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

QUARTERLY REPORT
October 2015 to December 2015

To be read in conjunction with ‘QUARTERLY REPORTING AND FACTSHEETS, GUIDANCE NOTES’ published at the front of the July 2015 to September 2015 Quarterly Report

Project Sponsor: Nicholas Bentall
Highways England/DfT
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

Project Sponsor: Nicholas Bentall

QUARTERLY REPORT
October 2015 to December 2015

To be read in conjunction with ‘QUARTERLY REPORTING AND FACTSHEETS, GUIDANCE NOTES’ published at the front of the July 2015 to September 2015 Quarterly Report

Submitted by:
Atkins Limited

Notice

This document has been produced by ATKINS for the Highways England solely for the purpose of the task. It may not be used by any person for any other purpose other than that specified without the express written permission of ATKINS. Any liability arising out of use by a third party of this document for purposes not wholly connected with the above shall be the responsibility of that party who shall indemnify ATKINS against all claims costs damages and losses arising

Document History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Purpose Description</th>
<th>Originated</th>
<th>Checked</th>
<th>Reviewed</th>
<th>Authorised</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1</td>
<td>Final</td>
<td>N Hutchings</td>
<td>N Bentall</td>
<td>N Bentall</td>
<td>N Hutchings</td>
<td>08/04/16</td>
</tr>
</tbody>
</table>
Quarterly Report

October 2015 to December 2015

To be read in conjunction with ‘QUARTERLY REPORTING AND FACTSHEETS, GUIDANCE NOTES’ published at the front of the July 2015 to September 2015 Quarterly Report
# Table of contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>3</td>
</tr>
<tr>
<td>1.1. Quarterly Reporting</td>
<td>3</td>
</tr>
<tr>
<td>1.2. Scope</td>
<td>3</td>
</tr>
<tr>
<td>1.3. Potential Discrepancies</td>
<td>3</td>
</tr>
<tr>
<td>1.4. RSAs Submitted by Highways England Areas</td>
<td>4</td>
</tr>
<tr>
<td>2. Qualitative Review of RSA Reports</td>
<td>5</td>
</tr>
<tr>
<td>2.1. Common Road Safety Problems</td>
<td>5</td>
</tr>
<tr>
<td>2.2. Inconsistencies</td>
<td>7</td>
</tr>
<tr>
<td>2.3. Good Practice and Areas for Improvement</td>
<td>7</td>
</tr>
</tbody>
</table>

## Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A. Quarterly Factsheet 1st October 2015 to 31st December 2015</td>
<td>14</td>
</tr>
<tr>
<td>Appendix B. Stage 4 RSAs – Research by Thomas Corke</td>
<td>15</td>
</tr>
</tbody>
</table>

## Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1-1</td>
<td>RSA submitted since 1st March 2014</td>
<td>4</td>
</tr>
<tr>
<td>Figure 1-2</td>
<td>RSA submitted this quarter (October to December 2015)</td>
<td>4</td>
</tr>
<tr>
<td>Figure 2-1</td>
<td>Road safety issues by number of occurrences</td>
<td>6</td>
</tr>
<tr>
<td>Figure 2-2</td>
<td>Principal highway measures by number of occurrences</td>
<td>7</td>
</tr>
</tbody>
</table>
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 October 2015 and 30th December 2015.

This review should be read in conjunction with the Quarterly Factsheet - October-December 2015 (Rev. 0) contained in Appendix A of this report; and with ‘Quarterly Reporting and Factsheets, Guidance Notes’ published at the front of the July 2015 to September 2015 Quarterly Report.

1.2. Scope
During this quarter, a total of 104 RSAs were submitted, of which 74 were carried out to HD 19/15. From the HD 19/15 reports, 12 sample reports were selected for review. The list below details the numbers of each stage of RSA forming the study sample together with totals submitted for the quarter. All figures relate to RSAs carried out HD 19/15.

