

**Specialist Professional and Technical Services
Framework
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Road Safety Audit Database**

**QUARTERLY REPORT
April 2019 to June 2019**



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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 April 2019 and 30th June 2019 (inclusive).

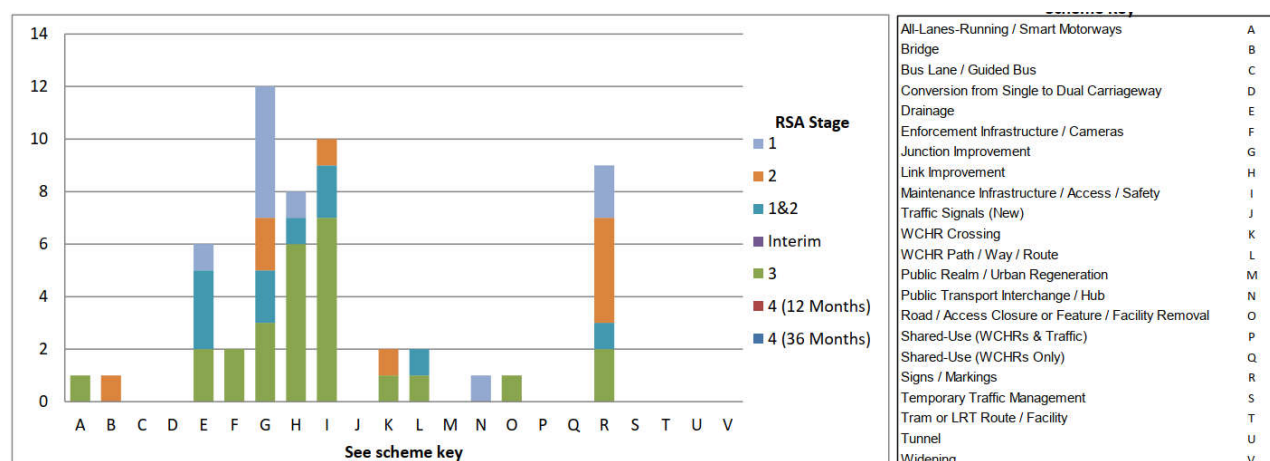
1.2. Scope

During this quarter, **a total of 55 RSAs were submitted**, of these:

- 49 RSAs were carried out to GG 119; and
- 6 RSAs were carried out to HD 19/15.

The types of schemes covered by the submitted RSAs are shown in Figure 1-1 below.

Figure 1-1 RSAs submitted this quarter (April-June 2019) by scheme type



From these, **27 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. No interim RSAs or stage 4 RSAs were submitted this quarter.

- Stage 1 RSAs 7 reports of 10 submitted
- Stage 2 RSAs 7 reports of 9 submitted
- Combined stage 1 & stage 2 RSAs 7 reports of 10 submitted
- Stage 3 RSAs 6 reports of 26 submitted

The samples selected for review all purport to have been carried out to GG 119.

1.3. RSAs Submitted by Highways England Areas

Figure 1-2 below illustrates all RSAs submitted to the SRDT inbox since 1st January 2014 by each Highways England area.

Figure 1-2 RSAs submitted since 1st January 2014 by Highways England Operational Area

