

**AGREEMENT BETWEEN SHEFFIELD CITY COUNCIL (1) AND SOUTH YORKSHIRE PASSENGER TRANSPORT EXECUTIVE (2) RELATING TO RESPONSIBILITY FOR THE MAINTENANCE OF SUPERTRAM-RELATED INFRASTRUCTURE AND OTHER ASSOCIATED EQUIPMENT WITHIN THE HIGHWAY**

**THIS AGREEMENT is made on 25th July 2012**

**BETWEEN**

- 1. SHEFFIELD CITY COUNCIL (SCC) of Town Hall Pinstone Street Sheffield S1 2HH and**
- 2. SOUTH YORKSHIRE PASSENGER TRANSPORT EXECUTIVE (SYLTE) of 11 Broad Street West Sheffield S1 2BQ**

**RECITALS**

(A) This Agreement is intended to set out the responsibilities of SCC and SYLTE in relation to the inspection, maintenance and replacement of the Highway, the Supertram-related infrastructure and the assets in, on, under or immediately adjacent to the Highway where the Highway is shared with Supertram and its associated infrastructure and equipment.

(B) It is intended that section 29 of the Tramways Act 1870 will be reflected in this Agreement.

**IT IS AGREED AS FOLLOWS**

**1. Definitions**

In this Agreement unless the context otherwise requires:

“Carriageway” means a way constituting or comprised in a Highway over which the public have a right of way for the passage of vehicles.

“Category 1 Defect” means any fault or defect that requires prompt attention because it represents a potential hazard or because there is a risk of short term structural deterioration. In the carriageway this would include defects that present trips of greater than 40mm and in footways this would include defects that present trips of greater than 20mm in areas of high pedestrian frequency (eg tram stops)

“Category 3 Defect” means any fault or defect that has the potential to develop into a potential hazard or which may lead to structural deterioration if not attended to. In the carriageway this would include defects that present a trip hazard greater than 20mm up to 40mm and in footways this would include defects that present a trip hazard greater than 20mm in areas of low pedestrian usage

"Highway" means a highway maintainable at public expense as defined in the Highways Act 1980.

"Ironwork" means metal drains, gratings, access and inspection covers and the like.

"SCRIM testing" means tests carried out by a Sideways-force Coefficient Routine Investigation Machine.

"Supertram" means the light rail system constructed and operated in accordance with the South Yorkshire Light Rail Transit Acts 1988, 1989, 1990 and 1993 (including any future extensions or alterations made to the said light rail system howsoever authorised)

"Supertram Maintenance Area" means the Highway covered by the 18-inch rule (as the same is defined in section 28 of the Tramways Act 1870) together with the areas hatched red on the Supertram Maintenance GIS layer.

"Supertram Maintenance GIS layer" means the suite of ARC GIS data files (when viewed on ARC using the layer file called "SuperTramMaintenance Layer.lyr" which is included in that suite of files) on the data CD dated 9<sup>th</sup> July 2012 which the parties acknowledge represents the relevant data at the date of this agreement, and which may be updated from time to time as agreed between the parties.

"SupertramThirdParty GIS layer" means the suite of ARC GIS data files (when viewed on ARC using the layer file called "SupertramThirdParty.lyr" which is included in that suite of files) on the data CD dated 9<sup>th</sup> July 2012 which the parties acknowledge represents the relevant data at the date of this agreement, and which may be updated from time to time as agreed between the parties.

"Urgent Defect" means any fault or defect that requires prompt attention because it represents an immediate or imminent hazard that causes high risk to life and limb. Examples include missing manhole covers, collapsed column blocking the highway, etc.

## **2. Interpretation**

2.1 In this Agreement unless the context otherwise requires:

- 2.1.1 words importing any gender shall include all genders;
- 2.1.2 the singular includes the plural and vice versa;
- 2.1.3 a reference in this Agreement to any clause, sub-clause, paragraph, schedule or annex, is, except where it is expressly stated to the contrary, a reference to such clause, sub-clause, paragraph, schedule or annex of this Agreement;
- 2.1.4 any reference to this Agreement or to any other document shall include any permitted variation, amendment or supplement to such document;
- 2.1.5 any reference to any enactment, order, regulation or other similar instrument shall be construed as a reference to the enactment, order, regulation or instrument (including any EU instrument) as amended, replaced, consolidated or re-enacted; and
- 2.1.6 headlines are for convenience of reference only.

- 2.2 The language of this Agreement is English and all correspondence, notices, certificates and other information provided or made under it shall be in English.
- 2.3 Subject to Clause 1 (Definitions) the words in this Agreement shall bear their natural meaning.
- 2.4 Reference to "parties" means the parties to this Agreement and reference to "a party" means one of the parties to this Agreement.
- 2.5 Any phrase introduced by the words "including", "includes", "in particular", "for example" or similar shall be construed as illustrative and without limitation to the generality of the related general words.
- 2.6 All of the obligations of a party to this Agreement shall be construed as separate duties, obligations and responsibilities owed to the other party and to be carried out at that party's own cost and expense, except where otherwise specifically provided in this Agreement
- 2.7 Wherever there is reference to agreement on procedures for notification, timescales, carrying out of works, default responsibilities and similar matters and there is no specific agreement between the parties as to those matters set out herein, the parties agree that they will continue to negotiate in good faith to reach agreement on such provisions, and when such agreement is reached and evidenced in writing, the provisions of this Agreement shall be construed as incorporating such agreement and compliance or non-compliance with them shall be regarded as compliance or non-compliance with this Agreement.

### **3. Inspection and Maintenance of the Supertram system and related infrastructure and equipment within the Highway**

#### **3.1 Visual Inspections and Follow-up Work**

- 3.1.1.1.SYPTE are responsible for the maintenance and repair of the Highway within the Supertram Maintenance Area in accordance with section 41 of the Highways Act 1980 and wherever possible on a like-for-like basis.
- 3.1.1.2.SYPTE are responsible for the carrying out, or arranging to be carried out, of visual inspections of the Supertram system and related infrastructure and equipment within the Highway at 2 monthly frequencies and sharing the result of such inspections with SCC.
- 3.1.1.3.Urgent Defects within the Supertram Maintenance Area shall be temporarily repaired by SYPTE within 30 minutes during business hours, or 1 hour outside business hours, of the time at which SYPTE becomes aware, or should have become aware, of the defect. They shall be fully repaired within 7 days of the time at which SYPTE becomes aware, or should have become aware, of the defect.
- 3.1.1.4.Category 1 Defects within the Supertram Maintenance Area shall be temporarily repaired within 24 hours and fully repaired within 28 days of the time at which SYPTE becomes aware, or should have become aware, of the defect.

3.1.1.5.SCC shall forward to SYPTE details of any Urgent, Category 1 or Category 3 Defects that they become aware of, in so far as they relate to assets for which SYPTE are responsible.

3.1.1.6.Where a defect in the highway for which the Council are responsible does not fall within the categories established in this Agreement directly but SYPTE, acting reasonably, consider that such a defect is likely to affect the operation of Supertram then they may notify SCC of:

- the defect in question and its location;
- the reasons why they consider that the defect is likely to have an effect on the operation of Supertram;
- the steps which they consider that SCC should take to ensure that the operation of Supertram is not affected

but such notification must make it clear that it is under the provisions of this clause.

3.1.1.7.Upon receipt of such notification SCC shall:

- in the case of Urgent Defects and Category 1 Defects, make safe and undertake temporary repairs within the equivalent timescales to those set out in paragraphs 3.1.1.3 and 3.1.1.4 as appropriate;
- in the case of a defect which is minor in nature, reply to SYPTE within 28 days stating whether they consider that the defect falls within the provisions of this clause or not, and if they consider that the defect does not fall within the provisions of this clause they shall give their reasons. If SCC consider that the defect falls within the provisions of this clause then they shall remedy the defect within appropriate timescales dependent on the nature of the defect.

