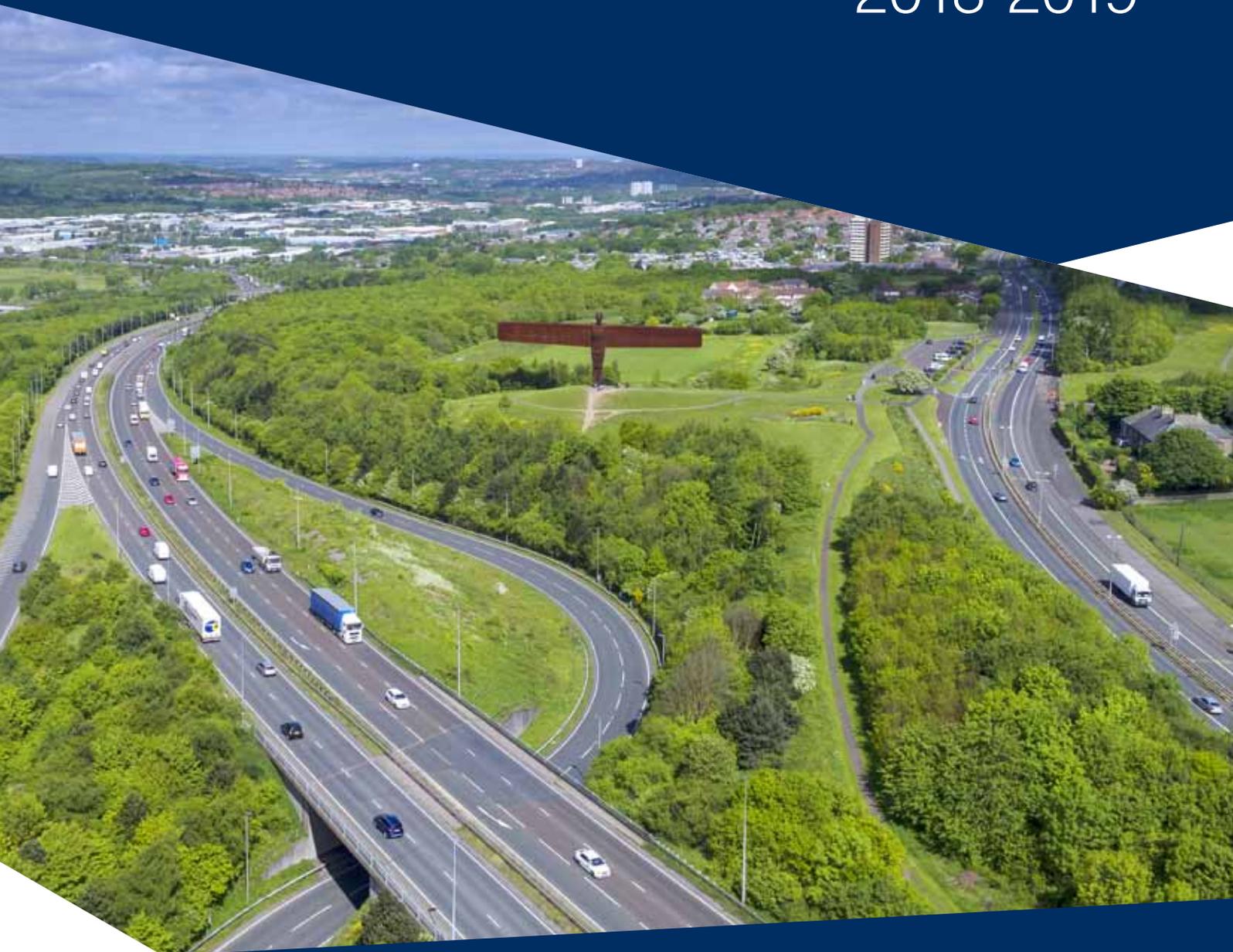


# Highways England Delivery Plan 2018-2019





# Highways England Delivery Plan 2018-2019



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# Foreword



Our 2018-19 Delivery Plan Update sets out our plans to improve safety and customer service, and the project and operational delivery of the government's first Road Investment Strategy (RIS).

Highways England was established in 2015. Our role is to plan, improve, manage, operate and maintain England's Strategic Road Network (SRN): over 4,300 miles of motorways and major A roads connecting the country and driving economic growth.

Since 2015, we have completed 22 schemes, with a further 18 major projects in construction across the SRN. This includes the flagship A14 Cambridge to Huntingdon<sup>1</sup> scheme, where we opened the first road bridge in September 2017. We have established a partnership with West Anglia Training Academy to create a dedicated training and apprenticeship course for this scheme. This supports local skills and development through the A14 scheme and beyond. We will also create 271 hectares of new wildlife habitat as part of this scheme, and we will finish it all in March 2021.

During 2017-18, we completed 10 schemes. These have added over 90 lane miles of capacity to our network, and will help to improve our customers' journeys.

- We delivered a bypass for Dunstable on the A5/M1 junction 11a link<sup>2</sup>, providing better access to the M1 in Bedfordshire, unlocking major growth in the region and creating safer, less congested journeys for our customers.
- We opened the second and final phase of the M5 junctions 4a-6<sup>3</sup> smart motorway, with all lane running, between junctions 5 and 6 in the Midlands, reducing congestion and improving journey time reliability.
- We upgraded 12 miles of the A1 between Leeming and Barton<sup>4</sup> to three lane motorway, supporting economic growth in the north, improving safety and completing a motorway link on the A1 from Tyne and Wear to London.

We are developing other nationally significant projects. This includes the new Lower Thames Crossing which, when complete, will provide 70% extra capacity across the Thames. It will unlock £8 billion for the economy, facilitating 6,000 new long-term jobs. It will help everyone travelling from north to south and on to the continent via Kent. More locally, it will provide reliable journey times and relieve considerable congestion between Essex and Kent.

<sup>1</sup>Map number 22 in Annex 1

<sup>2</sup>Map number 9 in Annex 1

<sup>3</sup>Map number 20 in Annex 1

<sup>4</sup>Map number 3 in Annex 1



We have continued to evolve as a company, introducing 1,000 new staff to gear up for our increasing investment programme, and improving our understanding of our assets through our Asset Delivery programme and investment in our asset management processes and systems.

Looking forward to 2018-19, we will start work on six projects, and seven will open to traffic.

We remain focused on our three imperatives: making our roads safer; improving our service to customers; and delivering the RIS.

Our aim is that no-one should be harmed when travelling or working on the SRN. While we can't eliminate all risk on our network or in our operations and construction activities, we can recognise it, assess it correctly, and ensure that people are protected from it.

We will deliver a programme of targeted safety campaigns to improve driver behaviours. We will also focus on improving the health, safety and wellbeing of all our people – not only in our organisation, but across our supply chain.

Using designated funds, we deliver environmental schemes, support innovative approaches and enable the development of new homes. We look to innovate and adopt new technology, support safer roads, and provide better links for pedestrians, cyclists, horse riders and other vulnerable users.

We are committed to our customers, and we want to understand their needs – and future priorities – even better.

This Delivery Plan Update lays out our objectives and outputs for the 2018-19 year. Our past record shows that we take these commitments seriously. We recognise that we still have much to do to improve our performance and we believe that we will continue to deliver against the objectives of the Infrastructure Act 2015, the expectations of our stakeholders and for the benefit of those we serve.

**Jim O'Sullivan**  
CEO







# 1. Executive summary

The Delivery Plan Update sets out our ongoing work and plans to meet our three imperatives: making our roads safer; improving our service to customers; and delivering the RIS.

Our objective is to improve the SRN's performance for our customers by increasing safety - which remains our first imperative and underpins everything we do – improving delivery and furthering the SRN's positive impact on our economy, environment and communities.

Our Health and Safety Five Year Plan promotes best practice, whilst our safety leadership, employee training and engagement activities help keep our workforce and supply chain safe.

As part of our drive to improve safety, we have made design improvements to the SRN, including scheme upgrades, better signage, smart motorways and expressways, which will help facilitate safer roads, drivers and working practices.

Highways England uses the term “expressway” only to differentiate the design standards for new and upgraded A roads from other types of motorways. This means that we will not be introducing “expressways” as a concept to road users and they will not need to learn new signs or procedures.

In 2018-19, we have a number of initiatives to improve road users' safety and journey quality. Insights from our customers and stakeholders, as well as from our research, have, for example, emphasised the importance of traffic information. We will aim to improve the information road users need to plan and manage their journeys safely and effectively.

Our designated funds programme is starting to make a real difference to people's lives and to the environment. In the first three years of the first road period (2015-2020) over 250 homes have received noise insulation using these funds, cyclists have benefitted from over 80 improvements and 20 landscape improvements have helped to improve the appearance of our network. We have a £200 million programme for this year, which is almost 10 times the first year's programme – showing our commitment to these funds and the value they deliver.

This Delivery Plan Update also presents our ongoing commitment to contributing to the UK's economic growth. As outlined in our Strategic Economic Growth Plan, The Road to Growth, the SRN has four important strategic roles to play in unlocking economic potential by: supporting reliant business sectors' productivity and competitiveness; providing efficient routes to global markets; supporting the sustainable development of homes; and increasing employment.



In support of these objectives, in 2018-19 we will open seven major improvement schemes to increase capacity, help provide reliable journeys and increase access, improving our network to accommodate local delivery plans.

A further significant scheme for which the Secretary of State for Transport has announced the preferred route is the A303 Stonehenge upgrade<sup>5</sup>. Totalling £1.6 billion, this includes the construction of a tunnel under one of the world's most famous prehistoric monuments, a free-flowing dual carriageway and a much-needed bypass north of Winterbourne Stoke.

Our £80 million Growth and Housing Fund for the first road period provides financial contributions towards the cost of road improvements that are needed for new housing developments. This will continue to be an important element of our strategy.

We will continue to improve performance, generate efficiencies and achieve cost savings, supporting our drive to use available public funds efficiently and effectively.

Ultimately, we can only optimise our ability to deliver if we have the right people, processes and systems. We will increase our efforts to retain, develop and attract the best talent to meet our evolving needs and to continue to drive our equality, diversity and inclusion principles.

We will further strengthen our strategic relationships with our stakeholders and supply chain, providing invaluable insights into our customers' needs and priorities for the SRN. To help us achieve our focus around our key imperatives, we will learn lessons from the challenges we have faced to date and seek to continuously improve.



Apprentice working on the M5 Oldbury viaduct scheme

<sup>5</sup>Map number 109 in Annex 1



## 2. A safe and serviceable network

### Key performance indicator (KPI)

#### Making the network safer



The number of Killed or Seriously Injured (KSI) on the SRN



A reduction in the number of KSIs from the baseline figure of 2,321 to 1,393 by 31 December 2020<sup>6</sup>

#### Keeping the network in good condition



The percentage of pavement/road surface asset that does not require further investigation for possible maintenance



The percentage of the network requiring no further investigation to be maintained at 95% or above



### Indicators that will be used to measure performance:

#### Road safety

- Incident numbers and contributory factors for motorways
- Casualty numbers and contributory factors for all-purpose trunk roads
- International Road Assessment Programme based road safety investigations, developed in conjunction with the Department for Transport (DfT), to feed into subsequent route strategies
- Accident frequency rate for construction and maintenance workers, and for Operations

#### Network condition

- Geotechnical asset inventory and asset condition
- Drainage asset – inventory and condition data coverage
- Technology asset availability
- Structure asset – inventory and condition

For a full table of KPIs, performance indicators (PIs) and requirements see **Annex 2**.