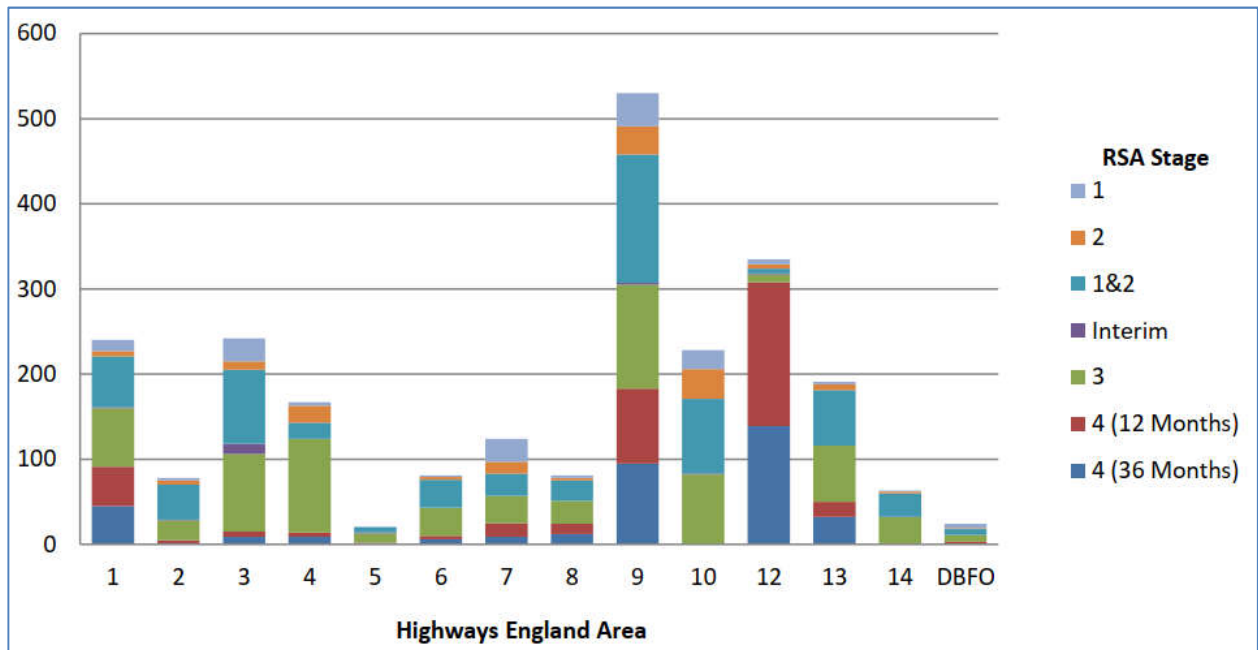
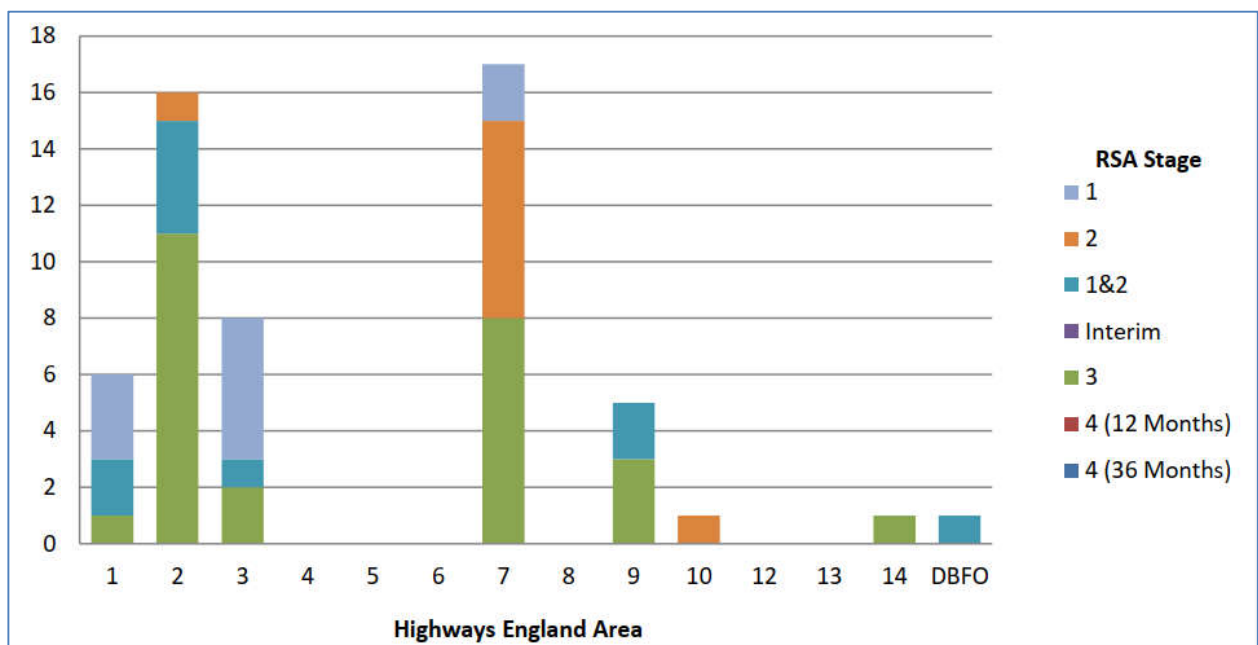


Figure 1-3 below illustrates all RSAs submitted to the SRDT inbox during this quarter, 1st April 2019 to 30th June 2019.

Figure 1-3 RSAs submitted this quarter (April - June 2019) 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 1.2 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 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 83 road safety problems covering 101 road safety matters. These include previously raised problems not resolved at the time of each of the sample RSAs.

This gives an average of 1.22 matters per problem reported which is a small increase from 1.08 in the preceding quarterly report (January to March 2019).

