

# M4 Smart Motorway Upgrade

Wave 2 monitoring - Qualitative research debrief

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FEBRUARY 2020

## Background and methodology

- Highways England is upgrading the M4 motorway between junctions 3 (Hillingdon) and 12 (Theale/Reading West) to a Smart Motorway. This will result in roadworks, during which time users will experience temporary delays to their journey.
- In 2019, Transport Focus worked with Populus to adapt their existing rail disruption model for road users in relation to the M4 Smart Motorway upgrade works
- Transport Focus asked Populus to replicate the benchmark research to track progress of key metrics over the course of the first phase of the works and a qualitative phase of work was conducted to ensure that any emerging issues and changes in mood were captured
- Populus conducted 3 x focus groups (1 x infrequent users of the affected stretch of the M4, 1 x frequent users and 1 x HGV/commercial vehicle drivers). Populus also conducted 4 x disabled driver depth interviews, all in the Reading area in January 2020
- This report is the result of that initial phase of qualitative research

# Overall summary

## In a nutshell (1), whilst drivers' focus is on the effect of the works on their journeys, they are increasingly worried about smart motorways per se

- Drivers had a wide range of different reactions to the M4 upgrade – from anxiety and frustration of the effects of the works to pragmatic planning around the disruption and confidence in their ability to deal with any impact on journeys
- The M4 works have impacted drivers around Reading in many ways, from minor disruption to journeys to additional time and money invested in “mitigation” e.g. planning extra time into commuting, to booking hotels at Heathrow rather than travelling “on the day”
- Whilst some people “discovered” the roadworks by driving in them, many were generally aware through local media and motorway signage in particular
- The leaflet was well received in the research, even though no one had seen it before. The bulletin/update provides good balance of granular detail and progress (although again no one had seen it before the research)
- People are keen to have disruption information targeted at them, but increasingly want more information, explanation and even justification of the concept of smart motorways, not just the impact of the works

## In a nutshell (2), whilst drivers' focus is on the effect of the works on their journeys, they are increasingly worried about smart motorways per se

- Signs are a key part of the roadworks experience and a primary communication channel for practical in-the-moment information. The Electronic Bulletin Boards were an interesting development – drivers aren't sure what role they should perform, but appreciate their physical clarity/ease of reading
- Portable variable message signs are an expected part of the roadworks landscape and drivers feel they know how to interpret their simple language and semiotics
- Communicating complex messages is difficult as evidenced by the attempt to explain why the carriageway lanes were diverging, when no workers were visible, through a single sign
- Closures had the capacity to cause great anxiety amongst those not expecting them; but most were generally aware of the possibility of a junction or the whole motorway being closed at some point during the works and many did check before travelling
- People understand the necessity of speed limits but they can be a cause of debate, particularly whether there could or should be flexibility in their application at different times of day, levels of traffic, etc.
- Drivers still believe that the downsides of disruption across the entire length of the upgrade, if the works were all done at once, would outweigh any modest reduction in the total duration of the works
- The “Red X” goes to the heart of people's growing anxieties about smart motorways – people worry about other drivers' behavior in relation to closed lanes but worry more about what would happen if they broke down, protected “only” by the Red X

The M4 works are  
experienced in  
different ways by  
different groups of  
people

# We can split people and their experience of the M4 works into four informal typologies, from anxiety through pragmatism and frustration to confidence

## Anxious adopters

- Use infrequently
- Less confident about motorway driving generally
- Have to use M4 because of family, work or social commitments
- Road works (and smart motorway) make them anxious and feel unsafe
- They will reluctantly change behaviour if possible, but don't feel they can avoid
- Disabled drivers can fall into this category

## Risk averse planners

- Generally more confident in their driving and on the motorway
- Less beholden to the motorway and so can switch routes or to train
- Will plan their way around trouble
- Sceptical about smart motorways and want to know more about how they will work/benefits
- Disabled drivers tend to fall into this category as they MUST plan journeys more carefully (e.g. need to take more regular loo breaks)

## Frustrated functionalists

- More experienced motorway drivers who use the M4 more regularly
- Know what to expect from roadworks
- Can "game" the works to some extent by setting off early/late
- But will generally just put up with the disruption
- Find signage, speed limits, duration, non visible workforce irritating
- Keen to have the works finish ASAP, sceptical about benefits of smart, less anxious about risks

