Framework for Transport Related Technical and Engineering Advice and Research Lot 2

Task Ref: 479(4/45/12)ATK

Task Title: Maintain and Update the Road Safety Audit Database

GUIDANCE NOTES

AND

QUARTERLY REPORT
July 2015 to September 2015

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GUIDANCE NOTES
AND
QUARTERLY REPORT
July 2015 to September 2015
Submitted by:
Atkins Limited

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Quarterly Reporting and Factsheets

GUIDANCE NOTES

Project Objectives
The three objectives of the project are to:

- Update, improve and maintain the RSA database to ensure its benefits can be maximised;
- Complete quarterly interrogation of the database to determine levels of adherence to HD 19/15 requirements; common safety problems, consistency of recommendations; good and bad practices.
- Develop a feedback mechanism whereby Project Sponsors, Designers and Auditors can improve their knowledge and work towards a key aim of the Roads Investment Strategy (RIS) to reduce the number of people Killed or Seriously Injured (KSI) on our network by 40% by 2020.

Sample Report Selection
Sample reports are selected at random from those submitted to the Highways England Safer Roads - Design Team (SRDT) inbox at roadsafetyaudit@highwaysengland.co.uk within each quarterly reporting period.

Whilst initially selected at random, to ensure that the reports contain sufficient, relevant material for review, the sample will be spread as evenly as possible across various stages. Some RSAs within the initial sample will be rejected if they do not meet the following criteria:

- RSAs must purport to have been carried out to HD 19/15; and
- RSAs at Stage 1 to 3 (including Combined Stage 1 & 2 RSAs and Interim RSAs) should include at least three RSA problems.

Quarterly Reviews
The principal purpose of the quarterly reviews is to:

- Share identified road safety problems to inform a consistent approach;
- Provide feedback to RSA professionals on good practice and areas of potential improvement;
- Provide feedback to highway designers to encourage 'right first time' designs;
- Provide feedback to Highways England Project Managers on the management of RSAs; and
- Provide feedback to DMRB Document Owners.

Compliance of RSAs at Stages 1 to 3
In order to quantify levels of compliance in RSA Stages 1 to 3, the revised database principally uses the mandatory ‘black-box’ requirements of HD 19/15 in reference to the contents of the RSA report and as listed in the following paragraphs of the standard.

These are:

- HD 19/15 paragraph 2.97
  a) “Identification of the Road Safety Audit stage including a unique document reference number and the status of the Road Safety Audit Report.
  b) A brief description of the proposed Highway Improvement Scheme including details of its location and its objectives.
  c) Details of who supplied the Road Safety Audit Brief, who approved the Road Safety Audit Brief and who approved the Road Safety Audit Team.
d) Identification of the Road Safety Audit Team membership as well as the names of others contributing such as the Police, Maintaining Agent and Specialist Advisors.

e) 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.).

f) The specific road safety problems identified, supported with the background reasoning.

g) Recommendations for action to mitigate or remove the road safety problems.

h) A location map based on the scheme plan(s), marked up and referenced to problems and if available, photographs of the problems identified.

i) A statement, signed by both the Road Safety Audit Team Leader and the Road Safety Audit Team Member(s) in the format given in Annex D.

j) A list of documents and drawings reviewed for the Road Safety Audit.

- HD 19/15 paragraph 2.98
  “The Road Safety Audit Report must contain a separate statement for each identified problem describing the location and nature of the problem and the type of collisions or incident considered likely to occur as a result of the problem.”

- HD 19/15 paragraph 2.99
  “Each problem must be followed by an associated recommendation. The Road Safety Audit Team must aim to provide proportionate and viable recommendations to eliminate or mitigate the identified problems.”

- HD 19/15 paragraph 2.100
  “Items such as correspondence with the Overseeing Organisation or copies of marked up checklists must not be included in the Road Safety Audit Report.”

- HD 19/15 paragraph 2.104
  “The Road Safety Audit Team Leader must not include in the Road Safety Audit Report, technical matters that have no implications on road safety or any other matters not covered by the Road Safety Audit Brief, such as maintenance defects observed during site visits and health & safety issues.”