<sup>6</sup>RIS: Making the network safer - target of a 40% reduction against the 2005-09 average baseline by the end of 2020.

# What we plan to deliver in 2018-19

## Enhancing our safety and wellbeing culture

Our directors and managers lead our employees, supply chain and contractors to raise health and safety standards throughout our industry. In 2018-19, we will:

- hold bi-annual health, safety and wellbeing forums to share best practice across the supply chain, focusing on areas such as successes, expectation setting and a forward look of what is planned around health and safety
- plan a number of initiatives, including investigating the use of automated technologies to reduce road worker risk and rolling out new standards for short-term closures to reduce live lane working
- run our annual health and safety week, which will support key wellbeing themes for our employees, including mental health, being active, health for all ages and healthy eating and drinking
- publish the next update of our Health and Safety Five Year Plan

## Improving safety and reporting

The Reported Road Casualties Great Britain: 2016 was published in September 2017 by the DfT. The introduction of the Collision Recording And Sharing system by some police forces has introduced changes in how the severity

of an incident is recorded. This has led to an increase in the number of casualties reported as serious rather than slight. We are working with the DfT, the Office of Rail and Road (the Highways Monitor) and the Office for National Statistics to undertake research into this. This is expected to help us understand the impact of the switch in reporting systems and also to provide advice on developing methods for producing an adjusted back series. We expect to report the findings of this work by autumn 2018.

In 2018-19, we will continue our programme of research to further improve our understanding of collisions and casualties, potential countermeasures and interventions. This will include undertaking detailed analysis of fatalities on the SRN, understanding poor driver behaviour and developing potential lead indicators, such as level of mobile phone use.

We will report annually on our performance indicators relating to the accident frequency rate for Highways England and our supply chain, taking forward any required interventions, including issuing safety alerts.

## Better information and compliance

The vast majority of our four million daily customers are considerate and safe drivers. To reduce other driver behaviours which are contributing to the number of accidents on our network, we will deliver a programme of targeted safety campaigns.



These are delivered using a combination of marketing, advertising, press work and social media to engage with the specific audiences we need to influence, including young motorcyclists, commuters, holidaymakers and commercial vehicle drivers. We also work with partners, wherever possible, both to amplify our messages and to help them share the positive influence of our work.

Building on last year's effective campaigns, our planned campaigns for 2018-19 will target:

- vehicle checks and roadworthiness
- close-following/tailgating
- driving too fast for the conditions
- motorcycling safety – protective clothing
- use of smart motorways

These will be supported by the wider DfT Think! campaign, which will focus on drink, drugs, speed and use of mobile phones.



We will deliver a range of activities with local partners and key stakeholders through our regional safety coordinators. These activities will focus on high risk groups, such as motorcyclists, and take forward initiatives such as delivering our Suicide Prevention Strategy.

We are also looking for continuous improvement of compliance through awareness and enforcement initiatives for hard shoulder and Red X. We will continue to issue warning letters and will work with the Police to take forward automated detection and enforcement of these offences. A range of wider compliance activities are being undertaken with our key partners, including: further development of close following technology; commercial vehicle driver hours checks; and delivering new tyre technologies to check pressure and tread depth.

## Supporting new drivers

In 2018-19, we will launch our New Driver programme which aims to increase learner and novice drivers' knowledge of driving on motorways or high speed roads. Research has shown that younger drivers are up to seven times more likely to be killed or seriously injured than drivers over 25. The programme follows the announcement that learner drivers will be allowed to drive on motorways from 4 June 2018, providing they are accompanied by an approved driving instructor in a dual controlled car. Our programme targets driving instructors, parents and guardians as well as new drivers.

This is a joint initiative with our partners, including the DfT, Driver and Vehicle Standards Agency, Driver and Vehicle Licensing Agency, Driving Instructors Association and Motoring Schools Association Great Britain.

The programme will provide resources through a driving hub website, e-learning materials and a telematics app. These will include various elements such as vehicle checks, importance of tyre safety, driving to the conditions and what to do if you break down on a motorway or high speed road.

## Supporting safer roads

Since the start of the first road period, we have undertaken, and will continue to undertake, a range of infrastructure measures to modernise and maintain our network to improve road safety. These include the introduction of smart motorways and expressways, better routes for non-motorised users, safer verges, improved signage and road marking and technology to prevent, detect and monitor incidents.

In 2018-19, our planned major scheme programmes, alongside targeted safety schemes, are forecast to prevent 200 deaths or serious injuries by 2020. We will continue to monitor our progress in this area.

These investment programmes will also deliver improvements to the star rating of the SRN. This provides a simple and objective measure of the level of safety which is built-in to the road. Our roads are amongst the safest in the world and our star rating target has set an internationally high benchmark for our network and will create safer and more forgiving roads when collisions occur. We have assessed our current network based on the International Road Assessment Programme safety rating model on which the target was established. This indicates that we will achieve our 90% of travel on 3 star roads by the end of 2020. In 2018-19, we will finalise our assessment of the network for 2020 and 2025 using the refined and more developed International Road Assessment Programme model.

We are updating our Design Manual for Roads and Bridges to make it easier for designers to understand road safety considerations, as well as ensuring they are embedded within design decisions. This is supported by wider research to understand the future needs of our customers.

During 2018, we will publish our new Guide to Road Safety Treatments. This update includes awareness and enforcement measures which are being used on parts of our network to improve road safety in addition to, or instead of, traditional engineering measures. The guide highlights that different road safety issues can be resolved by a variety of measures and provides information on supplementary data that may be used to better understand issues along a route.

## Operating our network

We are committed to improving the maintenance and operation of our network and have started a programme to grow our asset management and service delivery capability.

A key component of this is our future approach to maintenance arrangements, known as Asset Delivery. This enables us to directly manage both routine maintenance and scheme delivery, allowing us to take control of key maintenance decisions, own the asset data and focus on the customer need. It will also help to bring innovation and second tier suppliers closer to allow for more efficient delivery.

Asset Delivery was first launched in July 2016, and is now established as our chosen operating approach. We are rolling it out across our business and developing a phased delivery approach for the remaining areas to allow us to work closely with existing suppliers and further refine the future business processes and contract model.



We will continue to identify our asset data needs and look to fill associated critical gaps by March 2020.

Our maintenance and renewals programme keeps the assets on the SRN in a safe and serviceable condition. It is programmed based on the needs of our customers, our assets and our capability to deliver the investment effectively. Our planned renewals activities are set out in Table 1.

Table 1: 2018-19 indicative renewals output

Deliverables	Total quantity	Metrics description
<b>Pavement</b>	1,118 lane miles	Length resurfaced along the centre line of the pavement
<b>Road markings</b>	2,850,000 lin m	Length along the centre line of the road markings - this includes markings on new or replacement road surfacing
<b>Kerbs</b>	26,800 lin m	Length along the centre line
<b>Vehicle restraint system</b>	188,000 lin m	Length along the centre line
<b>Drainage</b>	165,000 lin m	Summation of individual lengths measured along the centre line of the drain
<b>Geotechnical</b>	3,000 lin m	Length of embankment/cutting treated (parallel to the carriageway)
<b>Traffic sign (non-electric)</b>	1,000	Number of permanent traffic signs installed or replaced
<b>Guardrail</b>	625 lin m	Length along the centre line of the new or replacement pedestrian guardrail
<b>Boundary fencing</b>	35,800 lin m	Length along the centre line of the new or replacement boundary fence
<b>Lighting</b>	1,720	Number of road lighting columns installed or replaced
<b>Bridge joint</b>	355	Number of bridge deck expansion joints installed or renewed
<b>Bridge bearing</b>	192	Number of bridge bearing units installed or renewed
<b>Parapet</b>	1,300 lin m	Length along the centre line of the vehicle parapet (new or renewed)
<b>Waterproofing</b>	118,100 sq. mtrs	The surface area treated for waterproofing
<b>Motorway communications equipment</b>	157	Number of new or replaced motorway communications equipment items
<b>Technology renewals and improvements</b>	343	Counts of the number of assets renewed or improved
<b>Winter resilience</b>	40	Counts of the number of schemes on completion
<b>Network resilience</b>	33	Counts of the number of schemes on completion

## Improved network knowledge

Informed asset management allows us to bring together, and coordinate, the activities required for an end-to-end approach. All parts of our company are involved. Our objective is that the right investment choices and decisions are made and that new assets are handed over in the right condition with the right information. This will inform ongoing maintenance and operation.

We have developed and calibrated an enhanced structure asset condition indicator. We will carry out further calibration during 2018-19, using the new and current condition indicators, for consideration in the next Road Investment Strategy (RIS2).

We have also developed an enhanced geotechnical asset condition indicator and a drainage condition indicator. These are proposed to undergo validation in 2018-19, which is expected to be completed by March 2020. Our current technology asset condition indicator is considered appropriate and will remain unchanged.

Similarly, a pavement indicator is being trialled, and validation is anticipated to be completed in 2018-19.

To improve our long-term maintenance of the network and drive enhanced performance, we have published the Asset Data Management Manual, which defines the asset data requirements for our asset inventory. In 2018-19, we will work to embed this within the company and roll out the Asset Visualisation and Information System, which collates asset data in line with the manual.

Safety remains our first imperative. We have set ourselves the challenging long-term vision that no-one should be harmed whilst travelling or working on our network. We are taking forward a broad range of initiatives to improve road safety and will continue to engage with our customers. We will continue to embed our health, safety and wellbeing culture through targeted initiatives and also strengthen our asset management and monitoring systems.





## 3. Supporting economic growth

### Key performance indicator

Encouraging economic growth



Average delay (time lost per vehicle per mile)



The government did not set a target for this measure in the first road period, but Highways England should act in a way that will minimise delay as far as possible

### Indicators that will be used to measure performance:

- Percentage of formal planning applications responded to within 21 days of receipt by Highways England
- Average delay on Gateway Routes
- Meet the government target of 25% small and medium sized enterprise direct and indirect spend

For a full table of KPIs, PIs and requirements see **Annex 2.**

## What we plan to deliver in 2018-19

### Driving strategic economic growth

Since April 2015, we have made steady progress in delivering the RIS. Published in 2017, The Road to Growth sets out the four strategic economic roles for the SRN and Highways England:

- enabling a high-performing SRN to support reliant business sectors' productivity and competitiveness
- providing efficient routes to global markets through international gateways
- stimulating and supporting the sustainable development of homes and employment spaces

- providing employment, skills and business opportunities within our sector

The SRN carries a third of all traffic and two thirds of all freight. Reliable journey times are vital to businesses and necessary to support increased productivity, competitiveness, export and economic growth. Our research indicates that journey delays are amongst our customers' biggest concerns - and the majority of these delays are caused by congestion resulting from network demand.

