SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

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SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

1. INTRODUCTION

1.1 General

1.1.1 In addition to the requirements of Schedule 7 Part 6, the Operating Company shall inspect, monitor, test, manage and maintain the Structures with particular requirements listed in Annex 7.7/A of this Part in accordance with the manuals and associated inspection schedules listed in Annex 7.7/B of this Part.

1.1.2 No later than 150 Working Days after the Commencement of Service Date, the Operating Company shall supply the Director with an electronic copy of all documents (including maintenance manuals) which have been transferred to it by the previous operating company. The Operating Company shall notify the Director of any documents listed in Annex 7.7/B of this Part which were not transferred and of any further documents which it requires.

1.1.3 The Operating Company shall review annually the documents listed in Annex 7.7B of this Part for each of the Structures listed in Annex 7.7/A of this Part.

1.1.4 Following the annual review of the documents, the Operating Company shall update them to meet the requirements of current legislation, subject to the prior approval of the Director, and where amendments are required to reflect works carried out.

1.1.5 Electronic versions of updated documents shall be issued annually to the Director by the Operating Company.

1.1.6 The Operating Company shall issue an inspection report for each Structure in a General Inspection format to the Director by 31 January in the calendar year following the inspections of each Structure. The annual inspection report shall cover the matters identified in the maintenance manual including any mechanical and electrical installations. Copies of periodic inspection and test Certificates shall be provided with the reports where applicable. Separate reports shall be provided for Access Systems that remain certified for use.

1.1.7 The Operating Company shall provide a Principal Inspection Report at six yearly intervals, or as otherwise indicated in Annex 7.7/A of this Part, that includes detailed summaries of the inspection reports. Principal Inspection reports shall include priority ranking of Defects that have been identified. The Principal Inspection report shall be provided by 30 November of the year in which the Principal Inspection cycle becomes due.

1.1.8 The Operating Company shall enter all Inspection reports and related data directly into the structures management function of the Integrated Roads Information System in a format agreed with the Director within 10 Working Days of their production.

1.1.9 For the Structures listed in Annex 7.7/A of this Part, the Operating Company shall up load a summary Defect report into the structures management function of the Integrated Roads Information System in a format agreed with the Director within 10 Working Days of its production.

1.1.10 Subject to an Order, special Inspections shall be undertaken by the Operating Company.

This is Annex 7.7/A to Schedule 7 Part 7 referred to in the foregoing Agreement between Scottish Ministers and Scotland TranServ being a Joint Venture comprising of Balfour Beatty Civil Engineering Limited and Mouchel Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/A – Structures with Particular Requirements

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SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/A – Structures with Particular Requirements

1. Structures with Particular Requirements

The Structures listed within the table below have particular requirements which the Operating Company shall carry out in addition to those duties set down in Schedule 7 Part 6. These requirements shall be read in conjunction with the bridge maintenance and operations manuals in the Annex following this section.

Table 1.1.1.A – Structures on the Trunk Road

Structure Reference Number	Structure Name
A898 100	Erskine Bridge
	Kingston Bridge Complex
	(with associated elevated approach Structures and on/off ramps)
M8 19-19-10	M8 Main Approach North E/B
M8 19-19-20	M8 Main Approach North W/B
M8S 19-19-30	Stobcross Street On Ramp
M8S 19-19-40	Stobcross Street Off Ramp
M8S 19-19-50	Waterloo Street On Ramp
M8S 19-19-60	Bothwell Street Off Ramp
M8S 19-19-70	North Street Off Ramp
M8S 19-19-80	Newton Street On Ramp
M8S 19-20-50	Kingston Bridge
M8 20-20-10	M8 Main Approach South E/B
M8 20-20-20	M8 Main Approach South W/B
M8S 20-20-30	West Street Off Ramp
M8S 20-20-40	West Street On Ramp
M8 19-19 W5	W058 Bothwell St R/W
M8 19-19 W10	W059A Waterloo St
M8 19-19 W12	Waterloo South
M8 19-19 W15	W059B RW Kingston
M8 19-19 W20	W059C S RW Kingston
M8 19-19 W25	W059D N RW Kingston
M8 19-19 W30	W059E S RW Kingston
M8 19-19 W35	W060A Kingson NB RW
M8 19-19 W40	W060B Kingson SB RW
M8 19-19 W45	W0161A North Street Wall
M8 19-19 W50	W0161B North Street E RW
M8 20-20 W10	West St On North
M8 20-20 W20	West St On South
M8 20-20 W30	West St Off North
M8 20-20 W40	West St Off South
M8 19-19 F70	Anderston M8 Footbridge
M8 27-28-55	White Cart Viaduct
	Baillieston Interchange Complex
	(with associated elevated approach Structures and on/off ramps)

