

Road Safety Audit

Procedure No.2
May 2020

M. Parry

Signed:
Network Manager
Streetcare, Transport, & Waste

Date:15/05/2020

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South Gloucestershire
Council

1.0 POLICY

- 1.1. Road Safety Audits (RSAs) on roads within South Gloucestershire Council (SGC) (excluding motorways and trunk roads) should be carried out in accordance with this policy and procedure.
- 1.2. Any queries regarding RSA policy or procedure should be referred to the Network Manager, who provides a lead role for this service.
- 1.3. The work involved is delegated to officers in the Road Safety & Sustainable Travel Team, through the line management arrangements. At the time of writing this procedure this is via the Road Safety & Sustainable Travel Manager.

2.0 INTRODUCTION

- 2.1 This document sets out the Council's policy on the Road Safety Audit of highway improvement schemes and the procedures for its implementation. It is based on the Design Manual for Roads and Bridges document GG119, the Standard for carrying out RSAs on trunk roads and motorways. However it is not possible to adopt the Standard in its entirety in South Gloucestershire because of limited resources.
- 2.2 The objective of this policy document is to ensure that the road safety implications of highway improvement schemes on South Gloucestershire's roads are fully considered for all users of the road including those working on the highway.

3.0 TERMS OF REFERENCE

RSA Brief – The Brief defines the scope of the RSA to be undertaken and is usually prepared by the Design Team.

RSA Report – Report written by the RSA Team that highlights safety concerns and makes recommendations to mitigate against injury to road users.

RSA Designers Response Report – Report written by the Design Team which states what actions will be taken in response to each safety concern raised in the RSA report, or explains why no action will be taken.

RSA Response Decision Form – Form signed by a Senior Officer within the Council to approve the actions to be taken in response to the RSA.

Designer/Design Team – Person, Team or organisation responsible for the design of the scheme/development.

Overseeing Officer – Officer within SGC who is managing the design and/or implementation of a development or 3rd party designed scheme within the authority (e.g. within the Development and Implementation or Development Control Teams).

Senior Officer – Officer within SGC with responsibility for signing the RSA Response Decision Form.

Project Manager – Officer within SGC's Transport & Strategic Projects Team responsible for a project's planning and execution.

Road Safety & Sustainable Travel Manager (RS&STM) – Team leader of the SR&STT within SGC.

Road Safety & Sustainable Travel Team (RS&STT) – Team within SGC with responsibilities for carrying out RSAs.

Authority Specialist – Officers within SGC with specialist knowledge who may be contacted by the Overseeing Officer for advice regarding a RSA Brief or RSA Response Decision Form. (E.g. SRST members/ Traffic signal engineers/ Motorcycling officer).

Developer – Organisation managing the planning/construction of a development.

Scrutiny Group – A group of officers who consider the design and safety of schemes at the preliminary design stage. The composition of the group may vary according to the nature of the scheme under scrutiny, but may typically comprise the Scheme Designer, the SRST and representatives from StreetCare and Transport teams

Super Major Planning Application – 200 dwellings and above; or 4hectare or 10,000 sq metres of commercial floor space and above

Major Planning Application – Developments 10-199 residential units and above or 1000sq metres of commercial floor space and above

4.0 ROAD SAFETY AUDIT

Schemes to be submitted to a Scrutiny Group

- 4.1 All schemes on the capital works programme and all major maintenance schemes involving changes to junctions, signs or lines should be submitted to a Scrutiny Group. Decisions made at the meeting should be documented by the respective Scheme Designers for inclusion in their scheme files.

Schemes to be subject to RSA

- 4.2 All highway improvement schemes should ideally be subject to independent RSA, however this is not possible in South Gloucestershire because of limited staff resources.
- 4.3 Maintenance schemes that solely involve a like-for-like replacement or refurbishment of existing highway features are excluded from RSA.
- 4.4 The following scheme categories should be subject to independent RSA:
- (i) Highway schemes estimated to cost £30,000 or over plus all new zebra and signal-controlled crossings, mini roundabouts, priority narrowings and schemes that are subject to road hump regulations.
 - (ii) All schemes where a new road is to be built which adds to the length of the highway network
 - (iii) Development schemes that result in a change to the existing layout and operation of junctions, realignment of roads or new junctions

- (iv) RSA should be applied to exceptional temporary traffic management schemes that involve temporary changes to the layout and operation of junctions or realignment of roads that will affect the network for a considerable period. Examples of such schemes include installation of a temporary roundabout junction or a diversion using a length of temporary carriageway to allow major excavation on a major carriageway.

