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Framework
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Road Safety Audit Database**

**QUARTERLY REPORT
October 2018 to December 2018**



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1. Introduction

1.1. Quarterly Reporting

This report comprises the quarterly review of Road Safety Audit (RSA) reports submitted to the Highways England Safer Roads - Design Team (SR-DT) inbox at roadsafetyaudit@highwaysengland.co.uk between **1st October 2018 and 31st December 2018** (inclusive).

1.2. New RSA Standard

In **November 2018**, a new RSA standard (GG 119) was published, to be applied with immediate effect. This quarterly report pertains to RSAs submitted to the SRDT inbox during a period which, in part, pre-dates the release of the new standard.

The RSA process is largely unchanged by the new standard but, where appropriate, advice has been tailored towards GG 119 requirements.

1.3. Scope

During this quarter, **a total of 163 RSAs were submitted**, of these:

- 57 RSAs were carried out to GG 119;
- 103 RSAs were carried out to HD 19/15 (*including two carried out in October 2018 which did not cite a standard but assumed to be HD 19/15*); and
- 3 RSAs were carried out to HD 19/03 (*these RSAs were carried out before HD 19/15 came into force but were late submissions to the inbox*).

From these, **35 sample reports** were selected as suitable for review. The list below details the numbers of each stage of RSA forming the study sample together with totals submitted for the quarter. HD 19/03 RSAs were not included in the reviews but have been included in the submission totals.

- | | |
|-----------------------------|---------------------------|
| • Stage 1 RSAs | 6 reports of 19 submitted |
| • Stage 2 RSAs | 6 reports of 16 submitted |
| • Combined Stage 1 & 2 RSAs | 6 reports of 53 submitted |
| • Stage 3 RSAs | 7 reports of 60 submitted |
| • Stage 4 RSAs (12 months) | 6 reports of 11 submitted |
| • Stage 4 RSAs (36 months) | 3 reports of 3 submitted |
| • Interim RSAs | 1 report of 1 submitted |

1.4. RSAs Submitted by Highways England Areas

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

Figure 1-1 RSAs submitted since 1st January 2014 by Highways England Operational Area