And, by inference:

HD 19/15 paragraph 2.84 states that “At least one individual within the Road Safety Audit Team undertaking Road Safety Audit on the motorway and/or trunk road network must hold a Certificate of Competency in Road Safety Audit, acquired in accordance with Annex J of this Standard.”. Whilst the certification of at least one member of the RSA Team is mandatory, the inclusion of such detail in the RSA report is not a requirement of the standard. The illustrative RSA reports in Annexes F, G and H do, however, include this detail.

It should be noted that paragraph 2.90 of the standard states that “If the Road Safety Audit Team considers the Road Safety Audit Brief to be insufficient for their purpose, requests for further information shall be made to the Design Team Leader and copied to the Project Sponsor. Any information requested but not supplied to the Road Safety Audit Team must be identified in the introduction to the Road Safety Audit Report.”

The absence of such a statement in the RSA report cannot be assumed as a non-compliance as the RSA Team may not have requested any additional information.

**Compliance of Interim and Combined Stage 1 & 2 RSAs**

This review infers from HD 19/15 that the requirements for Interim RSAs and for Combined Stage 1 & 2 RSAs are the same as detailed for Stage 1, Stage 2, Combined Stage 1 & 2 and Stage 3 RSAs.

**Compliance of Stage 4 RSAs**

The reporting requirements listed in HD 19/15 paragraphs 2.97, 2.100 and 2.104 are not explicitly (or by inference) applied to Stage 4 RSAs in the standard. In addition, the standard lists no similar Stage 4 RSA requirements that can easily be assessed by the person entering the data into the database (i.e. the ‘data recorder’) as measures of compliance.
Hence, the factsheet issued in conjunction with this qualitative quarterly report deals only with compliance of RSAs to Stages 1 to 3 (including Combined Stage 1 & 2 RSAs and Interim RSAs).

Further study into the levels of compliance and best practice in Stage 4 RSAs is currently being carried out and will be referred to in future Quarterly Reports.

**Factsheet Charted Compliances**

The factsheet complimenting each quarterly report (usually in Appendix A) charts levels of compliance of RSAs to Stage 1, Stage 2, Combined 1 & 2, Stage 3 and Interim RSAs submitted during the selected quarter in comparison to the.

The charts each comprise two rings. The inner ring details the level of compliance of RSAs submitted during the quarterly period under study, while the outer ring illustrates the level of compliance for the as much of the remaining data that has been retrospectively updated by the project. In the Key Chart given on each Factsheet, the outer ring label indicates how much of the data has been updated at the time of the quarterly study. In the example below (Figure i), the label indicates that database has been retrospectively updated back to April 2014.

**Figure i  Levels of Compliance - Key Chart**

The following section explains how levels of compliance (or not) of RSAs is determined by the 'data recorder'. Each explanation is accompanied by an example illustration taken from the first quarter’s factsheet.

**Unique reference, identified RSA stage and status (Compliant or Non-compliant)**

In order to be considered compliant, the RSA report must include all three of these elements.

It is not practicable for the data recorder to verify that reference numbers, if used, are unique within the Audit Organisation’s systems. However, where it appears that an identifying reference number (or alpha-numeric reference) has been given to an RSA report, this is counted as having complied with the requirement.

**Scheme description (Compliant or Non-compliant)**

In order to be considered compliant, the RSA report must include a description of the Highway Improvement Scheme including details of its location and its objectives.

The data recorder is not expected to judge whether or not the descriptions are accurate or representative although the qualitative reviews may comment on this area if evident from reports sampled for review.
Details of RSA Brief and CV approvals (Compliant, Non-compliant or HD 19/03)

In order to be considered compliant, the RSA report must detail the name of the person(s) who supplied the RSA Brief, approved the RSA Brief and who approved the RSA Team.

The data recorder is not expected to judge whether or not the person approving the RSA Brief or CVs is qualified or appropriately positioned to do so. The qualitative reviews may comment on this area if evidence from sampled reports suggests that the Project Sponsor has not been appropriately identified or is not sufficiently involved in the approvals or instruction processes.

With regard to approval of the RSA Brief, the illustrative reports use the term “…Road Safety Audit Brief provided by Elaine Gain, Project Sponsor”. If sample reports use the same terminology (i.e. regarding the ‘provision’ of a brief rather than the ‘approval’ of it) the assumption will be made that an RSA Brief to the illustrative copy given in Annex E of HD 19/15 was signed and issued by the person named in the RSA report although no certainty can be given that this is the case.