Stages of Road Safety Audit

4.5 Highway Improvement and Development Schemes should be subject to RSA at Stages 1, 2, 3 and 4. If, for any reason, a Stage 1 RSA has not been carried out (for small scale schemes for example), RSA Stages 1 and 2 should be combined at Stage 2 and referred to as a combined Stage 2 RSA.

4.6 Stage 1: Completion of Preliminary Design

- On completion of draft plans or preliminary designs.
- To assess horizontal and vertical alignments, sightlines and layout of junctions, including slip roads and lay-bys.
- After this stage, land-take may be established and orders prepared, so that scope for further change will be limited.
- For development schemes, all Major and Super Major Planning Applications should have a Stage 1 RSA carried out prior to the granting of planning permission unless agreed otherwise by the Development Control Overseeing Officer.
- The RSA Team Leader may invite representatives from the police and/or the StreetCare Asset Team to advise on audits at Stage 1 where the RSA Team Leader considers that their participation will benefit the audit.

4.7 Stage 2: Completion of detailed design

- During or on completion of detailed design and, where possible, before preparation of contract drawings, to assess detailed junction layout, markings, signs, safety fence, guard rail, street lighting, signals etc.
- Stage 2 RSAs should be carried out on development schemes, typically via Section 38 and Section 106/278 Agreements. The Stage 2 RSA Brief, RSA, RSA Designers Response and RSA Response Decision form must be included in the Technical Approval Submission for any agreements.
- The Stage 2 RSA should include a review of the issues raised in the Stage 1 RSA Report. Any issues that have not been satisfactorily resolved from the Stage 1 RSA should be reiterated in the Stage 2 RSA Report.
- The RSA Team Leader may invite representatives from the police and/or the StreetCare Asset Team to advise on audits at Stage 2 where it is considered that their participation will benefit the audit.

4.8 **Stage 3: Completion of Construction**

- The RSA should be undertaken when the highway improvement scheme is substantially complete and preferably before the works are opened to road users. This is to minimise potential risk to road users and the difficulty that would be experienced by Audit Teams in traversing the site when open to traffic. Where this is not feasible, the audit may be carried out a short time after opening or in phases where a scheme is subject to phased completion and opening. Stage 3 RSAs should be carried out within 1 month of schemes opening.
- For New Developments a Stage 3 RSA should be carried out and submitted for acceptance prior to the issue of the commencement of maintenance certificate (Certificate 1 for s106/278 agreements or Certificate 2 for s38 agreements).
- Stage 3 RSAs should be carried out within 1 month of road opening but preferably before the works are opened to road users.
- The RSA Team Leader may invite representatives from the police and/or the StreetCare Asset Team to accompany the Audit Team to offer their views for Stage 3 RSAs for major schemes (scheme costs in excess of £100,000) or where the Audit Team Leader considers that their participation will benefit the audit.
- All RSA Team Members should examine the scheme site together during daylight. At least 1 member of the audit team should also visit the site during the hours of darkness at Stage 3 so that hazards particular to night operation can be identified.
- The Stage 3 RSA should include a review of the issues raised in previous Audits. Any issues that have not been satisfactorily resolved from previous Audits should be reiterated in the Stage 3 RSA Report.
- The Design Team Leader should ensure that the Design Team has carried out its own inspection to satisfy itself that all is as it should be and that any remedial action has been ordered prior to the visit by the RSA Team. Prior to the Stage 3 RSA being undertaken, the Design Team should make the Audit Team aware of any remedial action that will be carried out.
- Works to implement measures resulting from Stage 3 RSAs should be completed promptly.

