Design Manual for Roads and Bridges

General Principles and Scheme Governance
General information

GG 119
Road safety audit

(formerly HD 19/15)

Revision 2

Summary
This document provides the requirements for road safety audit for highway schemes on the trunk road and motorway network.

Application by Overseeing Organisations
Any specific requirements for Overseeing Organisations alternative or supplementary to those given in this document are given in National Application Annexes to this document.

Feedback and Enquiries
Users of this document are encouraged to raise any enquiries and/or provide feedback on the content and usage of this document to the dedicated Highways England team. The email address for all enquiries and feedback is: Standards_Enquiries@highwaysengland.co.uk

This is a controlled document.

Contents

Release notes

Version	Date	Details of amendments
2	Jan 2020	Revision 2 (January 2020) is for an update to superseded references. Revision 1 (January 2019) was for the removal of the health and safety plus equality, diversity and inclusion clauses that are now covered in GG 101. Revision 0 (October 2018) GG 119 replaces HD 19/15. This full document has been re-written to make it compliant with the new Highways England drafting rules. Technical content changes have also been incorporated throughout where relevant.

Foreword

Publishing information

This document is published by Highways England.

This document supersedes HD 19/15, which is withdrawn.

Contractual and legal considerations

This document forms part of the works specification. It does not purport to include all the necessary provisions of a contract. Users are responsible for applying all appropriate documents applicable to their contract.

Introduction

Background

The objective of the road safety audit process is to provide an effective, independent review of the road safety implications of engineering interventions for all road users.

The Overseeing Organisations attach great importance to the improvement of road safety on the motorway and trunk road network. The application of DMRB requirements, that are based on road safety considerations, help achieve this objective.

However, even with the careful application of design standards by competent professionals, the design process will not remove all hazards for road users.

The road safety audit process, as set out in this document, helps manage the interaction of different design requirements for highway schemes.

The objective of road safety audit is to identify aspects of engineering interventions that could give rise to road safety problems and to suggest modifications that could improve road safety. It is important to note that road safety audit is not intended to be a technical check of compliance with design requirements.

Although road safety has always been considered during design, road safety audit has existed for a number of years to provide an independent check that the design characteristics do not contribute to collisions and/or incidents on highway schemes.

Road safety audit is undertaken by staff with experience of collision data analysis, road safety engineering experience and a reasonable understanding of highway design principles such as design requirements and best practice. 2008/96/EC [Ref 1.N] has mandated the road safety audit process and associated qualification requirements across the European Community. It is undertaken at key stages in the design, construction and early operation of a highway scheme.

Although Overseeing Organisations and design teams do not necessarily contain staff with collision data analysis and road safety engineering experience, these organisations play an equally important role alongside road safety audit teams in achieving the objectives of the process. The road safety audit process does not change the Overseeing Organisation's duty to manage safety for all populations and undertake an appropriate level of risk assessment.

This document is sub-divided into sections aimed at the different parties in the road safety audit process. It is expected that all parties will work in partnership (where appropriate) to identify, manage and mitigate the hazards in the most appropriate way.

Assumptions made in the preparation of this document

The assumptions made in GG 101 [Ref 2.N] apply to this document.

It is assumed that the Overseeing Organisation involved in the road safety audit process will provide the appropriate staff resources and technical support to undertake the process. This may include seeking advice from other appropriate individuals.

It is assumed that staff with the appropriate competency and authority within the Overseeing Organisation will be involved in the decision-making process when responding to RSA and deciding upon subsequent actions.

It is assumed that RSA teams have an awareness of the principles of road design.

It is assumed that RSA teams have an awareness of the principles of road safety risk assessments, and that identified RSA actions will be subject to formal design organisation risk assessments prior to implementation.

It is assumed that the design organisation may not be present to assist in stage 4 road safety audits.

Mutual Recognition

Where there is a requirement in this document for compliance with any part of a "British Standard" or other technical specification, that requirement may be met by compliance with the mutual recognition clause in GG 101 [Ref 2.N].

Abbreviations

Abbreviations

Abbreviation	Definition
TERN	Trans-European Road Network
RSA	Road Safety Audit

Terms and definitions

Terms

Term	Definition
Collision data analysis	The collection and examination of historical road traffic collision data over a period of time in order to identify common trends and factors which can justify corrective action.
Design organisation	The organisation(s) commissioned to undertake various phases of scheme preparation. NOTE 1: At some stages of road safety audit, this can be the contractor.
Exemption file note	A note held on file, produced by the Overseeing Organisation, which includes the reasons why road safety audit is not applicable to a highway scheme. NOTE 1: An exemption file note is not a substitute for the production of a departure from standard where road safety audit is applicable but the process is not applied. NOTE 2: An exemption file note template can be found in Appendix A.
Highway scheme	All works that involve construction of new highway or permanent change to the existing highway layout or features. This is also considered to include the EC Directive 2008/96/EC 2008/96/EC [Ref 1.N] term "Infrastructure Project". NOTE 1: Road safety audit is not applicable to all highway schemes and applicability is determined by the Overseeing Organisation. NOTE 2: The applicability requirements for road safety audit can be found in section 2. NOTE 3: The term highway scheme includes road schemes in Scotland.
Interim road safety audit	The application of the road safety audit process to the whole or part of a highway scheme at any time during its design and construction. Interim road safety audit is neither mandatory nor a substitute for the stage 1, 2, 3 and 4 road safety audits.
Like for like maintenance highway schemes	A highway scheme proposed as maintenance works, that solely involves the replacement or refurbishment of a highway feature with a corresponding feature, which as a minimum, will appear the same, be located in the same position, perform the same and be constructed of comparable materials as the feature it replaces.
Maintaining agent	The organisation responsible for the ongoing maintenance of the motorway and all-purpose trunk road network at the highway scheme location.

Terms (continued)

Term	Definition
Overseeing Organisation specialist	A person from the Overseeing Organisation that has the appropriate training, skills and experience in the road safety discipline. NOTE 1: For Highways England, this will be an appropriate person from the Safer Roads-Design team. NOTE 2: For Transport Scotland this will be the Head of Standards. NOTE 3: For Welsh Government this would be a specialist within the Network Management Division of the Transport Department. NOTE 4: For the Department for Infrastructure Northern Ireland this will be a specialist within the Engineering Directorate.
Road safety audit	The review of highway schemes at the completion of preliminary design, completion of detailed design, the completion of construction and as a post opening monitoring exercise. NOTE 1: At stages 1, 2 and 3 the aim is to identify relevant road safety matters and communicate these in the form of road safety audit problems and recommendations. NOTE 2: At stage 4 the aim is to communicate road safety audit problems and recommendations based on collision data analysis.
Road safety audit action	An agreed action recorded in the road safety audit decision log in response to each road safety audit problem raised.
Road safety audit brief	The instructions to the road safety audit team defining the scope and details of the highway scheme to be subject to road safety audit, including sufficient information for the stage of road safety audit to be undertaken.
Road safety audit decision log	A table within the road safety audit response report to record the road safety audit problems and recommendations, the design organisation and Overseeing Organisation responses and agreed road safety audit actions to road safety audit problems.
Road safety audit problem	An identified road safety matter together with a resultant potential road traffic collision type, identified highway scheme location and summary. NOTE 1: This can include road user injuries where there is no identifiable road traffic collision type. NOTE 2: This includes existing road safety matters where the proposed highway scheme impacts the existing road safety matter or vice versa.
Road safety audit recommendation	A proportionate and viable suggestion for improvement to eliminate or mitigate an identified road safety audit problem. NOTE 1: In some circumstances, the recommendation can include further work to be undertaken by the design organisation to establish an appropriate mitigation measure or improvement.

Terms (continued)

Term	Definition
Road safety audit report	The report produced by the road safety audit team describing any road safety problems identified by the road safety audit team and the associated road safety recommendations.
Road safety audit response report	A report produced by the design organisation following road safety audit stages 1, 2 and 3. The report includes both a design organisation and Overseeing Organisation response to each problem and recommendation raised in the road safety audit report. NOTE 1: The road safety audit decision log is part of the road safety audit response report. NOTE 2: The road safety audit response report is produced collaboratively by the design organisation and Overseeing Organisation. NOTE 3: A road safety audit response report is not produced for stage 4 road safety audits.
Road safety audit site visit	A visit to the location of a proposed or completed highway scheme by the road safety audit team and other invitees.
Road safety audit team	A team that works together on all aspects of the road safety audit, independent of the highway scheme conception, design, construction and operation. NOTE 1: The road safety audit team comprises a road safety audit team leader and at least one road safety audit team member. NOTE 2: The road safety audit team observer is not part of the road safety audit team. NOTE 3: The individuals within the road safety audit team can be drawn from different organisations including the Overseeing Organisation and the design organisation.
Road safety audit team leader	A person with the appropriate training, skills and experience who is approved for a particular highway scheme and road safety audit stage by the Overseeing Organisation. NOTE 1: The road safety audit team leader is responsible for leading the road safety audit team through the process and managing the production of the road safety audit report.
Road safety audit team member	A member of the road safety audit team with the appropriate training, skills and experience necessary for a particular highway scheme and road safety audit stage, working with the road safety audit team leader.
Road safety audit team observer	A person with the appropriate training, skills and experience accompanying the road safety audit team to gain experience of the road safety audit process and/or highway scheme type. NOTE 1: The road safety audit team observer is encouraged to contribute to the road safety audit team discussions.