3.1.2 Failure by SYPTE to respond to any Urgent Defects or Category 1 Defects, however identified, within such procedures or timescales as set out by this Agreement will result in SCC carrying out the works and recharging the cost of them to SYPTE.

3.1.3 Red (or any other specialist) surfacing which has been installed to control the direction and positioning of traffic away from the Supertram rails shall be inspected by SYPTE every 2 months and maintained and funded by SYPTE.

3.1.4 SYPTE shall be responsible for carrying out detailed elastomer inspections, together with follow up repairs, as necessary, based on an assessment of safety and of what tolerance is technically feasible.

## **3.2 Rail Height**

3.2.1 SYPTE shall carry out surveys of the whole network every 5 years utilising a purpose built rail height measuring machine.

3.2.2 SYPTE will also carry out rail height checks within 14 days following road traffic accidents, whether or not resulting in injury, which will be part of the "accident" investigations and also act as a control measure to check to what extent rail

height varies over time.

- 3.2.3 The survey results achieved in 3.2.1 and 3.2.2 will be analysed by SYPTE and the scope of any potential follow up remedial work will be agreed with SCC based on safety issues raised by the surveys, and procured and paid for by SYPTE in accordance with procedures and timescales agreed or to be agreed between the parties.

### **3.3 Skid Resistance Testing of Track Slab**

SCC will carry out annual SCRIM testing of the concrete track slab (whether treated or untreated), where it is also used by road traffic. Such testing to be jointly funded by SCC and SYPTE. SCC to share the results with SYPTE in an agreed format.

### **3.4 Anti Skid Surfacing**

- 3.4.1 SCC and SYPTE will jointly fund and accept responsibility for the provision, maintenance or replacement of any anti-skid surfacing necessary to improve the skid resistance of the concrete track slab across the total width of the carriageway lane together with any warning signs as may be required. Existing sections are shown black crosshatched on the Supertram Maintenance GIS layer. In order to effect this joint responsibility, the parties have agreed to the following processes which do not relieve either party of their responsibility.
- 3.4.2 Where the SCRIM testing referred to in paragraph 3.3 above indicates that a Road Section Length is deficient or potentially deficient, SCC shall carry out an investigation and act in accordance with its Skid Resistance Management approach (see Annex 1). Where the investigation has confirmed that the average skid resistance of a 50m section is 0.05 CSC units or more below the appropriate Investigatory Level, SCC shall determine an appropriate course of action in accordance with that approach, which will be notified to SYPTE at the quarterly Maintenance Sub Group meeting. Where the course of action involves a treatment, SCC will arrange for the appropriate treatment to restore skid resistance to be undertaken within 2 years of the SCRIM testing.
- 3.4.3 The liability of SYPTE to pay the 50% contribution to SCC towards the cost of the provision, maintenance or replacement of anti-skid surfacing necessary to improve the skid resistance of the concrete track slab pursuant to paragraph 3.4.1 shall be limited to an amount not exceeding £40,000 per annum (inflated per annum according to RPIx) or such further amount as is agreed between the parties (acting reasonably) at the first Maintenance Sub Group meeting (see paragraph 4.1.(ii)) in each financial year having regard to the results of the SCRIM testing in previous years.

### **3.5 Ironwork**

Ironwork owned by SYPTE in the highway shall be maintained and repaired by SYPTE in accordance with section 41 of the Highways Act 1980.

### **3.6 Structural Integrity of the Concrete Track Slab**

- 3.6.1 SYPTE is responsible for the structural integrity of the concrete track slab, rails and associated infrastructure.

### **3.7 Supertram-related equipment and infrastructure**

- 3.7.1 SYPTE shall be responsible, in accordance with the provisions of this Agreement, for maintenance and replacement of all Supertram-related infrastructure or apparatus, except that detailed in 3.7.3 and anti-pedestrian/anti-vehicle 'bobble' surfacing where it is outside the Supertram Maintenance Area.
- 3.7.2 Any lighting, litter bin or other receptacle or apparatus provided by SYPTE shall remain the property of SYPTE and may be maintained or removed by them in such manner as they consider appropriate subject to any provisions to the contrary in this Agreement.
- 3.7.3 The equipment or apparatus listed in Schedule 1 of this Agreement is owned by SCC, who will carry out its replacement and significant maintenance, but routine maintenance (e.g. cleaning and painting) is to be carried out by SYPTE. SYPTE to notify SCC within one week of a decision to make an amendment to this Schedule.

### **3.8 Drainage**

- 3.8.1 SYPTE shall be responsible for the cleansing, emptying and repair of drainage gullies, strip drains and track drainage gullies within the Supertram Maintenance Area, except those listed in Schedule 2 to this document, for which SCC are responsible. SYPTE shall also be responsible for maintenance and repair of the connecting pipework between the tram drainage gullies and the combined sewer / highway drain into which they discharge. SCC shall be responsible for the repair of damaged or blocked pipework between the highway drainage gullies and the sewer or drain into which they discharge.
- 3.8.2 SCC shall be responsible for the cleansing, emptying and repair of highway drainage gullies, strip drains and combined kerb drains adjacent to the tram system but outside the Supertram Maintenance Area, except those listed in Schedule 3 to this document, for which SYPTE are responsible. SCC shall be responsible for maintenance and repair of the connecting pipework between the highway drainage gullies, strip drains, combined kerb drains and the combined sewer / highway drain into which they discharge.
- 3.8.3 SCC is responsible for the maintenance and repair of highway drains. In the event that a blockage within the highway drain causes disruption to the tram track drainage, SYPTE will notify SCC.
- 3.8.3.1 If the Trams can proceed under caution SCC will rectify the problem within 7 days of notification, provided that the part of the highway drainage system is readily accessible, and subject to access being provided to the Supertram

Maintenance Area if necessary;

3.8.3.2 If the Trams cannot proceed, SCC to rectify the problem within 24 hours of notification, provided that the part of the highway drainage system is readily accessible, and subject to access being provided to the Supertram Maintenance Area if necessary.

3.8.4 In situations where a blockage within a combined sewer causes disruption to the tram drainage system this will be reported to Yorkshire Water to rectify the blockage.

### **3.9 Traffic Signals**

3.9.1 There are 71 traffic signal junctions and pedestrian traffic signal crossings which are capable of being affected by the presence or running of trams. They are all monitored by SCC through the Urban Traffic Control System.

3.9.2 In respect of all such junctions and crossings:

3.9.2.1 the "Vehicle Identification System" (VIS) infrastructure (comprising transponders on trams, loops located in the project network, VIS cabinets and cable connection to traffic signal junction and pedestrian crossing controllers) is owned and maintained by SYPTE;

3.9.2.2 the 274 full-time and 6 part-time LRT signal heads (comprising the signal head, aspect lamps, all associated internal electrical equipment and cabling to the traffic signal pole cap or double based pole wiring assembly) are owned and maintained by SYPTE;

3.9.2.3 the 48 core cable and underground duct connections to the traffic signalling duct network are owned and maintained by SYPTE; and

3.9.2.4 all other Traffic Signal apparatus or equipment of whatever nature is owned and maintained by SCC.

3.9.3 In respect of any faults or defects of any nature in any of the equipment or apparatus referred to in this clause which is the responsibility of SYPTE, SYPTE will provide SCC with such information as it may necessarily require relating thereto in order to enable SCC to comply with its network management duties under the Traffic Management Act 2004.