4.9 **Stage 4: Monitoring**

South Gloucestershire Council's RS&STT monitors the 'before and after' collision records for any scheme (including development schemes) for which a Stage 3 RSA has been undertaken and where a copy of the RSA has been forwarded to the RS&STT. This involves carrying out 'before and after' collision studies using data from 3 years 'before' and 1 year 'after' the date of the scheme completion.

Where higher than expected numbers of collisions have been reported, or the severity of collisions is high or a pattern can be identified within collisions since the scheme was completed, further analysis should be undertaken. This will include a report (6.6) which recommends appropriate remedial actions.

With regard to development schemes, where ‘after’ collision studies show that problems have arisen before the end of the maintenance period, the respective developer may be required to extend the maintenance period and carry out appropriate remedial measures to address the problems prior to the adoption of the works.

4.10 Design Changes

Stage 1 and Stage 2 RSAs should be repeated if the scheme design materially changes, if there are many minor changes which together impact on road safety, or if the previous finalised RSA for the relevant stage is more than 5 years old.

4.11 Interim Road Safety Audit

The Interim RSA process can provide the benefit of early identification of potential road safety problems leading to savings in both programme and design costs. This could be particularly beneficial to larger projects. Designers may submit designs on the whole or parts of schemes to the RSA Team for completion of an Interim RSA at any time during the preliminary and detailed design process.

Audit Team Training, Skills and Experience

4.12 The team should comprise a minimum of two persons with appropriate levels of training, skills and experience. The guidelines on acceptable training, skills and experience for RSA Team Members carrying out RSAs on South Gloucestershire’s roads are the same as those defined in GG119 (3.8.2) and are shown below.

	RSA team observer	RSA team member	RSA team leader
Training	10 days of formal collision data analysis or road safety engineering/road design training	10 days of formal collision data analysis or road safety engineering/road design training	10 days of formal collision data analysis or road safety engineering/road design training
CPD	N/A	A minimum of 2 days CPD in the field of RSA, collision data analysis or road safety engineering in the last 12 months	A minimum of 2 days CPD in the field of RSA, collision data analysis or road safety engineering in the last 12 months
Experience	1 year of collision data analysis or road safety engineering/road design experience	2 years of collision data analysis or road safety engineering/road design experience	4 years of collision data analysis or road safety engineering/road design experience
	N/A	5 RSAs completed within the last 24 months as team leader, member or observer	5 RSAs completed within the last 12 months as team leader or member

4.13 As specified in GG119, the RSA team should be independent from the Design Team.

Audit Team Approval and Appointment

4.14 The RS&STT must be satisfied as to the independence and competence of RSA Teams. Members of RSA Teams not directly employed by South Gloucestershire Council should demonstrate their competence by means of curriculum vitae.

Audit Brief

- 4.15 The RSA Brief defines the scope of the RSA to be undertaken and needs careful preparation by the Design Team. It must include sufficient information to enable an efficient and effective RSA to be undertaken. GG119 (Annex C) identifies elements that may be contained in a RSA Brief.
- 4.16 For development or third party designed schemes the Design Team should send a copy of the draft RSA Brief to the scheme's Overseeing Officer, who may request changes to be made.
- 4.17 When considering draft Briefs, Overseeing Officers may contact the authority's Specialists for advice.
- 4.18 Requests for RSAs made by Design Teams within South Gloucestershire Council should be made by completing the RSA Brief (see 6.1). This brief, along with all supporting documents and plans including a Statement of Reasons and details of any remedial measures planned, should be submitted electronically to the RS&STT who will instruct the RSA Team. For larger or more complex schemes, typically over £100,000, designers should use a brief similar to Annex C in GG119.
- 4.19 If the RSA Team considers the RSA Brief to be insufficient for their purpose, requests for further information shall be made to the Design Team Leader.

Notice and Time to Process

- 4.20 In order to assist resource planning, where possible four weeks' notice of a RSA requirement should be given prior to the formal request.
- 4.21 RSA reports should normally be returned within one month from the date of receipt for schemes up to £1 million and two months for schemes over £1 million.