Terms (continued)

Term	Definition
Road safety engineering	The design and implementation of highway schemes intended to reduce the number and severity of collisions involving road users, drawing on the results of collision data analysis.
Road safety matters	An element of the existing road environment or proposed road environment that could potentially contribute to a road traffic collision or features that could present a risk of injuries to road users.
Road traffic collision	As defined as personal-injury road traffic accident in Reported Road Casualties in Great Britain STATS19 [Ref 3.I].
Specialist advisor	A person approved by the Overseeing Organisation to provide specialist independent advice to the road safety audit team where the scheme includes features outside the experience of the road safety audit team. NOTE 1: Features can include complex traffic signal controlled junctions or smart motorway technology.
Strategic decision	A decision agreed by the Overseeing Organisation on an element that already reflects an appropriate balance of a number of factors including road safety. NOTE 1: This can include items such as route choice, junction type and standard of provision.
Third party organisation	Organisations that are not working on behalf of the Overseeing Organisation and are promoting a highway scheme on the Overseeing Organisation's highway network. NOTE 1: A third party organisation can be a government department, government owned company, developer, local authority, statutory undertaker, private individual, private organisation or consultant working for any of these parties.

1. Scope

Aspects covered

1.1 This document shall be used to implement road safety audit on highway schemes on motorways and all-purpose trunk roads.

NOTE 1 *Highway schemes include:*

1) work carried out under agreement with the Overseeing Organisation resulting from developments that affect the trunk road and motorway network; or

2) a highway scheme being promoted by third party organisations.

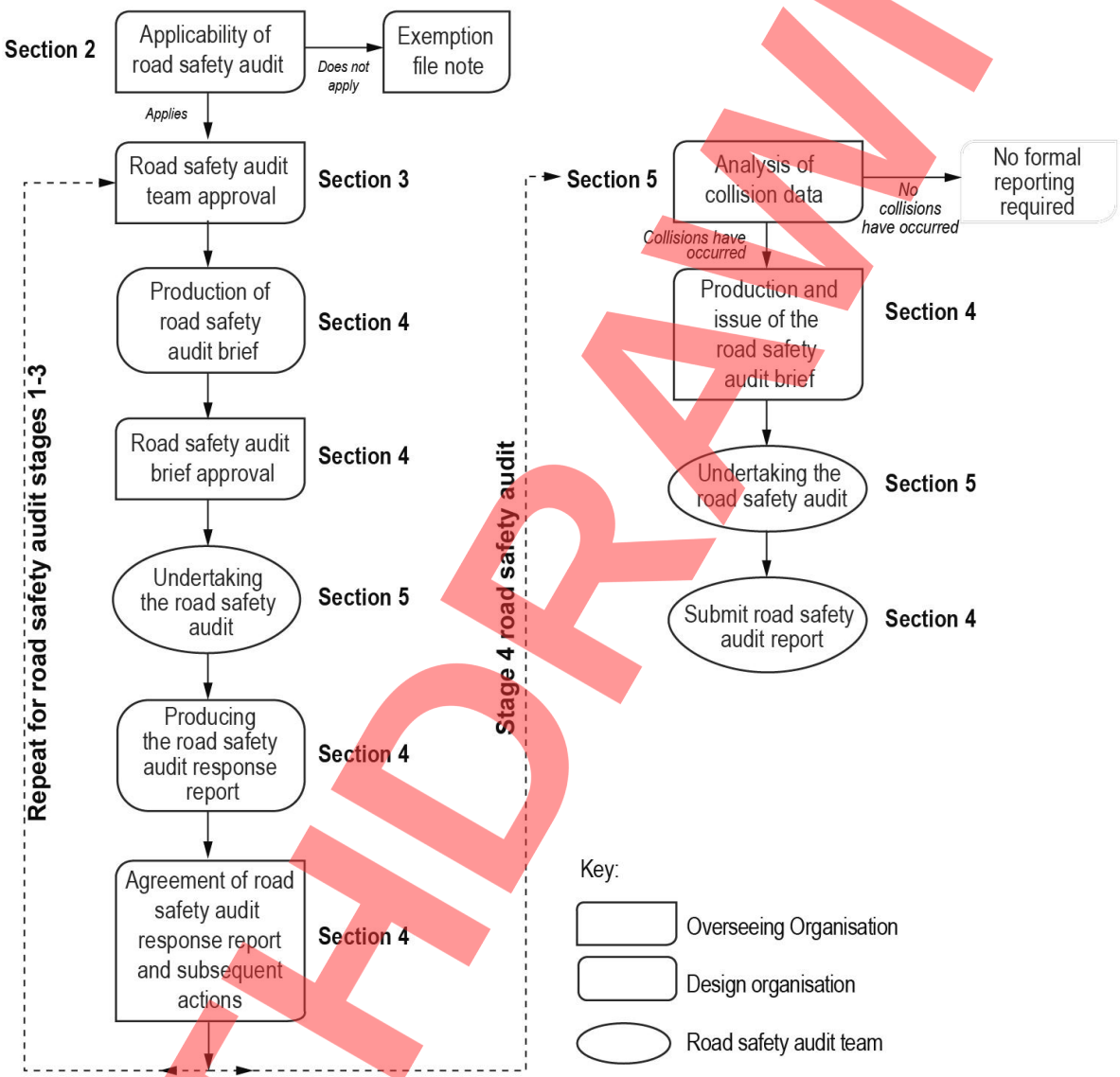
NOTE 2 *The operational safety of temporary traffic management for the construction of highway schemes is covered by chapter 8 of the Traffic Signs Manual TSM Chapter 8 [Ref 3.N].*

1.2 The Overseeing Organisation shall determine the applicability of road safety audit to highway schemes using section 2 of this document.

1.3 Where road safety audit is applied to a highway scheme, it shall be undertaken at each of the following stages:

1) Stage 1 - Completion of preliminary design.
2) Stage 2 - Completion of detailed design.
3) Stage 3 - Completion of construction.
4) Stage 4 - Post opening monitoring.

Figure 1.3 Road safety audit process overview



NOTE *Figure 1.3 provides an overview of the road safety audit process and the relevant sections of this document.*

Implementation

1.4 This document shall be implemented forthwith on all highway schemes on the Overseeing Organisations' motorway and all-purpose trunk roads according to the implementation requirements of GG 101 [Ref 2.N].

NOTE 1 *Like for like maintenance highway schemes are excluded from road safety audit.*

NOTE 2 *An exemption file note is not required for like for like maintenance highway schemes.*

Use of GG 101

1.5 The requirements contained in GG 101 [Ref 2.N] shall be followed in respect of activities covered by this document.

2. Applicability of road safety audit

Trunk road and motorway network

2.1 Where there are physical changes to the highway impacting on road user behaviour or resulting in a change to the outcome of a collision on the trunk road and motorway network, road safety audit (RSA) shall apply, regardless of the procurement method.

NOTE *Temporary traffic management and temporary changes to the highway not associated with the construction of a highway scheme, and that last longer than 6 months in duration, are considered to be physical changes to the highway.*

2.2 RSA shall not apply where a physical change to the highway will not impact on road user behaviour, or change the outcome of a collision on the trunk road and motorway network.

2.3 The Overseeing Organisation shall produce an exemption file note to be kept on the scheme file (or equivalent) where there is no need to apply RSA on the trunk road and motorway network.

NOTE *An exemption file note template is provided in appendix A.*

Trans-European Road Network (TERN)

2.4 In accordance with the European Directive on Road Infrastructure Safety Management 2008/96/EC [Ref 1.N], RSA must be applied to highway schemes on the TERN.

3. Road safety audit team requirements

RSA team structure

3.1 At all RSA stages the RSA team shall be comprised of the RSA team leader and at least one RSA team member.

3.1.1 RSA team observers may observe the RSA team to gain experience in carrying out RSA.

3.2 The number of RSA team observers shall be limited to a maximum of two.

3.3 The RSA team shall be independent from the highway scheme conception, design, construction and operation.

Specialist advisors

3.4 Where required by the RSA team, specialist advisors shall be approved by the Overseeing Organisation.

3.5 A specialist advisor shall be independent of the RSA team and highway scheme conception, design, construction and operation.

Audit team approval

3.6 The Overseeing Organisation shall approve the proposed RSA team before the RSA is undertaken.

3.6.1 The Overseeing Organisation may ask the design organisation to propose a RSA team on their behalf for approval by the Overseeing Organisation.

3.7 RSA team approval shall be recorded within the highway scheme file and communicated to the RSA team.

3.7.1 Approvals of the RSA team are scheme and RSA stage-specific and the use of personnel or organisations on previous RSAs should not guarantee their suitability to undertake a RSA on other schemes.

3.8 Proposed members of the RSA team shall demonstrate their competency by means of a road safety specific curriculum vitae (CV) detailing training, continuing professional development (CPD) and experience.

3.8.1 Experience should be relevant to the type of scheme being subject to RSA and identified in the proposed RSA team members' CV.

