



Measuring performance of England's strategic roads: what users want

March 2017

Foreword

What do drivers want from England's motorways and major 'A' roads? How would they like to see that measured and reported to help boost performance?

Transport Focus and the Office of Rail and Road (ORR) support aligning performance measures with road users' and stakeholders' needs.

Working with Highways England and the Department for Transport, we carried out research into how road users think performance should be measured. What follows is a summary of road users' views, including those of drivers, cyclists, pedestrians and equestrians. It is supplemented by the full research report which sets out in detail what road users think is important and why.

In brief, drivers are most concerned with journey time itself, arriving when they estimate they should, and avoiding wide variations in travel time for the same trip. However safety is the key success factor for cyclists, pedestrians and equestrians who travel along the SRN or need to cross it.

We have shared the findings of this research with Highways England to help it develop a suite of measures to assess performance of the SRN in Road Period 2 (2020-25). We have also shared



Anthony Smith



Joanna Whittington

them with the Department for Transport to help Government consider which areas should attract targets in that period.

Transport Focus and ORR intend to review Highways England's proposals against road user opinion in a final stage of this research.

The metrics will then be included in the process that leads to formulation of the second Road Investment Strategy for England's strategic roads.

Anthony Smith
Chief Executive
Transport Focus

Joanna Whittington
Chief Executive
Office of Rail and Road

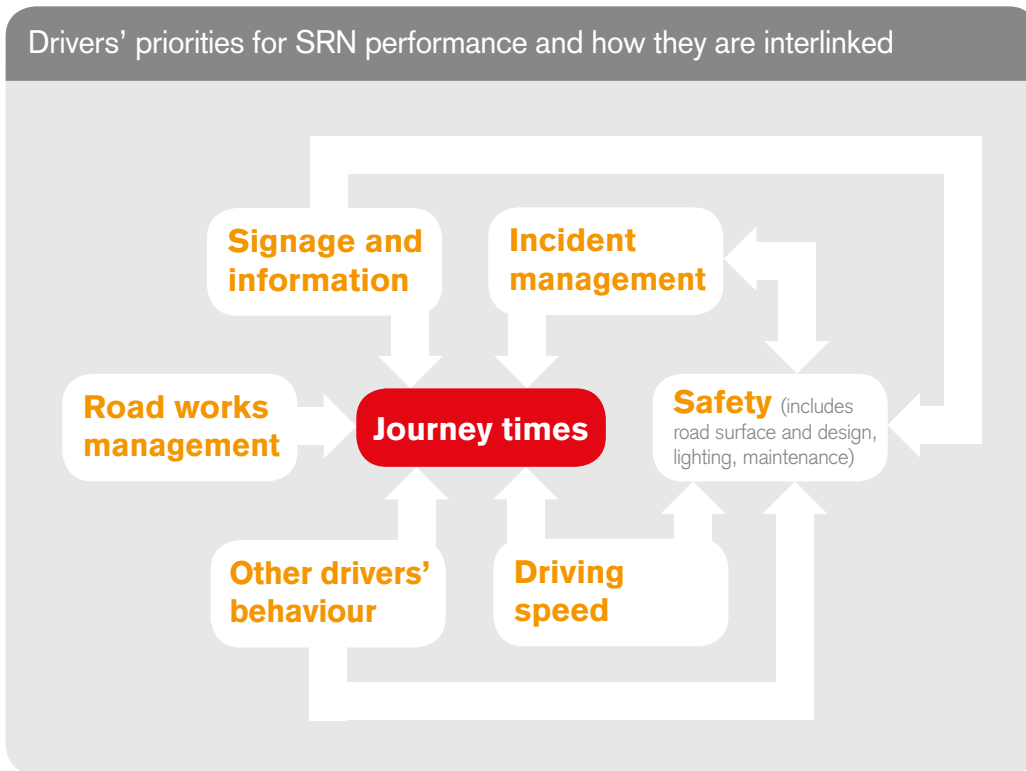
Introduction

This research identifies a number of key themes that road users believe should be covered by the performance specification to be set for Highways England in Road Period 2 (2020-25). Many are included in the current performance specification, as set out in the Government's first Road Investment Strategy. However, there are gaps – most notably around journey time, for which there are no targets, and the absence of measures around

signage, information and other drivers' behaviours. Even where a theme *is* covered in the current performance specification, the research showed important differences in how road users think about issues and define success. Plugging the gaps and measuring performance in the way road users judge it will be vital to ensuring that Highways England is focused on the things that matter most to its customers.

Key findings

What drivers want



The research shows that for drivers there are seven key factors when it comes to SRN performance, of which journey time is central.

Our research shows that drivers think about journey time in three main ways, which will often blend together:

- the actual journey time, in other words how long it takes to make a particular journey
- how often they arrive when they estimate they will (often determined by previous experience; what Google maps or a Sat Nav has suggested; and their view of how long it should take driving at the speed limit)
- predictability of journey time – in other words not having wide variations for the same trip on different days (this is often expressed by commuters and freight and logistics companies as not needing to leave a cushion to be sure of arriving on time, only to arrive early on many occasions).

Journey time is also at the heart of why road users want to see performance measured in relation to other elements –

for example, roadworks management and incident management. Even improved safety was often cited as desirable as much because fewer accidents means better journey times, as because it would reduce death and injury.

That said, safety is an important secondary factor for drivers, generally judged by the number of incidents. Many link this with road design, road surface quality, signage and lighting, but also with how other drivers behave. The latter ranges from other drivers not knowing the rules and poor driving etiquette, through to deliberate flouting of the law (for example speeding) and even intimidating, anti-social behaviour.

Each of the seven themes for drivers are listed overleaf, together with the key areas road users wish to see measured relating to each theme.



Drivers

Key themes	Key areas to measure
Roadworks management	Proportion of roadworks completed on time How well traffic flows through roadworks Quality of work (so it doesn't have to be done again)
Incident management	How quickly incidents are cleared away Speed, accuracy and usefulness of incident-related information Number of incidents that happen in the same location
Driving speed	What proportion of a journey can one drive at the speed limit What proportion of a journey can one drive at a constant speed
Signage and information	Proportion of signs that are clearly visible How useful is the information on signs and road markings Speed of updating information on electronic signs
Journey times	What proportion of journeys do I get there when estimated How predictable are my journey times
Safety (encompassing road surface and design, lighting, maintenance etc)	Proportion of road surface in good condition Proportion of the road with good visibility/lighting Number of incidents/accidents (by cause)
Other drivers' behaviour	Lane discipline Incidence of intimidating/threatening behaviour Police presence

What cyclists, pedestrians and equestrians want

For cyclists, pedestrians and equestrians, there are four key factors when it comes to SRN performance, of which safety is central.



They want to see Highways England's performance measured around road design and upkeep, signage and the behaviour of other road users (in other words, drivers of vehicles). While important issues in their own right, the underlying reason these were raised tended to be because of their link with improving safety – whether it be for those travelling along the SRN or those crossing it.



Cyclists, pedestrians and equestrians

Key themes Key areas to measure

Road design	Proportion of road miles with paths for cyclists, pedestrians and equestrians
	Width of space for cyclists, pedestrians and equestrians
	Number of crossings meeting the needs of different non-motorised road users
Safety	What proportion of the SRN has good visibility and lighting
	Number of places with safety risks for cyclists, pedestrians and equestrians related to road surface or overgrowth
	Number of accidents involving cyclists, pedestrians and equestrians
Signage and information	How often signs warn drivers about the presence of cyclists, pedestrians and equestrians
	How useful road marking information is to cyclists, pedestrians and equestrians
Other drivers' behaviour	Number of accidents involving cyclists, pedestrians and equestrians that arise from poor driving
	Police presence

What happens next?

Findings from this research have been shared with Highways England to help with the development of a suite of measures to assess performance of the SRN in Road Period 2. It has also been shared with the Department for Transport. Highways England is preparing draft metrics for Road Period 2 (2020-25) which will contribute to development of the second Road Investment Strategy. Transport Focus and ORR intend to review Highways England's proposals against road user opinion in a final stage of this research.

How we carried out this research

This qualitative research involved two stages of exploring road users' views about what should be measured, and how. The first stage identified seven key themes among drivers and four key themes among cyclists, pedestrians and equestrians – also identifying particular elements within each theme. The second stage then explored each of those themes in greater detail to understand how road users feel success should be measured and what level of performance would be regarded as great, ok and poor.

In the first stage we conducted 35 mini focus groups (four road users per group) and seven depth interviews, split uniformly across each of the seven Highways England regions. It involved those who drive for a living, those who drive on business or for leisure, and those travelling to or from work. Cyclists, pedestrians and equestrian users of the Highways England network also took part. The depth interviews were with disabled drivers, novice drivers and older drivers. In total we spoke to 147 road users in stage one.

Stage two involved the same structure of mini focus groups and depth interviews as stage one (albeit with different individuals taking part). We therefore spoke to a further 147 road users in stage two.

We have also captured the views of businesses for which the Highways England network is vital (for example the freight logistics sector and coach operators) through eight stakeholder interviews.

The research was conducted for Transport Focus and ORR by Define Insight, whose report follows in section two.



Contact Transport Focus

Any enquiries about this research should be addressed to:
Guy Dangerfield
Head of Strategy
e guy.dangerfield@transportfocus.org.uk
w www.transportfocus.org.uk

Fleetbank House
2-6 Salisbury Square
London
EC4Y 8JX

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Define research & insight

**Strategic Road Network performance
metrics research report**

for

**Transport Focus
and
Office of Rail and Road**

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1 Executive summary

Motorised road users' priorities for SRN performance

The research identified a set of core performance themes based around key factors impacting on journeys on the SRN. A range of different drivers were consulted, including: leisure, commuter and business drivers; older, disabled and new drivers; and those who drive for a living.¹ While there were some variations in the hierarchy of these themes for different types of drivers, most in this sample consistently highlighted the following themes as central to their experience of SRN:

- **Journey times**
- **Roadworks management**
- **Incident management**
- **Driving speed**
- **Other drivers' behaviour**
- **Signage and information**
- **Safety** (encompassing a range of issues impacting on safety, such as road surface and design, lighting, and maintenance).

While respondents discussed each of the above as distinct themes, there was some overlap between them too. For example, driving speed featured as an element of many of the other themes, but in different ways depending on whether the issue was driving under or over the speed limit. Nevertheless, it was also seen as a distinct theme in its own right, as respondents thought it was an important factor for their experience of the SRN.

In addition, some other themes were mentioned too, but to a lesser extent than the main ones listed above:

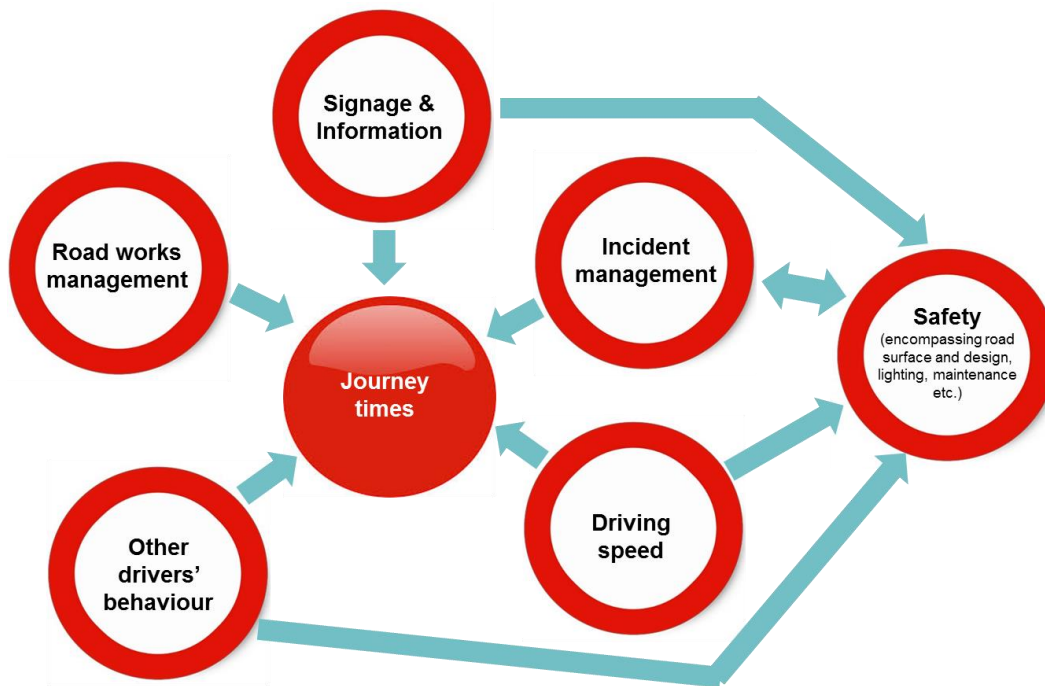
- Traffic volume was acknowledged by all drivers as a key factor causing congestion and affecting their journeys, but most felt there was little that could be done about it. Therefore, they didn't see it as something the SRN operator could be judged on in terms of its performance.
- Issues related to road surface and design or maintenance were sometimes discussed as separate themes. However, they were mostly raised in relation to safety which is why we included these issues within the broader safety theme.

Across different types of drivers, **journey time** was perceived as the dominant issue for the quality of their experience of the SRN. Accordingly, many of the other issues – such as roadworks management, incident management or driving speed – were largely brought up because of their impact on journey times.

¹ For more information about the sample and definitions of different driver types see section 3

Safety, on the other hand, was rarely mentioned as an issue spontaneously but has featured as rationale for being concerned about a range of other specific issues (e.g. surface quality, surface water, lighting etc.). Still, it was another area like journey times which respondents saw as strongly related to some of the other performance themes, such as **driving speed, incident management, other drivers' behaviour and signage and information**. The diagram below shows respondents' perception of the relationships between these different performance themes.

Diagram 1: How priorities are interlinked for drivers



Research also identified some slight variations in the importance of different themes for different categories of drivers. Some key differences between drivers concerned the following:

- Journey times were important to all but some leisure drivers, as well as older and new drivers, felt more flexible about them, as they could sometimes travel at off-peak times and some of the leisure journeys were less time-sensitive.
- Driving speed was also not equally important to all driver types. It was slightly lower in importance for professional drivers than for other types of drivers, where the former had speed limitations (e.g. those driving HGVs). Furthermore, most new, older and disabled drivers were primarily concerned about driving at a consistent speed rather than driving fast.
- Signage and information and other drivers' behaviour were important themes for all drivers, but they were particularly important to new drivers who were less confident about navigating the SRN and driving alongside others.
- For the same reason, safety was more of a priority for some new, older and disabled drivers' than for other driver groups. That is not to say that other drivers didn't see safety

as important too, especially after being probed about it; but top of mind it was less of a concern for them as they largely saw SRN roads as safe.

Once respondents identified key performance themes, they were then asked to suggest ways of measuring the SRN’s performance. Starting from a broad range of suggestions for potential measures generated in Stage 1, Stage 2 respondents used a range of strategies to help them prioritise and choose up to three key measures for each theme. In some instances, respondents simply felt that particular measures were more important than other ones, so chose those that seemed to express their highest priorities most. For example, most drivers agreed that completing roadworks on time was more important to them than information about roadworks (even though information was seen as very important too).

In other instances, respondents looked for relationships between the measures as a way of narrowing the list of potential measures down and prioritising. In those cases, respondents assumed that good performance in one area would mean there must be good performance in some other related areas. For example, they assumed that if incidents are cleared away quickly, this is likely to mean that access for emergency services is good on the SRN. In another case, they thought that if the traffic flows well through roadworks it is likely to mean that other aspects of roadworks management are working well, too. In this and similar cases, drivers chose the ‘higher order’ measures and discounted those that seemed to be implicitly ‘assumed’ by the main measure. Having gone through the process of prioritisation, respondents arrived at their final suggestions for the potential metrics across the key performance themes, which are outlined in the table below.

Key themes	Key areas to measure
1. Roadworks management	Proportion of roadworks completed on time
	How well traffic flows through roadworks
	Quality of work (so it doesn’t have to be done again)
2. Incident management	How quickly incidents are cleared away
	Speed, accuracy and usefulness of incident-related information
	Number of incidents that happen in the same location
3. Driving speed	What proportion of a journey can one drive at the speed limit
	What proportion of a journey can one drive at a constant speed
4. Signage and information	Proportion of signs that are clearly visible
	How useful is the information on signs and road markings
	Speed of updating information on electronic signs
5. Journey times	What proportion of journeys do I get there when estimated
	How predictable are my journey times

6. Safety (encompassing road surface, lighting, maintenance etc.)	Proportion of the road surface in good condition
	Proportion of the road with good visibility/lighting
	Number of incidents/accidents (by different causes)
7. Other drivers' behaviour	Lane discipline
	Incidence of intimidating/threatening behaviour
	Police presence

After respondents decided on key performance measures, they were also asked what targets, if any, they would set for each of the measures. When suggesting targets, respondents were asked to do so at different performance levels: 'great', 'OK' and 'poor'. They were also invited to discuss potential targets both qualitatively and quantitatively, to ensure their expectations and rationale are captured as well as any numerical targets.

Many found the task of setting targets for SRN performance measures challenging for several reasons. First, some were aware they lacked knowledge of current levels of performance and thus felt unable to specify realistic targets for improvement. For this reason, they were occasionally willing to suggest only an increase or decrease in the occurrence of particular issues, rather than an exact target. For example, some were unwilling to suggest targets for the reduction in the number of incidents for this reason, as they lacked data on current incident levels.

Second, there were cases where respondents felt there were too many factors and variations at play to be able to easily set general performance targets. In those cases, some felt flexible or variable targets might be more suitable. For example, some felt this was the case with major incidents as there were too many possibilities to be able to set the targets for the time taken to clear major incidents away.

Third, there were certain instances where respondents felt uncomfortable about setting targets for different levels of performance: 'great', 'OK' and 'poor'. This was usually the case where respondents felt it would not be appropriate to suggest that a certain amount of negative performance in some areas could still be seen as 'OK'. For example, many were reluctant to set any lower standards than 'great' for intimidating and threatening behaviour by other drivers, as that seemed to suggest they accepted a certain amount of this as 'OK'.

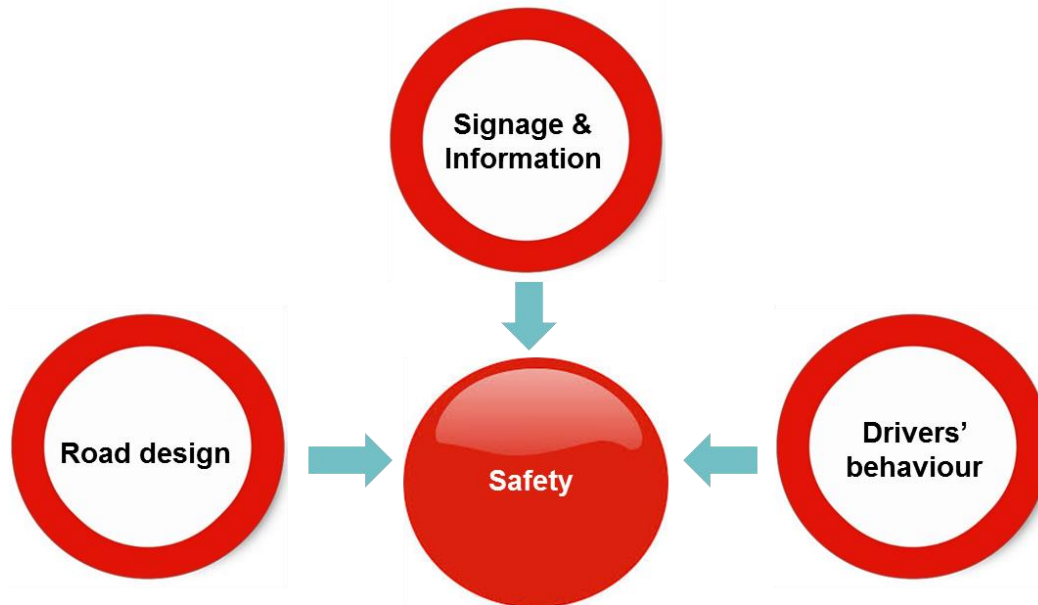
Nevertheless, there were other instances where respondents felt more confident to set performance aims and targets based on their experiences and needs from the SRN. For example, most agreed targets needed to be very high for visibility of signage, given the importance of signage to driver safety and decision-making.

Cyclists, pedestrians and equestrians' priorities for SRN performance

In contrast to motorised road users, **safety** was the biggest concern for non-motorised users of the SRN, whereas journey times and factors impacting on journey times were less of an

issue, if at all. With safety at the centre, other key performance themes were chosen because they addressed factors perceived as impacting on safety. **Road design** (and layout) was perceived as a key factor affecting safety of non-motorised users, followed by **signage and information** and **drivers' behaviour**. The diagram below illustrates these relationships between these key performance themes.