Audit Report

- 4.22 At all Stages the RSA Team should prepare a written report. Stage 1, 2 and 3 RSA Reports should include the items listed in paragraph 5.13 of GG119.
- 4.23 The signed statement to be used for RSA Reports completed by officers within the council is shown in 6.2 below.
- 4.24 The RSA Team Leader should note any comments on matters that are not covered by the RSA Brief and report them to the relevant Section within the Council. For example maintenance defects noted during site visits should be reported direct to South Gloucestershire Council's StreetCare Asset Team. These items may be listed under 'Other Issues' at the back of the RSA report after the signed Audit Team Statement.

RSA Designers Response Report

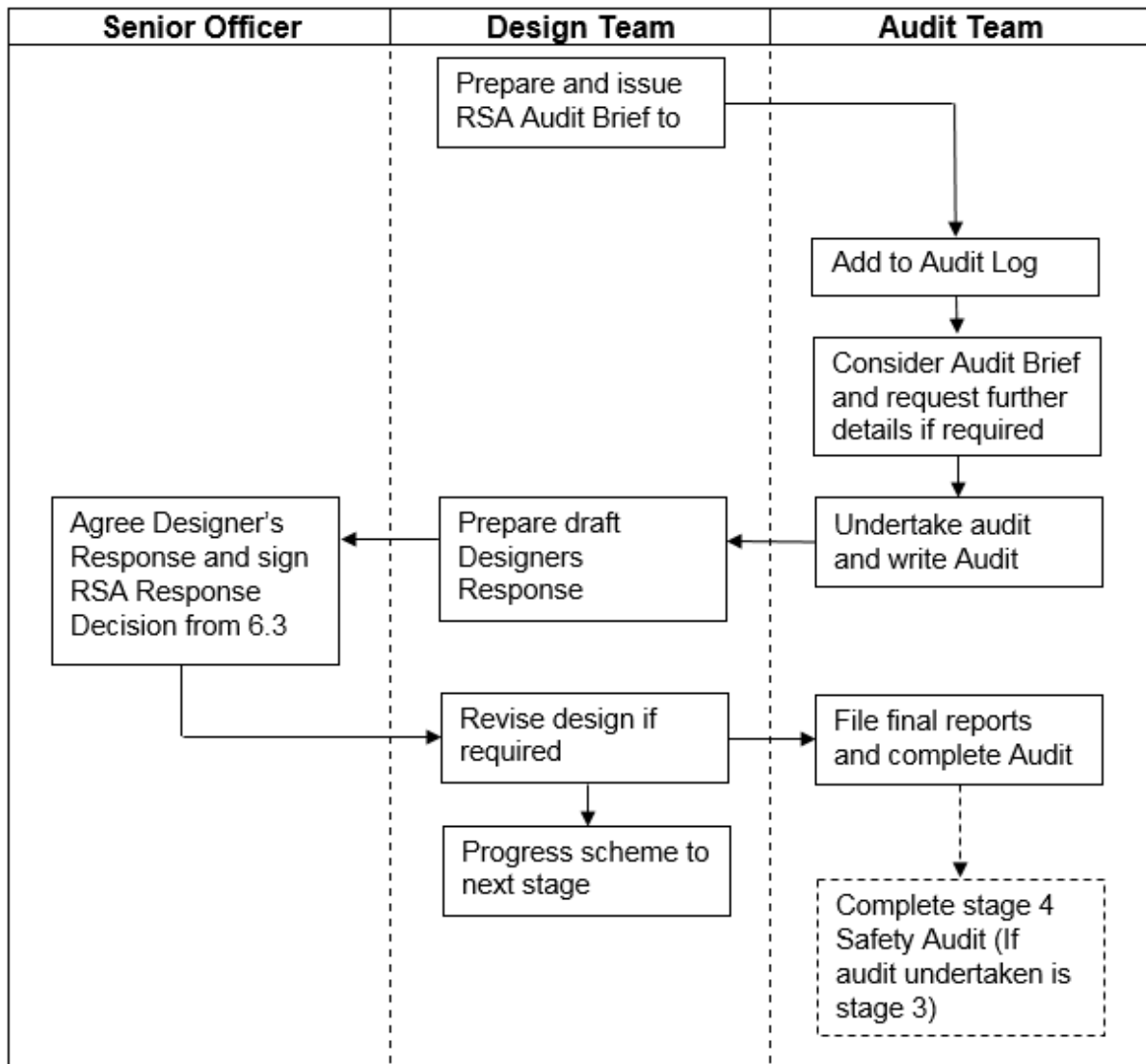
- 4.25 In view of the potential legal implications arising from RSA, it is essential to ensure that all problems raised by the RSA Team are given due consideration. To assist with this, the Design Team must prepare a RSA Designers Response Report to the RSA Report. The RSA Designers Response Report should clearly state the actions to be taken in response to all points raised in the RSA Report. The responses may refer to issues that the Design Team believes are insignificant or outside the terms of