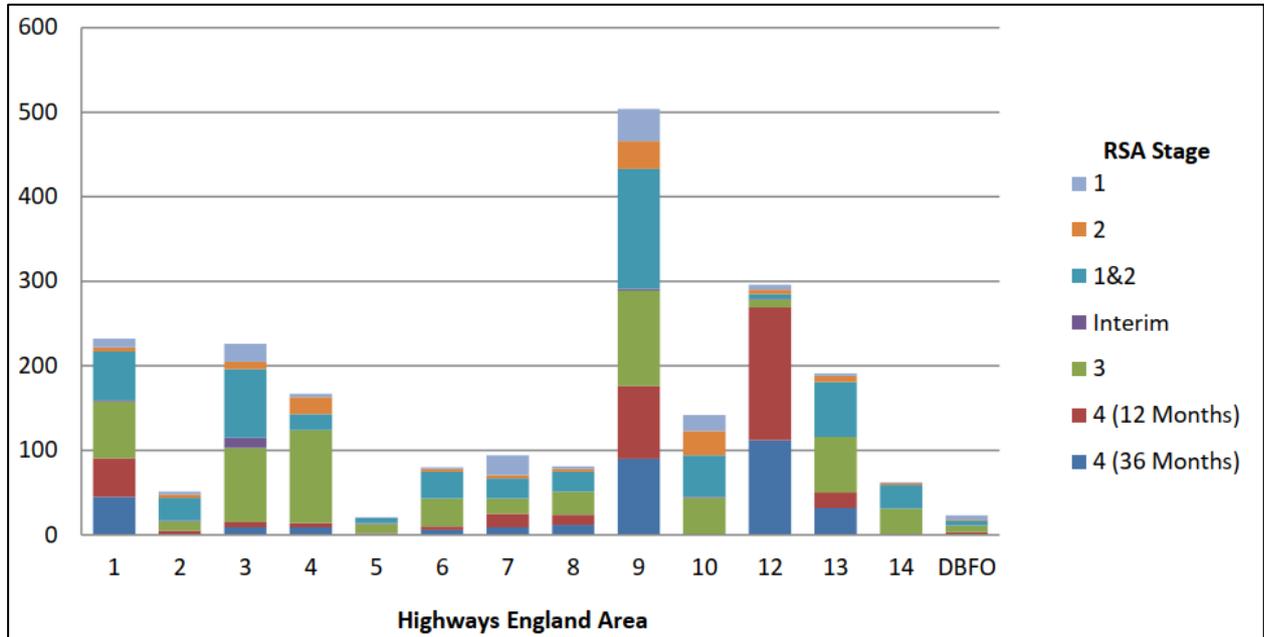
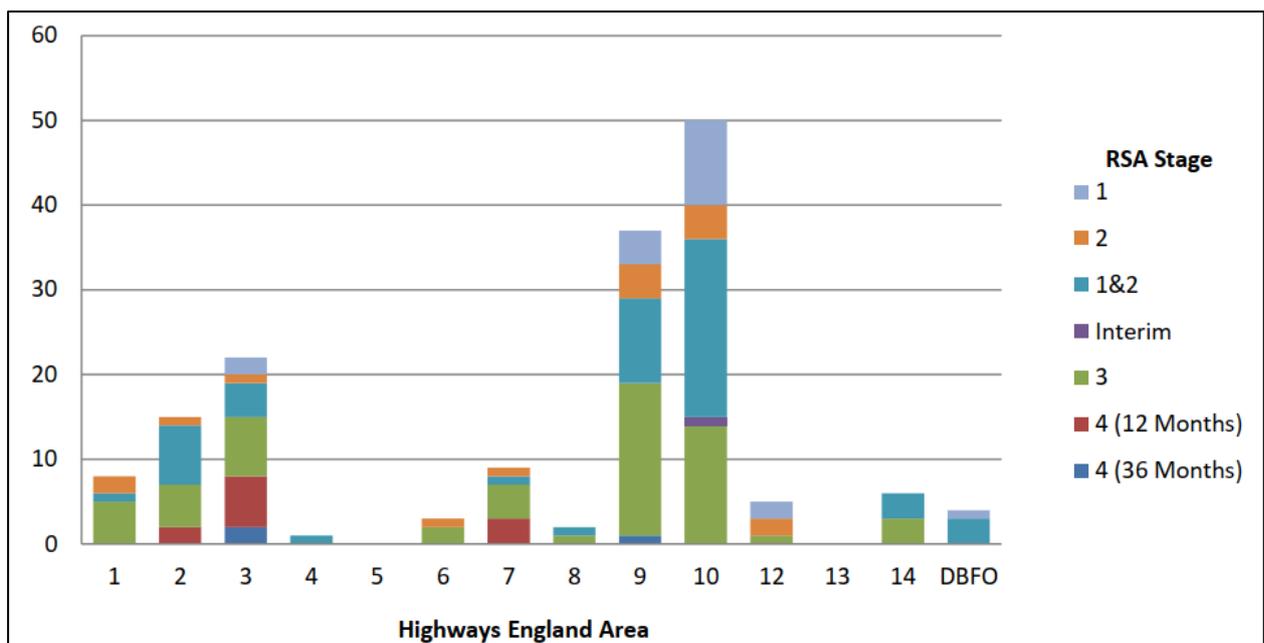


Figure 1-2 below illustrates all RSAs submitted to the SRDT inbox during this quarter, 1st October 2018 to 31st December 2018.

Figure 1-2 RSAs submitted this quarter (Oct-Dec 2018) by Highways England Operational Area



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 1.3 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 design 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 the frequency with which road safety problem types appeared in RSAs within the sample set.

For clarity, this section uses the following terms of reference. Definitions are as given in GG 119:

- **road safety problem** – An identified road safety matter together with a resultant potential road traffic collision type, identified highway scheme location and summary;
- **road safety matter** – 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; and
- **recommendations** – A proportionate and viable suggestion for improvement to eliminate or mitigate an identified road safety audit problem.

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

The sampled reports detailed a total of 126 road safety problems covering 131 road safety matters. These include previously raised problems not resolved at the time of each of the sample RSAs.

This gives an average of 1.04 matters per problem reported which is comparable to 1.08 in the preceding quarterly report (July 2018 to September 2018).

