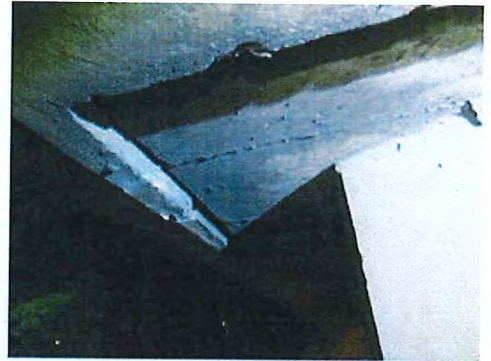


**SCOTLAND TRANSERV SOUTH WEST**



*First Main Defect*



*Second Main Defect*

**PRINCIPAL INSPECTION REPORT**

**Structure: M8 22-23 F62, BEECH AVENUE F/B**

**BICS Inspection Level: SENIOR INSPECTOR (21/01/2019 )**

**Inspection date: 28-May-2019**

**Prepared by SCOTLAND TRANSERV SOUTH WEST**

	Name	Qualification	BICS			Signature	Date
			I or SI	Certificate	Valid Until		
Inspected By	Redacted					Redacted	31/7/19
Assisted By							31/7/19
Checked and Approved By							31/7/19

## Summary of Maintenance Priorities 3 and 4

Span No	Element	Severity	Extent	Maint. Priority Ranking	Estimated Cost
1	Bearing Plinth/Shelf	2 Minor	C Moderate 5 - 20%	3	£1
1	Superstructure Drainage	4 Severe	E Extensive >50%	3	£1
1	Surface Finishes: Substructure Elements	4 Severe	D Extensive 20 - 50%	3	£1,500
1	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£15,200
2	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
3	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
4	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
5	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
5	Footway/Verge/Footbridge Surfacing	4 Severe	B Slight <5%	3	£500
6	Primary Deck Element (Table G4)	3 Moderate	B Slight <5%	3	£2,250
6	Primary Deck Element (Table G4)	3 Moderate	C Moderate 5 - 20%	3	£1,000
6	Half Joints	2 Minor	B Slight <5%	3	£3,500
6	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
7	Primary Deck Element (Table G4)	2 Minor	B Slight <5%	3	£1,000
7	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
8	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
9	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
10	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
11	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£1
12	Superstructure Drainage	4 Severe	E Extensive >50%	3	£1
12	Painting: Parapets/Safety Fences	5 Non-functional	E Extensive >50%	3	£15,200
				<b>TOTAL</b>	<b>£40,163</b>

## CONTENTS

### Executive Summary

- Appendix GA** General Arrangement Drawings  
**Appendix PH** Photographs  
**Appendix DI** Diagrams/Defect Sketches

### 1. Structure Identification & Location Plans

- 1.1 Structure Identification  
1.2 Location Plan

### 2. Checklists

- 2.1 PI Report Checklist

### 3. Description of Structure

- 3.1 General description  
3.2 Deck description  
3.3 End Supports  
3.4 Intermediate Supports

### 4. Maintenance History

- 4.1 Details of maintenance works undertaken since the last Principal Inspection

### 5. Description of Inspection

- 5.1 Previous inspections  
5.2 Name of Inspecting Engineer  
5.3 Date of inspection  
5.4 Weather Conditions  
5.5 Description of how the inspection was undertaken  
5.6 List of areas not inspected

### 6. Results of Inspection

- 6.1 Summary  
6.2 Detailed Defect Descriptions  
6.3 Concrete Impregnation  
6.4 Work Estimates  
6.5 Headroom  
6.6 Remedial Measures  
6.7 Special Inspection/Monitoring  
6.8 Testing  
6.9 Structural Review and Assessment  
6.10 Scour Inspections and Assessments

- Appendix FT** Changes to Full Text Inventory  
**Appendix WR** Weather Resistant Steel Monitoring  
**Appendix DR** Diving Report  
**Enclosure** Special Investigation Report

## EXECUTIVE SUMMARY

The M8 22-23 F62 Beech Avenue Footbridge is a 12 span post tensioned concrete structure. The bridge spans over the M8 and connects Beech Avenue in the Bellahouston Area to Clifford Street in the area of Ibrox. A post tension review was carried out by WSP in 2018.

The structure is currently in good condition. The defects found during the inspection are as follows;

### Maintenance Works Required

- Brick façade to be repaired at ES1 abutment (Item 8)
- Parapet protection paintwork to be repainted to prevent further rusting to metal parapet (Item 7)
- Potholes and uneven surfacing to be repaired to remove trip hazard from the footbridge (Item 11)
- Crack injection to the IS2 base to prevent further deterioration (Item 3)
- Concrete repairs to piers, bridge decks and half joints (Item 1, 3 and 4)
- Investigation required to discover cause of twisting of span 6 and 7 bridge decks (item 1 and 4)

### Cyclic Maintenance Required

- Sleeping bag to be cleared from ES1 bearing shelf during Cyclic Maintenance (item 13)
- ES1 and ES13 gullies to be cleared during Cyclic Maintenance (item 14)
- Debris to be removed from rail joints during Cyclic Maintenance (item 15)

### Management Action Required

3: Special Investigation Required Next Financial Year.

### Summary of defects and findings below;

#### 1. Primary Deck Element

The bridge decks of the structure are generally in good condition, however there are areas of localised spalling and cracking throughout.

Span 6 and 7 appear to be twisting at the relevant half joint and an investigation is required to discover the cause of the defect.

#### 2. Abutments

ES1 and ES13 abutments are hidden behind brick façade. However ES1 abutment has vertical cracking with some cracks leaching but generally in good condition.

#### 3. Piers

Intermediate supports are generally in good condition with local minor spalling, delamination and cracking throughout.

#### 4. Half Joints

Minor spalls on half joints at IS6 and IS8.

#### 5. Parapet Copings

Parapet copings are generally in good condition. Minor spall on span 1 and vertical cracks on all spans.

#### 6. Parapets

Minor surface rusting to the parapets especially at base of posts.

#### 7. Painting: Parapet/Safety Fences

Protecting paint system on both parapets failed on all spans. Parapets should be painted to prevent further deterioration.

#### 8. Surface Finishes: Substructure Elements

Brick façade at ES1 in poor condition and requires repair. ES13 façade generally in good condition.

#### 9. Foundations

Foundations are buried and there are no visible signs of movement or settlement, not inspected as per BD 63/17.

#### 10. Waterproofing

Waterproofing is 44 years old and therefore should be considered for refurbishment. Condition of surfacing indicates minor waterproofing defects on the structure.

#### 11. Surfacing

Loss of material and general weathering throughout leading to uneven surfacing. Deep cracking and potholing present on span 5.

#### 12. Bearings

Bearings generally in good condition.

#### 13. Bearing Shelf

ES1 and ES13 bearing shelves in good condition. However there is evidence of a vagrant living on the ES1 bearing shelf.

#### 14. Superstructure Drainage

Gullies adjacent to ES1 and ES13 rail joints blocked and require to be cleared during cyclic maintenance.

#### 15. Expansion Joints

Debris build up in all rail joints. This should be cleared during cyclic maintenance.