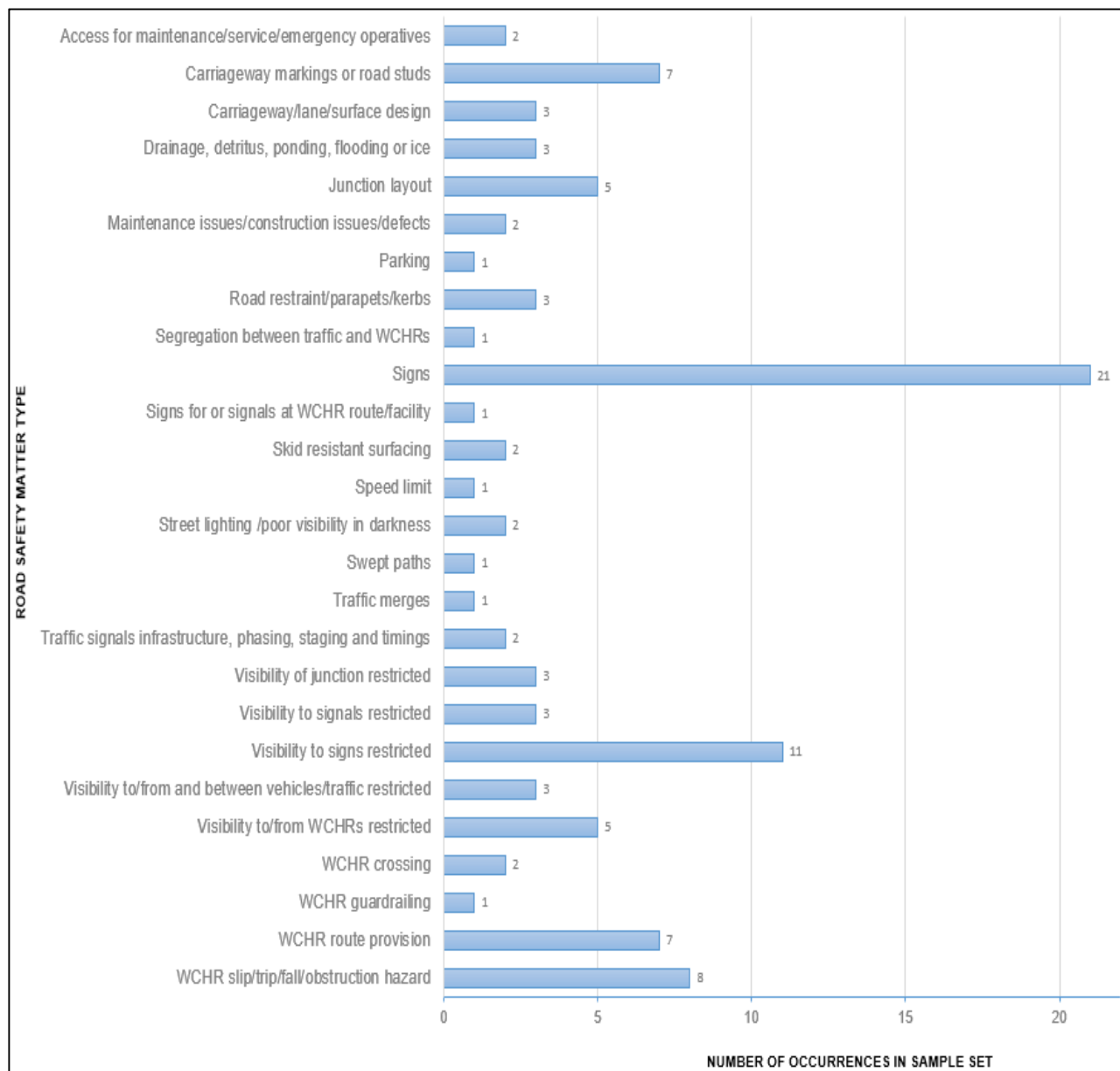
For the purpose of this quarterly report, the high-level categorisation of the problems and matters identified within the sample group have been expressed as follows, with problem categorisations in **bold** type and matters in [square brackets]:

- **Access for maintenance / service operatives / emergency services** [poorly located / confusing]
- **Carriageway / lane / surface design** [alignment / taper lengths / radii]
- **Carriageway markings or road studs** [absent / incorrect / confusing]
- **Drainage and related detritus, ponding, flooding and ice** [WCHR crossings / carriageways / cycleways]
- **Junction layout** [design / lane arrangement / approach speeds / stacking]

- **Maintenance issues, construction issues or defects** [construction method / incomplete works]
- **Parking** [the scheme encourages illegal / injudicious parking]
- **Road restraint / parapets / containment kerbs** [inappropriate / terminals / working width compromised]
- **Segregation between traffic and WCHRs** [inadequate]
- **Signs** [poorly located / incorrectly mounted / lack of lateral clearance / absent / incorrect / inadequate / x-height / reflectivity / clutter / confusing]
- **Skid resistant or high friction surfacing** [inadequate]
- **Speed limit** [environment does not encourage compliance]
- **Street lighting / poor visibility in darkness** [inadequate / changes in light levels]
- **Swept paths** [kerb-strikes]
- **Traffic merges** [merge lengths]
- **Traffic signals infrastructure, phasing, staging and timings** [conflicts]
- **Visibility of junction restricted** [by vegetation / street furniture]
- **Visibility to / from and between WCHRs restricted** [by vegetation / traffic / alignment]
- **Visibility to signs restricted** [by vegetation / other signs]
- **Visibility to traffic signals restricted** [by vegetation]
- **Visibility to/from and between vehicles/traffic restricted** [by vegetation / alignment]
- **WCHR crossing** [inadequate / tactile paving]
- **WCHR guardrailing** [absent]
- **WCHR route / facility signs or signals** [inadequate]
- **WCHR route provision** [mobility impaired users / inadequate / inappropriate / narrow / confusing / tactile warning surfaces]
- **WCHR slip, trip, fall or obstruction hazard** [poor or uneven surface / detritus / street furniture / upstands / vegetation]

