the east side substructure elements via the car park and the access roads on the north and south side. Access to the substructure elements on the west side was gained through the allotment on the south side. Liaison with the allotment community was required and access keys were provided. Prior to the inspection, ground clearance was undertaken due to extensive fly tipping. There is no direct access to the substructure from the north side.

Traffic management was not required to inspect the carriageway and footway as the road was closed to all vehicular traffic.

Due to the magnitude of the structure, special access equipment was required to inspect the higher reaches of the structure to enable all the all elements of the structure were inspected within touching distance. The special access equipment used included a scissor lift, scaffold towers and ladders.

The west side chambers were classed to be a low risk confined space therefore these areas were inspected under confined space conditions using a confined space trained team. The east side chambers will also require a confined space trained team.

Based on the inspector comments, it is recommended to carry out concrete investigations and concrete testing throughout the structure to facilitate future assessments and determine the construction details and materials. It will also be prudent to expose around the base of the columns at several locations to determine the condition, bearing type and dimensions

The assessments are necessary and will help verify the following:

- 1. The load carrying capacity of the bridge if the as-built condition is restored.
- 2. The load carrying capacity of the bridge with the existing defects.
- 3. Future options report to look to re-open the vehicular traffic to the bridge.

The results of the concrete investigations and lab testing will determine key material issues with the structure and help facilitate the compilation of a feasibility study.

To safeguard the structure in its present condition it is recommended to:

- Undertake temporary concrete repairs to the areas of exposed reinforcement to provide weather protection.
- 2. Install half round PVC drainage channels below the deck joints to help discharge water penetrating through the joints away from the columns via a down pipe as a temporary measure.
- 3. Continue with bridge closure.

**Works Required:** 

Engineer's Name: Mani Karuppiah

Approa	ch Ramp - East			
1 Deck	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary deck element (Room #2)	Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.50
2 Load	bearing Substructure			
No	Element Name	Remedial Works	Priority	Cost £k
11	Southern pier wall	Refer to element above for remedial works recommendation	М	0.60
11	Northern pier wall	Refer to element above for remedial works recommendation	М	1.00
11	Eastern support wall	Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	1.00
3 Dural	bility Elements			
No	Element Name	Remedial Works	Priority	Cost £k
18	Movement/expansion joints	Replace the existing asphalt plug joint at both ends	М	10.00



ructure			Inspection Date: Identifier:	14/11/20
18	Movement/expansion joints	Undertake repairs to the defective areas of surfacing using an approved bituminous material.	М	
1 Safety	Elements	Cost included on element #18 above		
No	Element Name	Remedial Works	Priority	Cost £k
23	Steel Parapets (North and	Repair/ replace section of damaged parapet on both	M	1.50
23	South) Handrail/parapets/safety fences	parapets  Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to	М	2.00
24	Carriageway surfacing	the parent concrete. Break out the area of to the carriageway surfacing	М	1.50
24	Carriageway surfacing	and repair with a suitable mastic asphalt patch repair.  Seal the cracks through the surfacing using an	L	0.10
5 Ancilla	ary Elements	appropriate cementitous material		
No	Element Name	Remedial Works	Priority	Cost £k
39	North and South access door		L	1.00
39	Infill blockwork wall.	Refer to element #1 for remedial works recommendation	L	1.00
39	North and South access door	routine maintenance	L	0.30
39	Airbrick	Replace the missing airbrick on the Southern infill blockwork wall under routine maintenance.	L	0.30
Approac	h Ramp - West			
	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
l	Primary deck element (Room #4)		L	0.30
1	Primary deck element (Room #3)		М	0.50
L	Primary deck element (Room #2)		М	0.70
	Primary deck element (Room #1)	The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.40
Load-l	pearing Substructure			
lo	Element Name	Remedial Works	Priority	Cost £k
1	Northern pier wall	Refer to element #1 for remedial works recommendation	L	0.20
1	Western support wall	Refer to element #1 for remedial works recommendation	Н	5.00
11	Southern pier wall	The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.35
3 Durab	ility Elements			
No	Element Name	Remedial Works	Priority	Cost £k
20	Finishes: substructure elements	Remove graffiti from room #3 under routine maintenance	L	1.00
-	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Handrail/parapets/safety fences	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.30
5 Ancilla	ary Elements	,		
No	Element Name	Remedial Works	Priority	Cost £k
39	Infill blockwork wall	Remove graffiti under routine maintenance	L	0.30
39	Airbrick	Replace missing airbrick	L	0.30
eport St	atus: Approved		Submitted Date:	13/11/2

**Submission Count:** 

14/11/2024

Print Date:

rspection Type: tructure Name:	Principal Inspection Repor Broadmead Road Viaduct		Inspection Date: Identifier:	14/11/20
39 Infil	ll blockwork wall	Undertake patch repair with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.10
pan 01				
Deck Elements				
No Ele	ment Name	Remedial Works	Priority	Cost £k
L Prin	nary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	Н	2.00
Load-bearing S	Substructure	,		
No Ele	ment Name	Remedial Works	Priority	Cost £k
.1 Colu	umns (1-6) East of span	Refer to element #1 for remedial works recommendation	М	1.00
12 Cros	ss head/capping beam	Refer to element #1 for remedial works recommendation	М	1.00
B Durability Elen	nents			
No Ele	ment Name	Remedial Works	Priority	Cost £k
19 Fini:	shes: deck elements	Remove graffiti from the deck soffit under routine maintenance	L	0.10
19 Fini	shes: deck elements	Strip to defective area of paintwork and apply a proprietary protective paint system to the deck soffit	L	1.00
	shes: substructure ments	Remove graffiti from the column under routine maintenance	L	0.10
	shes: parapets/safety	Remove graffiti from the parapet post	L	0.10
4 Safety Elemen				
No Ele	ment Name	Remedial Works	Priority	Cost £k
23 Stee Sou	el Parapets (North and hth)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.	L	3.00
23 Han fend	ndrail/parapets/safety ces	Refer to element #1 for remedial works recommendation	М	1.00
	ndrail/parapets/safety	Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.30
Span 02				
1 Deck Elements				
	ment Name nary Deck Element	Remedial Works  The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	<b>Priority</b> H	3.00
4 Safety Elemen	ts			
	ment Name	Remedial Works	Priority	Cost £k
23 Stee Sou	el Parapets (North and ith)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North	L	
23 Han fend	ndrail/parapets/safety ces	parapet post. For cost refer to span #1 Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	
Span 03				
1 Deck Elements				
No Ele	ment Name	Remedial Works	Priority	Cost £k
. Prin	nary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	M	0.40
3 Durability Elen				
	ment Name	Remedial Works	Priority	Cost £k
	shes: deck elements	Remove graffiti under routine maintenance	L	0.15
4 Safety Elemen	ts ment Name	Remedial Works	Priority	Cost £k
No Ele	inche Manie			

Submission Count: 1
BridgeStation

Approved

Report Status:

14/11/2024

Submitted Date:

**Print Date:** 

13/11/2024

tructure	Name: Broadmead Road Viadu	ct	Tollow ASSISTAN	
ructure	Name: Broduilleau Rodu Viduu	Ct	Identifier:	
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North	L	
23	Handrail/parapets/safety fences	parapet post. For cost refer to span #1  The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.20
Span 04				
1 Deck E	lements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	0.50
2 Load-b	earing Substructure	ite/ea iii to the parent conditions.		
No	Element Name	Remedial Works	Priority	Cost £k
12	Cross head/capping beam	Refer to element #1 for remedial works recommendation	М	0.30
4 Safety	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.	L	
23	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	М	0.30
Span 05				
1 Deck E	lements			
<b>No</b> 1	<b>Element Name</b> Primary Deck Element	Remedial Works  The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	<b>Priority</b> M	<b>Cost £k</b> 0.50
2 Load-b	earing Substructure	Reyea in to the parent concrete.		
No	Element Name	Remedial Works	Priority	Cost £k
11	Column (3-4)	Refer to element $\#1$ for remedial works recommendation	н	1.50
11	Columns (1-2)	Refer to element #1 for remedial works recommendation	Н	1.50
12	Cross head/capping beam	Refer to element #1 for remedial works recommendation	М	0.35
3 Durabi	lity Elements			
No	Element Name	Remedial Works	Priority	Cost £k
15	Superstructure Drainage	Clear fully blocked carriageway gully under routine maintenance	М	0.30
18	Movement/expansion Joints	Undertake repairs to the defective areas of expansion joint using an approved bituminous material.	М	2.50
18	Movement/expansion Joints	Undertake repairs to the defective areas of expansion joint using an approved bituminous material.	М	2.50
-	Elements			
<b>No</b> 23	Element Name	Remedial Works	Priority 	Cost £k
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.	L	
23	Handrail/parapets/safety fences	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	1.00
Span 06				
1 Deck E	lements			
No	Element Name	Remedial Works	Priority	Cost £k



rspection tructure			Inspection Date: Identifier:	14/11/20
1	Primary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	н	2.00
2 Load-l	bearing Substructure			
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (East of Span)	Refer to element #1 for remedial works recommendation	М	0.50
11	Columns (East of Span)	Refer to element #1 for remedial works recommendation	М	1.00
12	Cross head/capping beam	Refer to element #1 for remedial works recommendation	М	0.50
4 Safety	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North	L	3.00
23	Handrail/parapets/safety	parapet post. Refer to element #1 for remedial works	М	0.40
23	fences Handrail/parapets/safety	recommendation Undertake crack repairs using an appropriate	М	0.30
24	fences Carriageway surfacing	cementitious material  Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.	М	0.50
C 07		repair with a saliable maste asphale pater repair.		
Span 07	Elements			
		Danie die I Warden		
No 1	Element Name	Remedial Works	Priority H	2.50
1	Primary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	"	2.30
2 Load-l	bearing Substructure	Reyed in to the parent conferen		
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	L	0.20
12	Cross head/capping beam	Refer to element #1 for remedial works recommendation	М	0.40
4 Safety	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North	L	
23	Handrail/parapets/safety	parapet post.  Refer to element #1 for remedial works recommendation	М	1.00
24	fences Carriageway surfacing	Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.	М	0.50
Span 08				
-	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently likewed in the parent controls.	М	0.70
2 Load-l	bearing Substructure	`keyed-in' to the parent concrete.		
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	М	0.25
3 Durab	ility Elements			
No	Element Name	Remedial Works	Priority	Cost £k
21	Finishes: parapets/safety fences	Remove graffiti from the North parapet wall	L	0.10
4 Safety	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.	L	
				40.000
eport St	atus: Approved		Submitted Date:	13/11/20

Submission Count:

**Print Date:** 14/11/2024

nspection Structure			Inspection Date:  Identifier:	14/11/2023 B4
23	Handrail/parapets/safety	Refer to element #1 for remedial works	L	0.30
24	fences Carriageway surfacing	recommendation  Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.	М	0.30
Span 09				
1 Deck E	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	н	1.30
	pearing Substructure	D 11 W 1		
No 11	Element Name Columns (1-6)	Remedial Works  Refer to element #1 for remedial works	Priority M	0.50
	Columns (1 0)	recommendation	1-1	0.50
-	Elements			
No	Element Name	Remedial Works	<b>Priority</b> L	Cost £k
23	Steel Parapets (North and South)	Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.	L	
23	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	М	0.50
24	Carriageway surfacing	Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.	М	0.50
Span 10				
1 Deck E	Elements			
<b>No</b> 1	Element Name Primary Deck Element	Remedial Works  The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently	<b>Priority</b> M	<b>Cost £k</b> 1.00
2 Load-b	pearing Substructure	'keyed-in' to the parent concrete.		
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	Н	1.50
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	Н	1.50
12	Cross head/capping beam	Refer to element #1 for remedial works recommendation	М	0.50
3 Durabi	ility Elements			
<b>No</b> 15	Element Name Superstructure Drainage	Remedial Works Clear fully blocked carriageway gully under routine maintenance	<b>Priority</b> M	Cost £k
18	Movement/expansion Joints	Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair	М	2.50
18	Movement/expansion Joints	Replace the existing expansion joints under cyclic maintenance	М	2.50
21	Finishes: parapets/safety fences	Remove non-offensive graffiti from the Northern RC wall	L	0.10
-	Elements	Dame diel Wester	<b>-</b>	
<b>No</b> 23	Element Name Steel Parapets (North and South)	Remedial Works  Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North	<b>Priority</b> L	<b>Cost £k</b> 0.30
23	Handrail/parapets/safety fences	parapet post.  Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	0.15
24	Carriageway surfacing	Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.	М	0.50
Cn=- 44				
Span 11 1 Deck F	Elements			
	Element Name	Remedial Works	Driority	Cost £k
No	Element Name	Velliculai AAOLV2	Priority	COSL EK



2 Load-bearing S No Elei 11 Colu 11 Colu 12 Cross 4 Safety Elemen No Elei 23 Han fenc 25 Foo surf  Span 12 1 Deck Elements No Elei 1 Prin  4 Safety Elemen No Elei 23 Han fenc 5 Poo Surf  Span 12 1 Deck Elements No Elei 1 Prin  4 Safety Elemen No Elei 23 Han fenc Span 13 1 Deck Elements No Elei Span 13	ment Name  umns (East of Span)  umns (East of Span)  ss head/capping beam  ts  ment Name  ndrail/parapets/safety ces tway/verge/footbridge facing  s  ment Name nary Deck Element  ts  ment Name ndrail/parapets/safety	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works  Refer to element #1 for remedial works recommendation  Remedial Works  Refer to element #1 for remedial works recommendation  Re-bed the uneven paving slabs on North footway.  Remedial Works  The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works  Refer to element #1 for remedial works	Priority H H M Priority M	Cost £k 1.00 1.50 1.00  Cost £k 0.20 2.00  Cost £k 0.30
No Eler 11 Colu 11 Colu 11 Colu 11 Colu 11 Colu 12 Cros 4 Safety Elemen No Eler 23 Ham fend 25 Foo surf  Span 12 1 Deck Elements No Eler 1 Prin 4 Safety Elemen No Eler 23 Ham fend 5 Ham fend 5 Ham fend 5 Ham fend 6 Ler 6 Ler 7 Ham 8 H	ment Name  umns (East of Span)  umns (East of Span)  ss head/capping beam  ts  ment Name  ndrail/parapets/safety ces tway/verge/footbridge facing  s  ment Name nary Deck Element  ts  ment Name ndrail/parapets/safety	Refer to element #1 for remedial works recommendation Refer to element #1 for remedial works recommendation Refer to element #1 for remedial works recommendation  Remedial Works Refer to element #1 for remedial works recommendation  Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	H H M Priority M	1.00 1.50 1.00  Cost £k 0.20 2.00
111 Colu 111 Colu 112 Cros  4 Safety Elemen No Elei 23 Han fenc 25 Foo surf  Span 12 1 Deck Elements No Elei 1 Prin  4 Safety Elemen No Elei 23 Han fenc Span 13 1 Deck Elements No Elei 23 Han fenc	umns (East of Span)  umns (East of Span)  ss head/capping beam  ts  ment Name  drail/parapets/safety  ces tway/verge/footbridge facing  s  ment Name  nary Deck Element  ts  ment Name  drail/parapets/safety	Refer to element #1 for remedial works recommendation Refer to element #1 for remedial works recommendation Refer to element #1 for remedial works recommendation  Remedial Works Refer to element #1 for remedial works recommendation  Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	H H M Priority M	1.00 1.50 1.00  Cost £k 0.20 2.00
11 Column 12 Cross 12 Cross 14 Safety Elemen 12 Cross 15 Footh surful 15 Cross 16 Cross 17 Cross 17 Cross 17 Cross 17 Cross 17 Cross 17 Cross 18 Cr	umns (East of Span) ss head/capping beam  ts  ment Name  drail/parapets/safety ces tway/verge/footbridge facing  s  ment Name mary Deck Element  ts  ment Name drail/parapets/safety	recommendation Refer to element #1 for remedial works recommendation Refer to element #1 for remedial works recommendation  Remedial Works Refer to element #1 for remedial works recommendation Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	H M Priority M Priority M	1.50 1.00 Cost £k 0.20 2.00
4 Safety Elemen No Elei 23 Han fenc 25 Foo surf  Span 12 1 Deck Elements No Elei 1 Prin  4 Safety Elemen No Elei 23 Han fenc Span 13 1 Deck Elements No Elei Span 13	ss head/capping beam  ts  ment Name  drail/parapets/safety  ces  tway/verge/footbridge facing  s  ment Name  nary Deck Element  ts  ment Name  drail/parapets/safety	recommendation Refer to element #1 for remedial works recommendation  Remedial Works Refer to element #1 for remedial works recommendation Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	Priority M  Priority M	1.00  Cost £k  0.20  2.00  Cost £k
4 Safety Elemen No Eler 23 Han fenc 25 Foo surf  Span 12 1 Deck Elements No Eler 1 Prin  4 Safety Elemen No Eler 23 Han fenc Span 13 1 Deck Elements No Eler	ment Name drail/parapets/safety drail/parapets/safety drail/parapets/safety drail/parapets/safety drail/parapets/safety	Remedial Works Refer to element #1 for remedial works recommendation Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	Priority  M  Priority  M	Cost £k 0.20 2.00
No Eler 23 Han fence 25 Foo surf  Span 12 1 Deck Elements No Eler 1 Prin  4 Safety Elemen No Eler 23 Han fence Span 13 1 Deck Elements No Eler Span 13	ment Name Indrail/parapets/safety Indrail/parapets/safety Indrail/parapets/safety Indrail/parapets/safety Indrail/parapets/safety Indrail/parapets/safety Indrail/parapets/safety	Refer to element #1 for remedial works recommendation Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	Priority M	0.20 2.00 <b>Cost £k</b>
23 Ham fence 25 Foo surf  Span 12  1 Deck Elements  No Element  4 Safety Elemen  No Element  23 Ham fence  Span 13  1 Deck Elements  No Element  Span 13  1 Deck Elements  No Element  Span 13	drail/parapets/safety ces tway/verge/footbridge facing  ment Name nary Deck Element  ts ment Name drail/parapets/safety	Refer to element #1 for remedial works recommendation Re-bed the uneven paving slabs on North footway.  Remedial Works The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	Priority M	0.20 2.00 <b>Cost £k</b>
fend 25 Foo surf  Span 12  1 Deck Elements  No Elei 1 Prin  4 Safety Elemen  No Elei 23 Han fend  Span 13  1 Deck Elements  No Elei	ces tway/verge/footbridge facing  s ment Name nary Deck Element  ts ment Name drail/parapets/safety	Remedial Works  The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	<b>Priority</b> M	2.00 Cost £k
Span 12  1 Deck Elements  No Elei  1 Prin  4 Safety Elemen  No Elei  23 Han fend  Span 13  1 Deck Elements  No Elei	s ment Name nary Deck Element  ts ment Name ndrail/parapets/safety	Remedial Works  The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	М	Cost £k
1 Deck Elements No Elei 1 Prin 4 Safety Elemen No Elei 23 Han fend Span 13 1 Deck Elements No Elei	ment Name nary Deck Element  ts ment Name ndrail/parapets/safety	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	М	
No Elei 1 Prin 4 Safety Elemen No Elei 23 Han fend Span 13 1 Deck Elements No Elei	ment Name nary Deck Element  ts ment Name ndrail/parapets/safety	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	М	
4 Safety Elemen No Elei 23 Han feno Span 13 1 Deck Elements No Elei	nary Deck Element  Its  ment Name  Idrail/parapets/safety	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works	М	
4 Safety Elemen No Elei 23 Han feno  Span 13 1 Deck Elements No Elei	its ment Name ndrail/parapets/safety	before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.  Remedial Works		0.30
No Elei 23 Han fend  Span 13 1 Deck Elements No Elei	ment Name ndrail/parapets/safety	Remedial Works	Priority	
23 Han fend Span 13 1 Deck Elements No Elei	ndrail/parapets/safety		Priority	
<mark>Span 13</mark> 1 Deck Elements No Ele	ces	Refer to element #1 for remedial works	М	Cost £k
1 Deck Elements		recommendation		
No Ele	5			
	ment Name	Remedial Works	Priority	Cost £k
1	nary Deck Element	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	M	0.50
4 Safety Elemen	ts			
No Ele	ment Name	Remedial Works	Priority	Cost £k
23 Han	ndrail/parapets/safety ces	For remedial works recommendation refer to element $\#1$	М	0.50
Span 14				
4 Safety Elemen	ts			
-	ment Name	Remedial Works	Priority	Cost £k
	ndrail/parapets/safety	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	M	0.50
Span 15				
1 Deck Elements		Dama dial Washa	<b>.</b>	
	ment Name	Remedial Works  The reinforcement should be clean back to bare metal	Priority M	Cost £k
	nary Deck Element	before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	IVI	1.00
2 Load-bearing S				
	ment Name umns (1-6)	Remedial Works  Refer to element #1 for remedial works	<b>Priority</b> M	<b>Cost £k</b> 0.50
11 Colu	umns (1-6)	recommendation Refer to element #1 for remedial works recommendation	М	1.00

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spection ructure			Inspection Date: Identifier:	
.2	Cross head/capping beam	Refer to element #1 for remedial works	L	0.15
Durabi	ility Elements	recommendation		
lo	Element Name	Remedial Works	Priority	Cost £k
5	Superstructure Drainage	Clear blocked gully under routine maintenance	М	1.00
8	Movement/expansion Joints	Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair on both expansion joint at North and South	М	2.00
8	Movement/expansion Joints	Replace the existing expansion joint on Eastbound carriageway	М	1.50
Safety	Elements			
0	Element Name	Remedial Works	Priority	Cost £k
3	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	М	0.35
pan 16				
	Elements Element Name	Remedial Works	Priority	Cost £k
lo	Primary Deck Element	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	M	0.30
	pearing Substructure			
lo 1	Element Name	Remedial Works	Priority	Cost £k
.1	Columns (East of Span)	Refer to element #1 for remedial works recommendation	Н	2.50
2	Cross head/capping beam	Refer to element #1 for remedial works recommendation	L	0.30
Safety	Elements			
lo	Element Name	Remedial Works	Priority	Cost £k
3	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	М	1.00
Span 17 L Deck E	lements			
No	Element Name	Remedial Works	Priority	Cost £k
	Primary Deck Element	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	0.60
Safety	Elements			
lo	Element Name	Remedial Works	Priority	Cost £k
3	Handrail/parapets/safety fences	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	0.50
Span 18				
	lements	5 P. I.W. I	<b>_</b>	
No	Element Name	Remedial Works  The reinforcement should be clean back to bare metal	Priority M	0.20
	Primary Deck Element	before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	IM	0.20
Safety	Elements			
lo	Element Name	Remedial Works	Priority	Cost £k
3	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	М	0.30
pan 19	·lamanta			
	lements	2		
lo	Element Name Primary Deck Element	Remedial Works Refer to element #1 for remedial works recommendation	<b>Priority</b> M	<b>Cost £k</b> 0.60
Safety	Elements			
port Sta	atus: Approved		Submitted Date:	13/11/2

Submission Count:

 Submitted Date:
 13/11/2024

 Print Date:
 14/11/2024

ructure	Name: Broadmead Road Viad	uct	Identifier:	1
No	Element Name	Remedial Works	Priority	Cost £k
23	Handrail/parapets/safety fences	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	M	0.50
Span 20				
	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	0.50
2 Load-b	pearing Substructure			
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	М	1.50
11	Columns (1-6)	Refer to element #1 for remedial works	Н	4.00
12	Cross head/capping beam	recommendation Refer to element #1 for remedial works	М	1.50
3 Durahi	ility Elements	recommendation		
No	Element Name	Remedial Works	Priority	Cost £k
15	Superstructure Drainage	Clear blocked carriageway gully under cyclic	M	0.40
18	Movement/expansion Joints	maintenance Replace the existing expansion joints on Westbound	М	2.50
20	Finishes: substructure	carriageway Remove graffiti from cross head under routine	L	0.10
21	elements Finishes: parapets/safety	maintenance See Element 23 for remedial works.	L	
1 Cofoty	fences			
4 Safety No	Elements Element Name	Remedial Works	Priority	Cost £k
23	Handrail/parapets/safety fences	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	M	0.50
C 24				
Span 21				
	Elements	_ "		
<b>No</b> 1	<b>Element Name</b> Primary Deck Element	Remedial Works  The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	<b>Priority</b> H	<b>Cost £k</b> 5.00
2 Load-b	pearing Substructure			
<b>No</b> 11	Element Name Columns (West of Span)	Remedial Works Refer to element #1 for remedial works	Priority M	0.50
11	Columns (East of Span)	recommendation Refer to element #1 for remedial works	М	1.00
11	Columns (East of Span)	recommendation Refer to element #1 for remedial works	Н	2.00
12	Cross head/capping beam	recommendation The reinforcement should be clean back to bare metal	M	0.35
		before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.		
3 Durabi	ility Elements			
<b>No</b> 21	Element Name Finishes: parapets/safety	Remedial Works  Remove the non-offensive graffiti on both RC parapet	Priority L	0.40
4 C-£ :	fences	walls under routine maintenance		
_	Elements			
No 33	Element Name	Remedial Works	Priority M	Cost £k
23	Handrail/parapets/safety fences	Rake out areas of defective mortar and repair using an approved cementitious material	М	2.50
eport Sta	atus: Approved		Submitted Date:	13/11/20
	on Count: 1		Print Date:	14/11/20

ructure	Name: Principal Inspection Reports  Proadmead Road Viaduct		Inspection Date: Identifier:	14/11/20
23	Steel Parapets (North and South)	Repair/ replace damaged parapet infill	L	0.15
:3	Handrail/parapets/safety fences	Undertake patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.15
Span 22				
	Elements			
No 1	<b>Element Name</b> Primary Deck Element	Remedial Works  The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	<b>Priority</b> H	<b>Cost £k</b> 5.00
2 Load-l	pearing Substructure			
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	М	0.50
3 Durabi	ility Elements	- Commendation		
No	Element Name	Remedial Works	Priority	Cost £k
21	Finishes: parapets/safety	Remove graffiti from RC parapet wall	L	0.20
4 Safety	fences Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Steel Parapets (North and South)	Repair damage to south parapet infill	L	
23	Handrail/parapets/safety fences	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.20
Span 23				
-	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	3.00
2 Load-b	pearing Substructure	keyed in to the parent concrete.		
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	М	1.30
12	Cross head/capping beam	Refer to element #1 for remedial works recommendation	М	0.30
3 Durab	ility Elements			
No	Element Name	Remedial Works	Priority	Cost £k
18	Movement/expansion Joints	Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair on Eastbound expansion joint	М	1.00
18	Movement/expansion Joints	Replace the existing expansion joints on Westbound carriageway	М	2.50
21	Finishes: parapets/safety fences	Remove graffiti from RC parapet wall	L	
4 Safety	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
23	Handrail/parapets/safety fences	Rake out areas of defective mortar and repair using an approved cementitious material	М	2.00
23	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	L	
23	Steel Parapets (North and South)	Repair damage to south parapet infill	L	0.30
Span 24				
-	Elements			
No	Element Name	Remedial Works	Priority	Cost £k



tructure		•	Inspection Date: Identifier:	14/11/20
1	Primary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	н	1.50
2 Load-l	pearing Substructure			
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (East of Span)	Refer to element #1 for remedial works recommendation	Н	4.00
12	Cross head/capping beam	The reinferite and the state of	М	0.50
3 Durab	ility Elements			
No	Element Name	Remedial Works	Priority	Cost £k
20	Finishes: substructure	Remove graffiti from the column under routine maintenance	L	0.15
21	elements Finishes: parapets/safety	Remove graffiti from RC parapet walls	L	0.30
4 Cafatu	fences			
-	Elements	Remedial Works	Part 1	0+ 01
<b>No</b> 23	Element Name Handrail/parapets/safety fences	Remedial Works  Refer to element #1 for remedial works recommendation	<b>Priority</b> L	Cost £k
C				
Span 25				
	Elements	5 P. LW. 1		
No 1	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	н	1.00
3 Durabi	ility Elements	Reyed III to the parent concrete.		
No	Element Name	Remedial Works	Priority	Cost £k
20	Finishes: substructure	Remove non-offensive graffiti from the columns under	L	0.50
4 Safatu	elements Elements	routine maintenance		
No	Element Name	Remedial Works	Priority	Cost £k
23	Handrail/parapets/safety fences	Refer to element #1 for remedial works recommendation	M	0.20
Span 26				
	Elements	5 11 11 1	<b></b>	
<b>No</b> 1	Element Name Primary Deck Element	Remedial Works  The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently	<b>Priority</b> M	0.25
2 Load-l	pearing Substructure	'keyed-in' to the parent concrete.		
No	Element Name	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works	M	0.20
3 Durahi	ility Elements	recommendation		
No	Element Name	Remedial Works	Priority	Cost £k
20	Finishes: substructure elements	Remove non-offensive graffiti from the columns under routine maintenance	L	0.50
Span 27				
1 Deck E	Elements			
No	Element Name	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	М	0.25
2 Load-l	pearing Substructure	-,		
No	Element Name	Remedial Works	Priority	Cost £k
eport Sta	<b>atus:</b> Approved		Submitted Date:	13/11/20
	on Count: 1		Print Date:	14/11/20

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14/11/2024

Print Date:

Inspectio	**	pection Report	Inspection Date:	14/11/202
Structure	Name: Broadmead	Road Viaduct	Identifier:	B
11	Columns (1-6)	Undertake patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	L	0.15
3 Durab	ility Elements			
No	<b>Element Name</b>	Remedial Works	Priority	Cost £k
20	Finishes: substructure elements	Remove non-offensive graffiti from the columns und routine maintenance	er L	0.50
21	Finishes: parapets/saf fences	Remove non-offensive graffiti from RC parapet wall	L	
Span 28	3			
1 Deck	Elements			
No	<b>Element Name</b>	Remedial Works	Priority	Cost £k
1	Primary Deck Element	The reinforcement should cleaned back to bare meta before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.	5	2.00
2 Load-	bearing Substructure			
No	<b>Element Name</b>	Remedial Works	Priority	Cost £k
11	Columns (1-6)	Refer to element #1 for remedial works recommendation	М	0.70
12	Cross head/capping be	am Refer to element #1 for remedial works recommendation	М	1.00
3 Durab	oility Elements			
No	Element Name	Remedial Works	Priority	Cost £k
18	Movement/expansion	oints Replace the existing asphalt plug joint at both ends	М	4.00
20	Finishes: substructure elements	Remove non-offensive graffiti from the columns und routine maintenance	er L	1.00

£163.10 k



## **Defect View Photographs**

## Approach Ramp - East

## **Deck Elements**



## Photograph #6

View of multiple minor spalling exposing the reinforcement on the deck soffit, measured 100x1250x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	2	В	2.2	L	Υ	0.5
		#31						

### Comment **Remedial Works**

There were multiple minor spalling exposing the reinforcement on the deck soffit, measured 100x1250x15mm.