reference, or that the solutions recommended are not suitable given the economic and environmental constraints. To ensure that each recommendation raised in the RSA has been considered, the Designers Response should be provided after each recommendation within the RSA Report.

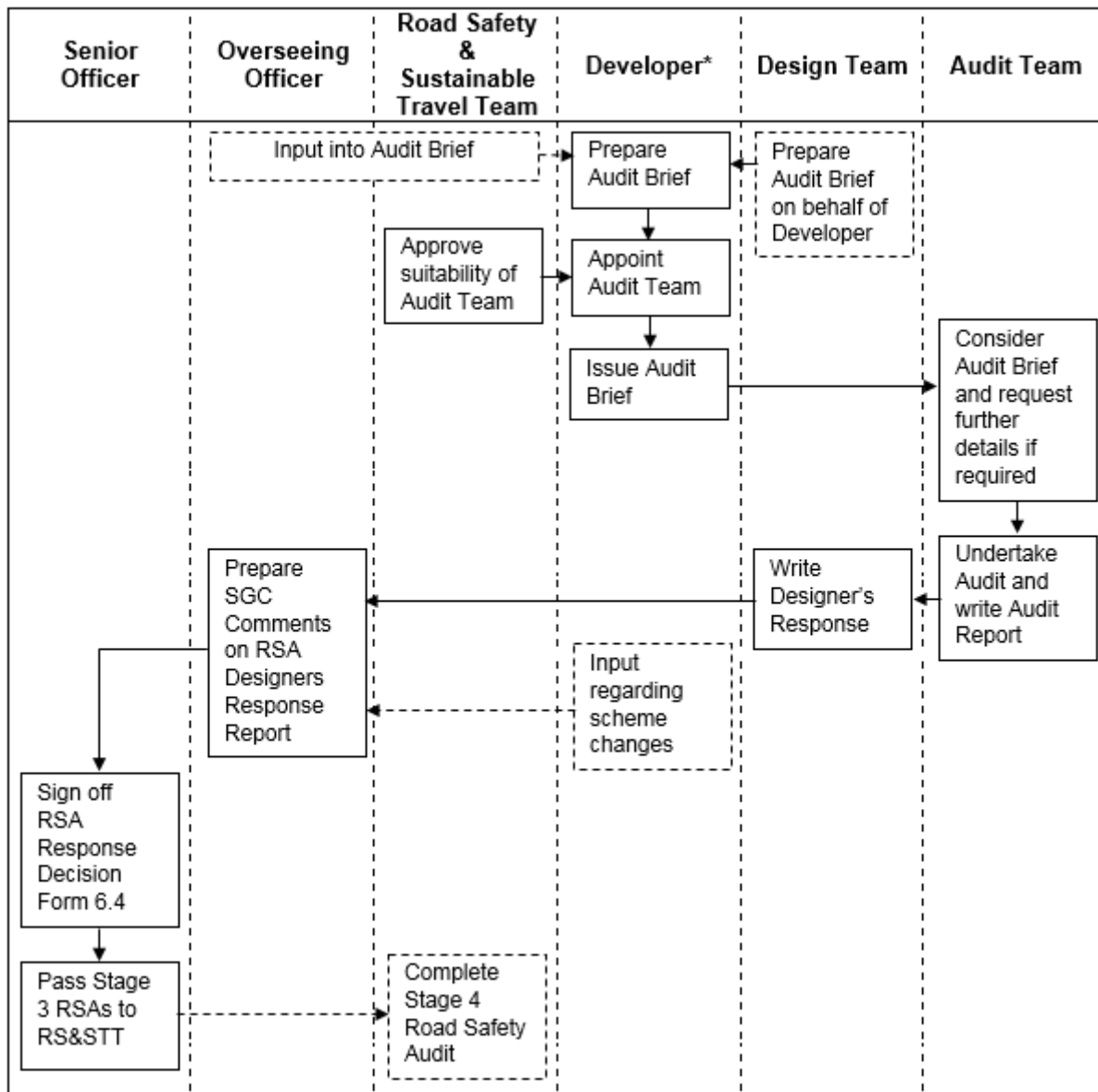
- 4.26 For SGC generated schemes, the RSA Designers Response Report should be considered by the Senior Officer, who should sign the appropriate RSA Response Decision Form (6.3) to approve the responses given by the Designer.
- 4.27 For developments and other third party designed schemes, the RSA Designers Response Report should be considered by the Overseeing Officer. The Overseeing Officer should add comments on behalf of SGC regarding each road safety recommendation alongside those given by the Designer in the RSA Designers Response Report.
- 4.28 When making final decisions on actions to be taken, Authority Specialists may be contacted for advice.
- 4.29 The Designer and a SGC Senior Officer should sign the RSA Designers Response Decision Form to show acceptance of the final decisions on actions to be taken in response to the RSA (using form 6.3 or 6.4, as appropriate).
- 4.30 An example of the process described in 4.25 to 4.29 above is shown in 6.5
- 4.31 Both the RSA Designers Response Report and RSA Response Report Decision Form should be passed electronically to the RS&STT for placing on the formal filing system.