- Stage 1 RSAs 2 reports of 4 submitted in quarter
- Stage 2 RSAs 2 report of 3 submitted in quarter
- Combined Stage 1 & 2 RSAs 2 reports of 21 submitted in quarter
- Interim RSAs 0 reports of 1 submitted in quarter (zero-problem report)
- Stage 3 RSAs 2 reports of 27 submitted in quarter
- Stage 4 RSAs (12 months) 2 reports of 3 submitted in quarter
- Stage 4 RSAs (36 months) 2 reports of 15 submitted in quarter

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 the July to September 2015 report.

1.3. Potential Discrepancies
As the update of the Highways England’s RSA Database continues there may remain some unavoidable discrepancies between data for this 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 1st January 2014. This backdating process is as yet incomplete and so, for the purpose of this quarterly report, only data relating to RSAs submitted from 1st March 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 March 2014 by each Highways England area.

Figure 1-1 RSA submitted since 1st March 2014

Figure 1-2 below illustrates those submitted to the SRDT inbox during this quarter, 1st October 2015 to 31st December 2015.

Figure 1-2 RSA submitted this quarter (October to December 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 83 road safety problems covering 88 Issues. These include previously raised problems not resolved at the time of each of the sample RSAs.

For the purpose of this quarterly report, the high level categorisation of the problems and Issues identified within the sample group have been expressed as follows:

- Junction layout [design / principle / turning speeds / queuing / stacking / restricted movements]
- Visibility to / from junction restricted [by vegetation / street furniture / infrastructure / buildings]
- ‘See-through’ at signals [contradictory signals visible / green signal seen by wrong traffic streams]
- Traffic signals phasing, staging and timings [conflicts / gap opportunities / queuing / stacking / junction clearing]
- Visibility to traffic signals restricted [by vegetation / street furniture / infrastructure / buildings]
- Traffic merges [conflicts / slow to fast merge / visibility restricted / merge lengths]
- Speed limit [too high / too low / extents / inappropriate for environment]
- NMU guardrailing [absence / inappropriate / inadequate / clearance between]
- NMU route/facility signs [poorly located / inconsistent / absent / obscured / incorrect / inadequate / confusing]
- NMU crossing [inconspicuous / inconsistent / absent / inadequate / confusing / tactile paving]
- NMU slip / trip / fall / obstruction hazard [poor surface / unprotected drops / street furniture / upstands / service and drain covers]
- NMU route [inconsistent / inadequate / inappropriate / narrow / confusing / tactile warning surfaces]
The 88 issues covered in the sampled reports are categorised in Figure 2-1 below which indicates the frequency of occurrence. 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.

**Figure 2-1  Road safety issues by number of occurrences**

As context for the road safety issues by number of occurrences given in Figure 2-1, a chart showing principal highway measures by number of occurrences in the sample set is given in Figure 2-2.
It should be noted that the measures described in Figure 2-2 are considered to be the highway measures representing the principal focus of the schemes as described in the sample group report titles or in scheme descriptions therein. Some schemes may have involved more than one principal measure and an attempt has been made to represent that. However, the list is not intended to detail every single measure. For instance, the measure ‘Signing’, as detailed in Figure 2-2, means that the associated scheme was principally a signing scheme and excludes other schemes, such as ‘Roundabout improvement’, which may have included signing measures.

**Figure 2-2** Principal highway measures by number of occurrences

<table>
<thead>
<tr>
<th>Principal Highway Measure Type</th>
<th>Number of Occurrences in Sample Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road restraint</td>
<td></td>
</tr>
<tr>
<td>Access/egress control</td>
<td></td>
</tr>
<tr>
<td>Access/egress route</td>
<td></td>
</tr>
<tr>
<td>Signing</td>
<td></td>
</tr>
<tr>
<td>NMU route (including uncontrolled crossings)</td>
<td></td>
</tr>
<tr>
<td>Roundabout improvement</td>
<td></td>
</tr>
<tr>
<td>Junction signalisation</td>
<td></td>
</tr>
<tr>
<td>Signalised junction improvement</td>
<td></td>
</tr>
<tr>
<td>Priority junction improvement</td>
<td></td>
</tr>
</tbody>
</table>

### 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 reports examined, there is very little commonality between specific issues and so recommendations are not generally comparable between reports this quarter.

There are a number of differences and inconsistencies regarding the various styles of describing problems and related recommendations evident in the sampled reports. These are discussed in further detail under subsequent headings in this quarterly report.