Structure Reference Number	Structure Name
M8S 8-8 10 (A8S 105)	M8 R/BOUT SE LEG
M73 2-2 10	M73 OVER RAIL
M73 2-2 20	M73 OVER M8 R/BOUT
M73 2-2 30	M73 OVER M8
M73 2-2 40	M73 OVER A89
M73S 2-2 50	M8 R/BOUT-M73 NB SR
M73S 2-2 60	M73 SB-M8 R/BOUT SR
M8S 8-8 100	M8 EB-M73 SB SLIP
M8S 8-8 110	M8 EB-A89 EB SLIP
M8 8-8 70	A89 WB O/B
M8 8-8 90	A89 EB O/B
M8S 8-8 120	M8 EB-M73 SB SLIP
M8S 8-8 130	M8 EB-M73 SB SLIP
M8S 8-8 20	M8 EB-M73 SB SLIP
M8S 8-8 30	M73 NB-M8 WB SLIP
M8S 8-8 40	OFF M8 R/BOUT WB
M8S 8-8 50	ONTO M8 R/B EB SLIP
M8S 8-8 60	M8 R/BOUT NW LEG
M8S 8-8 80	A89 WB-M8 WB SLIP
M8S 8-8 W10	Baillieston 1
M8S 8-8 W20	Baillieston 2
	St James Interchange
M8S 29-29-30	St James Viaduct A E/B
M8S 29-29-40	St James Viaduct B W/B

2. Erskine Bridge

2.1.1 Constructed in 1971 this Structure as shown in figure 2.1.1.A and whose location is denoted within figure 2.1.1.B comprises fifteen spans with an overall length of 1321 metres and carries A898 dual two lane Trunk Road with accommodation for cycle and pedestrian access. The steel box girder deck is supported by cable stays over the river spans. The remaining spans are supported by reinforced concrete columns and end abutments. Gas and water service pipes are suspended below the edge cantilevers.

An administration building and compound previously used in connection with tolls collection remain for the purpose and use of ongoing maintenance and monitoring. The Operating Company is advised that this facility may be used for the storage of specialist access equipment used for inspections and or maintenance Operations.

Figure 2.1.1.A – A898 100 Erskine Bridge

Figure 2.1.1.B – Erskine Bridge Location

2.2 Requirements for the A898 100 Erskine Bridge

2.2.1 The Operating Company is advised that a detailed inspection regime as outlined within the maintenance manual for this Structure may necessitate the inspection of specific elements on a more frequent timeframe. Where applicable, details shall be contained within the maintenance manual.

2.2.2 The Operating Company is advised that powered gantries to replace existing ones were installed in 2009 and provide access below deck to the cantilever and sloping sides of the steel box, although they do not access the full width of the steel box soffit. Appropriate level of inspections and servicing (including mechanical and electrical installations) are necessary for the gantries to remain certified for use at all times, this shall form part of the Operating Company's duties. Other access equipment held in the Erskine depot also requires regular specialist maintenance to remain in serviceable condition.

Further electrical installations in the form of internal lighting within the steel box and navigational lights on the Structure require to be maintained. There are also specialist contracts in place for:

(i) servicing wind anemometers,

(ii) CCTV cameras,

(iii) Weigh in Motion/Automatic Number Plate Recognition (WIM/ANPR) systems, and

(iv) the wind data and warning system.

A separate weather warning system is provided by the Meteorological Office.

There are detailed requirements in the maintenance manual that cover inspections of steelwork and welded connections, the cable system that includes periodic levelling of the deck to identify changes in profile. BT phones are installed at four corners of the bridge for which regular cleaning and maintenance are required by the Operating Company.

The Operating Company is advised that the following works are scheduled to be carried out or are underway upon the Structure:

(a) Tower and anchorage barrier protection.

(b) Increased height of edge parapets.

(c) Repainting of the bridge.