## Confident professionals

- Professional and commercial vehicle drivers and those using M4 very frequently
- Confident in own driving experience and capability
- Worry more about poor behaviour of other drivers which is exacerbated by the works
- Find the concept of smart motorways problematic (although might have had acceptable experiences elsewhere)
- Plan their journeys as far as possible beforehand and in real time
- Generally resigned to disruption as "business as usual" for UK motorways

## Disabled drivers share the outlook of “anxious adopters” and “risk averse planners”, but have other characteristics and needs

- Both practical and emotional factors mean that they need to plan carefully and feel they are more severely affected by disruption to “normal” motorway running
- They often arrange journeys and appointments at off-peak times to avoid the worst congestion and disruption; they are generally successful at this mitigation behaviour – they are well practised and resilient
- They can feel that the emotional amplification of congestion, narrow lanes etc. is heightened for them as they are more emotionally alert already, meaning that any disruption can feel more stressful than for able bodied drivers
- Using the same media sources as other drivers but particularly interested in a mix of hard copy (for general planning and info) and “live” updates via social media, local media and suggest a dedicated HE app, underlining their need for up-to-date information



Overall experience of  
the M4 upgrade works  
to date

# The M4 works have impacted drivers around Reading in many ways, from minor disruption to journeys, to additional time and money invested in mitigation

- Drivers have experienced lots of different impacts of the works:

Congestion and noise in neighbourhood

Regular journeys are taking longer

Need to set out earlier/later to avoid congestion

Changing route to avoid the M4 (generally or at specific times/dates)

Changing plans to work around disruption (e.g. book hotel at Heathrow, use train)

Experienced a specific incident – traffic jam, missed meeting, etc

- People's opinions of the work range from resigned indifference to anxious negativity; perhaps unsurprisingly there is no real positivity
- Mainly people are focused on the effect of the works themselves, but the topicality of the smart motorway "debate" (and timing of the groups the day after the BBC Panorama programme) is leading people to speculate about the resulting smart M4 (few had seen the programme but more had picked up on the related media coverage)

“

*It just makes me more nervous, especially having two kids in the car and it's dark and, like you said, the lanes are so narrow, and you get some crazy drivers! They get closer and closer*

*It's affected the journey that I take, if I'm going on the motorway, if I've got time, I'll avoid it, go on the A4*

*You've just got to allow more time for your journey at the moment*

”

Some communication has cut through in local and social media plus signage on and around M4; but most are aware through direct experience

# Whilst some people “discovered” the roadworks by driving in them, many were generally aware through local media and motorway signage in particular

There is a general awareness of “what’s going on” in terms of:

- Everyone aware that something is happening
- Most know it is the Smart Motorway upgrade
- Generally know if you use the motorway but also on local (social) media, traffic information/news, through businesses and a topic of conversation

**A split between people who had heard some detailed information about the works beforehand**

From local TV to signs on the motorway

To leaflet through the door near to works and to the appearance of “The Village” *(this is the name motorists gave to the compound of construction vehicles and temporary buildings at the side of the motorway)*

**And those who had not and became aware or stumbled across the works as they happened**

Either took it in their stride as expected on the motorway

Or stressed and frustrated by it “suddenly” happening

- Low awareness of HE events (although more constant presence at key sites would be welcomed e.g. Ikea and Sainsbury’s at J12)

“

*I think I got an email from my company that said please allow additional travelling time that you won't be paid for!*

*I think a story in the local news, where it was just saying they're going to be introducing smart motorways on the M4 and it's going to start from this date. That's pretty much what it read. Again, I can't remember ever being given a full explanation of what the reasons were and what improvement it's going to make*

*When they started putting stuff in that field on the left-hand side coming past junction 10*

”

# Leaflet well received – just a challenge to get it into drivers' hands

Whilst no one had seen the leaflet before, it was generally well received when they had a chance to read it

Most said they would have liked to have seen it/its contents already (rather than only seeing it in the research)

## Positives

- Comprehensive content
- Clearly explains the nature, timing and duration of the works
- Generally explains why the work is taking place

## Negatives

- Long/too detailed
- Doesn't fully explain/sell smart benefits (or address worries/risks)
- Cover picture emphasises restriction rather than driver benefit
- Didn't see it before the works started
- Disabled drivers would like to see specific reassurance/info related to their needs



“

*Would have been nice to have seen this a while ago*

*I guess it is quite a lot of information, but you know, not everyone's going to read this and now I've read it, I know what to do if you break down*

*I'm sure all of it is relevant, but some people might feel it's just too much to read and can't be bothered*

”



