



Department  
for Transport

# Road Investment Strategy: Overview



December 2014



Department  
for Transport

# Road Investment Strategy: Overview

The Department for Transport has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the Department's website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact the Department.

Department for Transport  
Great Minster House  
33 Horseferry Road  
London SW1P 4DR  
Telephone 0300 330 3000  
Website [www.gov.uk/dft](http://www.gov.uk/dft)  
General enquiries <https://forms.dft.gov.uk>

ISBN: 978-1-84864-148-8

© Crown copyright 2014  
Copyright in the typographical arrangement rests with the Crown.

You may re-use this information (not including logos or third-party material) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit [www.nationalarchives.gov.uk/doc/open-government-licence](http://www.nationalarchives.gov.uk/doc/open-government-licence) **OGL** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk).

Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.

Printed on paper containing 75% recycled fibre content minimum.

## **Photographic acknowledgements**

Alamy: Cover

# Contents

Foreword	5
The Strategic Road Network	8
The challenges	9
The Strategic Vision	10
The Investment Plan	13
The Performance Specification	22
Transforming our roads	26
Appendices: regional profiles	27

The Road Investment Strategy suite of documents (Strategic Vision, Investment Plan, Performance Specification, and this Overview) are intended to fulfil the requirements of Clause 3 of the Infrastructure Bill 2015 for the 2015/16 – 2019/20 Road Period.

## Foreword

Roads should never be at a standstill. This is true at the best of times, and it could not be more true than today.

Our Strategic Road Network (SRN or the network) has suffered from insufficient and inconsistent investment, and is currently unable to meet the social, economic and environmental aspirations we have as a nation. As we look to the future, the steady increase in population, the need to drive economic growth, the development of new technology and the availability of smart infrastructure will all serve to change what we need from our strategic roads.

With this first Road Investment Strategy (RIS), we are firmly grasping the chance to deal with these opportunities and challenges to deliver a network that will underpin our nation's prosperity and progress for generations to come. Through the first RIS, we are:

- Providing *certainty*, with over £15 billion to be invested in our major roads from 2015/16 – 2020/21
- Transforming *connectivity*, through the likes of our commitment to dual the A303 to the South West
- Increasing *capacity*, with projects that will deliver over 1,300 additional lane miles
- Improving the *condition* of the network, including resurfacing 80% of the SRN
- Enabling *construction* and creating jobs, with almost £5 billion invested in 50 schemes that will help connect housing sites, enterprise zones and other industrial developments.

This document provides an entry point into the RIS, giving an overview of our vision and plans for the network. It focuses in particular on the tangible improvements that our investment will make, and seeks to show how the transformational level of investment will be just that – transformational.



**The Rt Hon Patrick McLoughlin MP**  
Secretary of State for Transport



More detail on what underpins these aspirations and plans can be found in the accompanying three documents: the Strategic Vision, the Investment Plan and the Performance Specification.

# The SRN is a key part of our national infrastructure

## Connecting the nation

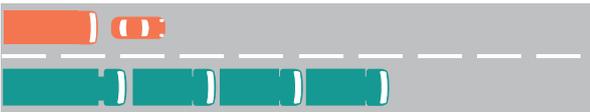
The SRN is made up of...

Motorways **1,865** miles      Trunk A-roads **2,571** miles



The SRN accounts for **2%** of all roads but carries...

**33%** of all traffic



**66%** of all freight

The SRN carries, on average, **4** times as many vehicles a day per mile than locally managed roads



## Driving the economy

In our recent social research, **nine in ten** individuals surveyed recognised the importance of the SRN to the economy



A record **16.3 billion** miles were travelled on British motorways between July and September 2014, 2.3% higher than the previous year



**20.4 billion** miles were driven on the SRN by HGVs and light vans in 2013



## Supporting the wider transport network by...

Ports



Delivering smooth access to ports

Local transport



Complementing local networks and connecting nationally

Rail and HS2



Supporting access to rail and the development of HS2

Aviation



Enhancing access to airports

Cycling and walking



Enabling active travel options

## Investment in the network will bring tangible benefits

We estimate that the investment made in the first Road Period will:

**Benefit up to 250,000**

people by reducing the noise impact of the SRN

**Help prevent over 2,500**

deaths or serious injuries on the network over five years

**Build over 1,300** additional lane miles

**Improve 200** sections of the network for cyclists

**Bring forward 127** schemes, with a total construction value of £15.7 billion

**Resurface 80%** of the network with low noise, quick-to-fix surfacing

**Save 46 million** hours of time lost in traffic every year by 2030

**Deliver over £4** of benefit for every £1 spent

# The Strategic Road Network

## As a nation we rely on our roads

Roads are fundamental to our nation's wellbeing. They keep the population connected and the economy flowing. Central government is responsible for the busiest, strategic roads – a network which contains England's motorways and major A-roads. While only accounting for 2% of the road network as a whole, the SRN carries one third of all road traffic and two thirds of freight.

## Investment has reduced and traffic has grown

The network we have today was primarily built in the 1960s and 1970s. The intervening decades have seen traffic on the SRN drastically increase, but investment in the network has reduced – in contrast to many of our international competitors. Now, in certain places, the SRN has reached capacity, and congestion currently costs £2 billion each year. With traffic expected to grow steadily over the coming decades, this situation will worsen – the cost of congestion is set to rise to around £10 billion per year in lost time by 2040 unless action is taken.

## But there is real cause for optimism

While rising traffic will place more pressure on the network, the future does hold exciting opportunities to harness innovations, increase performance and improve journey quality. Developments in technologies, such as Ultra Low Emission Vehicles (ULEVs), driver-assisted and autonomous systems, big data and smart infrastructure all have the potential to dramatically change how we use our roads.

## The opportunity to transform our network is one we cannot miss

As we look to the future, we must invest to address today's issues, and also to meet our future needs. So, with this RIS, we are taking a markedly different approach, focusing on longer term investment and planning, underpinned by the step-change in funding announced at the 2013 Spending Round. At the same time, the Highways Agency is transforming into the government-owned Strategic Highways Company (the Company), which will enable it to operate like the best-performing infrastructure providers in other sectors.

***“While rising traffic will place more pressure on the network, the future does hold exciting opportunities to harness innovations, increase performance and improve journey quality”***

# The challenges

Key problems being addressed include...

	<p><b>CONDITION</b></p>	<p>The condition of our network needs to be both maintained and improved – a lack of investment in our roads has left our network paying the price. A large percentage of the SRN's road surface will come to the end of its natural life in the next five years, so the funding in this Investment Plan is required to keep the network in a safe and serviceable condition.</p>
	<p><b>CAPACITY</b></p>	<p>The capacity of many of our roads is increasingly inadequate, with approximately 85 billion vehicle miles driven on the SRN in 2013. By 2040, traffic on the SRN will be between 27% and 57% higher than it was in 2013. Our road traffic forecasts indicate that, by 2040, around 25% of the entire SRN and 32% of the motorway network will experience severe congestion at peak times and suffer poor conditions at other times of the day.</p>
	<p><b>CONNECTIVITY</b></p>	<p>The connectivity of our road network is inconsistent. The last truly new road built in this country was the A1-M1 link in the 1990s; the last wholly new motorway was the M25. The geography of the road network reflects the economy of the past, neglecting many of our fastest growing cities. East-West routes, which are critically important to our modern economy, are often poorly served.</p>
	<p><b>CERTAINTY</b></p>	<p>Investment has been stop-start for generations. Insufficient and inconsistent plans and funding have made it difficult to build for the future and work with the supply chain to generate efficiencies. International comparisons suggest this has cost us billions of pounds in lost savings.</p>
	<p><b>CONSTRUCTION</b></p>	<p>The construction of housing and creation of jobs has been held back by poor transport connections. Too often bottlenecks on the SRN, at places like the A1 around Newcastle, have limited or even blocked local developments from taking place. Lack of certainty in investment has hampered the expansion and upskilling of the construction sector.</p>

# The Strategic Vision

## Our strategic roads will underpin future wellbeing and prosperity

The network of the future will be smoother, smarter and more sustainable. It will deliver the safer, more stress-free journeys that everyday users desire, and the enhanced reliability and predictability that is so important to business users and freight. The SRN will also work more harmoniously with its surroundings, impacting less on local communities and the environment, and doing more for those who live and work near the network.

***“By 2040, we will have transformed the busiest section of the network to enable improved safety levels, smoother traffic flow, and increased capacity”***

## The network of the future will require different infrastructure

Our aim is that, by 2040, we will have transformed the busiest sections of the network to enable improved safety levels, smoother traffic flow, and increased capacity. Smart Motorways, which use technology to expand capacity and regulate the flow of traffic, will form the core of the SRN, while the most strategically important A-roads will be upgraded to Expressways. This enhanced infrastructure should not, however, come at the expense of the environment. Instead, by 2040, we will have completed a wide-ranging retrofit of the network to improve environmental outcomes and help the network fit more seamlessly with its surroundings.

## Better information and communication will be essential

Control will be returned to drivers, with personalised and predictive travel information leading to improved journeys at more reliable speeds. Intelligent vehicles, which communicate with the infrastructure and each other, are also likely to become the norm by 2040, and we will look to capitalise on their momentum to deliver a network that can fully exploit technological advances.

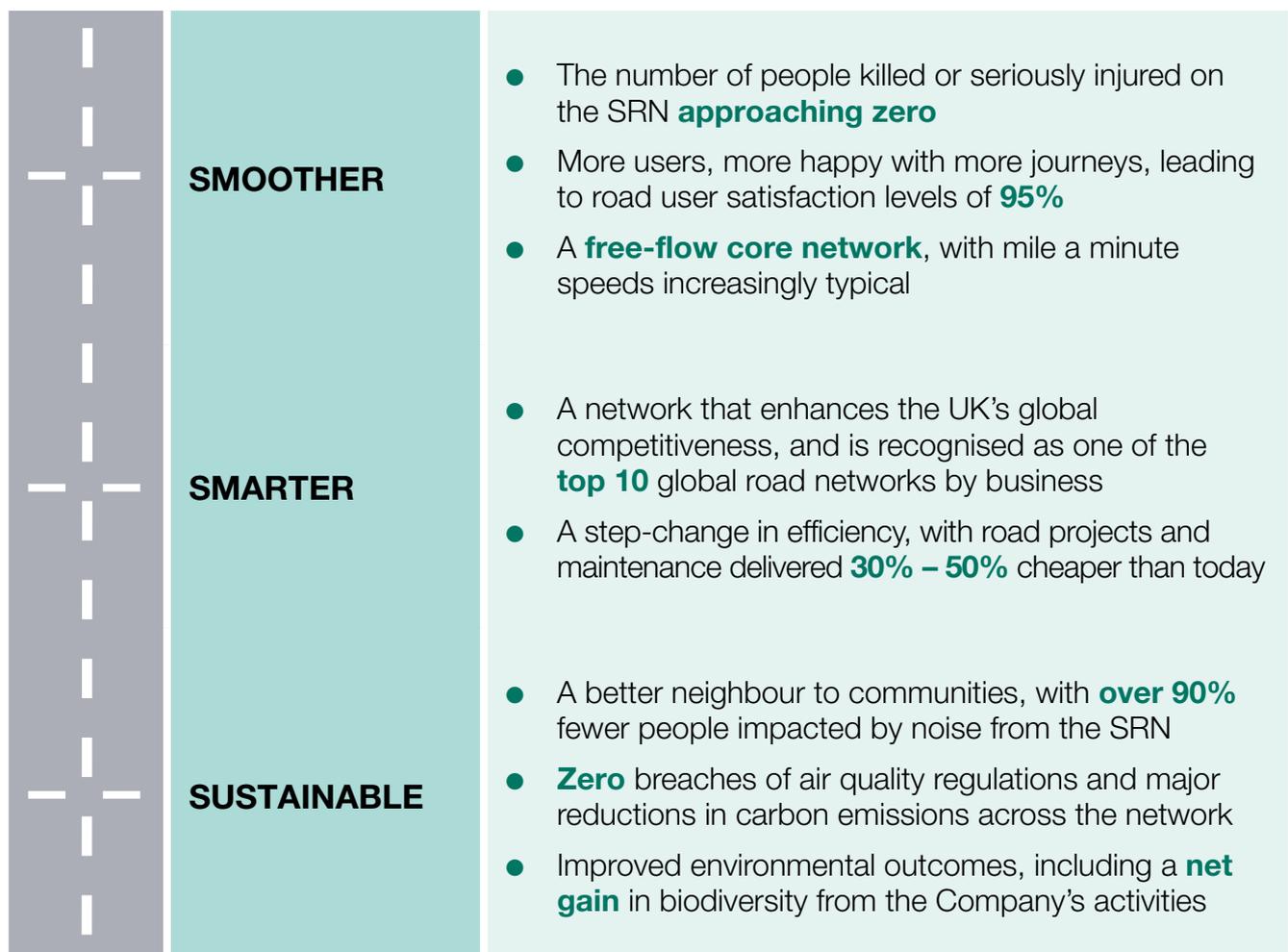
## Efficient and effective management of the network will be needed