3.9.4 In respect of any faults or defects of any nature in any of the equipment or apparatus referred to in this clause which is the responsibility of SCC, SCC will provide such information to SYPTE as it may reasonably require in order to enable it to operate the system and to comply with its responsibilities under this Agreement.

### **3.10 Traffic Signage**

3.10.1 All of the generic and specific signs pictured in the attached photo Schedule 4, shall be maintained by SYPTE, except for any exceptions shown specifically as

"SCC" in that Schedule.

3.10.2 SCC shall maintain all white line markings on the Highway including 'Give Way'/'Stop' markings for road vehicle traffic except for the rumble strip installed in conjunction with the red surfacing referred to in paragraph 3.1.3, which will be maintained by SYPTE.

### **3.11 Structures**

3.11.1 The division of maintenance responsibility between SCC and SYPTE for structures in, on, under, or immediately adjacent to the Highway shared with Supertram is set out in Schedule 5.

3.11.2 The parties shall carry out General Inspections of the structures for which they have responsibility every 2 years and Principal Inspections every 6/7 years, or as appropriate based on a risk-based analysis, and shall undertake any maintenance work arising from the inspections in accordance with such arrangements relating to maintenance and response times to be agreed between the parties, acting reasonably, on a case by case basis.

3.11.3 Each party shall send electronic copies of their inspections to the other party within 2 months of the inspection report being received.

### **3.12 Emergencies**

3.12.1. In the event of an emergency situation in the vicinity of the Supertram Maintenance Area, both parties will implement their emergency procedures.

## **4. Monitoring Groups**

4.1 A Steering Group has been established by the parties together with a Maintenance Sub Group and an Operations Sub Group.

(i) The Steering Group will meet every 6 months to ensure the strategic maintenance and management of the Supertram Maintenance Area is being delivered in line with this Agreement.

(ii) The Maintenance Sub Group will meet quarterly to monitor:

(a) operational performance of both parties in line with this Agreement, to be reported to the next meeting of the Steering Group; and

(b) the results of reports that South Yorkshire Police provide to SYPTE and SCC on a quarterly basis, in which accident record data is shared and reviewed to enable identification of locations where joint investigations are necessary. Outside of the meetings SYPTE and SCC will carry out investigations of fatal or life-threatening accidents and receive reports from South Yorkshire Police which may relate to the operation of



Supertram within the highway and will report back to the Sub Group at its next planned meeting on the outcome of such investigations.

(iii) The Operations Sub Group will meet quarterly to consider the impact of the tram on traffic movements, and vice versa, and also to look at related road safety issues, in addition to the work on accident investigations being carried out by the Maintenance Sub Group.

(iv) Each Sub Group will report back to the next meeting of the Steering Group on their work.

4.2 In addition to these standard meetings, both parties shall, as soon as practicable after carrying out any tests, inspections or surveys, provide to the other party details of the tests, inspections or surveys carried out and the results thereof including all recommendations.

## 5. Cross-Rights

Each party agrees to afford such access to the other as is reasonably necessary to enable them to comply with their responsibilities under this Agreement and will indemnify the other in respect of any loss or damage directly caused by the exercise of such access rights provided that wherever possible reasonable written notice shall be given prior to such access.

## 6. Review and Termination

6.1 This Agreement may be reviewed annually if either party so wishes and amended by agreement in writing as necessary.

6.2 This Agreement may only be terminated by mutual agreement between the parties.

SIGNED by 

On behalf of Sheffield City Council

Date

19/7/12

STEVE ROBINSON  
HEAD OF HIGHWAY MAINTENANCE

SIGNED by 

On behalf of South Yorkshire Passenger Transport Executive

Date

23/7/2012

## **Supertram Agreement**

### **SCHEDULE 1**

**Equipment and apparatus owned by SCC, who will carry out its replacement and significant maintenance, but for which routine maintenance (i.e. cleaning and painting) is to be carried out by SYPTE.**

All items listed and mapped in the SupertramThirdParty GIS layer.

### **SCHEDULE 2**

**Drains within the Supertram Maintenance Area for which SCC are nevertheless responsible.**

- West Street - Drainage Gully and strip drain in carriageway adjacent to pedestrian crossing near junction with Orange Street.
- High Street - Drainage Gully outside GT News.
- High Street - Drainage Gully outside Blue Arrow.
- Castle Square - 2 No Drainage gully just below tram stop.
- High Street - 2 No Drainage gully just above junction with Haymarket.

### **SCHEDULE 3**

**Drains outside the Supertram Maintenance Area for which SYPTE are nevertheless responsible.**

- Church Street, Cathedral tram stop - 'Aco' Strip drains between rear of tram stop and junction with East Parade.
- Middlewood Road, Leppings Lane inbound tram stop – drainage channel and footway gully between rear of tram stop and junction with Parkside Road.