Span No: 1 28/05/2019  
Span No: 2 28/05/2019  
Span No: 3 28/05/2019  
Span No: 4 28/05/2019  
Span No: 5 28/05/2019  
Span No: 6 28/05/2019  
Span No: 7 28/05/2019  
Span No: 8 28/05/2019  
Span No: 9 28/05/2019  
Span No: 10 28/05/2019  
Span No: 11 28/05/2019  
Span No: 12 28/05/2019

## APPENDIX GA

### General Arrangement Drawings



## **APPENDIX PH**

### **Photographs**



**Photo 1 - UPLINK ELEVATION**



**Photo 2 - DOWNLINK ELEVATION**



**Photo 3 - VIEW LOOKING UPLINK M8**



**Photo 4 - VIEW LOOKING DOWNLINK M8**



**DEFECT PHOTOGRAPHS**

*Photo 3 – Evidence of vagrant living on ES1 bearing shelf and brickwork façade damaged.*



**Photo 7 – LHS gully completely blocked at ES1 rail joint**



**Photo 9 – Protective paint system of both parapets failed throughout structure**



**Photo 17 – Localised spall exposing reinforcement at IS6 half joint and span 6 bridge deck**



**Photo 18 – Span 6 bridge deck appears to be twisted at DL RHS adjacent to IS6 half joint**



**Photo 19 – Deep cracks and potholing to span 5 surfacing**

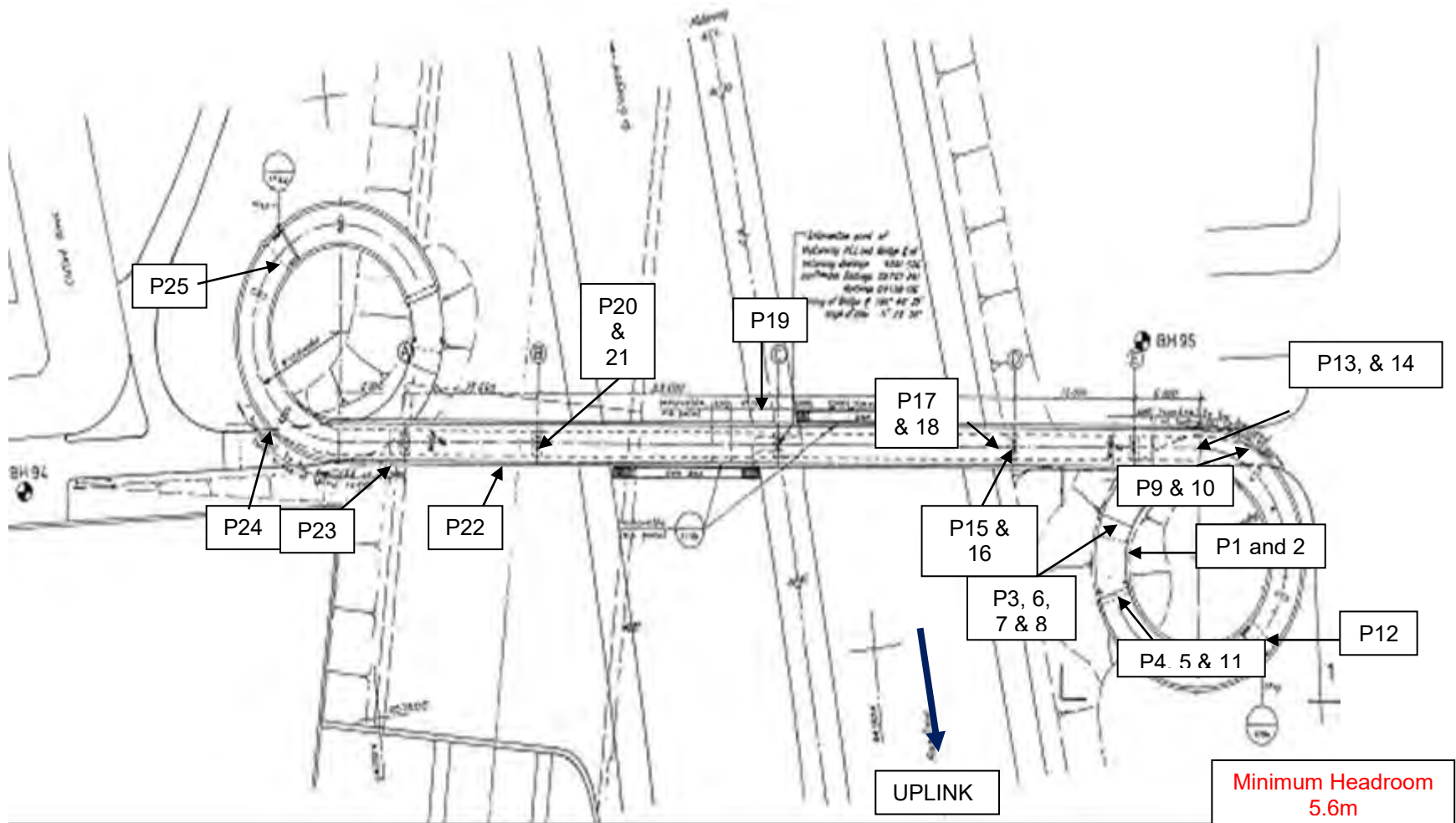


**Photo 20 – Localised spall adjacent to IS8 half joint and span 7**



## **APPENDIX DI**

### **Diagrams/Defect Sketches**



**M8 22-23 F62 Beech Avenue  
Defect Photograph Location Diagram**



# 1. STRUCTURE IDENTIFICATION AND LOCATION PLANS

## 1.1 Structure Identification

### Principal Inspection Report

Structure No. : M8 22-23 F62  
 Structure : BEECH AVENUE F/B  
 Grid Reference : 255766,664157  
 Year of Construction : 1975  
 Date of Inspection : Span No: 1 – 12 28/05/2019

## 1.2 Location Plan



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## 2. CHECKLISTS

### 2.1 Principal Inspection Report Checklist

**Structure Reference No:** M8 22-23 F62

**Structure Name:** BEECH AVENUE F/B

**Principal Inspection Date:**

Span No: 1	28/05/2019
Span No: 2	28/05/2019
Span No: 3	28/05/2019
Span No: 4	28/05/2019
Span No: 5	28/05/2019
Span No: 6	28/05/2019
Span No: 7	28/05/2019
Span No: 8	28/05/2019
Span No: 9	28/05/2019
Span No: 10	28/05/2019
Span No: 11	28/05/2019
Span No: 12	28/05/2019

The above report has been checked for compliance with the following:-

[NOTE: To confirm compliance, double click box to insert tick]

- |     |   |   |
|-----|---|---|
| 1.  | Date of site visit entered into SMS   | ✓ |
| 2.  | Report dated and signed   | ✓ |
| 3.  | Colour photograph inserted on front page  | ✓ |
| 4.  | Appendices GA1/PH*/DI*/FT1/ <del>WR*/DR*/HM*</del> included<br>1 = Mandatory<br>* = Delete as required - refer to Scottish Ministers Requirements   | ✓ |
| 5.  | All fields in Full Text Inventory verified as correct?  | ✓ |
| 6.  | Updating of Joblist checked and verified?   | ✓ |
| 7.  | Uplink/ <del>Downlink</del> shown on GA   | ✓ |
| 8.  | Photographs located on GA by arrows and reference   | ✓ |
| 9.  | Measured headroom shown on GA<br>(Mandatory for all overbridges and for underbridges over roads)  | ✓ |
| 10. | Photographs of all defects with a Priority Ranking >2 included  | ✓ |
| 11. | Works estimates included if an Prioritisation Ranking >2.<br>Where applicable, rates from the Schedule of Rates and Prices given in the Term Contract have been used in preparing the estimate. | ✓ |