NOTE 1 *The CPD record in the CV used to demonstrate competence for a proposed member of the RSA team can include other areas such as highway design, traffic management and highway maintenance.*

NOTE 2 *Relevant CPD does not have to take the form of formal training courses.*

NOTE 3 *Outcome-based structured reading, the preparation and presenting of relevant material and work based learning can all form part of a CPD record.*

3.8.2 Table 3.8.2 should be used for reference when reviewing the training, CPD and experience of the RSA team:

Table 3.8.2 RSA team competency

	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

NOTE 1 *Whilst it is not intended that the RSA team have extensive detailed design knowledge, it is important to include RSA team members with experience or training in road design.*

NOTE 2 *Experienced road safety professionals who are proposed for the RSA team can have developed their careers from a range of backgrounds.*

NOTE 3 *RSA team observers are not part of the RSA team.*

3.8.3 Proposed members of the RSA team with the recommended experience of collision data analysis and road safety engineering should not be accepted where this is not evident within the previous 24 months.

3.9 At least one individual within the RSA team undertaking RSA on the motorway and/or trunk road network must hold a certificate of competency in RSA in accordance with the requirements of the European Directive on Road Infrastructure Safety Management 2008/96/EC [Ref 1.N], acquired according to appendix G of this document.

4. RSA process requirements

4.1 The Overseeing Organisation shall initiate the RSA process at all stages, allowing time for all parties to complete the full RSA process.

Producing the RSA brief

4.2 The design organisation shall prepare the RSA brief for submission to the Overseeing Organisation for stage 1, 2 and 3 RSAs.

4.3 The Overseeing Organisation shall have responsibility for approving and issuing the RSA brief to the RSA team.

4.4 For stage 4 RSAs, and where there is no design organisation available, the Overseeing Organisation shall prepare and approve the RSA brief for submission to the RSA team.

NOTE *A RSA brief template is provided in appendix C.*

4.5 Where the RSA team has identified that the RSA brief is insufficient for their purpose, a request for further information shall be made to the Overseeing Organisation.

4.5.1 Any information requested but not supplied to the RSA team should be identified in the introduction to the RSA report.

Producing the RSA report

4.6 The RSA team leader shall be responsible for leading the RSA team through the process and managing the production of the RSA report.

4.7 The RSA team shall produce and issue a RSA report directly to the Overseeing Organisation for all stages.

4.8 Any misinterpretations of the highway scheme proposals shall be identified by the Overseeing Organisation and discussed with the RSA team.

4.9 Anything agreed to be outside of, or not covered by the RSA process or RSA brief shall be identified by the Overseeing Organisation and discussed with the RSA team.

4.10 Where changes are agreed to a RSA report between the RSA team and Overseeing Organisation, a revised version of the RSA report shall be produced by the RSA team and issued to the Overseeing Organisation.

NOTE *A RSA report template for RSA stages 1, 2 and 3 is provided in appendix D.*

Producing the RSA response report

4.11 A RSA response report shall be produced for stage 1, 2 and 3 RSAs.

NOTE *A RSA response report is not be required for stage 4 RSAs.*

4.12 The design organisation shall manage the production of the RSA response report in collaboration with the Overseeing Organisation.

4.13 The RSA response report shall include a summary of the scheme, the stage of RSA, the RSA report document reference and date of the RSA report it relates to.

4.14 The RSA response report shall contain details of the representatives from the design organisation who prepared the RSA response report.

4.15 The RSA response report shall contain a RSA decision log to include a reiteration of each road safety problem and recommendation made in the RSA report.

4.16 The design organisation shall, for each RSA problem and recommendation, do one of the following:

1) accept the RSA problem and recommendation made by the RSA team;

2) accept the RSA problem raised, but suggest an alternative solution, giving appropriate reasoning; or
3) disagree with the RSA problem and recommendation raised, giving appropriate reasoning for rejecting both.

4.17 The RSA response report shall contain a response from the Overseeing Organisation and a RSA action for each problem agreed between the design organisation and Overseeing Organisation.

4.18 The RSA response report shall be signed by the Overseeing Organisation and design organisation to indicate their agreement on the RSA actions.

4.18.1 The RSA response report should be produced and finalised within one month of the issue of the RSA report.

NOTE *Appendix F shows a RSA response report and RSA decision log template.*

4.19 For each RSA action, either the design organisation or Overseeing Organisation shall be responsible for its implementation.

Subsequent actions

4.20 The Overseeing Organisation shall keep a record of all RSA reports and RSA response reports on the highway scheme file.

4.20.1 The Overseeing Organisation should provide electronic copies of the RSA reports and RSA response reports to the Overseeing Organisation specialist.

4.20.2 The Overseeing Organisation should provide an electronic copy of the RSA response report to the RSA team for information.

Repeating a RSA stage

4.21 Where the Overseeing Organisation deems a repeat RSA to be necessary, the repeated RSA shall only be concerned with the elements of the scheme that have been changed.

NOTE *The design organisation or Overseeing Organisation can request a RSA stage to be repeated where multiple changes or significant changes to the highway scheme are likely to have an impact on road user behaviour or the outcome of a collision.*

4.22 Stage 1 and stage 2 RSAs shall be repeated if the previous RSA for the relevant stage is more than 5 years old.

Communication

4.23 The design organisation and Overseeing Organisation shall agree an appropriate method of communication with the RSA team to maintain the RSA team independence.

4.23.1 All communication should be recorded, including minutes of meetings if these are held.

5. Undertaking the road safety audit

Scope of road safety audit

5.1 RSA shall only be concerned with road safety matters.

NOTE 1 *RSA is not a technical check that the design conforms to standards and/or best practice guidance.*

NOTE 2 *RSA is not a check that the scheme has been constructed in accordance with the design.*

NOTE 3 *RSA does not consider structural safety.*

NOTE 4 *RSA does not cover health and safety issues concerning road workers during the construction, maintenance and operation of the road.*

5.2 Road safety matters resulting from the operation of facilities for highway maintenance that affect road users shall be included in the scope of RSA.

5.3 The needs of all road users shall be assessed when undertaking the RSA.

Road safety audit brief

5.4 The RSA brief shall define the scope of the RSA to be undertaken.

5.5 Where the design of the highway scheme includes strategic decisions, this shall be clearly identified within the RSA brief.

5.5.1 The Overseeing Organisation should give sufficient notice to the RSA team of when the scheme will be ready for RSA and the date by which the RSA report will be required.

5.6 A RSA brief shall be stage-specific.

5.6.1 The RSA brief should contain the relevant information for each stage as identified within appendix C.

Road safety audit report

5.7 At all stages, the RSA team shall prepare a written RSA report.

5.8 The RSA report shall contain a separate statement for each identified RSA problem describing the location and nature of the problem and the type of collisions or road user injuries likely to occur as a result of the problem.

5.9 Each RSA problem shall be followed by an associated RSA recommendation.

5.10 The RSA team shall provide proportionate and viable RSA recommendations to eliminate or mitigate the identified RSA problems.

5.11 RSA recommendations including the words "consider" and "must" shall not be used.

NOTE *The use of the word 'must' in RSA recommendations has the potential to be misinterpreted as an instruction from the RSA team.*

5.12 Recommendations to 'monitor' shall only be made where a need to supplement the stage 4 RSA is specifically identified in terms of frequency and incidence of particular vehicle manoeuvres or collision contributory factors and the monitoring task can be specifically allocated.

5.13 RSA reports shall include:

1) identification of the RSA stage including a unique document reference number and any details of revisions;
2) a brief description of the highway scheme including details of its location and its objectives;
3) details of who supplied the RSA brief, who approved the RSA brief and who approved the RSA team;
4) identification of the RSA team membership as well as the names of others contributing such as the police, maintaining agent and specialist advisors;

5) details of who was present at the site visit, the date and time period(s) when it was undertaken and what the site conditions were on the day of the visit (weather, traffic congestion, etc.);
6) a location plan based on the scheme plan(s), marked up and referenced to problems and if available, photographs of the problems identified;
7) a statement, signed by both the RSA team leader and the RSA team member(s) in the format given in appendix D;
8) a list of information provided to the RSA team.

5.14 The RSA team shall not include any issues in the RSA report that have no implications on road user safety or any other items not covered by the RSA brief.

NOTE *Examples of inappropriate issues include maintenance defects observed during site visits and health and safety issues.*

5.15 The RSA team leader shall report any comments on issues that are not covered by the RSA brief directly to the Overseeing Organisation.

5.15.1 Maintenance defects noted during site visits should be immediately reported directly to the maintaining agent and the Overseeing Organisation.

Stages of road safety audit

5.16 Highway schemes shall be subject to RSA at stages 1, 2, 3 and 4.

NOTE 1 *General aspects to be addressed at RSA stages 1, 2 and 3 are provided in the lists in appendix B of this document.*

NOTE 2 *The lists provided in appendix B are not intended to be exhaustive and provide a prompt for optional supplementary checks.*

NOTE 3 *A RSA report template is shown in appendix D for stages 1, 2 and 3 and a stage 4 RSA report template is contained in appendix E.*

5.16.1 Interim RSA may be applied at stages 1, 2 and 3.

Stage 1 road safety audit - Completion of preliminary design

5.17 Stage 1 RSA shall be undertaken at the completion of preliminary design, (for example at the order publication report stage) before publication of draft orders.