Diagram 2: How priorities are interlinked for non-motorised users



In terms of the ways to measure performance in each of these themes, non-motorised users in our sample suggested the following potential metrics:

Key themes	Key areas to measure
1. Road design	Proportion of road miles with paths for cyclists, pedestrians and equestrians
	Width of space for cyclists, pedestrians and equestrians
	Number of crossings meeting the needs of different non-motorised users
2. Safety	What proportion of the SRN has good visibility and lighting
	Number of places with safety risks for cyclists, pedestrians and equestrians related to road surface or overgrowth
	Number of accidents involving for cyclists, pedestrians and equestrians

3. Signage and information	How often signs warn drivers about the presence of cyclists, pedestrians and equestrians
	How useful road marking information is to cyclists, pedestrians and equestrians
4. Drivers' behaviour	Number of accidents involving cyclists, pedestrians and equestrians that arise from poor driving
	Police presence

Whilst most non-motorised users in our sample agreed on the themes and metrics above, research also captured some elements that are specific to particular groups of non-motorised users. First, there were some differences in how the SRN was used which led to some differences in priorities too. Most pedestrians and horse riders in our sample, as well as some cyclists, used SRN roads mainly when they cut across their routes off the network, so they needed to cross or briefly use an SRN road to be able to continue their predominantly non-SRN journey. To that extent, they stressed the importance of positioning crossings and designated lanes so their routes were joined up rather than severed by SRN roads. Conversely, commuter cyclists and those who made regular leisure cycling trips were also concerned about being able to use SRN roads for larger parts of their travel. Hence, those cyclists were keen on measures that would support their usage of the SRN, for example, by expanding the proportion of the SRN covered by designated cycling lanes.

Second, cyclists, horse riders and pedestrians in our sample had some specific concerns with different aspects of the SRN. For example, cyclists had more of a focus on road surface issues than other non-motorised users, although some horse riders highlighted similar issues but to a lesser extent. In addition, respondents highlighted particular needs with regard to crossings, overtaking or width of space that varied between pedestrians, horse riders and cyclists.

Stakeholder perspective on SRN performance

Stakeholders in our sample generally felt that the SRN worked well in many ways, but that there were also some areas where improvements were needed. Specifically, stakeholders thought that SRN roads were generally well-managed and often safer and maintained better than non-SRN roads. However, they highlighted information provision and reliability of journey times as the two key areas where the network performed less well. Both were seen as central to these businesses' ability to plan their journeys, deliver their service on time and avoid unnecessary costs resulting from disruption to their journeys.

Like private and professional drivers, stakeholders singled out roadworks and incident management as critical for the reliability of journey times on the SRN. Their views on how performance should be measured in these respects echoed other road users, but they also raised some specific issues relevant to their work. Stakeholders also pointed out that current information provision with regard to roadworks and incidents on the SRN was often inadequate. They all strongly felt that better information provision would help mitigate the impact of roadworks and incidents on their business as it would allow them to plan and adjust in time.

Stakeholders largely agreed with the performance areas and potential measures suggested by other road users, even where they were not directly relevant to their needs. They also suggested some additional potential performance themes and measures specifically related to their work. These concerned some infrastructure issues with regard to: capacity of particular parts of the network to cope with the traffic volume; integration of the SRN with local road networks; and sufficient provision of lay-buys and safe places to stop and rest, as well as facilities such as toilets for drivers and shelter at bus stops on the SRN.

Views on the current performance framework

Road users in this sample were positive about those aspects of the current performance framework which they felt reflected their priorities well. Specifically, they were satisfied to see some of the measures they suggested already included. These included measures related to **safety, incident management, roadworks management, journey times, road surface and user satisfaction**.

However, the research also revealed some discrepancies between the current framework and road users' priorities for the performance measures. This was most evident in criticisms of the current framework where respondents thought some of their priority areas were missing or weren't prominent and explicit enough. Respondents noted the themes of **signage and information, drivers' behaviour** and aspects of safety such as **lighting** were altogether absent from the current framework, whereas they were seen as important by many. Many also thought that **journey times** and **roadworks management** weren't covered explicitly and prominently enough in the current framework when compared to the importance they were given in respondents' suggestions. Others thought that roadworks management and journey times were missing altogether as performance areas, as they weren't mentioned explicitly.

Targets in the current framework were generally perceived as a proof of commitment to improve performance or evidence of lack of it. Therefore, respondents were pleased where they thought targets were high, although some were sceptical about how realistic such targets were. Equally, they were critical where the targets were absent or low, seeing this to suggest a lack of commitment to improve.

Respondents also highlighted aspects of the current framework they thought were unclear, such as particular abbreviations and terminology used, but also some of the performance topics included. For example, many were unsure what the themes of 'encouraging economic growth' or 'biodiversity' meant with regard to SRN roads.

Furthermore, they questioned some of the topics included in the framework. Most respondents, except for a few non-motorised users, saw the measures of 'noise reduction' and 'biodiversity' as unimportant to them. Many also questioned the cost savings and efficiency measures. Respondents worried money for important improvements and maintenance would be cut and quality of work would suffer as a result. The research suggests these measures may need to be explained more to road users, either to help them understand the rationale for including them or to address some concerns.

2. Background and objectives

Background

Highways England is a government-owned company charged with operating, maintaining and improving England's motorways and major 'A' roads, known as the Strategic Road Network (SRN). Highways England was also tasked with implementing the government's 2014 Road Investment Strategy that sets out a long-term vision for improving and modernising the SRN.

The Performance Specification, which is a part of the Road Investment Strategy, outlines Government's requirements from Highways England for the period of 2015-2020. It is aimed at improving the SRN to better meet user needs, support economic growth and wider environmental and social goals.

The Performance Specification for the SRN is currently being reviewed in order to set out the requirements from Highways England for the second road period 2020-2025. Transport Focus and the Office of Rail and Road (ORR), working with Highways England and the Department for Transport (DfT), wished to ensure that road users' views informed development of the Performance Specification for this second Road Period.

Objectives

Research was therefore required to establish SRN users' perspective on:

- Which areas of SRN performance need to be measured and their relative importance
- How each of these areas should be measured
- What levels indicate great, OK, or poor SRN performance.

These overarching objectives were to be considered in terms of:

- Different drivers, and non-motorised users' views
- Variations by road type and journey frequency, time and purpose
- Extent to which road users make allowances, if any, for things that Highways England cannot fully control (e.g. volume of traffic, driver behaviour).

3. Research methodology

Overview

The research used a mixed qualitative methodology² comprising of:

70 workshop group discussions and 14 depth interviews with motorised and non-motorised users of the SRN

8 depth interviews with key industry stakeholders.

Fieldwork was split into two stages to allow for a more exploratory approach in Stage 1 and further refining and developing of the performance framework in Stage 2.

- **The purpose of Stage 1 was therefore to capture road users' spontaneous views about what should be measured and how** to monitor SRN performance, with the aim of identifying a short-list of priority performance themes and potential measures to be explored and refined in Stage 2.
- **The purpose of Stage 2 was to test and refine these ideas for potential measures for each of the key performance themes** and work with respondents to develop and prioritise them to identify the optimal set of key performance measures and targets.

All drivers and non-motorised SRN users completed a **pre-task prior to their interview**. Respondents were asked to complete a **brief questionnaire** to note down:

- Brief **contextual information** on their travel on (SRN) roads – purpose and frequency of travel, their typical route(s) (major roads they use)
- **Satisfaction** with their travel on those roads – what works well/less well about travelling on those roads and how that affects their travel experience
- Main **improvements** they would like to see on those roads.

Sample

The sample was split between different types of drivers using the SRN³, non-motorised SRN users and key industry stakeholders. The tables on the next page show the drivers and non-motorised SRN users we spoke to across the two stages.

² Discussion guides and recruitment screeners used in the research are available on request.

³ See pages 13 and 14 for definitions and additional sample criteria for different driver types

Stage 1

Highways England region	Professional driver groups	Business driver groups	Commuter driver groups	Leisure driver groups	Non-motorised user groups	New, disabled, older drivers depths
<i>South West</i>	Large vehicles	Age 21-40	Age 41+	Age 61+	1 group	1 - disabled
<i>M25 area</i>	Small vehicles	Age 41+	Age 21-40	Age 18-30	1 group	1 - disabled
<i>South East</i>	Large vehicles	Age 21-40	Age 41+	Age 31-60	1 group	1 - disabled
<i>Midlands</i>	Small vehicles	Age 41+	Age 21-40	Age 61+	1 group	1 - disabled
<i>East</i>	Large vehicles	Age 21-40	Age 41+	Age 18-30	1 group	1 - novice
<i>Yorks. & N East</i>	Small vehicles	Age 41+	Age 21-40	Age 31-60	1 group	1 - novice
<i>North West</i>	Large vehicles	Age 21-40	Age 41+	Age 61+	1 group	1 - over 75
Total	7 x groups	7 x groups	7 x groups	7 x groups	7 x groups	7 x depths

Stage 2

Highways England region	Professional driver groups	Business driver groups	Commuter driver groups	Leisure driver groups	Non-motorised user groups	New, disabled, older drivers – depths
<i>South West</i>	Small Vehicles	Age 41+	Age 21-40	Age 18-30	1 group	1- Novice
<i>M25 area</i>	Large Vehicles	Age 21-40	Age 41+	Age 61+	1 group	1- Disabled
<i>South East</i>	Small Vehicles	Age 41+	Age 21-40	Age 61+	1 group	1 - Novice
<i>Midlands</i>	Large Vehicles	Age 21-40	Age 41+	Age 31-60	1 group	1- Older
<i>East</i>	Large Vehicles	Age 21-40	Age 41+	Age 61+	1 group	1- Novice
<i>Yorks. & N East</i>	Large Vehicles	Age 21-40	Age 41+	Age 18-30	1 group	1- Disabled
<i>North West</i>	Small Vehicles	Age 41+	Age 21-40	Age 31-60	1 group	1- Novice
Total	7 x groups	7 x groups	7 x groups	7 x groups	7 x groups	7 x depths

In addition, we spoke to eight industry stakeholders from across the sectors with a heavy usage of the SRN network, such as freight, bus and coach, and parcel delivery.

Sample definitions and criteria:

Motorised SRN road users

Split between **professional drivers** and **private drivers** (including leisure, commuter, business, new, older and disabled drivers) as follows:

1. **Professional drivers:** Driving is their living for at least 2 years, e.g. either large vehicles [heavy goods vehicle (HGVs) light goods vehicle (LGVs) over 7.5 tonnes]; or small vehicles [good vehicles under 7.5 tonnes, motorbike couriers, taxis, coach/bus] etc. Additionally:
 - a. Spread of demographics and age across the groups
2. **Business drivers:** Driving NOT the job itself but significant part of their work time, e.g. tradespeople with vans, sales people, community health/care workers, etc. Additionally:
 - a. Spread of work/job roles and vehicle driven e.g. car, motorbike, van
 - b. Mostly frequent SRN users (weekly usage), some less frequent (but at least once a month)
 - c. Spread of time of day they mainly use SRN
 - d. Even split between men and women – mixed groups
3. **Commuters:** Use SRN to go to/from work most days (car or motorbike)
 - a. Spread of road type used motorway, dual carriageway and single carriageway use
 - b. Spread in terms of socio-economic grade
 - c. Even split between men and women – mixed groups
4. **Leisure drivers:** main use of SRN is for shopping, leisure, visiting friends/relatives, to/from holiday activities. Must use SRN at least in last three months.
 - a. A spread of reasons for travel.
 - b. A spread of frequency of SRN use: weekly, monthly and quarterly
 - c. A spread of time of day use SRN
 - d. A spread of driving confidence levels on the SRN – across category a minimum of 6 but a maximum of 8 with low confidence
 - e. A spread of road type used –motorway, dual carriageway and single carriageway use
 - f. Most make leisure trips using a car but some to drive other vehicles e.g. motorbike
 - g. At least 1 per group driving on SRN with other passengers in the car
 - h. Even split between men and women – mixed groups
 - i. A spread in terms of socio-economic grade
5. **New drivers** (passed test less than 2 years), **older drivers** (75+ years old) and **disabled drivers**

Non-motorised SRN road users:

Cycling on SRN roads, pedestrians walking along SRN or using crossings on SRN, and equestrians using bridges to cross these roads. Groups were a mix of each type of non-motorised user.

Stakeholders

Major industries using the SRN network – freight, bus, coach and delivery.

Locations

Fieldwork was completed between 17 August 2016 and 5 January 2017 and took place in: Exeter, Bristol, North and South London M25 area, Watford, Nottingham, Birmingham, Maidstone, Ashford (Kent), Colchester, Norwich, York, Newcastle, Liverpool and Preston.

The Define research team included Joceline Jones, Danica Minic, Dulcie Denby-Brewer, Katie Wise and Kirsten Sear.

4. Motorised road users' priorities for SRN performance measures

The research identified a set of core performance themes based around key factors impacting on private and professional drivers' journeys on the SRN. While there were some variations in the hierarchy of these themes for different types of drivers⁴, most respondents in our driver sample consistently highlighted the following themes as central to their experience of the SRN:

- **Journey times**
- **Roadworks management**
- **Incident management**
- **Driving speed**
- **Other drivers' behaviour**
- **Signage and information**
- **Safety** (encompassing a range of issues impacting on safety, such as road surface and design, lighting, and maintenance).

Road users' experiences in each of these areas, as well as their suggestions for potential performance metrics and targets across these seven themes are discussed below in detail.

4.1 Roadworks management

A: Drivers' experience – roadworks management

Roadworks management featured prominently as an important SRN performance theme for the following two reasons. First, roadworks were frequently cited as one of the major factors impacting on journey quality on the SRN. Respondents often complained about their negative impact on their journey times because of lane closures leading to congestion and slower traffic flow.

Second, unlike incidents which are unpredictable, roadworks are planned so road users have higher expectations from how they are managed to minimise road disruption. Many drivers across SRN regions thought that they could be managed better to reduce their impact on traffic flow. In particular, drivers raised issues with specific aspects of roadworks management, which are discussed below.

Time management of roadworks

Duration/delays: There was a widespread impression that roadworks took a long time to complete and were frequently not completed on time. Respondents cited instances where

⁴ See pages 4 to 6 for a discussion of differences in the importance of key performance themes across different types of drivers.

lanes were closed due to roadworks but they couldn't see any work taking place. For some, this led to thinking that timescales for roadworks were too lax and there was not enough urgency to complete them quickly and on time.

"If it says 6 weeks of road works. I want to see people working there for the whole 6 weeks and for it to be finished on time." [Male, 30-40, Professional driver, Small vehicles, East]

Coordination: Some drivers also highlighted issues with co-ordination of roadworks. For example, respondents thought that particular roads had frequent roadworks making them question whether some of these at least could be done at the same time rather than in succession.

"They always seem to have road works on at the same time. The companies could communicate with each other so that there aren't five major roads in a row with road works." [Male, 41+, Commuter driver, East]

Peak versus off-peak: Some respondents further expressed their frustrations at roadworks being carried out during times with high traffic volume. For example, they complained about roadworks being done in daytime or during holiday season when the number of cars swells due to tourism in some areas, such as South West or Yorkshire.

"They should do the road works at night. Get them out of the way before rush hour." [Male, 41+, Professional driver, Large vehicles, South East]

"They need to be doing more in the winter not peak holiday times on routes to holiday destinations! They need to do them at sensible times as much as possible." [Male, 61+, Leisure driver, Midlands]

"Roadworks are alright during the night, but I think they don't know what to do with the roads when they do them during the day, because they don't realise how bad the traffic gets. When they shut the lanes on a major road that has a big effect." [Male, 30-40, Professional Driver, Small Vehicles, York]

Extent of road disruption

Traffic cones: Many thought that the way cones were laid out sometimes led to more road disruption than necessary. For instance, they complained that cones were placed too far away from roadworks taking additional road space or that they were left blocking the road even when there was no work going on.

"Why cordon the roads for 5 miles? I don't get it. They shouldn't close lanes." [Female, 61+, Leisure driver, North West]

"If people aren't working... then they don't need to put their cones out. I don't take my tools into someone's house when I'm not working."

"There's a lot of frustration that comes with driving past miles and miles of cones and you can't see anyone working." [Female, 31-60, Leisure driver, Yorkshire and North East]

Lane closures: Some respondents raised issues with the extent of lane closures due to roadworks. They thought that only the lane(s) with roadworks needed to be closed rather than adjoining lanes too, whose closure they saw as unnecessary additional disruption.

"I think the road works can be a bit excessive as well, like on the M60. It's always getting closed, lanes closed. You just think what can need doing now?" [Male, 35-64, Professional Driver- Small Vehicle, North West]

Alternative routes: Where respondents experienced multiple roadworks being carried out in the same area, they complained about not having alternative routes available.

"I'll tell you a bad journey! I was coming back down South from Leeds and every major route North to South had closures on it! All the diversions weren't possible! They don't talk to each other. There's no logical planning between the different roads. It took me about 7 hours in the end!" [Male, 41+, Commuter driver, South East]

Accountability

Overrunning: Respondents also questioned whether there was any accountability where roadworks weren't completed on time. Some felt that someone should be accountable to them as road users (and tax payers) for unnecessary travel disruption. Others thought that there was less incentive to finish roadworks on time if there was no accountability about meeting deadlines.

"I think the companies should be penalised if the roadworks overrun." [Male, 41+, Professional driver, Large vehicles, South East]

"I'd like to know who is accountable for scheduling. They say it will take 2 years but it takes 6 years. They should pay fines if it goes over." [Male, 41+, Business driver, M25 area]

Quality of work: Where respondents had an experience of repeated roadworks in the same place, they also questioned the quality of previous work. These respondents stressed the need for quality standards in roadworks to avoid repeated works and travel disruption due to poor quality of work.

"It would be good if when they did roadworks, they only had to visit that area once." [Male, 21-40, Business driver, East]

"The frost gets to the cheap tarmac and it keeps breaking up. They should spend more in the first place and get the better one." [Male, Professional Driver, Large Vehicles, South East]

"I don't think the roadworks are planned well. They're resurfacing the road and then 2 weeks later they're digging it up." [Male, Professional Driver, Large Vehicles, South East]

Information

Start/end/updates: Respondents reported they were often unsure about the start and end dates of roadworks, which made it more difficult for them to plan their journeys. They also thought updates were missing about delays in completing roadworks. Respondents wanted to know the start and end dates of roadworks, as well as to be given updates if roadworks were delayed (including the information about the reasons for the delay and the new end date). This was important so they could plan their travel during roadworks.

“You want to know when it’s starting and the expected finish time. If you know it’s going to be there you can do something about it.” [Male, 31-60, Leisure driver, Yorkshire and North East]

“You’d want to know when, where and why roadworks are being carried out.” [Male, 41+, Commuter driver, East]

“They should have a way you can get information on a website so you can see all the roadworks in a certain area.” [Female, 41+, Business driver, M25 area]

“They should update the signs saying how long the roadworks actually are in miles, and how long in time they will be going on.” [Male, 21-40, Professional driver, Small vehicles, Yorkshire and North East]

B: Performance measurement – roadworks management

All the issues highlighted above were seen as important and ideally road user needs would be met in each of these areas. However, when respondents were asked to prioritise between these areas, most thought the following three areas were most important for measuring SRN performance in terms of roadworks management. Respondents also suggested ways to measure these key performance areas, as well as aims and targets where applicable.

1) Proportion of roadworks completed on time

The foremost priority of road users with regard to roadworks management is to **avoid unnecessary disruption**. Good time-management was seen as paramount to that. It was also seen as proof that roadworks are well-managed in general and provide value for money for tax payers.

Most respondents thought that completion of roadworks on time was key to avoiding more disruption than necessary. For this reason, they agreed that this should be the key performance area to measure in this regard.

→ **Specifically, respondents thought that SRN performance in terms of time-management of roadworks should be evaluated by looking at the number of roadworks completed on time.**

Some, however, worried whether such a measure could provide an incentive for having longer timescales than necessary in order to ensure a high rate of completion on time. For this reason, respondents sometimes stressed roadworks also needed to be planned to be **completed as quickly as possible**. They thought that timescales of roadworks could be assessed by looking at the productivity and the ratio of hours/days worked to the overall duration of roadworks.

“I think they need to just do them as quickly as possible.” [Female, 19, New driver, North West]

“They could see how long over the road works are taking.” I know you can’t plan for everything but they should be able to tell you how long things are going to take. It would tell you how well they were being planned.” [Male, 35-64, Professional Driver-Small Vehicle, North West]

“If they’re not completed on time then they’re not doing a very good job. If everyone is expecting it to be done and it’s not then that’s not good.” [Female, 19, New driver, North West]

Many highlighted additional aspects of time-management they thought were important. Respondents wanted to see **better co-ordination of roadworks** undertaken by different agencies and organisations. This was seen as necessary to avoid multiple roadworks in the same area that could have been done at the same time, for example, road re-surfacing and utility roadworks.

Some also wanted roadworks to be **scheduled at less busy times**, for example, during night/off-peak hours and, where relevant, outside holiday seasons, to minimise the number of people affected by disruption. Respondents thought that these aspects of time-management could be evaluated by looking at the extent to which roadworks were scheduled at less busy times and also co-ordinated to carry out all necessary roadworks in one place at the same time.

Aims and targets for the “proportion of roadworks completed on time”

Great. Respondents expected the following targets should be met for SRN performance to be seen as ‘great’ in terms of completion of roadworks on time:

- All roadworks should be completed on time or ahead of time.
- Any contingencies should already be built in the timescales (while also aiming for roadworks to be completed as quickly as possible).

Most believed that if roadworks were planned properly, this was realistic and achievable.