We report our average delay on a 12 month rolling basis. We have been carrying out a greater percentage and a greater volume of works overnight to minimise the impact of our roadworks. Last year, between March 2017 and February 2018, we delivered approximately 85% of roadworks overnight, an increase of 5% from the previous year. In November 2017, we achieved 89% of works undertaken at night, our

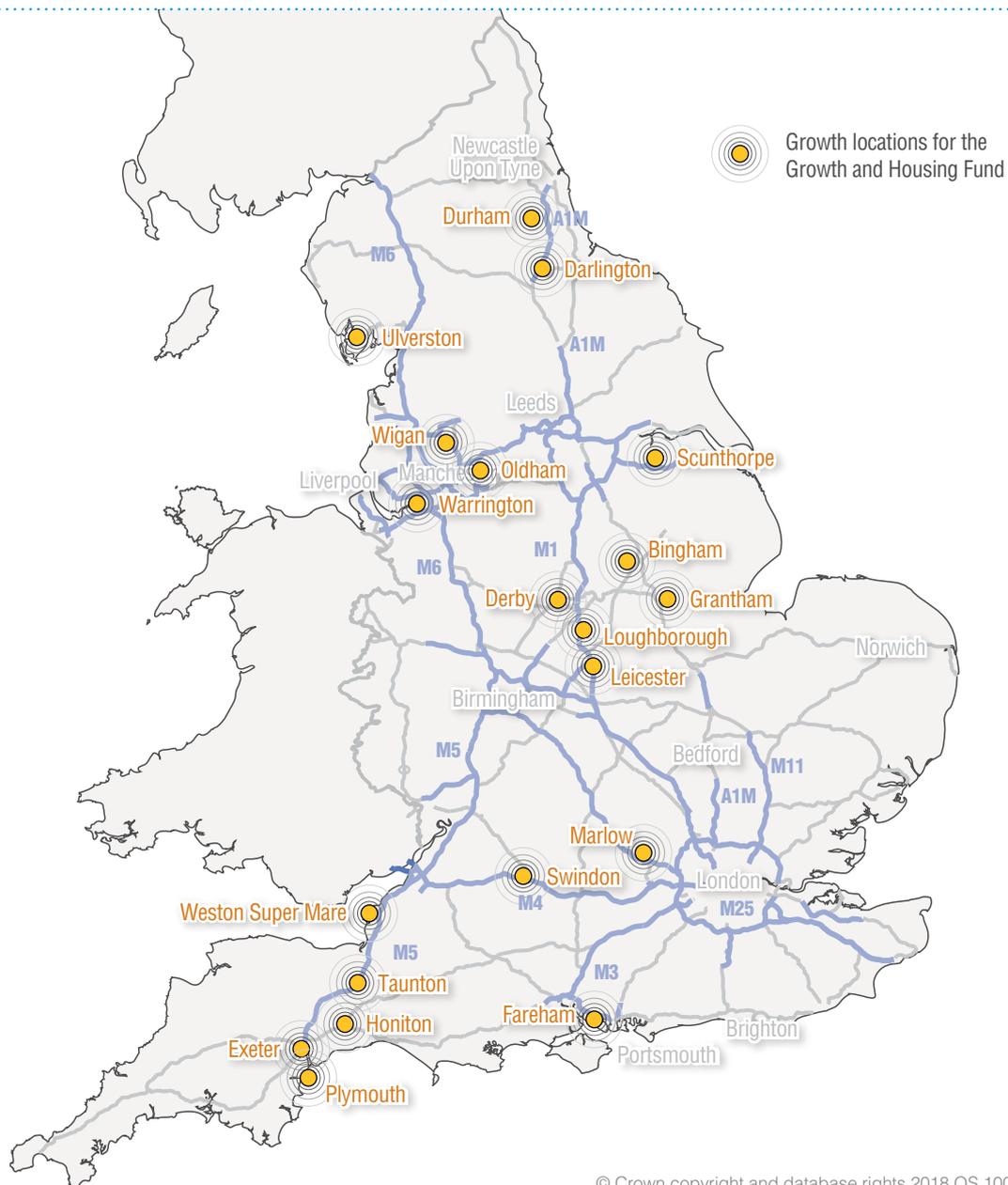
highest in-month percentage. Where possible, we will continue to lift or complete roadworks in advance of Bank Holidays.

Freight traffic around Dover can impact on journey times on the M20. We will continue to explore options to deal with projected future traffic demands and unexpected events on this area of the network.

## Investing through our Growth and Housing Fund

Our Growth and Housing Fund remains focused on delivering our £80 million programme of investments over the first road period. All projects are identified through competitive bidding rounds via the Local Enterprise Partnerships and Combined Authorities.

Map 1: Growth and Housing Fund – national proposals



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All schemes through this fund must unlock both housing and commercial development sites, and also attract substantial match funding from third parties, such as developers, local authorities and other government agencies – our key growth partners.

The Growth and Housing Fund schemes announced to date are anticipated to support the creation of up to 40,000 new jobs, 35,000 new homes and additional benefits such as new cycle paths, crossings and safety improvements. Our programme of investments is aligned to meet our commitment to attract third party match funding to cover at least 50% of all scheme costs across the entire programme.

At the end of January 2018, 23 schemes have been approved, committing up to £80 million of the total first road period programme budget across multiple years (including both scheme delivery and feasibility). In 2018-19, the following schemes will be in construction:

- A52 Wyvern junctions (Derby)
- M1 junction 16 Daventry Development Link
- M62 junction 8 (Warrington)
- A663 Foxdenton (Oldham)

We will progress the remainder of the proposals, with works on site expected to start on several large schemes, such as M27 junction 9 (Fareham), A38/A386 Forder Valley Link Road (Plymouth) and A1 Spitalgate (Grantham).

## Working in partnership with local authorities

In 2018-19, we will support local authorities or developers in the delivery of schemes that, while funded from other sources, will upgrade the SRN and support economic growth. In the North West, we are working with the Lancashire Enterprise Partnership – City Deal to develop a new junction 2 on the M55 near Preston, improving links to Fylde. We are also working with Lancashire County Council / Rochdale Council on a new junction to provide an access road from the M62 to Heywood. Other examples of where we are actively supporting developers include improvement projects such as the A20 access to Dover, which is complete, and M1 junctions 24-24a, which will align with works on a major scheme in this location.

We are working in partnership with Essex County Council to create a new junction on the M11 to provide another route into Harlow, cutting journey times as well as supporting new housing developments.

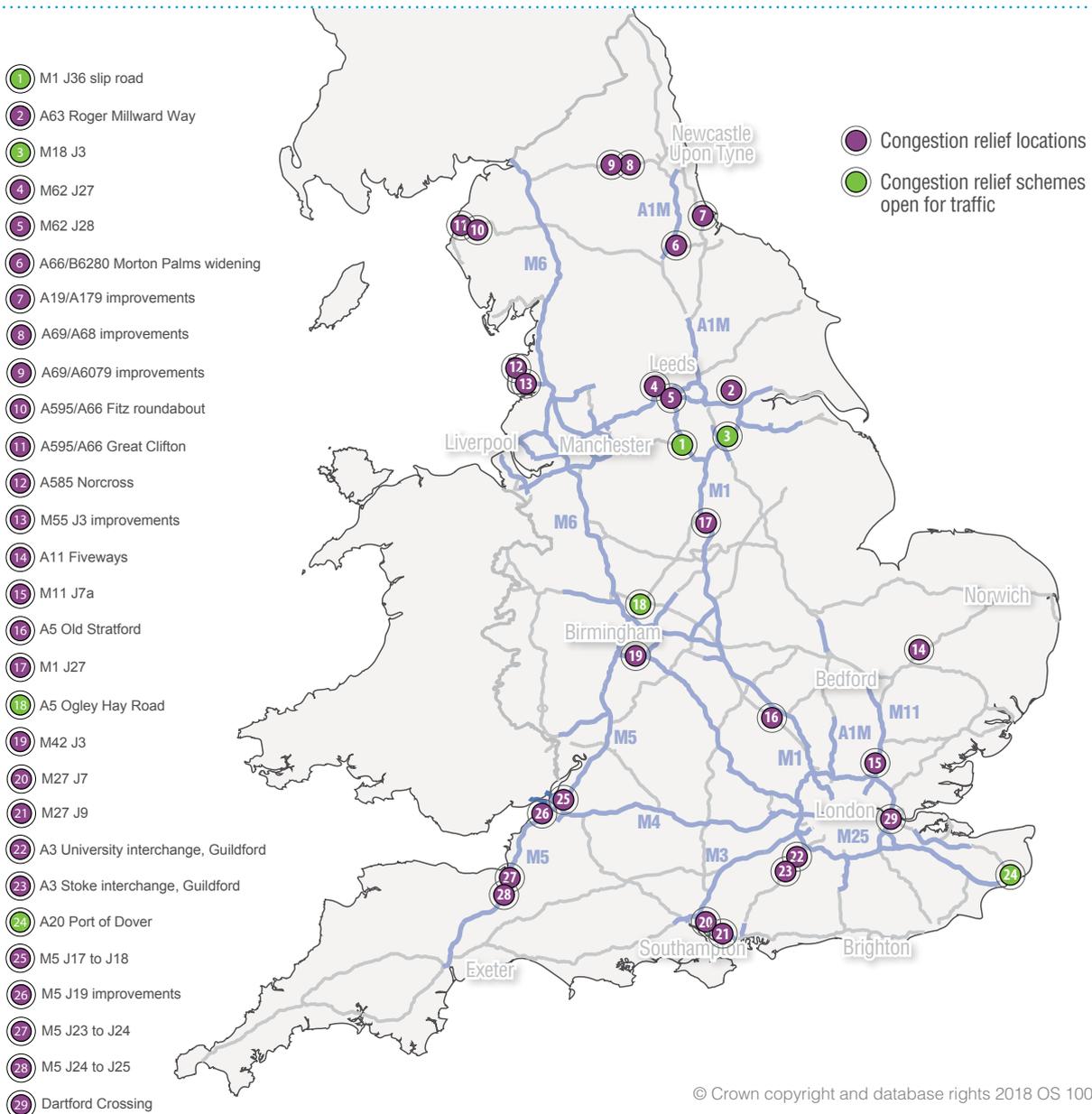
We are also working with local authorities to explore ways to strengthen integration with local roads, long distance routes and off-road networks. We are seeking to support park and ride sites and other interchange facilities which underpin local economies.

## Stimulating growth

We are using the £220 million investment, announced in the 2016 Autumn Statement, to continue our work to increase capacity on our network, reduce journey times and improve safety. This fund will be spent on

improving existing roundabouts, junctions and slip roads on important national, regional and local routes. The Safety and Congestion Relief Programme will bring benefits to communities and support economic and housing developments across the country.

Map 2: Safety and Congestion Relief Programme



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## Schemes opening for traffic in 2018-19

At the end of year three in the first road period, we had 18 major enhancement schemes in construction – seven of which are committed to be open for traffic in 2018-19 (see map 3). These include a number of smart motorways, which will help to increase capacity and provide more reliable journeys for our customers and improve some of the busiest junctions on our network. As well as supporting economic growth, these schemes will also have other benefits such as increased safety and a more free-flowing network.

Our schemes opening for traffic in 2018-19 include:

- **M6 junctions 16-19<sup>7</sup>**: By upgrading the M6 to smart motorway between Stoke and Knutsford in Cheshire, we will be forming the northern end of the ‘smart spine’ linking the North West and London.
- **M1 junctions 24-25<sup>8</sup> and M1 junctions 23a-24<sup>9</sup>**: The two schemes will increase capacity on the M1 between East Midlands Airport and the Nottingham junction.
- **M5 junctions 5, 6 and 7<sup>10</sup>**: This will provide significant expansion of junction 6 near Worcester, in addition to the already completed improvements to approach roads and increased capacity on junctions 5 and 7. This upgrade is between Bromsgrove and Worcester.
- **M20 junction 10a<sup>11</sup>**: This new junction near Ashford, Kent, will support a major new development to the south east of the town.
- **A19/A1058 Coast Road<sup>12</sup>**: The replacement of the junction between the A19 and A1058 will support free-flowing movement of traffic and uninterrupted access to the northern end of the Tyne Tunnel.