12. Structural Review & Assessment undertaken

✓

### 3. DESCRIPTION OF STRUCTURE

#### 3.1 General description

Structure Name: BEECH AVENUE F/B

Number of Spans: 12

Structure Type: FOOTBRIDGE

Route: M8

Confined Space Working: No

Obstacle(s) Crossed: Span 1: GROUND (APPROACH OR SIDELONG)  
Span 2: GROUND (APPROACH OR SIDELONG)  
Span 3: GROUND (APPROACH OR SIDELONG)  
Span 4: PEDESTRIAN WAY  
Span 5: GROUND (APPROACH OR SIDELONG)  
Span 6: TRUNK ROAD  
Span 7: TRUNK ROAD  
Span 8: GROUND (APPROACH OR SIDELONG)  
Span 9: PEDESTRIAN WAY  
Span 10: GROUND (APPROACH OR SIDELONG)  
Span 11: GROUND (APPROACH OR SIDELONG)  
Span 12: GROUND (APPROACH OR SIDELONG)  
Span 12: PEDESTRIAN WAY

OS Grid Reference: 255766,664157

### 3.2 Deck description

Span Description Secondary Deck Element No.	Width Secondary Deck Element	Length	Primary Deck Element	Primary Deck Element Material
---	---------------------------------	--------	----------------------	----------------------------------

#### 3.2a Scour and Assessment

Scour Priority	0
Original Design Loading	N/A
Completed Assessment Dates	0
Assessed Capacity	0

### 3.3 End and Intermediate Supports

Support No.	Support Foundation Type	Support Foundation Material	Support Structural Form	Support Construction
01E	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	BANKSEAT ABUTMENT	REINFORCED CONCRETE
02I	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	SOLID WALL PIER	REINFORCED CONCRETE
03I	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	SOLID WALL PIER	REINFORCED CONCRETE
04I	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	SOLID WALL PIER	REINFORCED CONCRETE
05I	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	SOLID WALL PIER	REINFORCED CONCRETE
06I	PILES - END BEARING	UNIVERSAL SECTION STEEL	SOLID WALL PIER	REINFORCED CONCRETE
07I	PILES - END BEARING	UNIVERSAL SECTION STEEL	SOLID WALL PIER	REINFORCED CONCRETE
08I	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	SOLID WALL PIER	REINFORCED CONCRETE
09I	SPREAD FOOTING ON ROCK	REINFORCED CONCRETE	SOLID WALL PIER	REINFORCED CONCRETE
10I	PILES - END BEARING	UNIVERSAL SECTION STEEL	SOLID WALL PIER	REINFORCED CONCRETE
11I	PILES - END BEARING	UNIVERSAL SECTION STEEL	SOLID WALL PIER	REINFORCED CONCRETE
12I	PILES - END BEARING	UNIVERSAL SECTION STEEL	SOLID WALL PIER	REINFORCED CONCRETE
13E	PILES - END BEARING	UNIVERSAL SECTION STEEL	BANKSEAT ABUTMENT	REINFORCED CONCRETE

## 4. MAINTENANCE HISTORY

### 4.1 Details of Maintenance Works undertaken since last principal inspection

#### From SMS

Span No:

Work Required:

Defect:

Comments:

Date of Order:

Cost:

Completed Date:

## 5. DESCRIPTION OF INSPECTIONS

### 5.1 Previous Inspections

Principal Inspection:

09-January-2014  
31-October-2006  
22-May-1999

General Inspection:

19-Jul-2017

Special Inspection details:

### 5.2 Name of Inspecting Engineer and Assistant

Inspecting Engineer: Redacted

Assistant: Redacted

### 5.3 Date of this inspection

28-May-2019

### 5.4 Weather conditions

Weather Conditions at time of inspection: Mild/Dry

Weather Conditions 2 days before inspection: Mild/Dry

**5.5 Description of how inspection was undertaken**

**Span: 1**

Access Equipment Used:	No equipment used
	Second = Not Applicable
	Third = Not Applicable
Traffic Management Used:	First = No Traffic Management Used
	Second = Not Applicable
	Third = Not Applicable

**Span: 2**

Access Equipment Used:	No equipment used
	Second = Not Applicable
	Third = Not Applicable
Traffic Management Used:	First = No Traffic Management Used
	Second = Not Applicable
	Third = Not Applicable

**Span: 3**

Access Equipment Used:	No equipment used
	Second = Not Applicable
	Third = Not Applicable
Traffic Management Used:	First = No Traffic Management Used
	Second = Not Applicable
	Third = Not Applicable

**Span: 4**

Access Equipment Used:	No equipment used
	Second = Not Applicable
	Third = Not Applicable
Traffic Management Used:	First = No Traffic Management Used
	Second = Not Applicable

Third = Not Applicable

**Span: 5**

Access Equipment Used:

No equipment used

Second = Not Applicable

Third = Not Applicable

Traffic Management Used:

First = No Traffic Management Used

Second = Not Applicable

Third = Not Applicable

**Span: 6**

Access Equipment Used:

Van Mounted Mobile Elevated Working Platform

Second = Not Applicable

Third = Not Applicable

Traffic Management Used:

First = Nearside Lane Closures

Second = Offside Lane Closures

Third = Not Applicable

**Span: 7**

Access Equipment Used:

Van Mounted Mobile Elevated Working Platform

Second = Not Applicable

Third = Not Applicable

Traffic Management Used:

First = Nearside Lane Closures

Second = Offside Lane Closures

Third = Not Applicable

**Span: 8**

Access Equipment Used:

No equipment used

Second = Not Applicable

Third = Not Applicable

Traffic Management Used: First = No Traffic Management Used  
Second = Not Applicable  
Third = Not Applicable

Span: **9**

Access Equipment Used: No equipment used  
Second = Not Applicable  
Third = Not Applicable

Traffic Management Used: First = No Traffic Management Used  
Second = Not Applicable  
Third = Not Applicable

Span: **10**

Access Equipment Used: No equipment used  
Second = Not Applicable  
Third = Not Applicable

Traffic Management Used: First = No Traffic Management Used  
Second = Not Applicable  
Third = Not Applicable

Span: **11**

Access Equipment Used: No equipment used  
Second = Not Applicable  
Third = Not Applicable

Traffic Management Used: First = No Traffic Management Used  
Second = Not Applicable  
Third = Not Applicable

Span: **12**

Access Equipment Used: No equipment used  
Second = Not Applicable



Third = Not Applicable

Traffic Management Used:

First = No Traffic Management Used

Second = Not Applicable

Third = Not Applicable

**5.6 List of areas not inspected**

<i>Span Number</i>	<i>Element</i>
1	Foundations
1	Wing Walls
1	Waterproofing
1	Abutments (Incl. Arch Springing)
2	Foundations
2	Waterproofing
3	Foundations
3	Waterproofing
4	Foundations
4	Waterproofing
5	Foundations
5	Waterproofing
6	Foundations
6	Waterproofing
7	Foundations
7	Waterproofing
8	Foundations

8	Waterproofing
9	Foundations
9	Waterproofing
10	Foundations
10	Waterproofing
11	Foundations
11	Waterproofing
12	Foundations
12	Wing Walls
12	Waterproofing
12	Abutments (Incl. Arch Springing)

## 6. RESULTS OF INSPECTION

### 6.1 Summary

**XX** = Improved since immediate previous inspection

**XX** = Worsened since immediate previous inspection

\*Severity descriptions are in accordance with the Inspection Manual for Highway Structures. Full descriptions are available in Table G.8 and 1.1.3 of Vol.2 Part B.