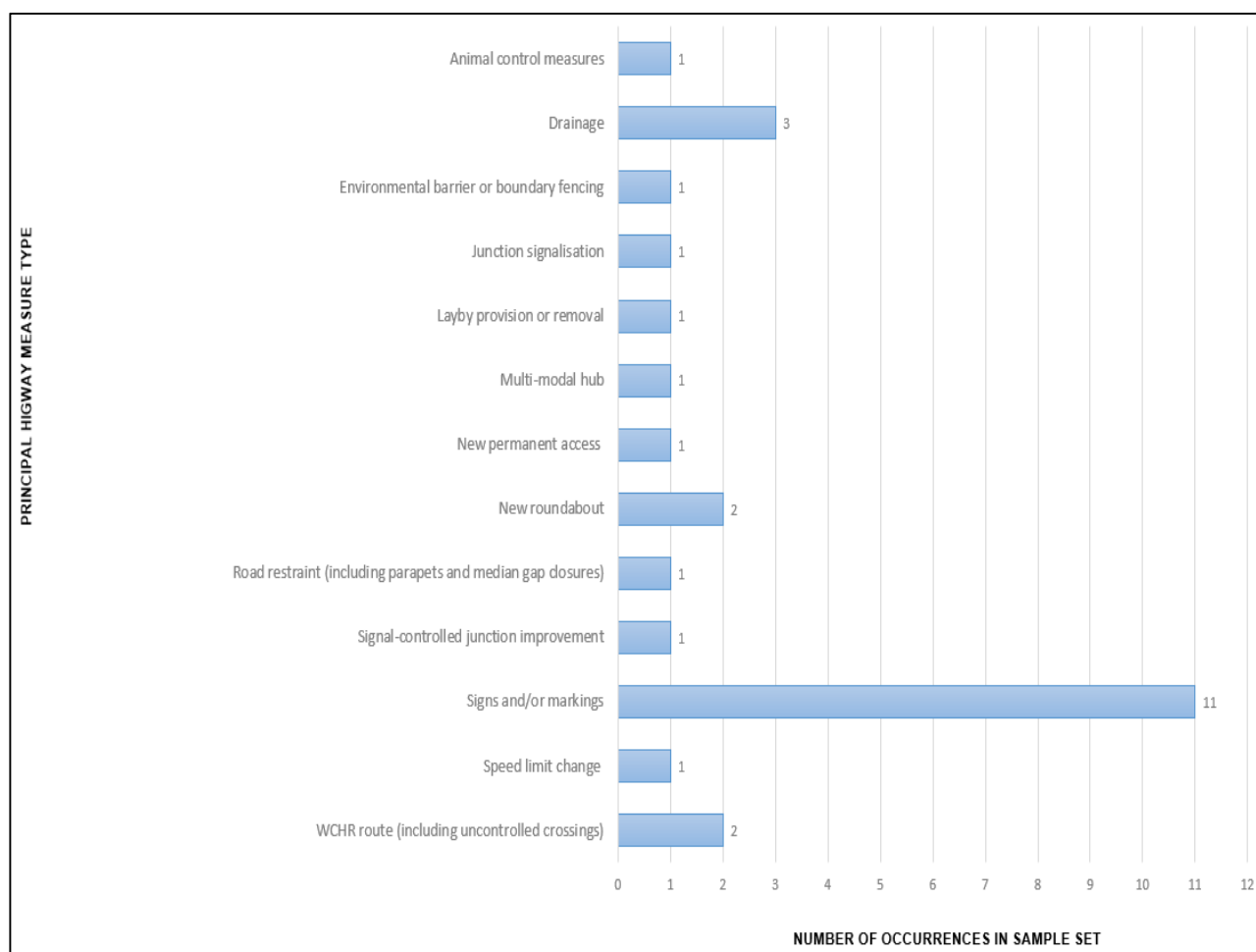
The 83 matters covered in the sampled reports are categorised in Figure 2-1 below which indicates the frequency of occurrence. The categories of these are shortened to fit the figure dimensions and the chart should be read in conjunction with the bullet list above for a fuller description.

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 Statements of endorsement

One supplier has included the following statement in one of their zero-problem reports.

“After careful consideration, based on the information provided together with the site visit, the audit team did not identify any safety related areas of concern regarding the scheme proposals and considers that the proposed scheme should not have an increased detrimental effect to road safety.”

Whilst it is common for RSA reports to include such statements to explain that no problems have been identified, the last sentence in this example constitutes an endorsement of the scheme proposals which does not form part of the RSA process. RSA teams should avoid including anything in the report which might be interpreted as an endorsement of the scheme proposals.

2.2.2 Confusing wording

One report raises a concern regarding lane designations on a particular exit of a motorway junction roundabout.

“The proposed lane designations on the circulatory have only a single lane designated for the [M999 east], however the entry from the roundabout to the [M999 east] on-slip is a dual lane entry, which then reduces to a single lane onto the [M999]. The dual lane entry may lead to drivers attempting to overtake on the very short dual lane section of the on-slip. The dual lane entry may also lead to drivers to attempt to enter the on-slip from the offside circulatory lane, which in turn may result in collisions with other traffic either continuing in the circulatory lanes or entering the on-slip.”

The wording and syntax are confusing, and the plan included under the problem text in the report (not shown here) is unclear and adds little assistance to understanding of the problem described.

For example, in this case, the text refers to “*dual lane entry*” to a motorway on-slip where it might have been more appropriate and conventional to describe it as a two-lane exit from the circulatory carriageway to the eastbound on-slip.

Furthermore, the problem describes two road safety matters (overtaking on the short two-lane section of slip road and injudicious exit from the off-side lane of the roundabout). However, it describes just one collision type which is related only to the latter matter.

A number of other RSA reports reviewed this quarter also include unnecessarily lengthy descriptions which contain grammatical errors. This makes the problems and recommendations unclear and might be likely to result in misinterpretation of the matters raised or rejection of the recommendations.

It is not unusual for RSA reports to include text about complex road or lane layouts, but RSA teams should endeavour to make the descriptions as clear as possible and remove any potential for ambiguity or confusion. It is important that problems and recommendations are well defined and intelligible to a wide readership.

2.2.3 Combined stage 1 and stage 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 at completion of the detailed design stage where no preliminary design has been undertaken. During this quarter, in comparison to the proportion of RSAs carried out separately at stage 1 and stage 2, the proportion of GG 119 RSA reports purporting to be combined stage 1 and stage 2 RSAs was 29%. This represents a significant improvement on the proportion recorded in the previous quarter (81%).

- **10** no. stage 1 RSAs to GG 119 this quarter
- **10** no. stage 2 RSAs to GG 119 this quarter
- **8** no. combined stage 1 and stage 2 RSAs to GG 119 this quarter.