**SCHEDULE 4**

**Sign types to be maintained by SYPTÉ, and specific exceptions.**



**Tramway - Look Both Ways**



**Facing Points Board**



**Lightening & Blue Tram**





Look Both Ways



No Entry Round Red & No Access Oblong Bow String Bridge

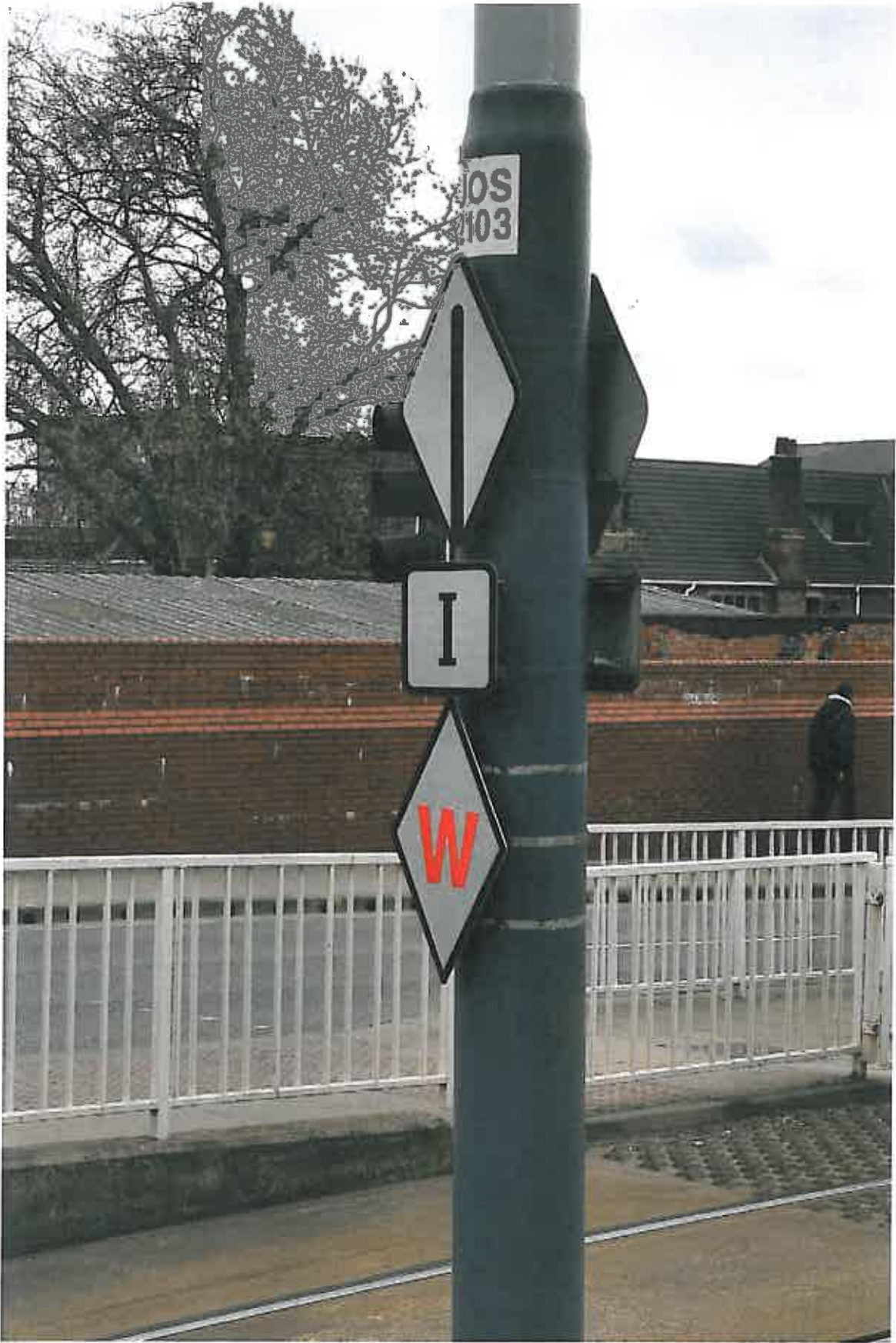


**No Entry**





**Red Speed Sign**



**Red W Sign**



At Shalesmoor this no entry sign is SYSL



Shalesmoor No Entry



**Speed Sign & Arrow**



**Blue Round in Orange Rectangle - SCC**



**SCHEDULE 5 – STRUCTURES – Division of maintenance responsibility between SCC and SYPTE for structures in, on, under, or immediately adjacent to the Highway shared with Supertram**

**PARK SQUARE JUNCTION TO MEADOWHALL INTERCHANGE**

No.	Type of Structure	Located between (OLE Structures)	On top	Underneath	Comments	Responsibility
60	Viaduct	HYP1004-HYP1017	Reserved tramway	Road (Park Square) + Land	New, post-tensioned concrete	SYSL/PTE
61	Bridge	HYP1019-HYP1023	Reserved tramway	Network Rail line	New, steel girder	SYSL/PTE
62	Retaining Wall	HYP1026-CIR1034	Road (Cricket Inn Rd)	Reserved tramway	Inbound side	SYSL/PTE
63	Retaining Wall	CIR1035-CIR1039	Reserved tramway	Private Road (Aston Street)	Outbound side	SYSL/PTE
64	Bridge	CIR1045-CIR1047	Tramway and footpath	Road (Parkway)	New, steel girder	SYSL/PTE
65A	Retaining wall	NCS1061-NCS1068	Reserved tramway	Depot	Outbound side	SYSL/PTE
65B	Retaining wall	NDP057-NDP069	Tramway (Depot exit)	Tramway (Depot loop)		SYSL/PTE
66A	Retaining wall	WOR1076-WOR1079	Reserved tramway	Road (Woodbourn Road)	Inbound side	SYSL/PTE
66	Bridge	WOR1079-WOR1081	Reserved tramway	Network Rail line	New, steel girder	SYSL/PTE
68	Retaining wall	WOR1095-WOR1105	Land	Reserved tramway	Inbound side	SYSL/PTE
67A	Retaining wall	WOR1104-WOR1105	Cycleway	Reserved tramway	Outbound side	SYSL/PTE
69	Bridge	ATT1107-ATT1108	Reserved tramway	Canal	New, steel arch	SYSL/PTE
152	Retaining wall	ATT1115-ATT1116	Cycleway/footpath	Reserved tramway	Inbound side	SYSL/PTE
70A	Retaining wall	ATT1123-ATT1126	Reserved tramway	Canal	Inbound side	SYSL/PTE
70B	Retaining wall	ATT1125-ATT1127	Reserved tramway	Land (Moytel)	Outbound side	SYSL/PTE
71	Retaining wall	ATT1132-ATT1133	Reserved tramway	Land	Outbound side	SYSL/PTE
72	Bridge	ATT1132-ATT1134	Reserved tramway	Road (Darnall Road)	New, steel girder	SYSL/PTE
77	Retaining wall	ATT1137-ATT1140	Reserved tramway	Road (Don Valley Stadium)	Outbound side	SYSL/PTE
	Bridge	ARS1142-ARS1143	Cycleway/footpath	Tramway and Network Rail line	Existing footbridge over tracks	SCC
153	Bridge	ARS1146-ARS1147	Road (Coleridge Road)	Tramway and Network Rail line	Ex BR	Network Rail
154A	Bridge	ARS1158-ARS1161	Road (Broughton Ln)	Tramway and Network Rail line	To be demolished	Network Rail
	Bridge	ARS1158-ARS1162	Cycleway and services	Tramway and Network Rail line	Not yet built (on site of 154A)	SCC
154B	Bridge	ARS1161-ARS1164?	Road (Broughton Ln)	Tramway and Network Rail line	Not yet built	SCC
79	Bridge	CAR1183-CAR1184	Footpath	Tramway and Network Rail line		SCC
156	Bridge	TIN1204-TIN1213	Road (Sheffield Road)	Tramway and Network Rail line	Ex BR	Network Rail
73	Bridge	TIN1221-TIN1223	Reserved tramway	River Don	New span on old abutments	SYSL/PTE
75	Bridge	MEI1254-MEI1255	Tramway and Network Rail line	Road (Meadowhall Road)		SYSL/PTE/ Network Rail
76	Retaining wall	MEI1257-MEI1259	Tramway and Network Rail line	Bus station		SYSL/PTE

**SCHEDULE 5 – STRUCTURES (Continued)**

**PARK SQUARE JUNCTION TO HALFWAY AND HERDINGS PARK**

No.	Type of Structure	Located between (OLE Structures)	On top	Underneath	Comments	Responsibility
56	Retaining walls	Various near pole 0000	Reserved tramway	Land (Park Square)	Various walls – see diagram	See diagrams
	Footbridges	Various near pole 0000	Footpaths	Roads (Park Square)	Various footbridges	All SCC
43	Bridge	SHS3003-SHS3006	Reserved tramway	Road (Park Square)	New	SYSL/PTE
100	Retaining wall	SHS3010-SHS3012	Land	Reserved tramway	Outbound side	SYSL/PTE
41A	Retaining wall	SHS3008-SHS3016	Tramway and footpath	Road (Sheaf Street)	Retains former Granville Street footpath	SCC
157	Bridge	SHS3014-SHS3019	Reserved tramway	Network Rail line		SYSL/PTE
81	Retaining wall	GRR3040-GRR3046	Sheffield College land	Granville Street	Believe Sheffield College's wall	SYSL/PTE inspect but don't own. NOT owned by SCC Highways.
38	Retaining wall	GRR3048-GRR3053	Reserved tramway	Network Rail line	Outbound side	SYSL/PTE
37	Viaduct	GRR3053-GRR3071	Reserved tramway	Land and road	New. Steel Girders	SYSL/PTE
34	Bridge	PAG3105-PAG3106	Footpath	Tramway in street	Existing bridge	SCC
35	Subway	PAG3111-PAG3112	Tramway in street	Footpath	Existing subway	SCC
36	Bridge	ARR3134-ARR3135	Footpath	Tramway in street	Existing bridge	SCC
88	Retaining wall	ARR3145-ARR3147	Tramway in street	Land (ex play area)		SCC
89	Retaining wall	GLT3284-GLT3288	Road (Ridgeway Road)	Flats	Outbound side	SCC
	Retaining wall	GLT3291-GLT3292	Road (Ridgeway Road)	Land	Outbound side. 871 Gleadless Road below	SCC
90	Retaining wall	BIL3366-BIL3367	Birley Substation	Reserved tramway	Outbound side	SYSL/PTE
83	Retaining wall	BIL3371-BIL3372	Golf Club	Reserved tramway	Inbound side	SYSL/PTE
93	Retaining wall	BDH3537-BDH3538	Reserved tramway	Land	Inbound side around manholes	SYSL/PTE
31	Subway	BDH3541-BDH3542	Tramway in street	Footpath		SCC
30	Culvert	BDH3540-BDH3542	Tramway in street	Stream		SCC
92	Retaining wall	WED3574-WED3575	Westfield substation	Reserved tramway	Inbound side	SYSL/PTE