Span No	Element	Score*	Maint. Priority Ranking (1-4)	Previous Maint. Priority Ranking
1	Foundations	6F	0	0
1	Wing Walls	6F	0	0
1	Bearings	2B	0	0
1	Waterproofing	6F	<b>2</b>	0
1	Primary Deck Element (Table G4)	1A	0	0
1	Parapet Beam Or Cantilever	2C	2	2
1	Bearing Plinth/Shelf	2C	<b>3</b>	2
1	Superstructure Drainage	4E	<b>3</b>	0
1	Movement/Expansion Joints	2C	2	2
1	Surface Finishes: Substructure Elements	4D	<b>3</b>	
1	Painting: Parapets/Safety Fences	5E	3	3
1	Handrail/Parapets/Safety Fences	2C	<b>2</b>	0

1	Footway/Verge/Footbridge Surfacing	2E	<b>2</b>	0
1	Revetment/Batter Paving	2B	<b>2</b>	0
1	Abutments (Incl. Arch Springing)	6F	0	0
1	Pier/Column	4B	<b>2</b>	0
2	Foundations	6F	0	0
2	Bearings	1A	<b>1</b>	0
2	Waterproofing	6F	<b>2</b>	0
2	Primary Deck Element (Table G4)	1A	0	0
2	Parapet Beam Or Cantilever	2B	2	2
2	Bearing Plinth/Shelf	1A	<b>1</b>	0
2	Painting: Parapets/Safety Fences	5E	3	3
2	Handrail/Parapets/Safety Fences	2C	<b>2</b>	0
2	Footway/Verge/Footbridge Surfacing	2E	<b>2</b>	0
2	Pier/Column	2C	<b>2</b>	0
3	Foundations	6F	0	0
3	Bearings	1A	<b>1</b>	0
3	Waterproofing	6F	<b>2</b>	0
3	Primary Deck Element (Table G4)	1A	0	0
3	Parapet Beam Or Cantilever	2B	2	2
3	Bearing Plinth/Shelf	1A	<b>1</b>	0
3	Painting: Parapets/Safety Fences	5E	3	3
3	Handrail/Parapets/Safety Fences	2C	<b>2</b>	0
3	Footway/Verge/Footbridge Surfacing	2E	<b>2</b>	0
3	Pier/Column	1A	<b>1</b>	0
4	Foundations	6F	0	0
4	Waterproofing	6F	<b>2</b>	0

Span No	Element	Score*	Maint. Priority Ranking (1-4)	Previous Maint. Priority Ranking
4	Primary Deck Element (Table G4)	2B	<b>2</b>	0
4	Parapet Beam Or Cantilever	2B	<b>2</b>	0
4	Movement/Expansion Joints	2E	2	2
4	Painting: Parapets/Safety Fences	5E	3	3
4	Handrail/Parapets/Safety Fences	2C	<b>2</b>	0
4	Footway/Verge/Footbridge Surfacing	2E	<b>2</b>	0
4	Pier/Column	2B	<b>2</b>	0
5	Foundations	6F	0	0
5	Waterproofing	6F	<b>2</b>	0
5	Primary Deck Element (Table G4)	2B	<b>2</b>	0
5	Half Joints	1A	<b>1</b>	
5	Parapet Beam Or Cantilever	2B	<b>2</b>	0
5	Movement/Expansion Joints	2E	2	2
5	Painting: Parapets/Safety Fences	5E	3	3
5	Handrail/Parapets/Safety Fences	2C	<b>2</b>	3
5	Footway/Verge/Footbridge Surfacing	4B	<b>3</b>	0
5	Pier/Column	2B	<b>2</b>	0

6	Foundations	6F	0	0
6	Waterproofing	6F	2	0
6	Primary Deck Element (Table G4)	3C	3	0
6	Half Joints	2B	3	
6	Parapet Beam Or Cantilever	2B	2	0
6	Movement/Expansion Joints	2E	2	2
6	Painting: Parapets/Safety Fences	5E	3	3
6	Handrail/Parapets/Safety Fences	2C	2	0
6	Footway/Verge/Footbridge Surfacing	2E	2	0
6	Pier/Column	2B	2	0
7	Foundations	6F	0	0
7	Waterproofing	6F	2	0
7	Primary Deck Element (Table G4)	2B	3	0
7	Half Joints	2B	2	
7	Parapet Beam Or Cantilever	2B	2	0
7	Movement/Expansion Joints	2E	2	2
7	Painting: Parapets/Safety Fences	5E	3	3
7	Handrail/Parapets/Safety Fences	2C	2	0
7	Footway/Verge/Footbridge Surfacing	2E	2	0
7	Pier/Column	2B	2	0
8	Foundations	6F	0	0
8	Waterproofing	6F	2	0
8	Primary Deck Element (Table G4)	2B	2	0
8	Half Joints	1A	1	
8	Parapet Beam Or Cantilever	2B	2	0
8	Movement/Expansion Joints	2E	2	2
8	Painting: Parapets/Safety Fences	5E	3	3

Span No	Element	Score*	Maint. Priority Ranking (1-4)	Previous Maint. Priority Ranking
8	Handrail/Parapets/Safety Fences	2C	2	0
8	Footway/Verge/Footbridge Surfacing	2E	2	0
8	Pier/Column	1A	1	0
9	Foundations	6F	0	0
9	Bearings	1A	1	0
9	Waterproofing	6F	2	0
9	Primary Deck Element (Table G4)	3B	2	0
9	Parapet Beam Or Cantilever	2B	2	0
9	Bearing Plinth/Shelf	1A	1	0
9	Painting: Parapets/Safety Fences	5E	3	3
9	Handrail/Parapets/Safety Fences	2C	2	0
9	Footway/Verge/Footbridge Surfacing	2E	2	0
9	Pier/Column	3B	2	3
10	Foundations	6F	0	0
10	Bearings	1A	1	0
10	Waterproofing	6F	2	0

10	Primary Deck Element (Table G4)	1A	1	0
10	Parapet Beam Or Cantilever	2B	2	0
10	Bearing Plinth/Shelf	1A	1	0
10	Painting: Parapets/Safety Fences	5E	3	3
10	Handrail/Parapets/Safety Fences	2C	2	0
10	Footway/Verge/Footbridge Surfacing	2E	2	0
10	Pier/Column	1A	1	0
11	Foundations	6F	0	0
11	Bearings	1A	1	0
11	Waterproofing	6F	2	0
11	Primary Deck Element (Table G4)	1A	1	0
11	Parapet Beam Or Cantilever	2B	2	0
11	Bearing Plinth/Shelf	1A	1	0
11	Painting: Parapets/Safety Fences	5E	3	3
11	Handrail/Parapets/Safety Fences	2C	2	0
11	Footway/Verge/Footbridge Surfacing	2E	2	0
11	Pier/Column	2B	2	0
12	Foundations	6F	0	0
12	Wing Walls	6F	0	0
12	Bearings	1A	1	0
12	Waterproofing	6F	2	0
12	Primary Deck Element (Table G4)	1A	1	0
12	Parapet Beam Or Cantilever	2B	2	0
12	Bearing Plinth/Shelf	1A	1	2
12	Superstructure Drainage	4E	3	0
12	Movement/Expansion Joints	2C	2	2
12	Surface Finishes: Substructure Elements	3B	2	
12	Painting: Parapets/Safety Fences	5E	3	3

Span No	Element	Score*	Maint. Priority Ranking (1-4)	Previous Maint. Priority Ranking
12	Handrail/Parapets/Safety Fences	2C	2	0
12	Footway/Verge/Footbridge Surfacing	2E	2	0
12	Revetment/Batter Paving	3C	2	0
12	Abutments (Incl. Arch Springing)	6F	0	0

**\* NOTE: Score Key after Section 6.2**

**6.1a Summary of Condition Scores**

XX = Improved since immediate previous inspection

XX = Worsened since immediate previous inspection

	Average BCI	Critical BCI
PI - 2019	76.82	72.58
GI - 2017	79.85	76.25
GI - 2015	77.41	78.12

