

M6 Junction 13 to 15 Smart Motorway Variable Mandatory Speed Limits (VMSL)

Summary of Statutory Instrument consultation responses

March 2018



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Executive summary

The M6 Junction 13 to 15 smart motorways project (the scheme) is located in the West Midlands. It runs from Junction 13 near Stafford, to Junction 15, Stoke on Trent, and has a total distance of 18 miles. Smart motorway infrastructure helps to regulate traffic flow and improve throughput with variable speed limits, signals and signing. As part of the scheme, the hard shoulder will be converted into lane 1, adding further capacity.

Construction is scheduled to begin in March 2018 and be completed by March 2022.

A consultation paper was issued to 211 consultees, and the consultation was open to public participation through the Highways England and GOV.UK's websites. The consultation encouraged representative organisations, businesses and the public affected by the proposed regulations, to register their views with Highways England.

The consultation period began on 24 November 2017 and ended on 21 December 2017. This paper provides a summary of the consultation responses and details how they have been considered and taken forward. A total of 20 responses were received during the consultation, and although a number of comments received are beyond the scope of the consultation, each one has been answered.

1. Introduction

1.1 Purpose

This document is intended to provide a summary of the responses received following the formal consultation on the introduction of variable mandatory speed limits (VMSL) on the M6 between junctions 13 and 15. The consultation, which was undertaken between 24 November 2017 and 21 December 2017, provided an opportunity for stakeholders, such as road user groups and other interested parties, to comment on the proposals. Highways England has considered the comments raised by consultees and this document summarises its response to those comments.

1.2 Background

Highways England is committed to building upon the success of the existing smart motorways schemes which have been implemented on a number of busy motorway sections across the country. Variable mandatory speed limits are a core component of the smart motorway system.

The M6 motorway is a strategic route for local, regional and international traffic and plays a major role as a national artery providing a direct motorway route between the north and central England. It is also a major inter-urban regional route connecting major conurbations and providing access to the important international gateways.

On the M6 Junction 13 to 15, which carries more than 115,000 vehicles per day, VMSL, if approved, will be set in response to the prevailing traffic conditions. These will be clearly displayed on advanced motorway indicator signals above the main carriageway mounted on overhead gantries e.g. variable speed limit signs, lane control indicators and controlled motorway indicators. Other displays include verge mounted variable message signs and post mounted advanced motorway indicators where provided.

The proposed regulations will restrict drivers from driving within the area of the smart motorway scheme at a speed exceeding that displayed on the speed limit signs, and where no other speed limit sign is displayed, the national speed limit will apply.

The scheme is part of the Highways England programme to add capacity to the existing strategic road network to support economic growth and maintain mobility. It's expected that the smart motorways scheme will:

- Increase motorway capacity and reduce congestion
- Provide more reliable journey times for the customer
- Smooth traffic flows
- Reduce the severity of accidents
- Increase and improve the quality of information for the customer.

The use of VMSL is an essential element in achieving the objectives above. Through the introduction of technology, the aim is to make the best use of existing road space.

1.3 Consultation topic

We are consulting on the proposed implementation of variable mandatory speed limits within the M6 motorway junction 13 to 15 smart motorway scheme.

The intention was to seek views on the proposal, specifically on how the proposal could affect individuals, their organisations or those they represent.

1.4 Document structure

Section 1 provides a background to the consultation.

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Section 2 describes how the consultation was conducted and how responses from consultees were considered.

Section 3 contains a summary of the consultation responses and analysis of each response.

Section 4 contains a summary of the approach to the consultation and the recommended way forward.

2. Conducting the consultation exercise

2.1 What the consultation was about

The consultation provided the opportunity for interested parties to comment on the proposal to implement VMSL for the M6 motorway junction 13 to 15 smart motorway scheme.

2.2 Legislative changes

Regulations have been proposed to be made under section 17(2) and (3) of the Road Traffic Regulation Act 1984 (“the 1984 Act”) for the implementation of VMSL for the M6 junction 13 to 15 smart motorway all lane running scheme and to enable amendments to be made to the Motorways Traffic (England and Wales) Regulations 1982 (S.I. 1982/1163) (“the 1982 Regulations”) which govern the use of motorways. The proposed Regulations will restrict drivers from driving within the area of the smart motorways scheme at a speed exceeding that displayed on the speed limit signs, or the national speed limit where no other speed limit sign is displayed.

The relevant legislative power in the 1984 Act permits the making of Regulations that regulate the manner in which, and the conditions subject to which, motorways may be used by traffic authorised to use such motorways.

