

**Specialist Professional and Technical Services  
Framework  
Task Ref: 1-286**

**Task Title: Road Safety Audit - Maintain & Develop  
Road Safety Audit Database**

**QUARTERLY REPORT  
January 2019 to March 2019**



## Document Control

<b>Document Title</b>	QUARTERLY REPORT January 2019 to March 2019
<b>Author</b>	Mark Gregory
<b>Owner</b>	Nicholas Bentall
<b>Distribution</b>	Task 286 - ACJV Project Team
<b>Document Status</b>	FINAL

## Revision History

Version	Date	Description	Author
1.0	29/05/19	Draft	Mark Gregory
2.0	29/07/19	FINAL	Neil Hutchings

## Reviewer List

Name	Role
John-Paul Doherty	Technical Review
Nicholas Bentall	Highways England Reviewer

## Approvals

Name	Signature	Title	Date of issue	Version

**The original format of this document is copyright to Highways England.**

## Table of Contents

	<b>1</b>
<b>1. Introduction</b>	<b>4</b>
1.1. Quarterly Reporting	4
1.2. New RSA Standard	4
1.3. Scope	4
1.4. RSAs Submitted by Highways England Areas	5
<b>2. Qualitative Review of RSA Reports</b>	<b>6</b>
2.1 Common Road Safety Problems	6
2.2 Good Practice and Areas for Improvement	9
2.2.1 Extraneous text in RSA reports	9
2.2.2 Combined stage 1 and 2 RSAs	9
2.2.3 Repeated problems	9
2.2.4 Site visit details	10
2.2.5 Road safety audit brief and team approval	10
2.2.6 Insufficient detail on the collision types of the problem	10
2.2.7 Spiral markings on roundabouts	10
2.2.8 Maintenance issue raised	11
<b>Appendix A</b>	<b>12</b>
Quarterly Factsheet 1 <sup>st</sup> January 2019 to 31 <sup>st</sup> March 2019	12

# 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](mailto:roadsafetyaudit@highwaysengland.co.uk) between **1<sup>st</sup> January 2019 and 31<sup>st</sup> March 2019** (inclusive).

## 1.2. New RSA Standard

In **October 2018**, a new RSA standard (GG 119) was published, to be applied with immediate effect. The RSA process was 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 194 RSAs were submitted**, of these:

- 126 RSAs were carried out to GG 119 and
- 68 RSAs were carried out to HD 19/15.

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 were submitted.

- |                             |                            |
|-----------------------------|----------------------------|
| • Stage 1 RSAs              | 5 reports of 8 submitted   |
| • Stage 2 RSAs              | 3 reports of 10 submitted  |
| • Combined Stage 1 & 2 RSAs | 12 reports of 64 submitted |
| • Stage 3 RSAs              | 7 reports of 53 submitted  |
| • Stage 4 RSAs (12 months)  | 0 reports of 27 submitted  |
| • Stage 4 RSAs (36 months)  | 0 reports of 32 submitted  |

The RSA 4 reporting requirements are significantly affected by GG 119 and all Stage 4 RSAs reports that were submitted this quarter were undertaken to HD 19/15. Therefore, no Stage 4 RSAs were reviewed this quarter.