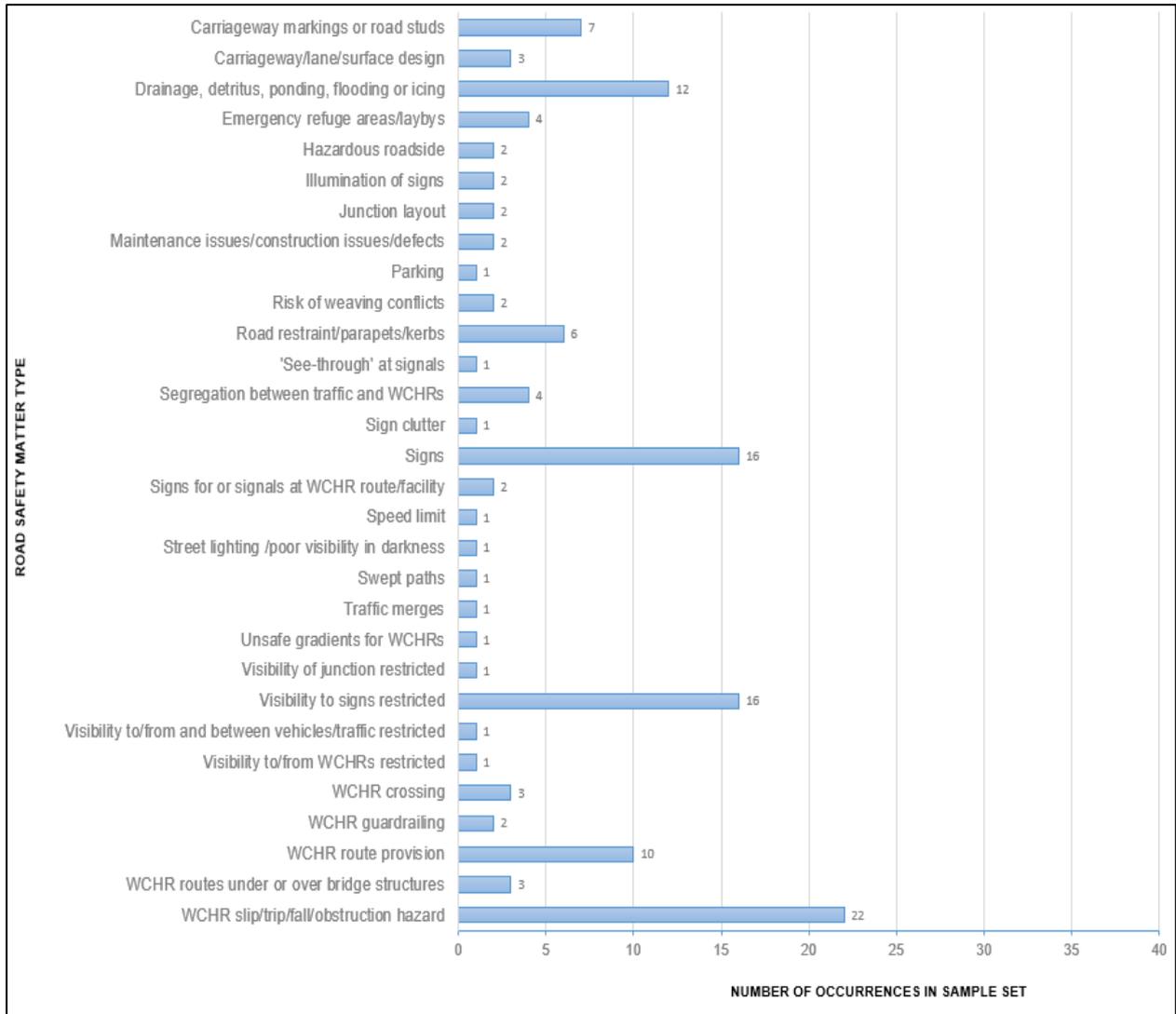
For the purpose of this quarterly report, the high-level categorisation of the problems and matters identified within the sample group have been expressed as follows, with problem categorisations in **bold** type and matters in [square brackets]:

- **Carriageway / lane / surface design** [poor surfacing / width / long or cross sections]
- **Carriageway markings or road studs** [poorly located / inconspicuous / inconsistent / inadequate / confusing]
- **Drainage and related detritus, ponding, flooding and ice** [walker, cyclist horse rider (WCHR) crossings / carriageways / laybys / footways / cycleways]
- **Emergency refuge areas / laybys** [design inappropriate / entry and exit / visibility to and from]
- **Hazardous roadside** [objects not passively safe]