Within the M6 junction 13 to 15 smart motorway all lane running scheme it will be an offence to use a motorway in contravention of Regulations applying to the scheme made under section 17(2) of the 1984 Act. A more detailed explanation of the changed regulations is given within the ‘M6 junction 13 to 15 smart motorway all lane running scheme consultation document for statutory instrument’. [1].

2.3 How the consultation was conducted

The consultation was carried out in accordance with the government’s consultation principles which are available [here](#). The consultation paper was issued to 211 consultees on 24 November 2017. The consultation documents were made available on Highways England’s and GOV.UK’s websites, allowing the public to comment on the proposals. The start of the consultation period was accompanied by a press notice. All parties affected by the proposals were encouraged to contact Highways England to provide their views. The consultation closed on 21 December 2017.

2.4 Publicising the consultation

To publicise the consultation, we wrote to 211 statutory consultees, all of which can be found listed at the back of our consultation document, before the consultation began, advising them that we would be holding the consultation and requesting responses. We also publicised the consultation by announcing it on the government website and on our own scheme specific webpage, welcoming responses from other businesses and individuals.

2.5 Number of responses

We had a total of 20 responses to the consultation.

Eight of these were from the 211 consultees that we wrote to, these being Staffordshire Police, the City of Stoke-on-Trent, West Midlands Fire Service, Trentham Leisure Ltd, Central Motorway Police Group, Staffordshire Chambers of Commerce, Stafford Borough Council and Jack Brereton MP. A further 10 were from members of the public.

We feel the responses we received gave us a good insight to views of those consultees affected.

2.6 Questionnaire analysis

Within the response questionnaire, we asked three questions, each with a yes/no response.

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There was then a section below each question for comments to further explain the reason for their answer. Most people took up the opportunity to explain the reasoning for their answer.

Question 1

Do you consider that the proposal to introduce the smart motorway scheme on the M6 between junctions 13 and 15 will lead to an improvement in travelling conditions on this section of motorway?

Question 2

Are there any aspects of the proposal to introduce the smart motorway scheme on the M6 between junctions 13 and 15 which give you concerns?

Question 3

Are there any additional comments you would like to make about the proposal to introduce the smart motorway scheme on the M6 between Junctions 13 and 15?

The purpose of the questions we used was to find out what kind of support the introduction of the scheme is receiving from affected organisations and members of the public, we also wanted to know of any concerns the introduction of the scheme and VMSL was causing. This was with the intention to either lay people's concerns to rest or take them into account and amend the scope or design of the scheme.

3. SUMMARY OF RESPONSES

3.1 Introduction

Seventy-five per cent of those who responded are in support of the scheme. One consultee commented: "I have seen first-hand the benefits brought about by the introduction of smart motorways nationally...the long-term benefits are obvious in respect of reducing congestion and the number of people of people killed or seriously injured on our roads."

We've also had some concerns raised, both for the implementation of VMSL on the M6 between junctions 13 and 15, and for the scheme itself. We have responded to the points raised in this report.

This section has been structured by highlighting each of the key question themes that emerged in the consultee responses.

3.2 Support for the scheme

Several consultees responded with words of support for the scheme, a few examples are given below;

"We welcome the introduction of the smart motorway scheme. The M6 offers key national road connectivity; therefore, we agree that the proposed development is key in handling future network demand and preparing our roads for the future." They went on to say: "The potential journey benefits, including increased reliability, a halving of personal injury accidents and decreased severity of accidents that occur on networks, which have been achieved on other national smart motorways are desirable outputs for the local area."

"We recognise that the proposed works to upgrade the M6 will improve the flow of traffic and ease congestion on the motorway once complete."

"Works such as these that contribute to achieving the proposed 'smart motorway spine' are welcome, particularly in terms of: improvements to driver/passenger safety; increased reliability; and better traffic flow to address capacity restraints."

3.3 Is the scheme really needed?

A small number of people who responded to the consultation, felt that there was no justification for the scheme. One commented that "there are too many cars on the road and spending... millions...won't change that one bit. All you do is inconvenience millions of drivers for 4 years." They went on to say that it "has made no difference to the traffic jams on the M6 heading south around J10-7 where traffic is stationary daily. Also, the signs are inaccurate, often reducing the speed of traffic when [there are] hardly any cars. All it does is slow traffic down unnecessarily." Another commented, "Whereas an extra lane on this stretch would undoubtedly be welcome, there are many other pinch points etc. around the country that should be addressed first."

Our response to this is:

"Highways England is delivering the £15billion of investment in England's motorways and major A roads as described in the Government's Road Investment Strategy. Over £11bn of this capital funding has been committed between 2015 and 2020 and includes over 400 miles of extra capacity that will be delivered by creating a spine of smart motorways - which are central to our modernisation programme, because they help to improve journey reliability, reduce congestion and cut stop-start traffic flows - as well as major upgrades like the A14 Cambridge to Huntingdon, the A63 in Hull and the A38 in Derby.