NOTE *The end of the preliminary design stage is often the last occasion at which land requirements can have the potential to be changed.*

5.17.1 Stage 1 RSA should include road safety matters which have a bearing upon land take, licence or easement before the draft orders are published or planning consent is applied for.

5.17.2 Where preliminary design is not undertaken, a stage 1 RSA may be combined with a stage 2 RSA at the detailed design stage.

5.18 The RSA team shall review the preliminary design information provided with the RSA brief.

NOTE *Aspects that typically form the focus of the stage 1 RSA are included as appendix B.*

5.19 Site visits shall be carried out in accordance with the requirements under section 5 road safety audit site visits.

Stage 2 road safety audit - Completion of detailed design

5.20 Stage 2 RSA shall be undertaken at the completion of the detailed design stage.

NOTE *At stage 2, the RSA team focuses on the more detailed aspects of the highway scheme.*

5.21 The RSA team shall review the detailed design information provided with the RSA brief.

NOTE *Aspects that typically form the focus of the stage 2 RSA are included as appendix B.*

5.22 The stage 2 RSA shall include a review of the RSA actions in the stage 1 RSA response report.

5.23 RSA problems and recommendations relating to incomplete RSA actions in the stage 1 RSA shall be reiterated at the stage 2 RSA.

5.24 Site visits shall be carried out in accordance with the requirements under section 5 road safety audit site visits.

Stage 3 road safety audit - Completion of construction

5.25 The stage 3 RSA shall be undertaken when the highway scheme construction is complete.

5.25.1 The stage 3 RSA should be undertaken before the scheme has opened to avoid the need for the RSA team to traverse the site when fully open to traffic.

5.25.2 Where the stage 3 RSA cannot be undertaken before opening, alternative arrangements should be agreed with the Overseeing Organisation.

NOTE *Alternative arrangements include the RSA being carried out a short time after opening or in phases where a scheme is subject to phased completion and opening.*

5.25.3 The RSA team leader should discuss any alterations recommended at the stage 3 RSA with the Overseeing Organisation to give the opportunity for modifications to be undertaken before opening.

NOTE *Early implementation of alterations recommended at the stage 3 RSA has the potential to provide a safer working environment for the workforce and minimise delays to road users.*

5.26 Stage 3 RSAs shall be carried out within 1 month of opening unless otherwise agreed with the Overseeing Organisation.

5.27 RSA problems and recommendations raised in the stage 1 and stage 2 RSA shall be reviewed at the stage 3 RSA and reiterated if the associated RSA actions are not complete.

5.28 The RSA team shall review the information provided with the RSA brief.

NOTE *Aspects that typically form the focus of the stage 3 RSA are included as appendix B.*

5.29 Site visits shall be carried out in accordance with the requirements under section 5 Road safety audit site visits.

5.29.1 Where there is an accessibility issue that restricts the RSA team from accessing areas of the site, reference to this should be included in the introduction of the RSA report.

NOTE *An example of an accessibility issue is an area of live motorway that cannot be accessed on foot.*

5.30 The RSA team shall examine the highway scheme from the viewpoints of all road users.

5.30.1 The RSA team may decide to drive, walk, cycle and/or ride a horse through the scheme to assist their evaluation.

5.31 The RSA team shall visit the site together in daylight and during the hours of darkness.

NOTE *The purpose of a site visit during darkness is to identify hazards specific to night time operation.*

Stage 4 road safety audit - Post-opening monitoring

5.32 The Overseeing Organisation shall arrange for stage 4 RSA to be undertaken.

NOTE *The stage 4 RSA is an evidence-led review of road traffic collisions that have occurred in the vicinity of the highway scheme.*

5.33 Stage 4 RSA shall be carried out using 12 months of validated post highway scheme-opening road traffic collision data.

NOTE 1 *Stage 4 RSAs are carried out so that any post highway scheme-opening road safety matters can be identified and remedial action taken.*

NOTE 2 *The lag in availability of validated road traffic collision data means the RSA can occur later than 12 months from the opening of the highway scheme.*

NOTE 3 *The availability of validated road traffic collision data varies depending on the individual Overseeing Organisation.*

5.34 A stage 4 RSA report shall be produced where road traffic collisions have been recorded in the vicinity of the highway scheme over the 12 month period of validated road traffic collision data.

NOTE *A stage 4 RSA report is not needed where no road traffic collisions have been recorded in the vicinity of the highway scheme over the 12 month period of post-opening validated road traffic collision data.*

5.35 If the Overseeing Organisation decides not to proceed further with the stage 4 RSA reporting, this decision shall be recorded, and kept on the highway scheme file (or equivalent).

5.36 Where a stage 4 RSA report is required, a RSA brief shall be prepared and issued to the RSA team by the Overseeing Organisation.

5.36.1 The production of the RSA brief may be delegated to the design organisation where they are retained post highway scheme completion.

5.36.2 Where there have been highway layout changes following the period the scheme first became operational, the stage 4 RSA brief should make reference to these changes.

5.36.3 Where operational data exists, this should be provided with the RSA brief to enable the RSA team to understand the implications of any road safety matters that have not resulted in reported collisions.

5.37 The stage 4 RSA report shall include any RSA problems indicated by the road traffic collision data analysis and operational data, and where necessary, include RSA recommendations for remedial action.

NOTE *A stage 4 RSA report template is provided in appendix E.*

5.38 During the stage 4 RSA, road traffic collision data shall be analysed in detail by the RSA team to identify:

1) higher than expected numbers of road traffic collisions that have occurred since the scheme became operational (when compared to control data);
2) locations at which road traffic collisions have occurred; and
3) road traffic collisions that appear to arise from similar causes or show common factors or trends.

5.38.1 The analysis of road traffic collision data should include identification of changes in the collision trends in terms of number, rate (taking account of any traffic flow changes), types and other collision variables, and comparisons with control data.

5.39 The RSA team shall visit the sites of highway schemes if characteristics within the road traffic collision data show:

1) higher than expected numbers of road traffic collisions have occurred since the scheme became operational (when compared to control data); or
2) the road traffic collision rate or severity has increased since the scheme became operational; or
3) common trends (e.g. a high frequency of road traffic collisions during the hours of darkness or on a wet road surface); or
4) road safety matters related to vulnerable road users.

5.39.1 Where a site visit is needed, the RSA team should decide if the road traffic collision data analysis justifies an inspection during a particular time period and record their decision making within the RSA report.

NOTE *A particular time period could be during the hours of darkness or a peak period.*

Road safety audit site visits

5.40 Site visits shall be carried out by all members of the RSA team together.

5.41 Site visits shall be limited to a maximum of 6 people.

NOTE *Site visit numbers include the RSA team and any additional specialist advisors, police and maintaining agent representatives.*

5.42 Table 5.42 shall be used for determining site visit requirements for each RSA stage:

Table 5.42 RSA site visit requirements

RSA stage	Visits	Attendees	Invitees
Stage 1	Daytime	RSA team	As determined by RSA team
Stage 2	Daytime		
Stage 3	Daytime and darkness		Police representative Maintaining agent representative
Stage 4	As required by clause 5.39 (section 5, stage 4 road safety audit - post-opening monitoring)	RSA team	As determined by RSA team

NOTE *Police and maintaining agent representation can be included at all stages of RSA if deemed beneficial and approved by the Overseeing Organisation.*

5.43 The RSA team shall determine the need to vary the time of the site visit to observe specific traffic conditions at all stages of RSA.

NOTE *Specific traffic conditions can include peak periods, the beginning or end of the school day or during frequent events.*

Interim RSA

5.44 The Overseeing Organisation shall decide whether to undertake an interim RSA.

NOTE 1 *Interim RSA can provide the benefit of early identification of potential road safety problems leading to savings in both programme and design costs.*

NOTE 2 *Interim RSA is particularly beneficial to larger projects with accelerated programmes, such as highway schemes involving early contractor involvement.*

NOTE 3 *Interim RSA supplements the RSA at stages 1, 2 and 3.*

NOTE 4 *Interim RSA does not replace a particular stage of RSA.*

5.45 The RSA process for an interim RSA shall be completed in accordance with the requirements of the relevant RSA stage.

5.45.1 Interim RSA may be undertaken during the construction process with the agreement of the Overseeing Organisation.

5.45.2 Elements of the constructed scheme may be subjected to interim RSA, when works are partially complete or when individual elements or sections of the scheme are complete and opened to road users in stages.

Third party organisation-led RSA

5.46 Where third party organisation-led schemes have the potential to result in highway schemes on the trunk road and motorway network, the process set out in this document shall be followed for all stages of RSA including appointment and approval of the RSA team.

NOTE *The highway scheme can be designed by an organisation working for the third-party organisation rather than an organisation working for the Overseeing Organisation.*

5.46.1 A stage 1 RSA report should be undertaken before planning consent is applied for as this demonstrates that the potential for road user safety issues has been addressed.

NOTE *The third party organisation-led scheme is submitted for planning approval to the local planning authority and, where there are highway implications, the highway or Overseeing Organisation is consulted.*

6. Certificate of competency curriculum

Training and assessment

6.1 The curriculum core modules provided in appendix G shall be used to provide appropriate RSA certificate of competency training and assessment.