**SCHEDULE 5 – STRUCTURES (Continued)**

**PARK SQUARE JUNCTION TO MIDDLEWOOD AND MALIN BRIDGE**

<b>No.</b>	<b>Type of Structure</b>	<b>Located between (OLE Structures)</b>	<b>On top</b>	<b>Underneath</b>	<b>Comments</b>	<b>Responsibility</b>
57	Bridge	FIS2003-FIS2010	Reserved tramway	Road (Park Square)	New bridge. Steel bowstring girder	SYSL/PTE
	Retaining wall	FIS2009-FIS2011	Reserved tramway	Land (Car park)	Former Commercial St. wall	SCC
38	Bridge	FIS2011-FIS2012	Reserved tramway	Road (Shude Hill)	Old bridge	SCC
50	Underpass	UOS2104-UOS2112	Roads (Roundabout)	Reserved tramway	(Road surfaces are SCC responsibility)	SYSL/PTE
52	Retaining walls	UOS2111-NER2127	Tramway and road	Footpaths and land	All walls supporting Netherthorpe Road	SCC
53	Subway	NER2122-NER2123	Tramway and road	Footpath	Subway	SCC
	Bridge	HIL2232-HIL2233	Tramway in street	River Loxley	Old bridge	SCC
55	Retaining Wall	HIL2233-MAB3004	Tramway in street	River Loxley	Outbound side	SCC