This quarterly review included a consideration of the scheme types, problem descriptions, and the drawings listed in the appendices of combined stage 1 and stage 2 RSAs within the sample set. From that consideration, it seems evident that three out of the seven combined RSAs reviewed were carried out on schemes which had likely had a preliminary design stage.

One of the combined stage 1 and stage 2 RSA reports submitted this quarter refers to a change in design since the stage 1 RSA: *“Since the stage 1 RSA, an additional lane has been provided on the western arm approach to the roundabout”*. In this case, a repeated stage 1 RSA on the changes in design might have been more appropriate. Alternatively, if the changes were small and had occurred during the detailed design process, a stage 2 RSA could have reflected on these changes accordingly.

2.2.4 Direction to liaise with outside agencies

One report contained a number of problems with recommendations such as:

“It is recommended that liaison is made with [Anywhere] County Council to agree sufficient vegetation is removed to provide an appropriate visibility splay in both directions.”

Whilst it is recognised that the road in question was obviously a local highway authority road, a recommendation to liaise with agencies outside the Overseeing Organisation is problematic. It is not for the RSA team to prescribe where the responsibility for remedial action lies. RSA teams should limit their recommendations to the remedial action itself. In this case, something along the lines of *“The vegetation should be cleared so as to provide sufficient visibility”* might have been more appropriate. Should the Overseeing Organisation decide that liaison with other agencies would be appropriate, this should be included in their RSA decision log and included in the RSA response report.

2.2.5 Use of “consideration” and “monitor”

One of the RSAs reviewed this quarter contains a recommendation stating:

“It is recommended that the extents of the 40mph limit to the south of the roundabout junction are reviewed and consideration given to reducing the length of the 40mph limit.”

Another RSA includes the following recommendation:

“It is recommended that consideration be given to additional carriageway destination markings on the [High Street] westbound approach to clearly guide drivers in the correct lane at the earliest opportunity.”

These are, in effect, in contravention of GG 119 which states that *“RSA recommendations including words “consider” and “must” shall not be used”*. Recommendations to *“give consideration”* to a road safety matter might encourage designers to dismiss the concerns raised too readily and avoid taking positive remedial action. For this reason, RSA teams should only make pragmatic recommendations.

2.2.6 Stage 3 site visit invitations

One of the stage 3 RSA reports reviewed this quarter mentions that a police representative was invited to attend the site visit but makes no mention of an invitation being sent to a maintaining agent representative. It is recognised that police and maintaining agent representatives often choose not to attend stage 3 site visits, but invitations to representatives from both organisations are a requirement of GG 119.

On reviewing the RSA report in question, a problem raised in a previous combined stage 1 and stage 2 RSA on the scheme related to the potential for vegetation to obscure signs. The designer’s response to that problem described a proposed action by the *“Maintenance Contractor”*. At stage 3, the RSA team considered the previously raised problem to be only partially resolved and so the maintaining agent representative might have been a particularly important invitee.

2.2.7 Absence of information

One of the combined stage 1 and stage 2 RSAs submitted this quarter contains a problem which relates to the fact that the drawings do not indicate the height of the kerb upstands at crossings. The problem cites the risk of trips and falls if the upstand is too high. Conclusions about the likelihood of a hazard emerging should not be based on the absence of information. GG 119 requires that RSA teams shall request further information where considered necessary and that such information, if not provided, shall be detailed in the report introduction.

2.2.8 No supportable link or background reasoning to collision risk

One of the stage 3 RSA reports includes a problem relating to a maintenance egress which emerges across a shared-use footway/cycleway and cites a risk of collisions with cyclists. It does not explain why collisions with cyclists might be likely other than the location on shared-use footway/cycleway.

A photograph used in relation to this problem (see Figure 2-3) does not help to illustrate why there might be a risk as it is simply a photograph of the access and gives no context to illustrate the concern raised. The problem wording cites no flow information or other reasoning which might support the assertion that conflict between motorists and cyclists is likely.

Figure 2-3 Photo gives no context to demonstrate concern described



All problems described by RSA teams should detail the background reasoning and photographs, where used, should illustrate the problem raised as well as the location.

2.2.9 Complex audit histories

In one of the combined stage 1 and stage 2 RSAs reviewed, the scheme description suggests that this RSA is on one isolated element of a larger scheme previously audited as a whole by others at stage 1, stage 2 and what the auditors describe as an “*interim stage 3*”. It also mentions another combined stage 1 and stage 2 RSA carried out on another part of the scheme.

The introduction lists all of these previous RSAs and the appendix verifies that the stage 2 RSA of the whole scheme and a response to that RSA have been provided with the RSA brief. However, this combined stage 1 and stage 2 RSA of the new element makes no mention of any problems raised in those preceding RSAs and whether or not they have any bearing on this new element being audited.

RSA teams shall include in the RSA report a review of previous, related RSAs even if it is to say that there were no problems raised, or that the agreed actions have been implemented and the problems resolved.

In cases where an RSA is being carried out for the first time on a new scheme element and this has no bearing on the findings of previous RSAs (or vice versa), the new RSA report should comment in this regard to clarify the context of the report in relation to the scheme as a whole.

2.2.10 Problem context and reasoning

A problem in one of the reports reviewed this quarter relates to a sign (on a sloping embankment) having post-heights lower than indicated on the drawing and cites a risk of increased severity of injury if struck. It states:

“The mounting height of the left-hand post is only at 1.37m. The drawing for this sign indicates the mounting height to be 2.11m and 1.8m respectively. The lower edge of the traffic sign could increase the severity of injury to vehicle occupants if an errant vehicle collided into this sign.”