## 1.4. RSAs Submitted by Highways England Areas

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

**Figure 1-1 RSAs submitted since 1<sup>st</sup> January 2014 by Highways England Operational Area**

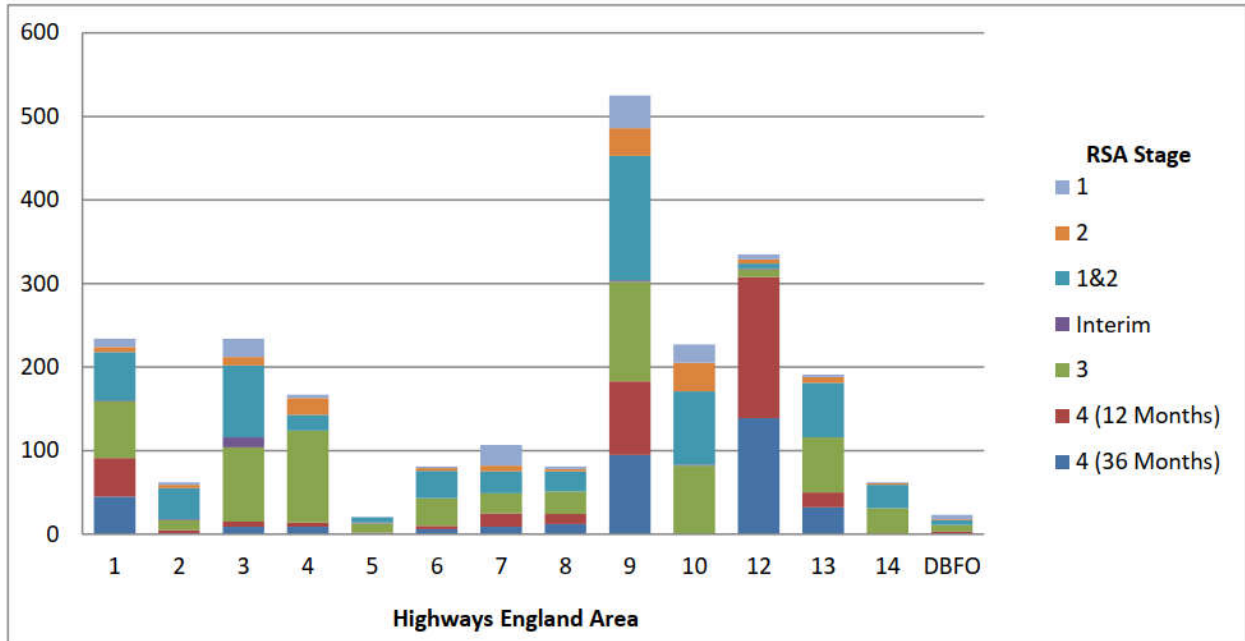
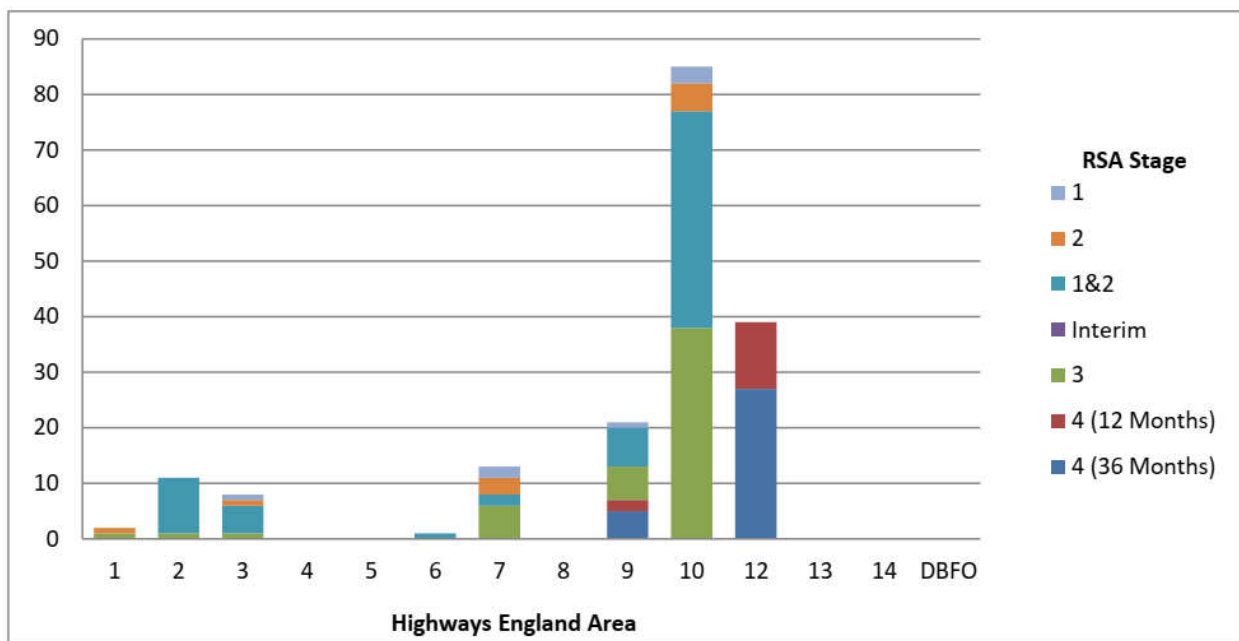


Figure 1-2 below illustrates all RSAs submitted to the SRDT inbox during this quarter, 1<sup>st</sup> January 2019 to 31<sup>st</sup> March 2019.