# City of Sheffield

Development, Environment & Leisure  
Transport & Highways Division

HIGHWAY  
ADOPTIONS  
GROUP

ADOPTION  
PLAN  
SCALE 1:500

Developer Section 36 Highways Act 1980

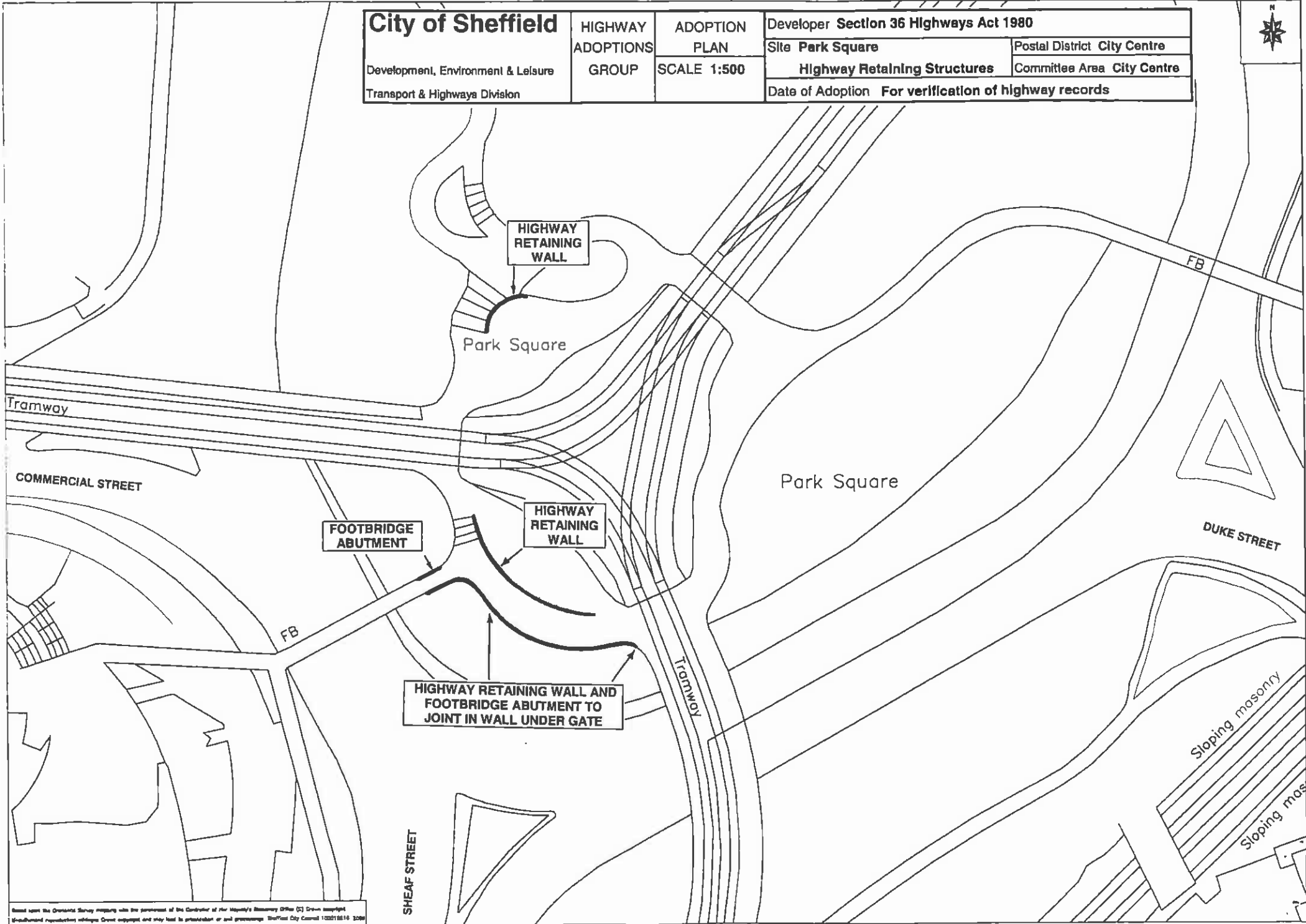
Site Park Square

Highway Retaining Structures

Postal District City Centre

Committee Area City Centre

Date of Adoption For verification of highway records



HIGHWAY  
RETAINING  
WALL

Park Square

Tramway

COMMERCIAL STREET

FOOTBRIDGE  
ABUTMENT

HIGHWAY  
RETAINING  
WALL

Park Square

DUKE STREET

HIGHWAY RETAINING WALL AND  
FOOTBRIDGE ABUTMENT TO  
JOINT IN WALL UNDER GATE

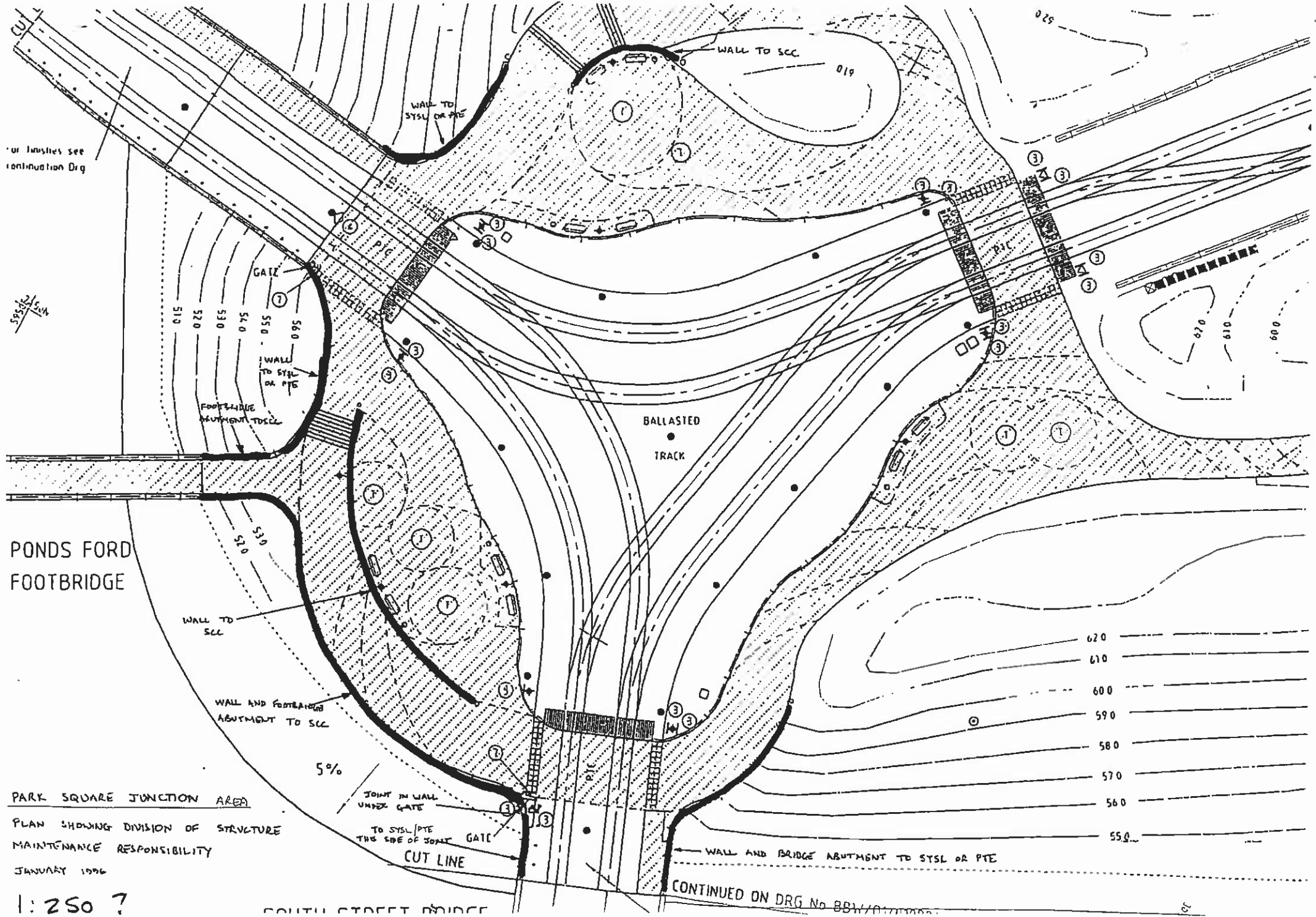
Tramway

Sloping masonry

Sloping mas

SHEAF STREET

Based upon the Ordnance Survey map(s) with the permission of the Controller of Her Majesty's Stationery Office (C) Crown copyright. Unauthorised reproduction without copyright and may lead to prosecution. Sheffield City Council 130018816 3288



For details see continuation Drg

SSS/SL

PONDS FORD FOOTBRIDGE

PARK SQUARE JUNCTION AREA  
 PLAN SHOWING DIVISION OF STRUCTURE  
 MAINTENANCE RESPONSIBILITY  
 JANUARY 1996

1:250 ?

SOUTH STREET BRIDGE

BALLASTED TRACK

CONTINUED ON DRG No 88W/01/1996

620  
 610  
 600  
 590  
 580  
 570  
 560  
 550

20



## ANNEX 1 – SKID RESISTANCE MANAGEMENT

The purpose of this Annexure is to outline the Authority's approach to maintaining the appropriate levels of skid resistance on the Project Network the aim being to minimise the number of accidents where skidding is a contributory factor.

### Primary and Secondary Road Networks

Table A1 below sets the Authority's Investigatory Levels for the Primary and Secondary Road Networks and is based upon the Department of Transport's HD28/04 Table 4.1. In Table A1 below, X denotes the initial Investigatory Level used for the relevant site category. The shading indicates the minimum value the Authority will allow the Investigatory Level to be changed to when an investigation of a deficient site concludes that the Investigation Level should be changed.

**Table A1 - Site Categories & Investigatory Levels for Primary & Secondary Road Networks**

Site category and definition		Investigatory Level at 50km/h							
		0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65
B	Dual Carriageway non-event		X						
C	Single Carriageway non-event			X					
Q	Approaches to and across minor and major junctions, approaches to roundabouts				X				
K	Approaches to pedestrian crossings and other high risk situations					X			
R	Roundabout				X				
G1	Gradient 5-10% longer than 50m				X				
G2	Gradient >10% longer than 50m					X			
S1	Bend radius <500m – dual Carriageway				X				
S2	Bend radius <500m – single Carriageway					X			

**Notes:**

Investigatory Levels are set for each 10m Sub Section length within a Road Section Length XSP

## Link and Local Road Networks

Table A2 below sets the Authority's Investigatory Levels for the Local and Link Road Networks (together with Primary and Secondary Roads with a speed limit less than 40 mph) and is an amended version of the Department of Transport's HD28/04 Table 4.1. X denotes the initial Investigatory Level used for the relevant site category. The shading indicates the minimum value the Authority will allow the Investigatory Level to be changed to when a deficient site investigation concludes that the Investigation Level should be changed.

**Table A2 - Site Categories & Investigatory Levels for Link and Local Road Networks  
(together with Primary and Secondary Roads with a speed limit less than 40 mph)**

Site category and definition		Investigatory Level at 50km/h							
		0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65
B – 1	Dual Carriageway non-event	X							
C – 1	Single Carriageway non-event		X						
Q – 1	Approaches to and across minor and major junctions, approaches to roundabouts			X					
K – 1	Approaches to pedestrian crossings and other high risk situations				X				
R – 1	Roundabout			X					
G1 – 1	Gradient 5-10% longer than 50m			X					
G2 – 1	Gradient >10% longer than 50m				X				
S1 – 1	Bend radius <500m – dual Carriageway			X					
S2 – 1	Bend radius <500m – single Carriageway				X				

**Notes:**

Investigatory Levels are set for each 10m Sub Section length within a Road Section Length XSP

## Prioritisation of Skid resistance Deficient Sites

The following risk analysis is applied within the Sheffield Performance Model to prioritise Skid resistance deficient sites for investigation in accordance with Service Standard 2 Performance Requirements 2.21(a), 2.21(b) and 2.26. Table A3 below shows the two hazard attributes and weightings used in this prioritisation process.

**Table A3 - Weighting of Attributes**

Hazard Attributes	Weighting (%)
Skid Deficiency	50
Investigatory Level	50

### Skid Deficiency (50% weighting)

Where on the Road Network a lane length of 50m or more has an average Skid Resistance that is greater than or equal to 0.05 CSC below the appropriate Investigatory Level, then it shall be given a score in relation to Table A4 below:

**Table A4 – Skid Deficiency Categories**

Skid Deficiency	Score
Between -0.05 & -0.06	1
Between -0.06 & -0.08	2
Between -0.08 & -0.10	3
Between -0.10 & -0.15	4
Greater than -0.15	5

### Investigatory Level (IL) (50% weighting)

This attribute accounts for the importance of the site in terms of skid resistance need. A higher value indicates that there is a greater requirement for skid resistance as motorists will be required to either stop or slow down quickly or negotiate sensitive road alignments such as bends, gradients, etc. These values are taken from Tables A1 and A2 above. A score from 1 to 5 is allocated depending upon the Investigatory Level as shown in Table A5 below:

**Table A5 - Investigatory Categories**

Investigatory Level	Score
0.30	1
0.35	2
0.40	3
0.45	4
Greater than 0.50	5

### The Skid Risk Score

To calculate the Skid Risk Score, which is referred to in Service Standard 2, the Sheffield Performance Model calculates the average skid resistance over the nominated 50m length using the following parameters in figure scrim\_1, within the Sheffield Performance model.