Our vision is deliberately ambitious, and will take time to achieve in full. The Company will make strides towards transforming the network during the first and second Road Periods (a RIS covers the duration of a Road Period), through creative, responsive and efficient management of the network, driven by the needs of customers.

The Company will also take into account customers' needs across transport modes. It will work with others, for example with Local Authorities on links between local and strategic roads, and Network Rail to support the likes of sustainable rail freight.

## We believe these changes will deliver a network that is fit to face the future

We have bold aspirations for the network. By 2040, our aim is for it to be...

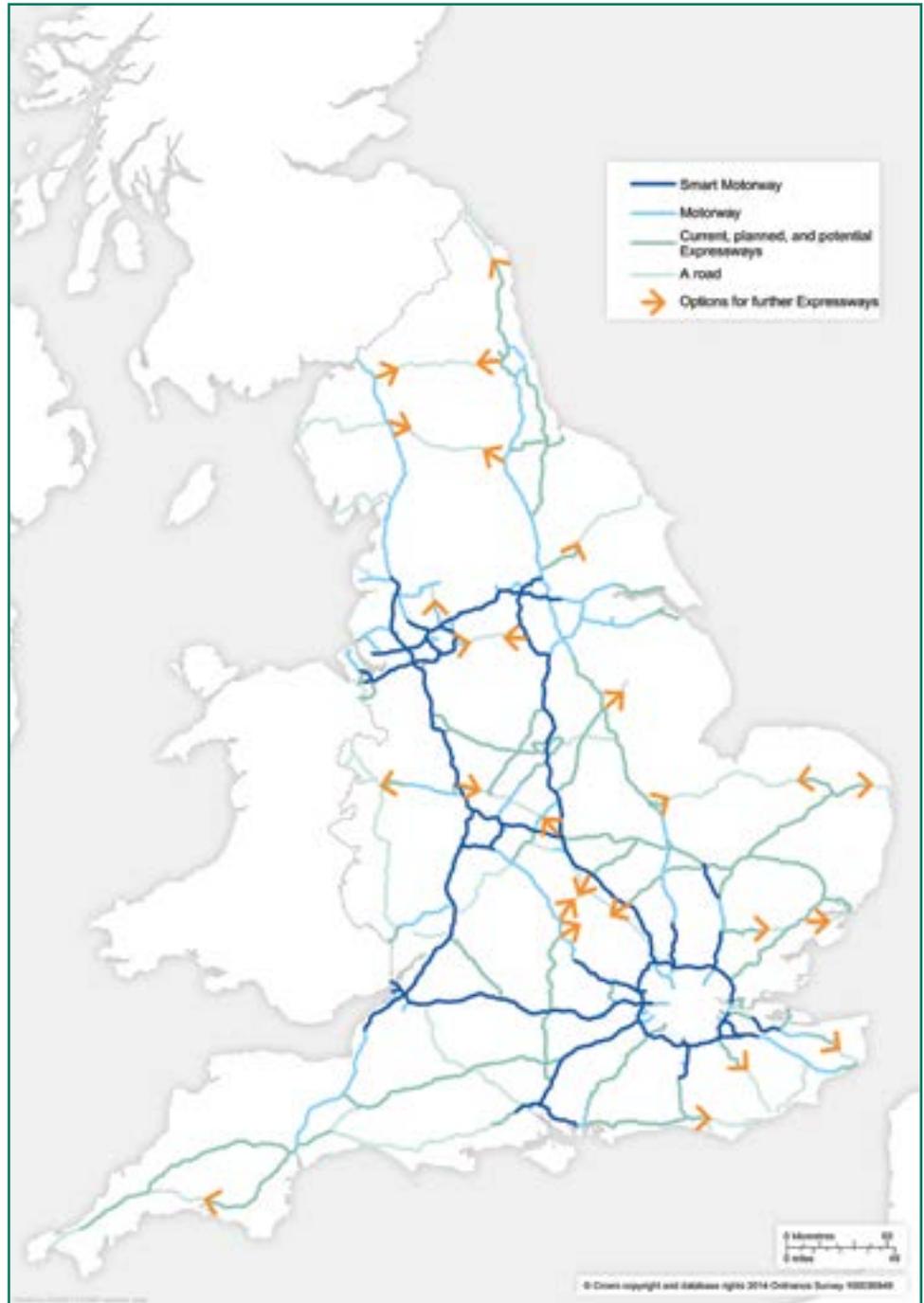


## The network towards 2040

As we look to 2040, we want an upgraded network, supported by technology. This means:

- **Smart Motorways** becoming the standard for the busiest sections of the network, delivering smoother traffic flow, increased capacity and improved safety
- Turning our busiest A-Roads into **Expressways**, providing improved standards and technology to manage traffic
- Enhanced safety and reduced congestion across the network, upgrading junctions, tackling bottlenecks and introducing new technology
- Improved design standards with greater consideration of the needs of walkers, cyclists, and local communities.

The map opposite shows what our network could look like by 2040.



**Improved East-West connectivity and better access to our cities and international gateways**

**A largely free-flowing network that supports a growing population and thriving economy**

**Smoother, quieter, more reliable journeys and a more resilient network**

# The Investment Plan

## A transformational level of investment in the SRN

In 2013, we announced a substantial level of investment in the SRN as part of the 2013 Spending Round, including:

- **Over 400 extra lane miles of Smart Motorways**, including a ‘smart spine’ linking London, Birmingham and the North West
- **54 major roads projects** to be built across this Parliament and the next
- Schemes to improve critical freight routes, such as the **£1.5 billion A14 scheme in Cambridgeshire** and the **M6 in Cheshire**
- **£6 billion set aside to resurface 80%** of the SRN and keep our network in top condition.

With this RIS, we are now announcing the next round of investment that will transform our roads through **84** wholly new schemes. This includes:

- **£3.5 billion on 20 new schemes** that will address some of the most long-standing and notorious network hotspots, including building a **tunnel at least 1.8 miles long at Stonehenge** and dualling the whole of the **A303**, transforming connectivity to and from the South West
- **£3.7 billion on a further 64 schemes** across the length and breadth of the country to improve safety, ease congestion, unlock growth and add nine additional Expressways to the SRN. **49** of these are schemes expected to start construction by 2020.

This means a total of **127** major road schemes will come forward in this Road Period – the largest programme of investment for a generation.

## A transformational impact

The new schemes will deliver improved local and regional journeys, whilst also addressing critical challenges faced by the country and the SRN. Key areas of impact include:

- Developing a core network of Smart Motorways and Expressways
- Supporting the Northern Powerhouse
- Enabling growth and housing

*“With this RIS, we are now announcing the next round of investment that will transform our roads through 84 wholly new schemes”*

- Creating better connectivity
- Improving safety and reducing congestion.

A series of new strategic studies will also explore options to address some of the SRN's emerging challenges, the results of which will inform the second RIS.

## Our investment will help to create a better network

We are committed to creating a better network – one that works for drivers and the communities that live around it. So we are establishing a series of ring-fenced investment funds, including a £250 million Cycling, Safety, and Integration Fund, a £300 million Environment Fund, a £150 million Innovation Fund, a £100 million Air Quality Fund, and a £100 million Growth and Housing Fund. These will target a range of areas, including:

**Noise:** We are investing £75 million in noise barriers and allied improvements to minimise the SRN's impact on nearby communities and reduce the number of people affected by noise by up to 250,000. This is in addition to the £6 billion which will be invested to resurface 80% of the network with lower noise surfaces.

**Cycling:** In line with the government's commitment to 'shift cycling up a gear', we are investing £100 million to improve cycling provision on at least 200 sections of the network, as well as ensuring all new schemes are cycle-proofed.

**New vehicle technology:** We are investing almost £40 million to support the development of driverless and co-operative vehicle technologies.

**Carbon:** We will support the increasing uptake of ULEVs, investing in rapid chargers to help ensure people will rarely be more than 20 miles from a charger on the SRN. The Company will also convert the majority of the Traffic Officer Service fleet to ULEVs.

**Flooding and water:** We are investing £70 million to improve the resilience of the SRN and reduce flooding risks to neighbouring communities – which is part of a broader £100 million water improvement package.

**Landscape, heritage and biodiversity:** We will invest over £100 million to enhance the network's landscape, address areas where there are negative impacts on sites of historic or cultural heritage, and improve the impact on local biodiversity.

The following section outlines how the Investment Plan will have a transformational impact across the country.

More detail on the investment per region is included in the appendices to this document. A full breakdown can be found in the Investment Plan.

## Environment

The Department and the Highways Agency have learnt a great deal in the past twenty years, and today's road schemes are very different to their predecessors. They are designed in far greater sympathy with their surroundings and with a much smaller environmental footprint. Thanks to improvements in design, there is no longer a forced trade-off between a well-functioning road network and a well-protected environment:

- **Advances in environmental mitigation measures** offer new ways to limit the impact of new developments on the local environment
- **Partnerships with environmental bodies** make sure that the Company will be doing all it can to prevent damage
- **Redesigning or replacing parts of the network** built when environmental issues were poorly understood, and unsympathetic designs were common, allowing us to improve the overall state of the network.

Considered design and efforts to minimise the negative impacts of the network have been firmly embedded into the RIS, as outlined below.

Like most road improvements over the past decade, the Investment Plan focuses on upgrades to the network we already have, rather than on building entirely new roads. Many of the upgrades involve improving junctions to drive greater performance without expanding the network, including developing the Smart Motorway network to increase capacity without significantly enlarging the network's physical footprint.