Management of RSA

4.32 The flowchart below shows how RSAs for SGC generated schemes (Typically on the SGC Local Transport Capital Programme) should be managed:



4.33 The flowchart below shows how RSAs for development or 3rd party designed schemes should be managed:



*or Project Manager for SGC Transport and Strategic Projects schemes

Retention of Safety Audit Reports

- 4.34 The RS&STT should arrange for all RSA reports for SGC generated schemes, together with RSA Briefs and supporting plans and documents, to be stored either electronically or in a suitable location for the period specified in the Council's Record Retention Policy.
- 4.35 The Design Team should place copies of RSA reports and RSA Response Reports on the scheme file.

5.0 REFERENCES

- 5.1 Design Manual for Roads and Bridges – General Principles and Scheme Governance
General Information – GG119 Road Safety Audit.

6.0 FORMS


6.1 Audit Brief for SGC generated schemes (February 2019)

South Gloucestershire Council

Road Safety Audit Brief

Scheme Title			
Project/Ordn Code	N/A		
Audit Stage (Please tick)	1	2	3
Brief provided by: (name and post title)		Date	
Scheme Description (please provide Statement of Reasons if available)			
Plans Submitted (please list or provide link to drawings)			
Supporting Information (please provide further information where applicable)			
Departures from standards			
Are there any works not yet complete (Stage 3 safety audits only)			
Is this site part night lit? (if yes, please provide details)			
Please specify nearby trip generators if relevant (schools/shops/doctors surgeries etc.)			
Should this site be visited at any particular time of day? (if so, please specify when and why)			
Other (please give any other information that may be of use e.g. vehicle speed/volume data)			

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6.2 Audit Team Statement

I certify that this audit has been carried out in accordance with South Gloucestershire Council's Policy and Procedure for Road Safety Audit.

Audit Team Leader:

Name:

Signed:

Position:

Date:

For and on behalf of South Gloucestershire Council

Road Safety and Sustainable Travel, ECS, PO Box 1954, **Road Safety ETP**, Bristol, BS37 0DD

Audit Team Member:

Name:

Signed:

Position:

Date:

For and on behalf of South Gloucestershire Council

Road Safety and Sustainable Travel, ECS, PO Box 1954, **Road Safety ETP**, Bristol, BS37 0DD

6.3 RSA Designers Response Decision Form (SGC generated schemes)

South Gloucestershire Council


RSA Response Report Decision Form

RSA Response Report for:			
Prepared on behalf of the Design Team by:			
Name/Position:		Date:	
Accepted by:			
Name/Position:		Date	
Signed:			