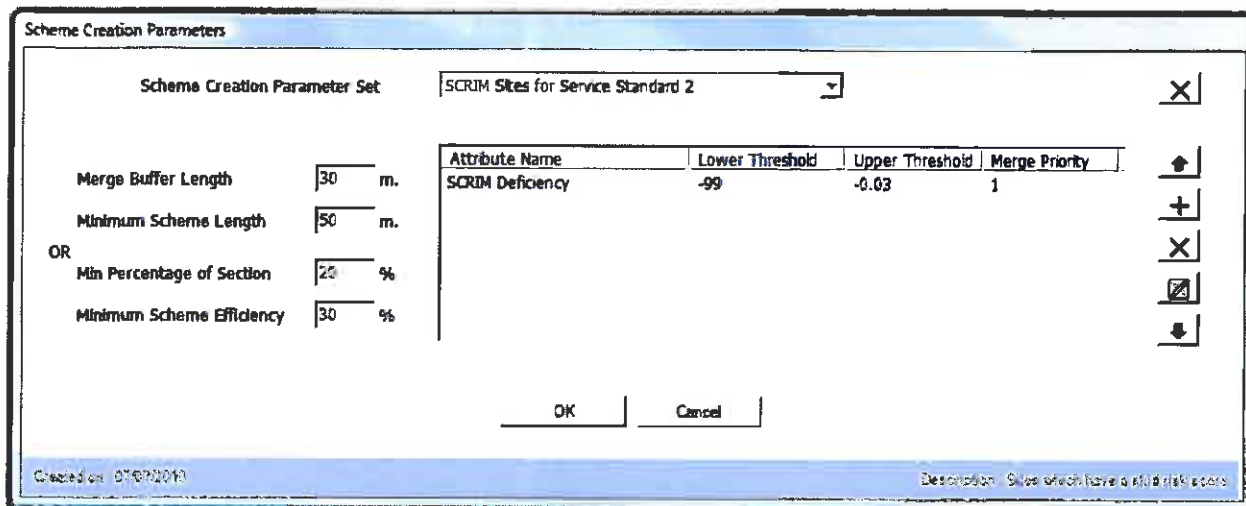


Figure – scrim\_1

The process defined above identifies the Skid risk sites which have a minimum length of 50m and an average scrim deficiency of 0.05 CSC units or more below investigatory level. If this is not achieved the sections which do not meet this criteria are allocated a Skid Risk Score of 0 (zero) and are not subject to the requirements of PR 2.21 (a) and(b) of Service Standard 2.

The Skid Risk Score = (Average Scrim Deficiency score \* 50) + (Max Investigatory Level score \* 50)

This Skid Risk Score approach is only applicable to Primary, Secondary and Link Roads. Local roads are investigated in accordance with Performance Requirement 2.26(b).

### Site Investigation Process

In accordance with Performance Requirement 2.21(a) and (b) and 2.26 of the Output Specification, the Service Provider shall carry out an investigation on a Road Section Length which has been highlighted as deficient or potentially deficient.

Where the investigation has confirmed that the average Skid Resistance is 0.05 CSC units or more below the appropriate Investigatory Level, the Service Provider shall notify the Authority of the proposed appropriate action

In all cases the investigation shall require the Service Provider to complete Site Investigation form SKID-1. Where the site investigation has concluded that the site requires amendment of the relevant Investigatory Level, such amendment shall be subject to Authority Approval, and form SKID-2 shall be completed and submitted to the Authority for approval. Where Authority Approval is not given within one (1) month, the Service Provider shall make, within a further period of one (1) month, a further proposal which does not require amendment of the relevant Investigatory Level.

All of the data contained on the SKID forms shall be entered into the Sheffield Performance Model for auditing purposes and shall be available to the Authority at all times.

# SCC Site Investigation Form

## Form: SKID-1

Ref No .....

Date .....

1. GENERAL		
Investigating Officer:		
Date of site visit:		
General weather at time of visit?		
Reason for site visit?	OS 2.21	
	OS 2.26	
	Accident report	
Dates of any previous site visits	Reasons for Visit:	Date:

2. SITE DETAILS	
Road classification	Primary / Secondary / Link / Local
Road Name	
UKPMS Section label(s)	
Carriageway/ Lane tested (CL/CR)	
Site Category taken from Table A1 and/or A2 within the Technical Specification	
Current Investigatory Level (CSC Value)	
Have any substantial changes been made to the site or road usage since Investigatory Level was assigned, if YES give details.	

3. SUMMARY OF ACCIDENT HISTORY		
	Number	%
Number of accidents in the last 3 years?		
Number and % of wet weather accidents		
Types of accidents:		
• Fatal		
• Seriously injured		
• Minor injuries		

<b>4. CONDITION DATA</b>	
Current CSC Value	
How much is it below Investigatory Level?	
Lowest value and location or is it consistent across the site? If not, what are the variations?	
Is the area of the maintained pavement surface free from debris and other sources of contamination, if NO give details:	YES / NO
Has the area of maintained pavement been surfaced in the last 6 months, if YES give date of treatment.	YES / NO
<b>5. VISUAL ASSESSMENT</b>	
Surface Type	Stone Mastic Asphalt / Hot Rolled Asphalt / Dense Bituminous Macadam / Surface Dressing / Microasphalt / Anti-Skid / Concrete / Block  If other please state:
CCI Value from Sheffield Performance Model, for maintained pavement surface under investigation	
Texture depth from SCANNER  OR  Sand Patch test results	Minimum Value: Maximum Value: Average Value:  ..... mm
Traffic	AADF Value:
Site Speed	20 / 30 / 40 / 50 / 60 / 70
Drainage- Any visible issues?  If YES please give details:	Yes / No
<b>6. ROAD USERS AND LAYOUT</b>	
Are there any features at the site which would require users to stop suddenly? (Junctions, signals, crossings, schools, shops, bus stops, public amenities, OAP Homes, etc.)  If YES please give details	Yes / No
Are the Signs and traffic signals- clear to drivers and relevant?  If NO please give details	Yes / No
Are road markings clear to drivers  If NO please give details	Yes / No
Is the site affected by overgrown vegetation/trees  If YES please give details	Yes / No