PI - 2014	74.07	68.75
GI - 2011	88.78	81.00

Management Action:	Span 1 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 2 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 3 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 4 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 5 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 6 : 3 - Special Investigation Required next Fin Year
Management Action:	Span 7 : 3 - Special Investigation Required next Fin Year
Management Action:	Span 8 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 9 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 10 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 11 : 2 - Maintenance Works should proceed next Fin Year
Management Action:	Span 12 : 2 - Maintenance Works should proceed next Fin Year

#### Maintenance Priority Ranking [1-4]

- 1 - INSIGNIFICANT Nothing to worry about. Leave for further examination at next PI. Not likely to deteriorate significantly within 6 years.
- 2 - MINOR Nothing to worry about, but likely to deteriorate significantly within 6 years.
- 3 - UNACCEPTABLE Should not be left for 6 years until next PI. Rapid deterioration and escalation of repair cost inevitable if left unrepaired. Could become severe to affect integrity of structure.
- 4 - SEVERE: Currently affecting the integrity of the structure or become hazardous if left. Essential to repair at the earliest date. **Register as CAT 1 Defect where appropriate.**

**Note: All safety related items must be assigned Priority Ranking 4, includes all headwall protection, VRS Defects, all safety related fencing and barrier defects.**

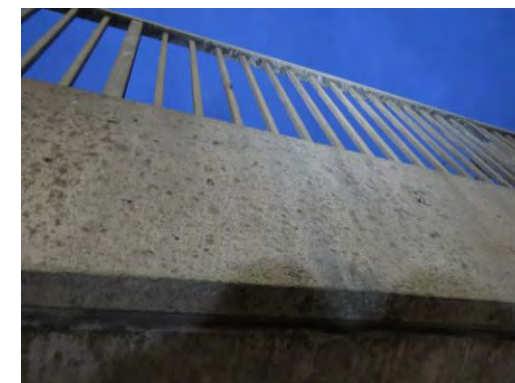
#### Management Actions [1-8]

- No maintenance works required; no defective main elements with maintenance prioritisation ranking >2. General Inspections to monitor.
- Maintenance works should proceed next financial year; defective main elements having maintenance prioritisation ranking >2. General Inspections to monitor if repairs delayed. (Estimate required)
- Special Investigation required next financial year to determine the nature and extent of works required. (Estimate required)
- Await programmed strengthening or other upgrading and carry out any structural maintenance concurrently with these works.
- Where an improvement scheme with detrunking is imminent (estimated to start within 6 years) - postpone all works until opening of the new trunk road to minimise traffic disruption. General inspections to monitor.
- Postpone maintenance works so that they can be phased with other future works to be carried out on the route. Transport Scotland Bridges Section consulted. General Inspections to monitor until works commence. (Estimate required)
- Demolition as part of trunk road scheme planned - structure can safely be neglected. General Inspections to monitor until demolition takes place.
- Beyond economical repair - Replace. (Estimate required)**

## 6.2 Detailed Defect Descriptions

Span No	Element	Defect Type	Multi Def	Sev/ Ext	Maint Prty	Work Required	Est Cost	Comments	Defect Photograph
1	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundaitons buried. Unable to inspect.	
1	Wing Walls	.0 Item present but not inspected	No	6F	0	?	Not Complete	ES1 wing walls are hidden behind brickwork facing wall. The brickwork is in good condition.	
1	Bearings	2 Minor Cracks	No	2B	0	N No Action Monitor Only	Not Complete	Minor cracks to face of ES1 bearings but generally in good condition.	
1	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 100,000	Waterproofing is 44 years old and therefore is outwith is expected lifespan and should be considered for replacement. The condition of the footpath would indicate there are minor issues with the waterproofing.	

1	Primary Deck Element (Table G4)	1 Hairline cracks, difficult to detect visually	No	1A	0	N No Action Monitor Only	Not Complete	Deck soffit in good condition.
1	Parapet Beam Or Cantilever	2 Minor localised spalls possibly exposing shear links	No	2B	2	N No Action Monitor Only	£ 1	Photo 1 - Very minor spalls on parapet cope.
1	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	Yes	2C	2	N No Action Monitor Only	£ 1	Photo 2 - Minor vertical cracking on both parapet copes on all spans.
1	Bearing Plinth/Shelf	.2 WDM Generic Defect Severity 2	No	2C	3	Cyclic Maint - Bearings & bearing shelves	£ 1	Photo 6 - Evidence of vagrant living under bridge. This should be removed during cyclic maintenance.





1	Superstructure Drainage	4 Mostly Non-functional (More Than 50% Of Cross Section Blocked)	No	4E	3	Cyclic Maint - Drainage	£ 1	Photo 7 - LHS gully completely blocked with debris on DL side of ES1 rail joint. This should be cleared at next Cyclic Maintenance visit. RHS gully appears functional.
1	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2C	2	Cyclic Maint - Expansion joints	£ 1	Photo 8 - Debris build up in ES1 rail joint. This should be removed during next Cyclic Maintenance visit.
1	Surface Finishes: Substructure Elements	4 Severe bulging, leaning or displacement	No	4D	3	?	£ 1,500	See photo 6 - Brick facade wall in front of ES1 abutment in poor condition. Large area of brickwork displaced and requires to be rebuilt.



1	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 50,000
1	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1
1	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1

Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration.

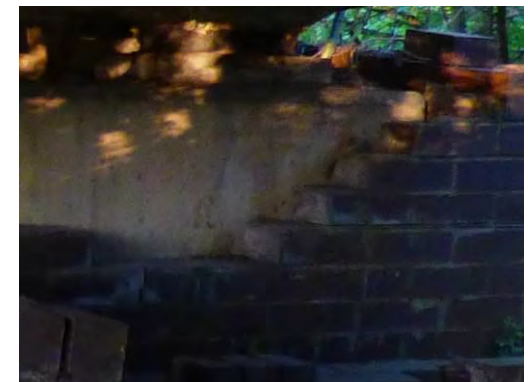


See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.

Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.



1	Revetment/Batter Paving	2 Minor deformation	No	2B	2	N No Action Monitor Only	£ 1	Photo 11 - Localised area of brickwork missing and dislodged on IS2 revetment.
1	Abutments (Incl. Arch Springing)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	Yes	2B	2	N No Action Monitor Only	£ 1	Photo 3 - Areas of cracking some with leaching on ES1 abutment.
1	Abutments (Incl. Arch Springing)	.0 Item present but not inspected	No	6F	0	?	Not Complete	The end support is hidden behind a brickwork facing wall. Unable to inspect abutment.



1	Pier/Column	2 Minor localised spalls possibly exposing shear links	Yes	2B	2	N No Action Monitor Only	£ 1	Photo 5 - Minor localised spall at LHS of ISP2.
1	Pier/Column	4 Wide/deep cracks more than 2mm or shear cracks	No	4B	2	Concrete - Crack injection	£ 250	Photo 4 - Crack to base of pier at IS2. Injection required to prevent further deterioration.
2	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
2	Bearings	1 Bearings Sound	No	1A	1	N No Action Monitor Only	£ 1	ISP 3 elastomeric pad is in good condition.



2	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. The condition of the footway surfacing indicates minor issues with the waterproofing. Cost included in span 1.
2	Primary Deck Element (Table G4)	1 Hairline cracks, difficult to detect visually	No	1A	0	N No Action Monitor Only	Not Complete	Deck soffit in good condition.
2	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
2	Bearing Plinth/Shelf	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	ISP 3 bearing shelf is in good condition.
2	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.
2	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.

2	Footway/Verge/Footbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacing	£ 1	See photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
2	Pier/Column	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	Photo 12 - Vertical cracks at top of IS3.
2	Pier/Column	.2 WDM Generic Defect Severity 2	Yes	2C	2	Cyclic Maint - Graffiti removal	£ 1	See Photo 12 - Graffiti to IS3 UL face.
3	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
3	Bearings	1 Bearings Sound	No	1A	1	N No Action Monitor Only	£ 1	ISP 4 elastomeric pad is in good condition.