# Bulletin/update provides good balance of granular detail and progress

## Update bulletin

Well received (although worry about how they would access it/how it would be distributed to them)

## Positives

- Focuses on practicalities of the works and the impact on drivers
- Provides details of what is happening and when
- Reassures (e.g. Six Nations)
- Provides a “status” report (so people can judge how well the work is going and whether it is on time)
- Pictures of actual work make link between on-road experience and progress tangible

## Negatives

- Some question bridge graphics
- Mainly worried about how they would get to see it



Upgrade to  
smart motorway  
Junction 3 to 12

### January 2020 news bulletin

We are closing the motorway between Junctions 4b and 5 over the weekend of 21-23 February 2020. A diversion route will be in place for the weekend while we demolish Old Slade Lane Bridge near Junction 4b (see next page). The work will be complete early Sunday morning 23 February to help clear the way for drivers heading to and from the Six Nations match at Twickenham that afternoon.

The recent weekend closure over 17-20 January was for the demolition of the old Huntercombe Spur bridge at Junction 7. A temporary bridge is in place while the new permanent replacement is built. All work was successfully completed on time and we'd like to thank residents and road users for their patience over the weekend. These images from the weekend (right) show the scale and complexity of the work we are engaged in for this project.



### Extension of traffic management and bridge progress so far



So far in the project we have made good progress on the bridges that need replacing to accommodate the smart motorway:

-  We have demolished 4 bridges
-  We installed a temporary bridge at Junction 7
-  We have built the new deck at Monkey Island Lane bridge

The traffic management for the project will soon be extended between Junctions 6 and 4b of the M4 to join up the two sections already in place. This will mean the 50mph speed limit and narrow lanes will be in place along the whole route until the summer period when we start to complete the construction works between Junctions 8/9 and 10 before continuing work to the west. Free breakdown recovery will remain in place, and if you get into difficulty our team will move your vehicle to a place of safety so you can call for assistance.

“

*It's information that people will use [that they] need to know.  
Again, where are these handed out? How can people access  
them*

*It looks just like advance warning. At least you've got  
something, at least you know*

*It's interesting to see the pictures. I like seeing engineering and  
stuff like that, it's fascinating*

”

# People are keen to have disruption information targeted at them, but increasingly want dialogue about the concept of smart motorways

As much as content, people focus on channel - all about “push” in today’s communication world

- Need just enough information, just in time
- In the right place, using the right channels
- Challenge to communicate e.g. upcoming closures, in a simple way,

The “Smart” elephant in the room – drivers want and need to know more about the nature of smart motorways:

- Short term – all about the works and the disruption, with benefits and explanation of “Smart” referenced to explain works
- Longer term – narrative has shifted from “tell me why” to “justify and reassure” on risks (or even halt upgrade)

These are examples of the different kinds of information that people value, taken from GetReading/Berkshire Live, mentioned favourably as a key source of M4 Upgrade works in the groups and disabled driver depths

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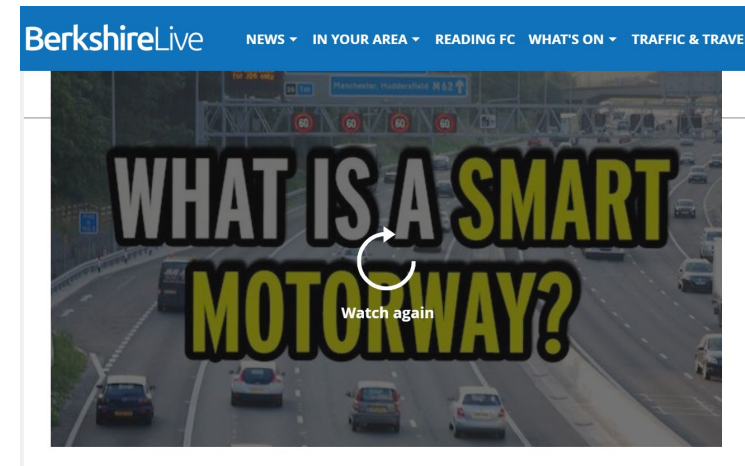
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Drivers are warned of three nights of M4 closures as the controversial smart motorway project continues.

The motorway will close overnight eastbound between Junction 12 for [Theale](#) and 11 for [Reading](#), Berkshire on Wednesday, February 12, Thursday, February 13 and Friday, February 14.