A19-A1058 Coast Road

<sup>7</sup>Map number 21 in Annex 1

<sup>8</sup>Map number 27 in Annex 1

<sup>9</sup>Map number 57 in Annex 1

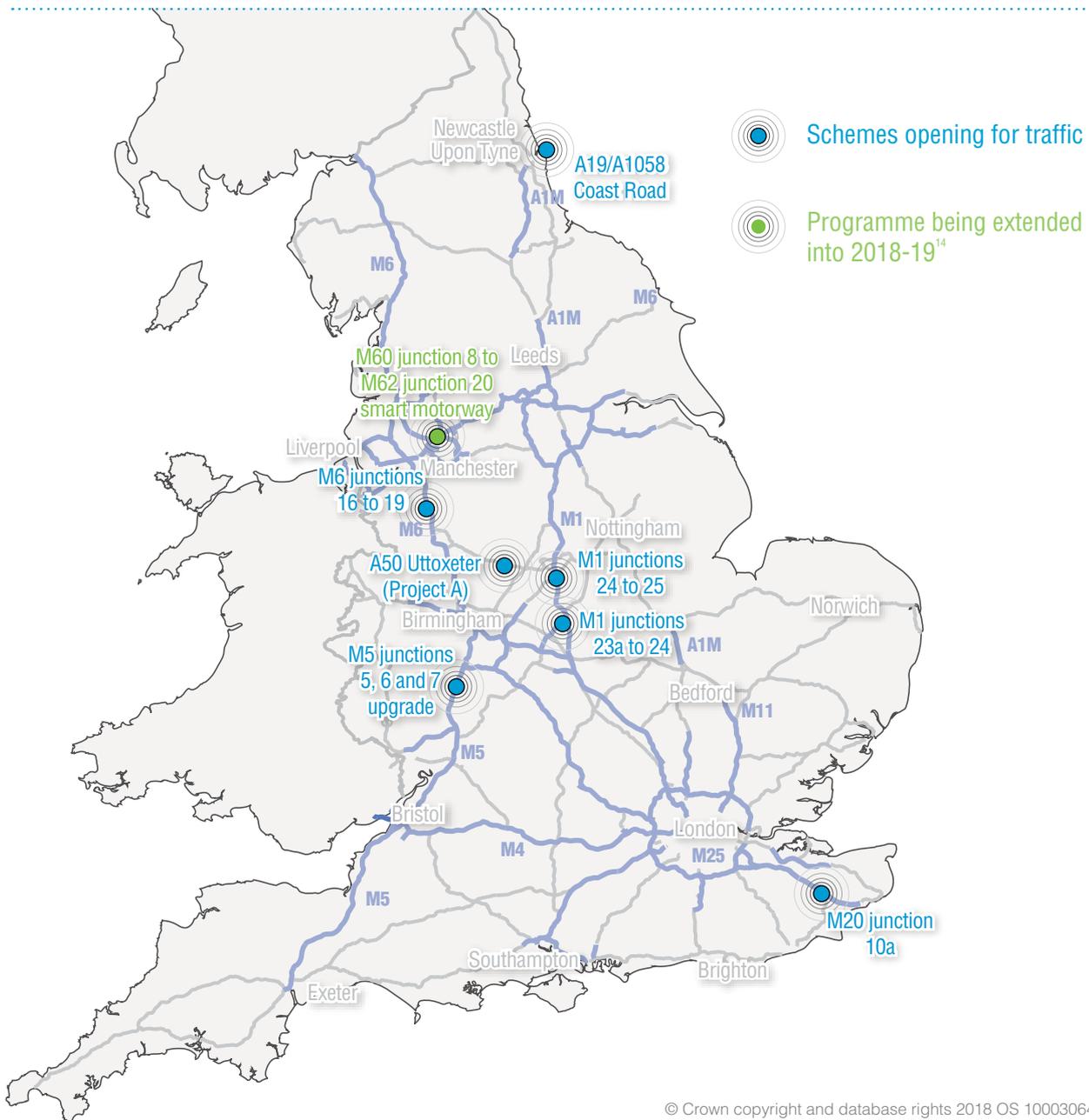
<sup>10</sup>Map number 64 in Annex 1

<sup>11</sup>Map number 23 in Annex 1

<sup>12</sup>Map number 24 in Annex 1

- **A50 Uttoxeter Project 'A'**<sup>13</sup>: Improvements on the A50 around Uttoxeter will provide improved access to a housing and employment site to the south of the A50. A second junction improvement, Project 'B', will be developed so it is ready for delivery after this road period.

Map 3: Schemes opening for traffic in 2018-19



<sup>13</sup>Map number 112 in Annex 1

<sup>14</sup>Issues encountered during construction and additional works to the existing asset have resulted in the programme being extended into 2018-19



## Schemes planned to start construction in 2018-19

In 2018-19, we will start work on six major road improvements to further increase capacity and improve access to areas of economic growth.

- **M27 junctions 4-11<sup>15</sup>**: We will upgrade the M27 to smart motorway between the M3 Fareham interchange, linking with the smart motorway scheme on the M3.
- **M6 junctions 21a-26<sup>16</sup>**: Through upgrading the M6 to smart motorway between the M62 Croft interchange and Wigan in southern Lancashire, we will link with the M62 junctions 10-12 scheme.
- **M56 junctions 6-8<sup>17</sup>**: By upgrading to smart motorway between Manchester Airport and A556, this scheme will work with improvements to the A556, the M6 junction 19 and smart motorways on the M6 to form part of a comprehensive upgrade to Manchester's southern access.
- **A19 Testos<sup>18</sup>**: The junction between the A19 and A184 will be upgraded, providing free-flowing access to the southern end of the Tyne Tunnel.
- **A500 Etruria<sup>19</sup>**: The widening of the A500 between Wolstanton and Porthill junctions near the Etruria Valley development complements measures on the local road network funded under the Stoke-on-Trent and Staffordshire Growth Deal.
- **A47 and A12 junction<sup>20</sup>**: This will deliver improvements to junctions throughout Great Yarmouth, including the reconstruction of the Vauxhall roundabout.



Shaft on A19-A1058  
Coast Road

<sup>15</sup>Map number 32 in Annex 1

<sup>16</sup>Map number 33 in Annex 1

<sup>17</sup>Map number 41 in Annex 1

<sup>18</sup>Map number 35 in Annex 1

<sup>19</sup>Map number 56 in Annex 1

<sup>20</sup>Map number 103 in Annex 1

## Schemes for future road periods

We have published our Strategic Road Network Initial Report and Route Strategies, both of which will inform future road investment. The Initial Report formed part of the DfT's public consultation on proposed priorities for RIS2. The 18 Routes Strategies will also contribute to RIS2 and confirm the SRN's significance as a driver, or potential barrier, to economic growth, housing supply and job creation. Each Route Strategy highlights existing SRN performance issues, asset conditions, operational requirements and anticipated future challenges. The Route Strategies include local and regional stakeholders' insights about local priorities, which help us to plan ahead.

Our activities in the current road period are already significantly supporting the growth of the UK economy and we are exploring how we can continue our contribution to growth in the future. For example, during the RIS we have been reviewing a number of potential schemes for development in future road periods.

Funding announced in the 2016 Autumn Statement is being used to progress a number of strategic studies. We are developing options for the Oxford to Cambridge expressway, M60 Manchester north-west quadrant and A66 (North Trans-Pennine). These transformational investment programmes, which would need to be implemented over several RIS periods, will significantly improve connectivity in key parts of the country and will be a catalyst for substantial economic growth and housing development.

In addition, we continue to assess the potential for further investments between Manchester and Sheffield via a new Trans-Pennine tunnel, the south-west quadrant of the M25 and improvement to sections of the A1 in the East of England.

A safe, high-performing SRN is vital to connect the country and to support economic growth in the UK. We aim to increase our network's economic contribution in line with our Strategic Economic Growth Plan, The Road to Growth. This outlines how we will enable a high-performing SRN to support reliant business sectors' productivity and competitiveness, provide efficient routes to global markets, support the sustainable development of homes and increase employment.





# 4. More free-flowing network

## Key performance indicator

### Supporting the smooth flow of traffic



The percentage of the SRN available to traffic



Maximise lane availability so that it does not fall below 97% in any one rolling year

### Supporting the smooth flow of traffic



The percentage of motorway incidents cleared within 1 hour



In any one rolling year, maintain performance of at least 85% of all motorway lane impact closures between 06:00 and 22:00 being cleared within 1 hour

### Improving user satisfaction



The percentage of National Road Users' Satisfaction Survey respondents who are very or fairly satisfied



Achieve a score of 90% by 31 March 2017, using a cumulative score over a 12 month period, and then maintain or improve

## Indicators that will be used to measure performance:

- The percentage of National Road Users' Satisfaction Survey respondents who are very or fairly satisfied with: journey time; information and signs; management of roadworks; feeling safe; upkeep
- Planning time index (reliability of journeys)
- Traffic (vehicle miles travelled) on the SRN
- Acceptable journeys
- Average speed

For a full table of KPIs, PIs and requirements see **Annex 2.**

## What we plan to deliver in 2018-19

### Enhancing customer experience

We have been listening to our customers and our diverse stakeholders to better understand their needs and concerns. This insight, supported by our in-depth research, is helping us to deliver our first road period objectives more effectively and meet the needs of our customers.

We have already delivered a number of initiatives aimed at improving our customers' experience including: rolling out improved

Variable Message Signs (VMS); developing a roadworks guide; trialling speed limits of 55/60mph through roadworks; improving and expanding coverage of VMS showing travel times; and implementing customer-focused performance measures for our supply chain.

During 2018-19, we will:

- launch our Customer Service Strategic Plan, which outlines our customer service improvement themes and key activities for the remainder of this road period and into the next one
- launch our internal Customer Service Annual Plan, which underpins our Strategic Plan and covers the initiatives that support improving customer experience and the service we provide
- collaborate with Transport Focus, who have scoped a revised Strategic Road User Survey, which will replace the current National Road Users' Satisfaction Survey and involve face-to-face interviews with 8,000 respondents

## Improving customer communication

We know that customers need reliable, up-to-date and accurate information to plan their journeys. We aspire to enhance our service for our customers by increasing the availability of relevant traffic information, when and where they need it. Using insights from customers and stakeholders to guide us, we aim to ensure that customers can receive the traffic information they want in the format they want it.

In 2018-19, we plan to:

- review our Traffic Information Strategy, using insights to drive future improvement plans
- enhance our online services to deliver better real-time messaging about unplanned incidents
- improve the accuracy of roadworks information communicated to customers
- look to enhance to the messages used on the VMS



VMS, M6 smart motorway



To improve the quality of our customer contact, we embedded mystery shopping into our Customer Contact Centre and Dartcharge.

We will develop a Customer Contact Strategy to ensure that we mature our understanding of our customers' needs and develop improvements to meet these.