2.2.3 A summary defect report is required for this Structure.

3. Kingston Bridge Complex

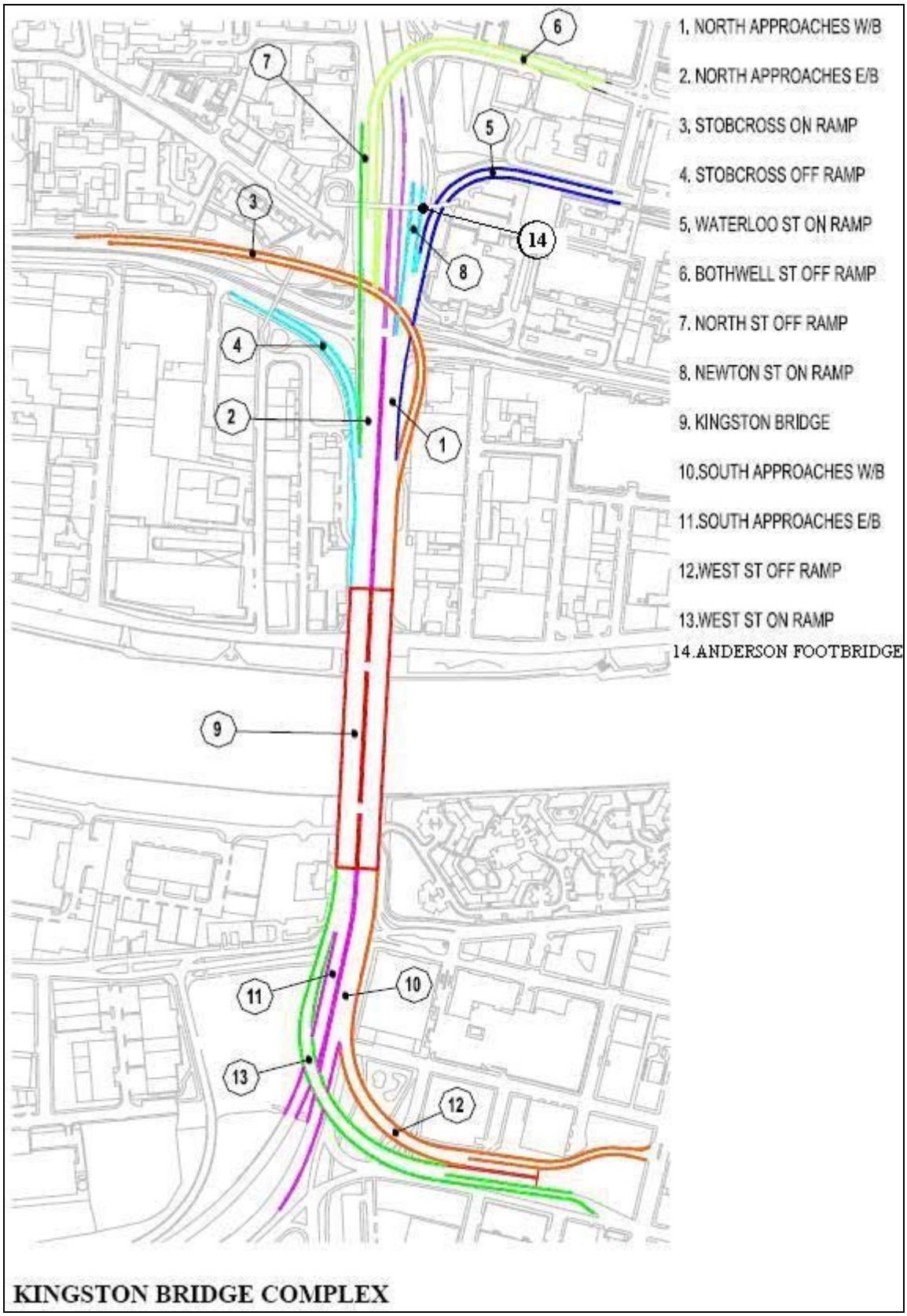
3.1.1 Constructed in 1971 this Structure shown in figure 3.1.1.A and whose location is denoted within figure 3.1.1.B has an overall length 268 metres and carries five lanes of the M8 in each direction. The main central span over the river Clyde is 143 metres. The deck consists of post tensioned cellular concrete construction supported on reinforced concrete piers and abutments.

The Kingston Bridge Complex extends from co-ordinates 258008E 665411N on the M8 at the north end to co-ordinates 257929E 664460N on the M8 at the south end. The location of the individual Structure approaches in addition to the on and off ramps and the main bridge is shown in figure 3.1.1.C.

Figure 3.1.1.A – M8 Kingston Bridge Complex

Figure 3.1.1.B – Kingston Bridge Complex Location

Figure 3.1.1.C – Kingston Bridge Complex Defined



3.2 Requirements for Kingston Bridge Complex

3.2.1 The Operating Company is advised that, under the management of the Glasgow City Council Kingston Bridge Project Team, the Kingston Bridge Complex has undergone a major programme of:

(i) inspections,

(ii) assessment, and

(iii) strengthening.

3.2.2 A further length of approximately one kilometre of cope and parapet on the Kingston Bridge Complex is still to be refurbished as part of a commitment to upgrade all sections of substandard cope and parapet on the Kingston Bridge Complex. These works shall be prioritised along with other bridgeworks on the network.