**Figure 1-2 RSAs submitted this quarter (Jan-Mar 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 1.3 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 122 road safety problems covering 132 road safety matters. These include previously raised problems not resolved at the time of each of the sample RSAs.

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

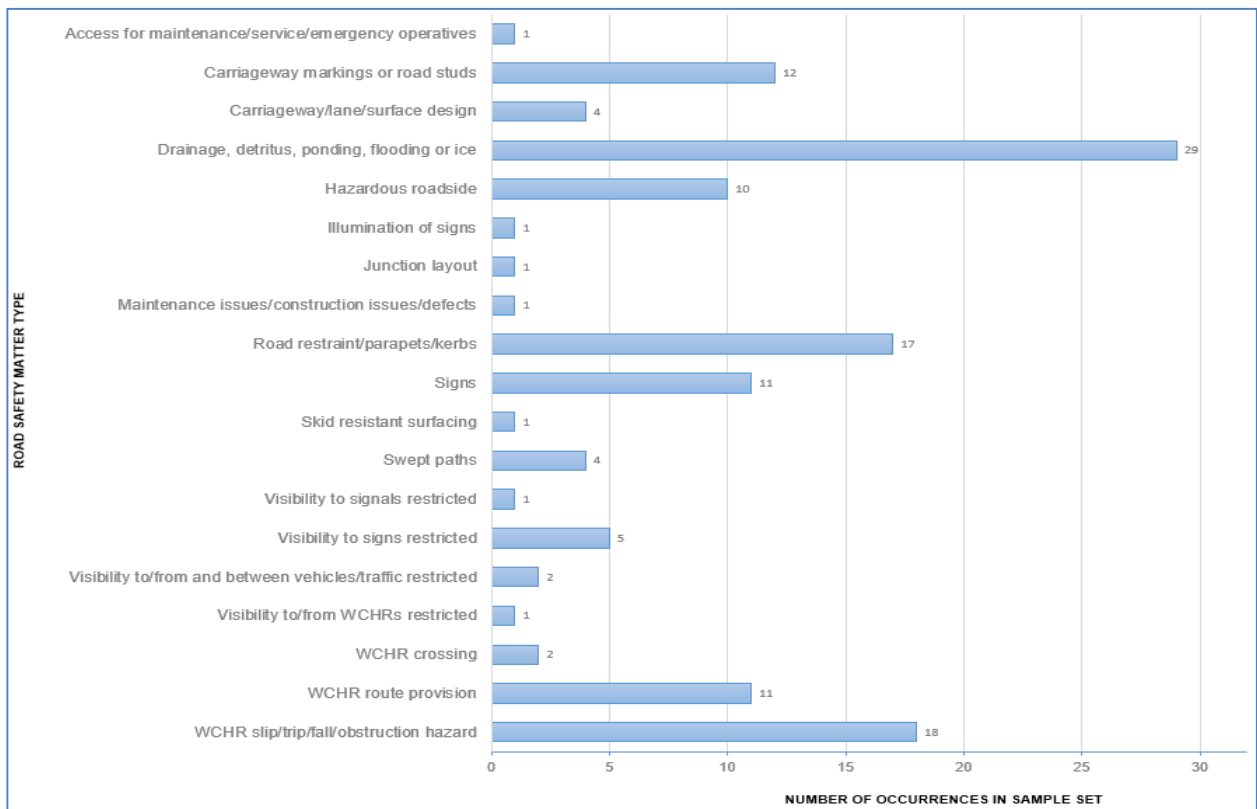
For the purpose of this quarterly report, the high-level categorisation of the problems and matters identified within the sample group have been expressed as follows, with problem categorisations in **bold** type and matters in [square brackets]:

- **Access for maintenance / service operatives / emergency services** [absent]
- **Carriageway / lane / surface design** [alignment / width]
- **Carriageway markings or road studs** [poorly located / inconsistent / absent / inadequate / confusing]
- **Drainage and related detritus, ponding, flooding and ice** [carriageways]