## 7. RECOMMENDATIONS

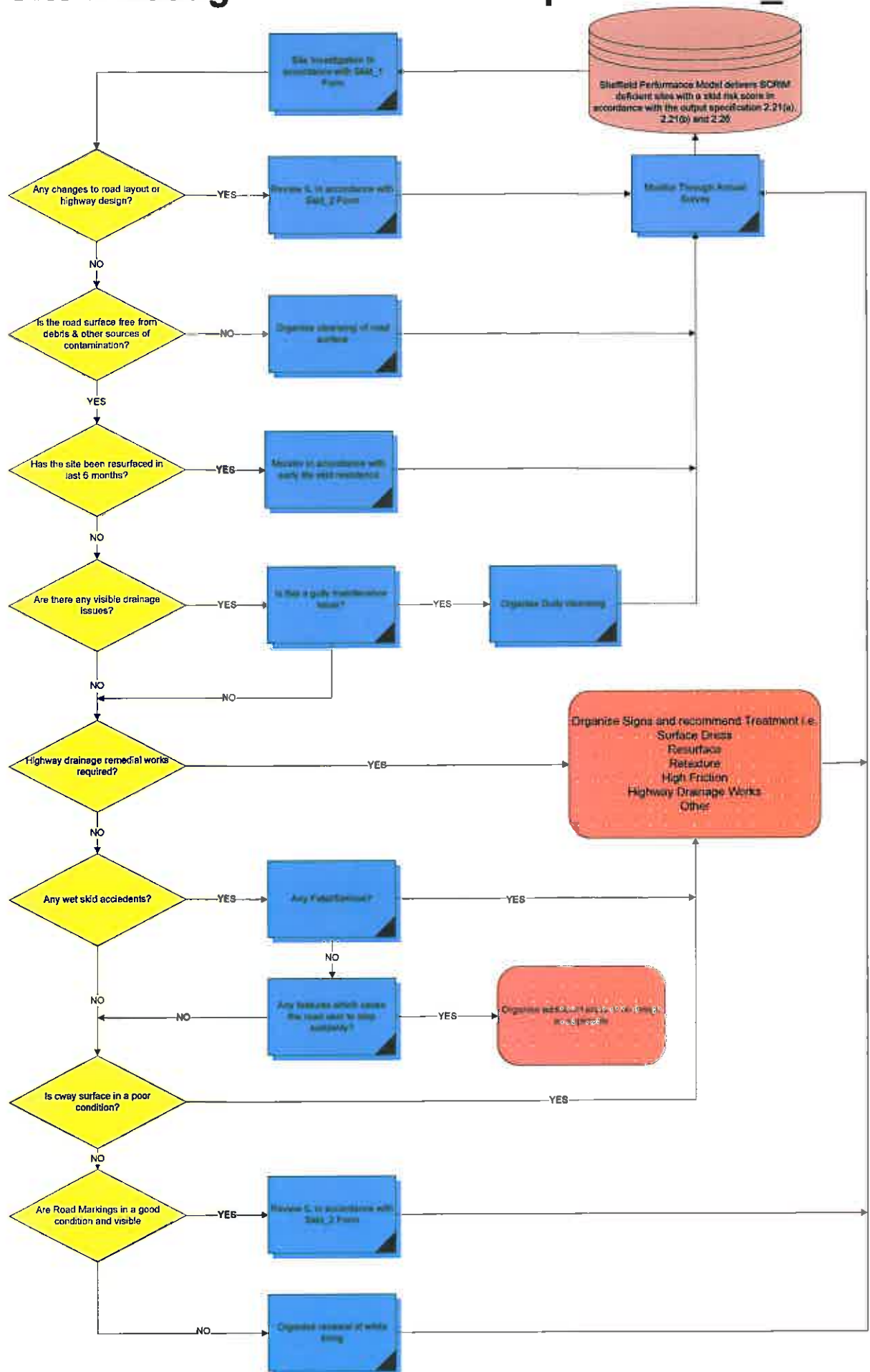
<b>Recommendation after site visit:</b>	<b>No Further Action</b> <b>Change IL</b> <b>Recommend Surface Treatment</b> <b>Other Recommendations</b>
<b>No Further Action</b> If no further action is required please give details and submit form to Authority for approval	
<b>Change IL</b> Should consideration be given to raising or lowering the Investigatory Level?  If YES, please submit Form SKID-2 (Re-Assignment of Site Category) to Authority for approval.	Yes / No  SKID-2 Ref No. ....  Date: .....
<b>Recommended Surface Treatment</b> <ul style="list-style-type: none"> <li>Surface dressing</li> <li>Resurface</li> <li>Re- texture surface</li> <li>High friction surfacing</li> <li>Other (give details)</li> </ul> If NO please give details:	Yes / No
<b>Other Recommendations</b> <ul style="list-style-type: none"> <li>Cleansing of road</li> <li>Cleansing of gullies</li> <li>Signs: replacement or additional</li> <li>Road markings</li> <li>Redesign of junction/ carriageway</li> <li>Other (please give details)</li> </ul>	
<b>Name of investigating officer:</b>	<b>Print name:</b>  <b>Signature</b>
<b>Position:</b>	
<b>Date:</b>	
<b>Approved and checked by:</b>	<b>Print name:</b>  <b>Signature:</b>
<b>Position:</b>	
<b>Date:</b>	

**8. CHECKLIST**

<b>Confirm signs have been erected</b>	<b>Yes / No / Not Applicable</b> Date erected: ..... Notified by: ..... Checked by: .....
<b>Surface treatment works complete?</b>	<b>Yes / No / Not Applicable</b> Date completed: ..... Notified by: ..... Checked by: .....
<b>Testing of new surface?</b>	<b>Yes / No / Not Applicable</b> Pass or Fail: ..... Inspected by: ..... Date: .....
<b>If new surface fails testing, give details of failure and required remedial/rectification works</b>	
<b>Removal of Temporary Warning Signs</b>	<b>If testing is accepted by Authority and authorisation has been given for removal of signs acknowledge sign removal:</b> Inspected by: ..... Date: .....
<b>Investigating Officer:</b>	<b>Print name:</b>  <b>Signature:</b>
<b>Date:</b>	
<b>Approved and checked by:</b>	<b>Print name:</b>  <b>Signature:</b>
<b>Date:</b>	



# Site Investigation Process Map: Skid Risk\_1



# Re-Assignment of Site Category

## Form SKID-2

Ref No .....

FORM SKID-2							
Reason for Assignment		Recommended from form SKID-1 Ref no.  Or <ul style="list-style-type: none"> <li>• Review</li> <li>• New Road</li> <li>• Improvement</li> <li>• Other (please state):</li> </ul>					
Road Name(s)							
Road Classification		Primary / Secondary / Link / Local					
Road Sign Speed		20 / 30 / 40 / 50 / 60 / 70					
Traffic (AADF)							
UKPMS section labels							
Site Category	Site Description	XSP (CL1/CR1)	Start Chainage	End Chainage	Proposed Site Category (If Applicable)	Current Intervention Level	Proposed Intervention Level
<u>Other comments or notes:</u>							
<p>Map(s) attached to this document? Yes / No</p> <p>Map Reference No.</p>							

<p><b>Does the road deviate away from the current Design Standards?</b> If YES please detail</p>	<p>Yes / No</p>
<p><b>Is there a notable conflict between road users at the site?</b> If YES please detail conflict (i.e. head on collision, high speed impact)</p>	<p>Yes / No</p>
<p><b>Are there occasions of queuing on the road?</b> If YES please detail</p>	<p>Yes / No</p>
<p><b>Are there any 'events' in the proximity: i.e. traffic lights or a gradient.</b> If YES please give details:</p>	<p>Yes / No</p>
<p><b>Please state Texture depth?</b>  <b>Please state if data is from SCANNER / Sand Patch Test</b></p>	<p>..... mm</p>
<p><b>Approaches to junctions, is there poor visibility or a high risk of collision?</b> If YES please give details:</p>	<p>Yes / No</p>
<p><b>At pedestrian crossings, is there poor visibility?</b> If YES please give details:</p>	<p>Yes / No</p>
<p><b>How many accidents have occurred at the site over the last 3 years?</b></p>	
<p><b>Of the accidents listed above, how many have been wet weather related accidents?</b></p>	<p>No. .... % .....</p>

<b>Does this site category require revision?</b> If YES please state revision	<b>Yes</b>
<b>Does the Investigatory Level require revision?</b> If YES please state revision	<b>Yes</b>
<b>Investigating Officer</b>	
<b>Date of site visit</b>	
<b>Approved by:</b>	
<b>Date:</b>	

# Re-Assignment of IL Process Map: Skid Risk\_2