NOTE 1 *There are two routes through which a certificate of competency can be obtained – a portfolio of evidence route or a training route.*

NOTE 2 *Details of the two routes are also provided in appendix G.*

Authorisation of certificate of competency

6.2 Organisations wishing to offer a certificate of competency shall have their assessment and certification processes reviewed and accepted in writing by the Highways England Safer Roads-Design team.

NOTE *Highways England's Safer Roads-Design team fulfils this role on behalf of the other Overseeing Organisations.*

6.3 Organisations offering a certificate of competency training course shall be independent of the candidate's employer.

6.4 Prior to the issue of a certificate of competency, organisations offering a training course shall assess the candidate's suitability as RSA team member and RSA team leader against the training, skills and experience guidance in section 3.

Certificate of competency validity

6.5 The certificate of competency shall not have a finite validity period.

NOTE *It is not intended that holding a certificate of competency will require a mandatory membership of an organisation.*

Certificates of competency awarded before implementation of EC Directive

6.6 Certificates of competency awarded before the implementation of the 2008/96/EC [Ref 1.N] shall be recognised.

6.6.1 Certificates of competency in RSA awarded in other European Union countries outside the UK may be acceptable.

7. Normative references

The following documents, in whole or in part, are normative references for this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Ref 1.N	2008/96/EC, 'Directive 2008/96/EC of the European Parliament and of the Council of 19 November 2008 on road infrastructure safety management '
Ref 2.N	Highways England. GG 101, 'Introduction to the Design Manual for Roads and Bridges'
Ref 3.N	The Stationery Office. TSM Chapter 8, 'Traffic Signs Manual Chapter 8 - Road works and temporary situations'

8. Informative references

The following documents are informative references for this document and provide supporting information.

Ref 1.I	The Stationery Office. Legislation.gov.uk. CM&CHA 2007, 'Corporate Manslaughter and Corporate Homicide Act (2007)'
Ref 2.I	The National Archives. legislation.gov.uk. Highways Act 1980, 'Highways Act 1980'
Ref 3.I	gov.uk. STATS19, 'Reported road casualties in Great Britain'
Ref 4.I	National Policing Improvement Agency. Association of Chief Police Officers. RDIM, 'Road Death Investigation Manual'
Ref 5.I	The National Archives. legislation.gov.uk. Road Traffic Act 1988, 'Road Traffic Act 1988'
Ref 6.I	The Stationery Office. Roads(S) 1984, 'Roads (Scotland) Act 1984'
Ref 7.I	Highways England. GG 142, 'Walking, cycling and horse-riding assessment and review'

Appendix A. Exemption file note template

A1 Highway scheme details

Details of the highway scheme proposed for exemption from the road safety audit process are provided below.

Table A.1 Highway scheme name, location and description

A2 Exemption statement

In accordance with GG 119 road safety audit I have examined the details of the above highway scheme.

For the reason/s set out below, the highway scheme is considered exempt from road safety audit as there is no impact on road user behaviour for all potential road users in this location and there will be no adverse changes to the outcome of a collision.

Table A.2 Reasons for exemption

A3 Overseeing Organisation approval

The Overseeing Organisation approval for the exemption from the road safety audit process is provided below.

Table A.3 Overseeing Organisation approval

Name:	
Role:	
Organisation:	
Signature:	
Date:	

Appendix B. Road safety audit checklists

Road safety audit checklists are outlined on the next page.

Table B.1 LOCAL ALIGNMENT

Stage 1	Stage 2	Stage 3
Visibility		
Are horizontal and vertical alignments consistent with required visibility? Will sight lines be obstructed by permanent or temporary features e.g. bridge abutments and parked vehicles?	Are sight lines obstructed by: 1. safety fences; 2. boundary fences; 3. street furniture; 4. parking facilities; 5. signs; 6.landscaping; 7.structures; 8.environmental barriers; 9.crests; 10.features such as buildings, plant or materials outside the highway boundary? Is the forward visibility of at-grade crossings sufficient to ensure they are conspicuous?	Are the sight lines clear of obstruction?
New/existing road interface		
Will the proposed scheme be consistent with the standard of provision on adjacent lengths of road and if not, is this made obvious to the road user? Does interface occur near any potential hazard, i.e. crest, bend after steep gradient?	Where a new road scheme joins an existing road, or where an on-line improvement is to be constructed, will the transition give rise to potential hazards? Where the road environment changes (e.g. urban to rural, restricted to unrestricted) is the transition made obvious by appropriate signing and carriageway markings?	Is there a need for additional signs and/or road markings?
Vertical alignment		
Are climbing lanes to be provided? Will the vertical alignment cause any "hidden dips"?		

Table B.2 GENERAL

Stage 1	Stage 2	Stage 3
Departures from standards		
What are the road safety implications of any approved departures from standards or relaxations? (Are these strategic decisions within the scope of the RSA?)	Consider road safety aspects of any departures granted since the stage 1 RSA.	Are there any adverse road safety implications of any departures from standard granted since the stage 2 RSA?
Cross sections and cross-sectional variation		
How safely do the cross-sections accommodate drainage, ducting, signing, fencing, lighting and pedestrian, cyclist and equestrian routes? Could the scheme result in the provision of adverse camber? What are the road safety implications if the standard of the proposed scheme differs from adjacent lengths of highway?		
Landscaping		
Could areas of landscaping conflict with sight lines (including during windy conditions)?	Could planting (new or when mature) encroach onto the carriageway or obscure signs or sight lines (including during windy conditions)? Could earth bunds obscure signs or visibility? Could trees (new or when mature) be a hazard to an errant vehicle? Could planting affect lighting or shed leaves on to the carriageway?	Could planting obscure signs or sight lines (including during periods of windy weather)? Do earth bunds obscure signs or visibility? Could trees (new or when mature) be a potential hazard to an errant vehicle? Could planting affect lighting or shed leaves onto the carriageway?
Climatic conditions		
	Is there a need for specific provision to mitigate effects of fog, wind, sun glare, snow, and ice?	Are any extraordinary measures required?

Table B.2 GENERAL (continued)

Stage 1	Stage 2	Stage 3
Drainage		
Will the new road drain adequately, or could areas of excess surface water result? Could excess surface water turn to ice during freezing conditions? Could excessive water drain across the highway from adjacent land?	Do drainage facilities (e.g. gully spacing, gully locations, flat spots, crossfall, ditches) appear to be adequate? Are features such as utility covers or gullies located within footpaths, cycle routes or equestrian routes? Are features such as utility covers or gullies located in the likely wheel tracks for motorcyclists or cyclists? Do they give concern for motorcyclist/cyclist stability? Is surface water likely to drain across a carriageway and increase the risk of aquaplaning under storm conditions?	Does drainage of roads, cycle routes and footpaths appear adequate? Are drainage features such as utility covers or gullies located within footpaths, cycle routes or equestrian routes? Are features such as utility covers or gullies located in the likely wheel tracks for motorcyclists or cyclists? Do they give concern for motorcyclist/cyclist stability?
Lay-bys		
Has adequate provision been made for vehicles to stop off the carriageway including picnic areas? How will parked vehicles affect sight lines? Could lay-bys be confused with junctions? Is the lay-by located in a safe location (e.g. away from vertical crests or tight horizontal alignments with limited visibility)?	Have lay-bys been positioned safely? Could parked vehicles obscure sight lines? Are lay-bys adequately signed? Are picnic areas properly segregated from vehicular traffic?	

Table B.2 GENERAL (continued)

Stage 1	Stage 2	Stage 3
Public utilities/services apparatus		
Could utility apparatus be struck by an errant vehicle? Could utility apparatus obscure sight lines?	Can maintenance vehicles stop clear of traffic lanes? If so, could they obscure signs or sight lines? Are boxes, pillars, posts and cabinets located in safe positions away from locations that may have a high potential of errant vehicle strikes? Do they interfere with visibility? Has sufficient clearance to overhead cables been provided? Have any special accesses/parking areas been provided and are they safe? Are there any utility inspection chambers in live traffic lanes and/or wheel tracks including those of motorcyclists or cyclists? Do they give concern for motorcyclist/ cyclist stability?	Can maintenance vehicles stop clear of traffic lanes? If so, could they obscure signs or sight lines? Are boxes, pillars, posts and cabinets located in safe positions away from locations that may have a high potential for errant vehicle strikes? Do they interfere with visibility? Are any special accesses/parking areas provided safe? Are there any utility inspection chambers in live traffic lanes and/or wheel tracks? Has any loose material around utility covers or gullies located in the verge been compacted down and made level with the surrounding ground?
Access		
Can all accesses be used safely? Can multiple accesses be linked into one service road? Are there any conflicts between turning and parked vehicles?	Is the visibility to/from accesses adequate? Are the accesses of adequate length to ensure all vehicles clear the main carriageway? Do all accesses appear safe for their intended use?	Is the visibility to/from accesses adequate? Are the accesses of adequate length to ensure all vehicles clear the main carriageway?
Skid resistance		
	Are there locations where high skid resistance surfacing (such as on approaches to junctions and crossings) would be beneficial? Do surface changes occur at locations where they could adversely affect motorcycle stability? Is the colour of any high friction surfacing appropriate?	Do any joints in the surfacing appear to have excessive bleeding or low skid resistance? Do surface changes occur at locations where they could adversely affect motorcycle stability?
Emergency vehicles		
Has provision been made for safe access and egress by emergency vehicles?		