“Where the M6 J13-15 scheme is concerned, approximately 115,000 vehicles use this section of M6 every day. The road currently suffers from serious congestion during peak hours causing significant delay to drivers. The introduction of a smart motorway will improve journey time reliability, safety and reduce congestion.

“Everyone who uses the route will benefit. When the scheme opens the number of drivers using the route a day will be broadly the same as it is now – around 110,000. By 2035 we expect it to be around 118,000 and by 2040 around 127,000

“In comparison with the do-minimum option, when the scheme opens drivers are expected to save 1 minute 46 seconds on their journey time, a reduction of four per cent. By 2040 when we expect significantly more traffic to be using the route, that time saving rises to 2 minutes 34 seconds, which will equate to a 6 per cent reduction in journey time.”

3.4 Increased likelihood of incidents/loss of hard shoulder

Some consultees feel that the introduction of VMSL and the loss of the hard shoulder will increase the likelihood of incidents. One said: “The frequency of accidents and blockages from breakdowns will increase, and the lack of breaks in the concrete barriers will not allow for stuck traffic to be removed. The hard shoulder should be retained throughout for safety.”

Our response to this issue is:

“Smart motorways with a dynamic hard shoulder have been in operation in England since 2006, and have demonstrated that the hard shoulder can safely be used as an additional traffic lane, by providing emergency areas and using traffic monitoring and signalling technology to create a controlled environment. In 2014, we used the experience gained from safely operating these sections of motorway to produce an improved design known as ‘all-lane running’, which is the current standard for new smart motorways. This involves permanent conversion of the hard shoulder to a running lane, as well as fewer gantries and greater use of verge-mounted signals to present information to drivers in a simpler way.

“It is important to note that the hard shoulder does not provide a safe place to stop; 8 per cent of fatal motorway accidents take place there. Evidence shows that most hard shoulder stops are not connected with a breakdown, and involve drivers exposing themselves to unnecessary risk; we also know that most breakdowns are not caused by faults which require an immediate stop. All-lane running eliminates non-emergency hard shoulder stops, while providing a place for drivers to stop away from the carriageway in an emergency. Emergency areas are provided at regular intervals, and we advise drivers to stop in one of these in the case of an emergency such as a critical vehicle fault, or if the situation does not require an immediate stop, to leave the motorway at the next junction or service area. We are currently trialling a range of measures to make emergency areas more visible, including orange surfacing and improved countdown signing showing the distance to the next emergency area.

“The all-lane running design minimises the use of nearside barrier where it is safe to do this, allowing the verge to be used as a ‘soft shoulder’ if necessary. If a driver is unable to reach a place of safety, the electronic signals can be used to close lanes, display warning messages and slow down the approaching traffic, providing protection which is not available on a high-speed dual carriageway or most standard motorways. We have also recently developed a radar-based stationary vehicle detection system, which will allow signs and signals to be set more quickly in response to a breakdown.”

3.5 Junction 15 design issues

Many people who responded to this consultation were concerned with the current layout at Junction 15, and the fact that the scheme design only mentioned 'minor improvements'

One consultee commented: "We are concerned whether the proposed 'minor improvements' to Junction 15 will achieve the maximum desired output for the area. The junction geometry is currently substandard, with traffic backing up onto the main carriageway on peak periods which causes safety issues. We would seek assurances that the developments would achieve the desired aims of reducing congestion and smoothing the flow of traffic.

Another said: "Junction 15 in its current form is dangerous due to the sharp bends and poor sightlines and causes congestion on the M6, A500 and A519, which on the non-motorway routes is often chronic. Minor improvements are suggested in this scheme, but no detail has been given. More information is needed about the proposed changes to junction 15."

With a third stating: "Junction 15 needs more than 'minor improvements'. Currently, the junction has a very poor safety record and contributes significantly to congestion problems. It is not clear from the consultation that the gravity of the problems at Junction 15 has been fully realised, nor that those problems will be fully addressed."

Our response to this concern is:

"We do acknowledge that Junction 15 is in need of improvement, but this cannot be achieved within our existing highway boundary. Junction 15 improvement is identified as a potential candidate for the second Roads Investment period commencing 2020. This will give us time to consider the full implications of the land acquisition, costs, environmental impact and the Development Consent order which will be required.