Monitor defect at the next scheduled inspection

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #7

View of longitudinal hairline crack on the deck soffit up to 3.65m in length



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	2	С	2.3	L	N	
		#2)						

Remedial Works Comment

There was minor longitudinal hairline crack on the deck soffit up to 3.65m in length.

[none]

Monitor defect at the next scheduled inspection



# Approach Ramp - East

## **Deck Elements**



### Photograph #8

View of  $300 \times 500 \text{mm}$  minor spalling on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	2	С	2.2	L	N	
		#3)						

Comment Remedial Works

There was isolated area of 300x500mm minor spalling on the deck soffit and honeycombing, measured area 1000x400mm.

[none]

Monitor defect at the next scheduled inspection



## Photograph #9

View of honeycombing on the deck soffit, measured area 1000x400mm

No Element Name Element Description Sev Ext Defect Priority Works Cost £k

1 Primary deck element (Table 2) Primary deck element (Room 2 C 2.2 L N

#3)

Comment Remedial Works

There was isolated area of 300x500mm minor spalling on the deck soffit and honeycombing, measured area 1000x400mm.

[none]

Monitor defect at the next scheduled inspection



# Approach Ramp - East

# Load-bearing Substructure



### Photograph #544

View of multiple areas of hollow section and isolated spalling on the West face of Eastern support wall, measured 220x500mm, 370x850mm, 1070x460mm, 230x120x20mm and 180x120mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Eastern support wall	3	С	2.2	М	Υ	1

### Comment

There were multiple hollow section areas and spalling exposing the reinforcement on the Western face of East support wall, measured 220x500mm, 370x850mm, 1070x460mm, 230x80mm, 180x120mm, 410x200x20mm and 200x120x5mm.

Note: Photograph were taken prior to concrete been breaking up.

## Remedial Works

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Approach Ramp - East

# Load-bearing Substructure



### Photograph #545

View of multiple spalling area on the West face of Eastern support wall, measured 490x200x20mm and 200x120x5mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Eastern support wall	3	С	2.2	М	Υ	1

### Comment

There were multiple hollow section areas and spalling exposing the reinforcement on the Western face of East support wall, measured 220x500mm, 370x850mm, 1070x460mm, 230x80mm, 180x120mm, 410x200x20mm and 200x120x5mm.

Note: Photograph were taken prior to concrete been breaking up.

## Remedial Works

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Approach Ramp - East

# **Load-bearing Substructure**



### Photograph #10

View of spalling exposing the reinforcement on the base of wall, measured 800x300x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	М	Υ	1

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on all chambers wall, measured 800x300x15mm on room #1, 800x250x20mm room #2 and 2No. on partition wall 250x250x40mm and 250x400x10mm room #3 and honeycombing on top of pier wall, measured 2200x300mm.

Refer to element above for remedial works recommendation

View of spalling exposing the reinforcement on top of wall, measured 800x250x20mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	М	Υ	1

Comment Remedial Works

There were multiple spalling exposing the reinforcement on all chambers wall, measured 800x300x15mm on room #1, 800x250x20mm room #2 and 2No. on partition wall 250x250x40mm and 250x400x10mm room #3 and honeycombing on top of pier wall, measured 2200x300mm.

Refer to element above for remedial works recommendation



# Approach Ramp - East

# Load-bearing Substructure



## Photograph #12

View of spalling exposing the reinforcement on the Northern partition wall, measured 250x250x40mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	М	Υ	1

## Comment Remedial Works

There were multiple spalling exposing the reinforcement on all chambers wall, measured 800x300x15mm on room #1, 800x250x20mm room #2 and 2No. on partition wall 250x250x40mm and 250x400x10mm room #3 and honeycombing on top of pier wall, measured 2200x300mm.

## Refer to element above for remedial works recommendation

# Photograph #13

View of spalling exposing the reinforcement on the Northern partition wall, measured 250x400x10mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	М	Υ	1

There were multiple spalling exposing the reinforcement on all chambers wall, measured 800x300x15mm on room #1, 800x250x20mm room #2 and 2No. on partition wall 250x250x40mm and 250x400x10mm room #3 and honeycombing on top of pier wall, measured 2200x300mm.

Remedial Works

Refer to element above for remedial works recommendation

Report Status:ApprovedSubmitted Date:13/11/2024Submission Count:1Print Date:14/11/2024



Comment

# Approach Ramp - East

# **Load-bearing Substructure**



### Photograph #14

View of honeycombing on top of pier wall, measured 2200x300mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	М	Υ	1

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on all chambers wall, measured 800x300x15mm on room #1, 800x250x20mm room #2 and 2No. on partition wall 250x250x40mm and 250x400x10mm room #3 and honeycombing on top of pier wall, measured 2200x300mm.

Refer to element above for remedial works recommendation

## Photograph #15

View of drummy section at base of wall, measured 1000x800mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	2	С		L	N	

Comment Remedial Works

There was isolated area of drummy section at base of wall, measured  $1000 \times 800 \, \text{mm}$ .

[none]

Monitor defect at the next scheduled inspection



### Approach Ramp - East

### Load-bearing Substructure



### Photograph #16

View of 200x150x20mm spalling exposing the reinforcement

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Southern pier wall	3	В	2.2	M	Υ	0.6

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on chambers No.1 & 2, measured 200x150x20mm room #1, 200x300x40mm room #1 and 250x125x20mm room #2

Refer to element above for remedial works recommendation



### Photograph #17 View of 200x300x40mm spal

View of 200x300x40mm spalling exposing the reinforcement

No	Element Name	Element Description	S	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Southern pier wall		3	В	2.2	M	Υ	0.6
Comment		Remedial Works							

There were multiple spalling exposing the reinforcement on chambers No.1 & 2, measured 200x150x20mm room #1, 200x300x40mm room #1 and 250x125x20mm room #2

Refer to element above for remedial works recommendation



### Approach Ramp - East

### **Load-bearing Substructure**



### Photograph #18

View of 250x125x20mm spalling exposing the reinforcement on top of pier wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Southern pier wall	3	В	2.2	M	Υ	0.6

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on chambers No.1 & 2, measured 200x150x20mm room #1, 200x300x40mm room #1 and 250x125x20mm room #2

Refer to element above for remedial works recommendation

### Photograph #19

View of longstanding tracking and flow of binder on the Westbound carriageway surfacing



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion joints	3	С	10.3	М	Υ	10

Comment

There was longstanding moderate tracking and flow of binder on both eastbound and westbound carriageway surfacing leading to extensive water leakage onto the elements below.. This is consistent with 2023 GI.

**Remedial Works**Replace the existing asphalt plug joint at both ends



### Approach Ramp - East

# **Durability Elements**

### Photograph #20

View of longstanding tracking and flow of binder on the Eastbound carriageway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion joints	3	С	10.3	M	Υ	10

### Comment **Remedial Works**

There was longstanding moderate tracking and flow of binder on both eastbound and westbound carriageway surfacing leading to extensive water leakage onto the elements below.. This is consistent with 2023 GI.

Replace the existing asphalt plug joint at both ends



### Photograph #21

View of de-bonding and loss of top surface on the Eastbound carriageway expansion

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion joints	3	С	10.1	М	Υ	

**Remedial Works** 

There was a longstanding area of de-bonding and loss of top surface on the Eastbound carriageway expansion joint leading to extensive leakage onto the elements

below. This is consistent with 2023  $\operatorname{GI}$ 

Undertake repairs to the defective areas of surfacing using an approved bituminous material.

Cost included on element #18 above

**Report Status:** Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



Comment

Inspection Date:

Identifier:

14/11/2023

Approach Ramp - East Durability Elements

### Photograph #22

View of loss of galvanized protection on South steel parapet



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	5	С	4.1	L	N	
	fences							

Comment Remedial Works

There were multiple location with loss of galvanised protection noted on both parapets. This is consistent with 2023 GI

[none]

Monitor defect at the next scheduled inspection



### Photograph #23

View of spalling exposing the reinforcement on South parapet coping, measured 70x200x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	2

There were multiple location where spalling exposing the reinforcement was noted on the Southern RC parapet coping. The defects measured 600x70x35mm at Ch.29.3m from East, 70x200x20mm, 50x130x30mm and 40x330x50mm. Also, 50mm x 320mm x full depth spalling on the external face of South parapet noted.

Remedial Works

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

 Report Status:
 Approved
 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
 14/11/2024



Comment

### Approach Ramp - East

Inspection Type:

Structure Name:



### Photograph #24

View of spalling exposing the reinforcement on South parapet coping, measured 50x130x30mm

Identifier:

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	2

### Comment

There were multiple location where spalling exposing the reinforcement was noted on the Southern RC parapet coping. The defects measured 600x70x35mm at Ch.29.3m from East, 70x200x20mm, 50x130x30mm and 40x330x50mm. Also, 50mm x 320mm x full depth spalling on the external face of South parapet noted.

### **Remedial Works**

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #25

View of spalling exposing the reinforcement on South parapet coping, measured 40x330x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	2

Comment

There were multiple location where spalling exposing the reinforcement was noted on the Southern RC parapet coping. The defects measured 600x70x35mm at Ch.29.3m from East, 70x200x20mm, 50x130x30mm and 40x330x50mm. Also, 50mm x 320mm x full depth spalling on the external face of South parapet noted.

### **Remedial Works**

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Approach Ramp - East Safety Elements

Inspection Type: Structure Name:



### Photograph #26

View of spalling on external face of South parapet upstand, measured approximately 50mm x 320mm x full depth.

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	2

### Comment

There were multiple location where spalling exposing the reinforcement was noted on the Southern RC parapet coping. The defects measured 600x70x35mm at Ch.29.3m from East, 70x200x20mm, 50x130x30mm and 40x330x50mm. Also, 50mm x 320mm x full depth spalling on the external face of South parapet noted.

### Remedial Works

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #27

View of 600x70x35mm spalling exposing the reinforcement on the parapet post at Ch.29.3m from East

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	2

### Comment

There were multiple location where spalling exposing the reinforcement was noted on the Southern RC parapet coping. The defects measured 600x70x35mm at Ch.29.3m from East, 70x200x20mm, 50x130x30mm and 40x330x50mm. Also, 50mm x 320mm x full depth spalling on the external face of South parapet noted.

### Remedial Works

Spalling should be broken out and the reinforcement cleaned back to bare metal before an anti-corrosion primer is applied. The affected locations should then be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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### Approach Ramp - East





### Photograph #28

View of crack along the top of South parapet coping, measured 480mm in length  $x\ 2$ mm wide

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.3	L	N	

Comment Remedial Works

Isolated area of crack on top of South parapet coping, measured 480mm in length  $x\ 2mm$  wide

Seal crack using an approved cementitous material

### Photograph #29

View of impact damage on the South steel parapet bottom rail at east



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	3	В	13.1	М	Υ	1.5

Comment Remedial Works

There was isolated area of impact damage on the South parapet bottom rail and North parapet vertical infill.

Repair/ replace section of damaged parapet on both parapets

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### Approach Ramp - East **Safety Elements**



### Photograph #30

View of impact damage on the North steel parapet vertical infill

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	3	В	13.1	M	Υ	1.5

### **Remedial Works** Comment

There was isolated area of impact damage on the South parapet bottom rail and North parapet vertical infill.

Repair/ replace section of damaged parapet on both parapets

### Photograph #31

View of full width transverse crack on Westbound carriageway surfacing



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	3	В	9.4	М	Υ	1.5

Comment Remedial Works

Isolated area of full width transverse crack noted on Westbound carriageway surfacing

Break out the area of to the carriageway surfacing and repair with a suitable mastic asphalt patch repair.



### Approach Ramp - East **Safety Elements**

**Inspection Type:** 

**Structure Name:** 



### Photograph #32

View of uneven surface on Eastbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	2	D	9.2	L	Υ	0.1

### **Remedial Works** Comment

There was uneven surfacing along the Eastbound carriageway.

Seal the cracks through the surfacing using an appropriate cementitous material

Monitor defect during next schedule inspection



### Photograph #33

General view of South footway surfacing

**Element Name Element Description** Cost £k No Defect **Priority** Ext Works 25 Footway/verge/footbridge Footway/verge/footbridge D 5.2 surfacing surfacing

**Remedial Works** 

Minor vegetation and debris accumulation at interface with parapet along the whole length. This is consistent with 2023 GI

Monitor defect at the next scheduled inspection

[none]



### Approach Ramp - East

### Safety Elements



### Photograph #34

General view of North footway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	D	5.2	L	N	
	surfacing	surfacing						

Comment Remedial Works

Minor vegetation and debris accumulation at interface with parapet along the whole length. This is consistent with 2023 GI

[none]

Monitor defect at the next scheduled inspection



Photograph #35

View of cracked paving slab at Ch.35m

No Element Name Element Description Sev Ext Defect Priority Works Cost £k

25 Footway/verge/footbridge Footway/verge/footbridge 2 B 3.5 L N

surfacing surfacing

Comment Remedial Works

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.35m

[none]

Monitor defect during next schedule inspection



### Approach Ramp - East Ancillary Elements



### Photograph #36

View of surface corrosion on the Northern access door

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	North and South access doors	3	D	1.1	L	Υ	1
	ctructure							

Comment Remedial Works

There was surface corrosion on the Southern and Northern access doors. This is likely due to loss of protective coating and weathering. This is consistent with 2023 GT

Abrade, treat and repaint the affected area of corrosion to the access doors on the North and South approach elevations.





No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	North and South access doors	3	D	1.1	L	Υ	1
	ctructure							

Comment Remedial Works

There was surface corrosion on the Southern and Northern access doors. This is likely due to loss of protective coating and weathering. This is consistent with 2023 GI

Abrade, treat and repaint the affected area of corrosion to the access doors on the North and South approach elevations.



### Approach Ramp - East

### **Ancillary Elements**



### Photograph #38

View of non-offensive graffiti on the North access door

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	North and South access doors	2	С		L	Υ	0.3
	structure							

### Comment Remedial Works

There was non-offensive graffiti on the North access door. This is due to vandalism

Remove graffiti from the North access door under routine maintenance

### Photograph #39

View of the missing airbrick on the Southern infill blockwork wall.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Airbrick	3	Е	3.6	L	Υ	0.3
	structure							

Comment Remedial Works

There was a missing airbrick on the Southern infill blockwork wall. This is consistent with 2023  $\mbox{\rm GI}$ 

Replace the missing airbrick on the Southern infill blockwork wall under routine maintenance.



### Approach Ramp - East

### **Ancillary Elements**



### Photograph #40

View of 600x1mm vertical shrinkage crack, associated with leachate on the Northern infill blockwork wall.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall.	2	В	2.3	L	N	
	structure							

Remedial Works Comment

There were 3No. 1mm vertical shrinkage cracks with associated leachate staining on the Northern infill blockwork wall. This is consistent with 2023 GI

[none]

Monitor defect at the next scheduled inspection



### Photograph #41

View of 1mm vertical shrinkage crack, associated with leachate on the Northern infill blockwork wall.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall.	2	В	2.3	L	N	
	structure							

[none]

**Remedial Works** 

There were 3No. 1mm vertical shrinkage cracks with associated leachate staining on the Northern infill blockwork wall. This is consistent with 2023 GI

Monitor defect at the next scheduled inspection



### Approach Ramp - East

### **Ancillary Elements**



### Photograph #42

View of isolated spalling exposing the reinforcement on the Northern infill blockwork wall, measured 95x95x20mm.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall.	3	С	2.2	L	Υ	1
	structure							

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the Southern and Northern infill blockwork wall. The defects measured 95x95x10mm, 160x150x10mm and 165x155x10mm.

Refer to element #1 for remedial works recommendation



### Photograph #43

View of isolated spalling exposing the reinforcement on the Southern infill blockwork wall, measured 200x180x20mm.

NO	Element Name	Element Description	Sev	EXT	Derect	Priority	WOFKS	COST EK
39	Other ancillary elements on	Infill blockwork wall.	3	С	2.2	L	Υ	1
	structure							

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the Southern and Northern infill blockwork wall. The defects measured 95x95x10mm, 160x150x10mm and 165x155x10mm.

Refer to element #1 for remedial works recommendation



### Approach Ramp - East Ancillary Elements



### Photograph #44

View of isolated spalling exposing the reinforcement on the Southern infill blockwork wall, measured 150x100x20mm.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall.	3	С	2.2	L	Υ	1
	structure							

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the Southern and Northern infill blockwork wall. The defects measured 95x95x10mm, 160x150x10mm and 165x155x10mm.

Refer to element #1 for remedial works recommendation

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### Span 01

### **Deck Elements**



### Photograph #45

View of spalling exposing the reinforcement on the external face at North end, measured 140x230x40mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There multiple severe spalling area exposing the reinforcement on the deck soffit, and isolated area on the external face at North end, measured 140x230x40mm, 1300x1100x65mm, 800x600x55mm and 300x300x40mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #46

General view facing North

140	Cienient Name	Element Description	Sev	EXL	Delect	Priority	WOIKS	COSL EK	
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Y	2	

### Comment

There multiple severe spalling area exposing the reinforcement on the deck soffit, and isolated area on the external face at North end, measured 140x230x40mm, 1300x1100x65mm, 800x600x55mm and 300x300x40mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 01 **Deck Elements**



### Photograph #47

View of 1300x1100x65mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There multiple severe spalling area exposing the reinforcement on the deck soffit, and isolated area on the external face at North end, measured 140x230x40mm, 1300x1100x65mm, 800x600x55mm and 300x300x40mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

### Photograph #48

View of 800x600x55mm spalling exposing the reinforcement on the deck soffit

1 Primary deck element (Table 2) Primary Deck Element 4 C 2.2 H Y	2	

### Comment

There multiple severe spalling area exposing the reinforcement on the deck soffit, and isolated area on the external face at North end, measured 140x230x40mm, 1300x1100x65mm, 800x600x55mm and 300x300x40mm

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 01



### Photograph #49

View of 300x300x40mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There multiple severe spalling area exposing the reinforcement on the deck soffit, and isolated area on the external face at North end, measured 140x230x40mm, 1300x1100x65mm, 800x600x55mm and 300x300x40mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

### Photograph #50

View of shrinkage crack, up to 4.8m in length on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment **Remedial Works** 

Minor shrinkage crack noted on the deck soffit up to 4.8m in length.

[none]

Monitor defect during next schedule inspection

Report Status: Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



### Span 01

### **Load-bearing Substructure**



### Photograph #51

View of 460x170x20mm spalling exposing the reinforcement on C2 west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6) East of span	3	С	2.2	М	Υ	1

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on the columns #2 and #3, measured 460x170x20mm, 600x500x70mm, 850x560x20mm and 900x150x30mm.

Refer to element #1 for remedial works recommendation

### Photograph #52

View of 600x500x70mm spalling exposing the reinforcement on C2 east face

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6) East of span	3	С	2.2	М	Υ	1

Comment Remedial Works

There were multiple spalling exposing the reinforcement on the columns #2 and #3, measured 460x170x20mm, 600x500x70mm, 850x560x20mm and 900x150x30mm.

Refer to element #1 for remedial works recommendation



### Span 01

### **Load-bearing Substructure**



### Photograph #53

View of 850x560x20mm spalling exposing the reinforcement on C3 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6) East of span	3	С	2.2	M	Υ	1

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on the columns #2 and #3, measured 460x170x20mm, 600x500x70mm, 850x560x20mm and 900x150x30mm.

Refer to element #1 for remedial works recommendation

### Photograph #54

View of 900x150x30mm spalling exposing the reinforcement on C3 north face

No	Element Name	Element Description	Sev	EXT	Defect	Priority	Works	Cost £K
11	Pier/column	Columns (1-6) East of span	3	С	2.2	М	Υ	1
Comment		Remedial Works	5					

There were multiple spalling exposing the reinforcement

There were multiple spalling exposing the reinforcement on the columns #2 and #3, measured 460x170x20mm, 600x500x70mm, 850x560x20mm and 900x150x30mm.

Refer to element #1 for remedial works recommendation



### Span 01

### Load-bearing Substructure



### Photograph #55

View of 265x1360x50mm spalling exposing the reinforcement on the cross head between C4 and C5

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1

### Comment Remedial Works

There were multiple spalling exposing the reinforcement on the cross head between C1 to C5, measured 265x1360x50mm, 180x500x50mm and 250x260x10mm.

### illediai Works

Refer to element #1 for remedial works recommendation



### Photograph #56

View of 180x500x50mm spalling exposing the reinforcement on the cross head between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1

Comment Remedial Works

There were multiple spalling exposing the reinforcement on the cross head between C1 to C5, measured 265x1360x50mm, 180x500x50mm and 250x260x10mm.

Refer to element #1 for remedial works recommendation



### Span 01

### Load-bearing Substructure



### Photograph #57

View of 250x260x10mm spalling exposing the reinforcement on the cross head west face between C1 and C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1

Comment Remedial Works

There were multiple spalling exposing the reinforcement on the cross head between C1 to C5, measured 265x1360x50mm, 180x500x50mm and 250x260x10mm.

Refer to element #1 for remedial works recommendation

### Photograph #58

View of flaking paintwork on the deck soffit

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
19	Finishes: deck elements	Finishes: deck elements	4	С	4.1	L	Υ	1

 Comment
 Remedial Works

 There was loss and flaking paintwork on the deck soffit.
 Strip to defective

Strip to defective area of paintwork and apply a proprietary protective paint system to the deck soffit



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### Span 01

### **Durability Elements**



### Photograph #59

View of non-offensive graffiti on the deck

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
19	Finishes: deck elements	Finishes: deck elements	2	В		L	Υ	0.1

### **Remedial Works** Comment

Isolated area of non-offensive graffiti within public view noted on the deck soffit

Remove graffiti from the deck soffit under routine maintenance

### Photograph #60

View of of graffiti on the Northern face of C3



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
20	Finishes: substructure elements	Finishes: substructure elements	2	С		L	Υ	0.1

Comment Remedial Works

There was minor non-offensive graffiti on the Northern face of C3.

Remove graffiti from the column under routine maintenance

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### Span 01

### **Durability Elements**



### Photograph #61

View of moss growth along the parapet coping

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	D	5.2	L	N	
	fences							

Comment Remedial Works

There was moss growth, algal and general staining throughout both RC parapet walls.

[none]

Monitor defect during next schedule inspection



### Photograph #62

View of non-offensive graffiti on the Northern parapet post at Ch.30m

NO	Element Name	Element Description	Sev	EXT	Derect	Priority	WORKS	COST £K
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	С		L	Υ	0.1
	fences							

Comment Remedial Works

There was minor non-offensive graffiti on the Northern parapet post at  $\mbox{Ch.}30\mbox{m}$ 

Remove graffiti from the parapet post



### Span 01 **Safety Elements**



### Photograph #63

View of 90x220x40mm isolated spalling on North parapet post internal face at Ch.37.2m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	Υ	0.3

### Comment

There was spalling on North parapet post internal and external face, measured 90x220x40mm at Ch.37.2m

### Remedial Works

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

### and 150x230x130mm.

### Photograph #64

View of 150x230x130mm spalling on North parapet post external face



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	Υ	0.3

### Comment

There was spalling on North parapet post internal and external face, measured 90x220x40mm at Ch.37.2m and 150x230x130mm.