The RIS supports the development of an ultra low-emission network. Having already committed £500 million to support the take up of ULEVs at Spending Round 2013, the RIS brings a commitment to support the development of charging facilities on the SRN, so that drivers will rarely be more than 20 miles from a rapid charger anywhere on the SRN, as well as switching the majority of the Traffic Officer Service fleet to ULEVs by 2020.

The RIS delivers an unprecedented commitment to undertake a range of activities to support the environment, with a ring-fenced £300 million Environment Fund and a £100 million Air Quality Fund. These will allow the Company to work with partners to take action to reduce noise and carbon, improve water and air quality, and improve the network's impact on nearby landscapes, cultural heritage sites and biodiversity. In addition to this, we anticipate spending £100 million on improving cycling facilities at 200 sections of the network and to cycle-proof all new road schemes as standard. This is all on top of the environmental measures built into all new road schemes as standard.

The Performance Specification element of the first RIS also requires the Company to deliver better environmental outcomes, including the mitigation of at least 1,150 Noise Important Areas and demonstrating how it is reducing the net loss of biodiversity. The Company's Statutory Directions and Guidance will reinforce this commitment to the environment and require the Company to embed protecting and enhancing the environment into its business and decision-making processes.

# 1. A core network of Smart Motorways and Expressways

The SRN is a national network that serves different people, places, and purposes

Part of the SRN’s strength lies in its versatility and responsiveness. It performs a range of functions – some vital to supporting the national economy, others required to enable regional connectivity and encourage local growth. Certain areas need a high-capacity motorway; others need a consistently good quality A-road that links them to the rest of the country.

We are improving infrastructure quality in the areas that need it the most

Our busiest and most economically important routes should benefit from technology-enabled Smart Motorways, which offer safer, more reliable journeys and an extra lane of capacity, while avoiding the need to physically widen the road. We are, therefore, transforming the core of the network so the busiest motorways are upgraded to Smart Motorway standard, starting with the M62 across the Pennines and ultimately creating uninterrupted Smart Motorway connectivity between London, Birmingham, Manchester and Yorkshire.

Equally, our key A-roads should be developed to a high standard throughout, with inconsistencies, bottlenecks and pinch-points tackled. We are, therefore, upgrading our most strategically important A-roads to Expressways to deliver performance levels similar to those seen on our motorways and improve national and regional connectivity.

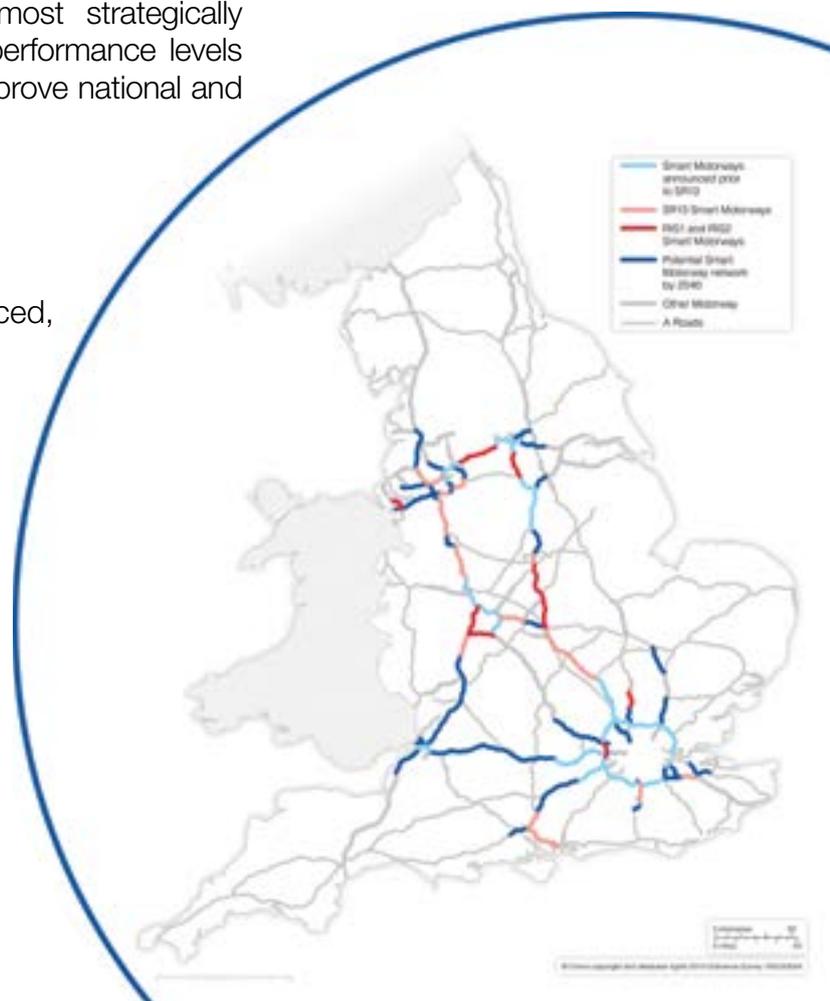
**Current Smart Motorway network and potential future plans**

We have announced:

- Eight new schemes worth over £1.6 billion which, in addition to those already announced, will bring us closer to completing the network’s Smart Motorway core
- 12 roads raised to Expressway standard through schemes worth £4 billion

### New strategic study

The A1 is one of the most famous and least consistent roads in England. In addition to upgrading the stretch in Yorkshire to motorway, a new study on the **A1 in the East of England** will investigate upgrading the road south of Peterborough, possibly to full motorway standard.



## Expressways: The future for the South West

A key focus of our Investment Plan is on building a core network of Smart Motorways and Expressways. While the former is a relatively well-established concept, Expressways are a new idea for England's roads. The South West will be one of the first regions to feel their impact in full.

### The challenge

The strategic roads of the South West present significant challenges in connectivity and consistency. While much of the country is linked by motorways, the South West is one of a number of areas that rely heavily on A-road connections. Roads like the A303, A30 and A417 have long sections of high-quality dual carriageway – but most people remember these roads for their bottlenecks and delays. These inconsistent roads have knock-on effects for businesses, communities and families.

### The Expressway solution

Users of a motorway expect a consistent quality from the road. Users of these most important A-roads need to have the same confidence that they will have a consistently good journey. We therefore intend to designate and develop these roads as 'Expressways' – roads that match the quality and safety of motorways and provide world class connections and a dependably good service to users.

Expressways will generally be dual carriageway – safe, well-built and more resilient to delay. Junctions will be largely grade-separated, so traffic can move freely from the start of the Expressway to its end. This means an end to tailbacks as roads narrow or slow-moving traffic blocks the carriageway. Given the volumes of traffic, many of these roads will be able to provide drivers with a motorway-quality journey.

Two major corridors in the South West are pioneering this new approach:

- The A30 in Devon and Cornwall is a critical link for communities in the far west of the region. Work will start soon to dual the single carriageway section at Temple, and our commitment in this RIS for further dualling at Carland Cross will mean a continuous Expressway link all the way to Camborne – 15 miles from Land's End
- The A303/A358 will provide an Expressway corridor from London to Exeter via the M5 at Taunton, creating a second strategic corridor to the region. Starting with improvements at Sparkford, Taunton and Stonehenge, the route will be converted to an Expressway over the next 14 years.

This represents the most fundamental improvement to the roads of the region since the creation of the M5. These roads will cease to be sources of delay and frustration and become foundations for growth. Fifty years after the first motorways opened, Expressways will transform roads in our regions.

For more details on investment in the South West, see the appendices to this document.

## 2. The Northern Powerhouse

### The cities of the North have the potential to make a global impact

Government is dedicated to creating a Northern Powerhouse – connecting our key northern cities so that they are greater than the sum of their parts and can work smoothly together to enhance not just our economy, but the country as a whole.

### Better transport is a key ingredient

Transport is vital to realising this aspiration. Fast, effective and reliable connections are needed so that the different cities in the North can join together to forge a single, world-leading economy. The SRN has crucial role to play in this, working closely with rail, HS2 and HS3.

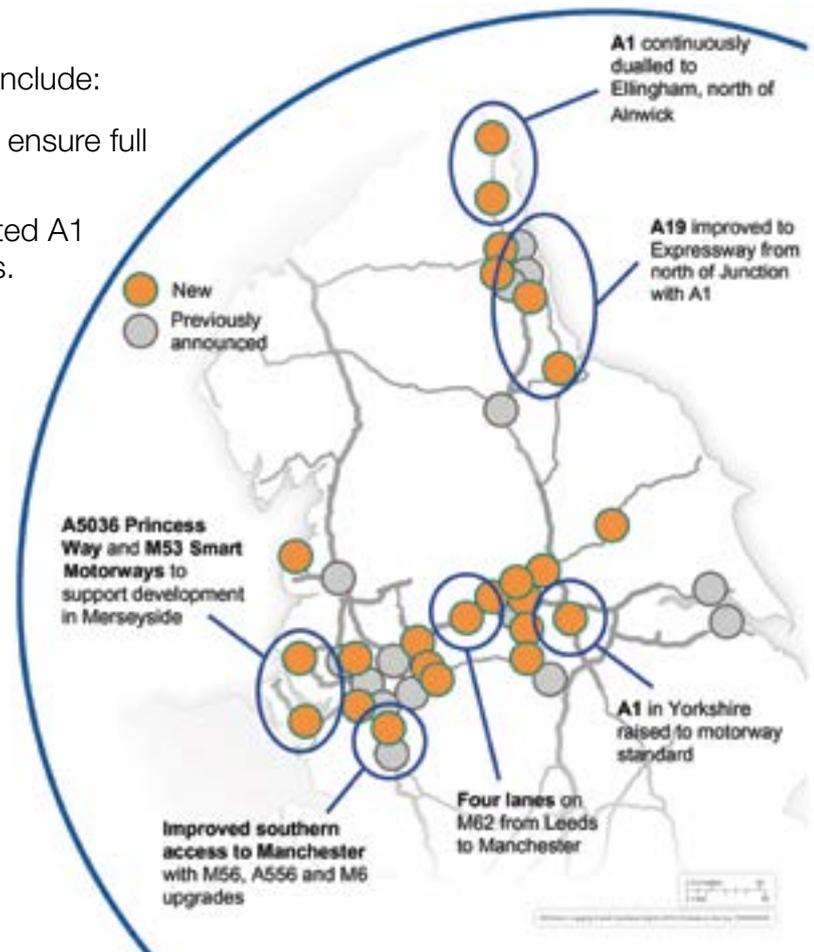
### Our investments will ensure the SRN plays its part

Existing plans are already bringing major improvements to the network around our northern cities. The RIS builds on this with a total package of investment in the North, including 26 schemes worth approximately £1.4 billion in Yorkshire and North East, and 16 schemes worth approximately £1.5 billion in the North West. This includes a four lane Smart Motorway across the Pennines to link Manchester and Leeds, plus upgrading the A1 in South Yorkshire to motorway standard throughout. Improvements to the A19, raising the road to Expressway standard, will help industry and exports in the North East.

Further schemes from the feasibility studies include:

- Dualling additional stretches of the A1 to ensure full dualling to Ellingham, north of Alnwick
- Widening sections of the heavily congested A1 Newcastle – Gateshead Western Bypass.

**Current and new RIS schemes**



#### New strategic studies

One study will investigate the case for a potential **Trans-Pennine tunnel** to transform connectivity in the North. A second study will decide whether to upgrade the **A69 and/or A66** to Expressway standard across the Pennines.