Table B.2 GENERAL (continued)

Stage 1	Stage 2	Stage 3
Future widening		
Where a single carriageway scheme is to form part of a future dual carriageway, is it clear to road users that the road is for two-way traffic?		
Agriculture		
	Have the needs of agricultural vehicles and plant been taken into consideration (e.g. room to stop between carriageway and gate, facilities for turning on dual carriageways)? Are such facilities safe to use and are they adequately signed?	
Fences and road restraint systems		
	Is there a need for road restraint systems to protect road users from signs, gantries, parapets, abutments, steep embankments or water hazards? Do the road restraint systems provided give adequate protection? Are the road restraint systems long enough? Are specific restraint facilities required for motorcyclists? In the case of wooden post and rail boundary fences, are the rails placed on the non-traffic side of the posts? If there are roads on both sides of the fence is an interlocking-design necessary to prevent impalement on impact?	Is the restraint system adequate? In the case of wooden post and rail boundary fences, are the rails placed on the non-traffic side of the posts? Have specific restraint facilities been provided for motorcyclists?

Table B.2 GENERAL (continued)

Stage 1	Stage 2	Stage 3
Adjacent development		
Does adjacent development cause interference/ confusion? (e.g. lighting or traffic signals on adjacent roads may affect a road user's perception of the road ahead) Is screening required to avoid headlamp glare between opposing carriageways, or any distraction to road users?	Has screening been provided to avoid headlamp glare between opposing carriageways, or any distraction to road users? Are there any safety issues relating to the provision of environmental barriers or screens?	Have environmental barriers been provided and do they create a potential hazard?
Basic design principles		
Are the overall design principles appropriate for the predicted level of use for all road users?		
Bridge parapets		
	Are parapet heights appropriate for the adjacent road user groups?	Is the projection of any attachment to the parapet likely to be struck by road users?
Network management		
		Have appropriate signs and/or markings been installed in respect of Traffic Regulation Orders?
Specific road users		
Is specific provision required for vulnerable groups? (i.e. the young, older users, mobility and visually impaired, motorcyclists.)	Are gradients appropriate for mobility scooters? Are timings at controlled crossings sufficient for all users? Do surface changes or excessive use of carriageway markings occur at locations where they could adversely affect motorcycle stability? Are specific restraint facilities required for motorcyclists? Are features such as traffic calming, utility covers or gullies located in the likely wheel tracks for motorcyclists or cyclists? Do they give concern for motorcyclist/cyclist stability?	Are the following adequate for specific and vulnerable groups? 1. visibility; 2. signs; 3. surfacing; 4. other guardrails; 5. drop kerbing/flush surfaces; 6. tactile paving; 7. gradients; 8. lighting levels; 9. restraint systems; 10. positioning of utility covers/gullies.

Table B.3 JUNCTIONS

Stage 1	Stage 2	Stage 3
Layout		
Is provision for right turning vehicles required? Are acceleration/deceleration lanes required? Are splitter islands required on minor arms to assist pedestrians or formalise road users' movements to/from the junction? Are there any unusual features that affect road safety? Are widths and swept paths adequate for all road users? Will large vehicles overrun pedestrian or cycle facilities? Are there any conflicts between turning and parked vehicles? Are any junctions sited on a crest? Is the junction type appropriate for the traffic flows and likely vehicle speeds?	Are the junctions and accesses adequate for all vehicular movements? Are there any unusual features, which may have an adverse effect on road safety? Have guardrails/safety fences been provided where appropriate? Do any roadside features (e.g. guard rails, safety fences, traffic bollards signs and traffic signals) intrude into drivers' line of sight? Are splitter islands and bollards required on minor arms to assist pedestrians or formalise road users' movements to/from the junction? Are parking or stopping zones for buses, taxis and public utilities vehicles situated within the junction area? Are they located outside visibility splays? Are any utility covers or gullies located in the likely wheel tracks of motorcyclists or cyclists?	Have guard rails/safety fences been provided where appropriate? Do any roadside features (e.g. guard rails, safety fences, traffic bollards signs and traffic signals) intrude into drivers' line of sight? Have bollards been provided to assist pedestrians or formalise road user movements?
Visibility		
Are sight lines adequate on and through junction approaches and from the minor arm? Are visibility splays adequate and clear of obstructions such as street furniture and landscaping? Will the use of deceleration or acceleration lanes obscure junction visibility?	Are the sight lines adequate at and through the junctions and from minor roads? Are visibility splays clear of obstruction?	Are all visibility splays clear of obstructions?
T, X, Y - junctions		
	Have ghost island right turn lanes and refuges been provided where required? Do junctions have adequate stacking space for turning movements? Can staggered crossroads accommodate all vehicle types and movements?	Are priorities clearly defined? Is signing adequate?

Table B.3 JUNCTIONS (continued)

Stage 1	Stage 2	Stage 3
All roundabouts		
	Are the deflection angles of approach roads adequate for the likely approach speed? Are splitter islands necessary? Is visibility on approach adequate to ensure drivers can perceive the correct path through the junction? Where chevron signs are required, have they been correctly sited? Are dedicated approach lanes required? If provided, will the road markings and signs be clear to all users? Are any utility covers or gullies located in the likely wheel tracks of motorcyclists or cyclists?	Can the junction be seen from appropriate distances and is the signing adequate? Where chevron signs are required, have they been correctly sited?
Mini roundabouts		
	Are the approach speeds for each arm likely to be appropriate for a mini roundabout? Is the centre island visible from all approaches?	

Table B.3 JUNCTIONS (continued)

Stage 1	Stage 2	Stage 3
Traffic signals		
	Will speed discrimination equipment be required? Is the advance signing adequate? Are signals clearly visible in relation to the likely approach speeds? Is "see through" likely to be a problem? Would lantern filters assist? Is the visibility of signals likely to be affected by sunrise/sunset? Would high intensity signals and/or backing boards improve visibility? Would high-level signal units be of value? Is the stopline in the correct location? Are any pedestrian crossings excessively long? Are the proposed tactile paving layouts correct? Are the markings for right turning vehicles adequate? Is there a need for box junction markings? Is the phasing appropriate? Will pedestrian/ cyclist phases be needed? Does the number of exit lanes equal the number of approach lanes? If not is the taper length adequate?Is the required junction intervisibility provided?	Can the traffic signals be seen from appropriate distances? Can drivers see traffic signal heads for opposing traffic? For the operation of signals: Are the signal phases working correctly, are unnecessary delays being created? Do pedestrian and cycle phases give adequate crossing time? Can pedestrians or cyclists mistakenly view the "green man" signal for other pedestrian or cycle phases?

Table B.4 WALKING, CYCLING AND HORSE RIDING

Stage 1	Stage 2	Stage 3
Adjacent land		
Will the scheme have an adverse effect on safe use of adjacent land?	Are accesses to and from adjacent land/properties safe to use? Has adjacent land been suitably fenced?	Has suitable fencing been provided?
Pedestrians		
Have pedestrian routes been provided where required? Do shared facilities take account of the needs of all user groups? Can verge strips dividing footways/cycleways and carriageways be provided? Where footpaths have been diverted, will the new alignment permit the same users free access? Are footbridges/subways sited to attract maximum use? Is specific provision required for special and vulnerable groups? (i.e. the young, older users, mobility and visually impaired?) Are tactile paving, flush kerbs and guard railing proposed? Is it specified correctly and in the best location? Have all walking needs been considered, especially at junctions? Are these routes clear of obstructions such as signposts, lamp columns etc.?	Have the needs of pedestrians been considered especially at junctions and roundabouts? Are any proposed drop kerbs flush with the adjacent highway? Is tactile paving proposed? Is it specified correctly and in the best location?	Are the following adequate?: 1. visibility; 2. signs; 3. surfacing; 4. other guardrails; 5. drop kerbing or flush surfaces; 6. tactile paving

Table B.4 WALKING, CYCLING AND HORSE RIDING (continued)

Stage 1	Stage 2	Stage 3
Cyclists		
Have cycle routes been provided where required? Do shared facilities take account of the needs of all user groups? Can verge strips dividing footways/cycleways and carriageways be provided? Is specific provision required for special and vulnerable groups? (i.e. the young, older users, mobility impaired?) Have all cycling needs been considered, especially at junctions? Are these routes clear of obstructions such as signposts, lamp columns etc.?	Have the needs of cyclists been considered especially at junctions and roundabouts? Are cycle lanes or segregated cycle tracks required? Does the signing make clear the intended use of such facilities? Are cycle crossings adequately signed? Has lighting been provided on cycle routes? Are any proposed drop kerbs flush with the adjacent highway? Are any parapet heights sufficient? Is tactile paving proposed? Is it specified correctly and in the best location?	Do the following provide sufficient levels of road safety for cyclists on, or crossing the road? 1. visibility; 2. signs; 3. guardrails; 4. drop kerbing or flush surfaces; 5. surfacing; 6. tactile paving.
Equestrians		
Have equestrian needs been considered? Does the scheme involve the diversion of bridleways?	Should bridleways or shared facilities be provided? Does the signing make clear the intended use of such paths and is sufficient local signing provided to attract users? Have suitable parapets/rails been provided where necessary?	Do the following provide sufficient levels of road safety for equestrians? 1) visibility; 2) signs; 3) guardrails.