### **Remedial Works**

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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### Span 01

### Safety Elements



### Photograph #65

View of localised deep spalling exposing the reinforcement on the parapet post between the span #1 and approach ramp at North, measured 160x1005x160mm

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	4	D	2.2	M	Υ	1

### Comment Remedial Works

There was localised deep spalling exposing the reinforcement on the parapet post between span #1 and approach ramp at North, measured 160x1005x160mm. Also, an isolated spalled area exposing the reinforcement on the external face at South, measured 160x130x20mm

### Refer to element #1 for remedial works recommendation

## re al

### Photograph #66

View of 65x370x40mm spalling exposing the reinforcement on Southern parapet coping at Ch.36.2m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	4	D	2.2	М	Υ	1

**Remedial Works** 

There was localised deep spalling exposing the reinforcement on the parapet post between span #1 and approach ramp at North, measured 160x1005x160mm. Also, an isolated spalled area exposing the reinforcement on the external face at South, measured 160x130x20mm

Refer to element #1 for remedial works recommendation

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Comment

Principal Inspection Report Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

Span 01

**Safety Elements** 

### Photograph #67

View of surface corrosion on South parapet



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	2	С	1.1	L	Υ	3

### Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

### Remedial Works

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.



### Photograph #68

View of surface corrosion on North parapet

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	2	С	1.1	L	Υ	3

Comment

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

**Remedial Works** 

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

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### Span 01

### Safety Elements



### **Photograph #69**General view of Westbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



### Photograph #70 General view of Eastbound carriageway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



**Safety Elements** 



### Photograph #71

View of minor vegetation and debris accumulation along the South footway surfacing

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	D	5.2	L	N	
	surfacing	surfacing						

**Remedial Works** Comment

There was minor vegetation growth and debris accumulation at interface with South parapet.

[none]

Monitor defect during next schedule inspection



Photograph #72

View of cracked paving slab at Ch.38m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge surfacing	Footway/verge/footbridge surfacing	2	С	3.5	L	N	

**Remedial Works** Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.38m

[none]

Monitor defect during next schedule inspection



### Span 02

### **Deck Elements**



### Photograph #73

View of spalling exposing the reinforcement on external face at South end, measured 150x150x25mm

Identifier:

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	3

### Comment

There is minor spalling exposing the reinforcement on the external face at the South end and an isolated area of spalling on the deck soffit, measuring 150x150x25mm and 303x30x20mm.

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

### Photograph #74

View of minor spalling on the deck soffit, measured 330x30x20mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	3

### Comment

There is minor spalling exposing the reinforcement on the external face at the South end and an isolated area of spalling on the deck soffit, measuring 150x150x25mm and 303x30x20mm.

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



**Inspection Type:** Principal Inspection Report **Structure Name:** Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

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Span 02

### **Deck Elements**



### Photograph #75

View of isolated area of fire damage on the deck soffit, measured 600x600mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В		L	N	

**Remedial Works** Comment

There was an isolated area of fire damage noted on the deck soffit, measured 600x600mm

[none]

Monitor defect during next schedule inspection



### Photograph #76

View of spalling exposing the reinforcement on South parapet coping, measured 70x370x70mm at Ch.36.2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	

Comment

There were isolated areas where spalling exposed the reinforcement on the South and North RC parapet coping, measuring 70x370x70mm and 40x300x70mm at Ch.40m.

**Remedial Works** 

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Report Status: **Submitted Date:** 13/11/2024 **Submission Count:** 14/11/2024 **Print Date:** 



Inspection Type: Principal Inspection Report
Structure Name: Broadmead Road Viaduct

Inspection Date: Identifier: 14/11/2023

Span 02 Safety Elements



### Photograph #77

View of spalling on North parapet coping, measured 40x300x70mm at Ch.40m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	

### Comment

There were isolated areas where spalling exposed the reinforcement on the South and North RC parapet coping, measuring 70x370x70mm and 40x300x70mm at Ch.40m.

### **Remedial Works**

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 03

### Deck Elements



### Photograph #78

View of 100x530x35mm spalling exposing the reinforcement on external face at South end

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.4

### Comment

There was multiple spalling exposing the reinforcement on external face at South end and on the deck soffit, measured 80x70x15mm, 100x530x35mm and 150x200x5mm.

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

### Vere

### Photograph #79

View of 150x200x5mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.4

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### Comment

There was multiple spalling exposing the reinforcement on external face at South end and on the deck soffit, measured 80x70x15mm, 100x530x35mm and 150x200x5mm.

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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### Span 03

### **Deck Elements**



### Photograph #80

View of shrinkage crack on the deck soffit up to 4.6m in length

**Element Name Element Description** Defect **Priority** Works Cost £k Primary deck element (Table 2) Primary Deck Element 2.3

**Remedial Works** Minor shrinkage cracks on the deck soffit up to 4.6m in [none]

length.

Monitor defect during next schedule inspection



View of offensive graffiti on the deck soffit



**Element Name Element Description** Cost £k **Priority** No Ext Defect Works 19 Finishes: deck elements Finishes: deck elements В 0.15

**Remedial Works** Comment

There is an offensive graffiti on the deck soffit. This is due to vandalism

Remove graffiti under routine maintenance

Report Status: **Submitted Date:** 13/11/2024 **Submission Count:** 14/11/2024 **Print Date:** 



### Span 03

### Safety Elements



### Photograph #82

View of 130x90x20mm spalling exposing the reinforcement on external face at South end

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	Υ	0.2

### Comment

Isolated area of 130x90x20mm spalling exposing the reinforcement on external face at South end.

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 04





### Photograph #83

View of minor spalling exposing the reinforcement on the North face, measured 100x100x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on both external face and an isolated area on the deck soffit measuring 100x100x20mm, 160x160x25mm, 160x150x20mm and 50x50x20mm. Also, a hollowness area was noted, measuring 1900x90mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #84

View of 160x160x25mm spalling exposing the reinforcement on the South face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on both external face and an isolated area on the deck soffit measuring 100x100x20mm, 160x160x25mm, 160x150x20mm and 50x50x20mm. Also, a hollowness area was noted, measuring 1900x90mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 04 **Deck Elements**



### Photograph #85

View of 160x150x20mm spalling exposing the reinforcement on the South face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on both external face and an isolated area on the deck soffit measuring 100x100x20mm, 160x160x25mm, 160x150x20mm and 50x50x20mm. Also, a hollowness area was noted, measuring 1900x90mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #86

View of 50x50x20mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	M	Υ	0.5

Comment

There were multiple areas of spalling exposing the reinforcement on both external face and an isolated area on the deck soffit measuring 100x100x20mm, 160x160x25mm, 160x150x20mm and 50x50x20mm. Also, a hollowness area was noted, measuring 1900x90mm

Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### **Deck Elements**



### Photograph #87

View of hollowness area, measured 1900x90mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.5

### **Remedial Works** Comment

There were multiple areas of spalling exposing the reinforcement on both external face and an isolated area on the deck soffit measuring 100x100x20mm, 160x160x25mm, 160x150x20mm and 50x50x20mm. Also, a hollowness area was noted, measuring 1900x90mm

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

### Photograph #88

View of surface corrosion on the holding down bolts and plates



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	D	1.1	L	N	

Comment **Remedial Works** Surface corrosion on the holding down bolts and plates.

Monitor defect during next schedule inspection

[none]

Report Status: Approved **Submitted Date:** 13/11/2024



**Submission Count:** 

**Print Date:** 

14/11/2024

# Deck Elements

### Photograph #89

View of shrinkage crack up to 4.5m in length on the deck soffit

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Multiple shrinkage cracks noted on the deck soffit up to 4.5m in length.

[none]

Monitor defect during next schedule inspection



### Photograph #90

View of spalling exposing the reinforcement on North RC parapet coping, measured 30x150x60mm at Ch.54.9m

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k23Handrail/parapets/safety fences3B2.2MY0.3Comment

Spalling exposing the reinforcement on North RC parapet coping and on external face at South, measured 30x150x60mm and 150x430x15mm.

Refer to element #1 for remedial works recommendation



# Span 04



### Photograph #91

View of spalling exposing the reinforcement on external face at South end, measured 150x430x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.3

Comment Remedial Works

Spalling exposing the reinforcement on North RC parapet coping and on external face at South, measured 30x150x60mm and 150x430x15mm.

Refer to element #1 for remedial works recommendation



### **Deck Elements**



### Photograph #92

View of spalling exposing the reinforcement on the North face, measured 160x370x35mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on the North and South edges measuring 160x370x35mm, 180x200x25mm and 180x200x25mm. Also, an isolated spalled area exposing the reinforcement on the deck soffit, measuring 100x100x20mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #93

View of minor spalling exposing the reinforcement on the North face, measured 180x200x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.5

# Comment

There were multiple areas of spalling exposing the reinforcement on the North and South edges measuring 160x370x35mm, 180x200x25mm and 180x200x25mm. Also, an isolated spalled area exposing the reinforcement on the deck soffit, measuring 100x100x20mm

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.





### Photograph #94

View of 180x200x25mm spalling exposing the reinforcement on the South face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.5

### Comment

There were multiple areas of spalling exposing the reinforcement on the North and South edges measuring 160x370x35mm, 180x200x25mm and 180x200x25mm. Also, an isolated spalled area exposing the reinforcement on the deck soffit, measuring 100x100x20mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #95

View of 100x100x20mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.5

Comment

There were multiple areas of spalling exposing the reinforcement on the North and South edges measuring 160x370x35mm, 180x200x25mm and 180x200x25mm. Also, an isolated spalled area exposing the reinforcement on the deck soffit, measuring 100x100x20mm

**Remedial Works** 

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# **Deck Elements**



Photograph #96

View of shrinkage crack up 1.2m in length on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Minor shrinkage crack up to 1.2m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection



Photograph #97

View of 400x120x25mm spalling exposing the reinforcement on C1 east face

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k11Pier/columnColumns (1-2)4C2.2HY1.5Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring 400x120x25mm, 450x260x15mm, full height x 350 x 60mm, 390x390x70mm, 470x100x55mm and 600x100x50mm.

Refer to element #1 for remedial works recommendation



### Span 05

### **Load-bearing Substructure**



### Photograph #98

View of 450x260x15mm spalling exposing the reinforcement at the bottom of C1 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-2)	4	С	2.2	Н	Υ	1.5

### Comment Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring 400x120x25mm, 450x260x15mm, full height x 350 x 60mm, 390x390x70mm, 470x100x55mm and 600x100x50mm.

Refer to element #1 for remedial works recommendation

# Photograph #99

View of full height  $x\ 350\ x\ 60mm$  spalling exposing the reinforcement on C2 south west face

INO	Element Name	Element Description	Sev	EXL	Delect	Priority	WOIKS	COSL EK
11	Pier/column	Columns (1-2)	4	С	2.2	Н	Υ	1.5

Comment Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring 400x120x25mm, 450x260x15mm, full height x 350 x 60mm, 390x390x70mm, 470x100x55mm and 600x100x50mm.

Refer to element #1 for remedial works recommendation



### Span 05

### **Load-bearing Substructure**



### Photograph #100

View of 470x100x55mm spalling exposing the reinforcement at top of C1 north face extending to the underside of of cross head

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-2)	4	С	2.2	Н	Υ	1.5

### Comment Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring  $400 \times 120 \times 25 \, \text{mm}$ ,  $450 \times 260 \times 15 \, \text{mm}$ , full height x 350 x  $60 \, \text{mm}$ ,  $390 \times 390 \times 70 \, \text{mm}$ ,  $470 \times 100 \times 55 \, \text{mm}$  and  $600 \times 100 \times 50 \, \text{mm}$ .

Refer to element #1 for remedial works recommendation

# 2023:11.15

## Photograph #101

View of 390x390x70mm spalling exposing the reinforcement at top of C1 west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-2)	4	С	2.2	Н	Υ	1.5

mment Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring 400x120x25mm, 450x260x15mm, full height x 350 x 60mm, 390x390x70mm, 470x100x55mm and 600x100x50mm.

Refer to element #1 for remedial works recommendation



### Span 05

### **Load-bearing Substructure**



### Photograph #102

View of 600x100x50mm spalling exposing the reinforcement on C2 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-2)	4	С	2.2	Н	Υ	1.5

### Comment **Remedial Works**

There were multiple areas of deep spalling exposing the reinforcement on both C1 and C2, measuring 400x120x25mm, 450x260x15mm, full height x 350 x 60mm, 390x390x70mm, 470x100x55mm and 600x100x50mm.

Refer to element #1 for remedial works recommendation



### Photograph #103

View of 1001x200x45mm spalling exposing the reinforcement on C3 north and west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Column (3-4)	4	С	2.2	Н	Υ	1.5

**Remedial Works** 

There were multiple areas of deep spalling exposing the reinforcement on both C3 and C4, measured 1001x200x45mm, 450x100x40mm,470x160x60mm, 1020x280x50mm and 1090x400x60mm

Refer to element #1 for remedial works recommendation

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### Span 05

### Load-bearing Substructure



### Photograph #104

View of 450x100x40mm spalling exposing the reinforcement at top of C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Column (3-4)	4	С	2.2	Н	Υ	1.5

### Comment Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C3 and C4, measured 1001x200x45mm, 450x100x40mm,470x160x60mm, 1020x280x50mm and 1090x400x60mm

Refer to element #1 for remedial works recommendation

# Photograph #105

View of 470x160x60mm spalling exposing the reinforcement on C3 east face



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Column (3-4)	4	С	2.2	Н	Υ	1.5

**Remedial Works** 

Comment

There were multiple areas of deep spalling exposing the reinforcement on both C3 and C4, measured

1001x200x45mm, 450x100x40mm,470x160x60mm, 1020x280x50mm and 1090x400x60mm

Refer to element #1 for remedial works recommendation



### Span 05

### Load-bearing Substructure



### Photograph #106

View of 1020x280x50mm spalling exposing the reinforcement on C4 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Column (3-4)	4	С	2.2	Н	Υ	1.5

### Comment Remedial Works

There were multiple areas of deep spalling exposing the reinforcement on both C3 and C4, measured 1001x200x45mm, 450x100x40mm,470x160x60mm, 1020x280x50mm and 1090x400x60mm

Refer to element #1 for remedial works recommendation

# 2023.11.15

## Photograph #107

View of 1090x400x60mm spalling exposing the reinforcement on C4 west face

No	Element Name	Element Description	:	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Column (3-4)		4	С	2.2	Н	Υ	1.5
Comment		Remedial Works							

There were multiple areas of deep spalling exposing the reinforcement on both C3 and C4, measured 1001x200x45mm, 450x100x40mm,470x160x60mm, 1020x280x50mm and 1090x400x60mm

Refer to element #1 for remedial works recommendation



### Span 05

### Load-bearing Substructure



### Photograph #108

View of 300x1-2mm vertical crack on C5 south face.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Column (5-6)	2	В	2.3	L	N	

Comment Remedial Works

There was an isolated 300x1-2mm vertical crack on C5 south face.

[none]

Monitor defect during next schedule inspection



### Photograph #109

View of 230x20x5mm isolated spalling on the west face between C3 and C4

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k12Cross-head/capping beam3B2.2MY0.35Comment

There was deep spalling exposing the reinforcement on the cross head between C5 and C6 and an isolated area of spalling on the west face between C3 and C4, measuring 640x190x65mm and 230x20x5mm

Refer to element #1 for remedial works recommendation



### Span 05

### Load-bearing Substructure



### Photograph #110

View of 640x190x65mm spalling exposing the reinforcement on the cross head between C5 and C6

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	M	Υ	0.35

### Comment Remedial Works

There was deep spalling exposing the reinforcement on the cross head between C5 and C6 and an isolated area of spalling on the west face between C3 and C4, measuring 640x190x65mm and 230x20x5mm

### Refer to element #1 for remedial works recommendation



View of fully blocked carriageway gully



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
15	Superstructure drainage	Superstructure Drainage	5	Е	8.1	М	Υ	0.3

Comment Remedial Works

The carriageway gully was fully blocked with debris and Clear fully blocked carriageway gully under routine silt.



### Span 05

### **Durability Elements**



### Photograph #112

View of debonding and cracks between the plug joint and road surface on Westbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.1	М	Υ	2.5

### Comment

There was debonding and cracks between the plug joint and road surface on Westbound carriageway leading to extensive leakage onto the elements below. This is consistent with 2023 GI

### Remedial Works

Undertake repairs to the defective areas of expansion joint using an approved bituminous material.

# extensive leakage onto the elements below. This is consistent with 2023 GI

### Photograph #113

View of tracking and flow of the binder on expansion joint Eastbound carriageway.

Note: Pothole forming.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	D	10.3	М	Υ	2.5

# Comment

Longstanding tracking and flow of the binder of expansion joint on Eastbound carriageway leading to extensive leakage onto the elements below. Also, pothole forming noted.

### Remedial Works

Undertake repairs to the defective areas of expansion joint using an approved bituminous material.



### Safety Elements



### Photograph #114

View of spalling exposing the reinforcement on South parapet coping, measured 50x650x60mm

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	M	Υ	1

### Comment

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 50x650x60mm, 550x100x40mm and 50x200x25mm.

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



View of spalling exposing the reinforcement on North parapet post, measured 550x100x40mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

# Comment

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 50x650x60mm, 550x100x40mm and 50x200x25mm.

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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# Span 05

# 

### Photograph #116

View of spalling exposing the reinforcement on North parapet coping, measured 50x200x25mm

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

### Comment

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 50x650x60mm, 550x100x40mm and 50x200x25mm.

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# **Deck Elements**



### Photograph #117

View of spalling exposing the reinforcement on external face at South end, measured 150x910x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There was multiple areas of spalling exposing the reinforcement on the external face at South end, measuring 150x910x25mm. Also, an area of deep spalling spalling exposing the reinforcement noted on the deck soffit, measuring 1400x1300x75mm, 600x1300x50mm and 600x2200x45mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #118

View of deep spalling exposing the reinforcement on the deck soffit, measured 1400x1300x75mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There was multiple areas of spalling exposing the reinforcement on the external face at South end, measuring 150x910x25mm. Also, an area of deep spalling spalling exposing the reinforcement noted on the deck soffit, measuring 1400x1300x75mm, 600x1300x50mm and 600x2200x45mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 06 **Deck Elements**



Principal Inspection Report

Broadmead Road Viaduct

### Photograph #119

Closed up view of the above defect

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There was multiple areas of spalling exposing the reinforcement on the external face at South end, measuring 150x910x25mm. Also, an area of deep spalling spalling exposing the reinforcement noted on the deck soffit, measuring 1400x1300x75mm, 600x1300x50mm and 600x2200x45mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #120

View of spalling exposing the reinforcement on the deck soffit, measured 600x1300x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

Comment

There was multiple areas of spalling exposing the reinforcement on the external face at South end, measuring 150x910x25mm. Also, an area of deep spalling spalling exposing the reinforcement noted on the deck soffit, measuring 1400x1300x75mm, 600x1300x50mm and 600x2200x45mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 06 **Deck Elements**



### Photograph #121

View of spalling exposing the reinforcement on the deck soffit, measured 600x2200x45mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

### Comment

There was multiple areas of spalling exposing the reinforcement on the external face at South end, measuring 150x910x25mm. Also, an area of deep spalling spalling exposing the reinforcement noted on the deck soffit, measuring 1400x1300x75mm, 600x1300x50mm and 600x2200x45mm

### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Photograph #122

View of shrinkage crack up to 1100mm in length on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment **Remedial Works** 

2No. of shrinkage crack up to 1100mm and 1300mm in length on the deck soffit.

[none]

Monitor defect during next schedule inspection

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### Span 06 **Deck Elements**



### Photograph #123

View of shrinkage crack up to 1300mm in length on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** 

2No. of shrinkage crack up to 1100mm and 1300mm in length on the deck soffit.

[none]

Monitor defect during next schedule inspection



### Photograph #124

View of 720x130x30mm spalling exposing the reinforcement on C1 north face

**Element Name Element Description** Cost £k No Sev Ext Defect **Priority** Works Pier/column Columns (East of Span) 2.2

Comment **Remedial Works** 

Refer to element #1 for remedial works recommendation C1-C3

There were multiple areas of spalling exposing the reinforcement on C1, C2 and C3 north and east face, measuring 720x130x30mm, 500x160x40mm,  $520x120x20mm,\ 1205x260x40mm\ and\ 570x320x50mm$ 

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### Span 06

### **Load-bearing Substructure**



### Photograph #125

View of 500x160x40mm spalling exposing the reinforcement on C2 north face extending to east

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	3	С	2.2	М	Υ	1

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on C1, C2 and C3 north and east face, measuring 720x130x30mm, 500x160x40mm, 520x120x20mm, 1205x260x40mm and 570x320x50mm



# Photograph #126

View of 520x120x20mm spalling exposing the reinforcement at bottom of C2 east face

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k11Pier/columnColumns (East of Span)3C2.2MY1

**Remedial Works** 

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on C1, C2 and C3 north and east face, measuring 720x130x30mm, 500x160x40mm, 520x120x20mm, 1205x260x40mm and 570x320x50mm

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Comment

### Span 06

### **Load-bearing Substructure**



### Photograph #127

View of 1205x260x40mm spalling exposing the reinforcement on C2 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	3	С	2.2	М	Υ	1

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on C1, C2 and C3 north and east face, measuring 720x130x30mm, 500x160x40mm, 520x120x20mm, 1205x260x40mm and 570x320x50mm



# Photograph #128 View of 570x320x50mm dee

View of 570x320x50mm deep spalling exposing the reinforcement on C3 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	3	С	2.2	М	Υ	1

**Remedial Works** 

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on C1, C2 and C3 north and east face, measuring 720x130x30mm, 500x160x40mm, 520x120x20mm, 1205x260x40mm and 570x320x50mm

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Comment

### Span 06

### **Load-bearing Substructure**



### Photograph #129

View of 700x160x70mm spalling exposing the reinforcement on C4 SW face

No	Element Name	Element Description		Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)		3	В	2.2	М	Υ	0.5
_			_						

C4-C6 Refer to element #1 for remedial works recommendation

There was 2No. areas of spalling exposing the reinforcement on C4 SW face and North face, measuring 700x160x70mm and 450x140x30mm



# Photograph #130

View of 450x140x30mm spalling exposing the reinforcement on C4 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	3	В	2.2	М	Υ	0.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There was 2No. areas of spalling exposing the reinforcement on C4 SW face and North face, measuring 700x160x70mm and 450x140x30mm



### Span 06

### Load-bearing Substructure



### Photograph #131

View of 160x320x20mm spalling exposing the reinforcement on the cross head between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5

Comment Remedial Works

(East of Span) Refer to element #1 for remedial works recommendation

There was 2No. areas of spalling exposing the reinforcement on the cross head between C2 and C3, measuring 160x320x20mm and 1000x300x40mm



### Photograph #132

View of 1000x300x40mm spalling exposing the reinforcement on the cross head between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5

Comment Remedial Works

(East of Span) Refer to element #1 for remedial works recommendation

There was 2No. areas of spalling exposing the reinforcement on the cross head between C2 and C3, measuring 160x320x20mm and 1000x300x40mm

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# Span 06

# **Durability Elements**



### Photograph #133

View of iron pyrite staining on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
19	Finishes: deck elements	Finishes: deck elements	2	В	1.1	L	N	
Comment		Remedial Wor	ks					

Minor rust staining noted on the deck soffit. [none]

Monitor defect during next schedule inspection



# Photograph #134

View of spalling exposing the reinforcement on South parapet coping at Ch.62.8m, measured 50x200x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.4

Multiple areas of spalling exposing the reinforcement on South parapet coping, measured 50x200x50mm at

Remedial Works
Refer to element #1 for remedial works recommendation

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Ch.62.8m and 90x200x80mm.

Comment

# Span 06

### **Safety Elements**



### Photograph #135

View of spalling exposing the reinforcement on South parapet coping, measured 90x200x80mm

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.4

Comment Remedial Works

Multiple areas of spalling exposing the reinforcement on South parapet coping, measured 50x200x50mm at Ch.62.8m and 90x200x80mm.

Refer to element #1 for remedial works recommendation

# 2023 12. 7

### Photograph #136

View of crack just below the coping on external face of North parapet, measured 400mm in length  $x\ 5\text{mm}$  wide

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.3	М	Υ	0.3

Comment Remedial Works

There was isolated crack just below the coping on external face of North parapet, measured 400mm in length x 5mm wide.

Undertake crack repairs using an appropriate cementitious material



Safety Elements



### Photograph #137

General view of South steel parapet

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	2	С	1.1	L	Υ	3

### Comment Remedial Works

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.

# Photograph #138

General view of North steel parapet



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	2	С	1.1	L	Υ	3

Comment Remedial Works

There were multiple location where surface corrosion was noted on South and North parapet post. This is consistent with 2023 GI

Abrade, treat and repaint the affected areas of surface corrosion on the parapet South and North parapet post.



# **Safety Elements**



### Photograph #139

General view of Westbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	4	В	9.4	М	Υ	0.5

### **Remedial Works**

There was an isolated area where a pothole has formed on the Eastbound carriageway surfacing, measuring 750x1400x10mm

Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.

# Photograph #140

View of pothole forming on Eastbound carriageway, measured 750x1400x10mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	4	В	9.4	М	Υ	0.5

**Remedial Works** Comment

There was an isolated area where a pothole has formed on the Eastbound carriageway surfacing, measuring 750x1400x10mm

Break out the area around the defective surfacing and repair with a suitable mastic asphalt patch repair.



### **Safety Elements**

Span 06



### Photograph #141

General view of South footway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	D	5.2	L	N	
	surfacing	surfacing						

Remedial Works Comment

There was minor vegetation growth and debris accumulation on both South and North footway at interface with RC parapet wall.

[none]

Monitor defect during next schedule inspection



Photograph #142 General view of North footway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	D	5.2	L	N	
	surfacing	surfacing						

[none]

**Remedial Works** 

There was minor vegetation growth and debris accumulation on both South and North footway at interface with RC parapet wall.