## 3. Growth and housing

### The SRN is integral to economic growth

The SRN is a key enabler of economic growth. Proposed developments, such as new housing sites and enterprise zones, need effective links to people and places. For large developments, the SRN has a critical role to play in increasing connectivity and providing the required capacity.

### We are increasing connectivity to enterprise zones

In 2011, the government announced its support for building 24 enterprise zones across the nation. The SRN provides vital connectivity to support the growth of these areas, helping unlock investments and create jobs. In this RIS, we are extending this support. Upgrades to the M53 around Ellesmere Port will remove a barrier to growth and directly support the local enterprise zone, a new junction on the M49 corridor will provide strategic access to the Avonmouth Severnside Enterprise Area, and improvements on the A5 will support the MIRA Enterprise Zone.

### We are enhancing our network to support housing growth

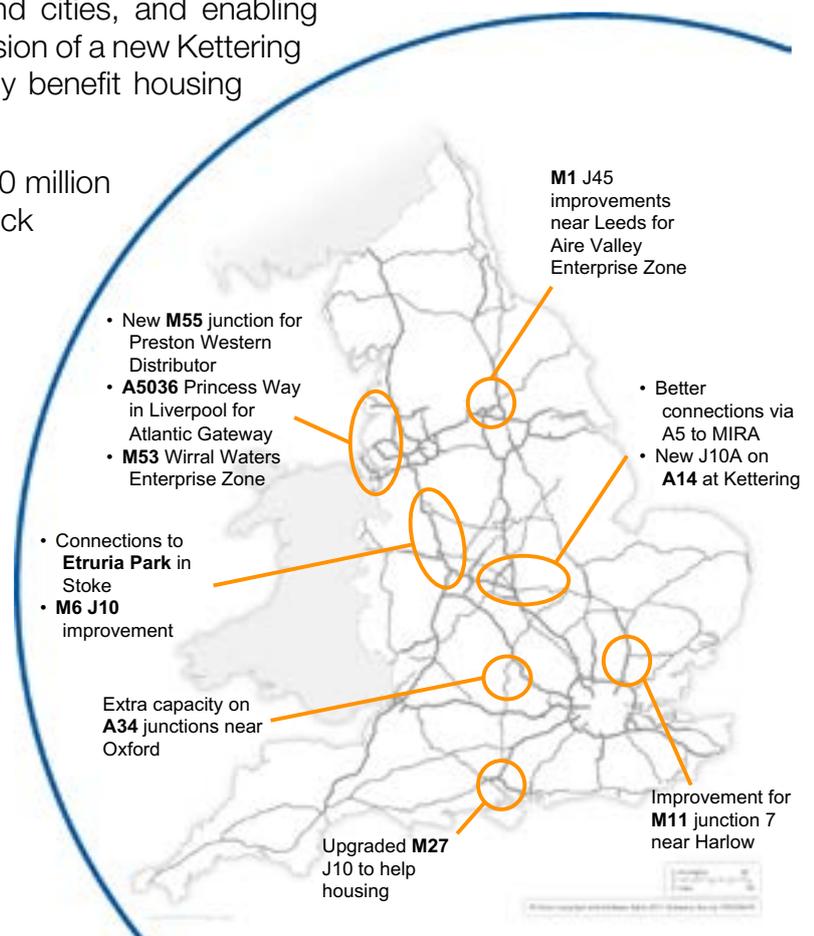
The SRN enables the planning and delivery of new housing. Alongside providing capacity for future economic developments, we will also invest with developers to ensure that housing growth means better journeys, not longer tailbacks. This means upgraded junctions, improvements around towns and cities, and enabling works for potential Garden Cities. The provision of a new Kettering A14 Junction 10a, for example, will directly benefit housing development in the area.

This investment will be supported by a £100 million fund, committed to help the Company unlock housing and growth projects.

#### New strategic study

Development in Manchester will put more pressure on the surrounding roads. Planning is needed now to make sure the **Manchester Orbital** is ready to support the national and local economies. This work needs to consider the full range of modal options, and the new combined Manchester authorities will play a key part.

#### Example schemes to support growth and housing



## 4. Better connections

### The SRN is an essential network for both people and freight

Our strategic roads reach all four corners of England, and play a central role in linking our different modes of transport at airports, ports and rail freight interchanges. But the SRN, in large part, reflects the geography and technology of the 1960s. We must ensure that it meets the needs of today and prepare it to meet the demands of tomorrow.

### We are enhancing links to other modes

Existing and new investments will provide world class road links to and from our international gateways, freight hubs and modal interchanges by eliminating the bottlenecks that blight major interchanges. For example, improvements on the A19 will enhance access to Teesport, and schemes on the A180 and A160 will improve links to the Port of Immingham. A453 improvements are already providing better access to Nottingham Tram Park and Ride, and a range of schemes are putting capacity in place for new strategic rail freight interchanges (SRFI) and HS2. Indeed, through the RIS, we will transform access to seven major ports and five airports.

### And filling gaps in the network to boost connectivity

This RIS is allowing us to target bottlenecks and raise the standard of sections of road to improve performance on whole routes. For instance, upgrading the A428 to create an Expressway link between Cambridge and Milton Keynes. We are also committing to transforming connections to and from the South West by upgrading the A303 to Expressway standard, which includes re-routing the A303 in a tunnel at Stonehenge, as well as raising the A1 in south Yorkshire to motorway standard, to create an alternative route to the North East.

### Projects of all shapes and sizes are being undertaken

Over this RIS and the next, we will improve connectivity between our major cities and the core and edges of the network. This will involve a range of interventions from transformative major projects to smaller schemes targeting key bottlenecks.

#### New RIS schemes to increase connectivity



#### New strategic study

This study will investigate the case for linking existing roads and creating an **Oxford to Cambridge Expressway**, which would create a high-quality link between Oxford and Cambridge, via Bedford and Milton Keynes.

## 5. Safety and congestion

### High quality infrastructure is only a means to an end

The most important outcome of investment and improvements to infrastructure is the impact on users. In this regard, safety is of the utmost importance, and minimising congestion is integral to making journeys easier and more reliable.

While, safety on the SRN is good and has improved considerably in recent years, we take nothing for granted and will strive to improve it still further. Congestion is a growing problem and certain points on the network have already reached capacity. With long term trends indicating a further increase in traffic, we must act now.

### Our planned investments and ring-fenced funding demonstrate our determination

The drive to improve safety and reduce congestion underpins the vast majority of our schemes. Several schemes, however, are specifically focused on alleviating these problems – the two of which often go hand in hand. On the M25, upgrades to Junction 10 will create a free-flowing interchange with the A3, improving an area which has a high casualty rate. In the North, planning work will start for upgrades to two of the region's most important interchanges: the M62/M1 Lofthouse interchange and the M60/M62/M66 Simister Island junction. Strategic studies will explain the long term options for the M60 and M25.

The ring-fenced Cycling, Safety, and Integration Fund and Innovation Fund will also enable us to remain at the forefront of road technology and continue to improve safety, for example, by funding research into collision avoidance and casualty reduction systems.

#### New strategic study

The **M25 South-West Quadrant** is the busiest part of the network. We are commissioning a study to plan for its future, supporting local people, strategic travellers and those using Heathrow. It will need to look at all options, including different modes and extra capacity, to make sure the route is resilient for the generation to come.

**£105 million set aside for safety measures in addition to RIS scheme investment**

**Schemes and studies to tackle severe congestion on M25, M60, A1 and A12**

**40% reduction in deaths and serious injuries on the network by the end of 2020**

# The Performance Specification

## Measuring performance in a balanced way

In the Performance Specification, we have identified eight areas where we will measure SRN and Company performance over the first Road Period, focusing on the needs of road users and the country. We have set Key Performance Indicators for each of these areas. We also require the Company to provide Performance Indicators for each area to give more information about performance and to deliver specific products, including improved performance measures for future Road Periods.

## Making the network safer for our customers

The fact that the SRN is considered one of the safest networks in the world is no reason to rest on our laurels. We know there is more that we could and should be doing; the human and economic cost of incidents is still far too high. We want the Company to help achieve a 40% reduction in deaths and serious injuries on the network by the end of 2020 to help deliver our ultimate aim: nobody should be killed or seriously injured as a result of incidents on our network.

## Ensuring user satisfaction

Drivers' satisfaction with their journeys is at the heart of our vision. We know road users want stress free journeys, with minimal delays and good information. Achieving our target of 90% customer satisfaction will also reflect achievement in other areas of the Company's performance. Roadworks, for instance, are a key cause of concern and a significant programme of maintenance and enhancement will be undertaken during the next five years; a positive journey experience will be a key measure of success.

## Supporting the smooth flow of traffic

We want to see a network that is free flowing and where disruption caused by congestion and other incidents is kept to a minimum. Our vision is that mile a minute speeds on the network will become increasingly common. We require the Company to manage roadworks in a way that keeps at least 97% of the network open for use, and to clear unplanned incidents as quickly as is practicable.

***“Underpinning roads reform is a desire for the network to be more efficient. We expect the new Company to deliver over £1.2 billion efficiency savings over the first Road Period, to be re-invested into the network”***

## Encouraging economic growth

A free-flowing network is vital to helping our economy flourish. Measuring the average delay on the network is an indicator of the extent to which congestion acts as a brake on economic growth. We also want the Company to demonstrate what it is doing to support developers, small and medium-sized enterprises, and the construction sector as a whole.

## Delivering better environmental outcomes

We have made a clear commitment to improving environmental outcomes and we want the Company to build on recent progress. Noise can adversely impact people living and working near the network so the Company should seek to mitigate 1,150 Noise Important Areas, reducing the impact of noise for around 250,000 people. The Company is also required to demonstrate how it is working to halt the loss of biodiversity so that its activities in the second Road Period deliver no net loss of biodiversity.

## Helping cyclists, walkers, and vulnerable network users

Roads are not just for drivers; we want to help people to be more active by providing more choice for cyclists, walkers and other vulnerable users. Initially, that means providing additional crossings to reduce severance between communities and improve safety for vulnerable users. We also want the Company to work with other key stakeholders to improve facilities for users of all kinds.

## Achieving real efficiency

We expect the new Company to deliver over £1.2 billion efficiency savings over the next Road Period, which will be re-invested into the network. It should also show it is delivering its programme of investment on time and within budget. A step change in the way that the Company operates will benefit the tax payer and deliver better roads for users.

## Keeping the network in good condition

The SRN is an essential piece of national infrastructure so must be kept in good condition. During the first Road Period, we want the Company to measure and report on how well it is maintaining road surfaces, and develop new condition indicators, including for bridges and earthworks.

The following pages show the specific KPIs relating to each of the eight performance areas.

Further details can be found in the Performance Specification.