“100% should be on time. Of course it’s realistic, it’s the point of the tender—they get specialists in there to know how long it’s going to take to do that road.” [Male, 41+, Business driver, South West]

“They need to build the redundancy into their planning to give themselves leeway.” [Male, 30-65, Professional driver- Small vehicles, North West]

“If they said 12 weeks and it took 12 weeks then I think you’d be able to say they were managed well because they were completed on time.” [Male, 41+, Business Driver, South West]

OK. For SRN performance in this respect to be seen as ‘OK’, respondents thought that:

- 75% to 80% of roadworks should be completed on time.
- Minor overrunning could be tolerated (up to 10% of planned time) but only for longer roadworks, whereas minor roadworks (e.g. lasting 2 to 3 weeks) were expected to be finished on time.
- Minor overrunning could also be tolerated if traffic flowed well through roadworks, as smaller delays in completion were less of an issue in that situation.

Poor. Respondents thought that SRN performance in this area would be ‘poor’ if:

- More than 25% of roadworks were completed late
- There was significant overrunning, for example, 50% of planned time and more.

2) How well traffic flows through roadworks

The **extent of traffic flow through roadworks** was another key performance area for many with regard to roadworks management on the SRN. As respondents stressed, the less traffic flow was restricted, the less their journeys would be affected by roadworks. Their priority was therefore to ensure that traffic flow through roadworks was not restricted more than it needed to be.

→ **Many thought that the impact of roadworks on traffic flow could be measured by comparing the rate of traffic flow during roadworks to the typical rate for that time of year/day.**

Respondents generally understood the ‘rate of traffic flow’ to mean the number of vehicles on a particular stretch of road, for example, between two junctions. Some respondents further suggested that performance in this area could also be measured by looking at the impact of reduced traffic flow on journey times.

“The main issue with roadworks is that it holds people up—if they didn’t hold you up then no one would fuss.” [Male, 30-65, Professional driver- Small vehicles, North West]

“I think traffic flow is important to measure—it means people are getting to where they need to be on time. If someone’s checking how much roads are coned off then I just don’t see the point, as the whole point of checking the road’s not got too many cones is to get the traffic flowing better.” [Male, 41+, Business driver, South West]

Aims and targets for “how well traffic flows through roadworks”

Great. The following was seen as necessary for ‘great’ performance in terms of the traffic flow through roadworks:

- Traffic flowing at 85% of the typical rate as when there are no roadworks
- Traffic flowing at a constant, reasonable speed
- Never having to stop (except at traffic lights)
- Traffic merging well when two lanes become one.

“You’d need to compare it to the usual flow and you’d want it to be as close as possible.” [Male, 30-65, Professional driver, Small vehicles, North West]

“[Traffic should be] merging well, no bottlenecks.” [Female, 61+, Leisure driver, East]

“If you could get at like 85% or more of the normal flow of traffic then that would great.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

OK. Respondents described the following conditions as ‘OK’ performance in this area:

- Traffic flowing at 75% of the normal rate.

“I reckon 75% would be ok.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

Poor. These levels of performance were described as:

- Moving slowly at less than 75% of the typical rate
- Driving in stop-start mode
- Being at a standstill
- Extent of congestion was such that their journey time doubled.

“It needs to actually flow, at a reasonable speed and not be stop start.” [Male, 41+, Business driver, South West]

“I think it’s anything when you have to stop—that shows it’s poor when you have to come to a standstill.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

3) Quality of work (so it doesn’t have to be done again)

Quality of work was seen as important to minimise the risk of repeated roadworks extending disruption that could be avoided. As many respondents stressed, if quality of work was high, there would be no reason for repeated roadworks and disruption in the same place for the same reason. Repeated roadworks were further seen to be a waste of tax payers’ money, so some respondents also stressed the need for accountability in this respect.

➔ **Respondents suggested measuring this performance aspect by looking at the durability of road improvements and the number of repeated roadworks in the same place over a short period of time.**

“I think they should see how long it lasts and set themselves targets, so say the average motorway road resurfacing is meant to last 10 years then 90% should last that amount of time and longer.” [Male, 21-40, Professional Driver, Small Vehicles, Birmingham]

“Ideally you wouldn’t have people needing to come back and re-do roadworks for at least 5 years because they’ve been done properly, so they shouldn’t be coming up in the same place.” [Male, 30-40, Professional Driver, Small Vehicles, York]

Aims and targets for “quality of work (so it doesn’t have to be done again)”

Great. Respondents described the following performance level as ‘great’:

- Materials used are durable
- Surfaces last 90% to 100% of their predicted life span
- Surfaces last 5 to 10 years depending on traffic volume and weather conditions.

“I would say that if the works lasted at least 90% of their predicted times then that would be OK.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

OK. They thought ‘OK’ performance would require:

- Surfaces to last 75% of their predicted life span, although some would make allowances for the impact of weather conditions and increased traffic volume.

“Works lasting 75% of its expected life, especially with the increasing amount of traffic.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

Poor. Poor performance was seen as:

- Surfaces lasted less than 75% of their predicted life span
- Workmen needed to return to re-do the work soon after finishing it, e.g. within a year.

“I think the quality is a good one—if they resurface it and they’re back again then you know it’s not been done well.” [Male, 30-65, Professional driver, Small vehicles, North West]

“Or if the workmen have to go back then that’s not good enough.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

4.2 Incident management

A: Drivers’ experience – incident management

Respondents were generally more understanding of road disruption caused by incidents because they saw them as unavoidable and unpredictable. They were also aware incidents varied in terms of severity and thus also in terms of their impact and time taken to clear them.

However, many also felt frustrated when incidents they perceived as minor took a long time to clear, or led to lane and road closures. They also highlighted the need for prompt and accurate signage related to incidents and diversions, good access for emergency services and action to tackle proven ‘black spots’ where accidents happen frequently. Drivers’ experiences and views in each of the areas important for incident management are outlined below.

Amount of road disruption

Time taken to clear the incident: Most respondents felt emergency service response times with regard to incidents were broadly fine. However, many were frustrated by how long it sometimes took to clear the incidents once emergency services were there. While they understood that more severe incidents required longer procedures so needed more time, they complained about ‘minor incidents’, for example, a broken down car, leading to a disproportionate amount of disruption through road closures or lengthy time it took to clear them.

“I think the breakdowns or a normal shunt would be cleared within 30 minutes. They just need to push it to the side of the road.” [Male, 41+, Professional driver, Large vehicles, South West]

“I think they get to the incident quick enough, but they don’t always do anything when they get there.” [Male, 34-52, Professional Driver- Large Vehicle, South West]

“Response time on the motorways isn’t good enough in the south. Breakdowns aren’t dealt with soon enough.” [Male, 41+, Professional Driver- Large Vehicle, Midlands]

Road/lane closures: Some further reported seeing roads or lanes closed due to incidents where they didn’t think they warranted that level of disruption.

“They need to keep as many lanes open as possible and only reduce the speed if they need to.” [Female, 41+, Commuter driver, North West]

“I think it’s the mentality of the people that want to do that job because whereas the police are slick and get it done, the traffic officers just want to assert their power and close more lanes than they need to.” [Male, 41+, Professional Driver- Large Vehicle, Midlands]

Diversions/alternative routes: Respondents had high expectations in terms of the speed of providing diversions, as well as the length of diversions. They wanted the shortest possible diversions to be put in place quickly.

“I think the traffic needs to be managed and diversions set up quickly, again it’s the flow of traffic.” [Male, 41+, Commuter driver, South West]

Signage and information during incidents

Speed, detail and accuracy: Most thought the system was relatively prompt to alert them to incidents through electronic signage or other means. Some, however, reported warnings weren’t always fast enough and/or did not include sufficient information about incidents and diversions. Respondents felt this was important both in terms of minimising disruption to their journey and in terms of safety. Specifically, they wanted immediate warnings and more information and signage helping them: get into the right lane ahead of incidents; follow a diversion; and adjust their speed in case of traffic at standstill on a motorway. They also wanted more specific information about incidents than currently provided, including exact incident location and which lanes were closed.

“I’d like to know if it’s an actual accident or if it is just bad traffic flow. I need more information because all of a sudden you have 10 miles and everyone is going so slow and you don’t know why.” [Male, 41+, Business driver, M25 area]

“Diversion signs are so confusing, I always get lost, it’s quite scary when you’re in an unfamiliar place, they just weren’t clear enough.” [Female, 41+, Commuter driver, South East]

Driver behaviour during incidents

‘Rubbernecking’: Some expressed their frustration at drivers slowing down to look at accidents, causing additional disruption and danger. They wanted to see fines enforced against drivers doing this.

“A bad journey is where there is an incident and people stop and look and that could cause another incident.” [Male, 56, Disabled driver, Midlands]

“On the ‘A’ roads when there’s an accident everyone slows down to have a look.” [Male, 41+, Professional driver, Large vehicles, South West]

“There’s all those rubberneckerers that slow down and cause a tailback on both sides—they just need to keep driving. What do they expect to see!?” [Female, 41+, Business Driver, North West]

Access for emergency services

Hard shoulder: All wanted good access for emergency services but differed in their views as to the best use of hard shoulder in incident management. Some complained about hard shoulders being turned into live lanes on motorways, which in their view compromised access for emergency services. However, others disagreed and instead welcomed the use of hard shoulder to manage traffic flow and volume.

“Accidents should be cleared quickly and there needs to be good access to the road. The traffic would impact on how quickly the police get there and drivers don’t help because they panic.” [Female, 41+, Commuter driver, North West]

“Using the hard shoulder as a lane is becoming a problem for access.” [Female, 25-40, Commuter, South East]

Causes of incidents

‘Black spots’: Particular spots on SRN roads were mentioned where incidents were frequent in respondents’ experience. These were seen to require root-cause analysis to ensure changes were made if needed to address the causes for the high number of incidents (and thus reduce traffic disruption and improve safety).

“There are a lot of black spots on the roads down here. I’ve missed numerous accidents by minutes.” [Female, 21-40, Business driver, South West]

“They surely should be monitoring number of accidents and what causes them. Then they can start to target the causes, like particular black spots.” [Male, 21-40, Professional driver, Small vehicles, Midlands]

B: Performance measurement – incident management

When asked to prioritise key areas for measuring SRN performance in terms of incident management, most respondents chose the following three areas as most important:

1) How quickly incidents are cleared away

There was a widespread agreement that this was the most important measure for incident management. Most, therefore, approved that it was already included in the current performance framework. Respondents felt this way because their main aim as drivers was for roads to return to normal as quickly as possible after the incident. Speed of clearing the incidents was therefore seen as more important than some other related issues, for example, extent of lane closures during incidents.

Some also thought this key measure was likely to be indicative of SRN performance in some other important areas of incident management. For example, they pointed out that if SRN performance was good in this respect, it could be assumed that access for emergency services is working well too since the speed of clearing incidents will depend on that. For this reason, they saw less of a reason to include some of the other potential measures in the framework as they assumed they would be implicitly addressed through this main measure.

→ **Respondents generally thought speed of clearing incidents away could be measured by looking at the time it takes for roads to go back to normal.**

While this was the main measure, some also wanted this overall measure to also be broken down so that more specific speed-related aspects could be measured too, such as the time it takes emergency services to get to the scene.

“How long it takes for it to be dealt with and how long the roads are closed for [are important to measure] because the quicker it’s dealt with, the better it’s being managed.” [Female, 55, New driver, South West]

“It means it’s efficient if it’s gone quickly and it means they’re concerned about the other road users as well and they’re trying not to inconvenience everyone else.” [Male, 21-40, Commuter driver, North West]

“I presume the response time is really good, so how quickly it’s cleared away is the best measure.” [Male, 21-40, Commuter driver, North West]

Aims and targets for “how quickly incidents are cleared away”

Many pointed out **minor and major incidents** would need to have different targets, as they were seen to require different amounts of time to deal with. Respondents generally defined minor incidents as those involving breakdowns or lesser collisions with no more than two cars involved and with no injuries. Conversely, major incidents were seen as those involving more than two cars and where there was serious injury or loss of life. Overall, road users in our sample wanted stricter targets for clearing minor incidents, but acknowledged the time it takes to clear major incidents is likely to vary considerably.

Great. Respondents thought SRN performance in this area would be ‘great’ if:

- Most minor incidents were cleared within 30 minutes
- Most major incidents were cleared within two hours, although respondents felt strongly these were likely to be variable in terms of time so weren’t always convinced setting targets for these was appropriate. In particular, some highlighted incidents involving damage to the road surface or loss of life, which they believed could take a long time to clear.

“It depends on the incident—a minor one you’d say in 30 minutes or even sooner but I don’t think you could set a target for major accidents.” [Female, 55, New driver, South West]

“A minor accident like a blowout or a bump, that should be cleared within half an hour. Pull the car over and sweep it up.” [Female, 31+, Leisure, North West]

“The people maintaining the roads will know how long different incidents take, like changing a tire, a minor bump. They should have a grading system to target each response time.” [Male, 41+, Professional driver, Large vehicles, Midlands]

OK. Respondents further thought performance could be seen as ‘OK’ if:

- Minor incidents were cleared within one hour
- Major incidents were cleared within three hours.

“For minor incidents there’s just no reason why it can’t be cleared or moved to the hard shoulder within an hour.” [Female, 31-60, Leisure, Midlands]

“I would say a couple of hours for a major accident. If it’s a fatality then you’re more understanding.” [Female, 25-40, Commuter, North West]

Poor. Finally, respondents thought network performance would be ‘poor’ if minor incidents took longer than one hour and major ones took longer than 3 hours to clear.

“An hour for a minor incident and then 4 hours for a major would be poor.” [Female, 21-40, Commuter driver, North West]

2) Speed, accuracy and usefulness of incident-related information

Incident-related information was seen as critical to enabling drivers to minimise the impact of disruption caused by incidents **while they were still ongoing**. As such, it was seen as indicative of how well incidents were managed during the time when traffic flow was disrupted. In addition to being important for safety, drivers needed this information to help their decision-making so they could choose the best possible route in a particular situation. Some also stressed appropriate and prompt information provision could help reduce congestion, as some drivers would be likely to take alternative routes to the one affected by an incident.

- ➔ **Respondents thought this performance area could be measured by looking at the speed of providing and updating information. Some thought it could also be assessed by examining the way it affects, and the extent to which it aids, drivers’ decision-making during ongoing incidents.**

“I think that’s more important and you need the information—how long can you expect to be delayed? What are the diversionary routes?” [Male, 41+, Professional driver, Large vehicles, Midlands]

“Having the information is the most important thing because people can sort out for themselves what they can do about it, as long as they know what’s going on.” [Male, 61+, Leisure driver, East]

“More information about how long they estimate you’ll be delayed too is important. You can decide if it’s worth diverting, or pull over if possible and let work know how late you’ll be.” [Male, 21-40, Commuter driver, South East]

Aims and targets for the “speed, accuracy and usefulness of incident-related information”

Most respondents believed modern technology would allow for real-time information on electronic signs, so used this as a benchmark for judging the speed of updating electronic signage. Where electronic signs were seen as lagging behind real-time information, it led some to think signs were not updated regularly enough and therefore could not be always trusted.

Great. In line with these expectations, respondents thought incident-related information on electronic signs could be judged as ‘great’ if:

- Incidents were reported within 0 to 10 minutes from the time they occurred and this information was then updated every five minutes
- 100% of electronic signs displaying incident-related information were accurate
- Information about incidents was deemed useful by drivers; specifically, they wanted the information to warn them in advance (for example, 1 to 2 junctions before the incident) and tell them about:
 - incident location (for example, which junction)
 - likely duration of delay
 - time when incident occurred
 - alternative routes/diversions set up.

“If there was an accident at 10, then I’d want to be able to know by 10 past 10.” [Female, 55, New driver, South West]

“I think more than 5 minutes is unacceptable with today’s technology.” [Male, 89, Disabled driver, Midlands]

“I want signage to be 100% accurate, there’s no reason why not. They’ll know what has caused it, they should be manning cameras.” [Male, 21-40, Commuter driver, South East]

OK. Respondents further thought incident-related information would be ‘OK’ if electronic signs reported incidents within 10 to 20 minutes and provided updates every 5 to 15 minutes.

Poor. The network was seen to perform poorly if it took over 25 minutes to report incidents, with follow-up updates every 20 minutes or less often.

“I think 25 minutes [would be poor], it’s quite a long time.” [Female, 55, New driver, South West]

3) Number of incidents that happen in the same location

Many in our sample argued root-cause analysis was needed to determine underlying safety problems in places with high numbers of repeated incidents. They wanted to see changes in these so-called ‘black spots’ that would result in greater safety and fewer incidents impacting on their journey times. Prevention of incidents and reduction in their number was therefore understood as part of incident management, along with measures taken during ongoing incidents.

- ➔ Respondents thought SRN performance in this respect could be measured by looking at the number of incidents in a particular location before and after measures have been taken to address the root-causes of incidents.

“Decrease in accidents in places where they frequently occur is very good. It’s finding out what is causing them and putting things in place to prevent them as much as possible.” [Male, 41+, Commuter driver, Midlands]

“They need to look at all the things that could contribute to accidents to see if anything could change.” [Female, 31-60, Leisure driver, North West]

Aims and targets for the “number of incidents that happen in the same location”

Great. For SRN performance to be seen as ‘great’ in this respect, respondents wanted to see a reduction in the number of incidents in known ‘black spots’. There were mixed views, however, on the scale of this reduction with suggestions varying from 20 or 30% to 80% year-on-year reduction in the number of incidents.

“80%, I think, and it ought to be within a year. They need a high target.” [Female, 31-60, Leisure driver, Midlands]

OK. Targets respondents set for an ‘OK’ performance also varied from ‘any decrease’ to 50% reduction within a year.

“I think any decrease would be good.” [Male, 31-60, Leisure driver, North West]

“I think 50% reduction in a year, but I think that’s unrealistic.” [Male, 41+, Professional driver, Large vehicles, Midlands]

Poor. Respondents further thought that ‘poor’ performance would see incident numbers remain the same or increase.

4.3 Driving speed

A. Drivers’ experience – driving speed

Driving speed was widely seen as a major factor impacting on various aspects of travelling on the SRN, including journey times, safety and overall experience in terms of how pleasant or tiring and stressful driving was. Depending whether respondents were more concerned about journey times or safety, their complaints focused on **driving under or over the speed limit**. The specific issues they raised are outlined below.

Travelling under the speed limit:

Temporary speed reductions/variable speed limits: Drivers were generally accepting, if begrudgingly, of the need for temporary speed reductions in certain situations, for example, ahead of incidents. However, many were under impression that speed limits were often reduced for no reason. In their view, this was often due to temporary reductions being left in

place long after the initial issue was over. For many, this was a cause of intense frustration at being forced to drive under the speed limit and therefore have longer journeys for no apparent reason. Additionally, some drivers complained variable speed limits made for a tiring and stressful journey, as they required more concentration. They also thought that too much speeding up and slowing down due to variable speed limits was dangerous.

Some leisure drivers were slightly more accepting of driving under the speed limit, as they were sometimes more flexible about their journey times. New drivers, older drivers and drivers with a disability were sometimes also more concerned about safety so were therefore less concerned about driving too slowly.

A minority also saw variable speed limits as beneficial as they thought they helped stagger and manage the traffic to ease congestion.

Nevertheless, drivers on the whole **wanted to be able to drive at a constant speed and preferably at the speed limit**. They also wanted temporary speed restrictions to be lifted as soon as the reason for them was over.

“I don’t like the variable speed limits. It will go 40, 60, 40, 70 and everyone is starting, stopping, you don’t know what’s going on. It’s clear there’s nothing ahead so I don’t know what it’s trying to achieve. I think it would be fine if the speed was consistent and gradually decreased.” [Male, 41+, Business driver, Midlands]

“They’re not very good at updating the signs on the gantries, like the speed controls and things are left in place long after the incident is cleared which is why all too often people don’t take any notice.” [Female, 41+, Commuter driver, South East]

“Variable speed limits do very well. I think the traffic management around here is very good.” [Male, 61+, Leisure driver, Midlands]

Others driving under the speed limit: Slow moving vehicles and drivers travelling under the speed limit were another source of frustration over not being able to drive at the speed limit. Many drivers complained about slow vehicles and drivers driving in the middle lane under the speed limit, slowing them down or leading to dangerous overtaking.

“I think they should reassess speed on the motorways. I think there should be an extra lane that would allow 80, keep the people who make progress separate from the nerry, give people more defined places to be.” [Male, 41+, Business driver, Midlands]

“If other people insist on going at a different speed to everyone else, either faster or slower, it really makes you stressed.” [Male, 31-60, Leisure driver, Yorkshire and North East]

Travelling over the speed limit:

Speeding: There was a general impression that driving over the speed limit was common, particularly on motorways. Respondents’ views about speeding varied depending on how fast they wanted to drive, from those arguing for increased speed limits to those feeling anxious about driving on motorways due to others speeding. In particular, new drivers and some older drivers and drivers with disabilities felt uncomfortable and unsafe with others driving over the speed limit on motorways. This led some to prefer driving on ‘A’ roads as speeding was seen as less of an issue on those roads.

“It makes me feel sick and scared when other drivers aren’t concentrating around me, or when they’re beeping and being aggressive when they think you’re driving too slowly, when actually you’re doing the speed limit. [Female, 21-40, Business driver, East]”

“They could increase the speed limit by 10 mph or so.” Let’s face it, most people drive that on motorways.” [Male, 21-40, Commuter driver, Midlands]

Average speed cameras: There were mixed views on the benefits of average speed cameras. Some respondents saw them as a more effective way to make drivers adhere to speed limits. They also saw them as safer as drivers can’t break the speed limit and slow down only when approaching ordinary speed cameras. However, those primarily concerned with the driving speed and journey times, found them frustrating as they made drivers adhere to specific speed limits irrespective of traffic conditions (for example, even when ‘roads are empty’).