Table B.5 TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING

Stage 1	Stage 2	Stage 3
Signs		
Is there likely to be sufficient highway land to provide the traffic signs required? Are sign gantries needed? Have traffic signs been located away from locations where there is a high strike risk?	Do destinations shown align with signing policy? Are signs easy to understand? Are the signs located behind safety fencing and out of the way of pedestrians and cyclists? Is there a need for overhead signs? Where overhead signs are necessary is there sufficient headroom to enable designated walking, cycling and horse riding usage? Has sign clutter been considered? Is junction signing adequate, consistent with adjacent signing and easily understood? Have the appropriate warning signs been provided? Are signs appropriately located and of the appropriate size for approach speeds? Are sign posts and sign structures passively safe or protected by safety barriers where appropriate? Are traffic signs illuminated where required and the correct reflectivity provided? Are traffic signs located in positions that minimise potential strike risk? Is the mounting height of sign faces appropriate? Are traffic signs orientated correctly to ensure correct visibility and reflectivity?	Are the visibility, locations and legibility of all signs (during daylight and darkness) adequate? Are signposts protected from vehicle impact or passively safe? Will signposts impede the safe and convenient passage of pedestrians and cyclists? Have additional warning signs been provided where necessary?
Variable message signs (VMS)		
	Are the legends relevant and easily understood? Are signs passively safe or located behind safety fencing?	Can VMS be read and easily understood at distances appropriate for vehicle speeds? Are they adequately protected from vehicle impact or passively safe?

Table B.5 TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING (continued)

Stage 1	Stage 2	Stage 3
Lighting		
Is the scheme to be street lit? Has lighting been considered at new junctions and where adjoining existing roads? Are lighting columns located in the best positions? (e.g. behind safety fences)	Has lighting been considered at new junctions and where adjoining existing roads? Is there a need for lighting, including lighting of signs and bollards? Are lighting columns passively safe? Are lighting columns located in the best positions e.g. behind safety fences and not obstructing walking, cycling and horse riding routes?	Does the street lighting provide adequate illumination of roadside features, road markings and non-vehicular users to drivers? Is the level of illumination adequate for the road safety of walkers, cyclists and horse riders? Is lighting obscured by vegetation or other street furniture?
Poles/columns		
Will poles/columns be appropriately located and protected?	Are poles and columns passively safe? Are poles and columns protected by safety fencing where appropriate?	
Carriageway markings		
Are any road markings proposed at this stage appropriate?	Do the carriageway markings clearly define routes/priorities? Are the dimensions of the road markings appropriate for the speed limit/design speed of the road? Have old road markings and road studs been adequately removed? Are road markings appropriate to the location? 1. centre and edge lines; 2. hatching; 3. road studs; 4. text/destinations; 5. approved and/or conform to the Regulations.	Are all road markings/studs clear and appropriate for their location? Have all superseded road markings and studs been removed adequately? Do the carriageway markings clearly define routes and priorities? Have all superseded road markings and studs been removed adequately?

Appendix C. Road safety audit brief template

Table C.1 Project Summary

Date:	Insert date
Document reference:	Insert unique document reference
Prepared by:	Insert design organisation
On behalf of:	Insert Overseeing Organisation
AUTHORISATION SHEET	
Project:	Insert highway scheme name
Report title:	Include RSA stage
PREPARED BY:	
Name:	Insert author of brief
Signed:	
Organisation:	Insert design organisation
Date:	Insert date
I APPROVE THE RSA BRIEF AND INSTRUCT THE RSA TO TAKE PLACE ON BEHALF OF THE OVERSEEING ORGANISATION:	
Name:	
Signed:	
Organisation:	Insert Overseeing Organisation
Date:	

Table C.2 General Details

General details				
Highway scheme name and road number:		Insert scheme title and road number/name		
Type of scheme:	e.g. new road scheme, smart motorway, junction improvement, traffic signs and road markings improvement, traffic calming scheme, etc.			
RSA stage tick as appropriate.	1	2	3	4
	Interim			
Overseeing Organisation details		**Design organisation details**		
Insert details		Insert details		
Police contact details		**Maintaining agent contact details**		
(Required for stage 3 RSAs)		Insert details		
RSA team membership				
Insert details of the approved RSA team and any specialist advisors and observers where appropriate.				
Terms of reference				
Make reference to relevant DMRB documents and other guidance where appropriate.				

Table C.3 Scheme Details

Scheme description/objective
General
Define the extents of the RSA, include a brief scheme description, the scheme objectives, a start date for construction if known and a completion date. In addition, for stage 4 RSAs, confirm when all related traffic management has been removed.
Design standards applied to the scheme design
For example, DMRB.
Design speeds
Provide details of applied and/or existing design speeds.
Speed limits
State whether mandatory or advisory, available speed data.
Existing traffic flows/queues
To include current automatic traffic counter (ATC) data, up-to-date turning count and queue information etc.
Forecast traffic flows
Where available and relevant, provide future traffic flow data including vehicle proportions.
Pedestrian, cyclist and equestrian desire lines
Include details of pedestrian, cyclist and equestrian movements in the vicinity of the scheme and, when applicable the relevant walking, cycling and horse riding assessment and review reports GG 142 [Ref 7.I]
Environmental constraints
Include all environmental constraints within the scheme extents, for example sites of special scientific interest (SSSI), conservation areas, listed properties etc.

Table C.4 Locality

Description of locality
Include all environmental constraints within the scheme extents, for example sites of special scientific interest (SSSI), conservation areas, listed properties etc.
General description
Include road network, road type, relevant land uses etc.
Relevant factors which may affect road safety
Factors known to the design organisation and considered as part of the design. This should also include anything that would not be immediately obvious to the RSA team – such as school crossing patrols and large events, for example.

Table C.5 Analysis

Collision data analysis
At stages 1, 2, and 3 provide a summary of road traffic collision data covering both the extent of the scheme and the adjoining sections of highway. As a minimum the most recent 36 months of data. At stage 4, provide 12 months of post-opening validated road traffic collision data. Raw data should be provided as an appendix.
Departures from standards
Include status details, i.e. approved/pending/rejected, and any design strategy records produced for improvements to existing trunk roads and motorways.
Previous road safety audit stage reports, road safety audit response reports and evidence of agreed actions
Attach previous reports to the RSA brief, or provide an explanation where these are not available.
Strategic decisions
Includes items outside the scope of this RSA which will not change irrespective of the RSA, for example route choice, junction type, approved departures from standard.
List of included documents and drawings
Documents
Reference and revision..... Title..... Date.....
For example: previous RSA reports; design responses; departures; road traffic collision data; walking, cycling and horse riding assessment and reviews. This could include any relevant operational data such as damage-only collision data or incident logs. This list could be included as an attachment to the RSA brief or a hyperlink to a shared electronic location where the RSA brief information has been collated.
Drawings
Drawing no. and revision..... Title.....
This list could be included as an attachment to the RSA brief or a hyperlink to a shared electronic location where the RSA brief information has been collated.

Table C.6 Checklist

Tick all that are included and provide reasons for those that are not included			
Site location plan		Scale layout plans	
Departures and relaxations from standards		Construction/ typical details	
Previous RSA reports		Previous RSA response reports and evidence of agreed actions	
Collision data and collision data analysis		Road traffic collision plot	
Traffic signal staging		Traffic counts	
Speed surveys		Pedestrian, cyclist and horse riding desire lines and volumes	
Walking, cycling and horse riding assessment and reviews		Items outside the scope of the RSA/ strategic decisions	
Other factors that may impact on road safety		Design speeds/ speed limits	
Design standards used		Adjacent land uses	

Appendix D. Stages 1, 2 and 3 Road safety audit report template

D1 Project details

Provide:

Table D.1 Project details

Report title:	Include stage of RSA
Date:	Insert date
Document reference and revision:	Insert unique document reference
Prepared by:	Insert RSA team organisation
On behalf of	Insert Overseeing Organisation

D2 Introduction

Provide:

1) a description of the proposed highway scheme including details of its location and its objectives. Make reference to any strategic decisions and confirm that any recommendations to make significant changes in relation to these elements are unlikely to be acceptable.
2) details of who supplied the RSA brief, who approved the RSA brief and who approved the RSA team.
3) identification of the RSA team membership as well as the names of other contributors such as the police, maintaining agent and specialist advisors.
4) details of who attended the site visit, the date, time periods when the audit was undertaken and the weather/traffic conditions on the day of the visit. Include the state of completion of the works at the stage 3 RSA.
5) the terms of reference of the RSA confirmation and that the RSA team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

D3 Items raised at previous road safety audits

Report any of the RSA actions in the RSA response report for the previous stage that have been agreed for action but not completed. Where the RSA action is not completed, or an RSA response report is not provided, outstanding problems and recommendations will be repeated here.

Where the circumstances have changed it may be necessary to revise the earlier problem and recommendation and this will be included only in section 4.

D4 Items raised at this road safety audit

Complete the information below. This does not have to be in the form of a table.

