

6.4 Inspection Categories

There are various categories of inspection which are described below.

6.4.1 Routine Inspections

Routine Inspections are those inspections which are undertaken with a predefined scope and frequency.

They are a general inspection for obvious deficiencies which might lead to risk or deserve special inspections. However, personnel engaged on the Crossing shall be encouraged to be vigilant and to report anything which appears to need attention. This shall include aspects of overall structural behaviour such as unusual vibrations or deflections.

Routine inspections are of the following categories:

Routine Superficial Inspections (R.I.): These are those Visual Inspections (V.I.) of carriageways, cycle track and footpath and of structures at or above deck level to detect any defects, damage or debris which may present hazards or deserve special inspections. They do not require traffic management, but inspection should be on foot from the footways, verges and cycle tracks. They shall include inspections of:

- (a) road drainage (gulleys in the cycle track);
- (b) nearside and offside safety barriers;
- (c) surfacing;
- (d) signs and road markings;
- (e) SOS phones*
- (f) Deck Level and Tower Top Navigation Lights;
- (g) Public Telephone kiosks (at each corner of the bridge);
- (h) Road lighting;
- (i) parapets (including access gates)‡;
- (j) cycle track manholes and gates (security);
- (k) central reserve manhole hatches;
- (l) CCTV masts, anemometer pole at mid-span, including ANPR masts.

* Note SOS emergency phones in the cycle track have been removed from the Bridge itself. There are two SOS phones each side at the North Abutment and two SOS phones each side on the South Approaches. These phones are functionally checked by Traffic Scotland but any physical damage shall be reported. Refer to sample Routine Superficial Inspection Table below.

‡ The bridge edge parapet is not a Vehicle Restraint System (VRS) and should not be subject to normal bridge edge parapet inspection frequencies. The nearside barrier should be treated as the carriageway edge VRS for routine inspection purposes. When carrying out routine inspections on the parapet however, particular care must be taken to ensure the integrity of the parapet gates. As well as providing access to the underdeck gantries, any weakness in the security of the gates puts the purpose of the raised parapet at risk.

A898 Erskine Bridge – Routine Superficial Inspections						
Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported	
		(Yes/ No)	(n/bound, s/bound, east/west, post number)	(extent, severity)		
Northbound (west side)	Carriageway Surfacing - (e.g. cracks, pot holes, blisters, worn patches) including joints	Old Tolls area to South Abutment Joint				
		South Abutment Nosing Joint				
		South Abutment to Main Expansion Joint				
		Main Expansion Joint				
		Main Expansion Joint to North Abutment Joint				
		North Abutment Comb Joint				
		North Abutment joint to A82 slip road bifurcation				
	Cycle track surfacing	Old Tolls area to South Abutment incl. cover to nosing joint				
		South Abutment to Main Expansion Joint incl. joint.				

A898 Erskine Bridge – Routine Superficial Inspections						
Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported	
		(Yes/No)	(n/bound, s/bound, east/west, post number)	(extent, severity)		
Northbound (west side)	Main Expansion Joint to North Abutment incl. comb joint					
	Old Tolls area to South Abutment incl. cover to nosing joint					
	South Abutment to Main Expansion Joint incl. joint.					
	Main Expansion Joint to North Abutment incl. joint					
	North Abutment					
	Markings - (e.g. worn, obscured)	Carriageway (nearside, centreline, offside, and A82W/A82E marking)				
		Cycle track (entrance/exit)				
		Footway (entrance/exit)				

A898 Erskine Bridge – Routine Superficial Inspections						
Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported	
		(Yes/ No)	(n/bound, s/bound, east/west, post number)	(extent, severity)		
Northbound (west side)	Carriageway Central Reserve Barrier	Old Tolls area to South Abutment including transition				
		South Abutment to Box 69D (N2)				
		Box 69D to Box 28D (H4a & Transitions/joints)				
		Box 69D to North Abutment (N2) including transition				
		North Abutment to start of bifurcation				
	Carriageway Nearside Barrier	Old Tolls area to South Abutment including transition				
		South Abutment to Main Expansion Joint (H4a)				

A898 Erskine Bridge – Routine Superficial Inspections					
Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported
		(Yes/ No)	(n/bound, s/bound, east/west, post number)	(extent, severity)	
Northbound (west side)	Main Expansion Joint to North Abutment (H4a) incl. transition				
	North Abutment to A82 Off Slip				
	S Abutment fixed to concrete, including anti-trespass panel and movement joint				
	S Abutment to Main Expansion Joint				
	Main Expansion Joint to Box 5				
	Box 5 to Box 1 over Railway				
	N Abutment fixed to concrete				
	Parapet Gantry Access Gates				
	Footway Cycle Track / End Gates				
	Edge Parapet				

A898 Erskine Bridge – Routine Superficial Inspections					
Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported
		(Yes/ No)	(n/bound, s/bound, east/west, post number)	(extent, severity)	
Road signs - (e.g. missing, damaged, obscured)	Approach road south end				
	On bridge				
	Approach roads north end				
Drainage - (e.g. blocked, silted up)	Old Tolls area to S Abutment on cycle track				
	On bridge cycle track				
	N Abutment Comb Joint including gutter and drainage pipes				
SOS phones - (e.g. damaged, missing)	South Approach Cycle Track				
	N Abutment Footway				
Deck Level Shipping navigation	Red Upper				
	Red Lower				

Northbound (west side)

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Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported
		(Yes/ No)	(n/bound, s/bound, east/west, post number)	(extent, severity)	
lights - (e.g. missing, damaged, misaligned not working)	Green Upper				
	Green Lower				
Northbound (west side) Public Telephones	S W Kiosk working				
	S West Kiosk condition incl. paintwork				
	S W - Samaritans/ Breathing Space information displayed in phone box				
	S W Samaritans / Breathing Space General Signage				
	N W kiosk working				

A898 Erskine Bridge – Routine Superficial Inspections					
Element	Area/Location	OK	If not OK, give defect location	Describe problem	Date 1st reported
		(Yes/ No)	(n/bound, s/bound, east/west, post number)	(extent, severity)	
	N W Kiosk condition incl. paintwork				
	N W - Samaritans/ Breathing Space information displayed in phone box				
	N W Samaritans / Breathing Space General Signage				
	N West - condition incl. paintwork				

6.4.2 Special Inspections (S.I.)

Special inspections are all inspections which are not routine and will arise from either:

a) defects or anomalies arising from accidental damage and/or found during routine inspections or other special inspections which require more detailed investigation or inspection;

or

b) a request from Transport Scotland for information, surveys or inspections not covered by routine inspections;

or

c) extreme environmental conditions;

or

d) damage to a part.

Special inspections shall be sub-divided into two types:

(i) Monitors:

These will be the regular monitoring of discovered defects or anomalies until such time that they can be repaired.

(ii) Other:

These will be the inspection or survey of a particular structural detail, area or condition.

The nature of inspections carried out during Special Inspections shall be appropriate to the circumstances and could include any of those listed in **Section 6.1** above.

6.5 Inspection Frequencies and Timings

6.5.1 Routine Inspections

The various categories of inspection defined in **Section 6.3** are to be undertaken at the following frequencies and timings.

Routine Superficial Inspections: These shall be undertaken at weekly intervals when there is no permanent Resident Engineer staff on the bridge and at monthly intervals when there is a continual site presence.