### 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. Previously Raised Areas for Improvement

In addition to the identification of areas of good practice, the quarterly reports identify areas where the application of the RSA process and reporting might benefit from some improvement. Some key areas, as identified by the previous quarterly report (July to September 2015), remain prevalent in the current sample group and so are summarised here and cross-referenced to the location of the original comments in the previous report:
• **Combined Stage 1 & 2 RSAs (July-Sept 15, Heading 2.3.3)**
  In the October to December 2015 quarter, a total of 21 Combined Stage 1 & 2 RSA were submitted to the SRDT inbox compared to only four Stage 1 and three Stage 2 RSAs were submitted. Of the two Combined Stage 1 & 2 RSAs in the sample group of reports one scheme was of such a nature and scale as might have more appropriately warranted separate Stage 1 and Stage 2 RSAs. The report itself, references some detailed design information which was not provided in the RSA Brief.

• **Stage 4 RSA Nomenclature (July-Sept 15, Heading 2.3.4)**
  A number of Stage 4 RSAs have been named as Stage 4A or Stage 4B as opposed to the terms used in HD 19/15 which denominate 12 month or 36 month monitoring reports.

• **Collision Data for Stage 4 RSAs (July-Sept 15, Heading 2.3.6)**
  Where practicable, at least three years (preferably five years) of pre-scheme data should be used for comparisons to the post-scheme situation, even for 12 month monitoring reports. This will give a more accurate means of measuring significance levels of changes in the data. Further comments about Stage 4 RSAs and collision analyses are made in this October to December 2015 quarterly report.

• **Clarity of Problems/Recommendations (July-Sept 15, Heading 2.3.8)**
  A number of problem and recommendation descriptions in the reports sampled are not clearly written and are ambiguous. A number of specific examples (anonymised) are given in further detail under subsequent headings in this quarterly report.

• **Assumptions (July-Sept 15, Heading 2.3.10)**
  In a number of the sampled RSA reports for the October to December 2015 quarter, the RSA Teams have made assumptions about elements of design which would be expected to have been explained in the RSA Brief. 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. A number of specific examples (anonymised) are given in further detail under subsequent headings in this quarterly report.

• **‘Checklist’ Headings (July-Sept 15, Heading 2.3.14)**
  A number of the sampled reports include headings taken from the ‘Road Safety Audit Checklists’ given in HD 19/15 Annexes A, B and C. Some of these have statements to the effect that no problems have been found in relation to the respective heading. It is recommended that such statements should not be included in RSA reports.

• **Identification of the Project Sponsor/Project Manager (July-Sept 15, Heading 2.3.15)**
  In nearly half of the reports sampled for the October to December 2015 quarter, there are examples of non-compliance with HD 19/15 with regard to the identification of the Project Sponsor/Project Manager and/or their approval of the RSA Brief and RSA Team. On occasions, an organisation is referred to as having provided the RSA Brief or having approved the RSA Team instead of an identifiable person.

### 2.3.2. Details of Site Visit in Full

RSA site visits should be detailed in RSA reports in accordance with the requirements of item (e) under paragraph 2.97 of HD 19/15 which states that the following should be included:

“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.) and it is a requirement of HD 19/15 that this is observed.”

It seems very common for some detail to be included but other elements, such as weather and traffic conditions, to be omitted. In the RSA reports submitted to the SRDT inbox this October to December 2015 quarter, nearly half of the reports do not detail the full circumstances of the site visit.

This description of the site visit provides context for the RSA Team observations and, in particular, for the problems cited.

In some circumstances, it is clear that the site visit should be carried out under certain conditions (site visit in darkness for Stage 3 RSAs or at other times if the RSA Brief describes some circumstance which the Project Sponsor thinks that the RSA Team should observe for examples).
It is also important that RSA Reports demonstrate compliance with regard to the members of the RSA Team visiting the site together. This is a requirement for all stages of RSA (at Stage 4 only if the need for a site visit is demonstrated in accordance with paragraph 2.50 of HD 19/15). In one of the Stage 3 RSA reports sampled for study this quarter, it was clear that one member of the RSA Team did not attend the site in darkness.