This element was not a requirement for RSAs carried out to HD 19/03 and so RSAs carried out to that earlier standard are counted as not applicable for the purpose of the quantification of compliance.

Identified RSA Team Membership (Compliant or Non-compliant)

In order to be considered compliant, the RSA report must detail the names of those forming the RSA Team. The standard also requires that the names of others contributing (such as the Police, Maintaining Agent and Specialist Advisors) should also be included. However, the data recorder cannot be expected to know about other parties if they are not detailed in the report and so the database cannot practically record the absence of this detail. The qualitative reviews will, however, comment in this area if it is evident from sampled reports that others were involved but not detailed.

Details of site visit (Compliant or Non-compliant)

In order to be considered compliant, the RSA report must detail the names of those present at the site visit, the date and time period(s) when it was undertaken and what the site conditions (weather, traffic congestion, etc.) were on the day of the visit.

It also needs to be evident that all members of the RSA Team attended the site visit together.

Specific road safety problems identified (Compliant or Non-compliant)

In order to be considered compliant, the RSA report must detail specific road safety problems supported with the background reasoning. This should include the type of collisions or incident considered likely to occur as a result of the problem. However, it should be recognised that the auditor is allowed some flexibility within this requirement as implied by HD 19/15 paragraph 2.98 which includes the statement: “If a collision type cannot be associated with the problem being considered, then it may not be appropriate to include the problem in the Road Safety Audit Report.” Accordingly, the data recorder will have to make a general and subjective decision about whether or not the way that problems are expressed generally satisfies the requirements.

Zero-problem RSAs will be recorded as not applicable in this regard.
Recommendations for action (Compliant or Non-compliant)

In order to be considered compliant, the RSA report must detail recommendations for actions to resolve or mitigate the identified problems. Zero-problem RSAs will be recorded as not applicable in this regard. The data recorder is not expected to judge whether or not the recommendations made are appropriate and reasonable. The qualitative reviews will consider this within the sample reports to some degree, given that a review of the scheme itself and associated drawings and documents is not within the scope of this project.

Marked up location map (Compliant or Non-compliant)

In order to be considered compliant, the RSA report must include a map showing the locations of problems identified. Zero-problem RSAs will be recorded as not applicable in this regard.

RSA Team Statement (Compliant or Non-compliant)

In order to be considered compliant, RSAs must include a signed statement to the format given in Annex D of the standard. It should be noted that for HD 19/15 reports, all members of the RSA team must sign the statement. HD 19/03 reports will be recorded as ‘Compliant’ in this regard if signed only by the Audit Team Leader (as was the requirement in that standard). The data recorder is not expected to judge whether or not the process adopted for signing the reports is robust. For example, scanned images of signatures or ‘E-signed’ reports will be counted as compliant but comment may be made in the qualitative review with regard to the appropriateness of the method adopted by the RSA Team.

List of documents and drawings reviewed (Compliant or Non-compliant)

In order to be considered compliant, RSAs must include a list of documents and drawings reviewed for the RSA.

Items such as correspondence are NOT INCLUDED (Compliant or Non-compliant)

In order to be considered compliant, RSAs MUST NOT include copies of correspondence, marked up checklists or similar materials within the RSA report. Covering letters bound onto PDF copies of RSA reports submitted to the SRDT inbox are not counted as a non-compliance unless they are contained within the RSA report itself.

Unrelated technical matters are NOT INCLUDED (Compliant or Non-compliant)

In order to be considered compliant, RSAs MUST NOT include technical matters that have no implications on road safety or any other matters not covered by the RSA Brief, such as (but not necessarily restricted to):

- maintenance defects observed during site visits;
- health & safety issues;
- pre-existing problems not exacerbated by the scheme proposals; and
- items out of scope.
Certificates of Competency in RSA

The requirement for the RSA Team (for schemes on the motorway and/or trunk road network) to include at least one person holding an approved Certificate of Competency in RSA came into force on 19th December 2013 as specified in Interim Advice Note 152/11.

The illustrative RSA reports in Annexes F, G and H of HD 19/15, show the inclusion of a statement in reports to say that an individual auditor is certified in this regard but, whilst the certification of at least one member of the RSA Team is mandatory, the inclusion of such detail in the RSA report is not, in itself, a requirement of the standard.

Whilst inclusion of such a statement can only be considered as an example of best practice, it is felt that this detail is usefully included in the quarterly factsheet.