## The Performance Specification

### Safety

Our focus is always on providing a safer network for all road users and reducing the number of casualties



**40%**  
Reduction in the number of people **killed or seriously injured** on the network



### User satisfaction

**Customer satisfaction** is a measure of overall performance across a number of areas, assessed through the National Road Users' Satisfaction Survey

**Overall satisfaction of at least 90%**



### Traffic flow

Free-flowing traffic is essential and we have two KPIs to enable the evaluation of the Company's impact:

**97%**  
**Network availability**  
at a minimum, to keep traffic flowing and reduce the impact of roadworks



**85%** **Motorway incidents**  
cleared within the hour



### Economic growth

The SRN will support economic growth. We have focused on **average delay**, monitoring time lost per vehicle per mile to illustrate the cost of delay

## Environment outcomes

Improving environmental outcomes is a key requirement of this Roads Investment Strategy, with a twin focus on the built and natural environment



**1,150**

**Noise important areas**, as identified by DEFRA, mitigated by the end of the first Road Period



**Reducing net loss** of biodiversity during the first Road Period to achieve no net loss during the second Road Period

## Cyclists, walkers, and vulnerable users

The company will report on the number of new and upgraded crossings they deliver during this Road Period



## Efficiency

We expect the Company to show how it is delivering the Investment Plan in a **timely and efficient manner** to save over £1.2 billion across 5 years



## Network condition



During Road Period 1, the Company will develop new improved metrics for the condition for all aspects of the asset

**95%** Of road surface – ‘pavement’ – in adequate condition

## Transforming our roads

It is no exaggeration to say that without the SRN the country would grind to a halt. Implementing a new road investment and planning process, underpinned by a step change in funding, is therefore not just desirable, but essential.

We have been deliberately ambitious in our aspirations for the long term and demanding in the progress we are seeking over the first Road Period. This is reflected both in the investments we are making and the outcomes targeted by the Performance Specification, which will put us on course to deliver a smoother, smarter, and more sustainable network.

This is undeniably a long term process; the transformation we are striving for cannot be achieved overnight, but will require time, foresight and forward planning. In that light, consideration of the second Road Period and beyond has begun and will ramp up over the coming years so that the next RIS will continue this transformation.

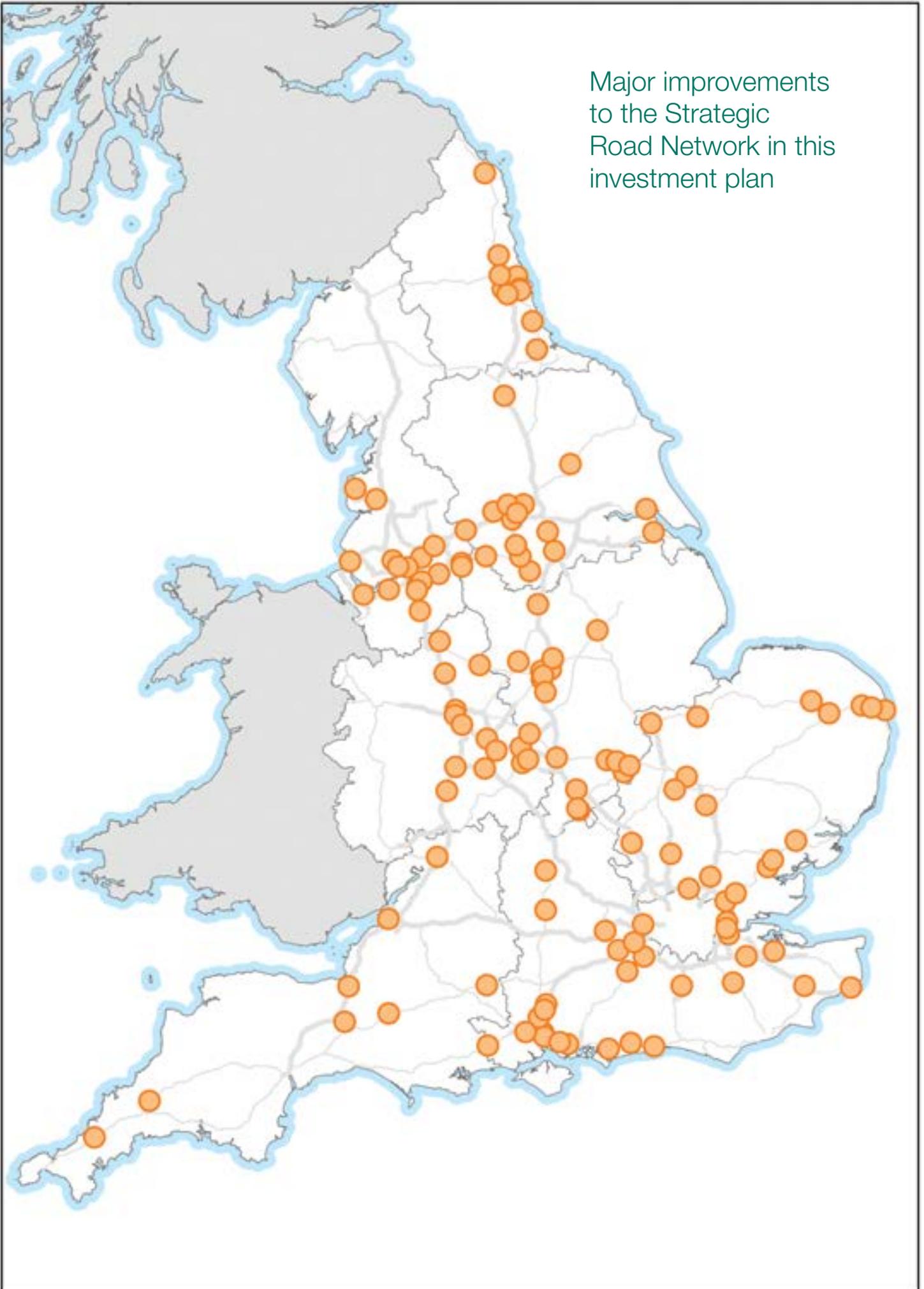
As this Road Investment Strategy proves, government has both the will and the plans to transform the SRN. Now is the time for action, as we work in concert with the Company to make this strategy a reality.

# Appendices: regional profiles

## Investment Plan regional profiles

North East England and Yorkshire	30
North West England	32
Midlands	34
East of England	36
London and the South East	38
South West England	40

Major improvements  
to the Strategic  
Road Network in this  
investment plan



## Investment Plan – North East England and Yorkshire

The roads of Yorkshire and the North East are largely defined by four major corridors – the M1, M62, A1 and A19. Since 2010, each of these has seen the start of major improvements:

- Construction has started on the A1 motorway upgrade between Leeming and Barton. This means that, in 2017, there will finally be an all-motorway link from Newcastle and Teesside to the rest of England
- Three stretches of Smart Motorways are now under construction on the M1 – from Chesterfield to south Sheffield, between Sheffield and Rotherham, and from Wakefield to the M62. On the M62 itself, a 15 mile stretch of Smart Motorway is already open, adding a lane to the most congested section of the road
- The second Tyne Tunnel opened in 2011, effectively widening the A19 under the river to two lanes in each direction.

These are improvements that will transform transport, particularly for the North East. However there is also more work to do. We have now completed two feasibility studies into the future of the A1 around and north of Newcastle. At present, the A1 Western Bypass from Newcastle to Gateshead is heavily congested. A £300 million widening scheme has already been announced between Coal House and Metro Centre. We now propose to go further by widening the adjacent section between Coal House and the junction with the A194(M), replacing the decaying Allerdene bridge in the process, and by widening the section between Junctions 74 and 79 north of the Tyne.

To the north of Newcastle, the capacity of the A1 has been a longstanding issue. We therefore plan to widen the A1 to create a new Expressway standard road to Ellingham. The length of continuous dual carriageway north of Newcastle will more than double to 33 miles; further safety improvements will enhance the rest of the route.

Major junction improvements will be built along the length of the A19. Improvements to the Coast Road and Testos roundabouts will improve access to the north and south of the Tyne Tunnel. This will remove the final at-grade junction between the Tyne and the Tees, and will raise the A19 to Expressway standard from the north of Newcastle to its junction with the A1 in Yorkshire. Improvements to the Down Hill Lane junction at Sunderland, coupled with widening for the A19 between Norton and Wynyard, will fix two of the

**26 major schemes**

**£1.4 billion invested from 2021 – 2015**

**Motorway from Newcastle to London complete by 2017**

**Smart Motorways across the Pennines**

bottlenecks on the route, significantly helping the region's industry and exports, as well as replacing a noisy concrete surface.

Ambitious plans will also transform journeys in and through Yorkshire. Planning work will start to upgrade the last non-motorway section of the A1 in Yorkshire, between Redhouse and Darrington, to motorway standard. Together with supporting improvements to the neighbouring A1(M) Doncaster Bypass, this will create a new strategic route to the North East, reducing congestion around Sheffield and Leeds.

Work will begin on further Smart Motorways for the region, crossing the Pennines on the M62 and linking Leeds to Manchester with four lanes – the first comprehensive increase in Trans-Pennine capacity since 1971. More smart motorways will connect Leeds to Sheffield, and Sheffield southwards to London at the same standard.

Key junctions will be addressed. Junction 26 of the M62, vital for access to Bradford, will receive

a new fly-under sliproad. An improved Junction 45 on the M1 to the East of Leeds will support the new Aire Valley enterprise zone. Planning will also begin for a major upgrade to the M1/M62 Lofthouse Interchange.

Two major improvements will strengthen access to the region's ports. An upgrade to the A180 and A160 will provide a dual carriageway to link Immingham and its associated refineries. Simultaneously, improvements to the A63 Castle Street will improve access to the port of Hull.

Last, and potentially most significant of all, our feasibility study on Trans-Pennine connectivity has highlighted the gap in the SRN between Sheffield and Manchester. We are commissioning a study into whether this gap can be filled by a multi-billion pound tunnel, travelling under the Peak District and transforming both the regional economy and the National Park for the better.

### North East and Yorkshire

#### Construction

- A1 A1 Coal House to Metro Centre
- A2 A1 Leeming to Barton
- A3 M1 Junctions 39-42
- A4 M1 Junctions 32-35A

#### Committed – previously announced

- A5 A19 Coast Road
- A6 A19 Testos
- A7 A63 Castle Street
- A8 A160/A180 Immingham

#### Committed – new

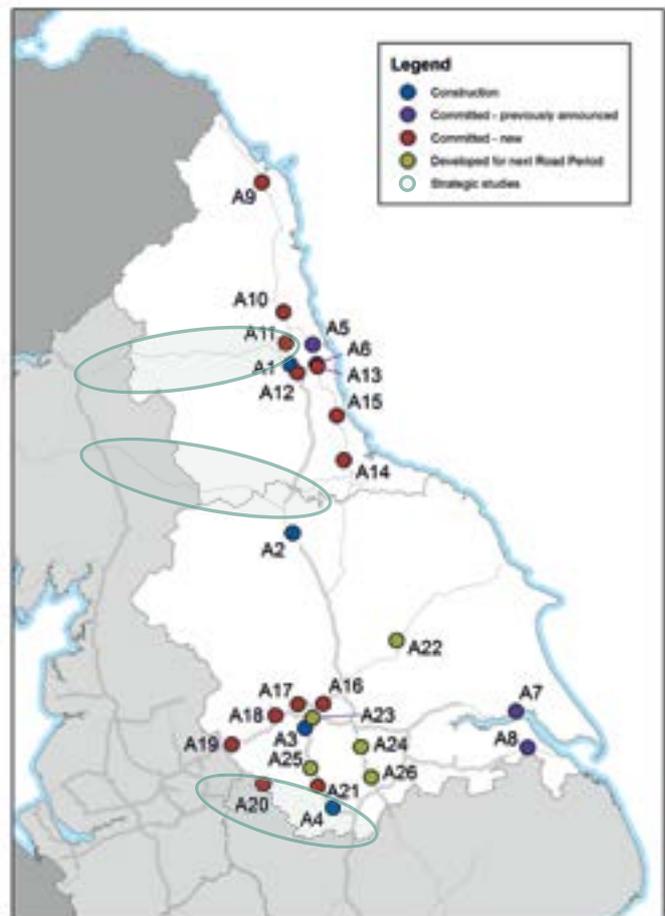
- A9 A1 North of Ellingham
- A10 A1 Morpeth to Ellingham dualling
- A11 A1 Scotswood to North Brunton
- A12 A1 Birtley to Coal House widening
- A13 A19 Down Hill Lane junction improvement
- A14 A19 Norton to Wynyard
- A15 A1 & A19 Technology enhancements
- A16 M1 Junction 45 Improvement
- A17 M621 Junctions 1-7 improvements
- A18 M62/M606 Chain Bar
- A19 M62 Junctions 20-25
- A20 A628 Climbing Lanes
- A21 A61 Dualling