- **Hazardous roadside** [street furniture / trees / structures / objects not passively safe / embankments / ditches]
- **Illumination of signs** [absence of illumination]
- **Junction layout** [stacking]
- **Maintenance issues, construction issues or defects** [ non-removal of temporary features]
- **Road restraint / parapets / containment kerbs** [inadequate / terminals / working width compromised / risk of launch]
- **Signs** [absent / confusing]
- **Skid resistant or high friction surfacing** [absent]
- **Swept paths** [kerb-strikes / overrunning footways or cycleways / overrunning verges / collision with infrastructure or furniture]
- **Visibility to / from and between WCHRs restricted** [street furniture]
- **Visibility to signs restricted** [by vegetation / other signs / infrastructure]
- **Visibility to traffic signals restricted** [by vegetation]
- **Visibility to/from and between vehicles/traffic restricted** [by vegetation / street furniture]
- **WCHR crossing** [inconspicuous]
- **WCHR route provision** [inadequate / inappropriate]
- **WCHR slip, trip, fall or obstruction hazard** [poor or uneven surface / unprotected drops / street furniture / service and drain covers]

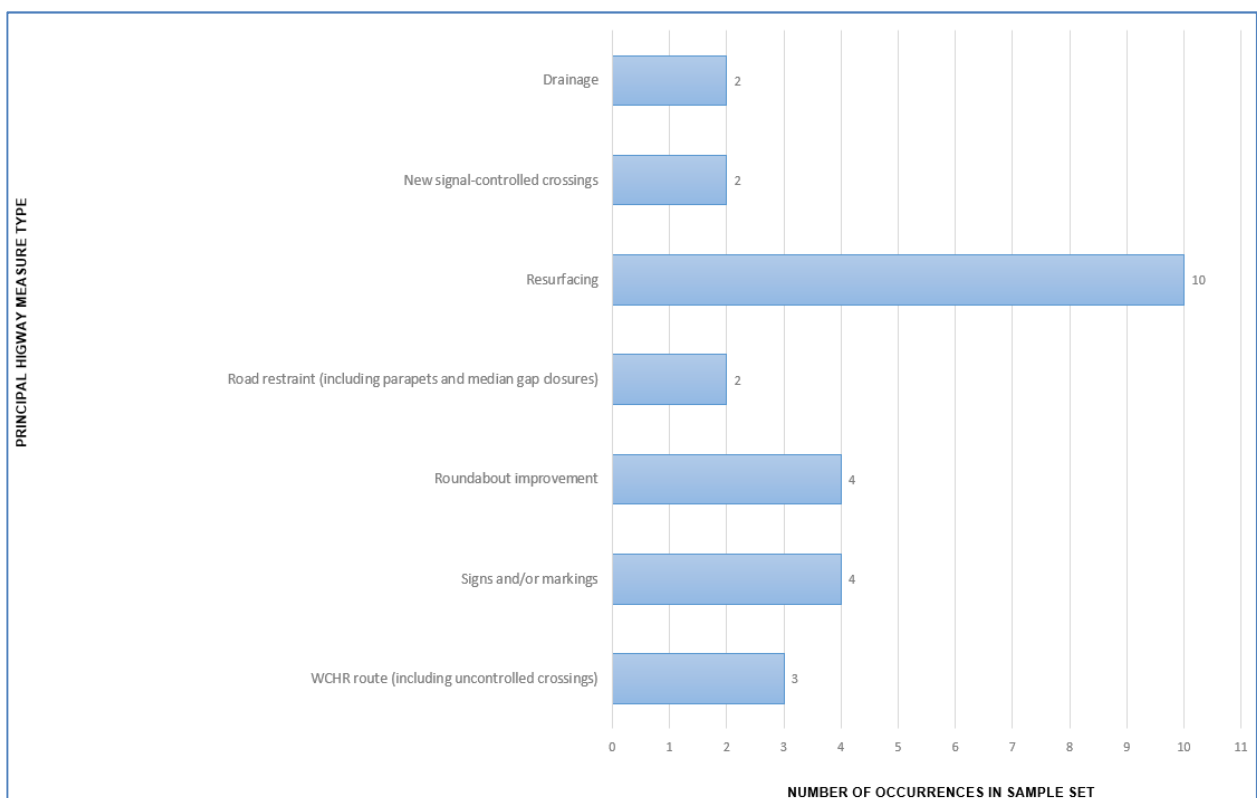
The 132 matters covered in the sampled reports are categorised in Figure 2-1 overleaf which indicates the frequency of occurrence. The categories of these are shortened to fit the figure dimensions and the chart should be read in conjunction with the bullet list above for a fuller description.