"For this scheme we will be making some improvements to the slip roads at Junction 15 to improve visibility and to make it easier and safer to use. For northbound traffic, lane 1 will become dedicated to the exit slip road on the approach to the exit. Creating this dedicated exit lane will make a positive contribution to ensuring that the junction becomes easier and safer to negotiate."

3.6 Why is this not being implemented between Junctions 15-16?

Along with comments received about junction 15, a significant number of people asked the question, why isn't this being implemented between junctions 15 and 16. One consultee said: We are eager to see the 'missing link' from the smart M6 spine, namely J15 to J16, receive similar treatment." They went on to say: "We are concerned at how this stretch will operate in isolation particularly with the issues it currently suffers, particularly slow-moving goods vehicles in a northbound direction. When will this link be brought up to smart motorway standard?"

Another made the comment that not implementing smart motorways between these two junctions would be "very damaging to the continuing economic regeneration of North Staffordshire and a significant blockage in the national motorway network. It needs to be addressed very urgently."

Health and safety concerns were also raised in relation to smart motorways not being implemented between junctions 15 and 16, whereby the consultee said: "[Junction 15] is a substandard junction arrangement, located at the bottom of steep gradients in both directions. Vehicle access in both North and South directions is rarely easy and I see, every day, difficult occasionally dangerous movements take place. If the all lane running

starts (and stops) at this location then I am concerned that safety will be infringed. I would prefer to see the start (and stop) location be moved to the top of Keele Bank; some distance from the junction.”

Our response to why junction 15 to 16 is not part of the scheme, is:

“Unfortunately, we can’t tackle Junction 15 to 16 immediately because it would need extra land and a Development Consent Order, which our studies have shown would take too long and cost too much to be justifiable in terms of the benefits delivered. We are, however, looking at ways to make it possible to include it in a future Regional Investment Programme.”

3.7 Size and spacing of emergency areas

Another concern raised was that the distance between emergency areas is far too large. One responder said: “The distance between emergency refuges means vehicles which suddenly break down (for example if they run out of fuel) are unlikely to be able to reach one, causing an obstruction to traffic and hazard.”

Another said: “The emergency refuge areas are too small and too far apart to be able to safely stop cars. I would like the ERA's to be at least doubled in size and to be spaced around one mile apart. I appreciate there would be a cost to this, however in the long term, safety is being compromised as roads policing staff will focus their efforts off motorways where it is safe to stop offending vehicles.”

Our response to this is:

“We have trialled visibility improvements using new signs and orange surfacing to increase customer confidence in knowing where they can stop in an emergency. On this scheme there will be 20 new emergency areas, with orange surfacing and enhanced signage to increase their visibility. The average spacing between emergency areas, junctions and the Motorway Services (motorists are also able to leave the Motorway at junctions and Service Areas) is 1.3 miles.

“This spacing of emergency areas means that at a speed of 60 miles per hour drivers will pass one of them in just over a minute; this is approximately equal to the spacing of lay-bys on sections of A-road with no hard shoulder, which have been operated safely for many years.

“Experience has shown that it is very rare that a driver is unable to reach a refuge area if they need to stop on a smart motorway section. The smart motorway design also involves minimising the amount of barrier on the verge where it is safe to do so, allowing motorists to pull off the carriageway and onto the verge if necessary.

“On the rare occasions when a vehicle is forced to stop in a live lane, this will be picked up by our control centres either through CCTV coverage or the detection technology in the roads. Safe removal of the vehicle is then arranged.

“In collaboration with the roadside recovery industry we have concluded that the size of emergency areas is sufficient for safe recoveries. We have also improved the design within emergency areas, listening to feedback from the recovery industry; enabling safer and more efficient recovery of broken down vehicles. We do not require agencies to remove or repair vehicles in live lanes. The vehicle is either removed to a refuge area or the lane is closed to traffic before any repair is carried out.”

3.8 Communication

Communication is key to all of our schemes. Those responding to this consultation agreed and wanted reassurance that continuing communication would be carried out in a timely fashion. One said: “From an operational perspective we remain eager to ensure excellent communication channels are in place...whilst the smart motorway works are being taken to ensure that the impact of planned traffic management on the local network is mitigated. We are also keen that any emergency incidents and their consequent traffic flow impacts are appropriately communicated and contingency put in place.”

Another commented: “We would also like to ensure that appropriate lines of ongoing communication are in place for the duration of the works, particularly from an operational perspective when incidents inevitably happen on the M6 whilst the works are going on. This will ensure that the local highway authorities are aware of likely increased traffic demand on the local network.”

With another saying that “Constituents will take an active interest in the works, and be directly affected by them, so effective, regular, lines of communication between Highways England and local elected representatives will need to be maintained before and during the works.”