## Resilience and extreme weather

Our customers need real-time information about weather forecasts and road treatment plans during extreme weather conditions, which our Severe Weather Information Service has been designed to provide. This service is part of a suite of integrated customer communications, including severe weather (such as specific measures for winter resilience), procedures for dealing with significant unplanned events and emergency planning, to which resilience standards apply.

In 2018-19, we will support our Severe Weather Information Service and our introduced package of improvements. These include real-time tracking of the winter fleet, enabling better management of resources in particular during severe weather events, and improved journey assignment.

Following winter 2017, our operational salt stocks will be replaced as part of the normal annual salt re-stock prior to winter 2018.

## Exploring innovative approaches

Our £120 million Innovation Fund for the first road period enables us to place greater emphasis on innovations that will positively affect our customers and our network. Our programme of innovation activity for 2018-19 is spread across existing projects and themes for investment to ensure efforts are focused in the right areas.



M62/A672 Rockingstone junction, Yorkshire

## Supporting connected and autonomous vehicles

During 2018-19, we will progress with the A2/M2 connected corridor, working in collaboration with the DfT, Transport for London and Kent County Council. This is part of the Interoperable Corridors (InterCor) project where the UK are partners with the Netherlands, France and Belgium. The project aims to enable vehicles and related road infrastructure to communicate data through cellular networks and ITS-G5 networks on road corridors running through the UK, the Netherlands, Belgium, and France. The goal is to achieve safer, more efficient and more convenient mobility of people and goods.

As part of the UK's commitment to InterCor, we are delivering an international connected vehicle testing event in 2018-19. The event aims to show that standards can be developed for connected vehicles to receive messages from roadside wireless communications systems whilst travelling across international boundaries. This is vital for giving industry confidence to invest in the associated in-vehicle communications systems. The event will take place in a controlled testing environment and will not affect day-to-day users of the routes.

The wider benefits of connected vehicle technology are dependent on the service offered. As part of the A2/M2 connected corridor, we will test the following services and benefits:

- **In-vehicle signage:** In this trial we will display information that would traditionally be shown on roadside signs, such as speed limits, to drivers on screens inside their vehicles. This will increase safety and, in the longer term, this may eventually allow some roadside infrastructure, such as gantries, to be removed.
- **Green light optimal speed advisory:** In this trial we will advise drivers of the likely time it will take for the traffic light to change from green to red, or vice versa. This will allow the vehicle to display a safe speed to ensure they pass through a series of traffic lights on green. It is hoped that the trial will demonstrate some emission reduction benefits.
- **Roadworks warning:** In this trial we will warn drivers of approaching roadworks through screens inside their vehicles. This will allow drivers to change lanes in advance of the works to improve traffic flow and reduce the chance of vehicles entering the works, increasing safety for road users and road workers.
- **Probe vehicle data:** This service delivers the location and speeds of vehicles to a central control system, which can be used to improve our understanding of traffic flow. A recent study we conducted showed that this data can significantly improve the algorithms for smart motorways to improve their efficiency. A key focus of the trial is to understand the privacy and cyber security requirements for this service to protect our customers' anonymity.



The UK Connected Intelligent Transport Environment is a consortium of industry partners, including Highways England and Coventry City council, brought together to trial connected vehicle technologies on a 40 kilometers route covering the M40/M42/A45/A46 and through the city of Coventry. In 2018-19, we are testing a number of communications technologies, such as wifi and cellular communications, and looking at performance, including how quickly messages can be transmitted into vehicles. The project aims to test how these technologies can improve journey times and reduce traffic congestion, as well as provide safety services through on-board communications.

During 2018-19, we will also work with the DfT and the freight industry to deliver our freight platooning trial. Platooning technology is used to control the position of following vehicles, permitting the group to operate in closer proximity.

In 2018-19, we will provide technical support to the 5G communication technology trial feasibility study.

## Testing additional innovative approaches

In 2018-19, we will consider proportionate technology to support expressways. We also intend to have Stopped Vehicle Detection (SVD) operational on M25 junctions 23-27 and begin testing of alternative SVD solutions to support the procurement strategy for the smart motorway SVD retrofit and roll-out programme.

In 2017-18, we completed our project to install an incident detection testbed in both bores of Southwick Hill Tunnel between Brighton and Worthing on the A27. It comprises roadside infrastructure, an evaluation software system and detectors to evaluate. This will allow us to improve our knowledge of detector performance, and to improve the quality of what we install within our tunnels. It should stimulate the market and develop a continuous improvement cycle of incident detection performance.

## Working with others

In 2018-19, we will:

- establish a new Research and Innovation Panel
- launch our new Innovation Portal, which will enable us to test priorities and run regular innovation challenges and competitions, as well as digitally support us to implement our Innovation, Technology and Research Strategy

By building relationships with small and medium enterprises and universities, we will continue to learn from, and share, best practice.

We have sponsored a PhD research programme which gives us access to experts from academia, providing independent and impartial research and insight.

## Improving signage and roadwork management

We aim to enhance our response to congestion by reviewing and improving the capability of our staff in managing incidents, how we work with the emergency services and the signage along our diversion routes.



A21 Tonbridge to Pembury dualling

In 2018-19, we will:

- improve the information we provide to our customers about congestion, both on our VMS across the SRN and via our online services
- update, improve and embed our standards for diversion routes which are needed when we close the network due to incidents
- develop a standard for diversion routes covering essential planned closures due to roadworks
- improve our roadworks mapping tool, adding designated funds, congestion relief and minor safety improvement fund schemes to identify efficiencies through combining road space or planned works
- where it is considered safe for both our customers and road workers, trial variable speed limits within two sets of roadworks, building on our 55/60mph speed limit trials from last year
- roll out a best practice toolkit for our schemes to deliver improved customer experience of roadworks
- trial improved signage and communication of the benefits of roadworks to improve customers' overall perception

We are progressing with the development of our new delay in roadworks indicator, which we will develop further in 2018-19.

### Enhancing incident management

We aim to clear at least 85% of motorway incidents within one hour. We also continuously aim to improve our performance against Acceptable Journey Time and the Planning Time Index (reliability of journeys).

In 2018-19, we will:

- develop in consultation with stakeholders, a new incident management measure for consideration in future road periods





M1 junctions 23a-25

- revisit and revise our incident management protocols, ensuring they focus at all times on the customer and how we effectively work with partners
- re-energise the Collision, Lead, Evaluate, Act and Reopen (CLEAR) initiative through close liaison with the roads policing lead for the National Police Chiefs Council
- further embed the CLEAR principles within front-line operations through the use of our network of regional CLEAR leads

We will work with our responder partners to reduce the impact of lengthy delays on our customers. We will also focus on how we can make improvements in our incident management response and create the right conditions for better welfare management when our customers become delayed on our network for prolonged periods.

In 2018-19, we will:

- deliver customer insight-driven VMS messages for trapped traffic
- develop revised standards to clarify our roles and responsibilities for mobilising and supporting welfare provision for trapped traffic
- roll out incident management training and pilot welfare provision training
- roll out delay duration and incident type VMS messages

## Improving traffic control centres

We have revised the go-live date of the new information and control system through the Common Highways Agency Rijkswaterstaat Model (CHARM) from September 2018 to Q2 2019-20 due to technical issues. CHARM is a joint initiative between Highways England and the Dutch road authority that will create a single more efficient operating system. This will improve our effectiveness, resilience and ability to deploy our officers more flexibly at particularly busy times or during emergency incidents.

The key deliverables for 2018-19 include:

- the solution design freeze
- field acceptance testing
- contract award for Application Integration and Maintenance Services
- readiness for service review

Following the first successful centre go-live, the application will be rolled out to the rest of our control rooms from 2019-2021.



Night works on the M3

We are continuing to work towards a more free-flowing network, where delays are less likely. Working with our partners, we will look at enhanced incident management to improve how we return the network to normal running and address customer concerns about the impact of roadworks.





# 5. Improving the environment

## Key performance indicator

Delivering better environmental outcomes



Number of Noise Important Areas mitigated



1,150 Important Areas where interventions are used to reduce the noise exposure of the population within the Important Area

Delivering better environmental outcomes



Delivery of improved biodiversity, as set out in Highways England's Biodiversity Plan



Reduction in the net loss of biodiversity by end of the first road period, on an ongoing annual basis

## Indicators that will be used to measure performance:

- Number of air quality pilot studies completed
- Carbon dioxide equivalents (or CO<sub>2</sub>e) in tonnes associated with Highways England's activities
- Carbon dioxide equivalents (or CO<sub>2</sub>e) in tonnes associated with the Supply Chain's activities.
- Number of flooding hotspots and culverts (high risk and very high risk) mitigated
- Number of outfalls and soakaways (high risk and very high) mitigated

For a full table of KPIs, PIs and requirements see **Annex 2**.

## What we plan to deliver in 2018-19

### Investing through our Environment Designated Fund

Our Environment Strategy, published in July 2017, is underpinned by targeted environment actions and Environment Designated Fund projects.

The potential projects in our forward programme for the Environment Designated Fund are at various stages between feasibility, detailed design and construction. The 2018-19 programme is being finalised and includes 66 partnership proposals which are being developed.



We are also developing a broader suite of environmental performance metrics for consideration in RIS2. These focus on three key areas: the natural and built environment; health and wellbeing; and reducing our carbon footprint.

## Improving air quality

Government's plan for tackling roadside nitrogen dioxide concentrations includes a targeted reduction in the impact of emissions from vehicles, and the accelerated transition to cleaner vehicles. This plan places specific obligations on identified local authorities to introduce local measures, and is also clear about government's expectation that we will work with those authorities to support achievement of the plan's objectives.

Our Air Quality Strategy, published in summer 2017, presents our proposed approach to identifying and applying mitigation measures for air quality, with actions identified across policy, planning, monitoring and operational management. The strategy also recognises the need to engage with local authorities, which we have undertaken through the appointment of regional air quality focal points within Highways England. They will own the working relationship with local authorities to further the objective of achieving clean air in the shortest possible time.

We will finalise our conclusions from our ten air quality pilot projects and we will publish our findings in 2018-19. The purpose of the studies, and other research activities, is to identify effective techniques for improving air quality which can then be implemented within other projects and delivery programmes.



Environmental studies near the A14, Huntingdon



Our extensive air quality research programme has focused on finding effective mitigation measures. There is evidence that tall overhanging barriers positioned alongside the road and overhanging part of the carriageway, generally the hard shoulder and lane 1, can provide a benefit. We are now planning a programme to install overhanging barriers (subject to a satisfactory trial), though engineering and environmental constraints may limit the number of locations where they are appropriate. For all sections of the SRN which exceed the air quality limit values, we are maintaining an audit trail of our technical analysis to provide evidence to government of our work to identify location-specific solutions.

Our Air Quality Designated Fund is accepting applications from project teams, local authorities and other delivery partners for proposals that will progress viable solutions to improve air quality.

We will complete and operate our National Air Quality Monitoring Network. This is a network of accurate continuous-analyser air quality monitoring stations, located in the most critical parts of the SRN. This will ensure that we have our own detailed data on the air quality challenge across our network. Validated and verified data will be reported from our monitoring stations annually, starting in 2018-19.

## Reducing our carbon footprint

We aim to make a meaningful contribution to government's target of an 80% reduction in greenhouse gas emissions from 1990s levels by 2050. To this end, we encourage and incentivise our supply chain to seek ways to mitigate the carbon impact of new road design projects.

Likewise, our renewed focus on corporate carbon reduction, particularly from network electricity consumption, is positively contributing to the revised Greening Government targets relating to fuel, gas, electricity, business travel and water consumption.