3	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. Condition of the footway indicates minor defects to waterproofing. Cost included in span 1.
3	Primary Deck Element (Table G4)	1 Hairline cracks, difficult to detect visually	No	1A	0	N No Action Monitor Only	Not Complete	Deck soffit in good condition.
3	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
3	Bearing Plinth/Shelf	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	ISP 4 bearing shelf is in good condition.
3	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.
3	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.

3	Footway/Verge/Footbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacing	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
3	Pier/Column	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	IS4 is in good condition.
4	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
4	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith is expected lifespan and should be considered for replacement. However there are signs of major waterproofing defects. Cost included in span 1.
4	Primary Deck Element (Table G4)	2 Minor localised spalls possibly exposing shear links	No	2B	2	Concrete - Repairs	£ 150	Photo 13 Localised spall to LHS on span 4 soffit adjacent of IS5.

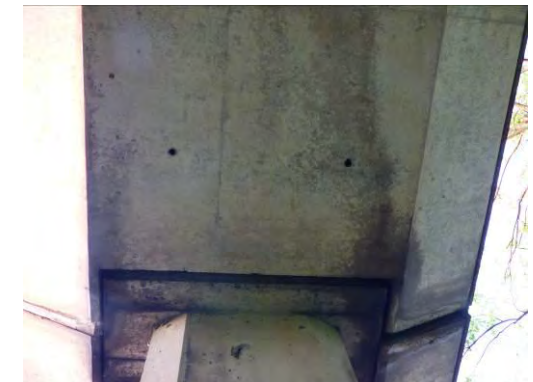




4	Primary Deck Element (Table G4)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	Yes	2B	2	N No Action Monitor Only	£ 1	See Photo 13 - Longitudinal cracking on span 4 soffit near IS5 with rust staining.
4	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
4	Movement/Expansion on Joints	1 Strip sealant sound	Yes	1A	1	N No Action Monitor Only	£ 1	Sealants have been replaced and are in good condition.
4	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2E	2	Cyclic Maint - Expansion joints	£ 1	See Photo 8 - Rail joint at IS5 is blocked with debris and should be cleared at next cyclic maintenance visit.

4	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.
4	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
4	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.

4	Pier/Column	2 Minor localised spalls possibly exposing shear links	No	2B	2	Concrete - Repairs	£ 500	Photo 14 - Minor areas of spalling on RHS of IS5.
5	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
5	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith is expected lifespan and should be considered for replacement. Condition of footway surfacing indicates minor defects to waterproofing. Cost included in span 1.
5	Primary Deck Element (Table G4)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	Photo 15 - Minor crazing on span 5 soffit.

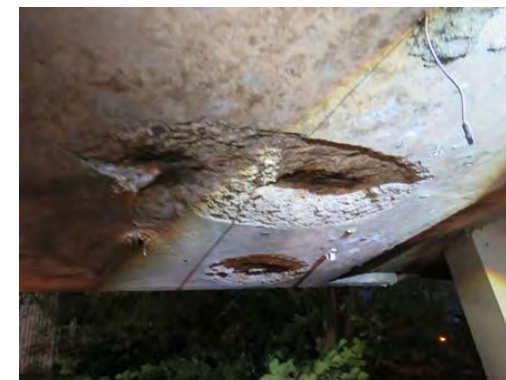


5	Half Joints	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	Half joint at IS6 is in good condition. Hairline cracks only.
5	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
5	Movement/Expansion on Joints	1 Strip sealant sound	Yes	1A	1	N No Action Monitor Only	£ 1	Sealants have been replaced and are in good condition.
5	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2E	2	Cyclic Maint - Expansion joints	£ 1	See Photo 8 - Rail joint at IS6 is blocked with debris and should be cleared at next cyclic maintenance visit.
5	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.

5	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
5	Footway/Verge/Foo tbridge Surfacing	4 Deep Cracks And Potholes	Yes	4B	3	Other - Surfacings	£ 500	Photo 19 - Deep cracks and potholing on Span 5 surfacing.
5	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
5	Pier/Column	2 Minor localised spalls possibly exposing shear links	No	2B	2	Concrete - Repairs	£ 500	Photo 16 - Minor spall on RHS of IS6 exposing reinforcement.



6	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
6	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. The condition of the footway surfacing indicates minor defects to waterproofing. Cost included in span 1.
6	Primary Deck Element (Table G4)	3 Major localised spalls possibly exposing shear links and/or main bars with general corrosion	No	3B	3	Concrete - Repairs	£ 2,250	Photo 17 - Localised spalls exposing reinforcement adjacent to IS6 and IS7. Area of spalling at DL end of bridge deck and half joint.
6	Primary Deck Element (Table G4)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	Yes	2B	2	N No Action Monitor Only	£ 1	Multidirectional cracks to mortar repairs on previous gantry fixings.



6	Primary Deck Element (Table G4)	.3 WDM Generic Defect Severity 3	Yes	3C	3	Investigation	£ 1,000	Photo 18 - Span 6 bridge deck appears to be twisted at DL RHS. The deck is 40 mm lower than span 5. An investigation is required to discover the cause of the defect.
6	Half Joints	2 Minor localised spalls possibly exposing shear links	No	2B	3	Concrete - Repairs	£ 3,500	See Photo 17 - Area of spalling to half joint on span 6 and end of primary deck.
6	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
6	Movement/Expansion on Joints	1 Strip sealant sound	Yes	1A	1	N No Action Monitor Only	£ 1	Sealants have been replaced and are in good condition.
6	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2E	2	Cyclic Maint - Expansion joints	£ 1	See Photo 8 - Rail joint at IS7 is blocked with debris and should be cleared at next cyclic maintenance visit.



6	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.
6	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
6	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
6	Pier/Column	2 Minor localised spalls possibly exposing shear links	No	2B	2	Concrete - Repairs	£ 500	Photo 19 - Minor areas of spalling on RHS of IS7.





7	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
7	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. The condition of the footway surfacing indicates minor defects to the waterproofing. Cost included in span 1.
7	Primary Deck Element (Table G4)	2 Minor localised spalls possibly exposing shear links	No	2B	2	Concrete - Repairs	£ 300	Photo 20 - Minor localised spall to span 7 soffit adjacent to IS8 half joint.
7	Primary Deck Element (Table G4)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	Yes	2B	2	N No Action Monitor Only	£ 1	Multidirectional cracking to mortar repair for old gantry fixings.
7	Primary Deck Element (Table G4)	.2 WDM Generic Defect Severity 2	Yes	2B	3	Investigation	£ 1,000	See Photo 18 - Span 7 bridge deck has settled by approximately 40mm at UL RHS. An investigation is required to identify the cause of the defect.

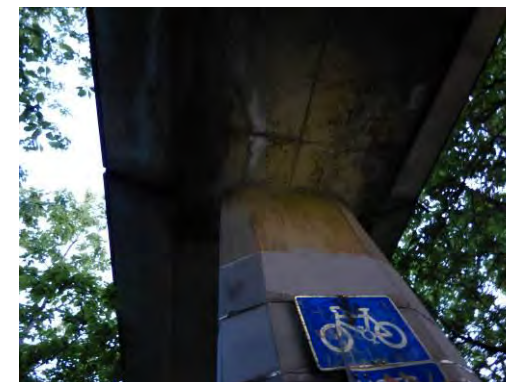


7	Half Joints	2 Minor localised spalls possibly exposing shear links	No	2B	2	Concrete - Repairs	£ 500	See Photo 20 - Minor localised spall on the IS8 half joint.
7	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
7	Movement/Expansion on Joints	1 Strip sealant sound	Yes	1A	1	N No Action Monitor Only	£ 1	Sealants have been replaced and are in good condition.
7	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2E	2	Cyclic Maint - Expansion joints	£ 1	See Photo 8 - Rail joint at IS7 is blocked with debris and should be cleared at next cyclic maintenance visit.
7	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.