#### Developed for next Road Period

- A22 A64 Hopgrove Junction
- A23 M1/M62 Lofthouse Interchange
- A24 A1 Redhouse to Darrington
- A25 M1 Junctions 35A-39
- A26 A1(M) Doncaster Bypass

#### Strategic studies

- Northern Trans-Pennine
- Trans-Pennine Tunnel



## Investment Plan – North West England

The North West is the home of Britain's motorway network and, even today, the area around Manchester and Liverpool has a greater number of motorways than all of the South East of England combined. Manchester's M60 is second only to the M25 in its peak traffic, which is why major upgrades are now taking place between Junctions 8 and 18 and onward to Junctions 18–20 of the M62 to bring Smart Motorways to the northern side of the ring.

Now that Smart Motorways are proven technology, their value for the roads of the region is clear. This was why last year the government committed to a further 60 miles of Smart Motorway in the Manchester area. This includes the south-east quarter of the M60, between Junctions 24 and 4, the M62 between the M60 and the M6, and the adjoining stretch of the M6 itself from the M62 to Wigan. Planning work will also begin to improve M60 Junction 18, the gateway to the Trans-Pennine M62, and to raise the M62 to Yorkshire to a full four-lane Smart Motorway. A new study will make sure that the M60 is ready for more development in the region.

To the south of Manchester, additional capacity is also coming into play. The A556 has long served as the de facto southern approach to Manchester, despite being a local road that runs through Mere village. Last month construction of a new Expressway-quality bypass began, which will provide a proper gateway to the North's largest city. The rest of this route into Manchester will receive further upgrades – with Smart Motorways widening the M56 from the A556 to the M60 to four lanes, and with an improved Junction 19 linking it to the M6.

Improvement to the M62 from Junction 20 eastwards will provide a fourth lane across the Pennines extending all the way to Leeds. Further south, the 'smart spine' along the M6 and M1 will massively improve connections to Midlands and beyond. Smart Motorways will control over 145 miles of motorway, ensuring easy journeys from Liverpool and Manchester to Leeds, Birmingham and London. This represents the biggest single increase in capacity into the North West since the opening of the M62 in 1970.

**16 major schemes**

**£1.5 billion invested from 2015 – 2021**

**Four lane motorways from Manchester to Leeds**

**Biggest increase in capacity into the region since 1971**

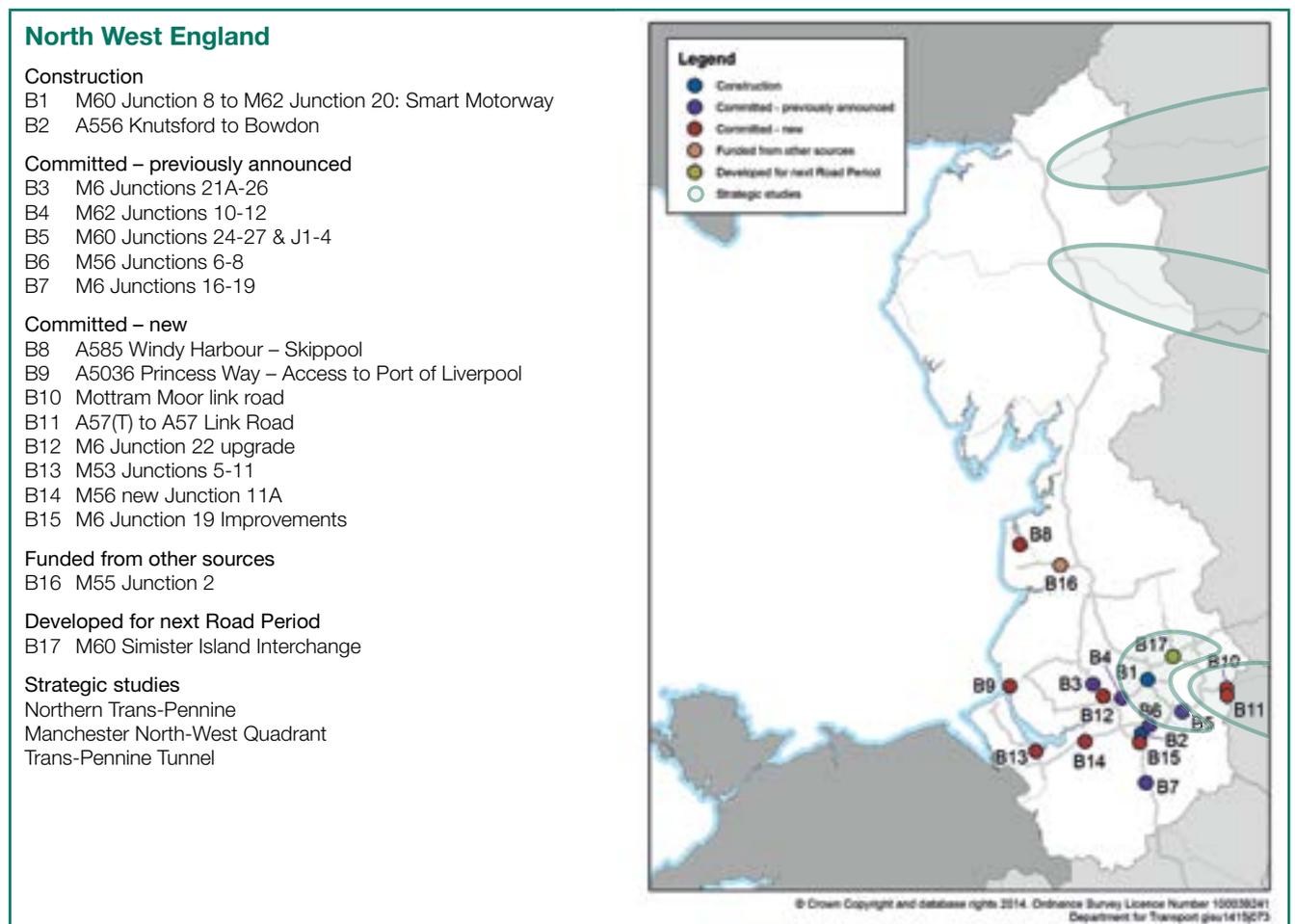
This record may not stand long – following the findings of our Trans-Pennine feasibility study there is a need to address the strategic gap between Manchester and Sheffield. The direct route between the two cities is only 35 miles long, but traffic taking the M62 – the only high performance Trans-Pennine route – must travel more than 65 miles. This means that traffic from Manchester has to travel further to get to Sheffield than it does to reach the Lake District. This can only be answered by bold thinking, and we are commissioning experts to assess whether there is a tunnelling option which can bring these cities together while still enhancing the tranquillity of the Peak District. For the short term, improvements to the A57, bypassing the village of Mottram, will provide relief for local communities and road users.

In Merseyside, road improvements have an important role to play in promoting local development. In its 2014 city growth deal, Liverpool stressed the importance of upgrades to the A5036 Princess Way, which links

Liverpool's port to the motorway network. Extra capacity on this route is vital to enhancing the port and developing the area, and we are pleased to confirm funding for the comprehensive improvement of this link. South of the Mersey, Smart Motorways on the M53 will help journeys into Birkenhead, supporting new housing and office space at the Wirral Waters development.

Development in northern Lancashire also requires further support. Preston is situated at the nexus of four different motorways. The new western distributor road, funded in the 2013 growth deal, will be linked to the M55 with the construction of the 'missing' Junction 2.

Road capacity in Cumbria remains good, but strategic connections are heavily biased to North-South movements. We intend to start a strategic study to examine the case for dualling the A69 and A66, to further Trans-Pennine capacity and improve connections between East and West in the North of England.



## Investment Plan – Midlands

The Midlands is the keystone of England's road network. Catthorpe, where the M1, M6 and A14 meet, is the most strategically important junction on the network, and is mid-way through a £190 million upgrade. The region's motorways have benefitted from the introduction of Smart Motorways.

The M42 east of Birmingham has been the test bed for the development of Smart Motorways. What was a pioneering technology ten years ago is now a fact of life across the West Midlands. Half of the 'Birmingham Box', on the M6 and M42, is now able to open up the hard shoulder to traffic or in the process of being upgraded to do so. Work to complete the Box will begin during the next Road Period, starting with improvements to Junction 6 and Smart Motorways around M40/M42 interchange.

Further stretches of Smart Motorway will also connect Worcester to the 'Birmingham Box', and will be backed by extra capacity on local junctions to support further development. New slip roads will fully connect the M54 to the M6 and M6 Toll, meaning traffic heading north will no longer have to make their way through nearby A-roads.

So far, Smart Motorways have been used to improve the journeys around cities. Now, we will use them to link cities together. The improvement of the M1 from Junction 28 to 31 means that, from 2016, there will be a Smart Motorway link between Nottingham and Sheffield – the first time the technology has linked two major urban areas.

This is just the beginning. Further sections of Smart Motorway will soon be rolled out to the north and south of Birmingham. To the north, they will connect Stoke, and from Stoke go onward towards Manchester. Southbound, improvements to the M6 and M1 north of Milton Keynes will create a similar link to London. This 'smart spine' will link the South East to the North West, with Birmingham at its heart.

Further Smart Motorways will also be added to the East Midlands to open up the hard shoulder between Junctions 23A and 25. Planning will also start to fill in the gap between Junctions 19 and 23A, completing the London to Yorkshire Smart Motorway. M1 Junction 24 is one of the most important junctions in the East Midlands connecting Derby, Stoke, Birmingham, and East Midlands Airport, as well as Nottingham via the soon-to-open A453 dual carriageway. As part of the

**31 major schemes**

**£1.8 billion invested from 2015 – 2021**

**145 miles of Smart Motorways to link London, Birmingham and Manchester**

**11 schemes to help housing and growth**

deal for approving a new rail freight interchange at Roxhill, the developer is proposing to fund a major improvement to Junction 24/24A, including a direct link from the A50 to the M1 southbound. If approved, this will solve one of the worst bottlenecks in the East Midlands.