Monitor defect during next schedule inspection



## Span 06

# Safety Elements



## Photograph #143

View of cracked paving slab at Ch.66m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

[none]

Comment Remedial Works

There was cracked paving slabs on the Southern footway surfacing at  ${\rm Ch.66m}$ 

Monitor defect during next schedule inspection



### Span 07 Deck Elements



### Photograph #144

View of spalling exposing the reinforcement on the North external face, measured 80x360x80mm 14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2.5

### Comment

There were 2No. areas of spalling exposing the reinforcement on the North external face, measuring 80x360x80mm and 60x60x30mm. In addition, multiple areas of deep spalling exposing the corroded reinforcement noted on the deck soffit, measuring 1900x650x55mm, 3800x1900x70mm, 1700x1700x70mm and 300x500x25mm

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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### Span 07 Deck Elements



### Photograph #145

View of 1900x650x55mm deep spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2.5

### Comment

There were 2No. areas of spalling exposing the reinforcement on the North external face, measuring 80x360x80mm and 60x60x30mm. In addition, multiple areas of deep spalling exposing the corroded reinforcement noted on the deck soffit, measuring 1900x650x55mm, 3800x1900x70mm, 1700x1700x70mm and 300x500x25mm

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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### Span 07 Deck Elements



### Photograph #146

View of 3800x1900x70mm deep spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2.5

### Comment

There were 2No. areas of spalling exposing the reinforcement on the North external face, measuring 80x360x80mm and 60x60x30mm. In addition, multiple areas of deep spalling exposing the corroded reinforcement noted on the deck soffit, measuring 1900x650x55mm, 3800x1900x70mm, 1700x1700x70mm and 300x500x25mm

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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### Span 07 **Deck Elements**



### Photograph #147

View of 1700x1700x70mm deep spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2.5

### Comment

There were 2No. areas of spalling exposing the reinforcement on the North external face, measuring 80x360x80mm and 60x60x30mm. In addition, multiple areas of deep spalling exposing the corroded reinforcement noted on the deck soffit, measuring 1900x650x55mm, 3800x1900x70mm, 1700x1700x70mm and 300x500x25mm

### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #148

View of shrinkage crack up to 2.8m in length on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** Comment

Minor shrinkage crack up to 2.8m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection

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### Span 07

### Load-bearing Substructure



### Photograph #149

View of 100x120x10mm minor spalling exposing the reinforcement on C1 north face and 90x90x5mm shallow spalling on east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	2	В	2.2	L	Υ	0.2

### Comment Remedial Works

There was an area of 100x120x10mm minor spalling exposing the reinforcement on C1 north face and an area of 90x90x5mm shallow spalling on east face. No visible defects to the other columns

Refer to element #1 for remedial works recommendation

# Photograph #150

View of 400x310x40mm spalling exposing the reinforcement on the underside of cross head between C2 and C3



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	М	Υ	0.4

# Comment

There were isolated areas of spalling exposing the reinforcement on the underside of cross head between C2 to C5, measuring 400x310x40mm, 460x310x40mm and 100x100x10mm.

Remedial Works

Refer to element #1 for remedial works recommendation



#### Span 07

#### **Load-bearing Substructure**



#### Photograph #151

View of 460x310x40mm spalling exposing the reinforcement on the underside of cross head between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	М	Υ	0.4

#### Comment Remedial Works

There were isolated areas of spalling exposing the reinforcement on the underside of cross head between C2 to C5, measuring 400x310x40mm, 460x310x40mm and 100x100x10mm.

#### Refer to element #1 for remedial works recommendation

Photograph #152 View of 100x100x10mm spalling exposing the reinforcement on the underside of cross head between C4 and C5



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	М	Υ	0.4

## Comment

There were isolated areas of spalling exposing the reinforcement on the underside of cross head between C2 to C5, measuring 400x310x40mm, 460x310x40mm and 100x100x10mm.

Remedial Works

Refer to element #1 for remedial works recommendation

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## Span 07

## **Safety Elements**



#### Photograph #153

View of spalling exposing the reinforcement on South parapet post, measured 430x70x100mm at Ch.67m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	M	Υ	1

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 430x70x100mm at Ch.67m, 55x230x35mm, 50x70x30mm and 50x300x40mm.

Refer to element #1 for remedial works recommendation

## Photograph #154

View of spalling exposing the reinforcement on South parapet coping, measured 55x230x35mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 430x70x100mm at Ch.67m, 55x230x35mm, 50x70x30mm and 50x300x40mm.

Refer to element #1 for remedial works recommendation

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# Span 07





#### Photograph #155

View of spalling on North parapet coping, measured 50x70x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

#### Comment **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 430x70x100mm at Ch.67m, 55x230x35mm, 50x70x30mm and 50x300x40mm.

Refer to element #1 for remedial works recommendation



### Photograph #156

View of spalling exposing the reinforcement on North parapet coping, measured 50x300x40mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

**Remedial Works** 

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measuring 430x70x100mm at Ch.67m, 55x230x35mm, 50x70x30mm and 50x300x40mm.

Refer to element #1 for remedial works recommendation

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## Span 08

#### **Deck Elements**



#### Photograph #157

View of spalling exposing the reinforcement on external face at North end, measured 190x210x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.7

#### Comment

There was 190x210x25mm spalling exposing the reinforcement on external face at North end, and multiple areas of spalling on the deck soffit, measuring 850x350x35mm, 900x500x45mm, 450x250x28mm and 250x350x22mm

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #158

View of 850x350x35mm spalling exposing the reinforcement on the deck soffit

#### **Element Name Element Description** Defect **Priority** Cost £k 3 Primary deck element (Table 2) Primary Deck Element С 2.2 М

## Comment

There was 190x210x25mm spalling exposing the reinforcement on external face at North end, and multiple areas of spalling on the deck soffit, measuring 850x350x35mm, 900x500x45mm, 450x250x28mm and 250x350x22mm

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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## Span 08

#### **Deck Elements**



#### Photograph #159

View of 900x500x45mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.7

#### Comment

There was 190x210x25mm spalling exposing the reinforcement on external face at North end, and multiple areas of spalling on the deck soffit, measuring 850x350x35mm, 900x500x45mm, 450x250x28mm and 250x350x22mm

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #160

View of 450x250x28mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.7

#### Comment

There was 190x210x25mm spalling exposing the reinforcement on external face at North end, and multiple areas of spalling on the deck soffit, measuring 850x350x35mm, 900x500x45mm, 450x250x28mm and 250x350x22mm

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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#### Photograph #161

View of 250x350x22mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.7

#### **Remedial Works** Comment

There was 190x210x25mm spalling exposing the reinforcement on external face at North end, and multiple areas of spalling on the deck soffit, measuring 850x350x35mm, 900x500x45mm, 450x250x28mm and 250x350x22mm

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #162

View of shrinkage crack up to 3.1m in length



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment **Remedial Works** 

Minor shrinkage crack up to 3.1m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection

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### Span 08

#### **Load-bearing Substructure**



#### Photograph #163

View of 520x180x40mm spalling exposing the reinforcement on C6 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	В	2.2	M	Υ	0.25

#### Comment Remedial Works

There was isolated area of spalling exposing the reinforcement on C6 east face, measured 520x180x40mm.

Refer to element #1 for remedial works recommendation

#### Photograph #164

View of 100x50x20mm isolated spalling exposing the reinforcement on external face at South end

NO	Element Name	Element Description	Sev	EXT	Derect	Priority	works	COST ±K
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	Υ	0.3

Comment Remedial Works

There was 100x50x20mm isolated area of spalling exposing the reinforcement on external face at South end and on parapet coping at Ch.79m, measured full height x  $50 \times 50mm$ 

Refer to element #1 for remedial works recommendation

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# Span 08



### Photograph #165

View of full height x 50 x 50mm spalling exposing the reinforcement on South parapet coping at Ch.79m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	Υ	0.3

#### Comment Remedial Works

There was 100x50x20mm isolated area of spalling exposing the reinforcement on external face at South end and on parapet coping at Ch.79m, measured full height x 50 x 50mm

Refer to element #1 for remedial works recommendation

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# Span 09

#### **Deck Elements**



#### Photograph #166

View of spalling exposing the reinforcement on external face at North end, measured 100x150x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.3

#### Comment

There was 100x150x25mm area of spalling exposing the reinforcement on external face at North end, and multiple deep spalling on the deck soffit, measuring 800x700x70mm, 400x400x35mm and 450x550x25mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #167

View of 800x700x70mm spalling exposing the reinforcement on the deck soffit at North

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.3

## Comment

There was 100x150x25mm area of spalling exposing the reinforcement on external face at North end, and multiple deep spalling on the deck soffit, measuring  $800x700x70mm,\,400x400x35mm\,\,\text{and}\,\,450x550x25mm.$ 

#### **Remedial Works**

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The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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# Span 09

## **Deck Elements**



#### Photograph #168

View of 400x400x35mm spalling exposing the reinforcement on the deck soffit at North end

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.3

#### Comment **Remedial Works**

There was 100x150x25mm area of spalling exposing the reinforcement on external face at North end, and multiple deep spalling on the deck soffit, measuring 800x700x70mm, 400x400x35mm and 450x550x25mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #169

View of 450x550x25mm spalling exposing the reinforcement on the deck soffit



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.3

## Comment

There was 100x150x25mm area of spalling exposing the reinforcement on external face at North end, and multiple deep spalling on the deck soffit, measuring 800x700x70mm, 400x400x35mm and 450x550x25mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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#### Photograph #170

View of shrinkage crack up to 2.8m in length

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment **Remedial Works** 

Minor shrinkage crack up to 2.8m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection



### Photograph #171

View of surface corrosion on the holding down bolts and down bolts and plates

No	Element Name	Element Description	Sev	v E	kt Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	(	1.1	L	N	
Comment		Remedial Works						

Surface corrosion noted on the holding down bolts and [none]

Monitor defect during next schedule inspection

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#### Span 09

## Load-bearing Substructure



#### Photograph #172

View of 350x180x40mm spalling exposing the reinforcement on C6 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on C6 east face and north face, measuring 350x180x40mm, 270x110x40mm and 400x350x30mm.

Refer to element #1 for remedial works recommendation



#### Photograph #173

View of 270x110x40mm spalling exposing the reinforcement on C6 north face

No	Element Name	Element Description		Sev	EXT	Defect	Priority	Works	Cost £K
11	Pier/column	Columns (1-6)		3	С	2.2	М	Υ	0.5
Con	nment		Remedial Works	:					

There were multiple areas of spalling exposing the reinforcement on C6 east face and north face, measuring 350x180x40mm, 270x110x40mm and 400x350x30mm.

Refer to element #1 for remedial works recommendation

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### Span 09

#### Load-bearing Substructure



#### Photograph #174

View of 400x350x30mm spalling exposing the reinforcement on C6 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on C6 east face and north face, measuring 350x180x40mm, 270x110x40mm and 400x350x30mm.

Refer to element #1 for remedial works recommendation

### Photograph #175

View of spalling on South parapet coping, measured 150x300x40mm at Ch.83.7m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

**Remedial Works** 

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measured

150x300x40mm at Ch.54.9m, 40x200x30mm, 50x200x30mm and 100x100x25mm on external face at South

Refer to element #1 for remedial works recommendation

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#### Span 09

#### **Safety Elements**



#### Photograph #176

View of spalling exposing the reinforcement on North parapet coping, measured 50x200x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	M	Υ	0.5

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measured 150x300x40mm at Ch.54.9m, 40x200x30mm, 50x200x30mm and 100x100x25mm on external face at South

Refer to element #1 for remedial works recommendation

#### Photograph #177

View of 100x100x25 mm spalling exposing the reinforcement on external face at South end

140	Element Name	Element Description	Sev	EXL	Delect	Priority	WOIKS	COSLER
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on both RC parapet walls, measured 150x300x40mm at Ch.54.9m, 40x200x30mm, 50x200x30mm and 100x100x25mm on external face at South

Refer to element #1 for remedial works recommendation

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## Span 09

## Safety Elements



#### Photograph #178

View of cracked paving slab at Ch.87m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

**Remedial Works** Comment [none]

There was cracked paving slabs on the Southern footway surfacing at Ch.87m

Monitor defect during next schedule inspection

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#### Photograph #179

View of 80x400x40mm spalling exposing the reinforcement on external face at North end

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	1

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit, measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #180

View of 50x1000x90mm spalling exposing the reinforcement on external face at South

#### Cost £k **Element Name Element Description** Sev Ext Defect Priority Works Primary deck element (Table 2) Primary Deck Element 3 2.2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit, measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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#### Photograph #181

View of 350x200x30mm spalling exposing the reinforcement on external face at South end

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	1

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit, measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #182

View of 350x350x40mm spalling exposing the reinforcement on the deck soffit

#### Nο **Element Name Element Description** Cost £k Defect **Priority** Ext Works Primary deck element (Table 2) Primary Deck Element 2.2

**Remedial Works** 

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit,

measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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#### Photograph #183

View of 800x200x40mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	1

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit, measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #184

View of 350x800x55mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	M	Υ	1

**Remedial Works** 

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit,

measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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#### Photograph #185

View of 800x400x50mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	1

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at North and South end, measuring 80x400x40mm, 50x1000x90mm and 350x200x30mm. Also, same defects noted on the soffit, measured 350x350x40mm, 800x200x40mm, 350x800x55mm, 800x400x50mm and 730x170x35mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #186

View of 560x160x40mm spalling exposing the reinforcement on top of C1 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	Н	Υ	1.5

Comment **Remedial Works** 

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C1-C4) throughout, measured 560x160x40mm, full height x 370x50mm, 570x190x30mm, 1430x190x30mm and 560x300x30mm.

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#### Span 10

#### Load-bearing Substructure



#### Photograph #187

View of full height x 370x50mm spalling exposing the reinforcement on C2 south face extending to west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C1-C4) throughout, measured 560x160x40mm, full height x 370x50mm, 570x190x30mm, 1430x190x30mm and 560x300x30mm.



#### Photograph #188

View of 570x190x30mm spalling exposing the reinforcement on C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C1-C4) throughout, measured 560x160x40mm, full height x 370x50mm, 570x190x30mm, 1430x190x30mm and 560x300x30mm.



#### Span 10

#### Load-bearing Substructure



#### Photograph #189

View of 1430x190x30mm spalling exposing the reinforcement on C3 south face

No Element	Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11 Pier/colu	mn	Columns (1-6)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C1-C4) throughout, measured 560x160x40mm, full height x 370x50mm, 570x190x30mm, 1430x190x30mm and 560x300x30mm.



#### Photograph #190

View of 560x300x30mm spalling exposing the reinforcement on bottom of C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C1-C4) throughout, measured 560x160x40mm, full height x 370x50mm, 570x190x30mm, 1430x190x30mm and 560x300x30mm.



#### Span 10

#### Load-bearing Substructure



#### Photograph #191

View of 750x140x20mm spalling exposing the reinforcement on C4 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	С	2.2	Н	Υ	1.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C4-C6), measuring 750x140x20mm, 1650x200x40mm, 950x40x20mm, 1150x140x20mm and 1040x240x70mm.



#### Photograph #192

View of 1650x200x40mm spalling exposing the reinforcement on C4 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	С	2.2	Н	Υ	1.5

 Comment
 Remedial Works

 C4-C6
 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C4-C6), measuring 750x140x20mm, 1650x200x40mm, 950x40x20mm, 1150x140x20mm and 1040x240x70mm.



### Span 10

C4-C6

#### **Load-bearing Substructure**



#### Photograph #193

View of 950x40x20mm spalling on C5 west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	С	2.2	Н	Υ	1.5

Comment **Remedial Works** 

Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C4-C6), measuring 750x140x20mm, 1650x200x40mm, 950x40x20mm, 1150x140x20mm and 1040x240x70mm.



#### Photograph #194

Refer to element #1 for remedial works recommendation

View of 1150x140x20mm spalling exposing the reinforcement on C5 south face

No	Element Name	Element Description		Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)		4	С	2.2	Н	Υ	1.5
Comment		Remedial Works							

There were multiple spalling exposing the reinforcement on columns (C4-C6), measuring 750x140x20mm,

1650x200x40mm, 950x40x20mm, 1150x140x20mm and 1040x240x70mm.

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C4-C6

#### Span 10

### Load-bearing Substructure



#### Photograph #195

View of 1040x240x70mm deep spalling on C6 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	С	2.2	Н	Υ	1.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C4-C6), measuring 750x140x20mm, 1650x200x40mm, 950x40x20mm, 1150x140x20mm and 1040x240x70mm.



#### Photograph #196

View of 1100x310x40mm spalling exposing the reinforcement on the cross head underside between C2 and C3

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k12Cross-head/capping beam3C3.3MY0.5

**Remedial Works** 

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C2-C4, measured 1100x310x40mm, 450x190x40mm and 1050x310x50mm.

Refer to element #1 for remedial works recommendation

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#### Span 10

#### **Load-bearing Substructure**



#### Photograph #197

View of 450x190x40mm spalling exposing the reinforcement on the cross head underside between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	3.3	М	Υ	0.5

#### Comment Remedial Works

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C2-C4, measured 1100x310x40mm, 450x190x40mm and 1050x310x50mm.

#### ciliculai Works

Refer to element #1 for remedial works recommendation



### Photograph #198

View of 1050x310x50mm spalling exposing the reinforcement on the cross head underside between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	3.3	М	Υ	0.5
Comment Remed		Remedial Wor	ks					

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C2-C4, measured 1100x310x40mm, 450x190x40mm and 1050x310x50mm.

Refer to element #1 for remedial works recommendation

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## Span 10

## **Durability Elements**



#### Photograph #199

View of moderate loss of road surface adjacent to joint on Westbound

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.1	M	Υ	2.5

Comment

There was moderate loss of road surface adjacent to joint on Westbound carriageway. This is consistent with 2023 GI

#### **Remedial Works**

Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair

## Photograph #200

View of tracking and flow of binder of Eastbound carriageway joint



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.3	М	Υ	2.5

**Remedial Works** Comment

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

Replace the existing expansion joints under cyclic maintenance

**Report Status:** Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



**Inspection Type:** Principal Inspection Report **Structure Name:** Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

### Span 10 **Safety Elements**



#### Photograph #201

View of isolated spalling exposing the reinforcement on North parapet coping, measured 15x100x10mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.15

#### Comment

There was an isolated area of spalling exposing the reinforcement on North parapet coping, measuring 15x100x10mm.

#### **Remedial Works**

Undertake patch repairs with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #202

View of cracked paving slab at Ch.94m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

[none]

Comment **Remedial Works** 

There was cracked paving slabs on the Southern footway surfacing at Ch.94m

Monitor defect during next schedule inspection

Report Status: **Submitted Date:** 13/11/2024



**Submission Count:** 

**Print Date:** 

14/11/2024

## Span 11



#### Photograph #203

View of 100x450x50mm spalling exposing the reinforcement on external face at North end

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

#### Comment

There was an area of spalling exposing the reinforcement on external face at North and South end, measuring 100x450x50mm and 160x1360x50mm. Also, same defect noted along the edge of deck soffit at South, measured 350x300x35mm and 700x300x35mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #204

View of 160x1360x50mm spalling exposing the reinforcement on external face at South end

140	Licinett Name	Liement Description	364	LAL	Delect	FIIOTIC	WOIKS	COSt ZR
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

## Comment

There was an area of spalling exposing the reinforcement on external face at North and South end, measuring 100x450x50mm and 160x1360x50mm. Also, same defect noted along the edge of deck soffit at South, measured 350x300x35mm and 700x300x35mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 11



#### Photograph #205

View of 350x300x35mm spalling exposing the reinforcement on the edge of deck soffit at South

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

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#### Comment

There was an area of spalling exposing the reinforcement on external face at North and South end, measuring 100x450x50mm and 160x1360x50mm. Also, same defect noted along the edge of deck soffit at South, measured 350x300x35mm and 700x300x35mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #206

View of 700x300x35mm spalling exposing the reinforcement on the edge of deck soffit at South

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

#### Comment

There was an area of spalling exposing the reinforcement on external face at North and South end, measuring 100x450x50mm and 160x1360x50mm. Also, same defect noted along the edge of deck soffit at South, measured 350x300x35mm and 700x300x35mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

**Report Status:** Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



# Span 11

## Deck Elements



#### Photograph #207

View of shrinkage crack up to 3.5m on the deck soffit

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Minor shrinkage crack up to 3.5 m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection



#### Photograph #208

Refer to element #1 for remedial works recommendation

View of 1400x200x40mm spalling exposing the reinforcement on C2 west face

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k11Pier/columnColumns (East of Span)4D2.2HY1.5Remedial Works

There were multiple spalling exposing the reinforcement on columns (C2-C3) throughout, measured 1400x200x40mm, full height x200x40mm, 700x200x55mm , 1250x250x40mm and 570x190x40mm.

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C1-C3

#### Span 11

#### Load-bearing Substructure



#### Photograph #209

View of full height x200x40mm spalling exposing the reinforcement on C2 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C2-C3) throughout, measured 1400x200x40mm, full height x200x40mm, 700x200x55mm, 1250x250x40mm and 570x190x40mm.



#### Photograph #210

View of 700x200x55mm spalling exposing the reinforcement on C2 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C2-C3) throughout, measured 1400x200x40mm, full height x200x40mm, 700x200x55mm , 1250x250x40mm and 570x190x40mm.



#### Span 11

### Load-bearing Substructure



#### Photograph #211

View of 1250x250x40mm spalling exposing the reinforcement on C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	1.5

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C2-C3) throughout, measured 1400x200x40mm, full height x200x40mm, 700x200x55mm, 1250x250x40mm and 570x190x40mm.



## Photograph #212

View of 570x190x40mm spalling exposing the reinforcement at bottom of C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	1.5

**Remedial Works** 

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple spalling exposing the reinforcement on columns (C2-C3) throughout, measured 1400x200x40mm, full height x200x40mm, 700x200x55mm , 1250x250x40mm and 570x190x40mm.

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#### Span 11

C4-C6

### **Load-bearing Substructure**



#### Photograph #213

View of 730x180x30mm spalling on C4 west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	Н	Υ	1

Comment **Remedial Works** 

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C4-C5) throughout, measuring 730x180x30mm, 700x200x50mm, 1500x310x50mm and 1600x210x40mm.



#### Photograph #214

View of 700x200x50mm spalling exposing the reinforcement on C5 north face

No **Element Description Element Name** Sev Cost £k Ext Defect **Priority** Works Pier/column Columns (East of Span) С 2.2

**Remedial Works** 

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C4-C5) throughout,

measuring 730x180x30mm, 700x200x50mm, 1500x310x50mm and 1600x210x40mm.

**Report Status:** Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



Comment

C4-C6

#### Span 11

C4-C6

## Load-bearing Substructure



#### Photograph #215

View of 1500x310x50mm spalling exposing the reinforcement on C5 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	Н	Υ	1

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C4-C5) throughout, measuring 730x180x30mm, 700x200x50mm, 1500x310x50mm and 1600x210x40mm.



#### Photograph #216

View of 1600x210x40mm spalling exposing the reinforcement on C5 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	Н	Υ	1

**Remedial Works** 

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C4-C5) throughout, measuring 730x180x30mm, 700x200x50mm, 1500x310x50mm and 1600x210x40mm.

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#### Span 11

#### **Load-bearing Substructure**



## Photograph #217

View of 1200x1mm vertical crack on C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	2	В	2.3	L	N	

**Remedial Works** 

There was isolated area of 1200x1mm vertical crack on C2 east face.

[none]

Monitor defect during next schedule inspection



#### Photograph #218

View of 700x100x50mm spalling exposing the reinforcement on the cross head underside between C5 and C6

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1	
Comment		Remedial Worl	(S						

Comment

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C2 to C6, measuring 700x100x50mm, 1100x170x50mm, 1200x260x50mm and 1000x300x50mm

Refer to element #1 for remedial works recommendation

Report Status: **Submitted Date:** 13/11/2024 **Submission Count:** 14/11/2024 **Print Date:** 



### Span 11

### **Load-bearing Substructure**



#### Photograph #219

View of 1100x170x50mm spalling exposing the reinforcement on the cross head underside between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	M	Υ	1

#### Comment **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C2 to C6, measuring 700x100x50mm, 1100x170x50mm, 1200x260x50mm and 1000x300x50mm

Refer to element #1 for remedial works recommendation



#### Photograph #220

View of 1200x260x50mm spalling exposing the reinforcement on the cross head underside between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1

**Remedial Works** 

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C2 to C6, measuring 700x100x50mm, 1100x170x50mm, 1200x260x50mm and 1000x300x50mm

Refer to element #1 for remedial works recommendation

Report Status: **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



## Span 11

## **Load-bearing Substructure**



### Photograph #221

View of 1000x300x50mm spalling exposing the reinforcement on the cross head underside between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1

### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C2 to C6, measuring 700x100x50mm, 1100x170x50mm, 1200x260x50mm and 1000x300x50mm

Refer to element #1 for remedial works recommendation

Photograph #222 View of iron pyrite staining on RC parapet wall



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	В	1.1	L	N	
	fences							

[none]

Comment Remedial Works

There was minor iron pyrite staining on RC parapet wall.

Monitor defect during next schedule inspection

 Report Status:
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 13/11/2024

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 1
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# Span 11



### Photograph #223

View of spalling exposing the reinforcement on South parapet coping, measured 50x190x30mm

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.2

### Comment Remedial Works

There was an isolated area of spalling exposing the reinforcement on South parapet coping and North external face, measuring 50x190x30mm and 50x300x25mm.

Refer to element #1 for remedial works recommendation

## Photograph #224

View of spalling exposing the reinforcement on external face at North parapet, measured 50x300x25mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.2

Comment Remedial Works

There was an isolated area of spalling exposing the reinforcement on South parapet coping and North external face, measuring 50x190x30mm and 50x300x25mm.

Refer to element #1 for remedial works recommendation



**Inspection Type:** Principal Inspection Report Structure Name: Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

Span 11 **Safety Elements** 



## Photograph #225

General view of North steel parapet between span #11 to span #15

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Comment **Remedial Works** 

Overall, both South and North steel parapets appears in good condition. No visible defects noted

[none]

## Photograph #226

General view of South steel parapet between span #11 to span #15



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Remedial Works Comment

Overall, both South and North steel parapets appears in good condition. No visible defects noted

[none]



**Inspection Type:** Principal Inspection Report Structure Name: Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

## Span 11 **Safety Elements**



## Photograph #227

General view of Eastbound carriageway surfacing between span #11 to span #15

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment **Remedial Works** 

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted

[none]

## Photograph #228

General view of Westbound carriageway surfacing between span #11 to span #15



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

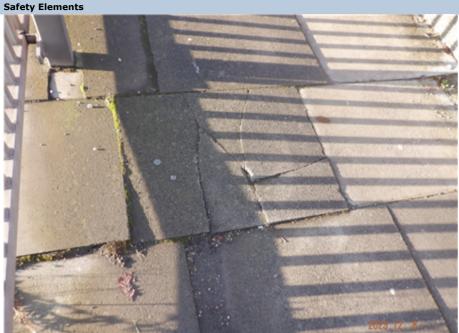
**Remedial Works** Comment

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted

[none]



# Span 11



## Photograph #229

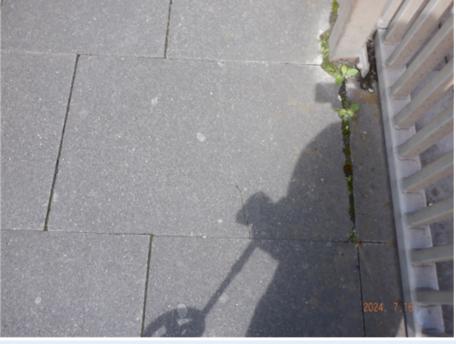
View of cracked paving slab on North footway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	С	9.6		Υ	2
	surfacing	surfacing						

Comment Remedial Works

There were uneven paving slabs slabs which over time will lead to trip hazards on the North footway.