7	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	N No Action Monitor Only	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
7	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
7	Pier/Column	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	Photo 21 - Horizontal cracking on RHS of IS8 pier.
8	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
8	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. The condition of the footway indicates minor defects to the waterproofing. Cost included in span 1.



8	Primary Deck Element (Table G4)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	Photo 22 - Minor longitudinal cracks on span 8 soffit.
8	Half Joints	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	Span 8 half joint in good condition.
8	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
8	Movement/Expansion on Joints	1 Strip sealant sound	Yes	1A	1	N No Action Monitor Only	£ 1	Sealants have been replaced and are in good condition.



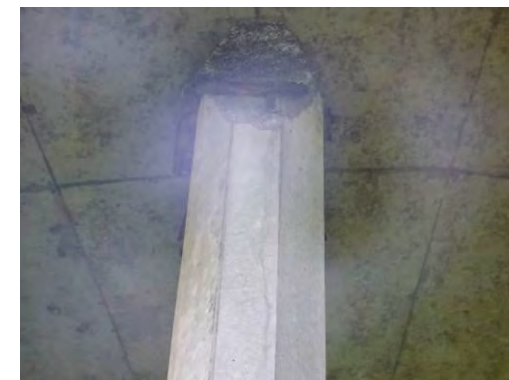
8	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2E	2	Cyclic Maint - Expansion joints	£ 1	See Photo 8 - Rail joint at IS9 is blocked with debris and should be cleared at next cyclic maintenance visit.
8	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.
8	Handrail/Parapets/Safety Fences	2 Minor surface rusting	No	2C	2	P Paint	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
8	Footway/Verge/Footbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacing	£ 1	Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.

8	Pier/Column	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	IS9 is in good condition.
9	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
9	Bearings	1 Bearings Sound	No	1A	1	N No Action Monitor Only	£ 1	IS10 elastomeric pad is in good condition.
9	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith is expected lifespan and should be considered for replacement. Condition of the footway surfacing indicates minor defects to the waterproofing. Cost included in span 1.
9	Primary Deck Element (Table G4)	3 Major localised spalls possibly exposing shear links and/or main bars with general corrosion	No	3B	2	Concrete - Repairs	£ 600	Photo 23 - Large localised spall on bridge deck of span 9 adjacent to IS9.



9	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
9	Bearing Plinth/Shelf	.1 No Defect	No	1A	1	N No Action Monitor Only	£ 1	IS10 bearing shelf in good condition.
9	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.
9	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	P Paint	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.

9	Footway/Verge/Footbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacing	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
9	Pier/Column	3 Major localised spalls possibly exposing shear links and/or main bars with general corrosion	No	3B	2	Concrete - Repairs	£ 750	Photo 24 - Large spall at top of IS10 exposing reinforcement.
10	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
10	Bearings	1 Bearings Sound	No	1A	1	N No Action Monitor Only	£ 1	IS11 elastomeric pad is in good condition.





10	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. The condition of the footway surfacing indicates minor defects to the waterproofing. Cost included in span 1.
10	Primary Deck Element (Table G4)	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	Deck soffit in good condition.
10	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
10	Bearing Plinth/Shelf	.1 No Defect	No	1A	1	N No Action Monitor Only	£ 1	IS11 bearing shelf in good condition.
10	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.

10	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	P Paint	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
10	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
10	Pier/Column	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	IS11 in good condition.
11	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundations buried, unable to inspect.
11	Bearings	1 Bearings Sound	No	1A	1	N No Action Monitor Only	£ 1	IS12 elastomeric pad is in good condition.
11	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. The condition of the footway surfacing indicates minor defects to the waterproofing. Cost included in span 1.

11	Primary Deck Element (Table G4)	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	Deck soffit in good condition.
11	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
11	Bearing Plinth/Shelf	.1 No Defect	No	1A	1	N No Action Monitor Only	£ 1	IS12 bearing shelf in good condition.
11	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 1	See Photo 9 - Paint system failed on parapet system throughout structure. This has lead to surface rusting on the parapets. Parapets should be painted to prevent further deterioration. Cost included in span 1.

11	Handrail/Parapets/ Safety Fences	2 Minor surface rusting	No	2C	2	P Paint	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.
11	Footway/Verge/Foo tbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacings	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
11	Pier/Column	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	Horizontal cracking at top of IS12 pier.
12	Foundations	.0 Item present but not inspected	No	6F	0	?	Not Complete	Foundaitons buried. Unable to inspect.

12	Wing Walls	.0 Item present but not inspected	No	6F	0	?	Not Complete	Wing walls are hidden behind brickwork facing wall. The brickwork is in good condition.
12	Bearings	1 Bearings Sound	No	1A	1	N No Action Monitor Only	£ 1	ES13 elastomeric bearing pads are in good condition.
12	Waterproofing	.0 Item present but not inspected	No	6F	2	?	£ 1	Waterproofing is 44 years old and therefore is outwith its expected lifespan and should be considered for replacement. However there are signs of major waterproofing defects. Cost is included in span 1.
12	Primary Deck Element (Table G4)	1 Hairline cracks, difficult to detect visually	No	1A	1	N No Action Monitor Only	£ 1	Deck soffit in good condition.
12	Parapet Beam Or Cantilever	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	No	2B	2	N No Action Monitor Only	£ 1	See Photo 2 - Minor vertical cracking on both parapet copes on all spans.
12	Bearing Plinth/Shelf	.1 No Defect	No	1A	1	N No Action Monitor Only	£ 1	ES13 bearing shelf is in good condition.

12	Superstructure Drainage	4 Mostly Non-functional (More Than 50% Of Cross Section Blocked)	No	4E	3	Cyclic Maint - Drainage	£ 1	See Photo 7 - Both gullies adjacent to ES13 rail joint are blocked and should be cleared at next Cyclic Maintenance visit.
12	Movement/Expansion on Joints	.2 WDM Generic Defect Severity 2	No	2C	2	Cyclic Maint - Expansion joints	£ 1	See Photo 8 - Debris build up in ES13 rail joint. This should be removed during next Cyclic Maintenance visit.
12	Surface Finishes: Substructure Elements	3 Moderate loss of bricks/stones	No	3B	2	Masonry - Repairs	£ 500	Minor damage to brickwork façade at ES13
12	Painting: Parapets/Safety Fences	5 All Coats Failed	No	5E	3	P Paint	£ 15,200	See Photo 9 - Paint system failed on parapet system throughout structure. This has led to surface rusting on the parapets. Parapets should be painted to prevent further deterioration.
12	Handrail/Parapets/Safety Fences	2 Minor surface rusting	No	2C	2	P Paint	£ 1	See Photo 9 - Surface rusting on parapets throughout structure. Especially at bottom of parapet posts.

12	Footway/Verge/Footbridge Surfacing	2 Cracks In Top Layer	No	2E	2	Other - Surfacing	£ 1	See Photo 10 - Areas of cracking and weathering throughout footbridge surfacing creating possible trip hazards. If the footbridge is to be resurface this should be done as a waterproofing scheme and the cost is included in the waterproofing element.
12	Revetment/Batter Paving	3 Moderate loss of bricks/stones	No	3C	2	Masonry - Repairs	£ 550	Photo 25 - Localised area of brickwork has become detached from revetment.
12	Abutments (Incl. Arch Springing)	2 Cracks and crazing in areas of low flexural behaviour or cracks less than 0.3mm	Yes	2B	2	N No Action Monitor Only	£ 1	Areas of cracking some with leaching on ES13 abutment.
12	Abutments (Incl. Arch Springing)	.0 Item present but not inspected	No	6F	0	?	Not Complete	The end support is hidden behind a brickwork facing wall. Unable to inspect abutment.