“Average speed is frustrating—when there’s a restricted speed limit and there’s no reason.” [Male, 41+, Commuter driver, South West]

“Speed cameras don’t have much impact. People just go fast and slow down or its very annoying when it’s still in place in the middle of the night and the road is empty.” [Female, 31-60, Leisure driver, South East]

B. Performance measurement – driving speed

Most road users in our sample saw the following two areas as most important for measuring SRN performance in terms of the driving speed:

1) What proportion of journey one can drive at the speed limit

Given the direct relationship between driving speed and journey times, being able to drive at the speed limit was seen as an extremely important aspect of SRN performance. Most drivers thought they should be able to drive at the speed limit on the SRN if the network is working well, although some allowances were made for congestion due to traffic volume and poor weather where it’s safer to slow down.

The speed limit was, nevertheless, seen as a **benchmark** from which to compare their actual driving speeds. Anything under the speed limit was therefore seen as unsatisfactory by many, although some allowances were made for certain factors outside Highways England’s control.

→ Respondents thought this aspect of SRN performance could be measured by looking at the discrepancy between the speed limit and the average speed between two junctions.

“I think that’s what shows the roads are working the best—you want to be driving as fast as you can.” [Male, 21-40, Commuter driver, South West]

“Driving at the speed limit is a good one because that’s all you want to do really.” [Female, 41+, Commuter driver, North East]

Aims and targets for the “what proportion of journey one can drive at the speed limit”

Great. Respondents thought they should be able to drive at the speed limit for a significant proportion of their journey time for SRN performance to be seen as ‘great’. There were mixed views, however, on what this proportion should be, ranging from 70% of the journey time to 90%.

“You’d hope that 90% of the time. You’re going at the speed limit.” [Male, 21-40, Commuter driver, South West]

OK. For SRN performance to be seen as ‘OK’, many thought they should be able to travel at the speed limit for a minimum of half the journey time. However, some set the targets higher than that, suggesting a minimum of 60 to 70% of the journey time driving at the speed limit would qualify as ‘OK’ performance.

“I’d say the proportion of a journey I can drive at the speed limit is roughly 60%... it’s ok I guess but in an ideal world I’d want it higher.” [Male, 41+, Business driver, South East]

Poor. This performance was seen as travelling at the speed limit for less than half of a journey. Additionally, some stressed poor performance also involved encountering various factors slowing drivers down, such as slow vehicles causing congestion, accidents and breakdowns causing drivers to slow down. For professional drivers, poor performance also involved not being able to complete scheduled journeys due to going ‘out of hours’.

“I’d say 50% would be awful. It puts added pressure on and makes it stressful so people drive more aggressively and getting in the gaps.” [Male, 21-40, Commuter driver, South West]

2) What proportion of a journey one can drive at a constant speed

When they are not able to drive at the speed limit – for example, because of congestion – many drivers feel that the next most important thing is being able to drive at a constant (reasonable) speed. Many thought being able to drive at a constant speed shows that roads are working well and helps drivers have reasonable journey times. Additionally, some also pointed out that driving this way was less stressful and tiring and more efficient than stop-start traffic.

➔ Respondents thought this performance aspect could be assessed by measuring the average speed between junctions to see if it’s consistent.

“It’s constant speed but not top speed, but that’s ok. For example if you’re going at 50mph on a 70mph road, at least you’re moving along.” [Male, 18-30, Leisure driver, North East]

“If someone is braking in front of you or something is holding you up it can be dangerous or frustrating.” [Female, 18-30, Leisure driver, North East]

“If you’re not at the speed limit, then you want to be going at a constant speed and be in moving traffic. Everyone gauges traffic by saying ‘at least it’s moving’ so the roads are working OK.” [Male, 21-40, Commuter driver, South West]

Aims and targets for the “what proportion of a journey one can drive at a constant speed”

Great. Drivers in our sample thought that SRN performance would be ‘great’ if they were able to drive at a constant speed for at least 65% of their journey time and if their speed was not too much under the speed limit. Respondents thought this would enable a positive driving experience as driving wouldn’t be stressful and traffic flow wouldn’t be interrupted, keeping journey times in turn reasonable even when there was congestion.

“You’re relaxed, not having to slow down all the time.” [Male, 30-65, Professional driver, Large vehicles), East]

“Going under the speed limit, but still going along steady, like at 50mph in a 70mph.” [Male, 18-30, Leisure driver, North East]

OK. Respondents further thought they would need to be able to drive at a constant speed for a minimum of 50% of their journey time for that to be seen as ‘OK’ performance.

“Going slower than your speed limit is fine, as long as you’re going along.” [Male, 40-65, Professional driver, Large vehicles), East]

Poor. They thought ‘poor’ performance could be described as driving at a constant speed for less than 50% of their journey time. Their view was this would lead to a negative driving experience, as it would mean longer and unpredictable journey times whereas stop-start traffic would lead to some aggressing driving causing stress in other drivers.

4.4 Signage and information

A. Drivers’ experience – signage and information

Signage and information was seen as paramount to road users’ safety and decision-making, but also important for a positive driving experience. Most road users in this sample thought that signage on the SRN was generally adequate, but still highlighted certain areas where they could see room for improvement.

Visibility of signage

Permanent signs: Some respondents commented that sometimes signs can be present but lack visibility or clarity due to being worn out, defaced by graffiti, poorly lit or covered by overhanging branches. Respondents also pointed out that many of the signs on the SRN network were on the left hand side which meant they were sometimes blocked by HGVs and missed. When these things occurred it made navigating the SRN network far more difficult and stressful, leaving drivers unsure of the correct lane and more likely to drive in unsafe ways, for example, getting into a lane at the last moment or ‘cutting in’. Overall, such comments

concerned mainly 'A' roads rather than motorways where gantry signs were lauded for their better visibility.

*"There could be more signs coming up to junctions that are more clear and visible."
[Female, 18, New driver, Colchester]*

Road markings: Road markings were considered to be important both in terms of instructions and separating and spacing lanes. They were seen as extremely helpful in terms of knowing which lane drivers needed to be in. However, respondents complained these can quickly become worn out and also in times of congestion can be covered by other vehicles. Respondents therefore wanted road markings to be regularly maintained to ensure they were clearly visible. However they also wanted these to be accompanied by roadside signage to ensure information was available in times of congestion.

"It's when it's faded and you can't really see it. but it is helpful when it's there on roundabouts." [Male, 35-64, Professional Driver- Small Vehicle, North West]

"I think road markings should come into it to make sure they were clear." [Male, 85, Older driver, Kent]

"I think they need to totally re-do the road markings on the M25 because you can't see any of the markings that are on the tarmac and it gets really confusing." [Male, 41+, Commuter, East]

Clarity of signage

Clear instructions: Road users in this sample sometimes felt that the instructions given on signs were not always clear enough (for example, lane instructions). They felt this meant that getting into correct lanes, preparing for manoeuvres in sufficient time and generally driving in a safe fashion can be compromised.

"There need to be clear signs identifying entries, exits and obstacles." [Male, 18-30 Leisure driver, East]

"It needs to be clear, which lane goes where." [Female, 21-40, Commuter driver, Midlands]

"It's not necessarily more signage, it's better, clearer signage [Male, 21-40, Commuter driver, Midlands]

Signage coverage and positioning

Early and sufficient warning: Most felt that the amount of signage was generally appropriate. However, many also reported that signage can be: easily missed; blocked by high-sided vehicles; only present once or twice; or not provided in sufficient time to allow them to manoeuvre into position safely and in good time.

To maximise their chances of acting on signs, many stressed they wanted easily visible signage to be always positioned within sufficient distance of junctions, roundabouts and intersections. Additionally, respondents thought that multiple signs would be beneficial to help avoid missing signage. They also appreciated count down and preparation information. For example, they liked signs telling them how long they had until a junction, when to get into another lane or adjust speed.

“[There should be] more frequent signage, so it doesn’t matter if you miss one. There needs to be plenty of warning before junctions and roundabouts, more count down, more warning of which lanes, maybe even tell you when to get in lane.” [Male, 21-40, Commuter driver, Midlands]

“They need to have accidents clearly signposted before you get there, so you’ve got time to slow down and prepare.” [Male, 30-40, Professional driver, Small vehicles, Yorkshire and North East]

“A good 5 to 10 miles signage should begin before junctions. It should be 100%.” [Male, 56 Disabled driver, Midlands]

Black spots: Some further thought that knowing that a particular stretch of a road was especially dangerous or prone to accidents increased vigilance and attention to safe driving.

“You need to know where the accident black spots are and what causes the accidents there so that you can avoid it.” [Male, 41+, Commuter driver, East]

Diversions: Many respondents discussed how confusing and frustrating they can find diversions set up during incidents or roadworks. They felt that signs were moved too often or were not always present at key points of the diversion route, for example, when getting to the next junction/roundabout.

Respondents argued that diversions needed to be checked more often to ensure they were still directing traffic the correct way and that the signage was clearly present at all necessary points of the route. Many even suggested that these should be tested wherever possible, especially in the event of roadworks where the diversion may be in place for quite some time.

“I hate when there’s diversions but the signs aren’t good, and you don’t know where you’re going.” [Female, 41+, Commuter Driver, North West]

Electronic Signage

Volume: Most appreciated that sufficient and well-updated electronic signage allows drivers to plan ahead and navigate the SRN network with better journey times and increased safety. Some, however, felt that there needed to be more electronic signage on the SRN network to ensure drivers were more likely to receive the information they needed in advance and plan accordingly.

“I’d like to see better use made of the signs above the road that warn you of traffic and things coming up.” [Male, 41+, Commuter driver, East]

“More warning signs about congestion so you can prepare yourself and be mindful of other people and if you’re in the right lane then you could take a short cut and come off the road early.” [Female, 18, New driver, South West]

Usefulness of information: Respondents felt that electronic signage had the potential to provide drivers with all of the information regarding factors that could impact on their journey times or compromise their safety. Drivers welcomed knowing about any incidents, roadworks and weather conditions that could affect them. However, some thought that the information currently provided was often not clear or specific enough for them to know whether and to what degree they would be affected.

Respondents thought that more specific information would improve their ability to navigate any issues and find alternative routes. For example, they wanted information about incident

locations to use names of major landmarks and places rather than refer only to junctions. This was seen as especially important when driving on unfamiliar sections of the SRN where drivers often didn't know the junction numbers. Additionally they wanted to know how long the incident was delaying journeys so that they could decide if an alternative route was necessary or more beneficial.

Accuracy: Some found that electronic signage can be inaccurate or "out of date". This was seen as particularly frustrating if drivers have unnecessarily diverted their journey or continued with their planned journey due to not being fully aware of the severity of an incident.

Respondents felt that electronic signage needed to be more regularly updated with information regarding all the factors that could delay journeys or compromise safety, such as incidents, roadworks and weather conditions. This should include information about the likely length of delay, severity of the issue and updates on the progress of clearing the incident.

"I'm not at all happy with the signage – the road signs should be updated and they're not. It's up to the driver to look on Google maps and that's dangerous. The signs on the roads need to give you alternative routes and tell you what's going on." [Female, 21-40, Business driver, North West]

B. Performance measurement – signage and information

Starting from their experience and needs as outlined above, respondents chose the following aspects of signage as most important for measuring SRN performance:

1) Proportion of signs that are clearly visible

Most saw good sign visibility as a key requirement for SRN performance in terms of signage, as they stressed signs can't serve their purpose of aiding drivers' decision-making and safety if they are not visible. Some also noted that this important area of SRN performance was currently missing from the current SRN performance framework and wanted it included.

➔ **Respondents suggested different ways in which SRN performance could be measured in terms of sign visibility. Many thought signs should be inspected through physical observation to check whether they are clearly visible from all lanes, at different times, in different weather conditions. Some also suggested using road user feedback to determine signage performance in this respect, for example, looking at road user satisfaction with visibility of signage and/or complaints about signage.**

"If it takes a long time to see a sign it then becomes dangerous because it doesn't give you enough time to plan and make your manoeuvres safely." [Female, 21-40, Business driver, Midlands]

"You need to be able to see a sign far in advance and use that information." [Male, 18, New driver, East]

"I think feedback is the main thing, allowing users to report when a sign isn't visible and they should check the signs regularly for maintenance issues." [Female, 41+, Commuter driver, East]

Aims and targets for the “proportion of signs that are clearly visible”

Respondents stressed signs were either visible or not visible so many struggled to suggest gradations in terms of performance, that is, suggest different targets for ‘great’, ‘OK’ and ‘poor’ performance. Most also thought that anything other than 100% visibility was unacceptable because of how important signs were for driver safety and decision-making.

Great. Respondents therefore described only their expectations for ‘great’ performance in terms of sign visibility:

- 100% signs should be clearly visible, including:
 - visible from all lanes
 - well-maintained/clean
 - not obstructed (for example, by overgrowth, other vehicles)
 - well-lit (so visible at different times of day and in different weather conditions).

“All of them should be clearly visible – maybe some of them would not be easy to see if they’ve just built a new building. But you need to see signs – even 1% not visible is bad.” [Male, 41+, Business driver, North West]

“Warning signs should always be visible no matter what.” [Male, 41+, Commuter driver, East]

“I think it has to be realistic – the signs have important information for safety and it could cause accidents if you can’t see them.” [Male, 18-30, Leisure drivers, South West]

- Gantry signs were also often cited as an ideal in terms of visibility, as they don’t get obstructed by lorries and overgrowth and are easier to see.

2) How useful is the information on the signs and road markings

Drivers’ main issue with signs was generally with their positioning, visibility and number – causing some to miss them and not act on them early enough – rather than information on them. Most respondents thought sign and road marking information on the SRN was generally adequate in how useful it was, but still felt this should be included in the performance framework due to its importance to driver decision-making and safety.

- ➔ Respondents thought this performance aspect could be measured by looking at road user satisfaction with usefulness of signs and road markings on the SRN.
- ➔ Some also suggested driver behaviour at selected junctions and roundabouts should be observed to assess the extent to which they behaved as intended by signage. Discrepancies could then be investigated to determine whether any improvements to signage are needed.

“You could measure how many people are in the wrong lane or how complicated someone thought it was because of the signs.” [Male, 18-30, Leisure driver, South West]

“That’s good because you don’t want to be dealing with extra information you don’t need.” [Male, 30-65, Professional driver, Small Vehicles, North West]

“How useful the information is on the sign is important because you need to be able to use that information.” [Male, 18, New driver, East]

Aims & targets for “how useful is the information on the signs and road markings”

Great. Respondents described ‘great’ performance in terms of usefulness of signs and road markings as follows:

- 95% user satisfaction with signage in this respect
- All signs are relevant, accurate and concise/easy to read
- Warning is given well in advance and repeated if necessary
- There aren’t too many signs so that signage becomes cluttered
- Signage covers critical information:
 - warnings/safety-related
 - speed limit
 - navigation
 - instructions about correct lane and exits
 - traffic-related information, weather warnings, incident information.

“They either need to have the writing on the road or on the sign but not both or it’s too much to take in.” [Male, 35-64, Professional driver, Small vehicles, North West]

“I’d say if you just take motorways then you need to be able to read all the information on the sign without slowing down.” [Male, 30-65, Professional driver, Small Vehicles, North West]

“It needs to be quick and short because you need to read it quickly.” [Male, 18, New driver, East]

OK. Most respondents argued signs could not be seen as ‘OK’ if they weren’t performing well as described above. Some ceded usefulness of signs and road markings could be seen as ‘OK’ if 70-95% road users were satisfied with it.

Poor. Respondents thought ‘poor’ performance in this area would involve any of the following:

- No information, inaccurate information or information provided too late to act on it
- Signs having too much information to process while driving
- Less than 70% user satisfaction with signage.

3) Speed of updating information on electronic signs

Drivers find the information about road conditions provided through electronic signs and other ways extremely useful, but their trust in this information depends on its perceived accuracy. This in turn is seen to depend on the speed of updating electronic signs, making this a third most important area for good performance of signage on the SRN. This performance aspect was particularly relevant to those regions with more electronic signage, such as the M25 area, the South East or the Midlands.

→ Respondents thought this performance aspect could be measured by monitoring how quickly information was provided, updated and then removed when no longer relevant.

“They need to be up to date and accurate, especially not slowing you down for no reason.” [Male, 41+, Business driver, North West]

“I think when signs are switched on and off [is] about how well the roads are being monitored and how quickly we’re being updated and communicated with... if this is done well then the signage will be better obeyed because you’d trust it’s accurate.” [Male, 21-40, Business driver, Midlands]

“I think that is good—if it’s switched on quickly then it’s doing a good job.” [Male, 30-65, Professional driver, Small vehicles, North West]

Aims and targets for the “speed of updating information on electronic signs”

Great. Respondent discussed ‘great’ performance in this area as follows:

- Desired speed of updating was seen to vary by type of information:
 - incident-related information was seen as more urgent – respondents therefore wanted incidents to be reported within 0 to 10 minutes and then updated every 5 minutes.
 - other information – for example, estimated journey times – was seen as less urgent so respondents thought it was sufficient to update it every 15 to 25 minutes.

“Traffic control can see when an accident happens, so they should turn the signs on with immediate effect.” [Female, 41+, Commuter driver, North East]

“I expect it instantly in this day and age, with technology.” [Female, 21-40, Business driver, Midlands]

OK. Respondents thought that slightly lower frequency of updating could still be seen as ‘OK’ performance:

- Incidents being reported within 10 to 20 minutes, with updates every 5 to 15 minutes
- Other information being updated every 30 minutes.

“I don’t think an update four times an hour is too much to ask, that’s how often they do it on the radio.” [Female, 21-40, Business driver, Midlands]

Poor. Performance was described as ‘poor’ if:

- Incidents were reported after more than 25 minutes and updated every 20 minutes or less often.
- Intervals for updating other information were longer than 30 minutes.

4.5 Journey times

A. Drivers' experience – journey times

As mentioned previously, journey times were a key concern across different driver groups, although they were slightly less pressing for some leisure and older drivers who were able to choose the time they travel. Respondents highlighted the need for reliable journey times to allow them to plan their travel. Many also complained about their average journeys being too long or frequent delays causing issues with being late, wasting their time, being stressed and tired. Respondents' experiences and views regarding journey times are outlined below.

Journey time issues

Congestion: Most drivers recognised **high traffic volume** as a key factor causing congestion and making their journeys longer as a result. Respondents identified a range of reasons for this, citing too many cars on the roads as a major factor, followed by the previously discussed factors such as roadworks and incident management and issues with driving speed.

Despite seeing 'too many cars on the roads' as the main reason for high volume of traffic, most perceived this as a 'fact of life' rather than something that can be influenced. Instead, they focused on all those other factors causing congestion which they believed can be managed.

However, a minority raised questions around potential measures aiming to *reduce* traffic volume rather than *manage* it only. They highlighted policies that would encourage more car shares and greater use of public transport as opposed to driving. Additionally, some also suggested an increase in freight via trains and ships to reduce the volume of HGVs/slow moving vehicles.

"The biggest problem is the volume of traffic in the summer because it's a tourist destination and that makes your journey unpleasant." [Female, 21-40, Business driver, South West]

Prolonged journey times: Some drivers who travelled at peak times felt their average journey times took unacceptable amounts of time. Commuter and business drivers in particular wanted to see their average journey times reduced. This was less the case for those leisure drivers who could travel out of peak hours. They felt this had a negative impact on their quality of life or work through making them late, waste time and be stressed and tired.

"I think the biggest influence is the time of day and time of year because that affects how much traffic you get, which is what is really going to slow you down." [Female, 18, New driver, East]

Unreliable journey times: Some respondents reported their journey times were too variable making it difficult for them to plan their travel. Respondents wanted to have more consistent journey times so they can predict the likely time they take and be able to plan their travel better.

“Journey time varies a lot...if I have to be somewhere by a certain time I leave a lot earlier.” [Female, 31-60, Leisure driver, South East]

“I’m not that happy with journey times because you just can’t call it. You have to build in so much extra time just in case.” [Male, 41+, Business driver, Midlands]

“You can’t predict your journey times round here. Sometimes you’ll fly down roads, sometimes you’ll be stuck in traffic for an hour.” [Male, 21-40, Commuter driver, Yorkshire and North East]

Road users’ ‘journey times’ concepts:

Arriving on time: Road users’ satisfaction with their journey times largely depended on whether they thought they arrived on time or not. Respondents considered they arrived on time where their **actual journey time** matched or did not diverge significantly from the **estimated journey time**.

“Arriving on time is a massive thing, because being late is what makes it stressful.” [Female, 30-40, Commuter, South West]

Estimated journey time: Respondents defined estimated journey times in three different ways. First, many thought this should be the time it takes to travel over a particular distance travelling at the speed limit. Second, respondents often based their expectations in terms of journey times on the estimates provided by Google and/or their Sat Nav devices. Third, respondents’ expectations were sometimes also based on their past experience where they were familiar with the journey. However, where this past experience was negative, respondents were still dissatisfied with journey times as they were seen as consistent but too long. For road users in this sample to be more satisfied with their journey times, they wanted them to be as close as possible to estimated journey times that were based on travelling at the speed limit or Google/Sat Nav devices.