**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 Extraneous text in RSA reports

A number of the reviewed reports included extraneous text, particularly in the introduction.

This extraneous text often includes disclaimer-type statements by the audit team, instructions to the designers or definitions not used in the report. One supplier gives a paragraph defining different types of “pedestrians” (where relevant) in every RSA report even when no pedestrians are mentioned in reports submitted. The pedestrian definition appears to be an unnecessary inclusion in the report.

The Illustrative Report in Annex F of HD 19/15 included section headings for common problem types such as “general”, “alignment”, “junctions”, “non-motorised users” etc. GG 119 does not include these headings in the report template, yet some reports continue to show these headings repeated with “no comments” noted when no safety problems are raised. Whilst problems may be grouped under headings, where no problems of that type are raised, the heading should be removed to avoid detracting from the actual problems raised.

Furthermore, the term “non-motorised users (NMUs)” is still being used but should be replaced by references to walking, cycling and horse riding as used in HD 42/17.

### 2.2.2 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 high:

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

The sample set for review this quarter included eight of the combined stage 1 and stage 2 RSAs. This quarterly review included a consideration of the scheme types, problem descriptions, and the drawings listed in the appendices of those combined stage 1 and stage 2 RSAs. From that consideration, it is clear that seven of the combined RSAs were carried out on schemes which had likely had a preliminary design stage. In accordance with GG 119, schemes which have had a preliminary design stage shall have separate stage 1 and stage 2 RSAs.

### 2.2.3 Repeated problems

In six of the sampled combined stage 1 and 2 RSAs there were lengthy but identical descriptions of the same problem at different locations. (The highest number of repeated problems was 10 in one report.) 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. This would make for a clearer and more succinct report, making it an easier read.

## 2.2.4 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 61% compared with 18% non-compliance recorded in the previous quarter. 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. The missing information in the sampled reports was the traffic conditions at the time of the site visit.

## 2.2.5 Road safety audit brief and team approval

This quarter has seen an increase in RSA reports not providing the required details of the RSA brief and team (CV) approvals. In this quarter, non-compliance was at 25% compared with 7% non-compliance recorded in the previous quarter. The non-compliant reports are from two operational areas. In one of the sampled reports with non-compliance, it stated that the brief was supplied on behalf of the *'project sponsor'*, so it is unclear whether the brief had actually been approved.

GG 119 states that the RSA report shall include details of who supplied the RSA brief, who approved the RSA brief and who approved the RSA team. In a few of the sampled RSA reports, the brief was *"approved"*; instead the brief was either *"provided"* by or *"signed"* by the *"project sponsor"*.

## 2.2.6 Insufficient detail on the collision types of the problem

In one of the RSA reports, the proposed scheme involved a large map-type sign being replaced with a new sign on the offside of the slip road approach to a roundabout rather than the existing nearside location. The audit team gave five reasons why the replacement sign should be kept on the nearside rather than the offside. Only the first reason had an associated collision-risk described in the problem.

Several of the other reasons are perhaps tenuous, such as *drivers forgetting information on the sign if sited too far from the roundabout* or *overseas drivers thinking they should turn right because the sign is on the offside when in fact they wish to turn left*.

GG 119 states that there should be a separate statement for each identified problem describing the location and nature of the problem and type of collisions or road user injuries likely to occur as a result of the problem. The reasons given should have been expanded upon to describe the collisions likely to result from the scenarios described.

Similarly, in the same report, the summary notes the *"variations in the advanced parking bay signs may result in collisions due to inconsistent driver behaviour"*. The problem is expanded in terms of why the audit team feels that consistency is required in sign sizes and in distances from the parking bays, but no collision types are given with these reasons.