The recommendation states:

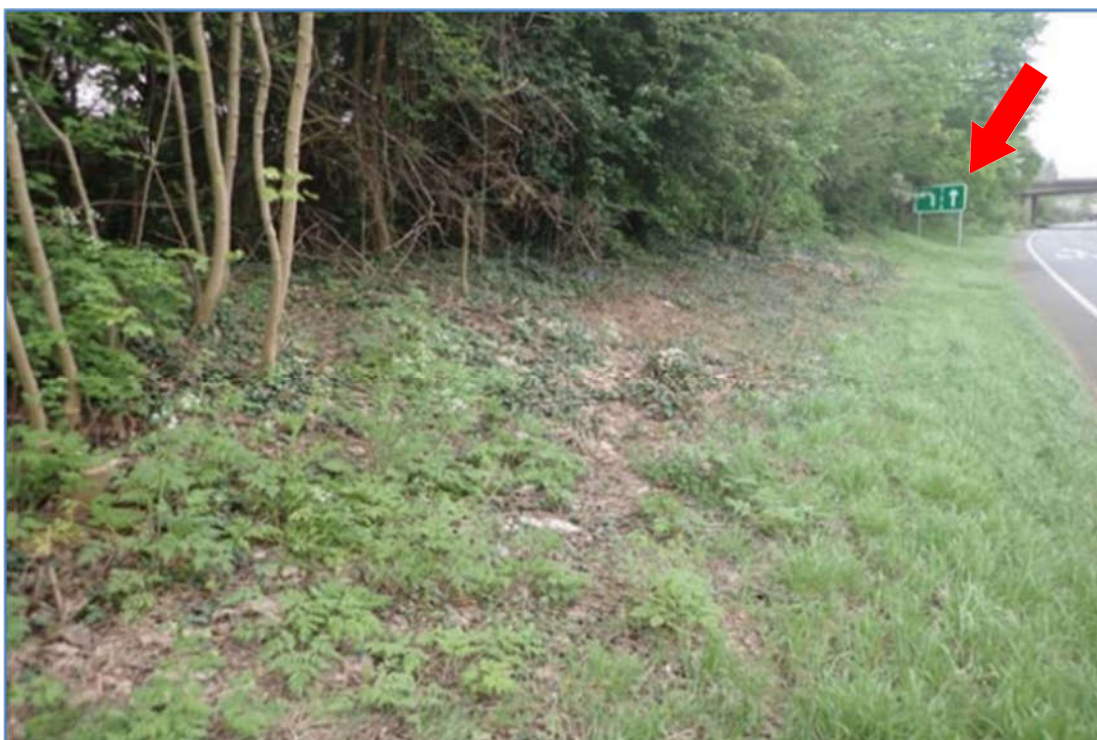
“It is recommended that the sign is mounted at the correct height and as shown on the design drawing.”

It is possible that the RSA team noticed the discrepancy between the mounting height described on the drawing and the height of the constructed sign and felt that, in itself, this was noteworthy. However, RSA is not intended to be a technical check of compliance with design requirements.

Whilst concern about the risk of increased severity might, in fact, be justified in this case, RSA teams should consider the reasoning behind construction decisions before making their recommendations and they are required to request such additional information where appropriate. In this case, the mounting height provided might have been intended to optimise forward visibility (if the approach is on an uphill gradient for example). If so, raising the mounting height would only exacerbate the problem. No mention is made about the nearby vegetation and how that might obscure the sign if it were raised.

The outcome of such deliberations should be summarised within the problem text to give it context and to illustrate that the recommendation is based on complete reasoning.

Figure 2-4 Sign mounted lower than indicated on drawing



2.2.11 Comments on compliance with standard

One of the reports reviewed this quarter includes the following text within a problem description:

“Although visibility of oncoming traffic on the westbound carriageway appears to be acceptable from a standards point of view the approach is over a crest, resulting in vehicles popping into view as they come over it.”

Whilst the text suggests that visibility would meet the required standard, the RSA team then immediately imply a road safety problem due to insufficient visibility. Whilst this illustrates that compliance with standard does not, in itself, ensure a safe design, the statement about compliance might actually confuse matters and dilute the road safety problem raised. RSA teams should restrict their comments to safety concerns and should not comment on compliance unless it directly relates to the matter raised.

2.2.12 Material sourced outside of the RSA brief process

Most RSA reports list supporting materials provided by the design team on behalf of the Overseeing Organisation for the purpose of the RSA. One of the reports reviewed this quarter contains an *“Appendix B - Other Information considered by RSA Team”*. The only item listed under that heading is *“Collision data for the period 2011 to 2015”* but the report is not clear about where this data was sourced from. This collision data would appear to have been several years out of date and may not have accurately reflected current collision trends and causations at the location of the proposed scheme.

If collision data or other important information is omitted from the supporting materials provided with the brief, the RSA team shall request it and should not rely on their own research to source such data as it may not be sufficiently up to date or robust.