- **Illumination of signs** [inadequate / absence of illumination]
- **Junction layout** [design / approach speeds / queuing]
- **Maintenance issues, construction issues or defects** [incomplete works / debris]
- **Parking** [does not sufficiently dissuade]
- **Risk of weaving conflicts** [merge / diverge]
- **Road restraint / parapets / containment kerbs** [inadequate / inappropriate / working width compromised]
- **'See-through' at signals** [contradictory signals visible]
- **Segregation between traffic and WCHRs** [inconsistent / inadequate]
- **Sign clutter** [confusing]
- **Signs** [poorly located / absent / inadequate / confusing / redundant]
- **Speed limit** [signs absent]
- **Street lighting / poor visibility in darkness** [light levels reduced by obstruction]
- **Swept paths** [overrunning footways or cycleways]
- **Traffic merges** [merge lengths]
- **Unsafe gradients for WCHRs** [crossing places]
- **Visibility of junction restricted** [alignment]
- **Visibility to / from and between WCHRs restricted** [by street furniture]
- **Visibility to signs restricted** [by vegetation / other signs]
- **Visibility to/from and between vehicles/traffic restricted** [by vegetation]
- **WCHR routes under or over bridge structures** [visibility / conflicts between users / parapet heights]
- **WCHR crossing** [layout / tactile paving]
- **WCHR guardrailing or other** [inappropriate / inadequate]
- **WCHR route / facility signs or signals** [poorly located / obscured]
- **WCHR route provision** [mobility impaired users / inadequate / inappropriate / narrow / confusing]
- **WCHR slip, trip, fall or obstruction hazard** [hazard warning / poor or uneven surface / detritus / unprotected drops / street furniture / upstands / service and drain covers / vegetation]

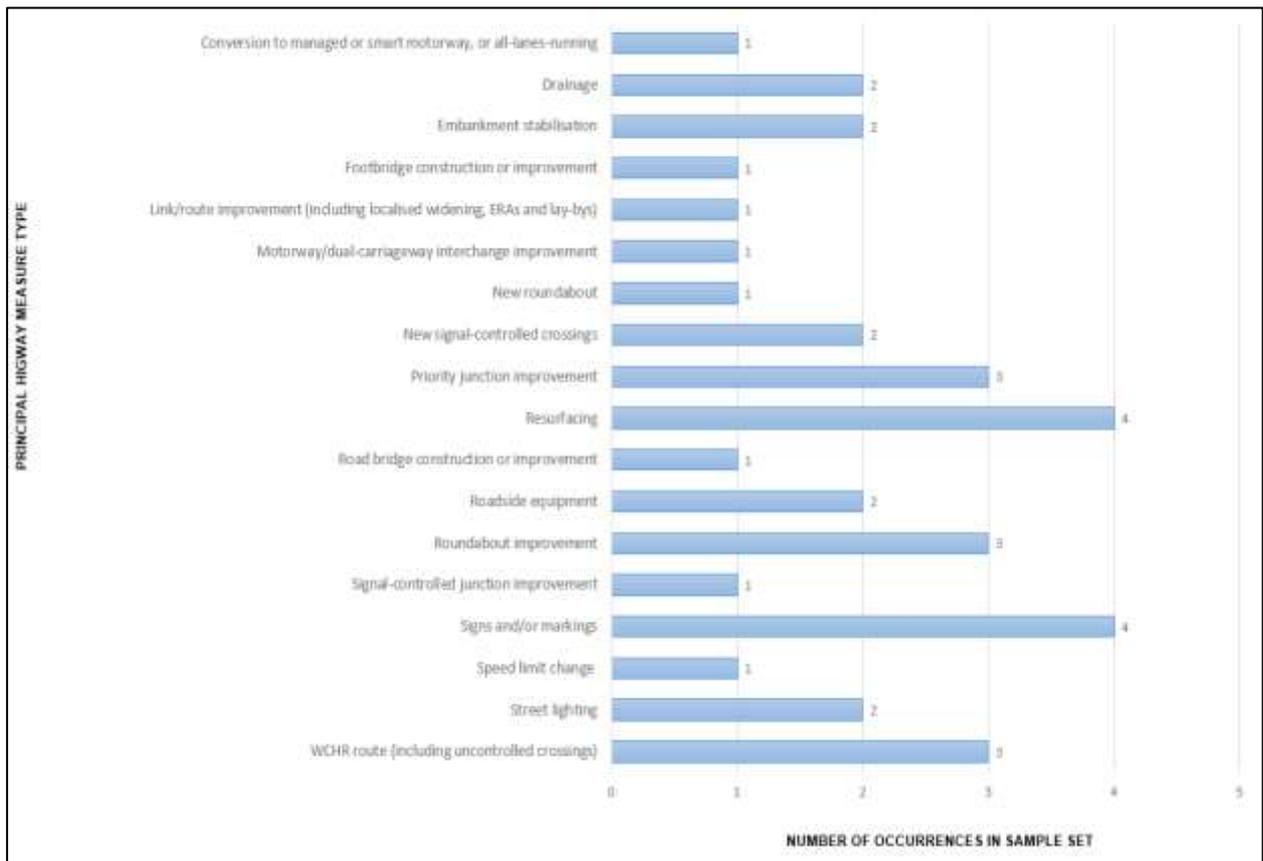
The 131 matters covered in the sampled reports are categorised in Figure 2-1 below which indicates the frequency of occurrence. The categories of these are shortened to fit the figure dimensions and the chart should be read in conjunction with the bullet list above for a fuller description.