“It’s important to be able to predict your journey time.” [Female, 31-60, Leisure driver, Yorkshire and North East]

Average journey time: Respondents referred to average journey times as a separate concept in the sense that they could but didn’t have to match the estimated journey times. The potential discrepancy between average and estimated journey times was particularly relevant when estimates were based on travelling at the speed limit. Average journey times were, therefore, a source of complaints where road users felt there was a significant discrepancy between them and estimated journey times. Where there was this discrepancy, road users wanted to close the gap between average and estimated journey times as much as possible.

“You don’t want journey time added.” [Female, 41+, Business driver, Yorkshire and North East]

B. Performance measurement – journey times

For both private and professional drivers, journey times were their main concern and priority for measuring SRN performance. Based on their experiences and needs, respondents highlighted the key areas that follow for measuring SRN performance with regard to journey times.

1) What proportion of journeys do I get there when estimated

This was widely seen as a key performance area with regard to journey times given the negative impact on drivers associated with wasting time, being late and having a stressful driving experience. Road users therefore wanted to see more accountability in terms of ensuring reasonable journey times on the SRN.

Drivers in our sample recognised this was a challenging performance area to measure because of the sheer number of factors impacting on journey times and the huge variation involved. Respondents generally thought some comparative element was crucial to this performance measurement where estimated journey times – for example, based on Google maps or time it takes to travel a certain distance driving at the speed limit – were compared to actual journey times.

→ Respondents therefore suggested the following possible ways to measure the proportion of journeys when road users arrived when estimated:

- by asking drivers to report how long their journeys take them and comparing that to estimated times for those journeys
- by measuring journey times along the stretches of SRN roads (for example, between two junctions) and comparing that to estimated journey times to see if there is a discrepancy
- by comparing actual journey times with how long it would take if driving at the speed limit.

“What proportion of time do I get there when I estimated is important because it’s really important to me to be early.” [Female, 25, Disabled driver, North East]

“If you leave at a certain time, you need to be able to know when you’re going to get there.” [Female, 21-40, Business driver, East]

“I guess you’d have to ask people out of the last 100 journeys on these roads, how many did you actually arrive on time.” [Male, 41+, Commuter driver, Midlands]

Aims and targets for the “What proportion of journeys do I get there when estimated”

Great. Respondents thought performance with regard to journey times would be ‘great’ if:

- They arrived when estimated or earlier for more than 80% to 90% of their journeys
- Many, however, considered a few minutes leeway was acceptable even for great performance, as respondents recognised the many factors impacting on journey times.

“At the moment I quite often get there when I expect to which is fine, more than 80% of the time.” [Female, 25, Disabled driver, North East]

“I think 10% is ok, that wouldn't be too bad [being later than expected] for those 2 out of 10, [Male, 35-64, Professional Driver- Small Vehicle, North West]

“Well I'd like it to be 100% but that's never going to happen is it really.” [Male, 41+, Commuter, Midlands]

OK. Performance in this respect was described as:

- Arriving when estimated or early for 70% to 80% of journeys
- Arriving 10 minutes later than expected.

“80-85%. You could live with that.” [Female, 25-40, Commuter, North West]

Poor. Respondents thought performance could be described as 'poor' if:

- They arrived when estimated for less than 70% of journeys
- They arrived 20 minutes or more later than expected (for a short journey)
- They were routinely late due to the road not working well
- Journey times became unpredictable

“Being late by 20 or 30 minutes is a massive delay.” [Male, 18, New driver, East]

“Going over by 50% of the estimated time would be pretty awful.” [Male, 35-64, Professional Driver- Small Vehicle, North West]

“Below 70% would be unacceptable I think.” [Female, 41+, Commuter, Midlands]

2) How predictable are my journey times?

Respondents thought this was another important performance area to measure because of the negative impact unpredictable journey times had on them. When journey times were not predictable drivers were generally in a position to either be late a certain proportion of time or always leave early to avoid being late. For those who chose the latter option, this meant they routinely wasted time as they arrived too early on many occasions. Journey predictability was important across different driver types but particularly important to commuters and time-sensitive trips, for example, travelling to appointments or to the airport.

Predictability as a measure is directly related to the previous measure – the proportion of journeys when road users arrive when estimated. The higher the proportion of journeys when arriving when estimated, the higher the predictability of journey times. However, there is also a subtle difference between the two measures. The first measure is concerned with achieving optimal or reasonable **length of journey times**. Its benchmark for measuring performance is the time it takes to cover a distance driving at the speed limit. The second measure, however, stresses the importance of **consistency of journey times** on the same route to help with planning travel. Predictability is therefore not sufficient to achieve good performance in terms of journey times, as journey times can be predictable but still too long. It is only when roads are performing well in both of these respects that journey times would be seen as optimal.

→ Respondents generally thought predictability of journey times could be measured in the following ways:

- by looking at journey times along stretches of SRN roads over a period of time to assess variation and consistency
- by asking drivers to comment on how predictable their journey times were.

“I leave super-duper early because I get so stressed which means I get to work early which is annoying because I waste a lot of my time.” [Female, 21-40, Commuter driver, South West]

“I would say how predictable journey times are important because I don’t like sitting in traffic and you want to know how long your journey’s going to be, particularly with a baby that needs feeding.” [Male, 18-30, Leisure driver, South West]

“You want to be able to predict what time you’re going to get to places so that you can be on time for things.” [Male, 18-30, Leisure driver, North East]

Aims and targets for “how predictable are my journey times”

When discussing targets at different performance levels in terms of journey time predictability, respondents were led by two main criteria: percentage of journeys that take predicted time and length of time added to journeys longer than predicted time.

Great. Respondents described the following as ‘great’ performance:

- The same journey taking the same amount of time each day
- Drivers being able to predict journey times, unless there was an incident or something else unpredictable happened
- Actual journey times matching Google/Sat Nav predicted times for 100% journeys.

“If I could predict it 90% of the time that would be great.” [Female, 41+, Commuter, Midlands]

“To always be exactly on time according to your Sat Nav or Google maps prediction [would be great].” [Female, 21-40, Business driver, East]

OK. Respondents thought performance could be described as ‘OK’ if:

- Journey times varied by 5 to 10 minutes from the predicted times
- Drivers were able to predict how long 80% of journeys will take.

“5 minutes you don’t think about, but 10 you do because it means you have to allow yourself more time.” [Female, 30-40, Commuter, South West]

Poor. Performance was described in the following terms:

- Never being able to plan arrival time or know how long a journey will take
- Arriving more than 20 to 30 minutes outside of predicted time

- More than 20% leisure journeys being unpredictable, however, this dropped to more than 10% of commuter journeys.

“You’d never be able to predict a big accident so it would never be 100%.” [Male, 18-30, Leisure driver, South West]

“More than half an hour is significant because that’s when I will start to be late for work. I build in enough time that I could cope with half an hour.” [Female, 41+, Commuter driver, Midlands]

4.6 Safety (encompassing road surface and design, lighting and maintenance)

A. Drivers’ experience – safety

Drivers in our sample rarely addressed safety on the SRN explicitly, as they generally thought SRN roads were safe. They also thought modern cars had improved safety features and saw themselves as competent drivers, all of which contributed to their sense of safety. However, safety issues were addressed indirectly when discussing a range of other specific issues, including road surface, maintenance and lighting. In addition, many thought the number of incidents on the SRN was another key performance area with regard to safety.

Road surface

Smooth surface: SRN road users in our sample thought the quality of road surface was generally good on the SRN. While they encountered potholes and patches that were less pleasant to drive on, on the whole most haven’t experienced any significant problems in this regard. Nonetheless it was generally seen as an important factor both in terms of safety and pleasant driving experience and therefore something that should be measured as part of assessing the safety performance of the SRN.

“Road quality is something that can make or break a journey. If there is flooding, bad terrain, pot holes, that can be quite stressful and catch you off guard.” [Female, 18-30, Leisure driver, East]

Impact of weather conditions: Respondents were less positive about the road surface on the SRN with regard to the effects weather conditions can have on it. Some complained of frequent surface water and flooding and/or insufficient gritting of the roads. Respondents wanted to see drainage improved and maintained to reduce the incidence and levels of surface water. They also wanted to reduce instances where roads were not sufficiently gritted.

“In the snow, they don’t grit the roads and everything comes to a standstill. They need to be more prepared.” [Female, 21-40, Commuter driver, M25 area]

‘Tram lines’: Drivers in certain regions, for example the North West, complained about ‘tram lines’ (rutting caused by heavy lorries) in the inside lane, which made them feel road surface was unsafe.

“The thing I never noticed before is the lorry tram lines and you’re swerving to the left and right.” Male, 65+, Leisure Driver, North West]

Lighting

Coverage/level of lighting: There was a widely shared view that vast parts of the SRN weren’t lit at all or not sufficiently lit. Drivers felt this made driving at night dangerous, tiring and stressful. They therefore generally wanted SRN roads to be well lit at night.

“No road lighting. Sometimes I come back late at night and without full beam you’d be totally blind and full beam doesn’t do much to light it up. You expect it on country lanes but not on major roads.” [Female, 21-40, Business driver, East]

Road design

Shared or designated lanes: One of the rare issues where motorised and non-motorised road users agreed concerned their frustration with different road users having to use the same lanes. Commuters and business drivers often bemoaned having to share their road space with others driving more slowly, such as lorry or caravan drivers, less confident drivers or cyclists. Many drivers also felt frustrated at having to share what they often saw as insufficient space with cyclists and tolerate each others’ different needs and capabilities in terms of speed.

Most respondents therefore thought that everyone’s experience of using the SRN, as well as safety and the overall traffic flow, would be greatly improved if there were more designated lanes. Specifically, many drivers wanted the left lane to become a designated lane for slower vehicles and the other lanes to have higher and minimum speed limits.

“I can’t stand cyclists or caravans, especially this time of year. I get really stressed.” [Male, 41+, Professional Driver, Large Vehicles, South West]

“Cyclists shouldn’t be on the road. They need separate cycle paths and safe crossings.” [Male, 41+, Commuter Driver, South West]

Signage maintenance

Obstructed/Worn out signs: As discussed in relation to signage, drivers sometimes complained about overgrowth obstructing signage or worn out signs making it more difficult to know which lane to get into. This meant they sometimes had to manoeuvre at the last moment driving in potentially unsafe ways. Total visibility of signage was required, as mentioned before.

“Signs should be clear and readable and free of graffiti.” [Female, 18-30, Leisure driver, East]

Other safety issues

Access for emergency services: This issue was discussed particularly with regard to the usage of hard shoulders to increase the capacity on some motorways. While some drivers welcomed the increased capacity, others criticised this development as dangerous and obstructing access to emergency and recovery services. Some of the respondents who

complained disagreed with any permanent change to the purpose of hard shoulders, as their safety concerns overrode any benefits in terms of traffic flow. Others however accepted temporary usage of hard shoulders as live lanes at times of high traffic volume, but wanted to see them revert to their standard use afterwards.

“It’s good when there’s congestion and they let you use the hard shoulder and it’s really flexible.” [Female, 65+, Leisure Driver, South West]

“I think they need to keep the hard shoulder for people who breakdown.” [Female, 31+, Leisure, North West]

“When there’s an accident it seems they struggle to clear it in time. It’s compounded further by the fact a lot of motorways are using the hard shoulder now, so the services can’t get to it.” [Male, 41+, Business driver, Midlands]

Weather warnings: Respondents had high expectations of electronic signage and wanted it to provide them with timely warnings about weather conditions that might affect their travel.

“Having weather warnings on signs is useful so that you can prepare.” [Female, 41+, Commuter, East]

“For the electronic signs they need to update you on weather conditions.” [Male, 56, Disabled driver, Midlands]

Poor driving: Poor driving was seen as yet another factor impacting on safety, which is discussed in more detail in the next section as many respondents thought it should be a separate performance area (see Section 4.7).

B. Performance measurement for safety

Based on the experiences and needs outlined above, respondents thought the following two performance areas were key to measuring SRN performance with regard to safety.

1) Proportion of the road surface in good condition

Good road surface condition was seen as critical for safety; hence, most road users in our sample saw this as important for measuring SRN performance with regard to safety. While this measure was in the current SRN performance framework, it was included within the theme of ‘Keeping the network in good condition’, whereas most road users in our sample categorised it as a safety issue.

➔ Respondents suggested the following ways of measuring SRN performance in this respect, by:

- observing and monitoring SRN roads to determine the proportion of roads that are smooth and with no potholes
- observing the speed of drainage
- assessing time taken to repair potholes and other surface problems.

“It’s inconsistency in road surface that contributes more to safety to be honest because then your driving isn’t adjusted, it takes you by surprise, for example if the

road copes with surface water in one section and then all of a sudden doesn't. [Male, 41+, Commuter driver, Midlands]

"They'd need to send people out to look and see if there's potholes." [Female, 55, New driver, South West]

It should be smooth, no pot holes. [Female, 21-40, Commuter driver, South East]

Aims and targets for the "proportion of the road surface in good condition"

Great. Because of the impact road surface condition has on safety, many thought targets for 'great' performance needed to be high. Respondents thought SRN performance could be described as 'great' if:

- 90% to 95% of the road surface was in good condition
- 90% of SRN roads coped well with adverse weather conditions
- Serious potholes were repaired overnight.

Respondents were, however, less sure what targets in certain areas should be like as they lacked benchmarks to judge current performance. For example, they weren't sure what the targets should be for the speed of draining.

"I think about 90% of the road surface in good condition, that would be great." [Male, 21-40, Commuter driver, South East]

"It does depend when it's been reported to them too, so acting as soon as possible upon a report, ideally the next day." [Female, 21-40, Commuter driver, South East]

"Maybe about 90% [would be great] you're going to have some bits that aren't smooth, but I wouldn't want to drive along a road with chippings – it scratches your car." [Female, 55, New driver, South West]

OK. Respondents described 'OK' performance as follows:

- 75% to 90% of the road surface in good condition
- 80% of SRN roads coping well with adverse weather
- Serious potholes repaired within a week.

Poor. The network was seen to be performing 'poorly' if:

- Less than 75% of the road surface was in good condition
- Less than 80% of SRN roads coped well with adverse weather
- Repairing serious potholes took more than a week.

"If I saw an issue and they hadn't started work in longer than a week I wouldn't be impressed" [Male, 25-40, Commuter, South East]

2) Proportion of the road with good visibility/lighting

Lighting was one area where the SRN was consistently seen as performing poorly, yet it was important to many drivers. Many complained about the lack of lighting on large stretches of SRN roads, making them feel stressed and unsafe when driving at night. For this reason, respondents thought the extent of lighting should be one of the priority areas for measuring SRN performance in terms of safety. They wanted to see improvements to the current level of lighting on the SRN, however, there was also awareness it was unrealistic to expect for the whole of the SRN to be well-lit.

➔ **Respondents thought this performance aspect could be measured by observing what proportion of SRN roads had lighting and good visibility at different times of day and in different weather conditions.**

“There are stretches without any lighting at all, especially when the weather is poor lighting can be hugely reduced which is dangerous and makes driving more stressful.” [Female, 21-40, Business driver, Midlands]

“Lighting and visibility is also really important, [it is] something that is lacking, not being able to see road markings and things, there’s whole stretches of unlit road.” [Female, 41+, Commuter driver, Midlands]

“That’s obviously important, poor visibility poses a real risk to safety.” [Female, 21-40, Commuter driver, South East]

Aims and targets for the “proportion of the road with good visibility/lighting”

Great. Respondents thought the following level of SRN performance would qualify as ‘great’:

- All motorways and ‘A’ roads on the network were lit for the whole stretch
- Type and level of lighting was consistent so any changes in lighting were gradual rather than sudden and significant.

“They should have all the roads lit – money should be no object when it comes to safety.” [Female, 31-60, Leisure driver, North West]

“You need more consistency in level of lighting and type of lighting” [Male, 41+, Commuter, Midlands]

OK. Short of this ideal, many thought SRN performance could be seen as ‘OK’ if:

- All junctions were lit within 500 yards of each side
- All lay-bys were lit for safety (of those in broken down vehicles)
- There were no stretches of the network completely unlit.

“All junctions should be lit at a minimum and 500 yards either side of them too.” [Male, 41+, Commuter driver, Midlands]

Poor. Respondents thought the network would be performing ‘poorly’ if roads weren’t lit.

3) Number of incidents/accidents (by different causes)

Respondents generally agreed that the number of incidents/accidents was the ultimate evidence for the safety on the SRN. This was because most assumed a causal link between how safe the roads are and the number of incidents and accidents. However, for this measure to be meaningful, respondents thought it would need to involve root-cause analysis to separate safety issues caused by roads from those caused by poor driving.

Respondents focused on the overall number of incidents rather than the number of killed and injured as the current framework does. This was partly because the number of incidents was seen to reflect the extent of safety issues, but also because of their preoccupation with the impact incidents had on their journey times.

➔ **Respondents thought this performance aspect could be measured by looking at the number of incidents/accidents on the SRN.**

“I think number of accidents has got to be the most important thing to target and put measures in to reduce.” [Female, 21-40, Commuter driver, South East]

“The number of accidents would give an indication of how unsafe a road is, then you can look into why those accidents may have happened and if there’s any common denominators tackle those things to reduce accident numbers.” [Male, 21-40, Commuter driver, South East]

“If numbers of accidents decrease then it shows the things they’re doing are right doesn’t it, surely ultimately reducing accidents is the most important thing.” [Female, 21-40, Commuter driver, South East]

Aims and targets for the “number of incidents/accidents (by different causes)”

Respondents struggled to suggest targets for a reduction in the number of incidents/accidents, as they felt they lacked appropriate benchmarks and information to do so. Those who suggested targets often defined ‘**great**’ performance in terms of a maximum reduction in the number of incidents and accidents; then gradually lowered targets for ‘OK’ and ‘poor’ performance. For example, they defined a 100% reduction as great performance, 80% reduction as OK performance and so on.

“I’d say a 90% decrease, you’ll never get 100% because how people drive is out of control.” [Female, 41+, Commuter driver, Midlands]

“Decrease in accidents in places where they frequently occur is very good, it’s finding out what is causing them and putting things in place to prevent them as much as possible.” [Male, 41+, Commute driver, Midlands]

“You’d want a bigger decrease in the major accidents compared to minor ones.” [Female, 55, New driver, South West]

4.7 Other drivers' behaviour

A. Drivers experience – other drivers' behaviour

Other drivers' behaviour was seen as a major factor impacting on road users' travel experience by most respondents. Respondents highlighted particular issues with others' driving, relating either to **inadequate driver proficiency** or to **aggressive attitude** on the road. Respondents sometimes felt unsure how much driver behaviour could be influenced and improved, but ultimately most saw a combination of **enforcement and education** as the only ways to address these issues.

Driver Proficiency

Lane Discipline: Respondents cited incorrect lane usage as one of the biggest sources of frustration, delay and threat to their safety as drivers. For example they complained about slow moving vehicles overtaking without being able to pick up sufficient speed or nervous drivers going too slowly in the middle lane. Additionally, respondents expressed frustration at drivers not getting into the correct lanes at junctions or on roundabouts, disrupting the flow of their journey and increasing the likelihood of accidents.

Some thought designated lanes with different speed limits would reduce problems with slow driving, but recognised such change was unlikely to happen. In the absence of this, they hoped for clearer guidance and better enforcement of rules about the purpose and usage of lanes on SRN roads and the speeds at which motorists should be driving in them.

Respondents also wanted to see more signage ahead of junctions and roundabouts that would allow for earlier preparation and getting into the right lane in time.

"Other drivers [make a bad journey], people cutting you up and not driving properly, not getting in the right lanes! [Female, 31-60, Leisure driver, South East]

"Hogging lanes, tailgating and not indicating. And then the lorries are in convoys." [Female, 61+, Leisure driver, North West]

Keeping distance: Many also highlighted not being given enough space by other drivers/vehicles as a cause of stress. Some drivers reported 'tailgating' (driving too close behind) can make them feel intimidated, pressured to increase their speed or 'closed in' where HGVs were involved.

Respondents further stressed the dangers incorrect distance can pose for non-motorised users, those towing or in times of poor weather conditions.

Respondents found chevrons helpful as indication of correct distance and stopping time that needs to be allowed. They hoped these could be used to raise drivers' awareness of safe distance they need to keep.

"You see an awful lot of tailgating so you can't keep a good stopping distance." [Male, 34-52, Professional Driver- Large Vehicle, South West]

"I think where they have chevrons, that's good to train people to keep the right stopping distance." [Female, 65+, Leisure Driver, South West]

Signalling: Respondents reported that a high proportion of drivers do not give sufficient indication of their actions or simply do not give any indication at all. They explained this made them feel unsafe as they had to guess other drivers' intentions, risking an accident in the process. Respondents thought this issue could be addressed as part of a wider drive to improve driving standards through a mix of better enforcement of rules and education.

Inappropriate speed – too slow: This was another aspect of poor driving many complained about (see Section 4.3: Driving speed for more detail on this issue).

Poor motorway driving: Some also raised the issue of motorway driving not being covered in the national driving test, but only included in the optional Pass Plus tuition. This made them think that the many road users do not actually know how to use the motorway correctly.

Respondents concerned about this thought that motorway driving needed to be included in the learner driver programme and covered in the driving test, or Pass Plus needed to become compulsory. Some also called for re-testing older drivers or for DVLA to send periodic updates or information about driving rules to all drivers.