Please send completed form (together with RSA Response report) electronically to:

David Swift
Strategic Road Safety Engineer
David.Swift@southglos.gov.uk
01454 863602
www.southglos.gov.uk

www.southglos.gov.uk



6.4 RSA Designers Response Decision Form (Developments & other 3rd party designed schemes)

South Gloucestershire Council

RSA Response Report Decision Form

(Developments & Other 3rd Party Designed Schemes)

RSA Decision form for:	<i>(Site or Development Name/Phase)</i>		
Designers:	<i>(Designers and Contact)</i>		
Road Safety Auditors:	<i>(Name of Auditor/Company carrying out Audit)</i>		
SGC Overseeing Officer:	<i>(SGC Overseeing Officer)</i>		
Agreed on behalf of SGC by: <i>(Senior Officer)</i>			
Name/Position:	<i>(Name and position)</i>	Date:	
Signed:	<i>(Signature)</i>		

A scanned copy of this completed form together with the Audit with decisions for each item in to be sent to the Strategic Road Safety Team.

David Swift
 Strategic Road Safety Engineer
 David.Swift@southglos.gov.uk
 01454 863602
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6.5 Example Developer/3rd Party designed schemes RSA Report, RSA Designers Response and RSA Designers Response Decision

Road Safety Audit

Stage 1/2

SA 0000 SOUTH GLOUCESTERSHIRE ROAD – ZEBRA CROSSING

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INTRODUCTION

- 1.1 This report describes a Road Safety Audit carried out on the new zebra crossing on South Gloucestershire Road by the Strategic Road Safety Team, Transport Strategy, South Gloucestershire Council in June 2015.
- 1.2 The Audit Team Members were:

Audit Team Leader
Audit Team Member
- 1.3 The road safety audit brief was supplied by A Developer with the approval of SGC Overseeing Officer.
- 1.4 The audit comprised an examination of the drawings relating to the scheme supplied by the design office. The Audit Team visited the site at 1500hrs on Monday 9th June 2015. The weather was dry and bright and there was normal traffic conditions
- 1.5 In the last three years (between (Jan2012) and (Dec2015)), there was one personal injury accidents at the site which occurred when a driver entered South Gloucestershire Road from a driveway and collided with a passing vehicle.
- 1.6 This safety audit has been carried out in accordance with South Gloucestershire Council's Safety Audit Procedures. The Audit Team has examined only those issues within the design relating to the road safety implications of the scheme, and has not examined or verified the compliance of the design to any other criteria.
- 1.7 The drawing supplied for audit was PLAN 001
- 1.8 All of the problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise accident occurrence. The locations of specific problems are referenced on the plan in **Appendix A**.
- 1.9 The scheme consists of a new zebra crossing on South Gloucestershire Road.

2. ITEMS RESULTING FROM THIS STAGE 1/2 SAFETY AUDIT	Officer dealing with proposed action(s)
<p>2.1 Problem</p> <p>Location: Extent of scheme</p> <p>Summary: Risk of Pedestrian/Vehicle collisions</p> <p>No tactile paving is proposed at the dropped kerbs for the zebra crossing. The lack of tactile paving could lead to a pedestrian with visual impairment walking into the carriageway where they could be struck by a passing vehicle.</p> <p>Recommendation Provide tactile paving on each side of the carriageway at the zebra crossing.</p> <p>Designers Response Agreed, tactile paving will be provided as part of the zebra crossing</p> <p>SGC Comments Agreed</p> <p>2.2 Problem</p> <p>Location: Extent of scheme</p> <p>Summary: Risk of Pedestrian/Vehicle collisions</p> <p>The auditors are concerned that the street lighting in the vicinity of the crossing may not adequately illuminate the zebra crossing. This is due to the distance from the nearest lighting columns and the existing trees along the road. If the lighting levels at the crossing are inadequate an approaching driver may fail to see a pedestrian crossing the road in dark conditions which increase the risk of an injury to a pedestrian.</p> <p>Recommendation The audit team recommend that floodlights are provided at the zebra crossing to adequately illuminate the crossing.</p> <p>Designers Response The existing lighting at the site meet recommended lighting levels for zebra crossing and so floodlights will not be provided.</p>	

SGC Comments

Due to inconsistency of lighting levels along the road and existing tree foliage, floodlights should be provided at the zebra crossing.