Re-bed the uneven paving slabs on North footway.



## Photograph #230

View of cracked paving slab at Ch.103m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge surfacing	Footway/verge/footbridge surfacing	2	В	3.5	L	N	

CommentRemedial WorksThere was cracked paving slabs on the Southern footway[none]

surfacing at Ch.103m

Monitor defect during next schedule inspection

Report Status: Approved Submitted Date: 13/11/2024



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## Span 12 **Deck Elements**



### Photograph #231

View of 130x1000x50mm spalling exposing the reinforcement on external face at South

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.3

#### **Remedial Works** Comment

There was an isolated area of spalling exposing the reinforcement on external face at South, measured 130x1000x50mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #232

View of minor shrinkage crack up to 0.9m on the deck soffit



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** Comment

Minor shrinkage crack up to 0.9m in length noted on the deck soffit.

Monitor defect during next schedule inspection



Inspection Type: Principal Inspection Report
Structure Name: Broadmead Road Viaduct

Inspection Date: Identifier: 14/11/2023

Span 12

Safety Elements



### Photograph #233

View of isolated area of spalling exposing the reinforcement on North parapet coping, measured 40x200x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	

## Comment Remedial Works

Multiple areas of spalling exposing the reinforcement on North parapet coping and external face, measured 40x200x20mm, 140x400x45mm and 160x100x20mm.

Refer to element #1 for remedial works recommendation

## Photograph #234

View of spalling exposing the reinforcement on external face at North parapet, measured 140x400x45mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	

Comment Remedial Works

Multiple areas of spalling exposing the reinforcement on North parapet coping and external face, measured 40x200x20mm, 140x400x45mm and 160x100x20mm.

Refer to element #1 for remedial works recommendation



## Span 13 **Deck Elements**



### Photograph #235

View of 2200x2000x55mm spalling exposing the reinforcement on the deck soffit around mid-span

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.5

### Comment

There were multiple spalling areas on the deck soffit and along the edge at South end, measuring 2200x2000x55mm, 300x300x35mm and 450x350x35mm.

### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #236

View of 300x300x35mm and 450x350x35mm spalling exposing the reinforcement on the edge of deck soffit at South end



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.5

## Comment

There were multiple spalling areas on the deck soffit and along the edge at South end, measuring 2200x2000x55mm, 300x300x35mm and 450x350x35mm.

### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Span 13 **Deck Elements**



## Photograph #237

Minor shrinkage crack up to 1.95m in length on the deck soffit

**Inspection Date:** 

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** Comment

Minor shrinkage crack up to 1.95m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection



## Photograph #238

View of spalling exposing the reinforcement on South parapet coping, measured 40x170x40mm

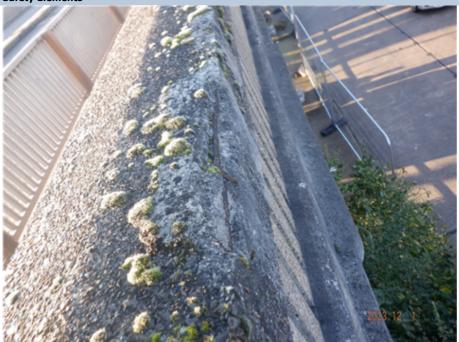
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.5	
Comment		Remedial Work	s						

Multiple spalling exposing the reinforcement on on both parapet coping and external face of North parapet, measured 40x170x40mm, 50x350x50mm and 100x100x20mm. Also, spalling on South parapet at Ch.104m, measured 50x150x20mm noted.

For remedial works recommendation refer to element #1



## Span 13 **Safety Elements**



## Photograph #239

View of failed repair exposing the reinforcement on North parapet coping, measured 50x350x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.5

#### Comment **Remedial Works**

Multiple spalling exposing the reinforcement on on both parapet coping and external face of North parapet, measured 40x170x40mm, 50x350x50mm and 100x100x20mm. Also, spalling on South parapet at Ch.104m, measured 50x150x20mm noted

# For remedial works recommendation refer to element #1

## Photograph #240

View of multiple spalling exposing the reinforcement on external face of North parapet, measured 100x100x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.5

Comment Remedial Works

Multiple spalling exposing the reinforcement on on both parapet coping and external face of North parapet, measured 40x170x40mm, 50x350x50mm and 100x100x20mm. Also, spalling on South parapet at Ch.104m, measured 50x150x20mm noted.

For remedial works recommendation refer to element #1

**Report Status:** Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



## Span 13

## Safety Elements



## Photograph #241

View of spalling on South parapet at Ch.104m, measured 50x150x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.5

## Comment Remedial Works

Multiple spalling exposing the reinforcement on on both parapet coping and external face of North parapet, measured 40x170x40mm, 50x350x50mm and 100x100x20mm. Also, spalling on South parapet at Ch.104m, measured 50x150x20mm noted.

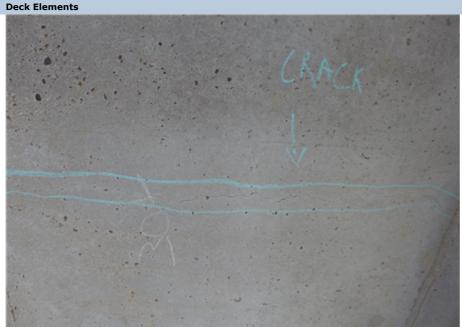
For remedial works recommendation refer to element #1

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# Span 14



## Photograph #242

Minor of 1mm shrinkage crack up to 1.2m in length on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Minor shrinkage crack up to 1.2m in length noted on the deck soffit.

[none]

Minor areas of spalling also noted

Monitor defect during next schedule inspection



## Photograph #243

View of spalling exposing the reinforcement on South parapet coping, measured 50x190x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	M	Υ	0.5

There were multiple spalling exposing the reinforcement on both parapet coping and external face of North and South parapet, measured 50x190x50mm, 70x700x70mm, 200x500x20mm, 100x100x20mm and

70x700x70mm, 200x500x20mm, 100x100x20mm and 110x90x20mm.

Remedial Works
The reinforcement should be clean back to bare metal before

an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Report Status:ApprovedSubmitted Date:13/11/2024Submission Count:1Print Date:14/11/2024



Comment

## Span 14 **Safety Elements**



#### Photograph #244

View of spalling exposing the reinforcement on North parapet coping, measured 70x700x70mm at Ch.113m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

### Comment

There were multiple spalling exposing the reinforcement on both parapet coping and external face of North and South parapet, measured 50x190x50mm, 70x700x70mm, 200x500x20mm, 100x100x20mm and 110x90x20mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Photograph #245

View of spalling spalling exposing the reinforcement on external face of North parapet, measured 200x500x20mm

INC	Element Name	Element Description	Sev	EXL	Delect	Priority	WOIKS	COSLER
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

## Comment

There were multiple spalling exposing the reinforcement on both parapet coping and external face of North and South parapet, measured 50x190x50mm, 70x700x70mm, 200x500x20mm, 100x100x20mm and 110x90x20mm.

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Span 14 **Safety Elements**



### Photograph #246

View of multiple spalling spalling exposing the reinforcement on external face of North parapet, measured 100x100x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

### Comment

There were multiple spalling exposing the reinforcement on both parapet coping and external face of North and South parapet, measured 50x190x50mm, 70x700x70mm, 200x500x20mm, 100x100x20mm and 110x90x20mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Photograph #247

View of 110x90x20mm spalling exposing the reinforcement on external face at South

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

## Comment

There were multiple spalling exposing the reinforcement on both parapet coping and external face of North and South parapet, measured 50x190x50mm, 70x700x70mm, 200x500x20mm, 100x100x20mm and 110x90x20mm.

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Span 15

## **Deck Elements**



## Photograph #248

View of spalling spalling exposing the reinforcement on external face at North, measured 150x200x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	1

### Comment

There were areas of spalling exposing the reinforcement on external face at North, measuring 800x150x50mm and 150x200x25mm. In addition., multiple spalling areas on the deck soffit, measured 1700x1700x40mm, 800x500x40mm and 400x200x15mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Photograph #249

View of spalling spalling exposing the reinforcement on external face at North, measured 800x150x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	1

## Comment

There were areas of spalling exposing the reinforcement on external face at North, measuring 800x150x50mm and 150x200x25mm. In addition., multiple spalling areas on the deck soffit, measured 1700x1700x40mm, 800x500x40mm and 400x200x15mm.

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Span 15 **Deck Elements**



### Photograph #250

View of 1700x1700x40mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	1

#### Comment **Remedial Works**

There were areas of spalling exposing the reinforcement on external face at North, measuring 800x150x50mm and 150x200x25mm. In addition., multiple spalling areas on the deck soffit, measured 1700x1700x40mm, 800x500x40mm and 400x200x15mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #251

View of 800x500x40mm spalling exposing the reinforcement on the deck soffit



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	1

There were areas of spalling exposing the reinforcement on external face at North, measuring 800x150x50mm and 150x200x25mm. In addition., multiple spalling areas on the deck soffit, measured 1700x1700x40mm, 800x500x40mm and 400x200x15mm.

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Span 15 Deck Elements



### Photograph #252

View of 400x200x15mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	1

## Comment Remedial Works

There were areas of spalling exposing the reinforcement on external face at North, measuring 800x150x50mm and 150x200x25mm. In addition., multiple spalling areas on the deck soffit, measured 1700x1700x40mm, 800x500x40mm and 400x200x15mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #253

Minor shrinkage crack up to 2.6m in length on the deck soffit.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Minor shrinkage crack up to 2.6m in length noted on the deck soffit.  $% \label{eq:controlled}$ 

[none]

Monitor defect during next schedule inspection



## Span 15

C1-C4

## Load-bearing Substructure



## Photograph #254 View of 470x150x30mm spalling on C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.



## Span 15

## Load-bearing Substructure



## Photograph #255

View of 880x200x40mm spalling exposing the reinforcement on C3 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment Remedial Works

C1-C4 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.



## Span 15

## Load-bearing Substructure



## Photograph #256

View of 1200x200x40mm spalling exposing the reinforcement on C3 south face extending to west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment Remedial Works

C1-C4 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.



## Span 15

## **Load-bearing Substructure**



### Photograph #257

View of 1470x530x35mm spalling exposing the reinforcement on C4 south face extending to west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment Remedial Works

C1-C4 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.



## Span 15

## Load-bearing Substructure



### Photograph #258

View of 1000x250x50mm spalling exposing the reinforcement on C4 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment Remedial Works

C1-C4 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.



## Span 15

## Load-bearing Substructure



## Photograph #259

View of 550x180x30mm spalling exposing the reinforcement on C4 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	M	Υ	0.5

Comment Remedial Works

C1-C4 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.

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## Span 15

C1-C4

## Load-bearing Substructure



## Photograph #260

View of 650x100x30mm spalling exposing the reinforcement on C4 south face at top

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on columns (C3-C4) throughout, measuring 470x150x30mm, 880x200x40mm, 1200x200x40mm, 1470x530x35mm, 1000x250x50mm, 550x180x30mm and 650x100x30mm.



## Span 15

C5-C6

## Load-bearing Substructure



### Photograph #261

View of 850x180x40mm spalling exposing the reinforcement on C5 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C5) throughout, measuring 850x180x40mm, 400x190x40mm, 600x120x40mm and 1000x330x40mm.



## Photograph #262

View of 400x190x40mm spalling exposing the reinforcement on C5 north face

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k11Pier/columnColumns (1-6)3D2.2MY1

Comment Remedial Works

C5-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C5) throughout, measuring 850x180x40mm, 400x190x40mm, 600x120x40mm and 1000x330x40mm.

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### Span 15

## **Load-bearing Substructure**



### Photograph #263

View of 600x120x40mm spalling exposing the reinforcement on C5 north face extending to west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1

Comment Remedial Works

C5-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C5) throughout, measuring 850x180x40mm, 400x190x40mm, 600x120x40mm and 1000x330x40mm.



## Photograph #264

View of 1000x330x40mm spalling exposing the reinforcement on C5 south face extending to west

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1

Comment Remedial Works

C5-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C5) throughout, measuring 850x180x40mm, 400x190x40mm, 600x120x40mm and 1000x330x40mm.

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## Span 15

## Load-bearing Substructure



### Photograph #265

View of 400x270x40mm isolated area of spalling exposing the reinforcement on the cross head underside between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.2	L	Υ	0.15

## Comment Remedial Works

There was an isolated area of spalling exposing the reinforcement on the cross head underside between C3 and C4.

Refer to element #1 for remedial works recommendation

## Photograph #266

View of fully blocked with debris and fallen leaves on the Eastbound carriageway gully



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
15	Superstructure drainage	Superstructure Drainage	4	Е	8.1	М	Υ	1

Comment Remedial Works

The gully on Eastbound and Westbound carriageway were completely blocked with silt and trapped debris.

Clear blocked gully under routine maintenance



# Span 15

## **Durability Elements**



### Photograph #267

View of fully blocked with debris and fallen leaves on the Westbound carriageway gully

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
15	Superstructure drainage	Superstructure Drainage	4	E	8.1	М	Υ	1

#### **Remedial Works** Comment

The gully on Eastbound and Westbound carriageway were completely blocked with silt and trapped debris. Clear blocked gully under routine maintenance

## Photograph #268

View of moderate loss of road surface adjacent to joint on Westbound



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.1	М	Υ	2

## Comment

There was moderate loss of road surface adjacent to joint on Westbound carriageway. This is consistent with 2023 GI

### Remedial Works

Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair on both expansion joint at North and South



## Span 15

## **Durability Elements**

## Photograph #269

View of tracking and flow of binder of Eastbound carriageway joint

14/11/2023



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.3	M	Υ	1.5

Comment **Remedial Works** 

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

Replace the existing expansion joint on Eastbound carriageway

## Photograph #270

View of surface corrosion on South parapet



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	С	1.1	L	N	
	fences							

[none]

**Remedial Works** Comment

There was minor surface corrosion on the steel parapet post.

Monitor defect during next schedule inspection





### Photograph #271

View of spalling exposing the reinforcement on South parapet coping, measured 40x280x50mm

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.35

#### Comment **Remedial Works**

There were areas of spalling exposing the reinforcement on both parapet copings, measuring 40x280x50mm, 90x40x20mm at Ch.122m on South and 90x300x40mmon North.

Refer to element #1 for remedial works recommendation

## Photograph #272

View of spalling exposing the reinforcement on North parapet coping, measured 90x300x40mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	0.35

Comment **Remedial Works** 

There were areas of spalling exposing the reinforcement on both parapet copings, measuring 40x280x50mm, 90x40x20mm at Ch.122m on South and 90x300x40mm on North.

Refer to element #1 for remedial works recommendation

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# Span 15

## Safety Elements



## Photograph #273

View of spalling exposing the reinforcement on South parapet, measured 90x40x20mm at Ch.122m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.35

## Comment Remedial Works

There were areas of spalling exposing the reinforcement on both parapet copings, measuring 40x280x50mm, 90x40x20mm at Ch.122m on South and 90x300x40mm on North.

Refer to element #1 for remedial works recommendation



## Span 16 **Deck Elements**



#### Photograph #274

View of spalling exposing the reinforcement on external face at North end, measured 150x140x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	M	Υ	0.3

#### Comment **Remedial Works**

There were areas of spalling exposing the reinforcement on the deck soffit and external face at North, measuring 50x300x50mm, 150x140x15mm and 400x600x30mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #275

View of spalling exposing the reinforcement on the deck soffit at North, measured 50x300x50mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.3

#### Comment Remedial Works

There were areas of spalling exposing the reinforcement on the deck soffit and external face at North, measuring 50x300x50mm, 150x140x15mm and 400x600x30mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



## Span 16 **Deck Elements**



### Photograph #276

View of 400x600x30mm spalling exposing the reinforcement on the deck soffit at North

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.3

#### Remedial Works Comment

There were areas of spalling exposing the reinforcement on the deck soffit and external face at North, measuring 50x300x50mm, 150x140x15mm and 400x600x30mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #277

Minor shrinkage crack up to 1.3m in length noted on the deck soffit.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N		

Comment **Remedial Works** [none]

Minor shrinkage crack up to 1.3m in length noted on the deck soffit.

Monitor defect during next schedule inspection

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## Span 16

C2-C6

# Load-bearing Substructure



## Photograph #278

View of 1880x530x50mm spalling exposing the reinforcement on C2 north face extending to east

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and 1000x160x30mm.



## Span 16

C2-C6

## Load-bearing Substructure



## Photograph #279

View of 740x180x50mm spalling exposing the reinforcement on C4 south face

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and 1000x160x30mm.



## Span 16

C2-C6

## Load-bearing Substructure



## Photograph #280

View of 1700x200x50mm spalling exposing the reinforcement on C5 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and 1000x160x30mm.



#### Span 16

C2-C6

1000x160x30mm.

## **Load-bearing Substructure**



#### Photograph #281

View of 1340x170x50mm spalling exposing the reinforcement on C5 south face

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and



### Span 16

## **Load-bearing Substructure**



#### Photograph #282

View of 1000x170x40mm spalling exposing the reinforcement on C6 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2.5

Comment Remedial Works

C2-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and 1000x160x30mm.



### Span 16

C2-C6

#### Load-bearing Substructure



#### Photograph #283

View of 1000x160x30mm spalling exposing the reinforcement on C4 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of spalling exposing the reinforcement on column (C2-6) throughout, measuring 880x530x50mm, 740x180x50mm, 1700x200x40mm, 1340x170x50mm, 1000x170x40mm and 1000x160x30mm.



## Photograph #284

General view of all columns at West side of span

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (West of Span)	1	Α	0		N	

Comment Remedial Works

Overall, all columns were in good condition. No visible defects  $% \label{eq:condition}%$ 

[none]

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#### Span 16

#### **Load-bearing Substructure**



#### Photograph #285

View of 210x310x20mm spalling exposing the reinforcement on the cross head underside between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.2	L	Υ	0.3

#### Comment Remedial Works

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C3-C5. Note: Columns on East of span. No defects on cross heads at West of span throughout

Refer to element #1 for remedial works recommendation

#### Photograph #286

View of 400x290x30mm spalling exposing the reinforcement on the cross head underside between C4 and C5



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.2	L	Υ	0.3

Comment

There were isolated areas of spalling exposing the reinforcement on the cross head underside between C3-C5. Note: Columns on East of span. No defects on cross heads at West of span throughout

Remedial Works

Refer to element #1 for remedial works recommendation



### Span 16 Safety Elements



#### Photograph #287

View of spalling exposing the reinforcement on South parapet, measured 30x250x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	M	Υ	1

#### Comment Remedial Works

There were multiple spalling on both parapet, worse measured 30x250x30mm, 200x370x50mm, 120x70x50mm at Ch.122.6m and 180x130x50mm on the base of North parapet at Ch.124m.

Refer to element #1 for remedial works recommendation

#### Photograph #288

View of spalling on South parapet, measured 200x370x50mm at Ch.122.6m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

**Remedial Works** 

There were multiple spalling on both parapet, worse measured 30x250x30mm, 200x370x50mm, 120x70x50mm at Ch.122.6m and 180x130x50mm on the base of North parapet at Ch.124m.

Refer to element #1 for remedial works recommendation

Report Status:ApprovedSubmitted Date:13/11/2024Submission Count:1Print Date:14/11/2024



Comment

# Span 16

# Safety Elements



#### Photograph #289

View of spalling on South, measured 120x70x50mm at Ch.122.6m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	M	Υ	1

#### Comment Remedial Works

There were multiple spalling on both parapet, worse measured 30x250x30mm, 200x370x50mm, 120x70x50mm at Ch.122.6m and 180x130x50mm on the base of North parapet at Ch.124m.

Refer to element #1 for remedial works recommendation

**Photograph #290** View of spalling on the base of North parapet, measured 180x130x50mm at Ch.124m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	1

 Comment
 Remedial Works

 There were multiple spalling on both parapet, worse measured 30x250x30mm, 200x370x50mm,
 Refer to element

120 x 70 x 50 mm at Ch.122.6m and 180 x 130 x 50 mm on the base of North parapet at Ch.124m.

Refer to element #1 for remedial works recommendation



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Span 16 **Safety Elements** 



#### Photograph #291

General view of North steel parapet

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Comment **Remedial Works** 

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

[none]

### Photograph #292

General view of South steel parapet



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Remedial Works Comment

Overall, both the Northern and Southern steel parapet was in good condition. No visible defects

[none]



### Span 16 Safety Elements



# Photograph #293

General view of Eastbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



#### Photograph #294

General view of Westbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



#### Span 16 Safety Elements



#### Photograph #295

General view of South footway surfacing. Note: Minor vegetation growth at interface with parapet

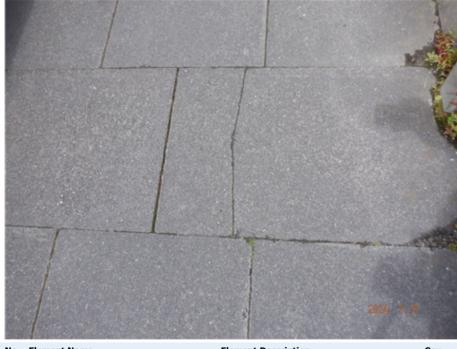
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	С	5.2	L	N	
	surfacing	surfacing						

Comment Remedial Works

Minor vegetation along the length of South footway at interface with parapet.

[none]

Monitor defect during next schedule inspection



## Photograph #296

View of cracked paving slab at Ch.131m

NoElement NameElement DescriptionSevExtDefectPriorityWorksCost £k25Footway/verge/footbridge<br/>surfacing2B3.5LN

Comment Remedial Works

There was cracked paving slabs on the Southern footway surfacing at  ${\rm Ch.131m}$ 

[none]

Monitor defect during next schedule inspection



#### Span 17 **Deck Elements**



#### Photograph #297

View of spalling exposing the reinforcement on external face at North, measured 140x230x5mm

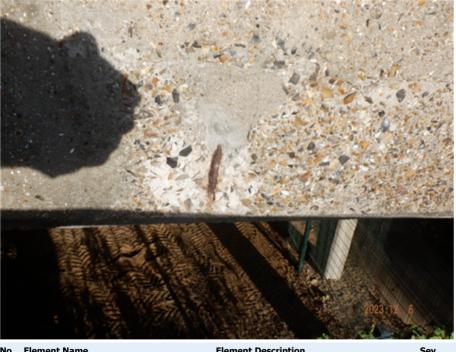
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

#### Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North and South, measuring 140x230x5mm and 90x70x20mm. Also, multiple spalling areas noted on the deck soffit, measuring 1500x600x50mm, 600x400x35mm and 600x500x30mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #298

View of 90x70x20mm spalling exposing the reinforcement on external face at South end

#### Cost £k **Element Name Element Description** Ext Defect **Priority** Works Primary deck element (Table 2) Primary Deck Element С 2.2

There was 2No. areas of spalling exposing the

Comment

reinforcement on external face at North and South, measuring 140x230x5mm and 90x70x20mm. Also, multiple spalling areas noted on the deck soffit, measuring 1500x600x50mm, 600x400x35mm and 600x500x30mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Span 17 **Deck Elements**



#### Photograph #299

View of 1500x600x50mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

#### Comment **Remedial Works**

There was 2No. areas of spalling exposing the reinforcement on external face at North and South, measuring 140x230x5mm and 90x70x20mm. Also, multiple spalling areas noted on the deck soffit, measuring 1500x600x50mm, 600x400x35mm and 600x500x30mm

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #300

View of 600x400x35mm spalling exposing the reinforcement on the deck soffit



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

## Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North and South, measuring 140x230x5mm and 90x70x20mm. Also, multiple spalling areas noted on the deck soffit, measuring 1500x600x50mm, 600x400x35mm and 600x500x30mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Span 17 **Deck Elements**



#### Photograph #301

View of 600x500x30mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	C	2.2	М	Υ	0.6

#### Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North and South, measuring 140x230x5mm and 90x70x20mm. Also, multiple spalling areas noted on the deck soffit, measuring 1500x600x50mm, 600x400x35mm and 600x500x30mm.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #302

View of all columns in good condition

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	1	Α	0		N	

Comment **Remedial Works** 

Overall, all columns were in good condition throughout.

No visible defects noted

[none]

**Report Status:** Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



## Span 17

## **Durability Elements**



#### Photograph #303

View of minor iron pyrite staining

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
19	Finishes: deck elements	Finishes: deck elements	2	В	1.1	L	N	

Comment **Remedial Works** 

Minor iron pyrite staining on the deck soffit. [none]

Monitor defect during next schedule inspection



#### Photograph #304

View of minor iron pyrite staining on C5

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
20	Finishes: substructure elements	Finishes: substructure elements	2	В	1.1	L	N	

Comment **Remedial Works** Minor iron pyrite staining noted on C5 north face.

Monitor defect during next schedule inspection

[none]

13/11/2024 Report Status: Approved **Submitted Date: Submission Count:** 14/11/2024 **Print Date:** 



### Span 17

## Safety Elements



#### Photograph #305

View of spalling exposing the reinforcement on South parapet coping, measured 50x450x60mm at Ch.133.7m 14/11/2023

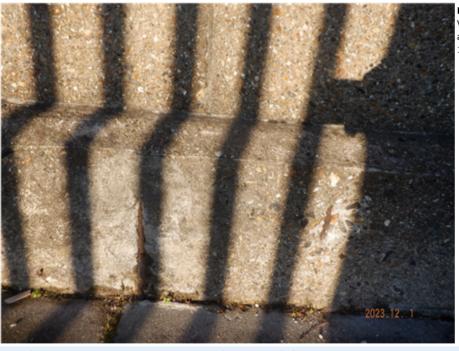
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

#### Comment

There were multiple areas of spalling exposing the reinforcement on both parapet coping and external faces, measuring 50x450x60mm at Ch.133.7m, 170x50x20mm at Ch.131m, 100x300x20mm and 150x140x20mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #306

View of spalling exposing the reinforcement at base of North parapet, measured 170x50x20mm at Ch.131m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

#### Comment

There were multiple areas of spalling exposing the reinforcement on both parapet coping and external faces, measuring 50x450x60mm at Ch.133.7m, 170x50x20mm at Ch.131m, 100x300x20mm and 150x140x20mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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#### Span 17 Safety Elements



#### Photograph #307

View of 150x140x20mm spalling exposing the reinforcement on external face at South end

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

#### Comment

There were multiple areas of spalling exposing the reinforcement on both parapet coping and external faces, measuring 50x450x60mm at Ch.133.7m, 170x50x20mm at Ch.131m, 100x300x20mm and 150x140x20mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #308

View of spalling exposing the reinforcement on South parapet coping, measured 100x300x20mm

140	Elellielle Maille	Element Description	Jev	EXL	Delect	Pilotity	AAOLK2	COSt ER
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

## Comment

There were multiple areas of spalling exposing the reinforcement on both parapet coping and external faces, measuring 50x450x60mm at Ch.133.7m, 170x50x20mm at Ch.131m, 100x300x20mm and 150x140x20mm.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 17



#### Photograph #309

View of cracked paving slab at Ch.137m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	5.2	L	N	
	surfacing	surfacing						

**Remedial Works** Comment [none]

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.137m

Monitor defect during next schedule inspection

13/11/2024 **Report Status:** Approved **Submitted Date: Submission Count: Print Date:** 14/11/2024

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#### Span 18 **Deck Elements**



#### Photograph #310

View of 100x300x25mm spalling exposing the reinforcement on external face at South

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.2

#### Comment **Remedial Works**

There was an area of 100x300x25mm spalling exposing the reinforcement on external face at South end end. 150x150x15mm spalling on the deck soffit also noted.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #311 General view of underside



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.2

## There was an area of 100x300x25mm spalling exposing

the reinforcement on external face at South end end. 150x150x15mm spalling on the deck soffit also noted.