Consultees have called for “a dedicated Facebook page with frequent updates” and a “dedicated, and published on the HE website, email address and contact details for the project team.”

Our response to this is:

“We have invested significantly in our communication and information campaigns for smart motorways and have increased customer awareness of smart motorways. We will continue to seek to understand customer needs and perceptions through research and insight work and listening to their concerns.

“We will continue our engagement with the emergency services, recovery operators and other operational stakeholders, to agree safe, effective procedures and ensuring a consistent approach to incident management.

“Within the M6 J13-15 project team, we are committed to providing as much information to the public and our stakeholders as possible with complete honesty. We are drawing up our plans for keeping stakeholders up to date, this includes regular website updates and newsletters.

“We have an overarching scheme communications plan which governs communications for the diverse stakeholders to ensure that information distribution is managed and monitored effectively. Stakeholders will receive information as and when appropriate, this will allow them to provide timely responses and to communicate details of planned works and diversions to their businesses and their people to ensure they have sufficient time to make the necessary arrangements so that their businesses can continue to operate while the works are carried out. We would however, advise that you visit the dedicated scheme website at <http://roads.highways.gov.uk/projects/m6-junction-13-to-junction-15-smart-motorway/> and sign up to receive regular information.”

3.9 Environmental impact

Within the consultation and through general correspondence, we have received many concerns raised over noise and air quality impacts of the scheme. One consultee said: “We would also like Highways England to ensure that the impact on the local environment from the scheme is minimised. The consultation highlighted the potential for air quality,

noise and visual impacts on nearby housing may occur from the schemes construction.”

Our response is:

Air quality

“The impact of the scheme on local air quality is influenced by both the change in speed and the change in traffic flow with the relationship between speed and emissions varying depending on vehicle type. For motorway traffic, the highest emissions occur at the lowest average speeds when the road is congested. Speed restrictions can help improve air quality through a smoothing of traffic flow, with a reduction in congestion and associated acceleration and braking. The M6 scheme includes the application of variable speed limits, which react to road conditions to ease congestion, balancing some emissions from the increase in traffic flow. The air quality assessment for the scheme found that there were no exceedances of national air quality objectives at sensitive locations either with or without the scheme and changes to local air quality with the scheme were found not to be significant.

Noise impact

“Although our noise assessment of the scheme showed no long term significant adverse effects, we are installing 2km of new noise barriers which the assessment showed will provide value for money in terms of noise benefits. In addition, some existing noise barriers will be taken down in sections during construction and then replaced.”

“Also, the current design for scheme includes low noise surfacing on both the hard shoulder and the carriageway throughout the length of the scheme. However, the complete resurfacing of the existing running lanes, in addition to the resurfacing required for the creation of all lane running, is subject to funding being available when the scheme is implemented.”

Visual impact and lighting

“Within the design we have endeavoured to ensure any visual impacts are kept to a minimum.”

“With regards to the erecting of the new gantries, depending upon the location of the gantry and the position of the property, some views may be screened in a relatively short timeframe, at other locations views may take longer for vegetation to mature and screen views fully. In some locations it may not be possible to fully mitigate views of the structure.”

“With regards to light pollution, it is acknowledged that there will be an increase in the quantity of signals, variable message signs (VMS) and gantry signs across the length of the proposed scheme. To minimise obtrusive light the design is based on luminaire tilt angles of zero degrees. The viewing angle of the technology equipment is relatively small and is directed down toward the c/way and the oncoming traffic. This will ensure the designed installation will emit no light above the horizontal plane.”

“For much of the scheme the motorway will remain unlit, any additional introduction of associated ambient lighting that results from proposed signals, VMS’s and gantry signs will not create significant light spill across the adjacent landscape including residential properties. There will be a degree of motorway corridor vegetation (trees) retained as part of the proposed scheme together with proposed replacement (mitigation) planting in areas of vegetation loss resulting from construction works. This mitigation will assist with reinforcing a buffer of vegetation between the carriageway and the wider landscape.”

“It is acknowledged that the proposed lighting and technology scheme will introduce new elements including changes to the existing and retained lighting columns, including replacing the lighting components and introducing new lighting infrastructure. But through the design of the lighting provisions including signals, VMS’s and gantry signs and the level of retained and proposed vegetation, additional light spill would create an insignificant impact based on the current baseline.”

3.10 Why carry out the scheme at the same time as others?

In general communication received as well as in response to this consultation, many people cannot understand how the M6 junction 13 to 15 scheme will be starting before the M6 junction 16 to 19 works have been completed. They believe this will end in miles and miles of roadworks. One person said: “So from March 2018-2019 there will now be approximately 35 miles of roadworks on the 45-mile stretch between junctions 13-19.” Another was concerned that Highways England “don’t take any notice of what’s been said many times about doing shorter stretches at a time.”