In addition, the Operating Company is advised that intervention works are scheduled during the life of the contract to be undertaken upon Anderson Footbridge. These works shall be referred to as Anderson Footbridge - Bridge to nowhere Connect 2 Scheme.

3.2.3 The Operating Company shall carry out class 1 inspections as referred to in BD/79 of the Design Manual for Roads and Bridges at three monthly intervals of the un-refurbished precast cladding cope and parapet on this 1km section.

The timing of the inspections shall be programmed to ensure continuity with the current programme.

3.2.4 The Operating Company shall carry out class 1 inspections as referred to in BD/79 of the Design Manual for Roads and Bridges at three monthly intervals of the 96 half-joints left on the Kingston Bridge Complex.

The timing of the inspections shall be programmed to ensure continuity with the current programme.

3.2.5 The Operating Company shall carry out class 1 inspection as referred to in BD/79 of the Design Manual for Roads and Bridges at 12 monthly intervals of the precast cladding (spandrel and arch units) on the main Kingston Bridge.

The timing of the inspections shall be programmed to ensure continuity with the current programme.

3.2.6 Subject to an Order, the Operating Company shall be responsible for ensuring the continued operation and management of the existing environmental electronic monitoring system within the Kingston Bridge including data collection and reporting.

3.2.7 In addition to the requirements of Schedule 7 Part 6, the Operating Company is advised that the year in which the first inspection shall be due for each specific element shall be as referred to in this Annex.

Also stated for information purposes are the dates for the associated retaining walls which are also on a cyclic inspection programme.

Table 3.2.7.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
M8	Kingston Bridge Complex			
M8 19-19-10	M8 Main Approach North E/B	2009 GI	2014	2011
M8 19-19-20	M8 Main Approach North W/B	2009 GI	2014	2011
M8S 19-19-30	Stobcross Street On Ramp	2008 GI	2014	2012
M8S 19-19-40	Stobcross Street Off Ramp	2010 GI	2014	2012
M8S 19-19-50	Waterloo Street On Ramp	2009 GI	2013	2011
M8S 19-19-60	Bothwell Street Off Ramp	2009 GI	2013	2011
M8S 19-19-70	North Street Off Ramp	2009 GI	2013	2011
M8S 19-19-80	Newton Street On Ramp	2009 GI	2013	2011
M8 19-20-50	Kingston Bridge	2009 GI	2013	2011
M8 20-20-10	M8 Main Approach South E/B	2009 GI	2013	2011
M8 20-20-20	M8 Main Approach South W/B	2009 GI	2013	2011
M8S 20-20-30	West Street Off Ramp	2009 GI	2013	2011
M8S 20-20-40	West Street On Ramp	2009 GI	2013	2011
M8 19-19 W5	W058 Bothwell St R/W	2009 GI	2013	2011
M8 19-19 W10	W059A Waterloo St	2010 PI	2016	2012
M8 19-19 W12	Waterloo South	2010 PI	2016	2012
M8 19-19 W15	W059B RW Kingston	2010 PI	2016	2012
M8 19-19 W20	W059C S RW Kingston	2010 PI	2016	2012
M8 19-19 W25	W059D N RW Kingston	1998 PI	*	*
M8 19-19 W30	W059E S RW Kingston	1998 PI	*	*
M8 19-19 W35	W060A Kingson NB RW	2010 PI	2016	2012
M8 19-19 W40	W060B Kingson SB RW	2010 PI	2016	2012
M8 19-19 W45	W0161A North Street Wall	2010 PI	2016	2012
M8 19-19 W50	W0161B North Street E RW	2010 PI	2016	2012
M8 20-20 W10	West St On North	1998 PI	*	*
M8 20-20 W20	West St On South	1998 PI	*	*
M8 20-20 W30	West St Off North	2010 PI	2016	2012
M8 20-20 W40	West St Off South	2010 PI	2016	2012
M8 19-19 F70	Anderston M8 Footbridge	2009 GI	2012	2013