We also encourage greater compliance with, and review of, our carbon performance measurements, ensuring data provided by our supply chain and from across our business is accurate, timely and comprehensive.

## Supporting electric vehicles

The electrification of vehicles is expected to bring widespread benefits, including improved air quality and reduced carbon emissions.

We will support government's air quality and decarbonisation aims, to support the ultimate goal to end the use of conventional fossil fuel light vehicles on our roads and achieve a zero-emission network. We are working towards meeting our RIS commitment of rolling out charging points for electric vehicles so that our customers are within 20 miles of a charge point on 95% of our network.

We have had very positive responses from local authorities to the opportunity to apply for grants for the installation of electrical vehicle charging points. This is subject to successful applications and determined by gap analysis of appropriate locations within their area.

We will investigate opportunities to switch some of our own fleet to fully electric vehicles as well as investigate solutions for heavy goods vehicles using our network to achieve zero emissions (at the tailpipe).

## Tackling noise

We will continue to address our commitments to noise mitigation and work towards achieving our KPIs through our major projects, renewals and designated fund schemes, including barriers, road resurfacing and insulation. Our noise insulation scheme is currently successfully operating in four out of six of our regions. In 2018-19, we plan to roll out the scheme in the remaining two regions. The project offers noise mitigation to approximately 3,000 properties close to the SRN.

## The Design Panel and the principles of good design

Our Environment Strategy also includes our Design Panel and Good Design Guide. In 2018-19, we are revising our Design Manual for Roads and Bridges and our project management processes to mandate, and monitor, the delivery and impact of our newly-stated design vision and ten principles of good road design.

## Protecting heritage assets

We are collaborating with a broad range of stakeholders, including Historic England, the National Trust, National Parks and our supply chain, to understand and improve any impact our roads have on closely-situated heritage assets – both within our ownership and those in third-party ownership. These include milestones and mileposts, both listed and not, along the network and historic bridges.

In 2018-19, we are developing a data verification process for Cultural Heritage Asset Management Plans and reviewing all data submitted to date.



Electric vehicle charging point





A45 Tollbar End

## Reducing litter

In 2018-19, we will:

- continue to deliver our Litter Strategy and the commitments in the Litter Strategy for England
- install bins at multiple Motorway Service Areas, following our 'drive up to bins' trial, with the opportunity to scale the campaign nationally
- display 'It's no secret what people think of you' anti-littering posters on electronic boards at multiple Motorway Service Area food courts
- participate in Keep Britain Tidy's Great British Spring Clean campaign, using social media and signage to convey that littering is preventable

## Improving water quality and resilience to flooding

We are identifying locations to improve water quality as part of our review of major projects. Work is underway to confirm proposed mitigations for each of these schemes. Outside our major improvement projects, we will progress schemes to improve high-risk outfalls (to surface watercourses) and soakaways (to ground water) through our Environment Designated Fund. Following our 2017-18 review of the fund programme, over 300 proposals were identified for possible delivery (subject to available funding) by 2021. These will be prioritised in line with costs and benefits.

## Enhancing biodiversity

Our Morecambe Bay Nature Improvement Area design and delivery works are ongoing until the end of the first road period as part of the Green Transport Corridor Pilot Partnership Project. Through this biodiversity project, we are trialling different management regimes designed to improve habitat and landscape connectivity along the road corridor and across the wider landscape.

Our Humberhead Levels Nature Improvement Area project is now in the design and delivery phase. We worked on the project's feasibility with Natural England and the Yorkshire Wildlife Trust, and we identified three locations for improvement. Scheme delivery is proposed to start in 2018-19 and will continue through the remainder of the first road period.

We have agreed 40 sites of Special Scientific Interest with Natural England that are a priority for improvement. During 2018-19, we will complete management plans and start the works for most of these locations. Our grassland improvement programme focuses on biodiversity improvements. Teams will roll out the programme and seek more opportunities to meet our target of 3,500 hectares of improved grassland by 2021.

During 2018-19, our new metric for biodiversity will be trialled. Our project teams and supply-chain will be supported so they understand the reporting requirements of the metric and can generate reliable data.

The environment is an important consideration in our network planning and maintenance. We aim to reduce our network's impact on the environment, whilst also seeking opportunities to operate more harmoniously with, and enhance, our surroundings. Our Environment Designated Fund's holistic approach covers human wellbeing, as well as the natural, built and historic environment.





# 6. Accessible and integrated network

## Key performance indicator

Helping cyclists, walkers and other vulnerable users of the network



The number of new and upgraded crossings



N/A – Measure of success is the increase in the number of completed:

- New crossings
- Upgraded crossings

## Indicators that will be used to measure performance:

- Number of vulnerable user casualties (broken down by cyclists, pedestrians, motorcyclists and equestrians)
- Identification and delivery of the annual cycling programme

For a full table of KPIs, PIs and requirements see **Annex 2.**

## What we plan to deliver in 2018-19

### Delivering our cycling and accessibility strategies

We are working with a wide range of stakeholder organisations on cycling, accessibility and integration. Insight provided by these groups allows us to understand our customers' needs and develop our forward programme.

We will develop measures so that we can communicate and demonstrate our progress in delivering our accessibility and cycling strategies. We have worked with stakeholders during 2017-18 to define these and will continue to do so as we finalise and test them in 2018-19.

In 2018-19, we will work with Transport Focus and our stakeholders on the first ever satisfaction survey for cyclists, walkers and equestrians on the SRN to identify what should be undertaken to improve satisfaction across these groups.

We have undertaken staff surveys to better understand our own staff travel choices and how these can be influenced. We have a well-established Cycle to Work scheme to assist staff to purchase bikes, and are supplementing this with a trial pool bike scheme in partnership with Transport for Greater Manchester, giving our local staff the facilities to borrow bikes and safety equipment. We will assess the success of this scheme and consider extending it to our larger offices.

In 2018-19, we will strengthen our relationship with bus and coach companies and develop opportunities to improve the SRN for customers using these services. We will also commission additional work with Transport Focus to understand how we can improve bus and coach users' journey experiences without detrimentally impacting other SRN customers' experiences.

In 2018-19, we will publish our first Accessibility Report. This report will set out progress to date against our accessibility and cycling strategies.

During 2018-19, we will deliver 25 schemes, including:

- **A628 near Flouch, South Yorkshire:** We are improving the road layout to help right-turning vehicles, reinforcing that overtaking is not permitted and providing warning signs, as appropriate.
- **A35 Sea Road South, Bridport:** We are improving cycle ways and crossings in proximity to roundabouts in Bridport and on the A35.

The A46 RAF Newton scheme, funded from our Growth and Housing Fund, will principally deliver benefits for cyclists and other nonmotorised road users. The scheme will create a new pedestrian and cycle bridge across the A46, addressing severance issues arising from our recent dualling of this section of the network.

We have a shared ambition with government to increase the SRN's accessibility, connectivity and integration with cross-modal transport. We also aim to enhance facilities, expand our customers' travel choices and improve their everyday journey experiences. To help us meet these aspirations, we are developing more, safer and better links for pedestrians, cyclists, horse riders and other vulnerable users.





# 7. Delivering performance and efficiency

## Key performance indicator

### Achieving real efficiency



Savings on capital expenditure



Total savings of at least £1.212 billion over the first road period on capital expenditure

### Achieving real efficiency



Delivery Plan progress: progress of work, relative to forecasts set out in the Delivery Plan, and annual updates to that plan, and expectations at the start of the first road period



Meet or exceed forecasts within the Delivery Plan or subsequent annual updates of that plan

## Indicators that will be used to measure performance:

- Cost Performance Indicator and Schedule Performance Index for schemes at Project Control Framework Stage 5 and beyond

For a full table of KPIs, PIs and requirements see **Annex 2.**

## What we plan to deliver in 2018-19

### Focusing on efficiency

Our overall approach is set out in our Capital Efficiency Delivery Plan. We will continue to deploy a series of efficiency levers that will enable best practice to be deployed both geographically and across programmes.

Our in-year efficiency milestone for 2018-19 against our RIS efficiency target is £345 million, which takes the cumulative efficiency milestone to £722 million.

### Adopting new approaches to delivery

During 2018-19, we will look to award the contracts for the Routes to Market procurement approach. This important activity will help deliver efficiency in 2019-20 and set us up for RIS2.



A5-M1 Link

The Routes to Market solution for regional investment entails establishing regional delivery partnerships as part of a framework over a six-year period. Our partnerships will bring us together with technical advisors and large and small scale contractors (Delivery Integration Partners) to design and deliver the works programme. Suppliers will be incentivised to deliver our priorities and measure what matters, and will subsequently be rewarded for outperformance.

We will look to award contracts for Delivery Integration Partners in late 2018-19 and the technical advisors in the first half of 2019-20.

We will also progress with Routes to Market for smart motorways. This will bring significant benefits from long-term thinking and a programmatic approach. We will begin the procurement process for this in late 2018-19.

We continue to make good progress towards meeting our challenging efficiency targets of £1.2 billion by the end of the first road period. We are focused on improving the way we work, continuing to deliver against our programmes and ensuring we have effective monitoring and reporting systems. We are also dedicated to ensuring that we have effective relationships with our suppliers.

## Improving data quality

Throughout 2018-19, we will continue to improve our approach to data management. Our Integrated Asset Management Information Systems will continue to be rolled out into our business. By bringing control over our network assets into these systems, we will be able to better coordinate work with competing priorities and to better manage different asset types, such as pavements, structures, drainage and geotechnical. In 2018-19, the legacy structure system will be replaced. Also during 2018, the drainage and geotechnical systems will be upgraded.

The new National Roads Telecommunications Services 2 (NRTS2) contract commenced in March 2018. This provides the telecommunications connectivity that links our seven Regional Control Centres and the National Traffic Operations Centre to the 30,000 roadside assets (e.g. message signs, signals, cameras etc). In 2018-19, we will manage the transition from NRTS1 to NRTS2.





## 8. People and our company

### What we plan to deliver in 2018-19

#### Supporting skills development

We provide strong employee development opportunities to ensure that our people have the skills, tools and processes to perform well, reach their potential and help us as an organisation meet our strategic objectives. We will further strengthen our recruitment to attract, and retain, a talented workforce with the skills we need.

We are supporting government's goal of creating 30,000 apprenticeships in road and rail by 2020 through the apprentices we engage directly and the requirements we place on our supply chain.

Our own commitment to increasing apprenticeships and the contractual requirements for our supply chain are managed through apprenticeship programmes. For us, these programmes are across every part of our business, particularly focused on early talent in key growth areas. We also upskill and cross-skill existing employees through the apprenticeship programmes.

For our supply chain currently under the Collaborative Delivery Framework, we have a number of National Skills Academies and specific initiatives. Our new procurement approach, Routes to Market, is also being developed with an employment and skills dimension.

We will take a significant step forward in 2018 as, for the first time, our Roads Academy programme will provide development across a complete leadership career pathway. From 2018-19, the following programmes will be running with two entry points per year:

- Step Up to Leadership, our Degree apprenticeship
- Emerging Leaders programme, our Post Graduate Certificate in Leadership in the Roads Sector
- Senior Leaders programme, our Post Graduate Diploma in Leadership in the Roads Sector
- Our Masters in Leadership in the Roads Sector

Our bi-annual masterclasses will continue in 2018-19, open to all alumni and members. Our Steering Group meetings will be held quarterly, attended by supply chain alumni to shape and drive the Academy to address road sector challenges. We will also collate the latest news from across the Academy and the sector in our quarterly newsletter.