Certificate of Competency details stated (Stated, Not Stated or Pre Dec 13)

As this is not in itself a measure of compliance, the chart illustrates percentages in terms of RSAs in which certification of individual auditors is stated (as shown in the illustrative RSA reports).
Quarterly Report

July 2015 to September 2015
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1. Introduction

1.1. Quarterly Reporting
This report comprises the quarterly qualitative review of Road Safety Audit (RSA) reports submitted to the Highways England Safer Roads - Design Team (SRDT) inbox at roadsafetyaudit@highwaysengland.co.uk between 1st July 2015 and 30th September 2015.

This review should be read in conjunction with the Quarterly Factsheet - July-Sep 2015 (Rev. 3) contained in Appendix A of this report.

1.2. Scope
During this quarter, a total of 92 RSAs were submitted and, from those, 12 sample reports were selected for review as follows:

- Stage 1 RSAs 2 reports of 5 submitted
- Stage 2 RSAs 1 report of 3 submitted
- Combined Stage 1 & 2 RSAs 2 reports of 33 submitted
- Interim RSAs 1 report of 4 submitted
- Stage 3 RSAs 2 reports of 28 submitted
- Stage 4 RSAs (12 months) 2 reports of 5 submitted
- Stage 4 RSAs (36 months) 2 reports of 14 submitted

The principal purpose of the quarterly review, together with explanations of the sampling process; measures of HD 19/15 compliance and of the rationale behind the charting used in the corresponding quarterly factsheets are all described in the Guidance Notes in the pre-amble to this report.

1.3. Potential Discrepancies
It should be recognised that Highways England’s RSA Database has undergone significant changes as part of this project to update and improve it. There are, therefore, some unavoidable discrepancies between data for this first quarter under review and those recorded previously. Accordingly, comparisons detailed in this quarterly report should be taken as indicative only.

In order to minimise the effect of discrepancies on data comparisons, the database has been retrospectively updated as far as is practicable. The project is required to update previously entered records as far back as January 2014. This process is ongoing and, for the purpose of this quarterly report, only data relating to RSAs submitted from April 2014 have been used where comparisons are made. It is expected that discrepancies between recent data and those entered previously, and any resulting errors, will lessen as the data record grows.
1.4. RSAs Submitted by Highways England Areas

Figure 1-1 below illustrates RSAs submitted to the SRDT inbox since 1st April 2014 by each Highways England area.

Figure 1-1 RSA submitted since 1st April 2014

Figure 1-1 below illustrates those submitted to the SRDT inbox during this quarter, 1st July 2015 to 30th September 2015.

Figure 1-2 RSA submitted this quarter (July to September 2015)
2. Qualitative Review of RSA Reports

This section comprises a qualitative review of RSAs sampled from those recorded in the main database. The sample selection is described under heading 1.2 above. The sampled reports have been used as the principal source for this review but occasionally, reference is made to the database as a whole for context.

As far as is practicable, this quarterly report seeks to feed discussion on:

- Common road safety problems raised by audit teams with a view to providing information which might be used by the SRDT and others in the industry to identify and inform potential changes to Requirements and Advice Documents (RADs). This comprises a high-level categorisation of the problems raised;
- Inconsistencies between problems and recommendations raised for similar designs elements; and
- Good practice and areas for potential improvement as evident from the sampled RSA reports.

2.1. Common Road Safety Problems

This section comments on common road safety problems identified by RSAs in the sample set (see details under heading 1.2).

For clarity, this section uses the following terms of reference:

- Problems – indexed text (i.e. ‘Problem A’) detailing road safety concerns in the standard RSA Problem/Recommendation format;
- Issues – individual elements of distinct road safety concern contained within a Problem related to but different in nature to other Issues within that same Problem; and
- Recommendations – remedial recommendations made by the RSA Team in relation to the Problem (and related Issues) raised.

Where appearing in quoted text, the words “problem”, “issue” and “recommendation” may have been used differently.

The sampled reports detailed a total of 43 road safety Problems covering 45 Issues. These include previously raised Problems not resolved at the time of each of the sample RSAs.