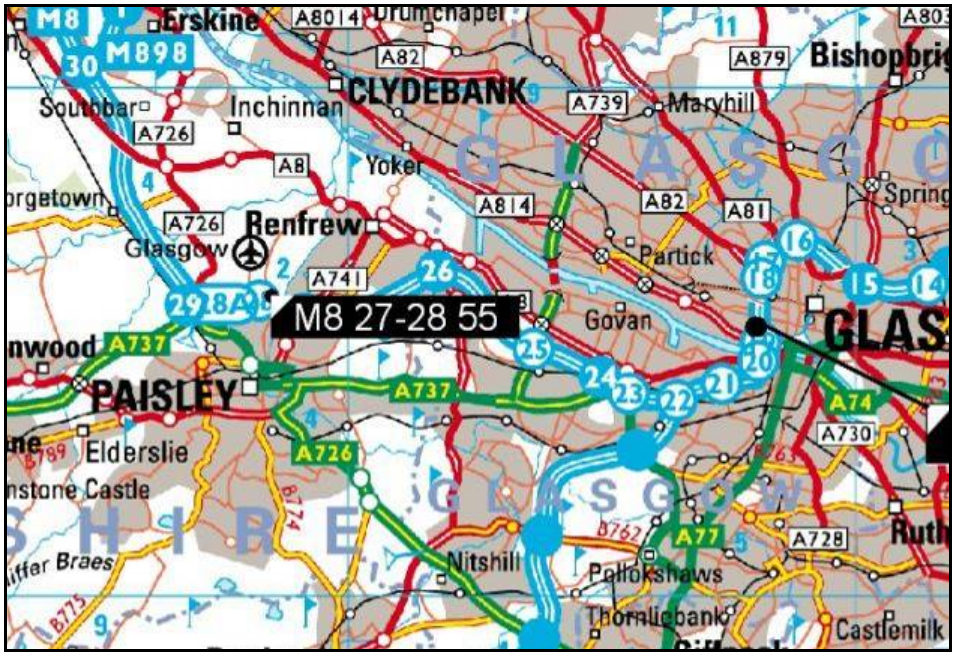
* The next PI shall be completed in the first year of the contract award whilst the next GI shall be conducted two years later.

4. White Cart Viaduct

4.1.1 Constructed in 1968 this Structure shown in figure 4.1.1.A and whose location is denoted within figure 4.1.1.B carries a dual three lane motorway south of Glasgow Airport. The Structure comprises 23 spans formed of twin box girders and a reinforced concrete deck slab with an overall length of 822 metres.

Figure 4.1.1.A – M8 27-28 55 White Cart Viaduct

Figure 4.1.1.B – White Cart Viaduct Location



4.2 Requirements for the M8 27-28 55 White Cart Viaduct

4.2.1 The Operating Company is advised that intervention works have been completed under two separate phases:

(i) phase 1: new parapets and lighting columns, and

(ii) phase 2: waterproofing, resurfacing and west side expansion joints.

4.2.2 The Operating Company is advised that a an additional phase 3 is scheduled to commence during the summer of 2010 for a planned 18 month contract duration and will be outside the scope of this Contract. These works will entail the strengthening

of the steel deck with additional steel sections and plating attached to the existing boxes in addition to strengthening of the existing welded connections. Internal lighting will also be installed within the boxes to facilitate future inspections.

Completion of the strengthening will allow the removal of current narrow lane restrictions over the viaduct.

4.2.3 A future Phase 4 is planned and this will include the repainting of the steelwork. Following completion of these works the Health and Safety file shall be handed over to the Operating Company for inclusion with the relevant manuals associated with this Structure.

4.2.4 In addition to the requirements of Schedule 7 Part 6, the Operating Company is advised that the year in which the first inspection is due shall be as referred to in this Annex.

Table 4.2.4.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
M8 27-28 55	White Cart Viaduct	2010 PI	2015	2013

4.2.5 A summary Defect report is required for this Structure.

5. Baillieston Interchange Complex

5.1.1 Constructed between 1971 and 1979 this interchange connects the M8, M73 and A89 in the complex arrangement of roads and Structures as indicated within figure 5.1.1.A. The location and approach roads are denoted within figure 5.1.1.B and the location of the individual structural elements within the interchange and their relationship to the above routes is shown in figure 5.1.1.C.