Another was worried that the reduced speed limit during the construction phase, in addition to the already reduced speed limit from junctions 16 to 19 will “cause drivers to fall asleep”

Other comments included: “[The] timetable needs to be realistic... Government has already recommended shorter sections of working.” And “it states on the scheme page that it is due to start March 2018 till 2022. This has me very concerned as your current works to upgrade M6 jct16-19 to a smart motorway isn’t expected to finish until March 2019. This will mean approx 48 miles of roadworks, instead of the current 18 miles, which is causing massive disruption already.” They went on to say: “I just cannot understand why these new works are going to start BEFORE the current 16-19 works have been completed.”

Our response to these issues is:

“We are committed to starting the M6 Junctions 13 to 15 smart motorway scheme in March 2018 and complete it by March 2022. The M6 Junctions 16 to 19 smart motorway scheme is on track to be completed by March 2019, in line with the commitment we made in our published delivery plan. We have given very careful consideration to balancing our desire to minimise disruption to motorists, but also to deliver the upgrades which are needed to address congestion.

“We will start the M6 Junction 13 to 15 scheme with enabling works which will clear the way for the major works. This means that for the first three months from March 2018, we will have only a few very short stretches of 50 mph narrow lane restrictions. We will then commence the major scheme works around June 2018 but we are limiting the main traffic management to a 10km only length of narrow lanes up to October 2018. To minimise disruption to motorists we are using a special safety barrier which allows us to increase the width of our narrow lanes. Beyond October 2018 we will also use this solution with a combination of contraflow to expedite the works along the motorway verges, reducing the overall duration of the scheme.

“Following recent trials on other schemes, we will also increase speed limits through the works from 50 mph to 55 mph or 60 mph. However, this will only occur at times and in locations when our ongoing safety assessments confirm conditions are suitable for its application.

As well as being concerned that this scheme will be in construction at the same time as the M6 junctions 16 to 19 scheme, consultees were also concerned that “the works are planned for the same time as work being undertaken on the M5 around junction 8. Whilst we realise these are two separate motorways and areas, there is a high probability that

both areas of work will cause traffic disruption whilst the work is undertaken. This will result in a back log of traffic both on the motorways and surrounding roads, increasing pressure on the local road infrastructure.”

Our response is:

“The traffic management that is in place at M6 J8 southbound / M5 link as part of the Oldbury scheme, is due to be removed later this year. The scheme is due to finish in Spring 2019. In the meantime, we are doing everything we can to minimise disruption while the work takes place, keeping the same number of lanes open in each direction during the day. We intend to only close parts of the motorway for construction work overnight, when traffic levels are much lower.”

3.11 HS2

Another concern was that “the M6 smart motorway construction phase coincides with the projected construction phase throughout the Borough for HS2 and possibly a proposed railhead near to Stone with a temporary or permanent new M6 junction.”

Our response is:

“The HS2 Phase 2a Midlands to Crewe line proposes that HS2 designs and constructs the following:

- A new rail overbridge at Yarnfield, between junctions 14 and 15.
- A new road bridge at Yarnfield Lane and demolition of existing bridge. This would serve a proposed new HS2 maintenance depot and construction traffic for the railway.
- Enhancement of the existing maintenance slip road at Yarnfield Lane to allow access to the M6.
- Strengthening of hard shoulder and Traffic Management to allow safe merges at the Yarnfield slip roads

“HS2 Phase 2A Royal Assent is scheduled for 2019. Depending on when detailed design is undertaken construction will commence sometime between 2019 and 2021. Our delivery plan commitment is to commence our scheme by March 2018 and to complete it by March 2022.

“We recognise that both schemes have to be sympathetic to each other. For example, our own improvements to the maintenance slip roads at Yarnfield Lane and converting the hard shoulder to a strengthened running lane have linkage with HS2’s plans

“The smart motorway scheme detailed design has been shared with HS2. We are in ongoing discussions with HS2 to ensure its future design is co-ordinated with the smart motorway. We in turn have avoided placing infrastructure in places that would likely clash with a future HS2 requirement.

“We will continue to work collaboratively with HS2 to minimise the disruption and maximise efficiency where the schemes overlap.”

3.12 Health and safety

Consultees are worried about safety on the motorway with tailbacks during implementation and “poor use of variable speed limits as seen on other motorways.”

Our response is:

“Highways England implements all lane running schemes based on robust analysis by experienced professionals using tested methodologies. The analysis shows that risks to

safety on smart motorways are predicted to be reduced by around 15% compared to motorways with a hard shoulder.