Figure 2-1 Road safety matters by number of occurrences



As context for the occurrences of road safety matters given above, Figure 2-2, overleaf, charts the principal highway measures that best describe the scheme type for each RSA report in the sample set.

Figure 2-2 Principal highway measures by number of occurrences in sample set



2.2 Good Practice and Areas for Improvement

This section identifies areas of good practice and areas with potential for 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.

2.2.1 Combined stage 1 and 2 RSAs

GG 119 requires that a stage 1 RSA is carried out at the completion of preliminary design. The combination of stage 1 and stage 2 RSA reports is only permitted for minor schemes where no preliminary design has been undertaken. This requirement would be expected to reduce the number of combined stage 1 and 2 RSAs but, during this quarter, the proportion of GG 119 reports which were combined stage 1 and 2 RSAs, was still relatively high.

- 8 no. stage 1 RSAs to GG 119 this quarter
- 5 no. stage 2 RSAs to GG 119 this quarter
- 17 no. combined stage 1 and 2 RSAs to GG 119 this quarter

2.2.2 Incomplete information

A number of the reviewed RSAs cited missing information as the premise for problems.

One stage 2 RSA stated:

“No information has been provided to the audit team in relation to the level of pedestrian flow to which the [facility] has been designed to accommodate.”

The problem goes on to identify a valid concern related to a likely increase in pedestrian traffic due to a nearby development. However, this information should have been requested and listed in the introduction if not available. The problem could then have made a more positive statement along the lines of:

“The design has not taken into consideration the future level of pedestrian flow which the facility will need to accommodate.”

One report states, in the introduction, *“Traffic count / turning data was not available to the Audit Team”*. This data might not have been available, but the author should be clear about how they have arrived at that conclusion. For instance, did the brief indicate that the data was unavailable or did the design team respond to a request for the information made by the RSA team? The introduction of the report should certainly be clear about information the RSA team have requested but were not provided with. If the designer gives reasons for the absence of such information, this could be included in the text about the absence.

In the problem text itself, rather than including phrases such as: *“lighting detail was not provided”* for example, it would be better to say:

“In the absence of lighting detail, see [insert cross reference to paragraph in introduction which explains the absence], there is concern that”

Care should be taken, however, to ensure that the problem description is specific and robustly based on the scheme design, not on the absence of information itself. It is the designer’s responsibility to ensure that the correct design process and checks have been carried out.

2.2.3 Audit process and administration

A number of reports, from the same supplier, contain a section called *“Audit administration”* which describes the RSA team’s expectations of the post-RSA procedures. The inclusion of this text is unnecessary, and in the reviewed reports, the procedure explained is not entirely accurate with regards to GG 119 requirements. RSA teams should not take it upon themselves to prescribe the technical requirements of the RSA or post-RSA processes.

2.2.4 Input from police or maintaining agent representatives

A number of stage 3 reports submitted this quarter contain statements such as *“No adverse comments have been received from either police or maintenance representatives regarding the scheme as constructed”*. Whilst it is hoped that police and maintaining agent representatives would contribute to some of the RSA team deliberations (as appropriate), RSA teams should take ownership of the problems and recommendations detailed in the report. Comment from those representatives do not need to be included in their own right unless they add context to specific safety concerns accepted by the RSA team and adopted by them for inclusion in their report.