For the purpose of the Quarterly Report, the high level categorisation of the Problems and Issues identified within the sample group have been expressed as follows:

- **NMU route/facility signs** [poorly located / inconsistent / absent / incorrect / inadequate / confusing]
- **Segregation between traffic and NMUs** [inconsistent / absent / inadequate]
- **NMU crossing** [inconspicuous / inconsistent / absent / inadequate / confusing]
- **Visibility to / from and between NMUs obstructed** [by vegetation / street furniture / infrastructure / buildings]
- **NMU slip / trip / fall / obstruction hazard**
- **Signs** [poorly located / inconsistent / absent / incorrect / inadequate / confusing]
- **Visibility to signs obstructed** [by vegetation / street furniture / infrastructure / buildings]
- **Sign clutter** [confusing]
- **Vehicle activated signs** [not working / poorly located / inconspicuous / inconsistent / absent / incorrect / inadequate / confusing]
- **Carriageway markings** [poorly located / inconspicuous / inconsistent / absent / incorrect / inadequate / confusing]
- **Access for maintenance / service operatives** [poorly located / inconspicuous / absent / unsafe / inadequate / confusing]
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- Road restraint / passive safety [absent / inadequate / working width compromised]
- Visibility to traffic signals obstructed [by vegetation / street furniture / infrastructure / buildings]
- Skid resistant surfacing [poorly located / inconsistent / absent / incorrect / inadequate / confusing]
- Drainage and related ponding and icing [NMU crossings / carriageways / footways / cycleways / other]
- Visibility to / from junction obstructed [by vegetation / street furniture / infrastructure / buildings]
- Visibility to / from and between vehicles / traffic obstructed [by vegetation / street furniture / infrastructure / buildings]
- Street lighting [absent / inadequate / confusing]

The RSA Problems in the sampled reports covered a total of 45 Issues which are detailed in Figure 2-1 below which indicates the frequency of occurrence of each category of Issue. The categories of these are shortened to fit the figure dimensions and the chart should be read in conjunction with the bullet list above for a fuller description.

2.2. Inconsistencies
One of the project aims is to identify any inconsistencies in the way that similar RSA Problems are dealt with across different RSA reports.

In the sample set selected, no significant inconsistencies between the various Problems and Recommendations have been identified.

From the sample reports examined, common problems such as signs or other elements obscured by vegetation (for example), are consistently associated with the recommended relocation of the item or clearance of the vegetation.

2.3. Good Practice and Areas for Improvement
This section identifies areas of good practice along with other areas of potential improvement as evident from the RSAs sampled for the purpose of this quarterly report.

Text and other materials quoted or copied from real RSA reports have been anonymised. Accordingly, all road, scheme and location names and descriptions, together with the names of persons and organisations
involved, should be taken as fictional and not associated with any actual scheme, location, organisation or person.

2.3.1. Problem Indexing
The illustrative RSA reports uses paragraph numbering to index each problem.

Auditors should take care to ensure that the use of paragraph numbering will not present a risk of confusion if a later RSA report or RSA Response Report refers back to a previously raised problem.

In particular, if a previously raised problem is quoted in full in a subsequent report, the paragraph numbering might be likely to change making tracking difficult, particularly for large and complex schemes.

Consideration could be given to using an indexing system independent of the report paragraph numbering.

2.3.2. Previously Raised Problems (RSAs Stages 1, 2 and 3)
A number of the sampled Stage 1, 2 and 3 (including Interim and Combined Stage 1 & 2) reports review previously raised RSA problems using the approach suggested by the illustrative RSA report given in Annex K of HD 19/15.

In the best example of this, a Stage 2 RSA states:

“A Stage 1 Road Safety Audit, report number H372/FP01, was carried out on the proposals of this scheme in August 2015.

Item reference 2.3 in the Stage 1 report remains a problem. This item is referred to again in this Stage 2 report under paragraph 3.7”

The approach in that particular report might have been improved by a reference to whether or not other problems previously raised have been resolved or Excepted.

One Stage 3 RSA in the sample group describes previously raised problems in Section 2 of the report and then states that they are repeated in Section 3. However, in Section 3, is not at all clear about how the referenced problems are linked and what action was taken. To explain further, one of the previously raised problems (say 2.2) is about sign clutter but cross-references to a new problem (say 3.4) which is about one particular sign.