Figure 5.1.1.A – Baillieston Interchange Complex

Figure 5.1.1.B – Baillieston Interchange Complex Location

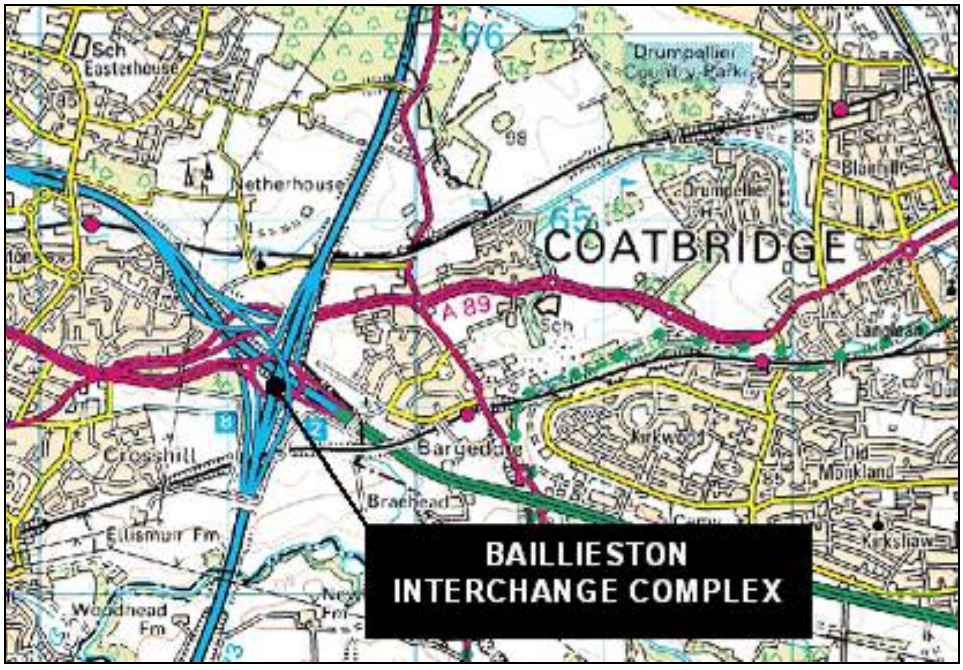
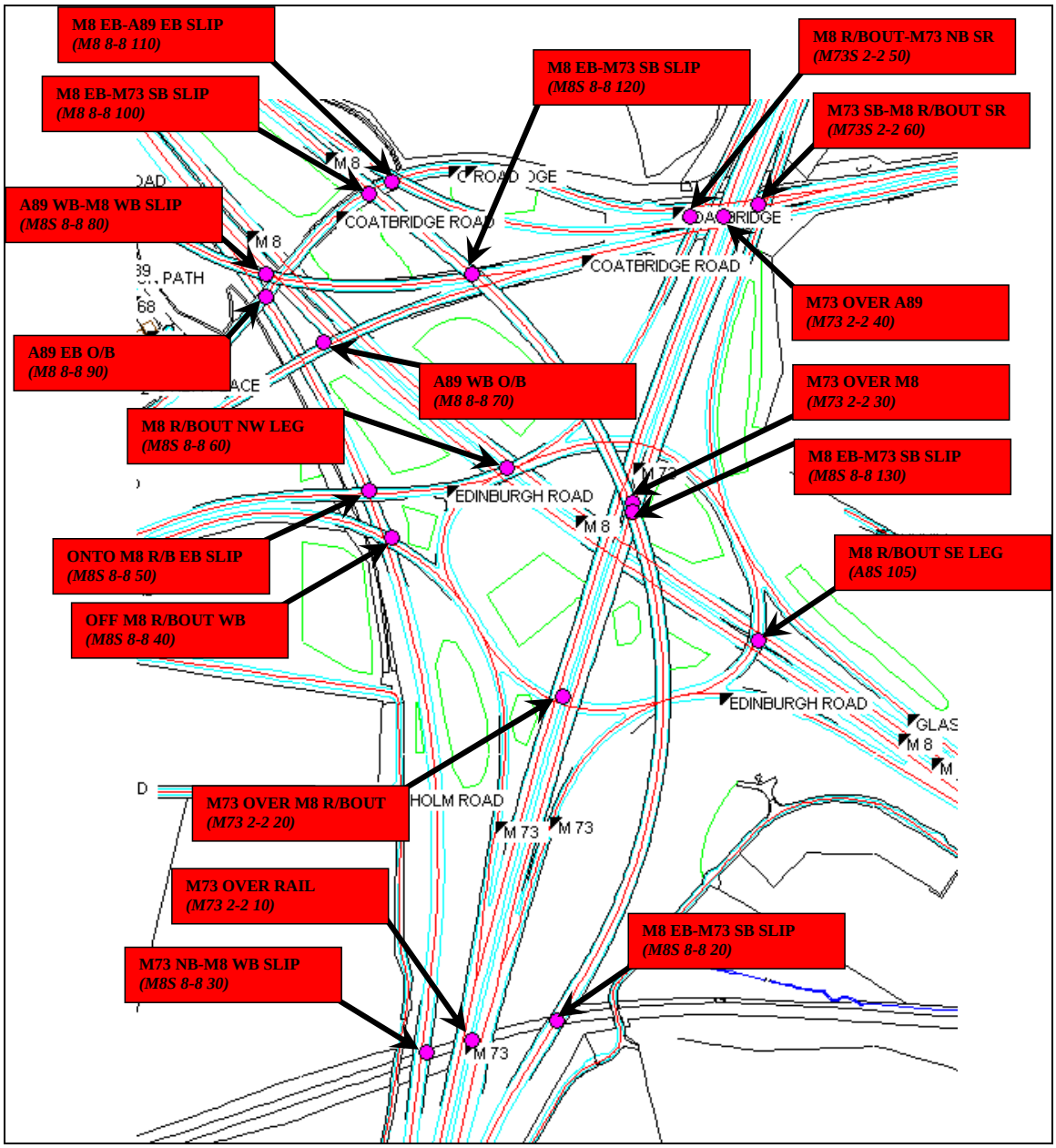