“Also, it’s education at the end of the day... They need to have a minimum speed, like less than 50mph and if you don’t follow it you will get a ticket.” [Male, 41+, Professional driver, Large vehicles, Kent]

Driver Attitudes

Rudeness/Aggression: Respondents also noted that rude and aggressive behaviour from other drivers can greatly impact on their stress levels and confidence, especially in circumstances of being nervous or unsure, for example, if driving in an unknown area or if lacking experience. Respondents were generally unsure what could be done to improve driver behaviour in this regard, except for some general awareness raising campaign or more police presence and enforcement.

“[A bad journey happens when there are] bad drivers and aggressive drivers – tailgating especially.” [Male, 21-40, Business driver, North West]

“The road is essentially my workplace. When people are driving irresponsibly and rudely around me I find it annoying because I wouldn’t go to where they work and be aggressive towards them.” [Male, 30-40, Professional driver, Small vehicles, Yorkshire and North East]

“Other drivers going really fast and aggressive bother me, and having no respect for the rules of the road.” [Female, 18-30, Leisure driver, East]

“Other drivers being aggressive and not indicating; it makes me that much more stressed.” [Male, 41+, Professional driver, Large vehicles, South West]

Lack of consideration for others: Some further felt that other drivers can lack consideration for others and use the road selfishly, adding to a stressful or frustrating driving experience and increasing the risk of accidents. Respondents cited instances of ‘jumping in’ right at the front of a queue at a junction or road closure, not giving others enough space, cutting up without indication and so on. As above, education and enforcement were cited as two ways to address this issue.

Inappropriate speed – too fast: See Section 4.3: Driving speed for more detail on this issue.

Enforcement

Greater police presence/enforcement of rules: As mentioned above, respondents were often unsure about the extent to which bad driving can be influenced. When they attempted to suggest ways to improve driving standards, they often argued for a greater camera and police/authority presence.

Some thought these would result in more enforcement of rules and punishment, which they hoped would improve all aspects of driver behaviour over time. If these attempts were successful, respondents thought they would lead to fewer accidents, delays and increased driver safety.

“I don’t really feel that safe but it’s because of other drivers, so I’d like to see a stronger police presence monitoring poor driving [Male, 21-40, Commuter driver, Midlands]”

B. Performance measurement for other drivers’ behaviour

Starting from their experience and needs as outlined above, respondents suggested the following ways to measure performance management in terms of other drivers’ behaviour, as well as aims and targets where applicable.

1) Lane discipline

Incorrect lane usage was seen to encapsulate a range of poor driving practices that were a significant cause of frustration in some cases (for example, ‘lane hogging’) and a safety risk in others (for example, ‘cutting in’). For this reason, most felt this needed to be included as one of performance priorities with regard to drivers’ behaviour on the SRN. There were some respondents, however, who were unsure whether drivers’ behaviour can be seen as an SRN performance issue or a matter for education and enforcement only.

- ➔ **Respondents acknowledged it would be extremely difficult to measure and change drivers’ behaviour. However, some suggested specific driving practices could be observed and measured to assess performance in this area, for example, driver behaviour at junctions. Others suggested road user feedback could be used to judge SRN performance in this area, coupled with data related to traffic offences.**

“I think one of the main issues is drivers cutting in – you see that a lot just because they want to get past the last car, even if you’re queuing they do it.” [Male, 30-65, Professional driver- Large vehicles, South West]”

“People not indicating when changing lanes is so dangerous and it happens in front of me quite a lot.” [Female, 25, Disabled driver, North East]”

“Use of indicators, that’s such a problem, people do things unexpectedly and you have to react so quickly.” [Male, 41+, Business driver, South East]”

Aims and targets for “lane discipline”

Most respondents struggled to suggest a quantitative target for a reduction in incorrect lane usage without any benchmarks, but also because some were unsure how this would be measured or improved. Drivers instead opted for describing the sort of behaviours they would want to see improved.

Great. Therefore, respondents described qualitatively what ‘great’ performance would look like:

- There would be no ‘lane hogging’
- Middle and outside lanes would be used for overtaking only
- No one would be changing lanes suddenly and without indicating
- There would be more signs telling people to get into the correct lane.

“Indicating to move over about 15 to 20 meters in front of you, it gives you enough time.” [Male, 30-65, Professional, Large vehicles, East]

“That would be no one sitting in or hogging the middle lane.” [Male, 30-65, Professional Driver, Large vehicles, South West]

OK. Respondents generally declined to suggest any lower standards which could still be described as ‘OK’ performance, as most disagreed that any amount of poor driving could be seen as ‘OK’.

Poor. Respondents described qualitatively what ‘poor’ performance would look like:

- Having to change lanes twice in order to overtake
- Encountering someone in the wrong lane four to five times a day
- Having to brake harshly due to someone changing lanes without indicating
- Incorrect lane usage causing an increase in journey time.

“It’s awful when they do it in front of you and you have to slam your brakes on without looking behind you, it’s so dangerous and can cause accidents.” [Female, 25, Disabled driver, North East]

2) Incidence of intimidating/threatening behaviour

Other drivers’ intimidating and threatening behaviour was found to make driving stressful, unpleasant and potentially dangerous. Hence, it was seen as another key area for measuring performance regarding drivers’ behaviour on the SRN.

➔ Overall, this was seen as even more difficult to measure and address than incorrect driving practices, as it was perceived to depend on driver attitude rather than proficiency. Road user feedback with regard to this topic was the only way respondents could see for measuring this aspect of SRN performance.

“For me it’s the intimidating and threatening driving because it’s just so distracting.” [Female, 41+, Commuter driver, East]

“Tailgating, undertaking and aggressive overtaking are really annoying.” [Male, 41+, Commuter driver, East]

Aims and targets for the “Incidence of intimidating/threatening behaviour”

Great. For SRN performance to be seen as ‘great’ drivers wanted to see a reduction in threatening behaviour but were unsure by what amount and how that would be measured or achieved. Some, however, pointed out that a potential role for Highways England in addressing these issues could be to use more road markings and signs to aid correct driving. For example, they thought the use of chevrons for aiding correct distance-keeping was very helpful and wanted this to be used more extensively.

“Well there needs to be a reduction in the amount of intimidating behaviour, but I can’t think what or how.” [Female, 41+, Business driver, South East]

“You get those chevrons on the road that tell you how far to stay back from the car in front, and it’s an easy visual method to follow. They should make more use of those ideally.” [Female, 41+, Commuter driver, East]

“You need to leave the right amount of space depending on the speed you’re going. An appropriate gap to leave between you and the car in front is different on a motorway than it is when you’re going at 50mph.” [Male, 41+, Commuter driver, East]

OK. Similarly as with incorrect driving, respondents felt it would be inappropriate to suggest targets for an ‘OK’ performance level, as that would suggest that some amount of threatening and intimidating behaviour was ‘OK’.

3) Police presence

Enforcement of rules was often seen as a key way to improve driving standards, supported with better education of drivers. Police presence was perceived as critical for enforcement of driving rules, which is why this was seen as one of key performance areas related to drivers’ behaviour.

➔ **Respondents suggested this performance aspect could be measured by looking at the extent of police presence across different areas of the SRN.**

“I think police presence [is important] because that would make people behave better.” [Male, 30-65, Professional driver, Large vehicles, South West]

“This would solve so many problems. So much dangerous stuff happens that makes me think – you wouldn’t do that if there was a police car around.” [Male, 30-65, Professional driver, Large vehicles, East]

“I think when people see the police, they rethink what they’re doing and slow down. They don’t want to get caught doing anything wrong.” [Female, 19, New driver, North West]

Aims and targets for the “police presence”

Respondents generally wanted to see an increase in the police presence on the SRN as they thought it was currently insufficient. Some were, however, unsure how to set targets for police presence.

Great. Others suggested the following targets for ‘great’ performance:

- Seeing a police car every 30 to 45 minutes when driving on the SRN
- Having one police car per one junction.

“One at every junction, but I don’t know how reasonable that is.” [Male, 30-65, Professional driver, Large vehicles, South West]

OK. Additionally, ‘OK’ performance was described as follows:

- Seeing a police car every 45 minutes to 1 hour when driving on the SRN
- Seeing a police car every 40 to 50 miles on the SRN.

“I think as a driver you should know that they’re there.” [Female, 19, New driver, North West]

Poor. Some thought that current levels of police presence were poor and thought it would remain so without any increase in police presence.

“You don’t ever see any police! I don’t see the point monitoring it if you’re not going to do anything about it.” [Male, 41+, Business driver, South West]

5. Cyclists, pedestrians and equestrians' priorities for SRN performance measures

Safety was the biggest concern for non-motorised users of the SRN, with journey times and key factors impacting on them being less of an issue if at all. With safety at the centre, other key performance themes were chosen because they addressed factors perceived as critical to safety. **Road design** (and layout) was perceived to be a key factor impacting on safety non-motorised users, followed by **signage and information** and **drivers' behaviour**. Non-motorised users' experiences of the SRN in each of these areas are discussed below, as well as their suggestions for how SRN performance should be measured and targets set across these themes.

5.1 Road design

A. Cyclists, pedestrians and equestrians' experience – road design

Together with safety, road design and layout were key concerns for non-motorised users of the SRN. Cyclists, pedestrians and horse riders in our sample highlighted the following areas of road design as most important.

Width of space for non-motorised SRN users: One of the main concerns for non-motorised road users of the SRN regarded the width of space they had on those roads. They felt that too often the space they had was very narrow making them feel unsafe. This was due to the road design, including the overall width of the road and how the space around the road was used (e.g. soft verge). Cyclists in particular, but sometimes other non-motorised road users, argued that the space around the roads could be used to widen the lanes and paths for their use. In their view, this would improve their safety significantly.

"I'd like to have a wider bridle path, so that it's easier to get down and people could walk their dogs down there if they wanted." [Male, Pedestrian, East]

"I'd love to see the planning stage because someone needs to be physically checking it out. If the road is wide enough as a cyclist it feel great but when it's too small you get scared by what is coming up behind you." [Male, Cyclist, Midlands]

Non-motorised users' lanes/paths: Provision of designated lanes and paths on the SRN was also highlighted as a related issue. Cyclists called for designated cycle lanes to be extended on the SRN to separate them from motorised traffic and protect their safety. Other non-motorised road users also wanted to see greater coverage of the SRN with paths designed for their use.

"We don't really have cycle lanes, but it comes down to the drivers being aware of them – sometimes the drivers will encroach on the cycle lane." [Male, Cyclist, North West]

Crossings: Non-motorised users also raised some specific issues with regard to crossings on the SRN, but these highlighted sometimes different needs, preferences or concerns of cyclists, horse riders and pedestrians. For example, while some cyclists in our sample preferred bridge crossings as they did not have to stop for traffic, these made horse riders feel unsafe because the barrier was too low for them (in case the horse panics and throws them off). In addition, some respondents felt underpasses were unsafe as they observed or experienced anti-social behaviour in them and were worried about muggings.

Non-motorised users wanted their different needs to be considered when designing crossings, including allowing cyclists to continue their journey without dismounting or stopping if possible, avoiding any risks to horses feet (e.g. from drains) or to horse riders who could fall from bridges if barriers are not high enough etc. Non-motorised road users also wanted crossings to be well-lit and signage to warn drivers in advance to slow down ahead of crossings.

“I need more crossings – it puts me off going because I know it’s not safe. There should be room for horses on the cycle crossings.” [Female, Horse Rider, South West]

Joined-up paths: Some non-motorised users reported that there were places on the SRN where paths and crossings weren’t completely joined up. This forced them to go onto the SRN in order to get to another path or a crossing, increasing risk to their safety.

Non-motorised users wanted such places to be re-assessed in terms of safety, with the view of finding a way of joining up their paths. For example, some horse riders thought road markings could be added to indicate both to them and drivers where they were supposed to cross the stretch of the SRN where the paths weren’t joined up.

“On the A19 the two bridleways aren’t properly joined up, so if you want to get from one to the other you need to go up the road a bit which can be quite dangerous.” [Female, Horse Rider, Yorkshire and North East]

B. Performance measurement – road design

1) Proportion of road miles with paths for cyclists, pedestrians and equestrians

As non-motorised road users feel unsafe in close proximity to cars, separate non-motorised lanes and paths are seen as critical for protecting them and increasing their safety. Their provision on the SRN was therefore seen as one of the key performance areas with regard to road design.

Longer stretches of designated lanes on the SRN were of main interest to some cyclists, for example, commuter cyclists. Most other non-motorised road users, however, were primarily interested in having separate lanes/paths when they needed to use the SRN to join up the roads and paths they used beyond the SRN. As they pointed out, rather than looking at the proportion of separate lanes only, it was critical to assess the location of those lanes and paths and the extent to which they join up routes off the SRN. Additionally, some also thought that non-motorised use of the SRN could be further assisted through better information provision about cyclist, horse riding and pedestrian routes involving parts of the SRN.

→ Respondents suggested the following ways of measuring SRN performance in this area, by:

- looking at what proportion of the SRN is covered by non-motorised lanes/paths
- looking at whether critical places on the SRN provide separate lanes and paths that allow non-motorised users to join up the routes they use outside the SRN rather than sever them.

*“I think you want somewhere you feel you have the right to be and you feel safe.”
[Female, Horse Rider, North West]*

*“I have to go [on the SRN] to get to the bridal paths because they don’t join up.”
[Female, Cyclist, South West]*

Aims and targets for the “Proportion of road miles with paths for cyclists, pedestrians and equestrians”

Great. Respondents defined ‘great’ performance in this area as follows:

- An increase in the percentage of the SRN roads covered by non-motorised lanes and paths
- Where designated lanes were missing, a painted line would be in place to show where non-motorised users should be
- Information about best routes for non-motorised users should be improved and cover SRN roads too (for example, this could be provided as an app).

“I’d like to see a percentage of paths increased.” [Female, Pedestrian, South East]

“More information so you know how to actually navigate paths, when they end where do you go?” [Female, Pedestrian, South East]

OK. For SRN performance to be characterised as ‘OK’, respondents thought particularly important stretches of the SRN needed to be covered by non-motorised lanes and paths, such as:

- Stretches of the SRN that join up other non-motorised routes beyond the SRN
- Very busy parts of the SRN
- Well-known accident spots or parts of the road dangerous for non-motorised users (for example, roads with tight bends where visibility is reduced)
- Junctions and roundabouts
- SRN roads in commuter areas, i.e. where more people might cycle to work on the SRN if they felt safer.

“A painted line would be OK for me – I think it’s enough for cars to know they can’t go in it.” [Female, Cyclist, South West]

Poor. Respondents thought SRN performance could be described as ‘poor’ if there were fewer designated lanes and paths than now.

“If they took the paths away [that would be poor].” [Female, Pedestrian, North West]

2) Width of space for cyclists, pedestrians and equestrians

Non-motorised users, in particular cyclists, often feel they have insufficient space on SRN roads and are pushed to the areas with most issues with road surface (debris, hazards such as drains etc.). For this reason, many felt it was critical to assess the width of space for non-motorised users when measuring SRN performance with regard to this group of road users. Most also thought that widening the space for their use on SRN roads would contribute significantly to their safety.

➔ **Respondents thought this performance aspect could be measured by looking at the width of space non-motorised users had on the SRN (particularly on the stretches of the SRN well-used by non-motorised users).**

“I think this would be the most beneficial – if everyone had their own space then there wouldn’t be any mixing of cars and pedestrians” [Male, Pedestrian, North West]

“If it’s wide then I think you’re giving non motorised users more importance on the road and making them a priority.” [Female, Cyclist, South West]

“The proportion of the road with cycling lanes and the width are all important, they feel lacking and often a bit thin where they are.” [Female, Cyclist, South East]

Aims and targets for the “width of space for cyclists, pedestrians and equestrians”

Great. Respondents thought the following was needed for SRN performance to be described as ‘great’:

- 90% to 100% of ‘heavy-usage’ paths widened within 12 months, where inadequate
- Existing paths well-maintained so they are not narrowed by overgrowth
- Roads wide enough so non-motorised users aren’t forced into the gutters
- Pedestrian paths wide enough for two people to walk side by side, plus some extra space.

“A good 90% widened in the next 12 months [would be great].” [Female, Pedestrian, South East]

“100% of the really busy ones guaranteed wider within 12 months [would be great].” [Male, Cyclist, South East]

“They’d need to prioritise based on how much those paths are used.” [Male, Cyclist, South East]

OK. For SRN performance to be seen as ‘OK’ in this respect, respondents thought that 60 to 90% of ‘heavy usage’ paths needed to be widened within 12 months, where inadequate.

“Ok would be about 60% widened in 12 months [Female, Cyclist, South East]

Poor. Such performance was described as less than 60% of ‘heavy usage’ paths being widened.

“10% paths widened in 12 months [would be poor].” [Female, Pedestrian, South East]

3) Number of crossings meeting the needs of different non-motorised users

Non-motorised users often need to cross the SRN to be able to continue their journey on non-SRN roads. Their number was therefore seen as an important performance indicator. However, many stressed the location of crossings and the extent to which they meet the needs of different non-motorised users was equally important. While most were generally satisfied with the number of crossings they had on the parts of the SRN they used, they weren’t necessarily satisfied with their location or how well they catered for different non-motorised users.

➔ Respondents thought this performance aspect could be measured in the following ways, by:

- looking at the number of crossings and their location
- looking at how well crossings meet the needs of different non-motorised users
- looking at non-motorised users’ satisfaction with SRN crossings.

“I don’t think more crossings means it’s better designed, they need to be in the right place.” [Male, Pedestrian, North West]

“You need to improve the crossings because most people want to get off as soon as they can.” [Female, Horse rider, South West]

Aims and targets for the “number of crossings meeting the needs of different non-motorised users”

Great. The following was seen as required to describe SRN performance as ‘great’:

- An increase in the number of crossings on the SRN
- Crossings provided every 500 yards (in parts of the SRN used by non-motorised users)
- Crossings meeting the following criteria:
 - they are well-placed (for example, where non-motorised paths join-up)
 - they feel safe (for example, safe enough for crossing with a child)
 - they meet the needs of different non-motorised users (for example, horse riders need buttons on traffic lights to be higher-up, as well as higher fences on bridges).

“They need them to link up the paths and have them at roundabouts.” [Female, Horse Rider, North West]

“If the crossings took you on a safer route then they would work well.” [Female, Cyclist, South West]

“Every 500 yards would be very good [Male, Cyclist, South East]

OK. For SRN performance to qualify as ‘OK’, respondents thought crossings would need to be provided every three quarters of a mile on the SRN. Many, however, did not feel comfortable with compromising with how useful or safe crossings were, so did not think it was appropriate to suggest lower targets for that.

Poor. Such a performance level was mainly discussed in terms of no increase in the number of crossings.

5.2 Safety

A. Cyclists, pedestrians and equestrians’ experience – safety

Safety was the dominant concern of non-motorised users of the SRN, most of whom felt more needed to be done to improve their safety. In addition to safety risks arising from issues with road design discussed above, respondents highlighted the following further key safety issues:

Road surface risks for non-motorised users: *Cyclists raised issues with drains, covers and road markings being slippery or obstructive and thus making road surfaces where they ride more dangerous for them. Horse riders sometimes complained that drains were placed in the middle of crossings, posing danger to horses. Cyclists and horse riders wanted the impact of drains, covers and slippery road markings on them to be always considered when deciding about where they will be positioned and which materials will be used.*

“You get those big slippery drains, and they put them in the middle on both sides where you’re trying to cross.” [Female, Horse Rider, South West]

Lighting: Like drivers, non-motorised road users also sometimes complained crossings on the SRN weren’t lit well and wanted to see improvements in this area.

Overgrowth: Some non-motorised road users, in particular cyclists, reported trees on the SRN roads they used weren’t always cut back regularly enough, with overgrowth obstructing their way and pushing them towards motorised traffic. They called for more regular maintenance of the SRN for this problem to be avoided.

“There’s so many cycle paths out of Exeter that are so overgrown that you can’t use them and have to cycle on the road.” [Female, Cyclist, South West]

Poor and dangerous driving: Drivers’ behaviour was seen as another key source of safety risks for non-motorised users. Respondents’ concerns in this area and views on performance measurement are discussed later in section 5.5.

B. Performance measurement – Safety

1) What proportion of the SRN has good visibility and lighting

Respondents reported that poor visibility and lack of lighting makes them feel unsafe and intimidated, as they are aware drivers may not see them and also worry they may not see hazards such as potholes, branches etc. For this reason, many thought lighting needed to be included as a performance area with regard to safety. In choosing this as one of the key areas, non-motorised users in our sample echoed drivers' concerns over visibility and lighting on the SRN.

→ Respondents thought that this performance aspect could be measured by:

- looking at the proportion of the SRN that was lit and how well roads were lit
- looking at whether spots that were particularly important to non-motorised users (for example, crossings) were lit and how well they were lit.

“The lighting is quite important if you are walking. And I would stay on a main road because you do feel safer.” [Female, Pedestrian Midlands]

“Lighting and visibility is so important, that’s why we all said we only go out in daylight hours, you want to feel safer, it can be intimidating but also feel you’re being seen by vehicles.” [Female, Pedestrian, South East]

“If you can’t see anything and no one can see you, that’s really unsafe.” [Male, Cyclist, East]

Aims and targets for the “what proportion of the SRN has good visibility and lighting”

Non-motorised respondents were often unsure how to set numerical targets for the increase in the proportion of the SRN that is lit, as they lacked benchmarks.