## 2.2.7 Spiral markings on roundabouts

In four of the last six reviews, some sampled reports have involved a scheme to improve capacity at a roundabout using road markings such as spiral road markings. These RSAs have frequently made adverse comments about the proposals or have given design advice for the signing and markings proposed.

In the latest review, one report notes that the use of markings to diag.1010 on the roundabout *"...may introduce confusion and doubt as to where they should position their vehicle. Circulating powered two-wheelers may lose control as the tyres lose grip on the markings particularly in wet conditions..."* The associated recommendation is to *"...follow guidance in TA 78/97 for appropriate spiral markings..."*

Whilst some of the proposed markings on the roundabout do not appear to be as per the guidelines in TA 78/97, the confusion described for road users may not materialise as the plan shows that the markings clearly define lanes on the circulatory area. If guidance in TA 78/97 is used, then this may actually lead to longer road markings being used which might be more hazardous to powered two-wheeled vehicles if they cannot avoid them in wet conditions.

It would appear that the use of the wrong line type, in itself, might not present a realistic collision risk. As such, this might not have warranted a road safety problem and should probably have been omitted. In such cases, RSA teams should focus the wording of road safety problems on clearly demonstrable hazards introduced by non-compliance.

### **2.2.8 Maintenance issue raised**

One of the Stage 3 RSA reports, notes that “...*hazard marker posts are prone to damage by vehicles straying to the edge of, or leaving, the carriageway...*” then adds that the “*current, near-pristine conditions of the marker posts offers reasonable delineation of the alignment...*” Concerns are then raised as to the performance of the hazard marker posts should they become soiled or damaged. The recommendation to clean and replace damaged marker posts is effectively a potential maintenance issue. It is not a safety issue that has actually been observed.

# Appendix A

**Quarterly Factsheet**  
**1<sup>st</sup> January 2019 to 31<sup>st</sup> March 2019**

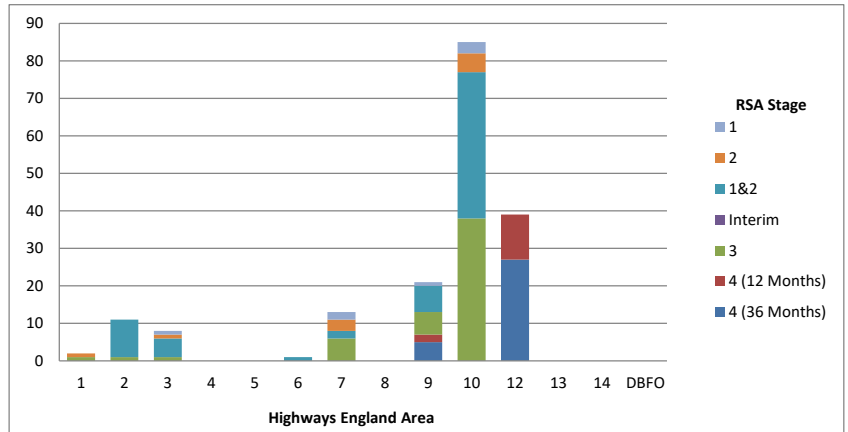
## Quarterly Factsheet - 1st January 2019 - 31st March 2019 (Rev. 1)

### Basic information

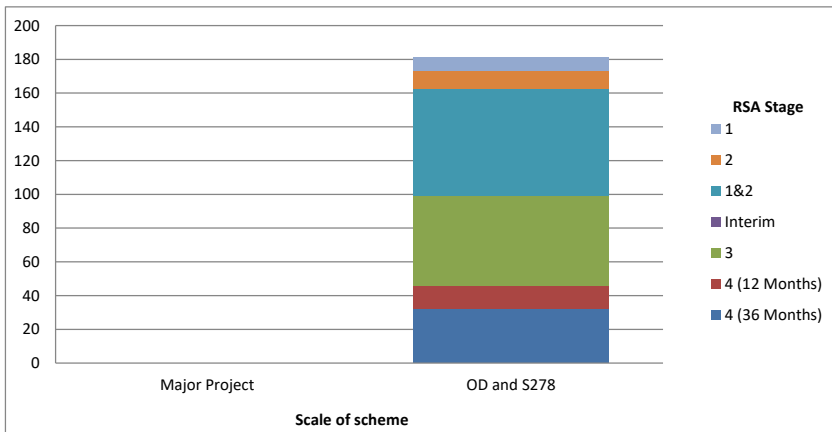
	This Quarter	Database Since Jan 2014
Number of RSAs submitted	181	2348
RSA team leader specifically identified	99%	95%
Overseeing Organisation project manager specifically identified	94%	90%