Signage is key  
especially for timely  
in-the-moment  
communication

# Signs are a key part of roadworks experience and primary communication channel for practical in-the-moment information

## “Announcement” signs

- Some had heard about the upgrade through these signs
- Debate about what the point is but most agreed they do include key information of - It's happening, where and when (when finished is key once works are happening)
- Drivers didn't feel the phrase “digital roads” was helpful – it isn't a recognised description

## In-situ experience on/around M4

- People generally focus on signage that tells them about a problem or a restriction
- It's what they expect to see
- It's what they need to know and want to know
- It's what they have time/opportunity to take in
- They would always like more notification on feeder roads in good time to take evasive action or to plan ahead as relevant e.g. for everything from slow traffic to junction closures



“

Conversation:

*Why do we want a digital road?*

*Yes, it doesn't make any sense*

*It tells you what junctions are affected easily, and it tells you when the completion date is*

*But look where it is, they're not in a good place, if you're driving, you'll probably see, 'Preparing for digital roads...' and you've gone past*

”

# Electronic Bulletin Boards are an interesting development – drivers aren't sure what role they should perform, but appreciate the physical clarity

A minority claimed to have seen these along the M4

There was a mixed reception

## Positives

- Clear text (also mentioned favourably by disabled drivers)
- Would stand out any time of day/night
- Can fit more in (although not too much)
- Could be used to inform

## Negatives

- Dislike narrative
- Too much to take in
- Congratulatory tone
- Might be very bright at night/disembodied white text
- Semiotically unclear – what does black/white on black connote cf traditional signs which people understand (e.g. use of amber and red)



## Usage

- Some openness to using their visual clarity to better communicate info/warnings
- But need to understand how to read
- Resist too much text or wrong tone

“

*It's slightly condescending, I already know there are narrower lanes*

*It's clear; I would imagine it's just an information one*

*Put the same words that are on the yellow one on the black and white one and that would be useful information*

*That seems very clear and I've not seen anything like that before  
– looks really easy to read* (Disabled driver)

”



# Portable variable message signs are an expected part of the roadworks landscape and drivers feel they know how to interpret their simple language and semiotics

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Standard portable variable message signs have a well understood format and colour coding

Assume will provide up to date disruption-orientated information

Time/distance is familiar usage

But mixed response – equal for/against split

- For/positives
  - Useful info
  - Means you know what to expect
- Against/negatives
  - Annoying info – don't want to know
  - Can't change anything – not useful
  - Still feel they need to “do maths”
  - Can make you focus on longer time to destination
  - Disabled drivers mentioned the use of junction numbers and not locations, which can be confusing especially when already stressed (this is a general point as well as specific to these signs)



“

*I just think, oh God, it just seems to have made my journey longer. I don't want to know, I just know where I'm going, I just want to get there*

”

# Communicating complex messages is difficult as evidenced by the attempt to explain why the carriageway was narrowing when no workers were visible

Bridge sign failed to communicate message beyond the obvious

- Only says that bridge is being replaced, does not suggest anything about invisible workforce
- “Lane diverging” sign is main focus as that is key in-the-moment info/warning
- If required to communicate workforce message should be more explicit (perhaps with EBB) – but disagreement about necessity of telling people about workforce in this way



“

*They're constructing a new bridge. It's stating the facts and it  
wants everyone to move over*

*The only one that's important is the move over*

*It don't make no difference to me. Put cones out, I know you're  
working, that's it*

”

## Response to specific questions and issues

- Closures
- Speed limits
- Duration
- Red X

## Closures had the capacity to cause great anxiety amongst those not expecting them; but most were generally aware of the possibility

Many had experienced the effect of the closures

- A couple of people had been “caught out” and had made them anxious about travelling again
- Some had known beforehand and changed travel plans – route, mode, timing
- A sense that it was “general knowledge” that there were closures because (minority) bridges were being replaced

Knowledge of advance communication was vague

- Mixed response – a minority felt that they knew in advance from signage and from local media in particular
- Many felt that signs were incorrectly positioned and that you could join the motorway having missed them and get stuck

Diversions

- General familiarity with the diversion routes – add length to journey but few other choices
- Fact of life in these situations
- One disabled driver uncomfortable with being diverted via “scary country lanes”

“

*They are quite well advertised when you come on to the motorway. On the slip-road, as you enter on to the slip-road, like the one that was at Reading said there would be closures*

*I knew it was going to be bad, so we were planning for it*

*I've been caught out with a couple of junction closures, but when I entered the motorway I saw absolutely nothing, got to 12, I realised*