### Maintenance Defects and Construction Defects

HD 19/15 paragraph 2.104 states that issues such as maintenance defects must not be included in the RSA report. It is acknowledged that occasionally an existing maintenance issue might be exacerbated by a scheme proposal (for example) and that, in such cases, inclusion in the RSA report might be justifiable. In the reports sampled, it was often not made clear how the scheme would exacerbate, or be impacted by, any existing risk.

Furthermore, RSAs are not a defects check and it is considered that such defects should be identified to the RSA Team by the Project Sponsor in advance of the site visit (ideally within the RSA Brief if practicable). In this way, the RSA Team could focus on scheme related hazards and not be distracted by defects which should have already been noted and scheduled for remedy by the appropriate parties.

#### 2.3.3. Stage 4 RSAs

In parallel to this study, a review of Stage 4 RSAs was carried out in December 2015 by Thomas Corke of Highways England’s ‘PTS NPPD Safer Roads – Design’ team. Key findings of that review are detailed in Appendix B of this report.

1. **Pre-opening Collision Data**

Data studied for Stage 4 RSA reports should exclude construction periods as such periods may skew the collision records due to potential changes in traffic speeds, flows and queues; temporary traffic management and various methods of control for examples.

None of the four Stage 4 RSAs in the sample group excluded the construction periods. In two of the reports, collision data from the construction period have actually been studied as distinct elements of the RSA, separate to the pre-opening and post-opening datasets.

The fictional ‘Ambridge Bypass’ scheme used for the illustrative reports in HD 19/15, is an example based on a new-road scenario and so no pre-opening data are mentioned. With the potential for construction period data to not be representative, it is recommended that construction periods are excluded from the analyses.

One of the reports reviewed gives pre-opening data in some considerable detail (including plots and stick diagrams) but records that there were no post-opening collisions. Stage 4 RSAs are to be focussed on post-opening collisions and pre-opening data are principally for identifying changes in collision numbers, patterns and trends. It is felt that such comparisons can usually be done by simply tabulating collision counts, rates and manoeuvres (among other factors if the data suggests any prevalence).

2. **No Post-opening Collisions**

If the Overseeing Organisation identifies that no post-opening collisions have occurred, the Project Sponsor would be expected to decide that a Stage 4 RSA was not necessary and to formally record that decision, with appropriate reasoning, on their Highway Improvement Scheme file (or equivalent).

Project Sponsors might rely on the RSA Team to carry out an initial examination of the data after being commissioned to carry out a Stage 4 RSA. If an RSA Team’s initial examination of the data reveals that there have been no post-opening collisions, it would be considered as best-practice for the RSA Team Leader to advise the Project Sponsor accordingly and request a decision on whether or not the Stage 4 RSA should go ahead.

3. **Stage 4 RSA Site Visits**

The criteria set out in HD 19/15 paragraph 2.50 for determining whether or not a site visit should be carried out should be rigorously but carefully applied. In some of the Stage 4 RSA reports sampled, it seems that this has not been the case and, in one of the sampled reports, the following statement is made:

"As outlined in this report, the data for the recorded collisions occurring after completion of the scheme revealed no specific site issues or pattern related to the works that were undertaken. Therefore, in
accordance with HD 19/15 Para 2.50 (Black Box) a site visit was not considered necessary for this Road Safety Audit.”

Another of the Stage 4 RSAs states:

“Having due regard to the collision history of the scheme site and in accordance with HD 19/15 the Audit Team did not visit the scheme site.”

In both of these reports, the decision about whether or not a site visit should be carried out might well have been justifiable in accordance with the terms of paragraph 2.50 in HD 19/15 but it is not evident that any comparison was made between the post-scheme collisions and control data. It is recommended that Stage 4 RSA reports should very clearly detail the rationale behind any decision not to visit the site and that this rationale should be based wholly on the terms of HD 19/15 paragraph 2.50. The decision should not be based solely on assumptions about whether or not the scheme has had an adverse effect on the collision record or on an unqualified collision ‘history’. It is, however acknowledged that where statistical significance of an increase in collision number would be difficult or impossible to establish (such as where there are zero pre-opening collisions and one post-opening collision for example), a consideration of the collision detail might be appropriate in order to evaluate whether or not a site visit would be useful.