Figure 5.1.1.C – Baillieston Interchange Complex Defined



5.2 Requirements for Baillieston Interchange Complex

5.2.1 In addition to the requirements of Schedule 7 Part 6, the Operating Company is advised that the year in which the first inspection will be due shall be as referred to in this Annex.

Table 5.2.1.A – PI/GI Inspection Dates

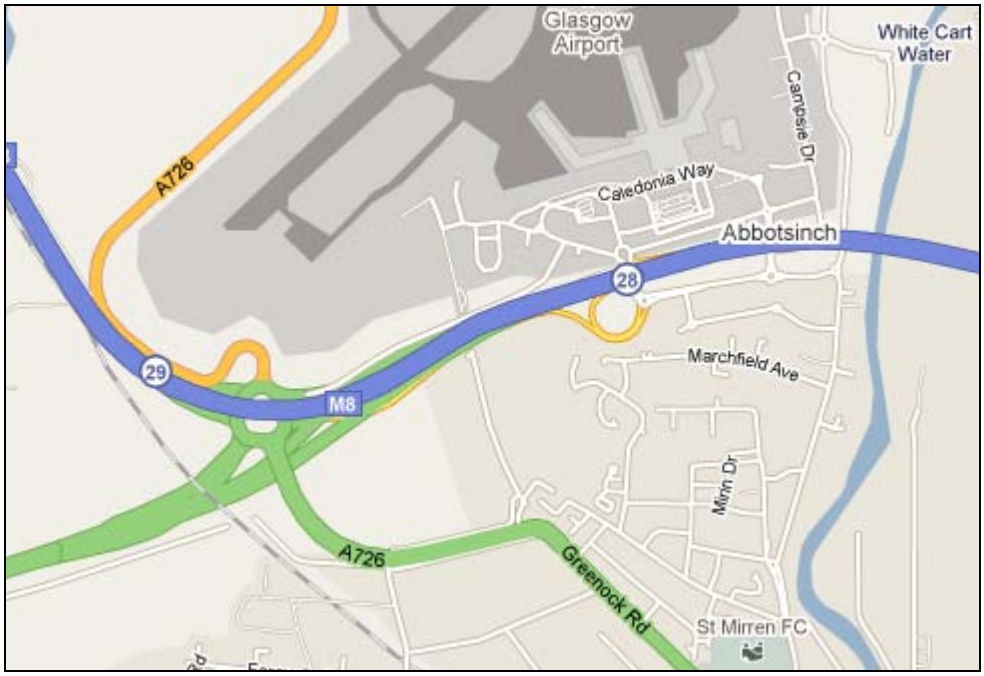
Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
	Baillieston Interchange			
M8S 8-8 10 (A8S 105)	M8 R/BOUT SE LEG	2010 GI	2012	2014
M73 2-2 10	M73 OVER RAIL	2009 GI	2011	2013
M73 2-2 20	M73 OVER M8 R/BOUT	2009 GI	2011	2013
M73 2-2 30	M73 OVER M8	2009 GI	2011	2013
M73 2-2 40	M73 OVER A89	2010 GI	2012	2014
M73S 2-2 50	M8 R/BOUT-M73 NB SR	2010 GI	2012	2014
M73S 2-2 60	M73 SB-M8 R/BOUT SR	2010 GI	2012	2014
M8S 8-8 100	M8 EB-M73 SB SLIP	2010 GI	2012	2014
M8S 8-8 110	M8 EB-A89 EB SLIP	2010 GI	2012	2014
M8 8-8 70	A89 WB O/B	2010 GI	2012	2014
M8 8-8 90	A89 EB O/B	2010 GI	2012	2014
M8S 8-8 120	M8 EB-M73 SB SLIP	2010 GI	2012	2014
M8S 8-8 130	M8 EB-M73 SB SLIP	2010 GI	2012	2014
M8S 8-8 20	M8 EB-M73 SB SLIP	2009 PI	2015	2011
M8S 8-8 30	M73 NB-M8 WB SLIP	2009 PI	2015	2011
M8S 8-8 40	OFF M8 R/BOUT WB	2010 GI	2015	2012
M8S 8-8 50	ONTO M8 R/B EB SLIP	2010 GI	2012	2014
M8S 8-8 60	M8 R/BOUT NW LEG	2010 GI	2012	2014
M8S 8-8 80	A89 WB-M8 WB SLIP	2010 GI	2012	2014
M8S 8-8 W10	Baillieston 1	2010 GI	2012	2014
M8S 8-8 W20	Baillieston 2	2007 GI	2015	2011