The region's A-roads will also receive real attention:

- Grade separation of three junctions in Derby will mean the A38 will become a full Expressway from North Derbyshire to the West Midlands
- Ongoing upgrades to the Tollbar junction, coupled with two new junction improvements, will do the same to the A46 between the M6 and the M40
- Widening the A14 around Kettering will keep the route from the Midlands to Felixstowe from closing up, as will the £1.5 billion improvement between Huntingdon and Cambridge
- In Nottingham, a series of upgrades to roundabouts on the A52 will smooth flows around the city's ring road
- Planning will begin to dual the Newark northern bypass, and replace the A46 Junction with the A1.

The Midlands is expecting substantial growth, in terms of housing and industry. We will support this by adding capacity with new schemes funded by developers, local growth deals and central government funding:

- Improvements to the A500 in Stoke, the A50 in Uttoxeter and the A5 at Hinkley will support development at Etruria Park, JCB and MIRA
- Expansion of M6 Junction 10 will help 10 key employment sites within a 10 minute radius, and unlock 2,500 new homes
- In Northamptonshire, widening of the A45 to the A14, a new A14 Junction 10A and improvement to the Chowns Mill roundabout on the A45 and A6 will allow growth in Kettering and Rushden
- As part of the Towcester southern extension, we will part-fund a new southern relief road, taking traffic out of the town centre and enabling 2,750 new homes.

## Midlands

### Construction

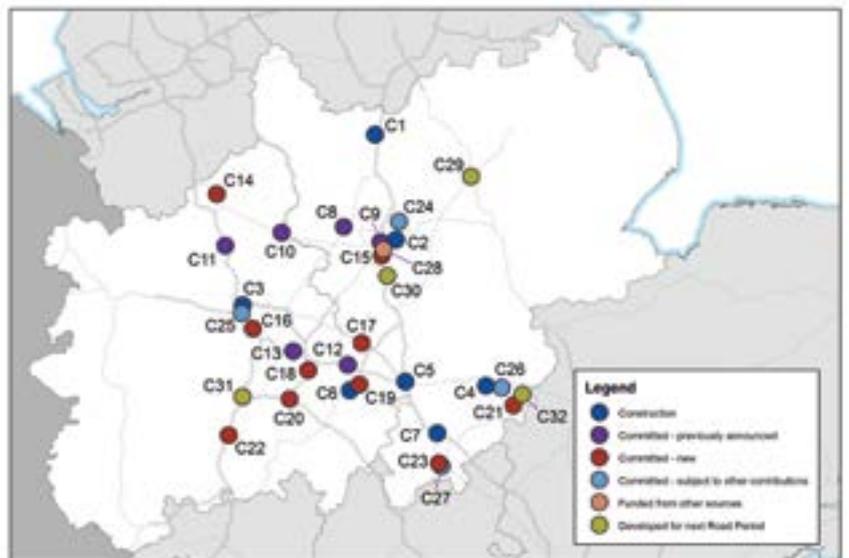
- C1 M1 Junctions 28-31
- C2 A453 Widening
- C3 M6 Junctions 10a-13
- C4 A14 Kettering bypass widening
- C5 M1 Junction 19 improvement
- C6 A45-A46 Tollbar End
- C7 M1 Junctions 13-19

### Committed – previously announced

- C8 A38 Derby Junctions
- C9 M1 Junctions 24-25
- C10 A50 Uttoxeter
- C11 M6 Junctions 13-15
- C12 M6 Junctions 2-4
- C13 M5 Junctions 4A-6

### Committed – new

- C14 A500 Etruria widening
- C15 M1 Junctions 23A-24
- C16 M6 Junction 10 improvement
- C17 A5 Dodwells to Longshoot widening
- C18 M42 Junction 6
- C19 A46 Coventry junction upgrades
- C20 M40/M42 interchange Smart Motorways
- C21 A45/A6 Chowns Mill junction improvement
- C22 M5 Junctions 5, 6 & 7 junction upgrades
- C23 A43 Abthorpe Junction



© Crown Copyright and database rights 2014. Ordnance Survey Licence Number 100050261  
Department for Transport gov.uk/1415/175

### Committed – subject to other contributions

- C24 A52 Nottingham junctions
- C25 M54 to M6/M6 Toll link road
- C26 A14 Junction 10a
- C27 A5 Towcester Relief Road

### Funded from other sources

- C28 M1 Junctions 24-24A improvement

### Developed for next Road Period

- C29 A46 Newark Northern Bypass
- C30 M1 Junctions 19-23A
- C31 M5/M42 Birmingham Box Phase 4
- C32 A45 Stanwick to Thrapston

## Investment Plan – East of England

The East of England is where many of our exports begin their journey to the wider world. With major ports at Felixstowe and Tilbury, and a third under construction at London Gateway, good connections to and from the region are crucial for the national economy.

To speed up these journeys, government confirmed in 2012 that it would deliver a £1.5 billion, 21 mile improvement to the A14 between Cambridge to Huntingdon. This stretch has been cited as the biggest single choke point for British business, and from 2016 work will begin to bypass Huntingdon and bring the whole affected stretch up to three-lane standard. This is the single biggest project in the entire roads programme.

To further support access to our major ports, we are now turning to the A12, which links Felixstowe and Ipswich with Essex and London. Key elements include:

- The widening of the stretch between Chelmsford and the junction with the Westbound A120 (Junction 25) to three lanes
- Preparation to widen the stretches between London and Chelmsford, and around the Colchester bypass
- Reconstruction of the junction with the M25
- A package of technology measures to smooth congestion on the rest of the route.

The last stage of dualling the A11 to Norwich will finish this month, completing England's newest Expressway and providing the first-ever dual carriageway link to Norfolk. We will build on this with a package of improvements along the length of the A47, including:

- Further dualling around Norwich, to the east between Blofield and North Burlingham, and to the west to link the Norwich and Dereham bypasses. This will mean thirty miles of continuous dual carriageway around Norwich. The Company will work with Norfolk County Council to consider improvements to the Thickthorn junctions with the A11 to aid growth in Norwich
- Junction improvements at Great Yarmouth, as well as safety improvements and work with Natural England to explore environmentally accessible options for upgrading the Acle Straight. The A12 from Yarmouth to Lowestoft will be renumbered as the A47

**16 major schemes**

**£2.0 billion invested from 2015 – 2021**

**£1.5bn to upgrade the A14**

**Dualling the Cambridge to Milton Keynes link**

- Dualling the link between Peterborough and the A1, improving northern and western access to the city
- Upgrading the Guyhirn junction with the A141, to improve safety and reduce congestion.

The East of England is also home to some of our fastest growing cities. The transport network does a poor job of linking some of these places together, and we will start a new study examining the case for an Expressway link between Cambridge, Milton Keynes and Oxford. This will make the best use of existing dual carriageway on the A421 and A428 and, to make sure we deliver results rapidly, we will begin by dualling the ‘missing link’ between Cambourne and the A1, completing the Cambridge to Milton Keynes leg of the route.

The A1 is one of the best known roads in England, but suffers from outdated standards

and sharp variations in quality. We intend to fix this. In the short term, we plan to bring Smart Motorways to the two-lane section of the A1(M) around Stevenage, and grade separate the notorious Black Cat roundabout. For the long term, we are starting a study into raising this part of the A1 to a modern standard, and restoring its status as the Great North Road.

Roads must also play their part in strengthening the economy of the region:

- A link road from the A5 to the M1 near Dunstable, including a new Junction 11A, will allow for 7,000 new homes at Houghton Regis
- At Harlow on the M11, £50 million of extra improvements to Junction 7 will make development easier and provide quicker access to and from the town.

### East of England

Committed – subject to other contributions

- D1 A14 Cambridge to Huntingdon
- D2 A5-M1 Link Road

Committed – new

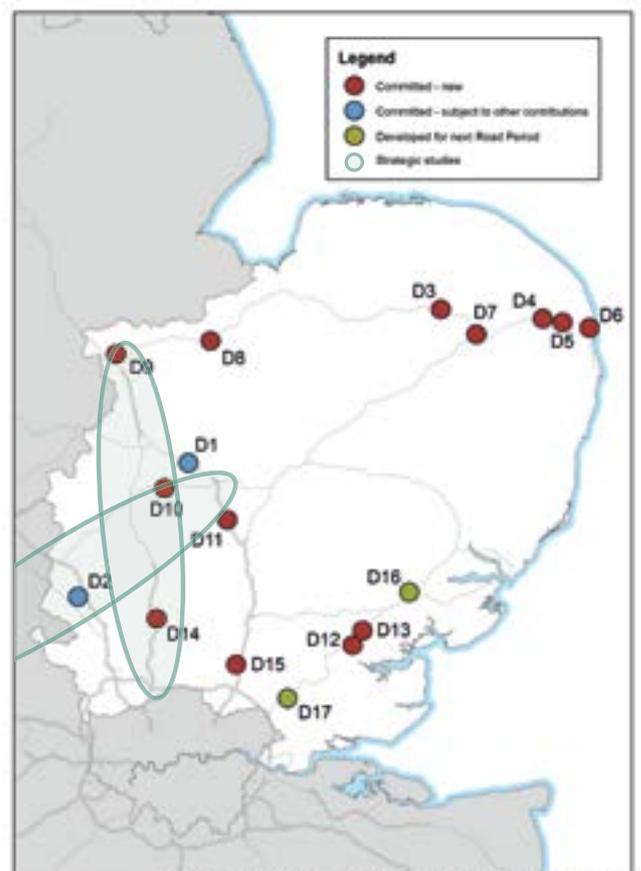
- D3 A47 North Tuddenham to Easton
- D4 A47 Blofield to North Burlingham dualling
- D5 A47 Acle Straight
- D6 A47/A12 junction enhancements
- D7 A47/A11 Thickthorn Junction
- D8 A47 Guyhirn Junction
- D9 A47 Wansford to Sutton
- D10 A428 Black Cat to Caxton Gibbet
- D11 M11 Junctions 8 to 14 – technology upgrade
- D12 A12 Chelmsford to A120 widening
- D13 A12 whole-route technology upgrade
- D14 A1(M) Junctions 6-8 Smart Motorway
- D15 M11 Junction 7 junction upgrade

Developed for next Road Period

- D16 A12 Colchester Bypass widening
- D17 A12 M25 to Chelmsford

Strategic studies

- Oxford to Cambridge Expressway
- A1 East of England



## Investment Plan – London and the South East

The M25 remains the busiest motorway in the UK, and one of the busiest roads in the world. 2014 marks an important milestone – the upgrading of the whole route to four lanes throughout<sup>1</sup>. Smart Motorways have filled the last gaps, fulfilling a pledge first made in 1989.

Work is now underway to improve the links that radiate out from the M25. Smart Motorways can provide more reliable journeys and more peak-time capacity, both of which will be valuable on the M3, M4, M20 and M23. The stretch on the M20 will support housing growth and new jobs around Maidstone, as will improvements to junctions on the A2 at Bean and Ebbsfleet, and a further new junction in south Kent near Ashford. The M23 Smart Motorway will provide better access to Gatwick airport. We will also carry out improvements to Junctions 25 (Cheshunt) and 28 (Brentwood) to fix longstanding congestion hotspots.

The south west quadrant of the M25, between Junctions 10 and 16, remains the busiest section. Congestion remains bad and, to improve conditions, we will bring forward a package of improvements for this stretch, including four-lane through-running at Junctions 10 to 12 and hard shoulder running from Junctions 15 to 16. Coupled with this, a major rebuild of the A3/M25 Wisley interchange will fix one of England's least safe motorway junctions.