	This Quarter	Database Since Jan 2014
Average number of problems recorded	1.0	1.7
Response report issued	7%	3%
Exception report issued	0%	0%

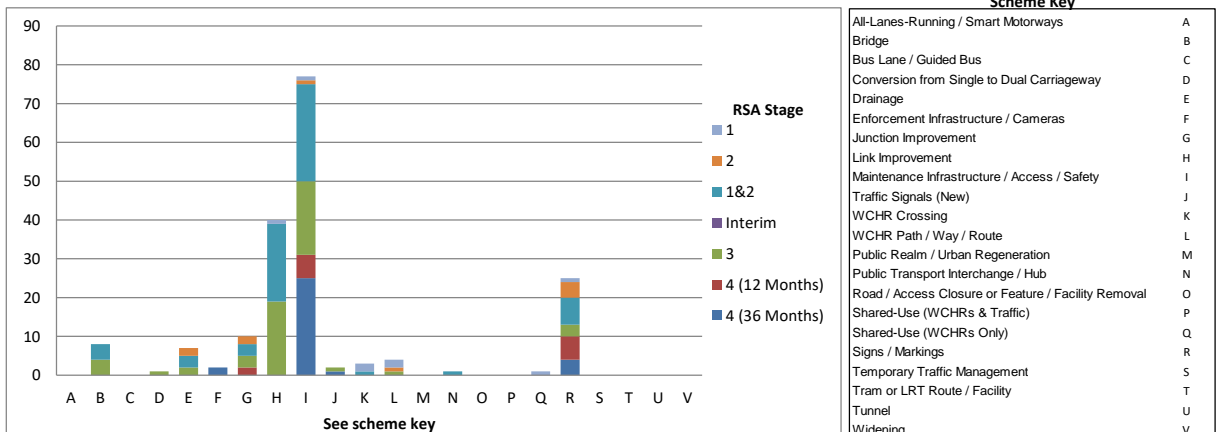
### RSAs by Highways England area - This quarter