Great. Overall, for SRN performance to qualify as ‘great’, they wanted to see an increase in the proportion of the SRN roads that were lit, as well as improvements in the quality of lighting and visibility when roads were lit. Respondents further stressed that all the critical places for non-motorised users of the SRN needed to be well-lit, including:

- Crossings
- Bends
- Junctions
- Well-known accident spots.

“I think they need to light all the bends well and then longer stretches aren’t so important to be completely lit.” [Female, Cyclist, South West]

“The great would be your whole walk being lit, all paths.” [Male, Pedestrian, South East]

*“Being able to see verges at the side of the road in case you slip [would be great].”
[Male, Cyclist, East]*

OK and poor. Respondents were not prepared to compromise on how well-lit the critical places on the SRN were, as they saw this as a minimum requirement. They therefore did not feel it was appropriate to suggest lower standards for this aspect of SRN performance.

2) Number of places with safety risks for cyclists, pedestrians and equestrians related to road surface or overgrowth

Non-motorised users often felt their needs in terms of road surface and road surroundings weren't taken into account when designing or maintaining roads. Cyclists in particular felt most strongly about ensuring road surface did not pose safety risks on the SRN. Overgrowth was seen as an issue for all non-motorised users as it can potentially endanger them if they are pushed onto the road to avoid it. For these reasons, most thought this needed to be included as a key performance area when looking at performance in terms of safety.

→ Respondents thought this performance aspect could be assessed by:

- observing the state of road surface and maintenance of parts of roads used by non-motorised users to assess the extent to which they pose safety risks to non-motorised users on the SRN
- looking at non-motorised users' satisfaction in this respect.

*“The road surface can be a huge problem for riders and cyclists. If we can't use the verges because they've got holes in them and loads of rubbish then what's the point.”
[Male, Cyclist, Yorkshire and North East]*

“There's issues on all roads as a cyclist – you feel every bump. And if there is a pothole or a drain then you have to pull out around it.” [Female, Cyclist, South West]

“Overgrown paths force you closer to the roads.” [Female, Horse rider, South East]

Aims and targets for the “number of places with safety risks for cyclists, pedestrians and equestrians related to road surface or overgrowth”

Great. Respondents described 'great' performance in this area as follows:

- Roads and non-motorised lanes/paths are both well-maintained so road surface is smooth and with no debris
- Drains are placed out of the way of non-motorised users
- Materials used for road markings are not slippery for cyclists
- Edges of roads and non-motorised lanes and paths not overgrown
- 90% of non-motorised road users are satisfied with road surface and maintenance of roads/lanes/paths they use.

*“If the roads are in good condition then you're less likely to come off your bike.”
[Female, Cyclist, South West]*

“I don’t think this would be high cost, it’s not a great deal of work, filling pot holes and cutting back bushes.” [Female, Pedestrian, South East]

OK and poor. Respondents thought 80% of non-motorised users’ satisfaction was required for ‘OK’ performance, whereas anything less than that can be seen as ‘poor’ performance.

3) Number of accidents involving for cyclists, pedestrians and equestrians

Non-motorised road users in our sample were similar to drivers in seeing the number of accidents as the main indicator concerning the safety on the SRN.

→ Specifically with regard to non-motorised road users, respondents thought this performance aspect could be measured by looking at the number of accidents involving non-motorised users on the SRN.

“I can’t see a bike, a horse or a walker ever having a minor accident on those roads—they’re always going to be major.” [Female, Cyclist, South West]

“I think the number of accidents is a good measure of how safe roads are.” [Female, Pedestrian, South East]

“I think the number of accidents tells you how safe the road is—how likely are you to get hurt.” [Female, Cyclist, South West]

Aims and targets for the “number of accidents involving for cyclists, pedestrians and equestrians”

Great. For a ‘great’ performance, respondents wanted to see a reduction in the number of accidents involving non-motorised users, but most struggled to suggest by how much without knowing the current number of accidents. Some also expected very high targets in this area, suggesting they may question any targets perceived as ‘lower’, unless they are introduced in the context of current benchmarks. Others pointed out SRN performance would be great in this area if there were no fatalities.

“I think if we knew the number now, then it would be easier to know what to expect.” [Female, Cyclist, South West]

“Even if they’d reduced by 30% I’d be thinking that’s quite good!” [Female, Pedestrian, South East]

“There could be accidents but no fatalities.” [Female, Cyclist, South West]

OK and poor. Respondents sometimes also felt uncomfortable about suggesting any targets for an ‘OK’ performance level, as they perceived this as accepting a certain number of accidents and fatalities as OK.

5.3 Signage and information

A. Cyclists, pedestrians and equestrians' experience – signage and information

Signage on the SRN was often seen as mostly relevant to drivers, but non-motorised users also pointed out certain aspects of more relevance to them:

Road markings: Like drivers, cyclists and horse riders considered road markings to be important both in terms of instructions and separating and spacing lanes. They were seen as extremely helpful in terms of knowing where non-motorised users needed to be on the road. However, non-motorised users also complained these can become worn out, which was seen as a problem in terms of clearly defining lanes. This was a particular issue for non-motorised users who often felt that their space was becoming encroached upon by other vehicles thus making them feel unsafe.

Non-motorised users, particularly cyclists and horse riders, wanted to see road markings used to increase their safety. For example, some wanted coloured markings separating lanes or rumble strips helping drivers notice when they are at risk of straying into another lane.

“I think on cycle lanes they need to have the different coloured cat’s eyes.” [Female, Pedestrian, Midlands]

Signage alerting drivers to non-motorised users' presence: Non-motorised users felt there was sometimes insufficient signage reminding drivers of their presence. As a result, they thought drivers felt that non-motorised users should not really be on the roads or were not expecting and making allowances for them on busy SRN roads.

Non-motorised users in our sample therefore felt that there should be more signage alerting drivers to their presence: encouraging them to look out for them, leave them sufficient space, slow down near crossings and keep vigilant in the face of blind spots.

“I think signs to say that people are crossing would be good so drivers know to slow down and check for people crossing.” [Female, Horse Rider, South West]

“There should be better signage warning drivers about cyclists, pedestrians and horse riders, because they never know to slow down and expect us.” [Male, Pedestrian, East]

Signage for non-motorised users: Some cyclists in particular did not really feel that information provided on existing signage and the positioning of the signage really catered to their needs. They wanted signage to be available that was clearly visible to them and to know distance, time and landmark information more relevant to their method of travel.

“[I would like] more signposts so you know where you’re going and indications of where you are like street signs and numbers. If you’re on Oxford Street you have no idea how far along you are or whereabouts you are on it because there’s no numbers [Female, Pedestrian/Cyclist, M25 area]

B. Performance measurement for signage and information

1) How often signs warn drivers about the presence of cyclists, pedestrians and equestrians

Signage warning drivers about the presence of non-motorised users was seen as essential for their safety and was also seen to legitimise their use of the SRN. Many non-motorised users in our sample felt that this kind of signage was currently lacking on the SRN or wasn't always well-placed. Respondents stressed such signs needed to be close enough to where non-motorised users joined SRN roads or else they may have no impact.

➔ Respondents thought this performance aspect could be measured by looking at the number of signs warning drivers about the presence of non-motorised users at critical places on the SRN.

“There isn't enough signage to alert drivers to the presence of non-motorised users, because they don't understand who is allowed can be and do what on those roads [Male, Cyclist, Midlands]

“There isn't enough signage telling the drivers to look out for [non-motorised users].” [Female, Horse Rider, North West]

Aims and targets for “how often signs warn drivers about the presence of cyclists, pedestrians and equestrians”

Great. For SRN performance to be seen as 'great', respondents thought signage needed to warn drivers about:

- Crossings
- Horse riders emerging from stables along the road
- Non-motorised users' presence on the verge of the road (where roads are well-used)
- Non-motorised users' presence at junctions
- Designated paths/lanes for non-motorised users

“I think the signage needs to tell motorists to expect horse riders so they're not going at silly speeds. But the signs need to be near to where horses cross, or where the stables are.” [Female, Horse Rider, North West]

“[There should be] warnings where cycle lanes are going to join the carriageway [Male, Cyclist, Midlands]

Respondents further thought 'great' performance would require a 70% increase in the number of signs warning drivers about the presence of non-motorised users. Some however warned against overloading drivers with signage

OK. Respondents thought SRN performance could be seen as 'OK' if there was a 50% increase in the number of signs warning drivers about the presence of non-motorised users.

Poor. No or a small increase in the number of signs warning driver about the presence of non-motorised users was seen as ‘poor’ performance.

2) How useful road marking information is to cyclists, pedestrians and equestrians

Road markings were highlighted as particularly critical to cyclists (and horse riders in some instances) so they know where they need to be on the road. Importantly, they were also seen to alert drivers about non-motorised user presence and where they may be on the road. Better use of road markings was, therefore, seen to have the potential to improve the safety of non-motorised users irrespective of any physical changes that could be made to roads to accommodate their particular needs.

→ Respondents thought that this performance aspect could be measured by:

- looking at what proportion of the SRN marks out space for non-motorised users on the road
- looking at non-motorised users’ satisfaction with road markings aimed at them.

“They need to be clearer about lanes and they really need to think about lane markings.” [Male, Cyclist, Midlands]

“They could do a survey to see if people are happy with the signs, but they’d need to ask all different kinds of road users.” [Female, Horse Rider, North West]

Aims and targets for “how useful road marking information is to cyclists, pedestrians and equestrians”

Great. Respondents generally thought that SRN performance would be ‘great’ if distinct lines marked out areas for non-motorised users even if there was no designated lane for them. For performance to be seen as great, some wanted to see an 80% increase in clearly marked out space used by non-motorised users on SRN roads. In suggesting these targets, non-motorised users in our sample were once again expressing their need for having more space on SRN roads.

“80% increase in clearly marked out cycle lanes and pedestrian paths would be great.” [Female, Pedestrian, North East]

“If the road marking is clear, then the drivers may think twice about coming too close to you.” [Male, Cyclist, M25 area]

OK. Respondents thought that a 30% to 50% increase in clearly marked out space used by and intended for non-motorised users would qualify as ‘OK’ performance.

Poor. Less than 30% increase in marked out space for non-motorised users was seen as ‘poor’ performance.

5.4 Drivers' behaviour

A. Cyclists, pedestrians and equestrians' experience of drivers' behaviour

Non-motorised users of the SRN highlighted drivers' behaviour as a safety concern. Specifically, they raised the following issues with driving behaviour:

Driving speed around non-motorised road users: Some horse riders and cyclists using the SRN complained about vehicles driving too fast around them. In addition, they and pedestrians pointed out that not all drivers slowed down before the crossings. Both were seen as driving at inappropriate speed around non-motorised users putting them in potential danger and making them feel unsafe.

Non-motorised road users wanted drivers to drive at an appropriate speed when overtaking them, as well as to slow down before crossings. They also wanted to see a drop in the number of pedestrians, cyclists and horse riders injured due to inappropriate speed.

"I sometimes cycle on roads where cars are very inconsiderate and they go very fast. I think they go about 80mph and they need to be more responsible. I don't feel very safe and it nearly sucks me to the side. I feel very unsafe." [Female, Cyclist, South East]

"The traffic goes a bit fast—like a few weeks ago there were two cars racing each other and it's just dangerous." [Male, Cyclist, North West]

Space given to non-motorised users when overtaking: Cyclists and horse riders in this sample also felt endangered by drivers not giving them sufficient space when driving around them. They stressed the importance of signage and awareness campaigns educating drivers about the correct distance they need to keep when driving around horse riders and cyclists.

"There's a sign on the A64 that warns you about horses, so I find that that puts drivers' minds into the right space to be careful of horses." [Male, Cyclist, Yorkshire and North East]

Enforcement: Like drivers, non-motorised users in our sample also thought current police presence was insufficient and wanted this to be increased to ensure better enforcement of driving rules.

B. Performance measurement for drivers' behaviour around non-motorised users

1) Number of accidents involving cyclists, pedestrians and equestrians that arise from poor driving

Like the similar measure related to safety, number of accidents involving non-motorised users and caused by poor driving was seen as the ultimate evidence of quality of driving around non-motorised users on the SRN.

- ➔ Respondents thought this aspect could be measured by looking at the number of accidents involving non-motorised users that are caused by poor driving.

“Number of accidents can be measured and they should always be aiming to reduce them, there’s so many accidents involving cyclists [Male, Cyclist, Midlands]

“Any reduction would be great.” [Male, Cyclist, East]

“Number of accidents can definitely be measured and they should always be aiming to reduce them, there’s so many accidents involving cyclists.” [Male, Cyclist, Midlands]

Aims and targets “number of accidents involving cyclists, pedestrians and equestrians that arise from poor driving”

As with targets for overall number of accidents involving non-motorised users, respondents wanted to see a reduction in their number but were unsure what the exact targets should be because they lacked appropriate benchmarks.

“Number of accidents can definitely be measured and they should always be aiming to reduce them, there’s so many accidents involving cyclists.” [Male, Cyclist, Midlands]

“I think the number of accidents tells you how safe the road is—how likely are you to get hurt.” [Female, Cyclist, South West]

2) Police presence

Similarly to drivers, non-motorised users thought enforcement of rules was the main way to improve driving standards. They also thought police presence was key to enforcement of those rules.

- ➔ Respondents thought this performance aspect could be measured by looking at the extent of police presence on the SRN.

“Police presence is necessary to solve all of the others or at least improve them because they’re the only people who can catch and punish people for it.” [Male, Cyclist, Midlands]

“Use traffic officers and highways vehicles, they should utilise those people, give them cameras, train them to register these behaviours and pass it on to those who can take action.” [Male, Cyclist, Midlands]

Aims and targets for “police presence”

Non-motorised road users echoed drivers in wanting to see an increase in police presence on the SRN, but also wanting the police to take special measures against poor driving around non-motorised users.

“There needs to be more police, more people seeing these behaviours happening and more fines and points and things for them, otherwise people will never stop.” [Male, Cyclist, Midlands]

“There needs to be more police, more people seeing these behaviours happening and more fines and points and things for them, otherwise people will never stop.” [Male, Cyclist, Midlands]

6. Stakeholder perspective on SRN performance

Stakeholders in our sample generally felt that the SRN worked well in many ways, but that there were also some areas where improvements were needed. Most also acknowledged the tendency to remember the problems with the roads more than the times when they were working well. This was partly because of the disruptive impact of the problems on stakeholders' business and their staff and customers, but also because when the network is working well it tends to be seen as simply doing what it is supposed to do.

“Often the good performance of the network gets over shadowed by when it's not working well, because you only tend to hear about the problems rather than the success stories.”

Specifically, stakeholders thought that SRN roads were generally well-managed and often safer and maintained better than non-SRN roads. Many also appreciated the network included key routes for them, as well as offered greater capacity both in terms of the traffic volume but also capability to be used by large vehicles. Additionally, some noted the network provided well-linked routes geographically, although there were some areas that could still be better linked.

“They're well managed predominantly and they're well maintained and the access to them is good, in terms of emergency vehicles. They're the only roads that can take our fleet of trucks in a regular basis.”

“They are the primary transport routes between the major locations we wish to serve.”

“We don't have issues with general upkeep. Safety is [also] not something we have any gripes with.”

“In comparison with all roads the strategic roads tend to be of a better quality, they tend to have a better safety record which is good because they are our key routes.”

“For the majority of the time they work absolutely fine and do what they're supposed to do.”

Stakeholders also highlighted those aspects of SRN performance where the network was seen to work less well. Specifically, **information provision** and **reliability of journey times** were the two key areas where respondents noted issues with SRN performance and hoped to see them addressed. While their focus on reliable journey times echoed private and professional drivers' priorities, their perspective on journey times was specific to the needs of their business, staff and customers. Both information and reliability were seen as central to these businesses' ability to plan their journeys and deliver their service on time to their customers. Additionally, delays were highlighted in terms of the costs these businesses had to absorb, as a result of: managing delays on the SRN through adding extra resource; increase in fuel used; missed deadlines and the impact on further supply-chains; loss of customers etc.

“The only real bug bear I have, and there is only one and that's information [...] We have a large amount of smart people using all sorts of technology but we get our bad news from the driver that encounters it first.”

“Congestion, reliability is the key issue if you're a freight operator. You want to be able to plan; quite often these are regular journeys, they are designed to meet certain

deadlines for the customer at the end, so things that happen at short notice or not in the way that they're supposed to, disrupt and mean that drivers get stuck. Cost implications and business planning and disruption to the onwards supply chain, big knock on impact."

"It's not a matter of journey speed; it's a matter of reliability. Because there is an expectation that the network will work to a standard and when it doesn't it costs the industry money, which is a hidden cost to governments and Highways England because it's a cost that is usually absorbed by companies because they have to."

"Commercially, we can't fail so we put more resource into it, clogging up the local roads and costing us more money."

"So a good journey for us is one that is reliable, we know how long it will take. What we have to do is be able to connect everywhere in the country the next day.... We have to do that so if a road journey can't be connected we have to fly the product. It costs 20 times the amount by air."

With regard to **information provision**, respondents mainly highlighted the following. Many reported that they mostly found out about roadworks at the same time as the general public and heard about incidents and congestion problems from their drivers. Some noted that information about road disruption due to incidents or for other reasons was often missing from the Highways England website, where they expected to find it. Others stressed the need for better communication between Highways England and stakeholder businesses and organisations, to allow for advance warning about planned and emergency roadworks. Respondents also called for greater consultation with stakeholders when planning major roadworks, so that the impact on freight, delivery and public transport can be considered. There was a shared belief that better information provision in these respects would help mitigate the impact of roadworks and incidents on their businesses because it would allow for advance planning and adjustment.

"When we have a driver going south and there's a blockage going north on the M6 and he says 'traffic's at a standstill, there's two trucks upside down and they're doing CPR on the hard shoulder' so you go on the Highways England website and it says normal conditions expected on the roads in the next 25 minutes."

"We need to know for example when it's worth taking a 200 mile detour vs. just waiting in the queue... it's a lack of information."

"We need more and better information, more accurate information."

"Planned roadworks and emergency works do tend to be very difficult to find out about [...] we get notified of those by the local authority quite far in advance of anything happening and then we can obviously plan diversion routes and inform passengers. But we don't have that from Highways England. The first time we realistically find out is when signs go out on the road, so we rely on driver feedback, then we have to chase Highways England for what the problem is, when it will be and all the details around it which isn't particularly good."

"[We need] more discussion about the right time to do stuff and the impact of concurrent roadworks and what that means. Sometimes we find that our primary and secondary routes are congested and that shouldn't happen."

"Communications and coordination of roadworks leaves a lot to be desired. When we first met [Highways England], they told us their aim is to tell us of closures 7 days in

advance and give confirmation of that closure 3 days beforehand. That's their target that they gave us and they're just nowhere near it."

Respondents also highlighted similar issues as private and professional drivers in terms of key factors impacting on reliability of **journey times**. They too highlighted **roadworks and incident management** as major factors in this respect, as well as some specific aspects important to their businesses. For example, they stressed the need for better **co-ordination of roadworks** so that multiple roadworks are not scheduled at the same time along the same road, same area, adjoining areas or along major routes. Respondents felt that too often different local authorities, road authorities and utility companies don't communicate their roadwork plans to each other. As a result, businesses are sometimes left without reasonable or any alternative routes and added delays accumulate to the point where the prolonged journeys start to have negative effect on their business. For this reason, some suggested there should be targets for the availability and quality of diversionary routes too.

"Roadworks and the diversions that are put in place have an influence, for example there were roadworks set up on the M6 without much warning given and the detour had roadworks on it! So it seems that one highway authority was not talking to another"

"It gets me when nobody in Worcester speaks to Tiverton when they're planning their road works and there's no whole route ownership because of the regions it's split into."

"There are customers who decide not to travel because of longer journey times. The A338 into Bournemouth – that has had big road works. We lost customers because people didn't want to spend the extra 20 minutes, and that's planned disruption."

"For us it's all about closures, the reliability of roads, being able to plan. The more we can do to avoid closures, the better the diversionary routes and the better the coordination of closures the better it is for us."

"Diversionary routes should add no more than 20 minutes to any journey. We've got one at the moment that adds 3 hours. It's just a nightmare."

Respondents also highlighted some other ways in which they felt roadworks management could be improved. Some reported their drivers sometimes find that roadworks are not carried out at times specified in the public information. For example, where roadworks were expected to start at night, drivers would find lane closures and cones set out in the afternoon causing issues and delays they did not expect at that time. Respondents therefore wanted to see greater supervision and accountability of contractors, so that roadworks are delivered as planned – not just in terms of completion to time and budget, but also the hours when work was carried out.

"I liked all of what was suggested [for assessing roadworks management], but I would add to that the proportion of roadworks that were conducted in the way they said they would do. Yes it's about completing on time, but if they only achieve that by putting cones out at 6pm when they said they'd put them out at 8pm then it's not actually successful.... Something that also says they're doing what they say they'll do."

"The cones certainly go out earlier than people would expect them to [for night time roadworks]."

With regard to **incident management**, stakeholders stressed the need for better information for stakeholders, as well as protocols for dealing with different types of incidents. For example, some thought there should be protocols for responding to major incidents where drivers are stranded for a long time, which specified the types of interventions in those situations. Additionally, while all stakeholders stressed the importance of taking time to ensure safety and correct procedures during incidents, some still pointed out that there were instances where clearing incidents took longer than they expected to be necessary or minor incidents that caused excessive disruption.

“We as a business would never argue that our parcels are more important than people’s lives, but we’d like the information about closures and if there is an accident then sensible recovery times.”