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

**Report Status:** Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



Comment

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#### Span 18 Deck Elements



#### Photograph #312

View of 150x150x15mm spalling on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.2

#### Comment Remedial Works

There was an area of 100x300x25mm spalling exposing the reinforcement on external face at South end end. 150x150x15mm spalling on the deck soffit also noted.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

## Photograph #313

Minor shrinkage crack up to 3.6m in length on the deck soffit.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Minor shrinkage crack up to 3.6m in length noted on the deck soffit.

Monitor defect during next schedule inspection



#### Span 18

## Load-bearing Substructure



Photograph #314 General view of all columns

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	1	Α	0		N	

Comment Remedial Works

Overall, all columns were in good condition throughout.

No visible defects noted





### Photograph #315

View of minor iron pyrite staining on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
19	Finishes: deck elements	Finishes: deck elements	2	В	1.1	L	N	
Comment		Remedial 1	Works					

Minor iron pyrite staining on the deck soffit. [none]

Monitor defect during next schedule inspection



#### Span 18 Safety Elements



#### Photograph #316

View of spalling exposing the reinforcement on South parapet coping external face, measured 180x180x15mm 14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.3

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on South parapet coping external face, measuring 180x180x15mm, 35x300x40mm, 50x300x25mm at Ch.137.8m and 100x90x20mm on external face of North parapet.

Refer to element #1 for remedial works recommendation

#### Photograph #317

View of multiple spalling on external face at North, measured 100x90x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.3

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Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on South parapet coping external face, measuring 180x180x15mm, 35x300x40mm, 50x300x25mm at Ch.137.8m and 100x90x20mm on external face of North parapet.

Refer to element #1 for remedial works recommendation



## Span 18

## Safety Elements



#### Photograph #318

View of spalling exposing the reinforcement on South parapet coping external face, measured 50x300x25mm at Ch.141.2m 14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	0.3

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on South parapet coping external face, measuring 180x180x15mm, 35x300x40mm, 50x300x25mm at Ch.137.8m and 100x90x20mm on external face of North parapet.

Refer to element #1 for remedial works recommendation

## Photograph #319

View of cracked paving slab at Ch.142m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

Comment Remedial Works

There was cracked paving slabs on the Southern footway surfacing at  $\mbox{Ch.}142\mbox{m}$ 

[none]

Monitor defect during next schedule inspection



## Span 19

## **Deck Elements**



#### Photograph #320

View of spalling exposing the reinforcement on external face at North end, measured 240x200x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.6

#### Comment **Remedial Works**

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 200x140x20mm and 240x200x20mm. Also, multiple spalling areas noted on the deck soffit and along the edge, measuring 1900x2800x70mm, 800x400x40mm and 1900x350x35mm.

Refer to element #1 for remedial works recommendation



#### Photograph #321

View of spalling exposing the reinforcement on external face at North end, measured 200x140x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 200x140x20mm and 240x200x20mm. Also, multiple spalling areas noted on the deck soffit and along the edge, measuring 1900x2800x70mm, 800x400x40mm and 1900x350x35mm.

Remedial Works

Refer to element #1 for remedial works recommendation

**Report Status:** Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



Comment

#### Span 19 **Deck Elements**



#### Photograph #322

View of 1900x2800x70mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.6

#### Comment **Remedial Works**

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 200x140x20mm and 240x200x20mm. Also, multiple spalling areas noted on the deck soffit and along the edge, measuring 1900x2800x70mm, 800x400x40mm and 1900x350x35mm.

Refer to element #1 for remedial works recommendation



#### Photograph #323

View of 800x600x40mm spalling exposing the reinforcement on the deck soffit

**Element Description** Cost £k **Element Name** Ext Defect **Priority** Works Primary deck element (Table 2) Primary Deck Element С 2.2

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 200x140x20mm and 240x200x20mm. Also, multiple spalling areas noted on the deck soffit and along the edge, measuring 1900x2800x70mm, 800x400x40mm and 1900x350x35mm.

**Remedial Works** 

Refer to element #1 for remedial works recommendation

**Report Status:** Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



Comment

Span 19



#### Photograph #324

View of 1900x350x35mm spalling exposing the reinforcement along the edge of deck soffit at North end

**Element Name Element Description** Defect **Priority** Works Cost £k Primary deck element (Table 2) Primary Deck Element 3 2.2 0.6

#### **Remedial Works**

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 200x140x20mm and 240x200x20mm. Also, multiple spalling areas noted on the deck soffit and along the edge, measuring 1900x2800x70mm, 800x400x40mm and 1900x350x35mm.

Refer to element #1 for remedial works recommendation



#### Photograph #325

Minor shrinkage crack up to 0.8m in length on the deck soffit.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment **Remedial Works** Minor shrinkage crack up to 0.8m and 1.5m in length on [none]

the deck soffit.

Monitor defect during next schedule inspection



# Span 19



#### Photograph #326

View of minor iron pyrite staining on the

**Inspection Date:** 

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
19	Finishes: deck elements	Finishes: deck elements	2	В	1.1	L	N	

Remedial Works Comment

Minor iron pyrite staining on the deck soffit. [none]

Monitor defect during next schedule inspection



#### Photograph #327

View of spalling exposing the reinforcement on South parapet coping, measured 50x920x55mm at Ch.141.2m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

Comment

Spalling exposing the reinforcement on South parapet coping and external face at North, measuring 50x920x55mm at Ch.141.2m, 30x200x80mm at Ch.145m on South parapet and 200x1000x30mm on North.

## **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Span 19 **Safety Elements**



#### Photograph #328

View of spalling exposing the reinforcement on external face at North, measured 200x1000x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

#### Comment

Spalling exposing the reinforcement on South parapet coping and external face at North, measuring 50x920x55mm at Ch.141.2m, 30x200x80mm at Ch.145m on South parapet and 200x1000x30mm on North.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #329

View of spalling exposing the reinforcement on South parapet coping, measured 30x200x80mm at Ch.145m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	2.2	М	Υ	0.5

## Comment

Spalling exposing the reinforcement on South parapet coping and external face at North, measuring 50x920x55mm at Ch.141.2m, 30x200x80mm at Ch.145m on South parapet and 200x1000x30mm on North.

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Span 19 **Safety Elements**



#### Photograph #330

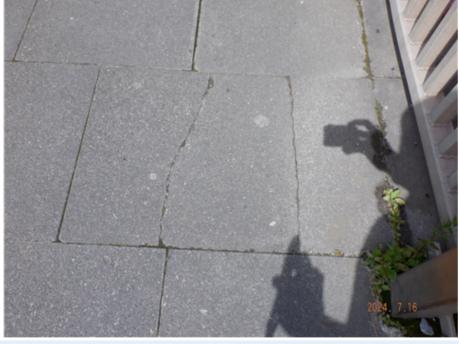
View of cracked paving slab at Ch.150m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	С	3.5	L	N	
	surfacing	surfacing						

**Remedial Works** Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.149m and Ch.150m [none]

Monitor defect during next schedule inspection



## Photograph #331

View of cracked paving slab at Ch.149m

25 Footway/verge/footbridge Footway/verge/footbridge 2 C 3.5 L N surfacing	

Remedial Works Comment

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.149m and Ch.150m [none]

Monitor defect during next schedule inspection



#### Span 20

#### **Deck Elements**



#### Photograph #332

View of spalling exposing the reinforcement on external face at North end, measured 250x700x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	М	Υ	0.5

#### Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 250x700x50mm and and 200x200x20mm. Also, multiple spalling areas exposing the reinforcement on the deck soffit, measuring 350x250x30mm, 1100x900x45mm and 300x450x45mm

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #333

View of spalling exposing the reinforcement on external face at North end, measured 200x200x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.5

#### Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 250x700x50mm and and 200x200x20mm. Also, multiple spalling areas exposing the reinforcement on the deck soffit, measuring 350x250x30mm, 1100x900x45mm and 300x450x45mm

#### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

 Report Status:
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 Print Date:
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#### Span 20 **Deck Elements**



#### Photograph #334

View of 350x250x30mm spalling exposing the reinforcement on the deck soffit at South

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.5	

#### Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 250x700x50mm and and 200x200x20mm. Also, multiple spalling areas exposing the reinforcement on the deck soffit, measuring 350x250x30mm, 1100x900x45mm and 300x450x45mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #335

View of multiple spalling exposing the reinforcement on the deck soffit, measured 1100x900x45mm and 300x450x45mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	M	Υ	0.5

Comment

There was 2No. areas of spalling exposing the reinforcement on external face at North end, measuring 250x700x50mm and and 200x200x20mm. Also, multiple spalling areas exposing the reinforcement on the deck soffit, measuring 350x250x30mm, 1100x900x45mm and 300x450x45mm

#### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



**Inspection Type:** Principal Inspection Report Structure Name: Broadmead Road Viaduct

**Inspection Date:** Identifier:

14/11/2023

#### Span 20 **Deck Elements**



#### Photograph #336

Minor shrinkage crack up to 1.2m in length on the deck soffit.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	С	2.3	L	N	

Comment **Remedial Works** 

Multiple minor shrinkage crack up to 0.6m, 1.2m and 2.6m in length noted on the deck soffit.

[none]

Monitor defect during next schedule inspection



### Photograph #337

View of minor surface corrosion on the holding down bolts and plate

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	1.1	L	N	

Remedial Works Comment Minor surface corrosion noted on the holding down bolts [none]

and plate

Monitor defect during next schedule inspection



#### Span 20

## Load-bearing Substructure



#### Photograph #338

View of 300x400x30mm spalling exposing the reinforcement on C1 east face extending to cross head

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	Е	2.2	Н	Υ	4

Comment Remedial Works

C1-C3

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.



### Span 20

## Load-bearing Substructure



#### Photograph #339

View of 700x250x50mm spalling exposing the reinforcement on C2 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	Е	2.2	Н	Υ	4

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.

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### Span 20

## Load-bearing Substructure



#### Photograph #340

View of 900x150x40mm spalling exposing the reinforcement on C2 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	E	2.2	Н	Υ	4

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.



#### Span 20

## Load-bearing Substructure



#### Photograph #341

View of 500x200x40mm spalling exposing the reinforcement on C1 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	E	2.2	Н	Υ	4

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.



#### Span 20

## Load-bearing Substructure



#### Photograph #342

View of 1300x300x50mm spalling exposing the reinforcement on C2 west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	Е	2.2	Н	Υ	4

Comment Remedial Works

C1-C3

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.



### Span 20

## Load-bearing Substructure



#### Photograph #343

View of 400x400x25mm spalling exposing the reinforcement on C3 west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	Е	2.2	Н	Υ	4

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.



# Span 20

# Load-bearing Substructure



# Photograph #344

View of 590x150x40mm spalling exposing the reinforcement on C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	Е	2.2	Н	Υ	4

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout and extending to cross head, measuring 300x400x30mm, 700x250x50mm, 900x150x40mm, 500x200x40mm, 1300x300x45mm, 400x400x25mm and 590x150x40mm.

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# Span 20

# Load-bearing Substructure



# Photograph #345

View of 620x290x50mm spalling exposing the reinforcement on C4 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	M	Υ	1.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm, 900x130x30mm and 900x130x30mm.



# Span 20

C4-C6

# Load-bearing Substructure



### Photograph #346

View of 1100x150x30mm spalling exposing the reinforcement on C5 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	M	Υ	1.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm,

900x130x30mm and 900x130x30mm.



# Span 20

C4-C6

# Load-bearing Substructure



# Photograph #347

View of 950x100x40mm spalling exposing the reinforcement on C5 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	M	Υ	1.5

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm, 900x130x30mm and 900x130x30mm.



# Span 20

# Load-bearing Substructure



# Photograph #348

View of 1200x150x40mm spalling exposing the reinforcement on C6 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	M	Υ	1.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm, 900x130x30mm and 900x130x30mm.

Report Status: Approved Submitted Date: 13/11/2024



**Submission Count:** 

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14/11/2024

# Span 20

# Load-bearing Substructure



# Photograph #349

View of 350x170x35mm spalling exposing the reinforcement on C6 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	М	Υ	1.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm, 900x130x30mm and 900x130x30mm.



### Span 20

# Load-bearing Substructure



### Photograph #350

View of 900x130x30mm spalling exposing the reinforcement on C5 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	4	D	2.2	М	Υ	1.5

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 620x290x50mm, 1100x150x30mm, 950x100x40mm, 1200x150x40mm, 350x170x35mm, 900x130x30mm and 900x130x30mm.



# Photograph #351

View of 480x170x30mm spalling exposing the reinforcement on the cross head underside between C4 and C5

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	4	С	2.2	М	Υ	1.5

Comment Remedial Works

There were multiple areas of severe spalling exposing the reinforcement on the cross heads between C1-C5, measuring 480x170x30mm, full width x 310x40mm, 1000x250x35mm and 480x330x25mm.

Refer to element #1 for remedial works recommendation



# Span 20

# **Load-bearing Substructure**



### Photograph #352

View of full width x 310x40mm spalling exposing the reinforcement on the cross head underside between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	4	С	2.2	М	Υ	1.5

### Comment Remedial Works

There were multiple areas of severe spalling exposing the reinforcement on the cross heads between C1-C5, measuring 480x170x30mm, full width x 310x40mm, 1000x250x35mm and 480x330x25mm.

Refer to element #1 for remedial works recommendation

# Photograph #353

View of 1000x250x35mm spalling exposing the reinforcement on the cross head underside between C1 and C2



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	4	С	2.2	М	Υ	1.5

# Comment

There were multiple areas of severe spalling exposing the reinforcement on the cross heads between C1-C5, measuring 480x170x30mm, full width x 310x40mm, 1000x250x35mm and 480x330x25mm.

Remedial Works

Refer to element #1 for remedial works recommendation



# Span 20

# Load-bearing Substructure



### Photograph #354

View of 480x330x25mm spalling exposing the reinforcement on the cross head east face between C1 and C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	4	С	2.2	М	Υ	1.5

### Remedial Works Comment

There were multiple areas of severe spalling exposing the reinforcement on the cross heads between C1-C5, measuring 480x170x30mm, full width x 310x40mm, 1000x250x35mm and 480x330x25mm.

### Refer to element #1 for remedial works recommendation

# Photograph #355

View of typical tracking and flow of binder on Westbound carriageway joint



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.3	М	Υ	2.5

Comment

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

**Remedial Works** 

Replace the existing expansion joints on Westbound carriageway

**Report Status:** Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



Inspection Type: Principal Inspection Report
Structure Name: Broadmead Road Viaduct

Inspection Date:

Identifier:

14/11/2023

ntifier: B

# Span 20

# **Durability Elements**



### Photograph #356

General view of asphalt plug joint on Eastbound carriageway surfacing in good condition

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.3	М	Υ	2.5

# Comment

Longstanding tracking and flow of binder noted on Eastbound carriageway joint leading to extensive leakage onto the elements below

# Remedial Works

Replace the existing expansion joints on Westbound carriageway



# Photograph #357

View of non-offensive graffiti on cross head east face between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
20	Finishes: substructure elements	Finishes: substructure elements	2	В		L	Υ	0.1

 Comment
 Remedial Works

 Non-offensive graffiti noted on east face between C3 and
 Remove graffiti f

C4.

Remove graffiti from cross head under routine maintenance



# Span 20 **Safety Elements**



### Photograph #358

View of spalling exposing the reinforcement on South parapet coping, measured 90x340x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.5

### Comment

There were multiple spalling exposing the reinforcement on South parapet coping, post, internal and external face, measured 90x340x50mm, 50x160x90mm, 150x180x15mm and 160x170x130mm at Ch.152m. Also, 100x50x30mm minor spalling noted on North parapet post at Ch.155m

### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #359

View of 160x170x130mm spalling exposing the reinforcement on South parapet internal face at Ch.152m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	М	Υ	0.5

Comment

There were multiple spalling exposing the reinforcement on South parapet coping, post, internal and external face, measured 90x340x50mm, 50x160x90mm, 150x180x15mm and 160x170x130mm at Ch.152m. Also, 100x50x30mm minor spalling noted on North parapet post at Ch.155m

### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 20 Safety Elements



### Photograph #360

View of minor spalling on North parapet post, measured 100x50x30mm at Ch.155m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	0.5

# Comment

There were multiple spalling exposing the reinforcement on South parapet coping, post, internal and external face, measured 90x340x50mm, 50x160x90mm, 150x180x15mm and 160x170x130mm at Ch.152m. Also, 100x50x30mm minor spalling noted on North parapet post at Ch.155m

# Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 21 Deck Elements



### Photograph #361

View of multiple spalling exposing the reinforcement on the deck soffit, measured 700x350x25mm, 600x300x30mm, 900x900x30mm and 1700x1300x40mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit throughout, the worse areas measured 700x350x25mm, 600x300x30mm, 900x900x30mm, 1700x1300x40mm, 300x350x40mm, 650x600x50mm, 300x250x30mm, 2620x2600x50mm, 700x400x30mm, 1000x600x40mm, 1000x700x40mm and 650x450x30mm

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 21



### Photograph #362

View of multiple spalling exposing the reinforcement on the deck soffit, measured 300x350x40mm, 650x600x50mm and 300x250x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit throughout, the worse areas measured 700x350x25mm, 600x300x30mm, 900x900x30mm, 1700x1300x40mm, 300x350x40mm, 650x600x50mm, 300x250x30mm, 2620x2600x50mm, 700x400x30mm, 1000x600x40mm, 1000x700x40mm and 650x450x30mm

# Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 21



### Photograph #363

View of spalling exposing the reinforcement on the deck soffit, measured 2620x2600x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit throughout, the worse areas measured 700x350x25mm, 600x300x30mm, 900x900x30mm, 1700x1300x40mm, 300x350x40mm, 650x600x50mm, 300x250x30mm, 2620x2600x50mm, 700x400x30mm, 1000x600x40mm, 1000x700x40mm and 650x450x30mm

# Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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# Span 21 Deck Elements



### Photograph #364

View of multiple spalling exposing the reinforcement on the deck soffit, measured 700x400x30mm, 1000x600x40mm, 1000x700x40mm and 650x450x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit throughout, the worse areas measured 700x350x25mm, 600x300x30mm, 900x900x30mm, 1700x1300x40mm, 300x350x40mm, 650x600x50mm, 300x250x30mm, 2620x2600x50mm, 700x400x30mm, 1000x600x40mm, 1000x700x40mm and 650x450x30mm

# Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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# Span 21

# Load-bearing Substructure



# Photograph #365

View of 600mm x full width x 45mm spalling exposing the reinforcement on C1 west face

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	M	Υ	1

Comment Remedial Works

C1-C3

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout, measuring 600mm x full width x 45mm,  $1560 \times 360 \times 50$ mm,  $1100 \times 200 \times 50$ mm,  $760 \times 370 \times 40$ mm and  $660 \times 100 \times 50$ mm.



# Span 21

# Load-bearing Substructure



# Photograph #366

View of 1560x360x50mm spalling exposing the reinforcement on C2 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	M	Υ	1

Comment Remedial Works

C1-C3

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout, measuring 600mm x full width x 45mm,  $1560 \times 360 \times 50$ mm,  $1100 \times 200 \times 50$ mm,  $760 \times 370 \times 40$ mm and  $660 \times 100 \times 50$ mm.



# Span 21

C1-C3

# Load-bearing Substructure



### Photograph #367

View of 1100x200x50mm spalling exposing the reinforcement on C3 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	M	Υ	1

Comment Remedial Works

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout, measuring 600mm x full width x 45mm,  $1560 \times 360 \times 50$ mm,  $1100 \times 200 \times 50$ mm,  $760 \times 370 \times 40$ mm and  $660 \times 100 \times 50$ mm.



# Span 21

# Load-bearing Substructure



# Photograph #368

View of 760x370x40mm spalling exposing the reinforcement on C3 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	M	Υ	1

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout, measuring 600mm x full width x 45mm,  $1560 \times 360 \times 50$ mm,  $1100 \times 200 \times 50$ mm,  $760 \times 370 \times 40$ mm and  $660 \times 100 \times 50$ mm.

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# Span 21

# Load-bearing Substructure



# Photograph #369

View of 660x100x50mm spalling exposing the reinforcement on C3 west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	С	2.2	М	Υ	1

Comment Remedial Works

C1-C3 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C1-3) throughout, measuring 600mm x full width x 45mm,  $1560 \times 360 \times 50$ mm,  $1100 \times 200 \times 50$ mm,  $760 \times 370 \times 40$ mm and  $660 \times 100 \times 50$ mm.



# Span 21

# Load-bearing Substructure



### Photograph #370

View of 1600x150x30mm spalling exposing the reinforcement on C4 north face

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2

Comment Remedial Works

C4-C6

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 1600x150x30mm,  $550mm \times full$  width  $\times 45mm$ , 730x100x30mm,  $1800mm \times full$  width  $\times 60mm$ , 700x100x25mm and 1000x150x35mm



# Span 21

# Load-bearing Substructure



### Photograph #371

View of 550mm x full width x 45mm spalling exposing the reinforcement on C4 west face

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2

Comment Remedial Works

C4-C6

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 1600x150x30mm,  $550mm \times full$  width  $\times 45mm$ , 730x100x30mm,  $1800mm \times full$  width  $\times 60mm$ , 700x100x25mm and 1000x150x35mm

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# Span 21

# Load-bearing Substructure



# Photograph #372

View of 730x100x30mm spalling exposing the reinforcement on C4 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 1600x150x30mm,  $550mm \times full$  width  $\times 45mm$ , 730x100x30mm,  $1800mm \times full$  width  $\times 60mm$ , 700x100x25mm and 1000x150x35mm



# Span 21

# Load-bearing Substructure



### Photograph #373

View of 1800mm x full width x 60mm spalling exposing the reinforcement on C4 east face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring  $1600 \times 150 \times 30 \text{mm}$ ,  $550 \text{mm} \times \text{full}$  width x 45 mm,  $730 \times 100 \times 30 \text{mm}$ ,  $1800 \text{mm} \times \text{full}$  width x 60 mm,  $700 \times 100 \times 25 \text{mm}$  and  $1000 \times 150 \times 35 \text{mm}$ 

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# Span 21

# Load-bearing Substructure



# Photograph #374

View of 700x100x25mm spalling exposing the reinforcement on C6 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2

Comment Remedial Works

C4-C6

Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 1600x150x30mm,  $550mm \times full$  width  $\times 45mm$ , 730x100x30mm,  $1800mm \times full$  width  $\times 60mm$ , 700x100x25mm and 1000x150x35mm



# Span 21

### Load-bearing Substructure



### Photograph #375

View of 1000x150x35mm spalling exposing the reinforcement on C6 north face

No Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11 Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	2

Comment Remedial Works

C4-C6 Refer to element #1 for remedial works recommendation

There were multiple areas of severe spalling exposing the reinforcement on column (C4-6) throughout, measuring 1600x150x30mm,  $550mm \times full$  width  $\times 45mm$ , 730x100x30mm,  $1800mm \times full$  width  $\times 60mm$ , 700x100x25mm and 1000x150x35mm



# Photograph #376

View of spalling along the edge of column support, measured approximately 520x130x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (West of Span)	3	В	2.2	М	Υ	0.5

Comment Remedial Works

There were spalling with exposed reinforcement on the column support, measured approximately 520x130x25mm and  $500mm \times full$  height  $\times 30mm$ .

Refer to element #1 for remedial works recommendation



# Span 21

# Load-bearing Substructure



### Photograph #377

View of spalling exposing the reinforcement on the column support, measured 500mm  $\times$  full height  $\times$  30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (West of Span)	3	В	2.2	М	Υ	0.5

### Comment Remedial Works

There were spalling with exposed reinforcement on the column support, measured approximately 520x130x25mm and 500mm x full height x 30mm.

Refer to element #1 for remedial works recommendation

# 2023 1 23

# Photograph #378

View of 430x150x50mm spalling exposing the reinforcement on the cross head between C3 and C4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	M	Υ	0.35

# Comment

There was 2No.areas of spalling exposing the reinforcement on the cross head between columns (C1-C4), measuring 430x150x50mm and 300x300x30mm

# Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

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# Span 21

# Load-bearing Substructure



### Photograph #379

View of 300x300x30mm spalling exposing the reinforcement on the cross head between C1 and C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	M	Υ	0.35

### Comment

There was 2No.areas of spalling exposing the reinforcement on the cross head between columns (C1-C4), measuring 430x150x50mm and 300x300x30mm

# Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #380

View of spalling exposing the reinforcement on the Eastern face, measured 350x200x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5
Cor	nment	Remedial Wor	ks					

There were multiple spalling exposing the reinforcement on the Eastern face of cross head, measured 350x200x30mm, 500x400x30mm, 400x300x40mm and 350x200x40mm

[none]



# Span 21

### **Load-bearing Substructure**



### Photograph #381

View of spalling exposing the reinforcement on the Eastern face, measured 500x400x30mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5

# Comment Remedial Works

There were multiple spalling exposing the reinforcement on the Eastern face of cross head, measured 350x200x30mm, 500x400x30mm, 400x300x40mm and 350x200x40mm

[none]



# Photograph #382

View of 4No. spalling exposing the reinforcement on the Eastern face, worse measured 400x300x40mm and 350x200x40mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5
Comment		Remedial Wor	ks					

There were multiple spalling exposing the reinforcement on the Eastern face of cross head, measured 350x200x30mm, 500x400x30mm, 400x300x40mm and 350x200x40mm

[none]



# Span 21

# **Durability Elements**



### Photograph #383

View of isolated area of non-offensive graffiti on South RC parapet wall at Ch.159.3m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	D		L	Υ	0.4
	foncos							

### Comment

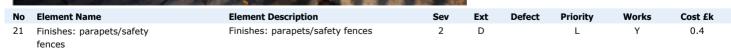
There was non-offensive graffiti noted on both RC parapet wall, at Ch.159.3m on South parapet. This is due to vandalism

### **Remedial Works**

Remove the non-offensive graffiti on both RC parapet walls under routine maintenance

# Photograph #384

View of isolated area of non-offensive graffiti on North RC parapet wall at Ch.156m



Comment Remedial Works

There was non-offensive graffiti noted on both RC parapet wall, at Ch.159.3m on South parapet. This is due to vandalism

Remove the non-offensive graffiti on both RC parapet walls under routine maintenance



# Span 21 **Safety Elements**



### Photograph #385

View of minor spalling on South RC parapet wall, measured 100x100x50mm, at Ch.153.7m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	Υ	0.15

### Comment

There was minor spalling on South RC parapet wall and post, measured 100x100x50mm

# **Remedial Works**

Undertake patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent

# Photograph #386

View of joint mortar loss along the base of Northern RC wall at Ch.156m to 164m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	D	3.2	М	Υ	2.5

**Remedial Works** Comment

There was joint mortar loss along the base of Northern RC wall at Ch.156m to 164m.