2.3.4. Scheme Descriptions

All of the RSAs submitted to the database this quarter had scheme descriptions and most of those sampled for this review gave clear and brief descriptions along similar lines as those given the HD 19/15 model reports.

In two of the sampled reports, however, descriptions were less clear. In one case, small sections of descriptive text were spread throughout the report. In another, the description might be considered too brief and is demonstrated in the anonymised example below:

“The overall scheme involved the provision of tourist signs to the Anytown Leisure Centre located off the A7564.”

In this latter case, it might have been better if the text described not just the location of the attractor but, also an indication of extent of the signing scheme and the roads/routes affected.

2.3.5. Project Sponsor Request to Change the Scope

One of the Combined Stage 1 & 2 RSAs demonstrates how an RSA Team dealt with a Project Sponsor request to limit the scope of the RSA. The paragraph in the RSA report is not particularly clear in its wording but the essence seems to be that the Project Sponsor had requested the RSA Team to disregard an element of works which was a fundamental part of the scheme proposals. No reason for this request was explained but it appears that paragraph 2.21 of HD 19/15 (quoted, in part, below for reference) was cited:

“…..In the unlikely situation where the road safety implications of the strategic decisions have not been fully considered previously, the Project Sponsor may extend the scope of the Road Safety Audit to include consideration of these items. The Project Sponsor must clearly identify within the Road Safety Audit Brief where the scope of the Road Safety Audit has been extended to cover strategic decisions.”

The RSA Team had a safety concerns relating to the issue in question and detailed their concerns in the report in the recognised way (i.e. Problem and Recommendation format). In the introduction, they explained that they felt that the purpose of paragraph 2.21 was to afford the opportunity to extend the scope of an RSA not to limit it. Whether the issue should have been detailed in the RSA report itself or dealt with by amendment to the brief is debatable but the RSA Team’s firmness in complying with HD 19/15 in this regard is noteworthy.

A more appropriate application of HD 19/15 paragraph 2.21 was evident in another of the sampled RSAs which detailed a Project Sponsor’s instruction to include consideration of the proposed increase in speed limit which might otherwise have been excluded as a ‘strategic decision’

It should be noted, however that a number of the sampled RSAs made recommendations such as “Remove the proposed footpath from the scheme” which, in the absence of a paragraph 2.21 instruction, should always be avoided.
2.3.6. Information Not Provided

In accordance with HD 19/15 paragraph 2.90, RSA Teams should request any information that they feel is missing and detail, in the RSA report, any such items requested but not received.

Further to the issue of RSA Teams documenting ‘assumptions’ instead of requesting additional information (previously raised in the July to September 2015 Quarterly Report), this issue remains common in the reports sampled this quarter.

A number of examples are as follows.

- “No details relating to GD 04/12 and surface water drainage were issued to the Audit Team.”
- “Accurate [AADT] data was not available closer to either scheme”
- “No details were submitted to the audit that clarified footway option”

There are also a number of examples where, instead of detailing missing information requested (but not received) by the RSA Team, phrases such as “It is unclear whether……” have been used to preface problem descriptions; or where items of information have been dismissed in terms of “not provided so not considered”.

2.3.7. Post-RSA Process (inclusion of responses and comments)

HD 19/15 clarifies the post-RSA procedure and makes no suggestion that a dialogue or debate between the RSA Team, the Designer and the Project Sponsor should take place. The illustrative Stage 2 RSA report in HD 19/15 demonstrates that previously raised problems which are considered by the RSA Team to be unresolved are simply repeated with no reference to the RSA Responses or Exceptions.

It is recognised that a number of the RSAs submitted to the SRDT inbox this quarter have not yet had corresponding RSA Response Reports or Exceptions issued. However, a number of Stage 2 RSAs and above describe previously made designer’s responses (and Highways England comments) in relation to the previously raised issues. It is also noted that none of the Highways England comments quoted in the sampled RSAs are in terms of formal Exceptions. The common practice seems to be that responses to, and comments about, previously raised problems are then responded to by the current RSA Team.