2.3.3. Combined Stage 1 & 2 RSAs
It is noted that, in the database record, the number of separate Stage 1 and Stage 2 RSAs seems very low whilst the number of Combined Stage 1 & 2 RSAs is much higher in proportion. Whilst it cannot be ascertained from the data alone that that Stage 1 and Stage 2 RSAs are being combined as a cost and/or programme saving measure, it is recommended that this high proportion of Combined Stage 1 & 2 RSAs with regard to suitability of process.

It is recognised that the two Combined Stage 1 & 2 RSA reports included in the sample group were both on signing improvement or replacement schemes which might have progressed straight to detailed design; in which case they might be appropriate for a Combined Stage 1 & 2 RSA. It is noted however, that neither of those reports mention signing schedules or other detailed information which might be expected for inclusion in the RSA Brief for a Combined Stage 1 & 2 RSA.

Anecdotally, it is known that Combined Stage 1 & 2 RSAs are often, and inappropriately, commissioned early in the design process and certainly before completion of the detailed design. It is recommended that care be taken to ensure that Combined Stage 1 & 2 RSAs are only carried out where appropriate.

It is evident from the database that the term ‘Stage 1/2 RSA’ is used quite frequently. It is felt that this may further compound any confusion about the level of detail required in the RSA Brief as it suggests a stage somewhere between Stage 1 and Stage 2. The term ‘Combined Stage 1 & 2 RSA’ should be used instead as required by paragraph 2.27 of HD 19/15.
2.3.4.  Stage 4 RSA Nomenclature

A number of Stage 4 RSAs recorded in the database use the ‘A’ and ‘B’ denominations for 12 month and 36 month monitoring reports respectively. These terms are used by other highway authorities (such as Transport for London) but do not properly apply to HD 19/15 RSAs.

To avoid confusion, consideration should be given to using the nomenclature given in HD 19/15 which refers in full to Stage 4 RSA 12 month and 36 month monitoring reports respectively. Descriptions in HD 19/15 also indicate that abbreviating these terms to “12 month Stage 4 RSA” or “36 month Stage 4 RSA” is acceptable.

2.3.5.  Problems Raised in Stage 4 RSAs

Some of the sampled Stage 4 RSAs reviewed problems which had been raised in previous RSA stages but drew no conclusions between those and the collision record. In some cases, the problems are reviewed only in terms of whether or not remedial measures had been implemented.

One of the RSAs details previously raised problems in all preceding RSAs and also a number of new problems. None of the problems were related to the collisions.

The status of previously raised problems or new problems not evidenced in the collision record should be dealt with only in separate discussion/correspondence if the RSA Team consider them to be important but this falls outside of the scope of a Stage 4 RSA.

Stage 4 RSAs should make remedial recommendations only in the case of problems suggested by the collision data or any related on-site observations. The illustrative Stage 4 RSA reports in HD 19/15 do not suggest that this should follow the Problem/Recommendation format used for other stages. The example text below is taken directly from HD 19/15:

“Two of the collisions that have occurred on the A827 westbound approach to the roundabout appear to have involved a driver travelling too fast or not comprehending the junction layout ahead. A remedial measure option to reduce this problem would be to provide transverse yellow bar markings on this approach. This road marking has been shown to have a significant effect in reducing collisions associated with inappropriate approach speeds.”

This, in the illustrative Stage 4 RSA (36 months) is followed by an economic assessment of the suggested remedy. In the Stage 4 RSAs sampled, none detailed problems identified from the collision record so economic assessments were not included.

2.3.6.  Collision Data for Stage 4 RSAs

The Ambridge example used in illustrative reports in HD 19/15 describes a new road scheme and so no pre-scheme collision data is detailed in the analysis. Instead, comparisons are made with collision rates predicted by the Design Manual for Roads and Bridges COBA manual.

It is sensible, however, that for many on-line schemes comparisons with collisions on the pre-scheme road is appropriate as well as with control data if available.

The Stage 4 (12 month) RSAs sampled use no control data and only make comparisons with 12 months of pre-scheme data.

Some of the sampled Stage 4 RSAs (12 and 36 months) make no comparisons to control data or expected collision rates.

Depending on the road and scheme history, it is recommended that, where practicable, at least three years of pre-scheme data be used in comparison with the 12 month and 36 month data for the respective Stage 4 RSAs for on-line schemes as well as with any control or predictive data available.

2.3.7.  Location Plans

A number of the location plans included in RSA reports are of poor quality and at a very low resolution which may make it difficult for designers and other readers to identify specific problem locations.