Rake out areas of defective mortar and repair using an approved cementitious material



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Span 21

# **Safety Elements**



### Photograph #387

General view of North steel parapet

**Inspection Date:** 

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	3	В	13.1	L	Υ	0.15

Comment **Remedial Works** 

Isolated area of minor impact damage noted on the South parapet vertical infill at East end

Repair/ replace damaged parapet infill

# Photograph #388

View of impact damage to South parapet vertical infill at East end



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	3	В	13.1	L	Υ	0.15

Remedial Works Comment

Isolated area of minor impact damage noted on the South parapet vertical infill at East end

Repair/ replace damaged parapet infill



**Inspection Type:** Principal Inspection Report **Structure Name:** Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

Span 21





# Photograph #389

View of Eastbound carriageway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment **Remedial Works** 

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



# Photograph #390

View of Westbound carriageway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment **Remedial Works** 

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



# Span 21

# Safety Elements



# Photograph #391

General view of North footway surfacing. Note: Uneven paving slabs

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	С	9.6	L	N	
	surfacing	surfacing						

**Remedial Works** Comment [none]

There were uneven paving slabs on the Northern footway surfacing, up to 3-4mm.

Monitor defect during next schedule inspection

13/11/2024 **Report Status:** Approved **Submitted Date: Submission Count: Print Date:** 14/11/2024



# Span 22

# **Deck Elements**



### Photograph #392

View of multiple spalling exposing the reinforcement on the deck soffit, worse measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm and 2400x1120x60mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

### Comment

There were multiple areas of spalling exposing the severely corroded reinforcement on the deck soffit throughout, worse areas measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm, 2400x1120x60mm, 1200x600x45mm, 1400x1300x45mm and 1500x800x45mm.

### **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #393

Closed up view of the above defect showing severe corrosion on the main bar

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

Comment

There were multiple areas of spalling exposing the severely corroded reinforcement on the deck soffit throughout, worse areas measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm, 2400x1120x60mm, 1200x600x45mm, 1400x1300x45mm and 1500x800x45mm.

### Remedial Works

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 22 **Deck Elements**



# Photograph #394

View of 1200x600x45mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

### Comment **Remedial Works**

There were multiple areas of spalling exposing the severely corroded reinforcement on the deck soffit throughout, worse areas measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm, 2400x1120x60mm, 1200x600x45mm, 1400x1300x45mm and 1500x800x45mm.

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #395

View of 1400x1300x45mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

There were multiple areas of spalling exposing the severely corroded reinforcement on the deck soffit throughout, worse areas measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm, 2400x1120x60mm, 1200x600x45mm, 1400x1300x45mm **Remedial Works** 

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

Report Status: Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



and 1500x800x45mm.

Comment

# **Deck Elements**



# Photograph #396

View of 1500x800x45mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	D	2.2	Н	Υ	5

# Comment

There were multiple areas of spalling exposing the severely corroded reinforcement on the deck soffit throughout, worse areas measured 3060x1400x70mm, 500x300x45mm, 300x250x40mm, 1600x900x50mm, 2400x1120x60mm, 1200x600x45mm, 1400x1300x45mm and 1500x800x45mm.

# **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #397

View of 2No. spalling exposing the reinforcement at bottom of C6 south face, measured 400x250x20mm

No	Element Name	Element Description		Sev	EXT	Defect	Priority	works	Cost £K	
11	Pier/column	Columns (1-6)		3	С	2.2	М	Υ	0.5	
Con	ıment		Remedial Works							

There were multiple areas of spalling exposing the corroded reinforcement at the bottom and the top of  ${\sf C6}$ south face and on the column concrete plinth/ upstand throughout, measuring 2No. of 400x250x20mm, 600x200x20mm, 670x90x15mm and 500x450x15mm. Refer to element #1 for remedial works recommendation



# **Load-bearing Substructure**



# Photograph #398

View of 2No. spalling exposing the reinforcement at top of C6 south face, measured 600x200x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	M	Υ	0.5

# Comment Remedial Works

There were multiple areas of spalling exposing the corroded reinforcement at the bottom and the top of C6 south face and on the column concrete plinth/ upstand throughout, measuring 2No. of 400x250x20mm, 600x200x20mm, 670x90x15mm and 500x450x15mm.

# Refer to element #1 for remedial works recommendation

# 13/09/2023 No. Element Name Flament Description Sev

# Photograph #399

View of spalling on top of column concrete plinth/upstand, measured approximately 670x90x15mm

NO	Element Name	Element Description	Sev	EXT	Derect	Priority	WOLKS	COST £K
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

Comment

Remedial Works

There were multiple areas of spalling exposing the corroded reinforcement at the bottom and the top of C6 south face and on the column concrete plinth/ upstand throughout, measuring 2No. of 400x250x20mm, 600x200x20mm, 670x90x15mm and 500x450x15mm.

Refer to element #1 for remedial works recommendation



Inspection Type:Principal Inspection ReportInspection Date:14/11/2023Structure Name:Broadmead Road ViaductIdentifier:B4

# Span 22

# Load-bearing Substructure



# Photograph #400

View of spalling exposing the reinforcement on the concrete plinth/upstand, measured 500x450x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.5

# Comment Remedial Works

There were multiple areas of spalling exposing the corroded reinforcement at the bottom and the top of C6 south face and on the column concrete plinth/ upstand throughout, measuring 2No. of 400x250x20mm, 600x200x20mm, 670x90x15mm and 500x450x15mm.

# Refer to element #1 for remedial works recommendation

# Photograph #401

View of non-offensive graffiti within public view on Southern RC wall at Ch.167.1m

AW	VIII	H
14	1	
MV		
MAG		
		2024. 7.16

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	D		L	Υ	0.2
	fences							

Comment Remedial Works

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.167.1m

Remove graffiti from RC parapet wall



# **Deck Elements**



Principal Inspection Report

Broadmead Road Viaduct

# Photograph #402

View of multiple spalling exposing the reinforcement on the deck soffit, measured 1000x700x45mm and 1500x1300x60mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	3

# Comment

There were multiple areas of spalling exposing the corroded reinforcement on the deck soffit throughout, the worst areas measured 1000x700x45mm, 1500x1300x60mm, 900x800x50mm, 650x750x50mm, 750x650x50mm, 350x300x40mm, 800x800x40mm, 800x800x50mm and 1100x800x40mm.

# **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #403

View of multiple spalling exposing the reinforcement on the deck soffit, measured 900x800x50mm, 650x750x50mm and 750x650x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	3

# Comment

There were multiple areas of spalling exposing the corroded reinforcement on the deck soffit throughout, the worst areas measured 1000x700x45mm, 1500x1300x60mm, 900x800x50mm, 650x750x50mm, 750x650x50mm, 350x300x40mm, 800x800x40mm, 800x800x50mm and 1100x800x40mm.

# **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# **Deck Elements**



# Photograph #404

View of multiple spalling exposing the reinforcement on the deck soffit, measured 350x300x40mm, 800x800x40mm, 800x800x50mm and 1100x800x40mm

**Inspection Date:** 

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	D	2.2	М	Υ	3

# Comment

There were multiple areas of spalling exposing the corroded reinforcement on the deck soffit throughout, the worst areas measured 1000x700x45mm, 1500x1300x60mm, 900x800x50mm, 650x750x50mm, 750x650x50mm, 350x300x40mm, 800x800x40mm, 800x800x50mm and 1100x800x40mm.

# **Remedial Works**

The reinforcement should be clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #405

View of 700x80x45mm spalling exposing the reinforcement on C1 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1.3

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C1-C3 North and South face, 700x80x45mm, 1200x200x45mm, 870x170x35mm, 1400x200x40mm, 700x200x30mm and 1000x150x30mm **Remedial Works** 

Refer to element #1 for remedial works recommendation

Report Status: Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



Comment

Inspection Type:Principal Inspection ReportInspection Date:14/11/2023Structure Name:Broadmead Road ViaductIdentifier:B4

# Span 23

# Load-bearing Substructure



# Photograph #406

View of 1200x200x45mm spalling exposing the reinforcement on C2 south face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1.3

# Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C1-C3 North and South face, 700x80x45mm, 1200x200x45mm, 870x170x35mm, 1400x200x40mm, 700x200x30mm and 1000x150x30mm

Refer to element #1 for remedial works recommendation

# 13/09/2023

# Photograph #407

View of 870x170x35mm and 1400x200x40mm spalling exposing the reinforcement on C3 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1.3

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C1-C3 North and South face, 700x80x45mm, 1200x200x45mm, 870x170x35mm, 1400x200x40mm, 700x200x30mm and 1000x150x30mm

Refer to element #1 for remedial works recommendation



# Load-bearing Substructure



# Photograph #408 View of 700x200x30mm and 1000x150x30mm spalling exposing the reinforcement on C3 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	D	2.2	М	Υ	1.3

# Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C1-C3 North and South face, 700x80x45mm, 1200x200x45mm, 870x170x35mm, 1400x200x40mm, 700x200x30mm and 1000x150x30mm

# Refer to element #1 for remedial works recommendation

# 13/09/2023 No. Element Name Element Description Sev

# Photograph #409

View of 450x280x40mm spalling exposing the reinforcement on the cross head underside between C4 and C5

140	Cienient Name	Element Description	Sev	EXL	Delect	Priority	WOIKS	COSLER
12	2 Cross-head/capping beam	Cross head/capping beam	3	В	2.2	М	Υ	0.3

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the cross head underside throughout the whole length, the worst areas measured 450x280x40mm, 800x300x40mm and 300x300x20mm between C4-C6.

Refer to element #1 for remedial works recommendation



14/11/2023 Inspection Type: Principal Inspection Report **Inspection Date: Structure Name:** Broadmead Road Viaduct Identifier:

# Span 23

# **Load-bearing Substructure**



# Photograph #410

View of multiple spalling exposing the reinforcement on the cross head underside between C5 and C6, measured 800x300x40mm and 300x300x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	В	2.2	М	Υ	0.3

### Comment **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on the cross head underside throughout the whole length, the worst areas measured 450x280x40mm, 800x300x40mm and 300x300x20mm between C4-C6.

Refer to element #1 for remedial works recommendation



# Photograph #411

View of loss of road surface adjacent to joint on Eastbound

**Element Name Element Description** Defect **Priority** Cost £k 10.1 18 Movement/expansion joints Movement/expansion Joints 3 В Μ

Comment

There was loss of road surface adjacent to joint on Westbound carriageway. This is consistent with 2023 GI

Break out the area of defective carriageway surfacing and repair with a suitable mastic asphalt patch repair on Eastbound expansion joint



**Inspection Type:** Principal Inspection Report **Structure Name:** Broadmead Road Viaduct

**Inspection Date:** Identifier: 14/11/2023

# Span 23

# **Durability Elements**



# Photograph #412

View of typical tracking and flow of binder on Westbound carriageway joint

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.3	М	Υ	2.5

Comment

Longstanding tracking and flow of binder noted on Westbound carriageway joint leading to extensive leakage onto the elements below

# Remedial Works

Replace the existing expansion joints on Westbound carriageway





No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	D		L	Υ	
	fences							

2024. 7.16

**Remedial Works** Comment

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.171m

Remove graffiti from RC parapet wall



# Span 23 **Safety Elements**



# Photograph #414

View of 50x150x75mm spalling exposing the reinforcement on South RC parapet wall at Ch.171m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	Υ	

### Comment **Remedial Works**

There was 50x150x75mm spalling exposing the reinforcement on South RC parapet wall at Ch.171m. Refer to element #1 for remedial works recommendation

# Photograph #415

View of joint mortar loss along the bottom of South RC parapet wall at Ch.175.7m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	С	3.2	М	Υ	2

# Comment

Isolated area of joint mortar loss along the bottom of Southern RC wall at Ch.175.7m and Northern RC parapet wall at Ch.165.3m to 168m

Monitor defect during next schedule inspection

Remedial Works

Rake out areas of defective mortar and repair using an approved cementitious material



14/11/2023 **Inspection Type:** Principal Inspection Report **Inspection Date:** Structure Name: Broadmead Road Viaduct Identifier:

# Span 23





# Photograph #416

View of cracked paving slab at Ch.181m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

[none]

**Remedial Works** Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.181m

Monitor defect during next schedule inspection

13/11/2024 **Report Status:** Approved **Submitted Date: Submission Count:** 14/11/2024 **Print Date:** 

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# Span 24 **Deck Elements**



# Photograph #417

View of 400x300x35mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

# Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #418

View of 1000x800x40mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

# Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 24 **Deck Elements**



# Photograph #419

View of 600x500x40mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

### Comment **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #420

View of 300x300x35mm and 500x20x35mm spalling exposing the reinforcement on the deck soffit



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

### **Remedial Works** Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.





# Photograph #421

View of 1070x800x45mm spalling exposing the reinforcement on the deck soffit

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #422

View of 950x900x45mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

# Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 24 **Deck Elements**



# Photograph #423

View of 600x570x45mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	1.5

# **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on the deck soffit, the worst areas measured 400x300x35mm, 1000x800x40mm, 600x500x40mm, 300x300x35mm, 1070x800x45mm, 950x900x45mm and 600x570x45mm.

# The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #424

Minor shrinkage crack up to 3.5m in length on the deck soffit.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** 

Minor shrinkage crack up to 3.5m in length noted on the deck soffit.

Monitor defect during next schedule inspection



14/11/2023 **Inspection Type:** Principal Inspection Report **Inspection Date:** Structure Name: Broadmead Road Viaduct Identifier:

# Span 24

# **Load-bearing Substructure**



# Photograph #425

View of 1900x120x30mm spalling exposing the reinforcement on C2 north face extending to west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	4

### Comment **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C2-C4, 1900x120x30mm, 3560x300x40mm, 1200x150x50mm, 1200x250x50mm, 3200x400x25mm and 3400x80x35mm.

# Refer to element #1 for remedial works recommendation

Photograph #426 View of 3560x300x40mm spalling exposing



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	4

**Remedial Works** Comment

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C2-C4, 1900x120x30mm, 3560x300x40mm, 1200x150x50mm, 1200x250x50mm, 3200x400x25mm and 3400x80x35mm.

Refer to element #1 for remedial works recommendation



Inspection Type:Principal Inspection ReportInspection Date:14/11/2023Structure Name:Broadmead Road ViaductIdentifier:B4

# Span 24

# **Load-bearing Substructure**



# Photograph #427

View of multiple spalling exposing the reinforcement on C3 south face extending to east face, measured 1200x150x50mm and 1200x250x50mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	4

# Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C2-C4, 1900x120x30mm, 3560x300x40mm, 1200x150x50mm, 1200x250x50mm, 3200x400x25mm and 3400x80x35mm.

# Refer to element #1 for remedial works recommendation

# 07/09/2023

# Photograph #428

View of 3200x400x25mm spalling exposing the reinforcement on C4 south face extending to east face

NO	Elellient Name	Element Description	Sev	EXL	Delect	Priority	WOIKS	COSLER
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	4

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C2-C4, 1900x120x30mm, 3560x300x40mm, 1200x150x50mm, 1200x250x50mm, 3200x400x25mm and 3400x80x35mm.

Refer to element #1 for remedial works recommendation



14/11/2023 Inspection Type: Principal Inspection Report **Inspection Date: Structure Name:** Broadmead Road Viaduct Identifier:

# Span 24

# **Load-bearing Substructure**



# Photograph #429

View of 3400x80x35mm spalling exposing the reinforcement on C4 north face extending to west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (East of Span)	4	D	2.2	Н	Υ	4

### Comment **Remedial Works**

There were multiple areas of spalling exposing the reinforcement on all columns throughout, the worst areas measured on C2-C4, 1900x120x30mm, 3560x300x40mm, 1200x150x50mm, 1200x250x50mm, 3200x400x25mm and 3400x80x35mm.

Refer to element #1 for remedial works recommendation



# Photograph #430

View of spalling exposing on the cross head underside between C1 and C2, measured 300x485x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C1-C3, measuring 300x485x15mm, full width x1100x20mm and full width x700x20mm

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Load-bearing Substructure



# Photograph #431

View of full width x1100x20mm spalling exposing the reinforcement on the cross head underside between C1 and C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5

# Comment

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C1-C3, measuring 300x485x15mm, full width x1100x20mm and full width x700x20mm

# Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #432

View of full width x700x20mm spalling exposing the reinforcement on the cross head underside between C2 and C3



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	0.5

# Comment

There were multiple areas of spalling exposing the reinforcement on the cross head underside between C1-C3, measuring 300x485x15mm, full width x1100x20mm and full width x700x20mm

# Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



14/11/2023 **Inspection Type:** Principal Inspection Report **Inspection Date: Structure Name:** Broadmead Road Viaduct Identifier:

# Span 24

# **Load-bearing Substructure**



# Photograph #433

View of full height 1mm shrinkage crack on cross head between C2 and C3. Note: Crack associated with leachate

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.3	L	N	

### Comment **Remedial Works**

Minor full height shrinkage noted on cross heads between C2 and C3. Note: Crack associated with leachate. All other cross heads were in good condition Monitor defect during next schedule inspection

# Photograph #434

View of 2No. full height 1mm shrinkage crack on cross head between C2 and C3.

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.3	L	N	

**Remedial Works** Comment

Minor full height shrinkage noted on cross heads between C2 and C3. Note: Crack associated with leachate. All other cross heads were in good condition Monitor defect during next schedule inspection



14/11/2023 **Inspection Type:** Principal Inspection Report **Inspection Date: Structure Name:** Broadmead Road Viaduct Identifier:

# Span 24

# **Durability Elements**



# Photograph #435

View of non-offensive graffiti on the column

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
20	Finishes: substructure elements	Finishes: substructure elements	2	С		L	Υ	0.15

### **Remedial Works** Comment

There was non-offensive graffiti within public view of column C4. This is due to vandalism

Remove graffiti from the column under routine maintenance

# Photograph #436

View of non-offensive graffiti within public view on Southern RC wall at Ch.185.7m



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	D		L	Υ	0.3
	fences							

**Remedial Works** 

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.185.7m. This is due to Remove graffiti from RC parapet walls



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Span 24 Safety Elements



# Photograph #437

General view of North steel parapet

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Comment **Remedial Works** 

Overall, both North and South steel parapet appears in good condition. No visible defects noted.

[none]

Photograph #438

General view of South steel parapet



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Comment **Remedial Works** 

Overall, both North and South steel parapet appears in good condition. No visible defects noted.

[none]



Inspection Type:Principal Inspection ReportInspection Date:Structure Name:Broadmead Road ViaductIdentifier:

# Span 24

# **Safety Elements**



# Photograph #439

General view of Westbound carriageway surfacing

14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

# Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



# Photograph #440

General view of Eastbound carriageway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



**Inspection Type:** Principal Inspection Report **Structure Name:** Broadmead Road Viaduct

**Inspection Date:** 

14/11/2023

Identifier:

Span 24 **Safety Elements** 



# Photograph #441

General view of South footway surfacing. Note: Vegetation growth and debris at interface with RC parapet

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	D	5.2	L	N	
	surfacing	surfacing						

Remedial Works Comment

There was vegetation growth and debris accumulation on both footway surfacing at interface with RC parapet.

[none]

Monitor defect during next schedule inspection



# Photograph #442

View of cracked paving slab at Ch.185m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

Remedial Works Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.185m

[none]

Monitor defect during next schedule inspection



# Span 25 Deck Elements



# Photograph #443

View of 1500x410x50mm spalling exposing the reinforcement on the Northern external face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	Н	Υ	1

# Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

# Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #444

View of 800x450x30mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	Н	Υ	1

Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.





# Photograph #445

View of 350x300x30mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	Н	Υ	1

# Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #446

View of 400x400x40mm spalling exposing the reinforcement on the deck soffit

### **Element Name Element Description** Cost £k Ext Defect Priority Works Primary deck element (Table 2) Primary Deck Element 2.2

Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.





# Photograph #447

View of 600x600x40mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	Н	Υ	1

# Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #448

View of 1500x1500x50mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	Н	Υ	1

Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

# **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# **Deck Elements**



# Photograph #449

View of 300x300x35mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	С	2.2	Н	Υ	1

# Comment

There were multiple areas of spalling exposing the reinforcement on the Northern external face and on the deck soffit, measuring 1500x410x50mm, 800x450x30mm, 350x300x30mm, 400x400x40mm, 600x600x40mm, 1500x1500x50mm and 300x300x35mm.

# Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Photograph #450

Minor shrinkage crack up to 1m in length noted on the deck soffit.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** 

Comment Minor shrinkage crack up to 1mm and 1.3m in length

noted on the deck soffit.

Monitor defect during next schedule inspection



# Span 25 **Deck Elements**



# Photograph #451

View of surface corrosion to the holding down bolts and plate

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	D	1.1	L	N	

**Remedial Works** 

Minor surface corrosion noted on the holding down bolts and plate

Monitor defect during next schedule inspection

# Photograph #452

View of 2No. full height 1mm shrinkage crack on cross head between C2 and C3.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.3	L	N	

**Remedial Works** 

Minor full height shrinkage cracks noted on cross head between C2 and C3. All other cross heads were in good condition

Monitor defect during next schedule inspection



Inspection Type:Principal Inspection ReportInspection Date:14/11/2023Structure Name:Broadmead Road ViaductIdentifier:B4

# Span 25

# **Safety Elements**



# Photograph #453

View of spalling exposing the reinforcement on the Northern parapet, measured 70x230xx60mm at Ch.192m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	M	Υ	0.2

# Comment Remedial Works

There was isolated spalling exposing the reinforcement on the Northern RC parapet wall, measured 140x300xx15mm, 220x70x45mm and 70x230xx60mm at Ch.192m.

Refer to element #1 for remedial works recommendation



# Span 26 **Deck Elements**



# Photograph #454

General view of deck soffit facing North

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.25	

# Comment

Isolated area of spalling exposing the reinforcement on external face at North end and on the deck soffit, measuring 300x300x25mm and 400x300x25mm.

# **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #455

View of isolated spalling exposing the reinforcement on external face at North end, measured 300x300x25mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	M	Υ	0.25

# Comment

Isolated area of spalling exposing the reinforcement on external face at North end and on the deck soffit, measuring 300x300x25mm and 400x300x25mm.

# **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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# Span 26 **Deck Elements**



# Photograph #456

View of 400x300x25mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	M	Υ	0.25

### **Remedial Works** Comment

Isolated area of spalling exposing the reinforcement on external face at North end and on the deck soffit, measuring 300x300x25mm and 400x300x25mm.

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #457

Minor shrinkage crack up to 0.6m in length noted on the deck soffit.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

**Remedial Works** Comment

Multiple shrinkage cracks noted on the deck soffit, length varies from 0.6m, 0.7m, 1.1m and 1.3m.

Monitor defect during next schedule inspection



**Inspection Type:** Principal Inspection Report **Inspection Date:** Structure Name: Broadmead Road Viaduct Identifier:

# Span 26

# **Deck Elements**



# Photograph #458

Multiple shrinkage crack up to 1.1 m, 0.7 mand 1.3m in length noted on the deck soffit. 14/11/2023

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

### **Remedial Works** Comment

Multiple shrinkage cracks noted on the deck soffit, length varies from 0.6m, 0.7m, 1.1m and 1.3m.

Monitor defect during next schedule inspection

# Photograph #459

View of 140x140x20mm spalling exposing the reinforcement on C3 west face



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	В	2.2	М	Υ	0.2

### Comment Remedial Works

There was an isolated area of spalling exposing the reinforcement on C2 west face, measuring 140x140x20mm. All other columns were in good condition.

Refer to element #1 for remedial works recommendation



# **Load-bearing Substructure**



# Photograph #460

View of full height shrinkage crack between

**Inspection Date:** 

Identifier:

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	2	В	2.3	L	N	

**Remedial Works** Comment

Minor full height shrinkage crack noted on cross head between C4 and C5. All other cross heads were in good condition.

[none]

Monitor during next schedule inspection



# Photograph #461

View of cracked paving slab at Ch.199m

**Element Name Element Description** Defect **Priority** Cost £k 25 3.5 Footway/verge/footbridge Footway/verge/footbridge В surfacing surfacing

**Remedial Works** Comment

There was cracked paving slabs on the Southern footway surfacing at Ch.199m

[none]

Monitor defect during next schedule inspection







# Photograph #462

General view of deck soffit facing North

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	M	Υ	0.25

# Comment

There was isolated area of spalling exposing the reinforcement along the edge of deck soffit at North end, measuring 450x200x40mm and 300x200x35mm.

# **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #463

View of 450x200x40mm and 300x200x35mm spalling exposing the reinforcement on the edge of deck soffit t North end



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	3	В	2.2	М	Υ	0.25

# Comment

There was isolated area of spalling exposing the reinforcement along the edge of deck soffit at North end, measuring 450x200x40mm and 300x200x35mm.

# Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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# Span 27



#### Photograph #464

Minor shrinkage crack up to 1.3m in length on the deck soffit.

**Element Name Element Description** Defect **Priority** Works Cost £k Primary deck element (Table 2) Primary Deck Element 2 В 2.3

**Remedial Works** 

Multiple shrinkage cracks noted on the deck soffit, length varies from 1.3m, 2.3m and 4.3m.

Monitor defect during next schedule inspection

#### Photograph #465

Minor shrinkage crack up to 4.3m in length on the deck soffit.



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	2	В	2.3	L	N	

Comment Remedial Works

Multiple shrinkage cracks noted on the deck soffit, length varies from 1.3m, 2.3m and 4.3m.

Monitor defect during next schedule inspection



#### Span 27

# Load-bearing Substructure



#### Photograph #466

View of 90x70x10mm spalling on the C4 west face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	2	В	2.2	L	Υ	0.15

#### Comment Remedial Works

Isolated area of spalling on the C4 west face, measuring 90x70x10mm.

Undertake patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete

#### Photograph #467

View of non-offensive graffiti on the RC parapet wall



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	С		L	Υ		
	fences								

Comment Remedial Works

Non-offensive graffiti noted on the Southern RC parapet wall at  ${\sf Ch.203m.}$  This is due to vandalism.

Remove non-offensive graffiti from RC parapet wall



#### Span 27 **Safety Elements**



#### Photograph #468

View of minor spalling on the Northern parapet coping external face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	2	В	2.2	L	N	

**Remedial Works** 

There was minor spalling on the Northern parapet coping external face.