“Smart motorways with a dynamic hard shoulder have been in operation in England since 2006, and have demonstrated that the hard shoulder can safely be used as an additional traffic lane, by providing refuge areas and using traffic monitoring and signalling technology to create a controlled environment with the support of Traffic Officers.

“All schemes, including smart motorways undergo a series of independent Road Safety Audits (4 stages in total) during the design, construction and post-opening stages operation of the scheme. Road Safety Audit identifies aspects of the scheme that could improve road safety. The construction and delivery of schemes are also governed by the Construction, Design and Management Regulations.

“The development of the original ALR concept was underpinned by a comprehensive safety assessment, using proven hazard analysis methodologies and governance processes based on the successful M42 pilot in 2006..

“In 2014, we used the experience gained from safely operating our early schemes to produce an improved design known as ‘all lane running’, which is the current standard for new smart motorways. This involves permanent conversion of the hard shoulder to a running lane, as well as fewer gantries and greater use of verge-mounted signals to present information to drivers in a simpler way.

“Evidence from the first two all lane running schemes on the M25 indicates that the current high level of safety performance on motorways is being maintained, with reductions in collision and casualty rates. All lane running achieves this more quickly and efficiently than previous approaches, drivers have also benefitted from improved journey times and fewer unexpected delays.”

3.13 Why will it take so long to finish?

A frequent concern is the time the scheme will take to be completed. One said: “The length of the roadwork duration at four years is quite significant especially with a 50mph limit in place. The smart motorway works from J16-J18 have caused no end of problems with accidents/broken down vehicles and general bad driving causing delays on most days.

Others wanted to know why it would take so long to finish.

Our response to this is:

“The amount of work involved to complete an all lane running scheme goes far beyond just installing signs. To ensure the scheme is operable on opening there are various factors that need to be addressed. These include:

- The removal of the steel central reserve barrier and replacing with a concrete barrier
- Road restraint in the verges
- Central reserve hardening (i.e. removal of the soft verges)
- Conversion of the hard shoulder into a running lane
- Implementation of Emergency Areas
- Drainage
- Removal of existing signs and gantries to be replaced with upgraded infrastructure
- New communications technology infrastructure connected to the Regional Control Centre
- Signage replacement and upgrades where necessary

- New CCTV cameras with full (infrared) coverage
- Resurfacing of lanes with a lower noise surface.”

3.14 Enforcement / monitoring of CCTV

One consultee was worried about traffic enforcement, stating: “Traffic enforcement on the motorway has become pretty much impossible as it's not possible to stop cars at the roadside. I'm also not convinced that the monitoring of CCTV is adequate. I can cite examples where vehicles have stopped in a live lane with CCTV coverage but have not been noticed by the camera operators.”

Our response to this is:

“Variable speed limits are designed to smooth traffic flows and make journeys more reliable by reducing the stop start effect of traffic during busy periods. Speed enforcement is part of the compliance regime necessary to delivery of these benefits.

“Speed enforcement will continue to be part of the smart motorways concept and will be from either a gantry or a verge mounted position, despite contrary belief, Highways England doesn't enforce any speed limits on the motorway network, the police do, and will continue to enforce the speed limits. Highways England sees no revenue from this.

“Incidents can be detected by on road equipment, on road observations, or calls from the public via emergency roadside telephones and mobile phones. As soon as Highways England is alerted to the incident, our regional control centre will use the signs and signals to close lanes to protect the vehicle until help arrives. We may also close lanes to allow access for emergency vehicles.

“Typically, a red x will be set above the selected access route to close the lane(s) to traffic. Supporting variable message signs will be set to reinforce the closure instruction and warn approaching motorists.

“The regional control centre will ensure that all signs and signals relating to the incident and associated traffic management measures have been cleared at the appropriate time in accordance with existing procedures.

“We have also set up coordination groups with the emergency services to ensure that we can develop and improve our operations with all lane running in place, especially during incidents.”

3.15 Diversions and signage

A few concerns were raised over diversions and the associated signage. One consultee said: “The works are bound to cause congestion and delay and therefore some traffic will divert onto adjacent highways, particularly in the event of accidents / breakdowns. Therefore, it is essential that the sign posting of the alternative routes and the impact on primary junctions on the alternative routes is carefully considered and managed.”

Our response is:

“We do appreciate that traffic management and diversions are a particular issue and have given careful thought and planning to how we manage the construction impact upon traffic and local stakeholders. We have also been working closely with councils and the emergency services to assess all proposed diversion routes and ensure that condition, performance and our signage are suitable for the diversions to proceed. This will ensure the best possible solutions to keep impacts to a minimum.