Table D.2 Items raised at this road safety audit

PROBLEM	
Location:	Insert the location of the problem and reference to a scheme drawing.
Summary:	Provide a short summary of the problem.
Describe the nature of the problem supported by background reasoning and include the type of collisions and/or road user injuries likely to occur.	
RECOMMENDATION	
Provide a proportionate and viable recommendation, based on the RSA stage, to eliminate or mitigate the identified RSA problem.	

D5 Audit team statement

Include the following statement to be signed by the RSA team leader and RSA team member(s):

Table D.3 Audit team statement

We certify that this road safety audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	
Signed:	
Position:	
Organisation:	
Date:	
ROAD SAFETY AUDIT TEAM MEMBER(S)	
Name:	
Signed:	
Position:	
Organisation:	
Date:	

D6 Problem location plan

Insert as an appendix to the RSA report.

Appendix E. Stage 4 Road safety audit report template

E1 Project details

Provide:

Table E.1 Project details

Report title	Stage 4 RSA report
Date	Insert date
Document reference and revision:	Insert unique document reference
Prepared by:	On behalf of: Insert RSA team organisation
On behalf of:	On behalf of: Insert Overseeing Organisation

E2 Introduction

Provide a brief description of the highway scheme including details of its location and its objectives.

Include details of who supplied the RSA brief, who approved the RSA brief and who approved the RSA team.

Identification of the RSA team membership as well as the names of other contributors.

Details of who attended the site visit, the date, time periods when the audit was undertaken and the weather/traffic conditions on the day of the visit.

E3 Scheme details

Provide details of the highway scheme, its location and when it was completed.

Clarify the dates of previous RSAs.

E4 Collision data analysis

Analyse the road traffic collisions recorded since the scheme became operational using 12 months of validated post-scheme opening data.

Compare the road traffic collision data with relevant control data.

Identify any post-opening road traffic collision problems.

E5 Items raised at stage 3 road safety audit

Report any of the RSA actions in the RSA response report for the previous stage that have not been completed. Where the RSA action is not completed, or an RSA response report is not provided, outstanding problems and recommendations will be repeated here.

Where collisions have occurred related to previous problems, regardless of the RSA response report, a revised problem and recommendation will be included in section 6.

E6 Items raised at this stage 4 road safety audit

In this section identify any road safety audit problems indicated by the collision data analysis and provide road safety audit recommendations for remedial action where appropriate. This does not have to be in the form of a table.

Table E.2 Items raised at this stage 4 road safety audit

PROBLEM	
Location:	Insert the location of the problem and reference to a scheme drawing
Summary:	Provide a short summary of the problem
Describe the nature of the problem supported by background reasoning and include the type of collisions or road user injuries that have occurred	
RECOMMENDATION	
Provide a proportionate and viable recommendation to eliminate or mitigate the identified RSA problem. This could include recommendations to provide further monitoring where insufficient information can be gathered from the available data.	

E7 Audit team statement

Include the following statement to be signed by the RSA team leader and RSA team member(s):

Table E.3 Audit team statement

We certify that this road safety audit has been carried out in accordance with GG 119.	
ROAD SAFETY AUDIT TEAM LEADER	
Name:	
Signed:	
Position:	
Organisation:	
Date:	
ROAD SAFETY AUDIT TEAM MEMBER(S)	
Name:	
Signed:	
Position:	
Organisation:	
Date:	

E8 Problem location plan

Insert as an appendix to the report.

Appendix F. Road safety audit response report template for stages 1, 2 and 3 only

F1 Project details

Provide:

Table F.1 Project details

Report title:	Include stage of RSA
Date:	Insert date
Document reference and revision:	Insert unique document reference
Prepared by:	Insert design organisation
On behalf of:	Insert Overseeing Organisation

Table F.2 Authorisation sheet

Project:	
Report title:	
Prepared by:	
Name:	
Position:	
Signed:	
Organisation:	
Date:	
Approved by:	
Name:	
Position:	
Signed:	
Organisation:	
Date:	

F2 Introduction

Include a summary of the scheme, the stage of the RSA and the date or reference of the RSA report it relates to.

Provide details of the representatives from the design organisation who prepared the RSA response report.

F3 Key personnel

Provide:

Table F.3 Key personnel

Overseeing Organisation:	Insert details of the personnel from the Overseeing Organisation
RSA team:	Insert details of the personnel from the RSA team
Design organisation:	Insert details of the design organisation

F4 Road safety audit decision log

Insert RSA decision log. This can be a spreadsheet appended to the RSA response report.

Table F.4 Road safety audit decision log

RSA problem	RSA recommendation	Design organisation response	Overseeing Organisation response	Agreed RSA action
Insert the original problem from the RSA report.	Insert the original recommendation from the RSA report.	Insert the design organisation's response.	Insert the Overseeing Organisation's response.	Insert the design organisation's and the Overseeing Organisation's agreed action to the problem.

F5 Design organisation and Overseeing Organisation statements

Include the following statements to be signed by the design organisation and the Overseeing Organisation.

Table F.5 Design organisation statement

On behalf of the design organisation I certify that: **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.**	
Name:	
Signed	
Position:	
Organisation:	
Date:	

Table F.6 Overseeing Organisation statement

On behalf of the Overseeing Organisation I certify that: **1) the RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and** **2) the agreed RSA actions will be progressed.**	
Name:	
Signed:	
Position:	
Organisation:	
Date:	

Appendix G. Routes to obtaining a certificate of competency and outline training curriculum

G1 Training routes

Table 1 summarises the two routes by which a certificate of competency in road safety audit is obtained; the portfolio of evidence route and the training route. It is envisaged that a training course covering the core modules in the training curriculum in table 2 will be of the order of two days duration.

Table G.1 Routes to obtaining a Certificate of Competency

Portfolio of evidence route	Training course route
Evidence to be included in the portfolio: Details of how the candidate meets the RSA team training, skills and experience guidance contained in section 3 of this document. Example RSA reports with details of the candidate's contribution to the road safety audit process and production of the road safety audit reports. A witness statement from an appropriate person vouching for the content of the candidate's portfolio submission and that the candidate has an acceptable level of understanding of the core modules identified in this appendix. The witness to hold a recognised qualification in the field of road safety, civil engineering or transportation planning or hold a senior professional position within a relevant company or organisation. The portfolio of evidence is signed by the candidate and submitted to an independent professional organisation or company who have had their certification process accepted by Highways England on behalf of all the Overseeing Organisations. This professional organisation or company is responsible for reviewing candidate's submissions and, where appropriate, issuing the Certificate of Competency in road safety audit.	Prior to completion of the training course and issue of a certificate of competency, the candidate submits the following to the training provider: Details of how the candidate meets the RSA team training, skills and experience guidance contained in section 3 of this document. Example RSA reports with details of the candidate's contribution to the road safety audit process and production of the road safety audit reports. A witness statement, from an appropriate person which vouches for the content of the above submissions. This witness to hold a recognised qualification in the field of road safety, civil engineering or transportation planning or hold a senior professional position within a relevant company or organisation. The course provider assesses the candidates regarding their understanding of the content of the training course and verifies the evidence submitted. Where a candidate has demonstrated to the training provider that they meet the training, skills and experience guidance and understood the content of the training course, the training provider is responsible for issuing the certificate of competency in RSA.

G2 Core modules

Table 2 summarises the core modules to be included in the training curriculum.

Table G.2 Core modules of training curriculum

Core module		Example module content
1	Road safety legal issues, legislation and policy	Review of the reasons why RSA is undertaken, in terms of the 1980 Highways Act Highways Act 1980 [Ref 2.I]; 1988 Road Traffic Act Road Traffic Act 1988 [Ref 5.I]; and Roads (Scotland) Act 1984 Roads(S) 1984 [Ref 6.I] where appropriate. Introduction to the 2007 Road Death Investigation Manual RDIM [Ref 4.I] The Corporate Manslaughter and Corporate Homicide Act 2007 CM&CHA 2007 [Ref 1.I] The 2008/96/EC [Ref 1.N] The Manslaughter by Gross Negligence Common Law Road safety policies, targets and strategies
2	Collision investigation focused on the strategic road network or comparable roads	Understanding and applying collision investigation techniques. Update on any developments in collision trends.
3	Road safety audit	Improvement and clarification of known potential issues, focused on the strategic road network or comparable roads, to cover: Roles and responsibilities RSA administration and practice RSA reporting

Table G.2 Core modules of training curriculum (continued)

Core module		Example module content
4	Road safety engineering/ road design	This module includes development in road safety engineering and its influence on road design, with focus on the trunk road and motorway network. The 2008/96/EC [Ref 1.N] specifically requires training or experience in road design. Road safety auditors should have an understanding of the Design Manual for Roads and Bridges (DMRB) design standards, and how good design principles reduce collision risk. The module could include the following: Road/junction geometry and design: 1) Design speed; 2) Horizontal and vertical alignment, including cross sections, drainage, stopping sight distances and adverse camber; 3) Appropriateness of junction type; 4) Visibility; 5) Road surfaces, including the use of high friction surfacing. Roadside features: 1) Passive infrastructure; 2) Road restraint systems and guard railing; 3) Landscaping; 4) Highway lighting. Facilities for vulnerable road users: 1) Pedestrian/cycling/equestrian facilities; 2) Mobility and visually impaired; 3) Motorcyclists.