2.3 Problem

Location: Extent of scheme

Summary: Risk of vehicle/vehicle collisions

The auditors are concerned that the skid resistance of the existing road surface is not appropriate for the approach to a zebra crossing. Insufficient skid resistance could lead to a vehicle failing to stop in time and either collide with the rear of a stationary vehicle or a pedestrian on the zebra crossing.

Recommendation

Provide HFS on both approaches to the zebra crossing

Designers Response

The skid resistance of the road surface on the approach to the zebra crossing has been tested and conforms to recommended levels.

SGC Comments

Agreed – no HFS is required

3. **AUDIT TEAM STATEMENT**

I certify that this audit has been carried out in accordance with South Gloucestershire Council's Policy and Procedure for Road Safety Audit.

Audit Team Leader:

Name: A T Leader **Signed:**

Position: Road Safety Manager **Date:**

Audit Team Members:

Name: A T Member **Signed:**

Position: Road Safety Engineer **Date:**

Others Involved

(E.g. observer, police, specialist advisor, Highways Maintenance representative)

RSA Response Report Decision Form

(Developments & Other 3rd Party Designed Schemes)

RSA Decision form for:	<i>South Gloucestershire Road – Zebra Crossing</i>		
Designers:	<i>A Designer, Principle Engineer, XYZ Ltd</i>		
Road Safety Auditors:	<i>R&S Auditors</i>		
SGC Overseeing Officer:	<i>D I Officer</i>		
Agreed on behalf of SGC by: <i>(Senior Officer)</i>			
Name/Position:	<i>A Boss, Team Manager</i>	Date:	<i>DD/MM/YY</i>
Signed:	<i>A. Bass</i>		

A scanned copy of this completed form together with the Audit with decisions for each item in to be sent to the Strategic Road Safety Team.

David Swift
Strategic Road Safety Engineer
David.Swift@southglos.gov.uk
01454 863602
www.southglos.gov.uk

6.6 Stage 4 Road Safety Audit

Road Safety Audit

Stage 4

SA (Name of scheme)

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1. Introduction

- 1.1 This report describes a Stage 4 Road Safety Audit carried out on the by the Strategic Road Safety Team, Transportation Services, South Gloucestershire Council. The audit considers the collision record prior to the scheme being constructed and 12 months after scheme completion. The audit was undertaken by in
- 1.2 This Stage 4 Road Safety Audit Was completed by David Swift and was approved by Rob Joyce, who make up the Council's in-house Road Safety Audit team.
- 1.3 The Road Safety Audit was undertaken on behalf of who originally requested the Stage 3 Road Safety Audit at the time of the scheme completion.
- 1.4 No site visit was made during the compilation of the safety audit because...
- 1.5 The proposed layout of the scheme was shown on drawings supplied at the time of the stage 3 safety audit SA... in
- 1.6 The scheme, completed in, consisted of ...

2. Injury collision record

- 2.1 In the 12 month period after scheme completion there were Collisions at the site. These include

This compares ... with the 36 months prior to the scheme works were there were collisions
- 2.2 The collision records shows that

3. Outstanding items from the previous stage 3 road safety audit (SA...)

3.1	Problem
Location	
Summary	Risk of
Recommendation	
Designers Response	
Further Stage 4 comments	

The collision record at the sites shows that ... (Insert whether any collision have occurred either as a direct result of the scheme OR as a result of items raised in the previous RSAs where recommendations were not followed)

4. AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with South Gloucestershire Council's Policy and Procedure for Road Safety Audit.	
Road Safety Audit Leader	
Name	
Position	Strategic Road Safety Engineer
Organisation	South Gloucestershire Council
Signed	
Date	
Road Safety Audit Team Member	
Name	
Position	Technician
Organisation	South Gloucestershire Council
Signed	
Date	

Others Involved

(E.g. observer, police, specialist advisor, Highways Maintenance representative)

APPENDIX A – LOCATION PLAN