Appendix A

Quarterly Factsheet
1st April 2019 to 30th June 2019

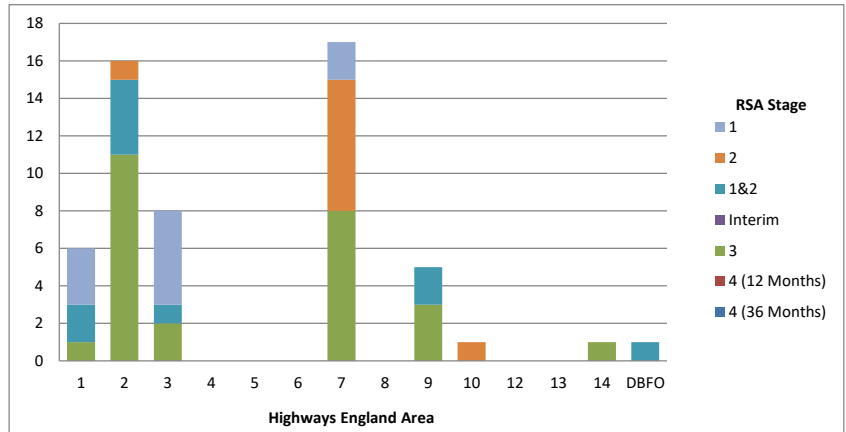
Quarterly Factsheet - 1st April 2019 - 30th June 2019 (Rev. 1.1)

Basic information

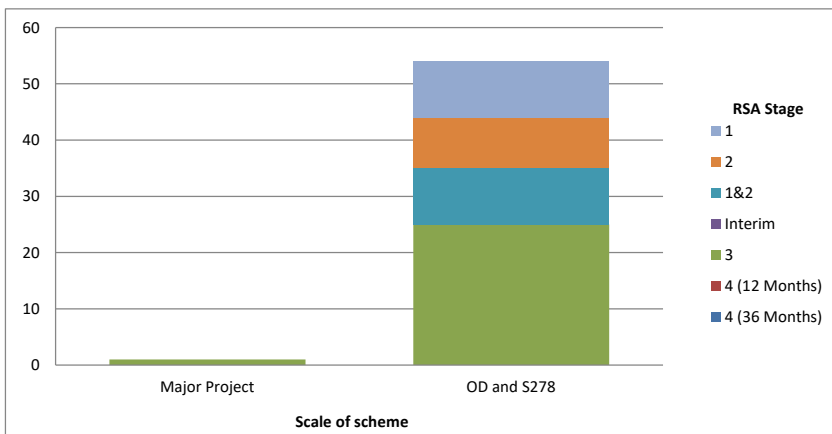
	This Quarter	Database Since Jan 2014
Number of RSAs submitted	55	2403
RSA team leader specifically identified	100%	95%
Overseeing Organisation project manager specifically identified	93%	90%

	This Quarter	Database Since Jan 2014
Average number of problems recorded	1.8	1.7
Response report issued	2%	3%
Exception report issued	2%	1%

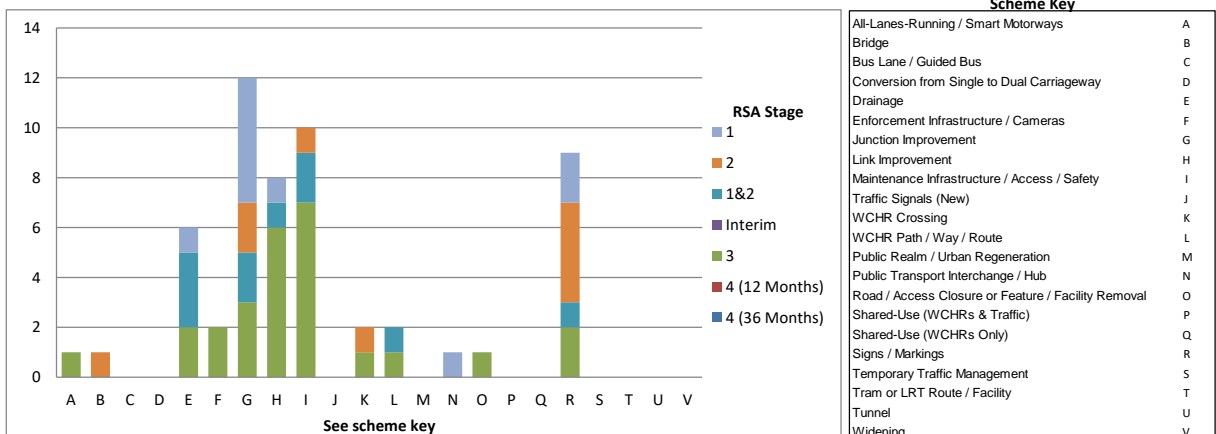
RSAs by Highways England area - This quarter



RSAs By scale of scheme - This quarter



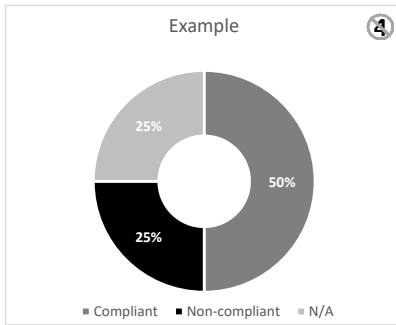
RSAs by scheme type - This quarter



Scheme Key	
All-Lanes-Running / Smart Motorways	A
Bridge	B
Bus Lane / Guided Bus	C
Conversion from Single to Dual Carriageway	D
Drainage	E
Enforcement Infrastructure / Cameras	F
Junction Improvement	G
Link Improvement	H
Maintenance Infrastructure / Access / Safety	I
Traffic Signals (New)	J
WCHR Crossing	K
WCHR Path / Way / Route	L
Public Realm / Urban Regeneration	M
Public Transport Interchange / Hub	N
Road / Access Closure or Feature / Facility Removal	O
Shared-Use (WCHRs & Traffic)	P
Shared-Use (WCHRs Only)	Q
Signs / Markings	R
Temporary Traffic Management	S
Tram or LRT Route / Facility	T
Tunnel	U
Widening	V