#### Delivering our equality objectives

We have a goal to embed equality, diversity and inclusion (EDI) principles into all areas of the business. We put particular emphasis on achieving our supporting objectives for EDI in employment, the supply chain and customer and communities. We will publish a report outlining how we are delivering against this ambition on an annual basis.

## Employment

For 2018-19, our employment objective is to create a more diverse workforce who are managed, developed and led in an inclusive manner. To meet this, we will focus on specific activities, including:

- providing support for people returning from career breaks to increase diversity, particularly for those at mid-to-senior career levels
- undertaking outreach work to attract potential employees, graduates and apprentices from diverse talent pools
- nurturing staff networks, including establishing a Highways England presence at 'Pride' events through our newly launched LGBT+ network
- embedding a four-fold increase in the number of mental health first aiders across the business

## Suppliers

We will continue to collaborate with our suppliers to further embed our EDI objectives and support them to improve their Strategic Alignment Review Tool scores by 15% by 2020. Our supply chain objective is to lead improvements in how all parts of society view and experience the highways sector. Working closely with our supply chain, 2018-19 will see focused activity around the EDI agenda, including:

- increasing visible commitment to EDI through our Suppliers Diversity Forum and expanding engagement with the wider supply chain
- developing our capability through facilitating collaboration, knowledge sharing and support in understanding and delivering the EDI agenda
- measuring progress throughout our contract processes
- rewarding performance through our supplier awards



Driving simulator at  
Highways UK event 2017





Roads Academy 2017

## Customer and communities

Throughout 2018-19, our EDI customer and communities objective is to ensure that we understand and consider the diverse needs of these groups. To meet this, we will focus on specific activities, including:

- improving EDI engagement and interventions
- strengthening our capability by using a network of diversity advocates
- increasing disability awareness and engagement
- supporting the delivery of our Accessibility Plan
- promoting the new Equality Impact Assessment guidance
- developing effective communications with hard to reach or vulnerable groups

## Providing additional services

We perform other services on behalf of the government outside of the RIS. These are governed by protocols under our Framework document and are activities or functions specified by the Secretary of State for Transport. Specific examples of our activity in 2018-19 on these protocols are:

- **Abnormal loads:** We provide the Electronic Service Delivery for Abnormal Loads (ESDAL). ESDAL is a government-funded service that hauliers can use to ensure that they correctly undertake their statutory obligation to notify the police, highways and bridge authorities of abnormal indivisible loads. In 2018-19, we will enhance the ESDAL system to enable our Asset Delivery areas to manage abnormal loads more effectively.

- **National Salt Reserve:** As in previous years, we will manage the National Salt Reserve on behalf of the DfT. Monthly site inspections of all port-stored salt will continue throughout 2018-19, ensuring that the salt is protected from the elements to minimise stock loss.

Despite the cold and snowy weather experienced in the second half of winter 2017-18, there has been no requirement to use salt from the National Salt Reserve. Isolated temporary local supply issues with local authorities have been dealt with under mutual aid arrangements.

- **Severn Bridge Crossing:** The operations, maintenance and toll management for the M4 and M48 Severn River Crossings were transferred to public ownership on 8 January 2018, with Highways England now responsible for management of the crossing. The transfer took effect with minimal impact on customer service and resulted in 175 staff joining Highways England.

We will now operate and maintain these national assets, ensuring continued safety and service performance for the thousands of customers who use them each day, including toll charge collection.

During 2018-19, we will decommission toll management and collection arrangements at the M4 and M48 Severn River Crossings, following the decision to abolish tolls by December 2018. This work includes the safe removal of toll plaza, booth and barrier infrastructure and the start of the main roadworks to deliver free-flowing carriageways into Wales.

We continue to ensure that we have the right people, skills and incentives to deliver our commitments to government, provide an excellent service to our customers and drive further improvements in safety as well as in our network's economic, environmental and community impact. We have an overarching goal to embed EDI in everything we do, with particular emphasis on achieving specific objectives for employment, the supply chain, customer and communities.





## 9. Collaborative relationships

### What we plan to deliver in 2018-19

#### Working collaboratively

During 2018-19, we will work with Transport Focus to consider the viability of a pilot survey to understand customer requirements, current experiences and the planning and signage needs for roadside facilities on trunk roads.

In 2018-19, our Strategic Planning Advisory Panel is due to meet three times to develop a programme of work to gather views and inform our strategic plans. This panel is comprised of key national stakeholders from across England. It provides strategic planning to support our role in facilitating economic growth and advises on issues affecting local government and communities.

### Developing a smart motorways training package

We have worked in partnership with the Freight Transport Association to develop a training package for the haulage industry, creating a Driver Certificate of Professional Competence accreditation, the equivalent of National Vocational Qualification Level 2. The aim is to improve the understanding of smart motorways amongst professional drivers, shape driver behaviour and support compliance, increasing safety overall.

For 2018-19, the objective is to increase the number of partners delivering the training package and make it more widely available to the industry. We will also work with breakdown companies to refine the package so that training can be rolled out to their respective training teams.



Traffic officer,  
Regional Control Centre

## Working in partnership with local authorities

Through our work with local authority stakeholders over the past year, we have developed our relationships with local highways authorities to build collaboration and improve value and delivery times. We have secured agreements with a number of combined and local authorities that will enable us to deliver improved services.

These agreements are varied and include shared use of VMS to better inform our customers, how we will plan roadworks to improve end-to-end customer experience and responsibilities for emergency diversion routes. We plan to have a further seven agreements in place by the end of 2018-19.

## Working with the supply chain

During 2018-19, we will continue working towards achieving our quarterly publication of our Procurement Plan, which will include all purchasing categories to ensure we provide forward visibility to our entire supply chain.

Within the collaborative performance framework, there are metrics specifically designed to gather intelligence on our supplier's performance in delivering

efficiencies. Throughout 2018-19, quarterly updates are required to be submitted for assessment.

During 2018-19, we will work with our university and technology partners to further improve the Rapid Engineering Model for the smart motorways programme. These further developments to the model will enable us to produce a design, base schedule and cost plan for smart motorway schemes more efficiently. We will deliver improvements including the further development and use of drones in survey applications and the production methods and off-site manufacture of precast products. With the surveys, we are able to increase data accuracy and deliver the data faster and safer as we have fewer, if any operatives, near live traffic.

Through focusing on priority value chain opportunities, we will highlight future operating models, make-or-buy options, different and better delivery vehicles and the skills and capability requirements for the longer term. This supports the work of the Collaboration Board and Engagement Council (joint company/supply chain forums) and will lead to the development of value chain plans that are scheduled for implementation during 2018-19, creating better value in specific areas of investment.

**Strong and mutually beneficial relationships – with our supply chain, strategic partners and stakeholders – are critical to our success. We will continue to listen to our customers to better understand their needs.**





## 10. Changes we have made

### Changes to business commitments

#### Changes to the major improvements programme

Item	Reason for change	Changes from Delivery Plan Update
<b>A303 Amesbury to Berwick Down</b>	Change of procurement arrangements to Private Finance, requiring greater time before works could start.	Start of works (SoW) is deferred from 2019-20 to 2021-22
<b>A428 Black Cat to Caxton Gibbet</b>	Additional time required to consider the findings of the A1 Strategic Study, resulting in a delay to the programme.	SoW is deferred from 2019-20 (RP1) to RP2
<b>A38 Derby junctions</b>	Additional time required to review options and concerns raised by stakeholders in advance of taking forward a preferred route.	Change to the delivery plan commitments: SoW date from 2019-20 to 2020-21; open for traffic (OfT) date from 2022-23 to 2024-25
<b>A63 Castle Street</b>	Due to the complexities of the scheme and the need to ensure that details are developed sufficiently for a robust Development Consent Order application, the programme has been extended.	Change to the delivery plan commitments: SoW date from 2018-19 to 2019-20; OfT date from 2021-22 to 2024-25
<b>M60 junction 8 to M62 junction 20</b>	Issues encountered during construction have resulted in delays to the programme.	Rescheduled OfT to 2018-19

## Changes to business commitments

Other changes

Change	Reason for change	Changes from Delivery Plan Update
<b>Common Highways Agency Rijkswaterstaat Model project</b>	Due to complexities in delivering the solution in our business and technical environments, this is now expected to go-live in the first centre by Q2 2019-20.	Changes from Highways England Delivery Plan Update 2017-18
<b>Strategic Road Network Initial Report</b>	The Strategic Road Network Initial Report was published in December 2017 rather than the expected November 2017.	Changes from Highways England Delivery Plan Update 2017-18
<b>Collision Recording And Sharing system</b>	It had been anticipated that the DfT would report in autumn 2017 following research on the impact of this system. The DfT now aim to report in autumn 2018.	Changes from Highways England Delivery Plan Update 2017-18
<b>Delay in roadworks indicator</b>	This indicator was not able to be tested in 2017-18 due to a transition to the new roadworks scheduling system.	Changes from Highways England Delivery Plan Update 2017-18

Our aim is to deliver the outcomes and outputs defined in the RIS. In a number of cases, we have redefined or amended our approach. This has been necessary for different reasons, such as changes in scope or complexity which have impacted on project delivery timescales or because we believe we need to change the project deliverables to do the right thing for our customers and stakeholders.





# 11. Planning for the future

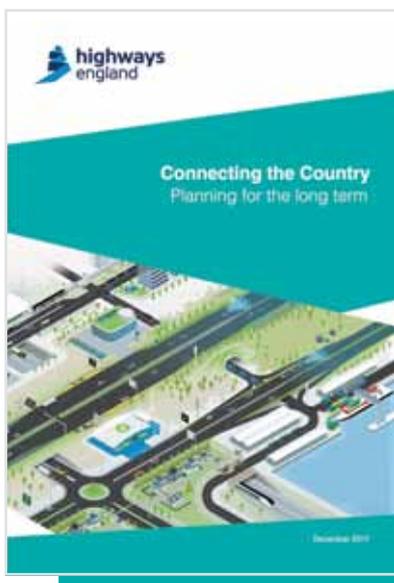
For the first time, Highways England and our partners, the DfT, the Office of Rail and Road and Transport Focus, are undertaking a full five-year strategic planning cycle to understand the pressures on, and opportunities for, the SRN, which will result in the definition of our future road programme for the second road period (2020-2025).

The DfT will publish its feedback to the consultation in spring 2018 and they will use this to inform RIS2. Over the course of 2018-19, we will develop our Strategic Business Plan, setting out how we intend to deliver our commitments between 2020 and 2025. This will be subject to an efficiency review by the Office of Rail and Road. The DfT's final RIS2 is expected to be published in summer 2019 and our final Strategic Business Plan

in autumn 2019, although firm dates have yet to be agreed. We will work closely with government to support the development of RIS2 and to incorporate learnings from the RIS, as well as insights and practical next steps, into planning for the second road period.

Our 2020 Organisational Plan describes in detail how we intend to develop the skills and capabilities we will need to deliver RIS2. This includes recruiting and training our existing staff in, for example, project management.

Once RIS2 and our Strategic Business Plan have been finalised, we will move into the mobilisation phase. We will publish a Delivery Plan for the second road period, setting out the detail of how the priorities identified will be delivered between 2020 and 2025.