”

# People understand the necessity of speed limits but they can be a cause of heated debate

Speed limits were a source of spontaneous discussion with many people expressing their exasperation

- That speed limits are applied regardless of time of day/night, traffic conditions and presence of workforce
- About the way “other drivers” fail to observe (driving both below and above the speed limit)

However generally understood as necessary for safety

- To slow drivers down generally
- To slow drivers in narrow lanes
- To protect workforce

In spite of this, most drivers would prefer speed limits to remain consistent rather than change between short stretches

- But can depend on “segment” (frustrated and confident car drivers want to make progress whenever possible, HGV drivers prefer “steady as she goes” 50mph approach)
- At night/when no traffic/no workers – could be lifted somewhat
- The idea of having a section at 60, where the works are almost complete, with 50 either side, received a mixed response
- The minority in favour liked the idea of making progress and were used to this from variable speed limits on other motorways; those “against” worried that they would be “caught out” by the change, that it would be more dangerous to have speeding up and slowing down (HGV drivers also take longer to speed up and slow down)



“

*Safety, I'm assuming, for the workmen, that's what I always thought it was for*

*I think it's best to keep it consistent personally because you might forget about the speed limit, mightn't you?*

*I think it just encourages maybe sharp braking*

*I don't agree, I would rather put my put foot down a bit*

”

# Drivers still believe that the downsides of disruption across the entire length of the upgrade would outweigh the modest reduction in the duration

Intuitive preference for getting the works over with

BUT

Most people think that it is a very long stretch already

They would only put up with concerted disruption if the works were completed very quickly rather than a marginal gain of a few months

Plus many have worries about the effect of long stretches at high alert

- Slow speed
- Narrow lanes
- Other road users

“

*Yes, it seems like hundreds of miles, doesn't it?*

*It feels like they're doing it all at once*

*It depends on how much quicker it could be done. If you said to me it will be done in six months by shutting the motorway between this junction and that junction, every day for a month, I'd probably take that rather than being on ten years of nonsense*

”

# The “Red X” goes to the heart of people’s growing anxieties about smart motorways

- A small number of people had seen publicity about the Red X
- However many people assumed they know what it means and what they should do – but only in general (and not necessarily accurate) terms (e.g. lane will close, lane is closed, you will get fined for driving in it!) and when they think about specific scenarios they are more anxious/sceptical
- Some people had experienced drivers ignoring and e.g. blocking the lane for emergency vehicles
- What to do in a smart motorway breakdown situation was an issue raised spontaneously right at the top of the sessions – by all “segments” – with disabled drivers feeling particularly vulnerable
- It remains a key worry about smart motorways, amplified by the negative publicity around the time of the groups (and since)



“

*There's a Red X: get out of the lane!*

*Just a lane is going to be closed up ahead*

*I think if you're abusing that one, you've really got no excuse, because it's the most obvious thing in the world... There's no confusion over a red cross, is there? If I'm honest*

*I'd worry that if I were the one broken down I'd be the one they'd crash into 'cause they're zooming down that lane – they'll not have time to react* (Disabled driver)

”

In conclusion

## In general, drivers have a pragmatic view of the M4 upgrade works; however the question of the safety of smart motorways is a concern for many

- Drivers' experience of the works, their management and the communication around them is generally as acceptable as can be expected given that they would prefer not to be disrupted
- In particular, drivers seemed to be generally aware of what is happening and largely able to plan on a day-to-day basis (e.g. allowing more time for commuting) and when their journeys will be disrupted significantly (e.g. closures)
- Local media in particular has been very effective in the “self-contained” Reading area, communicating about the day-to-day effects of the work and around future closures; Highways England should continue to engage with local media outlets to keep drivers up to date about all aspects of the works
- Whilst the leaflet and update bulletin are well received in themselves, they need to be more effectively distributed to drivers, none of whom had seen the material outside the research
- The big issue, however, is concern about the safety of the resulting smart motorway once the upgrade work has been completed – Highways England could consider how they could work to address this communication need because (a) it is a key, relevant piece of information for drivers (b) it could seem like a deliberate omission not to address it and (c) drivers' response to the works could be coloured by how positively they feel about the end result

Northburgh House  
10 Northburgh Street  
London EC1V 0AT

T +44 [0]20 7253 9900  
F +44 [0]20 7253 9911

[info@populus.co.uk](mailto:info@populus.co.uk)  
[www.populus.co.uk](http://www.populus.co.uk)

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