2.2.5 Repeated problems

One of the combined stage 1 and 2 RSAs reviewed contains four lengthy but identical descriptions of the same problem at four different locations. Whilst GG 119 states that RSA reports shall contain a separate statement for each identified RSA problem, it does not say that identical problems at multiple locations cannot be presented as one problem with a number of listed or uniquely referenced locations (see 2.2.6 below). This would make for a clearer and more succinct report.

2.2.6 Problem location references

The example RSA report in HD 19/15 illustrated a convention of attributing location references (letters for example) against each problem. This meant that each distinct location could be shown by a unique label on the problem location plan. GG 119 is less prescriptive in this regard, but this convention has been, and is still being used inefficiently on occasions. Some often-seen examples of this:

- *Problem 1 – Location A – single location*
- *Problem 2 – Location B – single location*
- *Problem 3 – Location C – single location*

In the above example, all problems have a single location. There is therefore no need to give each a location letter as it would be clearer to simply use the problem numbers themselves on the problem location plan labels.

- *Problem 1 – Location A – multiple locations*
- *Problem 2 – Location B – single location*
- *Problem 3 – Location C – multiple locations*

This example would result in the location letters 'A' and 'C' being used multiple times on the problem location plan.

A significant number of RSAs involve complex, multiple and repeated locations (i.e. same location for multiple problems). In such cases, each location, should be attributed a distinct location reference. For example:

- *Problem 1 – Locations A, B and C*
- *Problem 2 – Location D*
- *Problem 3 – Location B and E*

Hence, on the problem location plan, each location would have a unique label which might indicate the location of multiple problems.

A number of the reviewed reports include helpful phrasing such as “*See Location A, Appendix B*” which makes it clear, to the reader, where the location references are illustrated.

2.2.7 Site visit details

This quarter has seen a marked increase in RSA reports not providing the required details of the site visit in full. In this quarter, non-compliance was at 18% where it is more usually close to zero. A large proportion of the non-compliant reports appear to be from the same operational area and from the same supplier.

As with HD 19/15, GG 119 requires that RSA reports include details of who was present at the site visit, the date and time period(s) when it was undertaken and what the site conditions (weather and traffic etc.) were on the day of the visit.

2.2.8 Road safety audit team observers

One stage 2 RSA reviewed lists three local authority attendees under “[RSA] *team membership*”. These three persons are listed in the RSA team statement page as “[RSA] *team observers*”. It should be noted that, as in HD 19/15 beforehand, GG 119 limits the number of RSA team observers to a maximum of two. In addition, GG 119 clarifies that RSA team observers do not form part of the RSA team.

2.2.9 Works not complete

One of the Stage 3 RSAs reviewed relates to a structure which was being removed and replaced by a new structure nearby. The problem text reads:

“During the site visit the auditors noted that the redundant [structure] which was designed to be removed is still in place posing a risk for errant vehicles. The redundant [structure] is not sufficiently protected because the safety barrier is not extended far enough beyond the obstacle. This could result in more severe injuries to vehicle occupants in case of collision.”

The recommendation reads simply:

“It is recommended that the redundant [structure] is removed from the site.”

Given that the scheme evidently proposed to remove the structure, this problem and recommendation appear to be redundant. In addition, the photograph included suggests that the scenario described by the RSA team is unlikely. RSA teams should certainly include comment in the introduction if works are unfinished at the time of the site visit, but they should not seek to ‘police’ the construction programme with a problem and recommendation. If there are concerns about incomplete elements of works presenting a risk to members of the public, whilst it is only going to be a temporary hazard, the project manager should be informed immediately by an email outside of the RSA process.

2.2.10 Scope description

One stage 1 RSA gives a very clear and concise introduction. However, the report refers to three separate phases of design but does not make it clear which phase(s) are the subject of the RSA. Design phases on large projects are often more complex than simply “preliminary” and “detailed” designs. The scope of the RSA should always be clearly described and should include an unambiguous description of the design phase(s) or option numbers being audited (as appropriate).

2.2.11 Photographs

One stage 2 RSA includes a number of photographs which are included as a separate section of the report to the problem/recommendation section. However, it is unclear which problems they relate to. Photographs are best included with the problems they relate to and care should be taken to ensure that the photograph, or any other graphic included, clearly illustrates the problem or the problem location.

