Welcome

Smart motorway
M1 junctions 13 to 16
public information
exhibition
Smart motorways

Smart motorways are a technology driven approach to the use of our motorways, increasing capacity and relieving congestion while maintaining safety. Smart motorways help make journey times more reliable.

Technology is installed to monitor and manage traffic flow and the hard shoulder is used for traffic, either permanently or at peak times.

As well as the additional capacity from the extra lane, the technology manages traffic using variable speed limits to smooth traffic, reducing frustrating stop-start flow and improving journey reliability.

It is also used to support the response to incidents, using the signs and signals to close any lane in advance of the incident scene.

Drivers are enjoying the benefits of smart motorways across the country without safety being adversely affected – our motorways continue to be some of the safest in the world.

If you would like to know more about the M1 junctions 13 to 16 smart motorway scheme you can contact us at:
M1J13-16Smart@highwaysengland.co.uk

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M1 junctions 13 to 16 smart motorway

We are improving the busy 37.9km (23.5 mile) stretch of the M1 between Junction 13 south of Milton Keynes and Junction 16 near Northampton by upgrading it to an ‘all lane running’ (ALR) smart motorway.

Construction is planned to begin in spring 2018 and the smart motorway is expected to be open to traffic by the end of 2021.

The project involves:

- Converting the hard shoulder to create a new additional permanent traffic lane between junctions 13 to 16, increasing capacity to reduce congestion.
- New electronic information signs and signals and CCTV cameras on overhead gantries. These will show variable mandatory speed limits and manage traffic flow and incidents.
- Installing remotely operated temporary traffic management signs along the entire route, which form a key safety feature of the works.
- 38 new emergency areas (EAs) to provide an area of relative safety following a breakdown.
- New emergency roadside telephones in each emergency area. These will connect you directly to Highways England’s Regional Control Centres and pinpoint your location.
- Replacing the central reservation with a new rigid concrete barrier between junctions 13 and 15 to help increase safety. A new barrier has already been installed north of junction 15.
- Installing new or replacement noise barriers in built-up areas including Newport Pagnell, Harwell, Collingtree and Kilsby.
- The provision of new low-noise surfacing in lanes 1 and 4 currently programmed as part of the scheme works.
Smart technology

A smart motorway has technology installed to monitor and manage traffic flow. It is important that you understand the signs and comply.

When lanes are closed, signs display a red X showing which lanes cannot be used.

- Signs in the verge or above the carriageway advise you of the speed limit, any lane closures and provide information on road conditions such as severe weather.

- CCTV and sensors detect and monitor congestion and incidents, so we can set appropriate speed limits and manage incidents effectively.

- Speed limits vary and are applied at times of congestion, to prevent stop - start conditions. If no speed limit is shown the national speed limit applies.
Smart motorways are an effective way to provide more capacity on our busiest motorways while maintaining safety and at a third of the cost of widening schemes, meaning better value for the tax payer.

All lane running, which involves permanent conversion of the hard shoulder as a live lane for traffic to use, provides an opportunity to modernise and improve far more of our motorways than under previous approaches.

Our M25 two year after reports show that all lane running smart motorways are meeting our expectations; improved journey time reliability, reductions in collisions and casualty rates while being used by more vehicles.

The approach also supports economic growth. The M1 junctions 13 to 16 scheme is an important element of Highways England’s continuing plan to improve England’s motorway network.
Emergency areas

- Emergency areas provide an area of relative safety following a breakdown.
- There will be 38 new emergency areas within the M1 junctions 13 to 16 smart motorway scheme. Motorway service areas and hard shoulders where available can also be used.
- If you are driving at 60mph you will reach a place you can stop in an emergency every 75 seconds on average.
- There is an emergency telephone in each emergency area. This connects you to Highways England’s Regional Control Centres and pinpoints your location.

Remember to use the emergency telephone as this automatically pinpoints your location.
Incident management

- Incidents such as accidents and breakdowns are managed by our control centre staff.

- If the accident or breakdown means vehicles are unable to get off the carriageway or reach an emergency area, we can use technology to close any lane on the motorway.

- Control centre staff set signs to inform other road users about what is happening and manage traffic so that the people involved in the incidents are protected and an access route is cleared for emergency vehicles.

- They then continue to monitor traffic conditions throughout each incident and re-open lanes as soon as it is safe to do so.

- We are working closely with the emergency services to develop best practice as these major improvements are rolled out on our motorways.

1. Incident detection
2. Emergency service on scene
3. Incident protection and clearing
4. Incident cleared and smart motorway re-opened
Red X signs

- Red X signs are used for safety reasons to close lanes:
  - to protect road users who may have broken down or been involved in an incident.
  - to provide access and protection for the emergency services, our traffic officers and our road workers.

- If you see a Red X symbol on a gantry sign over or at the side of the motorway it means that the lane is closed for one or more of these reasons.

- Driving in a lane with a Red X symbol is illegal and dangerous and drivers must not use it.
Highways England is committed to delivering better environmental outcomes. In remaining within current motorway boundaries, smart motorways have the built-in advantage of minimising scheme environmental footprints. In addition, we carry out thorough environmental assessments to identify and assess potential environmental impacts and recommend mitigation that can be included in the scheme to minimise them.

- The team has undertaken an environmental assessment that covers topics including noise and vibration, air quality, ecology and landscape and visual impacts.
- The results will be presented in the Environmental Study Report. This will also describe the measures to mitigate adverse effects and enhance the environment for human and environmental receptors.
- A Construction Environmental Management Plan will be prepared and used by the contractor to avoid, minimise or mitigate adverse construction effects on the environment and surrounding communities.

Environment

The key issues considered include:

- Understanding the presence of protected species. Surveys have been undertaken for bats, badger, dormouse, great crested newt, otter and water-vole.
- Understanding potential changes to air quality, particularly in relation to human receptors and within air quality management areas.
- Minimising the loss of existing visual screening provided by vegetation where possible, and designing replacement planting to reinforce visual screening for the future.
- Understanding where existing noise barriers need to be upgraded to ensure their functionality remains and where additional barriers will need to be provided.
Smart motorway M1 junctions 13 to 16

Construction

- Roadworks will be in place while we construct the smart motorway and we will do all we can to keep traffic moving and keep disruption to a minimum while we are working.
- It is anticipated that during construction traffic management will be in place including the use of narrow lanes, temporary safety barriers and speed restrictions to ensure the safety of the workforce and travelling public. In addition to this, junction layouts may be temporarily altered to allow for resurfacing and improvement.
- If you live near the motorway, your view of the M1 between junctions 13 and 16 may change during construction as we will need to remove some vegetation to build new gantries. We will be replanting where we can to help to screen views of motorway equipment.
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- There will be temporary closures of the carriageways at night on some occasions. In these instances, clearly signed diversions will be put in place.

- The main scheme works will involve installation of gantries and monitoring equipment, new drainage.
- The construction of the scheme will be governed by the Construction, Design and Management Regulations.
- Further details will be provided on the project web pages as they become available both before and during construction.
- Construction is planned to start in spring 2018 and we expect to open the smart motorway before the end of 2021.
- Post-construction involves a period of testing and commissioning of new technologies where there may be no appearance of work physically taking place. During this period, speed restrictions will be in place for safety reasons before the scheme becomes fully operational.