It is acknowledged that some reference to RSA Responses or Exceptions might be useful with regard to removed problems such as given in the fictional statement below which is based largely on the a similar sentence given in the Stage 2 RSA illustrative report:

“The road safety aspects of the Ambridge Road Junction were the subject of comment in the November 2012 Stage 1 Road Safety Audit Report. (Items A3.1 and A3.2). These items remain a problem and are referred to again in this Road Safety Audit Report. All other issues raised in the Stage 1 Road Safety Audit have been resolved or are subject of a formal Exception report.”

There is concern that detailing full responses and counter-responses exceeds the scope of an RSA and might suggest that the RSA Team has adopted an ‘approval’ role with the regard to the implementation (or not) of remedial measures.

2.3.8. Clear Wording

It is essential that the wording of RSA problems and recommendations is clear and succinctly stated. It is particularly important that the wording of recommendations is such that they clearly link to the problem stated.

In the example below, taken from one of the sampled reports, the meaning of the problem and the rationale behind the recommendation could be a lot clearer, especially with regard to the cause and effect predicted and how the recommended measure would resolve the problem.

“Problem: Although tactile paving has been provided and is set back from the edge of the continuous edge line marking, the distance between the two could encourage a pedestrian to stand within the carriageway whilst waiting for a gap in the traffic to occur. This would expose pedestrians to greater risk of impact with a vehicle.”
**Recommendation:** Provide ‘Look to Right’ and ‘Look to Left’ markings to the front of the tactile paving.

In another case, the problem is slightly clearer in wording but uses terminology which might not be entirely sensible.

“The details submitted to the audit do not indicate if a junction visibility splay is to be provided at the Scranton Road / Station Access and at the Wernham Road junction. The lack of a junction visibility splay will result in vehicles accessing Scranton Road and Wernham Road without warning of approaching traffic.”

In the following example, the problem description suggests a cut-and-paste approach to problem writing which is unhelpful and unclear.

“When it is dark, drivers could fail to see a splitter island and collide with it, leading to loss of control accidents.”

If not clearly and sensibly described, problems and recommendations are more likely to be dismissed by the designers or Excepted by project Sponsors; and might ultimately lead to real problems not being resolved.

RSA Teams should carefully sense-check the written problems and recommendations to minimise the likelihood that they will be dismissed.

Furthermore, RSA Teams should ensure that they use the correct terminology for elements of scheme design. In one of the sample reports, a bridleway is described as a footpath. It is recognised that, in context, such a misnomer might not result in any major misunderstanding, but it would be considered best practice to avoid ambiguity by using the correct terminology in a consistent manner.

**2.3.9. Photographs**

A number of the submitted RSAs include photographs to illustrate problems or locations. The inclusion of photographs in this way is generally recognised as good practice. However, this practice can, on some occasions, have limited usefulness.

For example, close up photographs can sometimes have insufficient context to be useful in identifying a location or illustrating a problem. In addition, it is not always useful to use a photograph of an existing location or feature if trying to illustrate a proposal.

The inclusion of drawing clips instead of photographs might, in some cases, be more effective as illustrations. Otherwise, photographs can be annotated or combined with graphics to clearly illustrate the intended point. In the latter case, care would need to be taken to ensure that graphics are not used to illustrate RSA recommendations as that would encroach into the area of design and would, thereby, exceed the scope of an RSA.
Appendices
Appendix A. Quarterly Factsheet
1st October 2015 to 31st December 2015
Basic Information

<table>
<thead>
<tr>
<th></th>
<th>This Quarter</th>
<th>Database Since March 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of RSAs submitted</td>
<td>104</td>
<td>702</td>
</tr>
<tr>
<td>RSA Team Leader specifically identified</td>
<td>100%</td>
<td>88%</td>
</tr>
<tr>
<td>Project Sponsor specifically identified</td>
<td>93%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Average number of problems recorded | 1.5 | 1.8 |
Response Report issued | 4% | 3% |
Exception Report issued | 0% | 0% |

RSAs By Highways England Area - This Quarter

RSAs By Scale of Scheme - This Quarter

RSAs By Scheme Type - This Quarter

Road Safety Audit Database

Quarterly Factsheet - 1st October 2015 to 31st December 2015 (Rev. 1)