Photographs and graphics illustrating the recommended measures, or suggested locations of these, should not be included as this is too prescriptive.

2.2.12 Unnecessary instruction to designers

One of the submitted RSAs contains a problem relating to vegetation which might reduce light levels. The problem text acknowledges that the scheme proposes to reduce the existing vegetation to facilitate the installation of new lighting columns and states:

“This clearance is to be adequate to ensure proposed road lighting [is] unimpeded.”

The problem then goes on to raise concern about the current reduction in light levels caused by the tree crowns and the entire recommendation reads:

“The drawings should be amended to explicitly refer to the reduction in the tree crowns to an extent where they do not impede the lantern or the ability of the light emitted to reach the road surface. The vegetation should be reduced to such an extent that it will not re-grow to the current level.”

It would appear that the RSA team are recommending something that the design has already proposed to remedy, rendering the recommendation redundant. If the RSA team have additional concern, the problem should be clearly worded to explain why the proposed measures might not

achieve the desired result. Furthermore, RSA teams should avoid instructing the design team with regards to what the drawings should show.

2.2.13 GG 119 terms of reference and RSA report structure

A number of the reviewed reports state they have been carried out to GG 119 but still refer to terms such as “*Project Sponsor*” and contain extraneous text previously common in RSA reports from some providers. Whilst the differences in substance between GG 119 and HD 19/15 are small, several terms of reference therein have changed. It would appear that, in a number of reports reviewed, the author has simply replaced the “*HD 19/15*” denomination with “*GG 119*” but has not amended the report structure or terms of reference in any other way. This is not necessarily of concern in itself, as the output is similar, but it might be symptomatic of RSA teams not having absorbed the principles and nuances of the new standard.

In accordance with the Manual for the Development of Documents which governs the drafting of the DMRB, GG 119 also removes a lot of the capitalisation previously used in HD 19/15. For instance, “*Road Safety Audit*” and “*Team Leader*” are now written in GG 119 as “*road safety audit*” and “*team leader*”. Whilst GG 119 does not prescribe that RSA reports should be written in the same manner, this would remove the unnecessary sense of entity from some terms. The term “*Overseeing Organisation*” remains capitalised in GG 119. Sensibly, normal rules of capitalisation such as in sentence case, title case and abbreviations (i.e. “*RSA*”) should still be applied.

Appendix D of GG 119 sets out the recommended framework for an RSA report (stages 1, 2 or 3) and whilst it does not generally dictate the use of specific text, it presents an opportunity to remove extraneous text, so often seen in RSA reports to date, which can make reports bulky and difficult to read (often obscuring important detail).

GG 119 states that RSA reports shall include a statement, signed by both the RSA team leader and the RSA team member(s) in the format given in appendix D. The statement reads “*We certify that this road safety audit has been carried out in accordance with GG 119*”. However, a number of the reviewed reports purporting to be to GG 119 use alternative statements such as, “*We confirm that this audit has been carried out in accordance with the guidelines in GG 119*”. This is not appropriate as it is the mandatory requirements of GG 119 that RSAs must follow, not the guidelines. The RSA team statement shown in Appendix D of GG 119, “*We certify that this road safety audit has been carried out in accordance with GG 119*” should be used verbatim with no freestyling of the text.

Appendix E of GG 119 sets out the recommended framework for stage 4 RSA reports but a number of the stage 4 RSAs submitted, whilst citing GG 119 as the terms of reference, do not follow this structure. Rather, they seem to have adhered to the HD 19/15 composition.

The execution of stage 4 RSAs is one area where GG 119 requirements differ more significantly than those in HD 19/15, in particular, with regard to the checking of previously raised stage 3 problems. Stage 4 reports should repeat any stage 3 problems and recommendations where the actions detailed in the stage 3 RSA response report have not been carried out. This should be detailed under a heading such as “*Items raised at stage 3 road safety audit*”.

Where collisions related to previously raised RSA problems have occurred, regardless of the RSA response report, a revised problem and recommendation will be included under a separate heading such as “*Items raised at this stage 4 road safety audit*”.

Under GG 119, 36-month reports are no longer required so designations such as “*RSA stage 4 (12)*” or similar are unnecessary.

Appendix A

Quarterly Factsheet

1st October 2018 to 31st December 2018