“It depends what’s broken down and where – if it’s a single vehicle broken down in the hard shoulder then I don’t understand why any lanes are closed.”

“Is there a process or a plan that goes into action if people are trapped for 10 hours, what do you do then? Do you divert people off? Is there a clear process within Highways England and other emergency services for how they would tackle such an extreme event, how do we get water to them? What about toilets?”

“What is the protocol that regional control centres have because they are monitoring the network, do they have a protocol for alerting professional operators to problems? Can they provide correct data feeds? What operational stakeholders need to be kept informed?”

Driving speed was seen as another related factor impacting on journey times, similarly as with private and professional drivers. There were some differences, however, in their perspectives on the driving speed on the SRN. For some stakeholders, driving speed was not as much of a concern as it was for many private drivers. This was particularly the case with some businesses whose vehicles’ speed was already lower than driving speed for cars, so they were less concerned with going fast. They were however concerned with driving at a reasonable and constant speed to be able to deliver their services on time. For this reason, some complained about the average driving speed on the SRN falling over the recent years or questioned the suitability of mandatory speed limits which they thought weren’t always suitable. They also stressed the importance of active traffic management and thought its effectiveness in ensuring the smooth traffic flow should be assessed as part of SRN performance. Additionally, coach and bus businesses placed great value on being able to drive at their speed limit because longer journey times potentially made their services less attractive to customers.

“Driving speed for us is less of an issue...well it’s a different issue to cars. Our vehicles are restricted on speed, physically restricted and legally restricted so the absolute speed isn’t an issue for us. What is an issue is unnecessary speed limits, we’ve done a lot with Highways England about why is it a blanket 50mph if the traffic is moving through the roadworks safely or it’s night time so it’s quite quiet.”

“We are hearing from our members that their average speed is falling on the network which would improve with active traffic management if it’s done well. Active traffic management reduces the concertina effect in high traffic where people go faster for a bit and then slow right down. Active traffic management can make that smoother by using things like average speed limits, which makes it safer, more fuel efficient and less stressful.”

Of all the other performance measures suggested by private and professional drivers, stakeholders only commented on **signage and information**, whereas some remaining performance topics were of less concern to them. With regard to signage, some pointed out fixed signage on dual and single carriageways on the SRN could be better maintained to ensure visibility. Stakeholders did not comment on safety as a performance theme because they generally saw the SRN as safe and other drivers' behaviour was rarely raised as a performance topic.

“Signs being clearly visible is definitely an issue for people and that they're kept clean.”

Stakeholders still thought that all the performances themes and measures suggested by private and professional drivers were important, even if not all of them were as critical for them as for private drivers. In addition, a couple of respondents thought that some in their business may perceive non-motorised users' measures beyond ensuring their safety as less important, as the SRN is primarily intended for motorised traffic.

“I think these are all good measures, they're all priorities. You have to do all of them because they're all interrelated.”

“Most of those themes are pretty logical and roadworks management is one of the first things on there. But the bulk of the stuff on there is more relevant to car users and HGV drivers more so than public transport.”

“Safety of pedestrians and cyclists is important but a lot of our members would say this is a road network and it's built to get motorists around.”

They also highlighted some additional performance themes that were missing from drivers' suggestions but were very important to their businesses. Specifically, stakeholders highlighted different infrastructure-related issues affecting their businesses, staff or customers.

First, some pointed out there were instances where infrastructure was one of the key reasons for congestion and 'bottle necks'. For example, they cited points where SRN roads join local roads which cannot cope in terms of capacity. Improved integration of local and SRN road networks – as well as better communication between local authorities and Highways England – was therefore seen as a critical strategic issue. In addition, respondents also highlighted parts of the network around major cities as known problem spots for congestion.

“We know certain stretches are less reliable than others, around large towns and cities, areas that are known to be a problem. It's being able to make a judgement on [their] reliability.”

“The network becomes chronically congested as you approach London and that's a real problem.”

“Our members use both local roads and SRN roads, and there is no point having efficient SRN roads if the local roads are crumbling apart and far too congested which makes it harder to reach their destination.”

Second, some raised the issue of 'severance' where SRN roads divide non-SRN public transport routes. In those instances, buses needed to cross the SRN to continue their journey

on non-SRN roads. However, as there is no specific provision allowing them to cross quickly, their journeys are prolonged by delays caused by congestion at junctions. The long journey times, in turn, make some bus services less attractive to customers, impacting negatively on their business but also leading to lower use of public transport. To address this issue, some respondents suggested that junction performance may need to be part of the performance framework.

“The effect of motorway bypasses next to urban areas that can effectively act as a barrier... [For example] South Yorkshire is the urban area with basic straight line joining up Sheffield, Rotherham and Doncaster. Two trunk roads cut straight across that straight line effectively at right angles, the M1 and the A1. So we find buses crossing those motorway networks very challenging because in practice there are very few crossings, many are junctions so prone to congestion, they won't have bus priority so that can be a delay problem.”

“Essentially the transition between where the SRN meets the local road network certainly needs looking at. What we tend to find is that certainly we have an issue on what's known as the Vauxhall Roundabout. There isn't the capacity that the SRN network has so you just get traffic tailing back. Things like that make it very hard to produce reliable time tables when there's so much variation.”

“Setting some kind of warning threshold...it will depend a lot on circumstances like distance covered, other congestion but a system where one minute delay is taken as just life, 2 minute delay was keep under review and above that was a red sign of the junction is causing problems. Those figures may be too low but some data like that.”

Third, some respondents highlighted the insufficient provision of driver and public facilities. Specifically, freight and delivery companies pointed out gaps in provision of lay-bys and safe places to stop for drivers on some SRN roads, as well as lack of facilities (for example, toilets). This was felt to be more of an issue on trunk roads, but some gaps on motorways were noted too.

“Service areas, there's an inconsistency on parts of the network in terms of driver facilities and while it's right for people to plan their journeys and to understand what they should expect, there is an expectation that a driver should be able to get able to get to a toilet occasionally, and that's not always provided for, there are gaps.”

“There should be a standard in place that recognises that drivers need comfort breaks, it should be measured to show it's at least considered there are a few gaps on the motorway but not as bad as dual and single carriageways.”

“There's nothing here [in the performance framework] about driver facilities... There's KPIs about helping cyclists and pedestrians and other vulnerable users but nothing about giving drivers safe places to stop. Often on trunk roads it will just be a lay-by and if that is taken out that's a big problem for us, when people have nowhere to stop to take a break... I'd like a KPI in here, if you take a lay-by or stopping place out there needs to be one not far away, within a certain distance or required to advertise where the next one is.”

Other respondents noted some bus stops on the SRN had inadequate provision of facilities for the waiting public. Specifically, they stressed the need for shelter and safety of people waiting for buses on the SRN to be better addressed. They also pointed out access to buses travelling

on the SRN could be improved. For example, if lay-bys were missing for buses to stop, they needed to drive into villages adding time to their journey.

“You won’t have particularly regular services on these routes so if you are walking out from a village and your service is every half an hour so having somewhere safe and sheltered to wait is very important”

“Stops with poorer infrastructure tend to originate around smaller villages so usage is low...it is chicken and egg, if there was infrastructure there it might encourage people to use them more.”

Stakeholders in our sample made some suggestions about the level at which SRN performance needed to be measured for that data to be useful and meaningful to them. Some suggested that performance data would be useful to them only if they could see performance of particular roads or particular known ‘bottle necks’. Similarly, some also thought that measuring performance for the network as a whole would not necessarily lead to improvements because performance in problematic ‘spots’ or on roads key for their business could remain poor while the overall performance targets could still be met.

“Where it says 85% for the whole network, chances are they’re probably going to get there, but actually if you start to focus on the real problem areas, how often are they going to be able to reach that. There are known bottlenecks and for organisations like ourselves it would be very useful to have some kind of data on how those bottlenecks are performing, it helps us to focus on where we put pressure for future investment.”

Other respondents pointed out that some targets may need to be broken down into a set of more detailed targets in order for the main target to be met. For example, a respondent suggested that a target for clearing incidents may need to be broken down into more specific targets for different agencies involved in recovery work, as otherwise different agencies could shift responsibility for exceeding target times to each other.

7. Views about the current performance framework

Respondents were shown the current performance framework at the end of their interviews, having put forward and discussed their ideas for measuring SRN performance first.⁵ Consequently, respondents approached the current framework comparatively, looking to establish where it overlapped with their ideas and where there were discrepancies.

Performance topics in the current SRN performance framework

Road users in our sample were positive about those aspects of the current performance framework which they felt reflected their priorities well. Specifically, they were satisfied to see some of the topics they suggested, even if the measures weren't always articulated in the same way.

Respondents saw the following topics and measures from the current framework as similar or related to what they proposed for the framework:

- They noted that their theme of **incident management** was included as one of the key performance indicators within the theme of 'Supporting the smooth flow of traffic'.
- Some also thought that their theme of **roadworks management** was partially addressed through the 'network availability' indicator within the 'traffic flow' part of the current framework, although not necessarily as explicitly and prominently as road users in our sample did.
- Respondents thought the 'average delay' indicator within the theme of 'Encouraging economic growth' covered the issue of **journey times**, but only partially and not as explicitly or prominently as they suggested.
- Other topics respondents highlighted as similar to what they suggested included **safety** and the condition of **road surface**.
- In addition, they were pleased that the current framework included the theme of **user satisfaction**, which respondents also saw as an important source of data for measuring performance on certain aspects of the SRN.

"That looks about right to me, I feel like these are the sorts of things we have spoken about." [Male, 21-40, Professional driver, Small vehicles, Midlands]

"I like the maximising lane availability to 97%-- if they're getting 97% I'd say that's good." [Male, 41+, Business driver, South West]

"They have targets from improving flow of traffic. That covers a lot of what we felt was important." [Female, 21-40, Commuter driver, Midlands]

⁵ The reason for this was to make sure that road users' spontaneous ideas were captured first, as otherwise it would be difficult to distinguish between their ideas and those where they were influenced by what they saw in the current framework.

Reviewing the current SRN performance framework further made many drivers **re-evaluate the importance of safety** for measuring the SRN performance. Before they saw the current framework, drivers' main focus was on improving journey times and they had relatively low concerns over safety on the SRN. As a result, safety was often seen as less of an issue for SRN performance than some other areas, such as journey times. Even incidents were considered mainly in terms of their impact on journey times rather than in relation to safety.

However, seeing the current key performance indicator for safety on the SRN – namely, the 'number of killed and seriously injured' – accentuated the seriousness and importance of safety for many, making them see it as one of the highest priorities. It also made some suggest that if roads were safer, this would impact positively on other key areas (for example, incidents, journey times, driver behaviour etc.). Road users in our sample therefore agreed with the prominence given to safety.

"Everyone wants less people to die on the roads. I don't know how they'd do it but I think a 40% reduction in deaths and serious injuries would be phenomenal." [Male, 41+, Commuter driver, East]

"Safety jumps out to me. We leave our homes of a morning and we expect to come back at night." [Male, 41+, Commuter driver, North West]

Research further revealed some discrepancies between the current framework and road users' priorities for the performance measures. This was most evident in criticisms of the current framework where respondents thought some of their priority areas were missing or weren't prominent or explicit enough.

Respondents noted the themes of **signage and information, drivers' behaviour and lighting** were altogether absent from the current framework, whereas they were seen as important by many. Many also thought that **journey times** and **roadworks management** weren't covered adequately in the current framework. As mentioned earlier, some thought that these two themes were partly addressed through 'Network availability' and 'Average delay' measures in the current framework, but wanted to see them covered more explicitly and prominently, for example, as separate themes in their own right. Others thought that roadworks management and journey times were missing altogether as performance areas, as they weren't mentioned explicitly.

"There isn't anything about communication is there? And that was very important to us." [Female, 21-40, Business driver, Midlands]

"There's nothing about signs in there, so maybe they should put something about them so they know to monitor them." [Male, 41+, Commuter driver, East]

"Roadworks are missing. How come you have 15 miles of it and not a person doing a thing? Roadworks need to be better planned and cover smaller sections." [Male, 31-60, Leisure driver, Midlands]

Respondents were also unsure what certain performance topics meant or why certain performance measures were included. For example, many were unsure what 'encouraging economic growth' or 'biodiversity' meant with regard to SRN roads. In addition, most respondents except for a few non-motorised users saw the measures of 'noise reduction' and 'biodiversity' as unimportant to them.

“What is biodiversity? Electric cars and things like that?” [Male, 41+, Business driver, South East]

“I don’t get what they need the noise thing for. If you choose to live near a motorway then you’ve got to expect that.” [Female, 21-40, Commuter driver, North West]

Many also questioned the cost savings and efficiency measures. Respondents worried that money for important improvements and maintenance would be cut and the quality of work would suffer as a result. The research suggests these measures may need to be explained more to road users, either to help them understand the rationale for including them or to address concerns.

“How will they cut on expenditure? What’s their proposal? Reducing maintenance, cutting services, scrapping cycle lanes?” [Male, 41+, Business driver, South East]

Targets in the current SRN performance framework

Research suggests performance targets are generally likely to attract scrutiny and be used to judge the likelihood that the performance framework will bring improvements. This is because targets were generally perceived as proof of commitment or lack of it. Therefore, respondents were pleased where they thought targets were high, although some were sceptical about how realistic such targets were. Equally, they were critical where targets were absent or low, seeing this to suggest a lack of commitment to improve.

Targets over 80% and 90% were seen as high, inspiring hope they would lead to improvements. Many, however, thought such targets required some explanation about how they would be achieved in order to seem realistic. Specifically, the following targets were seen as high and were received very well:

- 90% user satisfaction
- 97% lane availability
- 85% incidents to be cleared within 1 hour
- 95% of road surface not to require maintenance.

“I wouldn’t believe that it was 97%. It’s good to aim at but if it’s feasible. I’d expect it to be more like 54%.” [Male, 41+, Business driver, South West]

“They seem to be very optimistic with their percentages. They’re all high, 80-90%... maybe they’re being unrealistic but at the same time hopefully they’re putting money into these things, investing in making them better which is encouraging.” [Male, 21-40, Business driver, Midlands]

Additionally, there were some areas where respondents’ views on the appropriate targets greatly varied. Most notably, there were mixed views concerning the target for the reduction in the number of killed and serious injured on the SRN by 2020. Some thought a 40% reduction – as specified in the current framework – would be an excellent achievement given the multitude factors impacting on this number. Others, however, felt the target was low as in their view this suggested acceptance that some serious injury or loss of life was acceptable on the SRN.

“Why 40%? It should be more than that because it’s a serious thing.” [Female, 25, Disabled driver, North East]

Since targets were perceived as proof of commitment, respondents were critical where there were no targets specified or they were perceived as vague. In particular, the target missing for the number of new and upgraded crossings was seen as evidence that non-motorised users' needs are not seen as important. This was stressed by both non-motorised users and drivers in our sample. Also, the absence of the target for average delay was interpreted to suggest little if any action is being taken to improve this.

Certain targets were criticised as vague, which respondents also saw as allowing room for manoeuvre to take little if no action. For example, the target for the delivery plan progress to 'meet or exceed expectations' was seen as not specific enough to ensure targets are met.

"There needs to be a target for everything on here, even if it's as simple as on-going assessment." [Male, 21-40, Business driver, Midlands]

"I think they haven't set a number because they're scared of the target, scared of the huge amounts of delays we have." [Female, 21-40, Commuter driver, North West]

"You'd expect them to meet it anyway. I don't get the point of the target." [Male, 41+, Business driver, South West]

Other aspects of the current SRN performance framework

Some respondents also highlighted aspects of the current framework they felt could be presented in a more 'user-friendly' way. Such comments concerned mainly language and the use of words, phrases or terms that were not widely known and clear to the general public. Additionally, there were points in the current framework where some road users in our sample wanted more explanation to help them evaluate the framework.

Specifically, respondents pointed out they did not know what most of the abbreviations in the framework meant. They also highlighted a range of words that were unclear to them or misleading. For example, they couldn't understand why 'pavement' was used to mean road surface and were unsure what biodiversity and capital expenditure meant in this context.

"I don't understand what NRUSS means." [Female, 25, Disabled driver, North East]

"You'd need to understand what that is all about to see if that's realistic." [Male, 18, New driver, East]

Respondents further wanted additional explanations to help them understand how the targets will be achieved. This was seen as important for being able to assess how realistic these targets were. Some also wanted to know how data will be gathered to evaluate SRN performance, helping them assess the credibility of performance data.

"I want to know how they're going to achieve these things, like 40% reduction in KSIs. What are they putting in place to achieve that? [Male, 41+, Business driver, South East]

Respondents also thought the SRN performance framework should be publicly available, for the following reasons:

- Accountability – respondents stressed that if targets are publicly known, those responsible can be held to account

- Informing the public about any achievements – it was seen as important for road users to know that effort is being made to improve SRN roads
- Raising awareness among road users about what they could do to improve SRN performance through better driving.

However, respondents admitted that they wouldn't look for this information, but thought it should be available online and promoted in other ways. For example, some thought they would be more likely to read this information if it was provided in concise and accessible formats at service stations or with their road tax renewal in the post. They could also see the value of knowing about the framework and any achievements related to it.

“They should post us information about this, attached to road tax maybe.” [Male, 21-40, Commuter driver, South East]

“Tell us about their achievements in simple ways, “we reduced X by X.”” [Female, 21-40, Commuter driver, South East]

“If they don't achieve these what happens? We should be aware, they should be accountable, if there's no consequence what is the point?” [Female, 21-40, Commuter driver, South East]

8. Further comments: variations, allowances and data collection

Throughout the discussions, respondents were asked to highlight any variation in targets they see as necessary, for example, by time of day/year, road type etc. Respondents were also asked to comment on any allowances they would make for factors beyond Highways England's control which affected its ability to meet the targets. Finally, for each of the measures they suggested, respondents were asked to outline potential methods of data collection and comment on their credibility. Respondents' views on these topics are outlined below.

Variation by time and road type

Respondents acknowledged that variations in traffic volume and road conditions at different times of day and year, as well as on different types of roads, were likely to affect strategic roads' capability to meet the performance targets. However, this did not lead most to suggest different measures or targets for different roads and times, but rather to have different expectations for how well roads were likely to perform.

Specifically, respondents had different expectations for SRN performance at different times of day or year, acknowledging the impact of high traffic volume at peak times and also to some extent the impact of adverse weather conditions. Respondents also saw motorways as better than 'A' roads in certain respects. They thought motorways were often able to absorb more traffic than 'A' roads when there was congestion due to roadworks or incidents. Motorways were also seen as better in terms of signage, as they had more gantry signs which were more visible. Some drivers in our sample also thought they were more likely to encounter inexperienced drivers on 'A' roads than motorways, which led them to suggest driving was safer and better on motorways.

For these reasons, some respondents had higher expectations from SRN roads in off-peak times and also from motorways, whereas they were more prepared to make some allowances for the SRN in peak times.

*"The thing is, you're not going to be anywhere near the speed limit at rush hour."
[Male, 21-40, Commuter driver, South West]*

*"Signs are less visible on 'A' roads than on motorways because of more hedges."
[Male, 41+, Business driver, North West]*

"You'd need to take the weather into account – things like heavy rain, fog, ice." [Male, 21-40, Commuter driver, South West]

Allowances for variation in SRN performance

On the whole, respondents were more prepared to make allowances for the impact of factors outside of Highways England's control than those they thought were within their control. Specifically, respondents were more likely to be understanding about the impact of the following factors:

- Particularly difficult weather conditions (although most expect roads should be able to cope with a range of seasonal weather conditions)

- Major incidents involving fatalities – most respondents accept these can take variable amounts of time
- Particularly high volume of traffic – most thought there were far too many cars for SRN roads to cope with at times, so they accepted congestion could not be completely controlled
- Human error and poor behaviour – there was a sense that there will always be some poor drivers on the roads no matter what is done.

“There’s no laws or police presence that will change these behaviours—it’s teenagers. It’s a generational thing.” [Male, 41+, Business driver, South West]

“You’d need to take the weather into account – things like heavy rain, fog, ice.” [Male, 30-40, Commuter driver, South West]

However, where factors causing congestion or posing safety risks were seen to be within Highways England’s control, most were not prepared to make allowances for not meeting performance targets.

“You make allowances for heavy usage, but other than that you’d expect them to meet their targets.” [Male, 41+, Business driver, North West]

Data collection methods

The following methods were most commonly expected to be used to collect data needed for performance measurement:

Road cameras: Many had very high expectations of the data road cameras could capture, as well as data that can be extracted when reviewing footage. They also had high faith in this being an unbiased source of data. Therefore, this was invariably suggested as a potential method of data collection across different themes and measures.

Road user feedback: Where measures required qualitative data instead or in addition to quantitative, road user feedback was often cited as a possible method.

Observation: Certain aspects of road performance, e.g. sign visibility, appeared to require physical observation to assess them.

Quantitative monitoring: This was seen as appropriate when there was a need to assess a number of specific features of the SRN roads (e.g. a number of crossings, signs)

Respondents were generally trusting that methods used to collect performance data would be credible, but many had particularly high hopes for gathering data by using road cameras.

“They could get data from average speed cameras and that could work out from the number plates how long it took for them to get from one point to another and then compare that with Google’s time.” [Male, 21-30, Leisure driver, South West]

“They can look on cameras to see what’s going on.” [Male, 21-40, Commuter driver, North West]

“They could do a survey to see if people are happy with the signs.” [Female, 25, Horse Rider, North West].