[none]

Monitor defect during next schedule inspection



# Photograph #469

View of cracked paving slab at Ch.206m

**Element Name Element Description** Priority Cost £k No Sev Ext Defect Works 25 Footway/verge/footbridge Footway/verge/footbridge С 3.5 surfacing surfacing

**Remedial Works** 

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.202m and Ch.206m [none]

Monitor defect during next schedule inspection



# Span 27

# **Safety Elements**



#### Photograph #470

View of cracked paving slab at Ch.202m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	С	3.5	L	N	
	surfacing	surfacing						

**Remedial Works** Comment [none]

There were multiple cracked paving slabs on the Southern footway surfacing at Ch.202m and Ch.206m

Monitor defect during next schedule inspection

13/11/2024 **Report Status:** Approved **Submitted Date: Submission Count: Print Date:** 14/11/2024



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# Span 28



#### Photograph #471

View of spalling exposing the reinforcement on external face at South end, measured 200x700x50mm and 130x600x80mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #472

View of spalling exposing the reinforcement on external face at North end, measured 150x370x140mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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#### Span 28 **Deck Elements**



# Photograph #473

General view of deck soffit facing North

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #474

View of spalling exposing the reinforcement on external face at North end, measured 150x150x20mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Span 28 **Deck Elements**



#### Photograph #475

View of 400x200x50mm spalling exposing the reinforcement on the edge of deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #476

View of 1000x400x35mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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#### Span 28 **Deck Elements**



#### Photograph #477

View of 400x250x25mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #478

View of 250x250x25mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



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**Inspection Date:** Identifier: 14/11/2023

#### Span 28 **Deck Elements**



#### Photograph #479

View of 500x500x50mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary Deck Element	4	С	2.2	Н	Υ	2

#### Comment

There were multiple areas of spalling exposing the reinforcement on external face at South and on North face, measuring200x700x50mm, 130x600x80mm, 150x370x140mm, 150x150x20mm and on the deck soffit, measuring 400x200x50mm, 1000x400x35mm, 400x250x25mm, 250x250x25mm and 500x500x25mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #480

View of 630x150x50mm spalling exposing the reinforcement on C3 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.7

There were multiple areas of spalling exposing the reinforcement on the cross head between C3-C4, measuring 630x150x50mm, 260x100x50mm and 630x630x50mm. All other columns were in good condition

**Remedial Works** Refer to element #1 for remedial works recommendation

**Report Status:** Approved **Submitted Date:** 13/11/2024 **Submission Count: Print Date:** 14/11/2024



Comment

#### Span 28

#### Load-bearing Substructure



#### Photograph #481

View of 260x100x50mm spalling exposing the reinforcement on C3 north face

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.7

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the cross head between C3-C4, measuring 630x150x50mm, 260x100x50mm and 630x630x50mm. All other columns were in good condition

Refer to element #1 for remedial works recommendation

# Photograph #482

View of 630x630x50mm spalling exposing the reinforcement on C4 east face extending to cross head



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Columns (1-6)	3	С	2.2	М	Υ	0.7

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the cross head between C3-C4, measuring 630x150x50mm, 260x100x50mm and 630x630x50mm. All other columns were in good condition

Refer to element #1 for remedial works recommendation



#### Span 28

#### Load-bearing Substructure



#### Photograph #483

View of full width x350x35mm spalling exposing the reinforcement on the cross head underside extending to east face between C1 and C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	M	Υ	1

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the cross head between C1-C4, measurin140x400x35mm, 200x300x30mm, full width x2105x55mm and full widthx460x40mm.

#### Refer to element #1 for remedial works recommendation

# 2024 1.18

# Photograph #484

View of 200x300x30mm spalling exposing the reinforcement on the cross head underside between C1 and C2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1
Comment		Remedial Worl	(S					

There were multiple areas of spalling exposing the reinforcement on the cross head between C1-C4, measurin140x400x35mm, 200x300x30mm, full width x2105x55mm and full widthx460x40mm.

Refer to element #1 for remedial works recommendation



#### Span 28

#### Load-bearing Substructure



#### Photograph #485

View of full width x2105x55mm spalling exposing the reinforcement on the cross head underside between C2 and C3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	M	Υ	1

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the cross head between C1-C4, measurin140x400x35mm, 200x300x30mm, full width x2105x55mm and full widthx460x40mm.

Refer to element #1 for remedial works recommendation

#### Photograph #486

View of full width x460x40mm spalling exposing the reinforcement on the cross head underside between C3 and C4



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
12	Cross-head/capping beam	Cross head/capping beam	3	С	2.2	М	Υ	1

Comment

There were multiple areas of spalling exposing the reinforcement on the cross head between C1-C4, measurin140x400x35mm, 200x300x30mm, full width x2105x55mm and full widthx460x40mm.

Remedial Works

Refer to element #1 for remedial works recommendation



#### Span 28

# **Durability Elements**



#### Photograph #487

General view of Eastbound carriageway asphalt plug joint

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.1	М	Υ	4

#### Comment

There was longstanding moderate tracking and flow of binder on both eastbound and westbound carriageway surfacing leading to extensive water leakage onto the elements below. This is consistent with 2023 GI.

#### Remedial Works

Replace the existing asphalt plug joint at both ends



#### Photograph #488 General view of Westbound carriageway asphalt plug joint

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
18	Movement/expansion joints	Movement/expansion Joints	3	С	10.1	М	Υ	4	
Comment		Remedial Work	s						

There was longstanding moderate tracking and flow of binder on both eastbound and westbound carriageway surfacing leading to extensive water leakage onto the elements below.. This is consistent with 2023 GI.

Replace the existing asphalt plug joint at both ends



# Span 28

#### **Safety Elements**



#### Photograph #489

View of 50x240x40mm spalling exposing the reinforcement on South parapet coping at Ch.207.8m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	N	

#### Comment

There was isolated area of spalling exposing the reinforcement on South parapet coping at Ch.207.8m, measured 50x240x40mm and 50x280x60mm on the North parapet coping at Ch.209.4m.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Photograph #490

View of 50x280x60mm spalling exposing the reinforcement on North parapet coping at Ch.209.4m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	N	

# Comment

There was isolated area of spalling exposing the reinforcement on South parapet coping at Ch.207.8m, measured 50x240x40mm and 50x280x60mm on the North parapet coping at Ch.209.4m.

#### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Span 28 Safety Elements



#### Photograph #491

View of cracked paving slab at Ch.213m and Ch.209m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	С	3.5	L	N	
	surfacing	surfacing						

Comment Remedial Works

There were cracked paving slabs on the Southern footway surfacing at Ch.209m and Ch.213m

Monitor defect during next schedule inspection

[none]

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# Approach Ramp - West

#### **Deck Elements**



#### Photograph #492

View of 225x225x25mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	В	2.2	L	Υ	0.4
		#1)						

#### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 225x225x25mm, 50x50x15mm, 70x50x20mm and 200x50x15mm.

#### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



View of multiple spalling spalling exposing the reinforcement on the deck soffit, measured 50x50x15mm and 70x50x20mm



No	Element Name	Element Description	Sev	EXT	Defect	Priority	works	Cost £K	
1	Primary deck element (Table 2)	Primary deck element (Room #1)	3	В	2.2	L	Υ	0.4	

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 225x225x25mm, 50x50x15mm, 70x50x20mm and 200x50x15mm.

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



# Approach Ramp - West

#### **Deck Elements**



#### Photograph #494

View of 200x50x15mm spalling exposing the reinforcement on the deck soffit

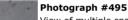
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	В	2.2	L	Υ	0.4

#### Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 225x225x25mm, 50x50x15mm, 70x50x20mm and 200x50x15mm.

#### **Remedial Works**

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



View of multiple spalling exposing the reinforcement on the deck soffit, worse measured 800x800x35mm and 400x600x30mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	С	2.2	M	Υ	0.7
		#2)						

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the deck soffit. The worst areas measured 800x800x35mm, 400x600x30mm and 400x400x20mm.

Refer to element #1 above for remedial works recommendation



# Approach Ramp - West

#### **Deck Elements**



#### Photograph #496

View of 400x400x20mm spalling exposing the reinforcement on the deck soffit

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	С	2.2	M	Υ	0.7
		#2)						

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the deck soffit. The worst areas measured 800x800x35mm, 400x600x30mm and 400x400x20mm.

Refer to element #1 above for remedial works recommendation

#### Photograph #497

View of multiple spalling exposing the reinforcement on the deck soffit at South, measured, 650x200x20mm and 700x100x20mm



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room #3)	3	С	2.2	М	Y	0.5

Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 800x800x35mm, 400x600x30mm and and 400x400x20mm.

Refer to element #1 above for remedial works recommendation



# Approach Ramp - West

#### **Deck Elements**



#### Photograph #498

View of multiple spalling exposing the reinforcement on the deck soffit, measured, 500x500x25mm and 250x250x25mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	С	2.2	M	Υ	0.5
		#3)						

**Remedial Works** Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 800x800x35mm, 400x600x30mm and and 400x400x20mm.

Refer to element #1 above for remedial works recommendation





View of spalling exposing the reinforcement on the deck soffit, worse measured, 350x100x10mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room #3)	3	С	2.2	М	Υ	0.5

Remedial Works Comment

There were multiple areas of spalling exposing the reinforcement on the deck soffit, measuring 800x800x35mm, 400x600x30mm and and 400x400x20mm.

Refer to element #1 above for remedial works recommendation

Report Status: Approved **Submitted Date:** 13/11/2024 14/11/2024 **Submission Count: Print Date:** 



# Approach Ramp - West

#### **Deck Elements**



Photograph #500 General view facing East

No Element Name Elei	ement Description	Sev	Ext	Defect	Priority	Works	Cost £k
1 Primary deck element (Table 2) Prim	mary deck element (Room	3	В	2.2	L	Υ	0.3

Comment Remedial Works

There was isolated area of spalling exposing the reinforcement on the deck soffit, measuring 1700x200x10mm.

Refer to element #1 above for remedial works recommendation



Photograph #501
General view facing West

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	В	2.2	L	Υ	0.3
		#4)						

Comment Remedial Works

There was isolated area of spalling exposing the reinforcement on the deck soffit, measuring 1700x200x10mm.

Refer to element #1 above for remedial works recommendation



# Approach Ramp - West

#### **Deck Elements**



#### Photograph #502

View of 1700x200x10mmspalling exposing the reinforcement on the deck soffit.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	3	В	2.2	L	Υ	0.3
		#4)						

Comment Remedial Works

There was isolated area of spalling exposing the reinforcement on the deck soffit, measuring 1700x200x10mm.

Refer to element #1 above for remedial works recommendation



Photograph #503 General view facing East

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

Comment Remedial Works

Overall, room #5 deck soffit appears in good condition. No visible defects recorded during the inspection [none]



# Approach Ramp - West

#### **Deck Elements**



Photograph #504 General view facing West

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
1	Primary deck element (Table 2)	Primary deck element (Room	1	Α	0		N	
		#5)						

Comment Remedial Works

Overall, room #5 deck soffit appears in good condition. No visible defects recorded during the inspection [none]



# Photograph #505

View of spalling exposing the reinforcement on Eastern support wall, measured 300x150x25mm. Room #1

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm,

1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

# **Load-bearing Substructure**



#### Photograph #506

View of spalling exposing the reinforcement on Eastern support wall, measured 950x1400x200mm. Room #2

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation

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#### Approach Ramp - West Load-bearing Substructure



#### Photograph #507

View of 200x500x25mm spalling exposing the reinforcement at base of wall. Room #4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

Refer to element #1 for remedial works recommendation

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# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #508

View of 370x400x35mm spalling exposing the reinforcement at base of wall. Room #4

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation

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# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #509

View of 400x100x50mm spalling exposing the reinforcement. Room #4

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### Remedial Works

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #510

View of 500x270x30mm spalling exposing the reinforcement. Room #5

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### Remedial Works

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #511

View of 1450x1100x25-30mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

Refer to element #1 for remedial works recommendation



#### Approach Ramp - West **Load-bearing Substructure**



#### Photograph #512

View of 700x400x25-30mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### **Remedial Works** Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

Refer to element #1 for remedial works recommendation



#### Approach Ramp - West Load-bearing Substructure



#### Photograph #513

View of 1450x1100x25-30mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation

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# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #514

View of 1650x800x30-40mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment Remedial Works

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

Refer to element #1 for remedial works recommendation

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#### Approach Ramp - West Load-bearing Substructure



#### Photograph #515

View of 450x600x30mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

#### **Load-bearing Substructure**



#### Photograph #516

View of 600x2200x50mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #517

View of 700x2200x80mm spalling exposing the reinforcement on Eastern face of Western support wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Western support wall	4	D	2.1	Н	Υ	5

#### Comment

There were multiple areas of spalling exposing the reinforcement on the Western face of support wall, measuring 300x150x25mm, 950x1400x200mm, 200x500x25mm, 500x270x30mm, 370x400x35mm and 400x100x50mm. Noted in room #1-2 and room #4-5. Also, on Eastern face of the support wall, measured 1450x1100x25-30mm, 700x400x25-30mm, 1450x1100x25-30mm, 1650x800x30-40mm, 450x600x30mm and 700x2200x80mm.

#### **Remedial Works**

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

# Load-bearing Substructure



#### Photograph #518

View of spalling with exposing reinforcement on the Northern pier wall, measured 110x60x10mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	L	Υ	0.2

#### Comment Remedial Works

There was an isolated area of spalling area exposing the reinforcement on the Northern pier wall, measuring 110x60x10mm, 1300x600x10mm and 190x190x30mm. Noted in room #1 and #5.

Refer to element #1 for remedial works recommendation

#### Photograph #519

View of 1300x600x10mm spalling with exposing reinforcement on the Northern pier wall



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	L	Υ	0.2

Comment

There was an isolated area of spalling area exposing the reinforcement on the Northern pier wall, measuring 110x60x10mm, 1300x600x10mm and 190x190x30mm. Noted in room #1 and #5.

Remedial Works

Refer to element #1 for remedial works recommendation



# Approach Ramp - West

#### Load-bearing Substructure



#### Photograph #520

View of 190x190x30mm spalling with exposing reinforcement on the Northern pier wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Northern pier wall	3	В	2.2	L	Υ	0.2

# Comment Remedial Works

There was an isolated area of spalling area exposing the reinforcement on the Northern pier wall, measuring 110x60x10mm, 1300x600x10mm and 190x190x30mm. Noted in room #1 and #5.

Refer to element #1 for remedial works recommendation

# Photograph #521 Partial view of Southern pier wall - Room #1



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Southern pier wall	3	В	2.2	L	Υ	0.35

# Comment

Isolated area of spalling exposing the reinforcement at bottom of pier, measuring 280x750x30mm and 200x550x40mm. Noted in room #3 and #5

#### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Approach Ramp - West

#### Load-bearing Substructure



#### Photograph #522

View of 280x750x30mm spalling exposing the reinforcement at bottom of pier - Room #3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Southern pier wall	3	В	2.2	L	Υ	0.35

#### Comment

Isolated area of spalling exposing the reinforcement at bottom of pier, measuring 280x750x30mm and 200x550x40mm. Noted in room #3 and #5

#### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



View of 200x550x40mm spalling exposing the reinforcement at bottom of pier - Room #5



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
11	Pier/column	Southern pier wall	3	В	2.2	L	Υ	0.35

#### Comment

Isolated area of spalling exposing the reinforcement at bottom of pier, measuring 280x750x30mm and 200x550x40mm. Noted in room #3 and #5

#### Remedial Works

The reinforcement should cleaned back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Approach Ramp - West Durability Elements



#### Photograph #524

View of widespread graffiti on both pier wall and abutment. Room #3

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
20	Finishes: substructure elements	Finishes: substructure elements	2	D		L	Υ	1

#### Comment Remedial Works

There were areas of widespread non-offensive graffiti on both piers and abutment wall in room #3. This is due to vandalism.

Remove graffiti from room #3 under routine maintenance

# 2024. 7.16

#### Photograph #525

View of non-offensive graffiti within public view on Southern RC parapet wall at Ch.214.3m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
21	Finishes: parapets/safety	Finishes: parapets/safety fences	2	С		L	Υ	0.3
	fences							

Comment Remedial Works

There was non-offensive graffiti within public view on Southern RC parapet wall at Ch.214.3m. This is due to vandalism

[none]



#### Approach Ramp - West

#### **Safety Elements**



#### Photograph #526

View of spalling exposing the reinforcement on South RC parapet coping

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	Υ	0.3

#### Comment

There was 2No. areas of spalling exposing the reinforcement on the Southern parapet coping external face and 2No. on internal face, measured 80x270x40mm at Ch.214.3m and 50x550x40mm at Ch.222.3m

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #527

View of spalling exposing the reinforcement on South RC parapet coping



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	Υ	0.3

#### Comment

There was 2No. areas of spalling exposing the reinforcement on the Southern parapet coping external face and 2No. on internal face, measured 80x270x40mm at Ch.214.3m and 50x550x40mm at Ch.222.3m

#### **Remedial Works**

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



#### Approach Ramp - West

#### Safety Elements



#### Photograph #528

View of spalling exposing the reinforcement on South RC parapet coping, measured 80x270x40mm at Ch.214.3m

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	Υ	0.3

#### Comment

There was 2No. areas of spalling exposing the reinforcement on the Southern parapet coping external face and 2No. on internal face, measured 80x270x40mm at Ch.214.3m and 50x550x40mm at Ch.222.3m

#### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

# Photograph #529 View of spalling exposing the reinforcement on South RC parapet coping, measured 50x550x40mm at Ch.222.3m



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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k	
23	Handrail/parapets/safety fences	Handrail/parapets/safety fences	3	В	2.2	L	Υ	0.3	

#### Comment

There was 2No. areas of spalling exposing the reinforcement on the Southern parapet coping external face and 2No. on internal face, measured 80x270x40mm at Ch.214.3m and 50x550x40mm at Ch.222.3m

#### Remedial Works

The reinforcement should clean back to bare metal before an anti-corrosion primer is applied. The areas should be patch repaired with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.



### Approach Ramp - West

#### **Safety Elements**



#### Photograph #530

General view of South steel parapet

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Comment **Remedial Works** 

Overall, both North and South steel parapet appears in good condition. No visible defects noted.

[none]

#### Photograph #531

General view of North steel parapet

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No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
23	Handrail/parapets/safety fences	Steel Parapets (North and South)	1	Α	0		N	

Remedial Works Comment

Overall, both North and South steel parapet appears in good condition. No visible defects noted.

[none]

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#### Approach Ramp - West

#### **Safety Elements**



#### Photograph #532

General view of Westbound carriageway surfacing

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]

#### Photograph #533

General view of Eastbound carriageway

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
24	Carriageway surfacing	Carriageway surfacing	1	Α	0		N	

Comment Remedial Works

Overall, both Eastbound and Westbound carriageway surfacing appears in good condition. No visible defects noted.

[none]



#### Approach Ramp - West

#### **Safety Elements**



#### Photograph #534

General view of North footway surfacing

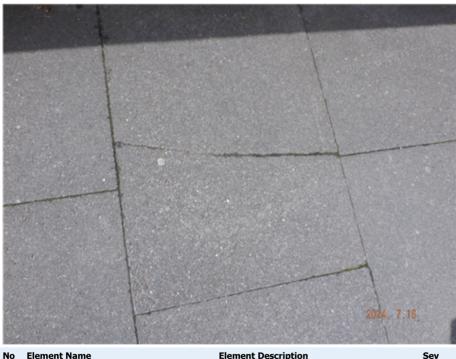
No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge	Footway/verge/footbridge	2	В	3.5	L	N	
	surfacing	surfacing						

Comment Remedial Works

There were minor cracked paving slab on the Southern footway at Ch.218m.

[none]

Monitor defects during next schedule inspection



#### Photograph #535

View of minor cracked paving slab on South footway at Ch.218m.

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
25	Footway/verge/footbridge surfacing	Footway/verge/footbridge surfacing	2	В	3.5	L	N	

Comment Remedial Works

There were minor cracked paving slab on the Southern footway at Ch.218m.

[none]

Monitor defects during next schedule inspection



#### Approach Ramp - West

#### **Ancillary Elements**



Photograph #536
View of North access doors

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	North and South access doors	2	Е	1.1	L	N	
	structure							

Comment Remedial Works

There was surface corrosion on the Northern access door.

Monitor defect during next schedule inspection



#### Photograph #537

View of the missing airbrick on the Northern infill blockwork wall from inside

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Airbrick	3	В		L	Υ	0.3
	structure							

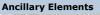
Comment Remedial Works

There was a missing airbrick on the Northern infill blockwork wall.

Replace missing airbrick



## Approach Ramp - West





#### Photograph #538

View of the missing airbrick on the Northern infill blockwork wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Airbrick	3	В		L	Υ	0.3
	ctructure							

Comment Remedial Works

There was a missing airbrick on the Northern infill blockwork wall.

Replace missing airbrick



#### Photograph #539

View of non-offensive graffiti on the Northern blockwork wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall	2	С		L	Υ	0.3
	structure							

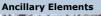
Comment Remedial Works

Moderate non-offensive graffiti on the Northern blockwork wall. This is due to vandalism

Remove graffiti under routine maintenance



#### Approach Ramp - West





#### Photograph #540

Partial view of Southern infill blockwork wall

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall	2	С		L	Υ	0.3
	ctructure							

Comment Remedial Works

Moderate non-offensive graffiti on the Northern blockwork wall. This is due to vandalism

Remove graffiti under routine maintenance

# Photograph #541 Partial view of Southern infill blockwork wall



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall	2	С		L	Υ	0.3
	structure							

Comment Remedial Works

Moderate non-offensive graffiti on the Northern blockwork wall. This is due to vandalism

Remove graffiti under routine maintenance



#### Approach Ramp - West

#### **Ancillary Elements**



#### Photograph #542

View of isolated area of spalling exposing the reinforcement on the North blockwork wall, measured 100x100x15mm

No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall	2	В	2.2	L	Υ	0.1
	structure							

#### Comment

There was an isolated area of spalling exposing the reinforcement on the North blockwork wall, measuring 100x100x15mm.

#### **Remedial Works**

Undertake patch repair with an appropriate cementitious material, ensuring that it is sufficiently 'keyed-in' to the parent concrete.

#### Photograph #543

View of 1mm vertical shrinkage crack on the Southern infill blockwork wall



No	Element Name	Element Description	Sev	Ext	Defect	Priority	Works	Cost £k
39	Other ancillary elements on	Infill blockwork wall	2	В	2.3	L	N	
	structure							

Comment Remedial Works

Minor 1mm vertical shrinkage crack on the Southern infill blockwork wall.

Monitor defect during next schedule inspection



Inspection Type:Principal Inspection Report14/11/2023Structure Name:Broadmead Road ViaductBroadmead Road Viaduct

# **Photo Location Plans**

No photo location plans added. Plans must be added to the inspection's folder with Document type: Defect Location Plan.

Supported file types: .jpeg .png .bmp



Inspection Type:Principal Inspection Report14/11/2023Structure Name:Broadmead Road ViaductBroadmead Road Viaduct

# **Defect Location Plans**

No Defect Location Plans added. Plans must be added to the inspection's folder with Document type: Defect Location Plan.

Supported file types: .jpeg .png .bmp



Inspection Type:Principal Inspection Report14/11/2023Structure Name:Broadmead Road ViaductBroadmead Road Viaduct

# **General Arrangement Drawings**

No General Arrangment Drawings added. Drawings must be added to the inspection's folder with Document type: General Arrangement Drawings. Supported file types: .jpeg .png .bmp



# **Hazard Assessment Sheet**

Assessment date: 15/03/2024
Assessed by: Mario Inacio
Comments: None.

#### Access Information:

This top of the the structure was open to the general public. Access arrangements are required to inspect the

underside of the structure due to locked security gates and running rail lines.								
Hazards/Risks Applicable to this Structure								
Parking of vehi	icle							
Hazard Ref	Hazard Description	Hazard Exists?	Comments:					
1	Causing obstruction to carriageway or pedestrians							
2	Parking on private property							
3	Getting stuck							
4	Obstructing access to properties or land							
5	No problems	☑	Parked on Scoter CI (free parking available).					
Inspection of e	elements above structure							
Hazard Ref	Hazard Description	Hazard Exists?	Comments:					
6	Fast moving traffic							
7	Poor visibility							
8	Narrow road							
9	No refuges/verges							
10	No problems	$\square$	Carriageway was closed of traffic					
Access to sub-	structure elements							
Hazard Ref	Hazard Description	Hazard	Comments:					
		Exists?						
11	Steep/slippery embankments							
12	Dense vegetation							
13	Fencing							
14	Barbed wire							
15	Animals							
16	Security devices							
17	Private landowners							
18	High wing walls/unprotected							
19	No problems	☑	Accessed from the gate on Scoter CI .					
Inspection of s	sub-structure elements							
Hazard Ref	Hazard Description	Hazard	Comments:					
		Exists?						
20	Structure has limited headroom							
21	Structure is poorly lit							
22	The structure is submerged							
23	Both ends are not visible							
24	Watercourse is deep/fast or polluted							
25	Invert is uneven/unstable or soft							
26	Invert is not visible							
27	Structure requires working from height	☑	Inspected the elevation and soffit using scissor lift and ladder					
28	Structure requires confined space access							
29	Structure needs to be inspected using a boat							
30	No problems	☑						
Bearing Inspec	ction							
Hazard Ref	Hazard Description	Hazard Exists?	Comments:					
31	Elevated platform will be needed							
32	No problems							
Services								
Hazard Ref	Hazard Description	Hazard Exists?	Comments:					
33	Overhead services							
34	Buried services i.e. apparatus/covers/chambers							



Principal Inspection Report Inspection Date: 14/11/2023 Inspection Type: Structure Name: Broadmead Road Viaduct Identifier: **Environment Awareness Sheet** 15/03/2024 Survey date: Mario Inacio Name of inspector: General details of structure □ Urban Location Rural  $\overline{\mathbf{V}}$ Water П Carriageway Railway Structure Spans: **Asbestos Management** Asbestos exists?: Don't Know Date of asbestos report: Comments: No evidence of ACM's found during the inspection. Last updated by: Pedro Silva Last updated: 04/05/2018 Inspection of structure surroundings Water Quality: Good Medium Poor П Are there any green plants growing submerged in the water? Are there any plants extending out of the water? Is gravel visible on the invert of the riverbed of the structure? Bird nests: **Bird droppings:** In surrounding vegetation In surrounding vegetation П П On the structure On the structure Holes in the ground: Bank side vegetation: Short grass  $\overline{\mathbf{V}}$ Large > 250mm Long grass Medium 100 - 250mm Brambles & Scrub П Small < 100mm

Animal tracks?
Additional comments:

Animal droppings?
Additional comments:

Degree of traffic disturbance: Accessibility to humans:

**Inspection of structure** 

Structural features: Voids: Large cracks Ledges: Bats visible Newts Bat droppings Lizards/Snakes П Bird Boxes Oily stains around cracks Scratch Marks

Other signs of animal occupation:

Additional Comments:

Bridge was closed to vehicular traffic at the time of this inspection.

 Report Status:
 Approved
 Submitted Date:
 13/11/2024

 Submission Count:
 1
 Print Date:
 14/11/2024