6. St James Interchange

6.1.1 Constructed in 1993 this Structure shown in figure 6.1.1.A and whose location is denoted within figure 6.1.1.B carries the M8 motorway over the A726 south west of Glasgow Airport. Comprising two Structures with varying span lengths, the longest span is 67.00 metres. The deck superstructure is a composite of steel beams and reinforced concrete supported upon columns which in turn are founded upon piles.

Figure 6.1.1.A – St James Interchange

Figure 6.1.1.B – St James Interchange Location



6.2 Requirements for St James Interchange

6.2.1 In addition to the requirements of Schedule 7 Part 6, the Operating Company is advised that the year in which the first inspection is due shall be as referred to in this Annex.

Table 6.2.1.A – PI/GI Inspection Dates

Bridge Number	Bridge Name	Date of last PI/GI (most recent)	Date of next PI	Date of next GI
M8S 29-29 30	St James Viaduct A E/B	2009 PI	2015	2011
M8S 29-29 40	St James Viaduct A W/B	2009 PI	2015	2011

This is Annex 7.7/B to Schedule 7 Part 7 referred to in the foregoing Agreement between Scottish Ministers and Scotland TranServ being a Joint Venture comprising of Balfour Beatty Civil Engineering Limited and Mouchel Limited.

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/B – Documents for Structures with Particular Requirements

SCOTTISH MINISTERS' REQUIREMENTS

SCHEDULE 7 PART 7

STRUCTURES WITH PARTICULAR REQUIREMENTS

ANNEX 7.7/B – Documents for Structures with Particular Requirements

These documents are Reference Documents.

Erskine Bridge	
1.	**Maintenance Manuals**
	Volume 1
	Volume 2
	Volume 3
	Erskine Bridge Underdeck Side Gantries - Maintenance Manual
	Erskine Bridge Underdeck Side Gantries - Operating Manual
	Document Bundle D - Statutory Undertakers Equipment
	Document Bundle E - Electrical Equipment
	Document Bundle G Tower Cradle Operation and Maintenance Manuals
2.	**Operations Manual**
	Erskine Bridge Operations Manual
3.	**Safety Manual**
	Erskine Bridge Safety Manual
	A898 100 Erskine Bridge Inspection Schedule

M8 Kingston Bridge **Strengthening Phase 1 (1996 - 2001) Design and Construction Records**	
1.	Volume 1 of 6 - General Description of the Works including Maintenance and Health and Safety Information
2.	Volume 2 of 6 - Structural Maintenance information Sections 1 - 4
3.	Volume 3 of 6 - Structural Maintenance information Sections 5 - 11
4.	Volume 4 of 6 - Health and Safety File information Sections 1 - 3
5.	Volume 5 of 6 - Health and Safety File information Sections 4 - 7
6.	Volume 6 of 6 - Health and Safety information Sections 8 - 11

Stobcross On Ramp Replacement and Associated Works Documents	
1.	Stobcross Off-Ramp Replacement Health & Safety File
2.	As Built Records Volume 1 - Design and Construction Report
3.	As Built Records Volume 2 - Maintenance Manual

M8 Kingston Bridge Monitoring System Documents	
1.	Technical Manual
2.	AiRanger SPL Instruction Manual
3.	Datascan Installation and User Guide
4.	Vaisala Humidity and Temperature Transmitters Technical Data
5.	Heraeus Platinum Resistant Temperature Probe Datasheet
6.	Silicon Cell Pyranometer Manual
7.	RDP Spring Return Transducer Datasheet
8.	Main Server Hardware Specifications
9.	APC Smart UPS Uninterruptible Power Supply 230 VAC Users Manual
10.	DC Spring Return Displacement Transducers Datasheet

White Cart Viaduct Documents
1. M8 White Cart Viaduct Maintenance Manual: Volume 1 Records and Appendices
2. M8 White Cart Viaduct Maintenance Manual: Volume 2 Descriptions, Inspection & Maintenance Requirements

Baillieston Interchange Complex Documents
Presently no Maintenance Manual exists for this Structure

St James Interchange Documents
1. St. James Interchange Inspection & Maintenance Manual