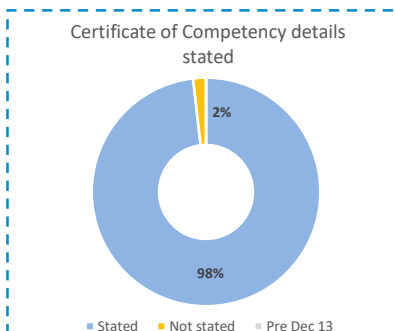
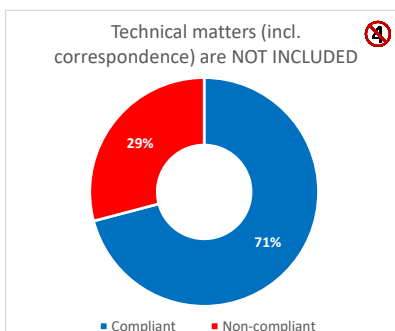
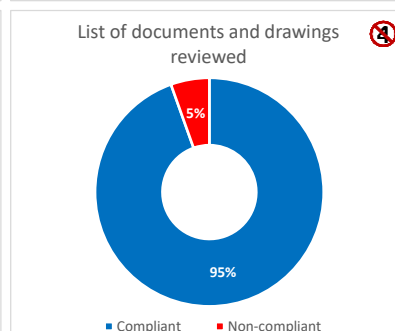
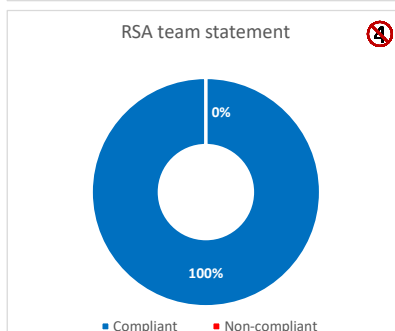
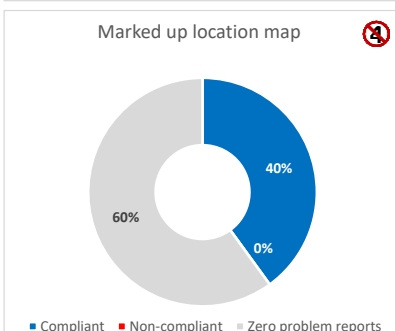
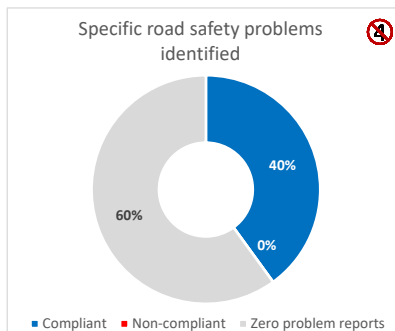
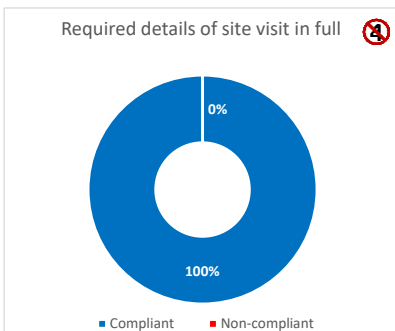
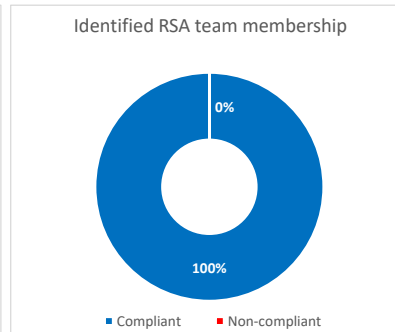
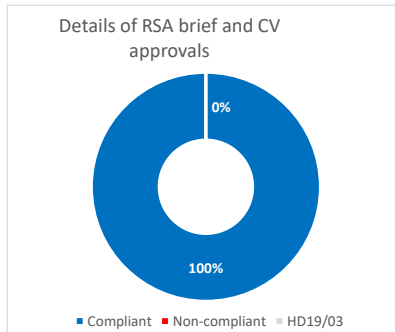
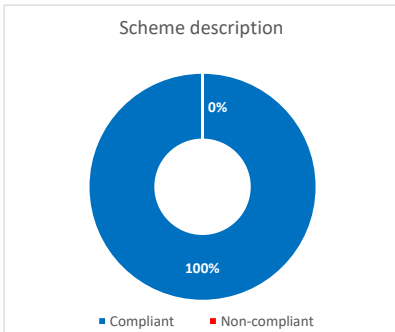
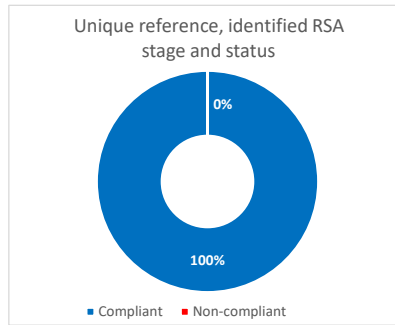
Quarterly Factsheet - 1st April 2019 - 30th June 2019 (Rev. 1.1)

RSAs by compliances - This quarter - Refers to all RSA stages unless indicated (see key)



4

Charts marked by this symbol exclude data for stage 4 RSAs as those compliances are not directly comparable



Inclusion of Certificate of Competency details is not mandatory