An example of how a good location plan should look is shown in Figure 2-2 below.
The location plans in some RSAs detail location references used in the problem descriptions or summaries (such as Problem 2.1 – Location A for example). This is how the HD 19/15 illustrative reports approach this and it allows for multiple problems to be recorded on the location plan without numerous and cluttered labels indicating each individual problem.

A number of the sample RSAs have, however, labelled each problem and are cross-referenced to the actual problem number. This is considered to be a suitable practice if clutter can be avoided.

2.3.8. Clarity of Problems/Recommendations
In most of the RSAs sampled, problems and recommendations are clearly stated although in a number of cases there is some confusion about how this is set out.

For example, some authors include or hint at recommendations within the ‘Problem’ text whilst others detail problems under ‘Recommendations’ which were not mentioned within the ‘Problem’ text. This can be illustrated by the following fictional example:

**Problem:**
The junction on the western side of the road is not clearly visible to southbound drivers and should be signed to prevent late braking or turning conflicts.

**Recommendation:**
Provide a sign warning drivers of the junction ahead. The low PSV of the proposed road surface here may also present a risk of skidding so provide skid resistant surfacing as appropriate.

In this fictional example, the red text indicates where the wording should have formed part of the recommendation text or problem text respectively.

2.3.9. Schematic Drawings
Further to the example of a poor quality location plan, Figure 2-2 above shows that a schematic drawing was used for the RSA. The RSA Brief list suggests that no other drawings were used.

It is recognised that the RSA in this example was on a traffic management scheme, the design of which is commonly based on schematic drawings but, nevertheless, if the scheme is considered worthy of RSA, a schematic drawing is insufficient to allow an auditor to fully consider the proposed measures in the context of the existing or proposed road geometry.
2.3.10. Assumptions
In a number of the sampled RSA reports, the RSA Teams have made assumptions about elements of design which would be expected to have been explained in the RSA Brief. In one example, the author has stated:

“For the Audit it is taken that all of the subject roads will remain at their existing speed limits.”

It is recognised that this was for a Stage 1 RSA but it is considered that this (and similar situations in other RSAs) could have been easily clarified for the record by an email conversation. If such information is not provided within the RSA Brief package, the RSA Team Leader should request the information or clarification about the design intentions. If such information is not available or forthcoming, then comment to this effect should be included in the report introduction.

None of the sampled RSAs suggested that additional information was requested of the Project Sponsor or Designer.

It is recommended that RSA Teams do not make assumptions due to the absence of data or information and that clarification is sought in each case.

2.3.11. Non-problem Comments
One of the RSA reports include a ‘Comment’ listed and indexed at the end of the ‘Problems’ section.

The comment pertains to difficulties faced by drivers on entry to a roundabout and a related collision problem. The comment concluded:

“The Auditors note that the matter relates to an existing situation for which the local highway authority is responsible and understand that the highway authorities are, in any event, investigating further, more strategic, improvements to the junction.”

Such comment lies outside of the scope of an RSA and should not be included in RSA reports.

2.3.12. Abbreviations
Abbreviations should only be used after the term has been used in full and the abbreviation referred to. For example, where TTM is referred to, it is recommended that it first be referenced as “Temporary Traffic Management (TTM)”.

2.3.13. RSA Appendices
The illustrative Stage 2 RSA report in HD 19/15 indicates that the RSA Brief materials should be listed in an appendix or annex to the report. A number of the sampled RSA reports have included the drawings and documents themselves instead of just a list. This is considered to be an unnecessary and cumbersome practice.

It seems sensible that the only other appendices to the RSA report would usually be the location plan and any photographs illustrating the problems observed (although the latter might be better included within or adjacent to the ‘Problem’ text.

2.3.14. ‘Checklist’ Headings
A number of the RSA reports sampled refer to the HD 19/15 Annex A, B and C ‘Checklist’ headings corresponding to the RSA Stage being undertaken with a statement to the effect that no such problem had been identified.

An example of this from the sample group is as follows:

“Local Alignment - No specific road safety issues have been identified at this stage.”