“We do constantly strive to seek a balance between completing the works as quickly as possible and minimising the inconvenience of closures to road users and those on diversion routes. Equally our highest priority has to be the safety of workforce and road users alike. Please be assured though we continue to look for new ways of working and adopt best practice in all aspects of work, where applicable.

“For instance, for this scheme we are:

- Using a new type of safety barrier which means that the narrow driving lanes through the works can be wider.
- Commencing the scheme from March to June 18 with only short stretches of traffic management to undertake work on bridges that will clear the way for maximum efficiency in the subsequent main works.
- Working with the councils to assess all proposed diversion routes and ensure that condition, performance and our signage are suitable for the diversions to proceed.”

3.16 HGVs

Two respondents were concerned about HGVs:

“How about trialling a ban on HGVs using lane 3? I regularly see tailbacks caused by a truck taking minutes to overtake another, when they're both limited to 60mph. Giving faster moving traffic two HGV-free lanes may reduce these tailbacks.”

“These are long stretches of straight motorway on steep hills which can cause HGVs to drive constantly to the tacho limit. most accidents involve HGV collisions - the speed limits for HGVs should be reduced and they should be forced to drive in convoy at peak times.”

Our response is:

“We are committed to tackling congestion and making journeys safer and more reliable, and one way in which we try to do this is by implementing HGV overtaking bans in certain areas. We understand that slower vehicles can cause delays and blockages when overtaking at low speeds, which can increase the risk of accidents and further delays.

“We are sometimes asked why we do not impose a blanket overtaking ban for HGVs on the strategic road network, or restrict them to two lanes on all lane running (4-lane) sections of motorway. As HGVs and any vehicle with a trailer are already banned from the right hand lane of motorways with three or more lanes, the introduction of further restrictions on sections of road where there are many opportunities to overtake quickly and safely could be seen as disproportionate or over-restrictive.

“One other concern is the possibility of nose to tail convoys blocking the nearside lanes which would cause difficulty for drivers wishing to join or leave the motorway. This problem has already shown itself at road works where HGVs have been restricted to the inside lane for several miles. In addition to problems in getting on and off at junctions, many drivers have commented that they feel intimidated having to pass a number of HGVs nose to tail. Given that HGVs form a higher percentage of the traffic on English motorways than most other EU networks, the queues could be significant.

“Additional bans would also be likely to increase the travel time of most HGVs because there are often other vehicles travelling more slowly than the maximum permitted speed of an HGV. The additional restriction would have an impact on the ability to overtake; HGVs would then have to travel at the speed of the slowest vehicle, significantly increasing journey times, as well as causing very long queues in the inside lane.”

3.17 Junction 13

Another query was about Junction 13: "Will ALR continue through J13 or is there a planned lane drop? It would be more beneficial for ALR to continue at J13 and J14 rather than drop considering most volume in this section is heading further north/south."

Our response is:

"ALR will continue through junction 13 and link in with the already implemented J10A to 13 SMP scheme. Through junction 14 we are able to provide ALR in the northbound direction. However due to the constraint of Creswell viaduct and the adjacent Doxy Marshes SSSI in the southbound direction the technical complexity, cost and potential environmental impact of widening this existing structure outweigh the benefits that would be provided."

4. SUMMARY AND RECOMMENDATIONS

4.1 Summary

We held this consultation as we believe it is important for us to know the public's views about the scheme and the introduction of VMSL, as they will be the users of the scheme when it is complete. We also felt it necessary as it was an opportunity for individuals and organisations to raise any concerns to Highways England which required action. We are pleased with the responses we received which gave a sense of both the positive and negative aspects of the scheme.

We will be sending an individual copy of this report to everyone who responded to this consultation and who left us contact details. Otherwise it will be available on the scheme webpages.

We also have an open inbox for the scheme which is regularly monitored; all emails sent to this inbox from members of the public receive a response to help answer questions that they may have.

4.2 Recommendations

From the results of the VMSL consultation, we can conclude that we will be progressing with the introduction of Variable Mandatory Speed Limits between junctions 13 and 15 of the M6 as a part of the smart motorway scheme.

We do not feel that the concerns raised regarding the introduction of Variable Mandatory Speed Limits were substantive enough to prevent us from progressing with VMSL.

Many of the concerns raised have already been previously considered in the design stage and information provided from other sections of the network already using VMSL prove that the introduction of the technology has not caused any significant incident and VMSL is considered safe and effective allowing us to rule out the majority of concerns we received in this consultation. There was insufficient opposition to the introduction of VMSL to raise concerns as to why we should not be using VMSL.