This will improve conditions in the medium term. Looking to the future, further widening of the road would require major re-engineering, and would have significant consequences for those living nearby. The improvements announced in this document buy some time to find a lasting solution to the problems of the south-west quadrant – one which makes use of all available transport modes and takes proper consideration of the environment. Inaction is not an option, and the Department will begin a wide-ranging study to look at how this section of the network can keep working into the future.

Smart Motorways are not limited to London. Around Southampton and Portsmouth, from Junction 11 on the M27 to Junction 9 on the M3, Smart Motorway technology

**29 major schemes**

**£2.2 billion invested from 2015 – 2021**

**Improvements around 10 out of 31 junctions on M25**

**Smart technology on seven motorways**

<sup>1</sup> While the stretch between Junctions 3 and 5 remains unwidened, the parallel M20 and M26 means there is six lanes of capacity in each direction

will provide an extra lane at peak times throughout the Solent area. Further improvements around Junctions 5, 8 and 10 of the M27 and Junctions 9, 10 and 14 of the M3 will mean far easier movement on and off of the motorway.

Upgrades to junctions will make access to key ports across the region easier:

- M25 Junction 30 will be rebuilt to improve access to the new London Gateway port
- Junctions on the A20 in Dover will be upgraded to improve access to the port and support new homes and jobs
- The M271 Redbridge Junction, required to get to Southampton docks, will be improved.

The A34, the main route from the Midlands to Southampton, must be kept open for freight. To ensure this happens, we will invest £30 million in new route-management technology in the short term and enhanced junctions, including a free-flowing link to the M3, will improve journeys around Oxford and Winchester.

South of London, the widening of the trunk road network continues to improve access. The newly widened A23 has opened south of Crawley, and the dualling of the Tonbridge bypass is expected to begin next year. The A27 feasibility study has recommended a new dual carriageway bypass of Arundel and extra improvements in Worthing and Lancing, which will fix one of the most notorious ‘missing links’ in the region, while junction improvements in Chichester will ease journeys on the western part of the route. Smaller bottlenecks will also be targeted, for example with a short widening of the A31 at Ringwood to remove the conflict between local and long-distance traffic, and through improvements to the A27 through Worthing and Lancing.

To the north of London, the M1 has benefitted from heavy investment over the past decade. East-West connections have not received the same attention. To link up the fastest growing towns in England, we will start a new strategic study on creating an Expressway link between Oxford and Cambridge via Milton Keynes, fixing a longstanding gap in the network and bringing new capacity to support growth in the ‘Brain Belt’.

## London and South East England

### Construction

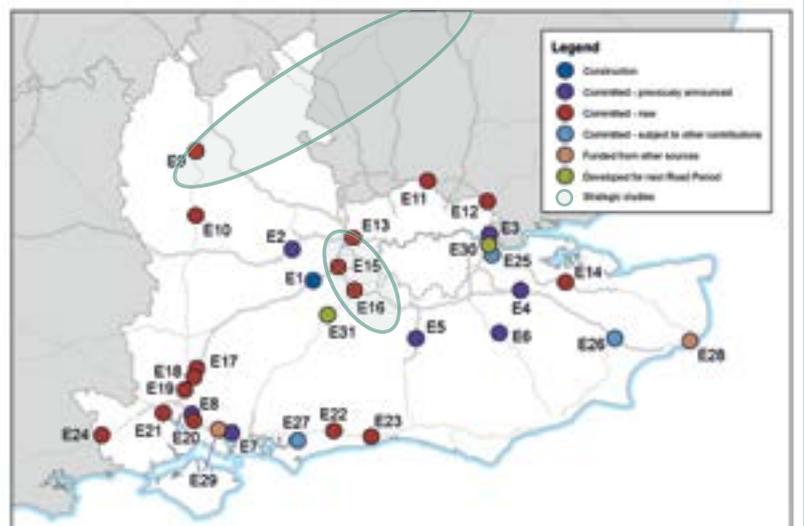
E1 M3 Junctions 2-4A

### Committed – previously announced

E2 M4 Junctions 3-12  
E3 M25 Junction 30  
E4 M20 Junctions 3-5  
E5 M23 Junctions 8-10  
E6 A21 Tonbridge to Pembury  
E7 M3 Junctions 9-14  
E8 M27 Junctions 4-11

### Committed – new

E9 A34 Oxford Junctions  
E10 A34 Technology enhancements  
E11 M25 Junction 25 improvement  
E12 M25 Junction 28 improvement  
E13 M4 Heathrow slip road  
E14 M2 Junction 5 improvements  
E15 M25 Junctions 10-16  
E16 M25 Junction 10/A3 Wisley interchange  
E17 M3 Junction 9 improvement  
E18 M3 Junction 10-11 improved sliproads  
E19 M3 Junctions 12-14 improved sliproads  
E20 M27 Southampton Junctions  
E21 M271/A35 Redbridge roundabout upgrade  
E22 A27 Arundel Bypass  
E23 A27 Worthing and Lancing improvements  
E24 A31 Ringwood



### Committed – subject to other contributions

E25 A2 Bean & Ebbsfleet junctions  
E26 M20 Junction 10a  
E27 A27 Chichester Improvement

### Funded from other sources

E28 A20 Access to Dover  
E29 M27 Junction 10

### Developed for next Road Period

E30 Lower Thames Crossing  
E31 A3 Guildford

### Strategic studies

Oxford to Cambridge Expressway  
M25 South-West Quadrant

## Investment Plan – South West England

The major roads of the South West face a challenge unlike any other region of the UK. Although fewer hours are wasted in congestion in total, the road network across the region does not always play its part in connecting the economy together. Too often poor or inconsistent roads mean jams and delays, with knock-on effects for businesses, communities and families.

This is why the South West will lead the country in the introduction of new Expressways. These will deliver the safety and speed of a motorway journey, providing world-class connections for the places that they serve. Above all they will provide a consistently good service to road users, without the bottlenecks that have defined too many roads in the South West.

The biggest of these Expressways will be the A303, stretching from the M3 via the M5 to Exeter. There have long been calls for new strategic corridor to the South West, but concerns about damage to Stonehenge have stopped past proposals. There is only one way to fix this: a bored tunnel to take the A303 away from the surface. This will reunite the landscape and environment around Stonehenge, and will also unlock the rest of the A303 for upgrade to Expressway standard. A total of six widenings over the next 14 years will mean a new corridor to the South West – starting with the sections at Stonehenge, Sparkford and the A358 link from the A303 to Taunton.

Further west, the A38 to Plymouth already provides Expressway-quality access. The A30 into Cornwall does not. Work has already been announced to dual the stretch between Temple and Higher Carblake. In this strategy, we will also fund dualling of the stretch between the A39 and the A390 – the last single carriageway gap in the road. With this complete, the Expressway will stretch all the way to Camborne – 40 miles further than it does at present and finishing only 15 miles from Land's End.

In Gloucestershire, the A417 and A419 provide an Expressway-quality journey between Swindon and Gloucester, with the exception of a three mile gap near the Air Balloon roundabout. This 'missing link' has been a source of frustration for many years, as well as an accident blackspot. The site runs through a sensitive environmental

**8 major schemes  
plus £500  
million further  
investment in  
the A303**

**£2.0 billion of  
investment open  
or underway by  
by 2021**

**Tunnel at  
Stonehenge to  
allow dual A303**

**A30 and A417  
upgraded to  
new Expressway  
standard**

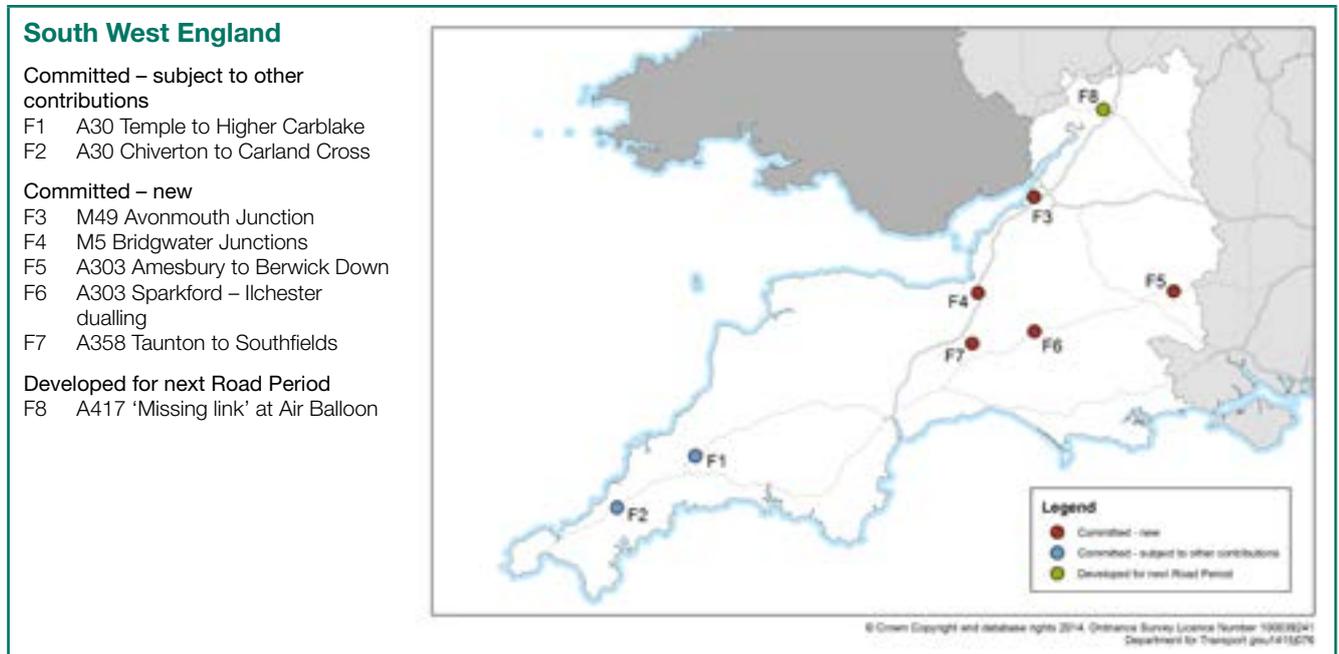
area, and previous proposals have struggled to find an appropriate balance between these contrasting requirements. We are committed to working with all interested parties to find and deliver a solution that can meet economic and social needs, while being sensitive to the special environment of the Cotswolds. Indeed, recent schemes, such as the Hindhead tunnel, show that ‘win-win’ solutions are possible. We intend to bring forward a solution in the first Road Period, that is suitable for delivery.

These major enhancements will fundamentally change the way in which the South West is linked together. Further work will help to support the wider regional economy:

- Smart Motorways have helped tackle congestion through the Almondsbury interchange between the M4 and M5, addressing the single biggest congestion hotspot in the region

- A new junction on the M49 will help the creation of a new enterprise zone at Avonmouth, with good connections to England and Wales
- Enhancements along the M5 will unlock further development sites near Hinkley Point.

This investment period is also likely to see the conclusion of the Severn Crossings concession agreement, under which the concessionaire responsible for building the new bridge has been recouping their costs. The government will work with its counterpart in Wales, and other stakeholders, to find a future for the crossings that can both ensure the long-term maintenance of the bridge and provide the best support to the economies of the region and Wales.



ISBN 978-1-84864-148-8



9 781848 641488