Paragraph 2.100 of HD 19/15 states that “copies of marked up checklists must not be included in the Road Safety Audit Report”. Accordingly, it seems sensible that ‘no-problem’ headings as described here should not be included in RSA reports as they offer no benefit to the reader.
2.3.15. Identification of the Project Sponsor/Project Manager

In a number of the sample RSA reports, no reference is made to a person fulfilling the specific role of Project Sponsor or Project Manager. In some cases the reports detail that it has been instructed/commissioned by an organisation but does not name an individual within that organisation.

There are also examples where the report indicates that the RSA Team has been approved by one person but the RSA Brief has been issued by or approved a different person.

It is recommended that the relationships between the various persons involved in the management and commissioning of RSAs are clearly described in terms of the roles set out in HD 19/15.

2.3.16. Road Restraint Systems (RRS)

Featuring quite highly in the RSA problem types are issues surrounding the absence, or inadequacy, of RRS.

In one such example, the RSA Team identified that an unprotected cabinet had been installed and that it was not clear whether or not a road restraints risk assessment process (RRRAP) had been carried out. The recommendation to this problem was:

"The designer should confirm that a RRRAP was carried out in accordance with TD19/06 and/or that the cabinets are passively safe."

This recommendation might be considered as inadequate as the implementation of RRRAP may not, in itself, resolve the problem (if one exists). In such cases, it first seems sensible that the RSA Team Leader should clarify whether or not a RRRAP was carried out and whether or not the cabinet is passively safe. If the RSA Team feel that a hazard exists, then they should perhaps recommend that RRS or other measures be provided and allow the post-RSA process to determine whether or not such is required.

2.3.17. Report Signatures

Ideally, the signature page should be scans of unique wet-signed RSA Team statements and not, as seen in a number of the sampled reports:

- Copies of previously used signatures; or
- E-signed or typed ‘signatures’.

It is suggested that the RSA Team Leader should keep a copy of the signed RSA report or at least the RSA Team Statement page as a record of a wet-signed document so as to protect the RSA Team against any challenges about validity or authenticity.
Appendices
Appendix A. Quarterly Factsheet
1st July 2015 to 30th September 2015
### Basic Information

<table>
<thead>
<tr>
<th></th>
<th>This Quarter</th>
<th>Database Since April 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of RSAs submitted</td>
<td>99</td>
<td>559</td>
</tr>
<tr>
<td>RSA Team Leader specifically identified</td>
<td>100%</td>
<td>85%</td>
</tr>
<tr>
<td>Project Sponsor specifically identified</td>
<td>95%</td>
<td>83%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>This Quarter</th>
<th>Database Since April 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of problems recorded</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Response Report issued</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Exception Report issued</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

### RSAs By Highways England Area - This Quarter

![Highways England Area Graph](image1)

### RSAs By Scale of Scheme - This Quarter

![Scale of Scheme Graph](image2)

### RSAs By Scheme Type - This Quarter

![Scheme Type Graph](image3)
RSAs by Compliances - This Quarter - Stage 1, 2, 1&2, 3 & Interim

The outer ring shows the whole database since April 2014

The inner ring shows this quarter

Scheme description
- Compliant: 94%, 97%
- Non-Compliant: 6%, 3%

Details of RSA Brief and CV approvals
- Compliant: 59%, 50%
- Non-Compliant: 41%, 50%

Identified RSA Team membership
- Compliant: 94%, 93%
- Non-Compliant: 6%, 7%

Required details of site visit in full
- Compliant: 99%, 98%
- Non-Compliant: 1%, 2%

Specific road safety problems identified
- Compliant: 50%, 50%
- Non-Compliant: 50%, 50%

Recommendations for actions
- Compliant: 99%, 99%
- Non-Compliant: 1%, 1%

Marked up location map
- Compliant: 99%, 99%
- Non-Compliant: 1%, 1%

RSA Team statement
- Compliant: 96%, 96%
- Non-Compliant: 4%, 4%

List of documents and drawings reviewed
- Compliant: 91%, 91%
- Non-Compliant: 2%, 2%

Certificate of Competency details stated
- Stated: 72%, 72%
- Not Stated: 28%, 28%
- Pre Dec 13: 5%, 5%

Inclusion of Certificate of Competency details is not mandatory

Items such as correspondence are NOT INCLUDED
- Compliant: 94%, 94%
- Non-Compliant: 6%, 6%

Unrelated technical matters are NOT INCLUDED
- Compliant: 99%, 99%
- Non-Compliant: 1%, 1%

Example