**Key - Severity**

Severity Code	Severity
1	As New / Insignificant
2	Minor
3	Moderate
4	Severe
5	Non-Functional
6	NOT APPLICABLE

**Key - Extent**

Extent Code	Extent
A	No Significant Defect
B	Slight <5%
C	Moderate 5 - 20%
D	Extensive 20 - 50%
E	Extensive >50%
F	NOT APPLICABLE

**6.3 Concrete Impregnation**

**6.4 Works Estimates**

Cost estimate for a practical package of maintenance works (all defects in a structure to be considered) or alternatively cost estimate for a special investigation.

<u>Item</u>	<u>Cost (£)</u>
Scheme Preparation (to contract stage)	
Contract Administration (excluding tendering procedures, if applicable)	
Site Supervision	
Preliminaries	



List of Defective Main Elements and their Repair/Remedial Costs

<i>Span</i>	<i>Element Name</i>	<i>Work Required</i>	<i>Estimated Cost</i>
1	Pier/Column	Concrete - Crack injection	250
1	Bearing Plinth/Shelf	Cyclic Maint - Bearings & bearing shelves	1
1	Superstructure Drainage	Cyclic Maint - Drainage	1
1	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
1	Painting: Parapets/Safety Fences	P Paint	50000
1	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
2	Pier/Column	Cyclic Maint - Grafitti removal	1
2	Painting: Parapets/Safety Fences	P Paint	1
2	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
3	Painting: Parapets/Safety Fences	P Paint	1
3	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
4	Primary Deck Element (Table G4)	Concrete - Repairs	150
4	Pier/Column	Concrete - Repairs	500
4	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
4	Painting: Parapets/Safety Fences	P Paint	1
4	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
5	Pier/Column	Concrete - Repairs	500
5	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
5	Painting: Parapets/Safety Fences	P Paint	1
5	Footway/Verge/Footbridge Surfacing	Other - Surfacing	500
5	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
6	Primary Deck Element (Table G4)	Concrete - Repairs	2250
6	Primary Deck Element (Table G4)	Investigation	1000
6	Half Joints	Concrete - Repairs	3500
6	Pier/Column	Concrete - Repairs	500
6	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
6	Painting: Parapets/Safety Fences	P Paint	1
6	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
7	Primary Deck Element (Table G4)	Concrete - Repairs	300
7	Primary Deck Element (Table G4)	Investigation	1000
7	Half Joints	Concrete - Repairs	500

7	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
7	Painting: Parapets/Safety Fences	P Paint	1
7	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
8	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
8	Painting: Parapets/Safety Fences	P Paint	1
8	Handrail/Parapets/Safety Fences	P Paint	1
8	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
9	Primary Deck Element (Table G4)	Concrete - Repairs	600
9	Pier/Column	Concrete - Repairs	750
9	Painting: Parapets/Safety Fences	P Paint	1
9	Handrail/Parapets/Safety Fences	P Paint	1
9	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
10	Painting: Parapets/Safety Fences	P Paint	1
10	Handrail/Parapets/Safety Fences	P Paint	1
10	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
11	Painting: Parapets/Safety Fences	P Paint	1
11	Handrail/Parapets/Safety Fences	P Paint	1
11	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
12	Superstructure Drainage	Cyclic Maint - Drainage	1
12	Movement/Expansion Joints	Cyclic Maint - Expansion joints	1
12	Surface Finishes: Substructure Elements	Masonry - Repairs	500
12	Painting: Parapets/Safety Fences	P Paint	1
12	Handrail/Parapets/Safety Fences	P Paint	1
12	Footway/Verge/Footbridge Surfacing	Other - Surfacing	1
12	Revetment/Batter Paving	Masonry - Repairs	550

Contingencies @ 44% £27,891.16

Statutory Undertakers' Costs N/A

Special Inspections and Testing Services N/A

VAT (if payable) £18,256.03

**Total £109,536.19**

**6.5 Headroom (for bridges over roads)**

*Headroom as reported in BMS. Report any changes and reasons.*

Actual Minimum Headroom: 5.60m

Date measured: 28-May-2019

## **APPENDIX FT**

### **Changes to Full Text Inventory**

**COMMON ATTRIBUTES**

Eastings  
Northings

**Original Updated Date**

**ACTUAL DIMENSIONS AND HEADROOM RESTRICTIONS**

Skew Angle Degrees  
Width Available on Bridge  
Deck Width  
Deck Overall Length  
Actual Minimum Headroom  
Date of Measuring Actual Minimum Headroom  
Signed Headroom Metric  
Signed Headroom Imperial  
Signed Headroom Mandatory  
Actual Navigation Clearance  
Minimum depth of surfacings  
Maximum Cover (*Culverts Only*)  
Minimum Cover (*Culverts Only*)

**CONCRETE COATING HISTORY**

Concrete Coating Manufacturer  
Concrete Coating Type  
Year Concrete Coating Applied  
Whole or Part Coating

**CONCRETE IMPREGNATION HISTORY**

Impregnant Type  
Concrete Silane Manufacturer  
Year Concrete Impregnation Applied

**CSS INFORMATION**

Construction Span  
Span Description  
Length of Span  
Span Width  
Primary Deck Element  
Primary Deck Element Material  
Secondary Deck Element  
Secondary Deck Element Material  
Number of Construction Forms  
Span Number  
Span Structural Form  
Span Structural Continuity  
Masonry Arch Barrel Rise At Crown  
Masonry Arch Barrel Rise At Quarter Points  
Thickness of Arch Barrel adjacent to Keystone  
Masonry Arch Average Fill To Crown  
Year of Widening  
Widening Left or Right  
Widening Designer

**CONTAINMENT**

Containment Location  
Containment Main Provision  
Containment Material Type  
Parapet Height  
Parapet Containment Infill Type

**DECK CARRIAGEWAY SURFACINGS**

Carriageway  
Year Surfacing Installed

Surfacing Type  
Depth of Surfacing

**Original Updated Date**

**FOUNDATIONS**

Support Foundation Type

Support Foundation Material  
Bridge Scour Protection Type

**MIN PARAPET HEIGHT**

Min Parapet Height

**PROTECTIVE SYSTEM HISTORY**

What the Protective System is applied to  
Year Protective System Applied  
Protective System Manufacturer  
Protective System

**SPAN WATERPROOFING HISTORY**

Year Waterproofing Installed  
Carriageway  
Waterproofing Manufacturer and Description  
Waterproofing Type  
Waterproofing Protective Layer

**SUPPORT BEARING HISTORY**

Support Number  
Bearing Number  
Year Bearing Installed  
Bearing Manufacturer and Description  
BS 5400 Section 9 1 Bearing Type

**SUPPORTS**

Support Number  
Support Structural Form  
Support Construction Detail  
Support End Fixity  
Abutment Gallery  
Distance Support to Carriageway  
Bearings Single or Double Row

**SUPPORT JOINT HISTORY**

Support Number  
Year Joint Installed  
Joint Installed By  
Joint Function  
Type of Joint  
Joint Manufacturer and Description

**INSPECTION ACCESS AND WEATHER**

First Access Equipment Used  
Second Access Equipment Used  
Third Access Equipment Used  
First Traffic Management System Used  
Second Traffic Management System Used  
Third Traffic Management System Used