See scheme key

Scheme key

- All Lanes Running / Smart Motorways
- Bridge
- Bus Lane / Guided Bus
- Conversion from Single to Dual Carriageway
- Channage
- Enforcement Infrastructure / Cameras
- Junction Improvement
- Lane Improvement
- Maintenance Infrastructure / Access / Safety
- Traffic Signals (New)
- NIKI Crossing
- NIKI Path / Way / Route
- Public Realm / Urban Regeneration
- Public Transport Interchange / Hub
- Road / Access Closure or Feature / Facility Removal
- Shared Use (NIKIs & Traffic)
- Shared Use (NIKIs Only)
- Signs / Markings
- Temporary Traffic Management
- Train or UTT Route / Facility
- Tunnel
- Watering

ATKINS
RSA Team statement

Required details of site visit in full

Specific road safety problems identified

Recommendations for actions

List of documents and drawings reviewed

Certificate of Competency details stated

Unrelated technical matters are NOT INCLUDED

Items such as correspondence are NOT INCLUDED

Marked up location map

Recommended for actions

Identified RSA Team membership

Details of RSA Brief and CV approvals

Inclusion of Certificate of Competency details is not mandatory

Certificate of Competency details stated

Stated Not Stated Pre Dec 13

100% 99% 1%

99% 40% 100%

Unrelated technical matters are NOT INCLUDED

Items such as correspondence are NOT INCLUDED

Certificate of Competency details stated

Stated Not Stated Pre Dec 13

100% 100% 0% 0% 0%
Appendix B. Stage 4 RSAs – Research by Thomas Corke

This appendix summarises some of the key findings of a review of Stage 4 RSAs carried out in October 2015 by Thomas Corke of Highways England’s ‘PTS NPPD Safer Roads – Design’ team.

The review examined 23 Stage 4 RSA reports in terms of compliance with the Design Manual for Roads and Bridges (DMRB) standard HD 19/15.

At the time of Thomas Corke’s review, the Stage 4 RSA reports catalogued in the database and available for study were all submitted by the same service supplier.

The following bullet points details some of the key findings quoted directly from the study but it should be noted that some of the numerical data will have changed between the data available when the review as carried out and that available for this quarterly report:

- All 23 audit reports made reference to “Stage 4a” or “Stage 4b”. This is not aligned with the preferred terminology set out in HD19/15.
- None of the audits makes reference to an audit brief as required by HD19/15 paragraph 2.74. It is not clear whether audit briefs were approved by the Project Sponsor and provided to the audit team.
- Only 2 audits make reference to changes made after opening. All other reports are silent on this issue.
- All audit team members for every audit possess a Certificate of Competency as required by HD19/15 paragraph 2.84. Reference nos. and details are recorded in the audit report.
- In 21 out of the 23 audit reports, all auditors were noted as being members of the Society of Road Safety Auditors through use of post-nominal letters.
- For all 23 audits, the audit team have been approved by Highways England. However, it is not clear whether this approval was made by the Project Sponsor and whether approval was given on a For all 23 audits, STATS19 collision data was assessed for the required period (12 or 36 months) as required by HD19/15 paragraphs 2.44 and 2.45. This data was included in an annex at the end of the report.
- In all audits, there was a note that the collision data was not validated and may not be complete.
- Only 2 out of 23 audit reports clearly stated the opening/completion date of the project. For all others, the date of the RSA3 has been assumed as the relevant date.
- In one case, there were no collisions recorded in the vicinity of the Highway Improvement Scheme. In accordance with HD19/15 paragraph 2.49, a Stage 4 RSA is not required under these circumstances.
- A site visit was carried out in all audits reviewed. Details of the time and date of the site visit are provided, plus details of weather conditions.
- Attendees at the site visit are only described in 3 of the reports reviewed. In one of these, it was apparent that the audit team did not visit the site together.
- In 12 out of 23 audits the site visit was considered justified by reference to HD19/15 para 2.50. In the remaining 11 audits there was either insufficient evidence of collisions, improvement in collision rate or no unexpected trends identified and therefore the site visit was not justified.
- No time-specific trends were found and therefore no requirement for timing of visit site was identified.