### RSAs By scale of scheme - This quarter



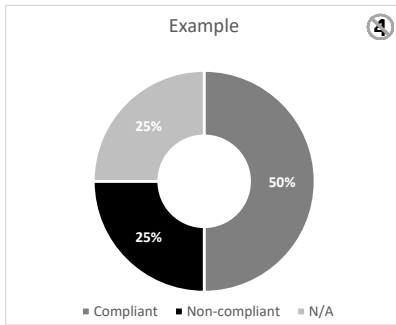
### RSAs by scheme type - This quarter



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

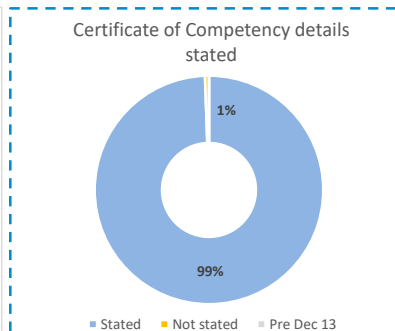
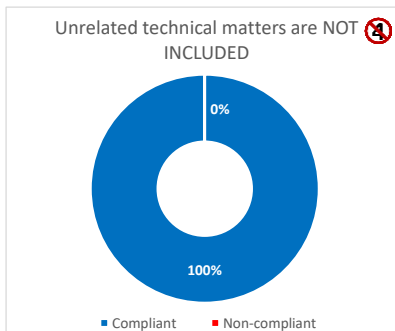
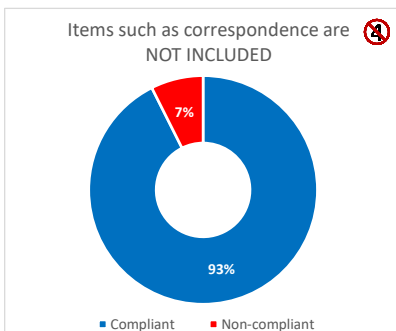
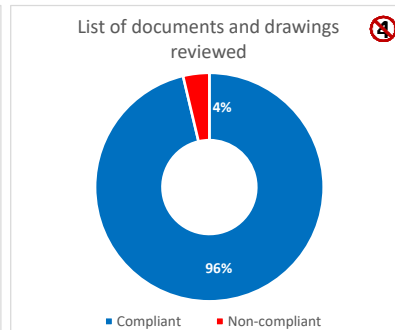
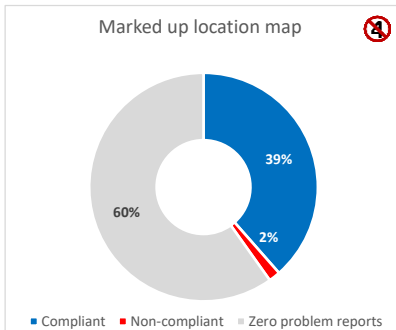
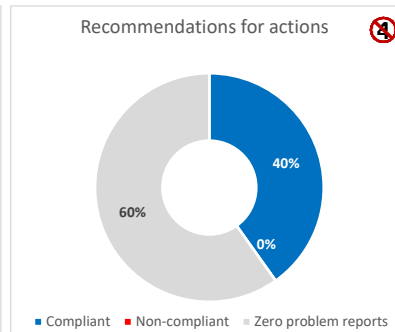
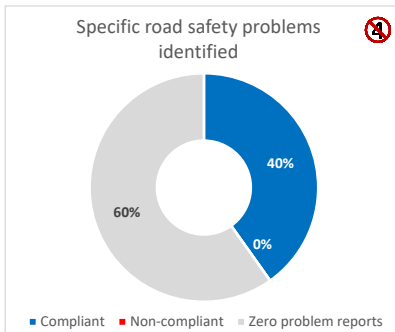
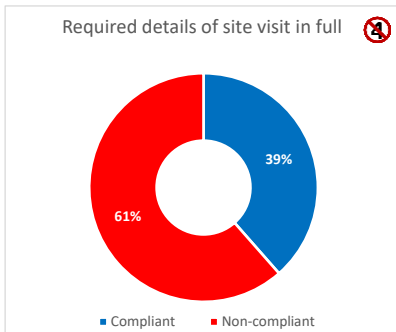
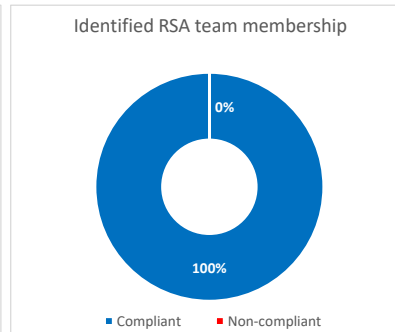
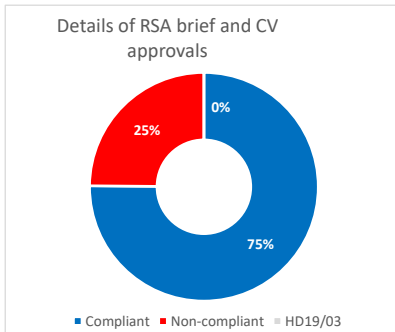
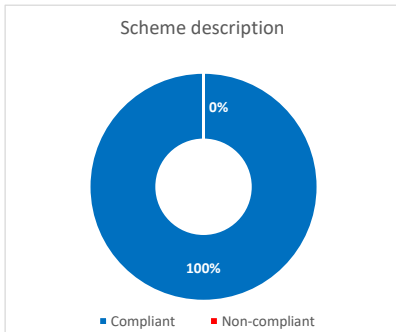
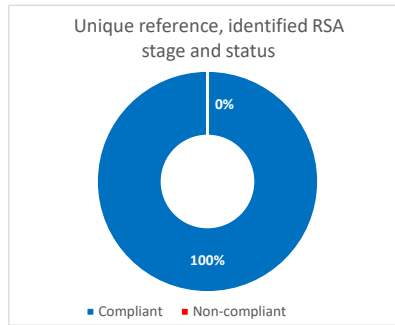
## Quarterly Factsheet - 1st January 2019 - 31st March 2019 (Rev. 1)

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