Connecting the Country  
Planning for the long term



Strategic Road Network  
Initial Report



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# Annex 1: Major improvement projects

## Updated scheme schedule 2015-2020

Map Ref	Scheme	Region	Programme			
			Start of works		Open for traffic	
			Commit	Status	Commit	Status
1	A556 Knutsford to Bowdon	North West		Complete	2016-17 Q4	Complete
2	A1 Coal House to Metro Centre	North East and Yorkshire		Complete	2016-17 Q1	Complete
3	A1 Leeming to Barton	North East and Yorkshire		Complete	2017-18 Q1	Complete
4	M1 junctions 28-31	Midlands		Complete	2015-16 Q4	Complete
5	A453 widening	Midlands		Complete	2015-16 Q2	Complete
6	A14 Kettering bypass widening	Midlands		Complete	2015-16 Q1	Complete
7	M1 junction 19 improvement	Midlands		Complete	2016-17 Q3	Complete
8	A45-A46 Tollbar End	Midlands		Complete	2016-17 Q3	Complete
9	A5/M1 junction 11a link	East		Complete	2017-18 Q1	Complete
10	M25 junction 30	South East and London		Complete	2017-18 Q1	Complete
11	M6 junctions 10a-13	Midlands		Complete	2015-16 Q3	Complete
12	A30 Temple to Carblake	South West		Complete	2016-17 Q3	Complete
13	M1 junctions 32-35a	North East and Yorkshire		Complete	2016-17 Q4	Complete
14	M1 junctions 39-42	North East and Yorkshire		Complete	2015-16 Q3	Complete
15	M60 junction 8 to M62 junction 20: smart motorway <sup>21</sup>	North West		Started	2017-18 Q2	See footnote
16	M3 junctions 2-4a	South East and London		Complete	2017-18 Q1	Complete
17	A160/A180 Immingham	North East and Yorkshire	2015-16 Q1	Complete	2016-17 Q4	Complete
18	A21 Tonbridge to Pembury	South East and London	2015-16 Q1	Complete	2016-17 Q4	Complete
19	M1 junctions 13-19	Midlands	2015-16 Q3	Started	2021-22	
20	M5 junctions 4a-6	Midlands	2015-16 Q3	Complete	2017-18 Q2	Complete
21	M6 junctions 16-19	North West	2015-16 Q3	Started	2018-19 Q4	
22	A14 Cambridge to Huntingdon	East	2016-17 Q3	Started	2020-21	
23	M20 junction 10a	South East and London	2017-18 Q4	Started	2018-19 Q4	
24	A19/A1058 Coast Road	North East and Yorkshire	2016-17 Q2	Started	2018-19 Q4	
25	M4 junctions 3-12	South East and London	2016-17 Q4	Started	2021-22	
26	A63 Castle Street <sup>22</sup>	North East and Yorkshire	2019-20		2024-25	
27	M1 junctions 24-25	Midlands	2016-17 Q4	Started	2018-19 Q3	
28	M6 junctions 2-4	Midlands	2017-18 Q4	Started	2019-20	
29	M6 junctions 13-15	Midlands	2017-18 Q4	Started	2021-22	
30	M20 junctions 3-5	South East and London	2017-18 Q4	Started	2019-20	
31	M23 junctions 8-10	South East and London	2017-18 Q4	Started	2019-20	
32	M27 junctions 4-11	South East and London	2018-19 Q3		2020-21	
33	M6 junctions 21a-26	North West	2018-19 Q4		2021-22	
34	M60 junctions 24-27 and junctions 1-4	North West	2020-21		2022-23	

<sup>21</sup>The construction programme has been extended to carry out additional work on the existing asset for flood mitigation, pavement resurfacing, environmental barriers and data cabling, and to manage construction delays. We now expect to open for traffic in 2018-19. This avoids the need for repeated access on this section of the network.

<sup>22</sup>The delivery programme for this complex scheme has been modified to accommodate the time taken to develop the detail required for a robust Development Consent Order that meets the needs of local stakeholders.

## Updated scheme schedule 2015-2020

Map Ref	Scheme	Region	Programme			
			Start of works		Open for traffic	
			Commit	Status	Commit	Status
35	A19 Testos	North East and Yorkshire	2018-19 Q4		2020-21	
36	M54 to M6/M6 toll <sup>23</sup>	Midlands	RP2			
37	A27 Chichester bypass <sup>24</sup>	South East and London				
38	A38 Derby junctions <sup>25</sup>	Midlands	2020-21		2024-25	
39	A2 Bean and Ebbsfleet	South East and London	2019-20		2022-23	
40	M62 junctions 10-12	North West	2017-18 Q4	Started	2019-20	
41	M56 junctions 6-8	North West	2018-19 Q4		2020-21	
42	M3 junctions 9-14	South East and London	2019-20		2021-22	
43	A19 Down Hill Lane junction improvement	North East and Yorkshire	2019-20			
44	A19 Norton to Wynyard	North East and Yorkshire	2019-20			
45	A1 and A19 technology enhancements <sup>26</sup>	North East and Yorkshire				
46	M1 junction 45 improvement	North East and Yorkshire	2019-20	Complete	2017-18 Q4	Complete
47	M621 junctions 1-7 improvements	North East and Yorkshire	2019-20			
48	M62/M606 Chain Bar <sup>27</sup>	North East and Yorkshire				
49	M62 junctions 20-25	North East and Yorkshire	2019-20			
50	A585 Windy Harbour – Skippool	North West	2019-20			
51	A5036 Princess Way – access to Port of Liverpool	North West	2019-20			
52	M6 junction 22 upgrade	North West	2019-20			
53	M53 junctions 5-11 <sup>28</sup>	North West				
54	M56 new junction 11a	North West	2019-20			
55	M6 junction 19 improvements	North West	2019-20			
56	A500 Etruria widening	Midlands	2018-19 Q4			
57	M1 junctions 23a-24	Midlands	2019-20	Started	2018-19 Q3	
58	M6 junction 10 improvement	Midlands	2019-20			
59	A5 Dodwells to Longshoot widening	Midlands	2020-21			
60	M42 junction 6	Midlands	2019-20			
61	A46 Coventry junction upgrades	Midlands	2019-20			
62	M40/M42 interchange smart motorways	Midlands	2019-20			
63	A45/A6 Chowns Mill junction improvement	Midlands	2019-20			
64	M5 junctions 5,6 and 7 junction upgrades	Midlands	2019-20	Started	2018-19 Q4	
65	A43 Abthorpe junction	Midlands	2019-20	Complete	2017-18 Q1	Complete

<sup>23</sup> Changes to the scheme being progressed.

<sup>24</sup> Following review of public consultation responses from residents, local authorities and Members of Parliament, the scheme has been cancelled as there was no clear consensus on the preferred option solution.

<sup>25</sup> The preferred route announcement for the scheme was paused at the request of the DfT to look at further options to achieve agreement between stakeholders. As a result, the start of works is rescheduled into the second road period.

<sup>26, 27, 28</sup> The scheme has been assessed as providing low value for money and we will reconsider scheduling this scheme as part of future road investment planning.



## Updated scheme schedule 2015-2020

Map Ref	Scheme	Region	Programme			
			Start of works		Open for traffic	
			Commit	Status	Commit	Status
66	A428 Black Cat to Caxton Gibbet <sup>29</sup>	East	RP2			
67	M11 junctions 8-14 – technology upgrade <sup>30</sup>	East				
68	A12 Chelmsford to A120 widening <sup>31</sup>	East	RP2			
69	A12 whole-route technology upgrade <sup>32</sup>	East				
70	A1(M) junctions 6-8 smart motorway	East	2019-20			
71	M11 junction 7a – junction upgrade	East	2019-20			
72	A34 Oxford junctions	South East and London	2019-20			
73	A34 technology enhancements	South East and London	2019-20			
74	M25 junction 25 improvement	South East and London	2020-21			
75	M25 junction 28 improvement	South East and London	2021-22			
76	M4 Heathrow slip road	South East and London	2017-18 Q2	Complete	2017-18 Q4	Complete
77	M2 junction 5 improvements	South East and London	2019-20			
78	M25 junctions 10-16	South East and London	2020-21			
79	M25 junction 10/A3 Wisley interchange	South East and London	2020-21			
80	M3 junction 9 improvement	South East and London	2021-22			
81	M3 junction 10-11 improved sliproads	South East and London	2019-20			
82	M3 junctions 12-14 improved sliproads	South East and London	2019-20			
83	M27 Southampton junctions	South East and London	2019-20			
84	M271/A35 Redbridge roundabout upgrade	South East and London	2019-20			
85	A31 Ringwood	South East and London	2020-21			
86	M49 Avonmouth junction	South West	2019-20	Started	2020-21	
87	M5 Bridgwater junctions <sup>33</sup>	South West	2020-21			
88	A52 Nottingham junctions	Midlands	2019-20	Started	2023-24	
89	A14 junction 10a <sup>34</sup>	Midlands				
90	A5 Towcester relief road	Midlands	2019-20			
91	A30 Chiverton to Carland Cross	South West	2019-20			
92	A1 North of Ellingham	North East and Yorkshire	2019-20			
93	A1 Morpeth to Ellingham dualling	North East and Yorkshire	2019-20			
94	A1 Scotswood to North Brunton	North East and Yorkshire	2019-20			
95	A1 Birtley to Coal House widening	North East and Yorkshire	2020-21			

<sup>29</sup>The development of the scheme has been rescheduled to ensure that full consideration of the impact of the A1 strategic study is taken into account prior to committing to a preferred route.

<sup>30,32,34</sup>The scheme has been assessed as providing low value for money and we will reconsider scheduling this scheme as part of future road investment planning.

<sup>31</sup>Progress to the preferred route announcement has been rescheduled, to enable us to develop a delivery solution that aligns with the proposed development at Marks Tey.

<sup>33</sup>Work is progressing during the first road period to develop options that are aligned with local stakeholder needs and will be included in the RIS2 planning prioritisation process.

## Updated scheme schedule 2015-2020

Map Ref	Scheme	Region	Programme			
			Start of works		Open for traffic	
			Commit	Status	Commit	Status
96	A628 climbing lanes <sup>35</sup>	North East and Yorkshire	2019-20			
97	A61 dualling <sup>36</sup>	North East and Yorkshire	2019-20			
98	Mottram Moor link road	North West	2019-20			
99	A57(T) to A57 link road	North West	2019-20			
100	A47 North Tuddenham to Easton	East	2021-22			
101	A47 Blofield to North Burlingham dualling	East	2021-22			
102	A47 Acle Straight	East	2019-20	Complete	2017-18 Q4	Complete
103	A47 and A12 junction enhancements	East	2018-19 Q4			
104	A47/A11 Thickthorn junction	East	2020-21			
105	A47 Guyhirn junction	East	2020-21			
106	A47 Wansford to Sutton	East	2020-21			
107	A27 Arundel bypass	South East and London	2019-20			
108	A27 Worthing and Lancing improvements	South East and London	2019-20			
109	A303 Amesbury to Berwick Down <sup>37</sup>	South West	2021-22			
110	A303 Sparkford – Ilchester dualling	South West	2019-20			
111	A358 Taunton to Southfields	South West	2019-20			
112	A50 Uttoxeter (Project A) <sup>38</sup>	Midlands	2015-16 Q3	Started	2018-19 Q4	

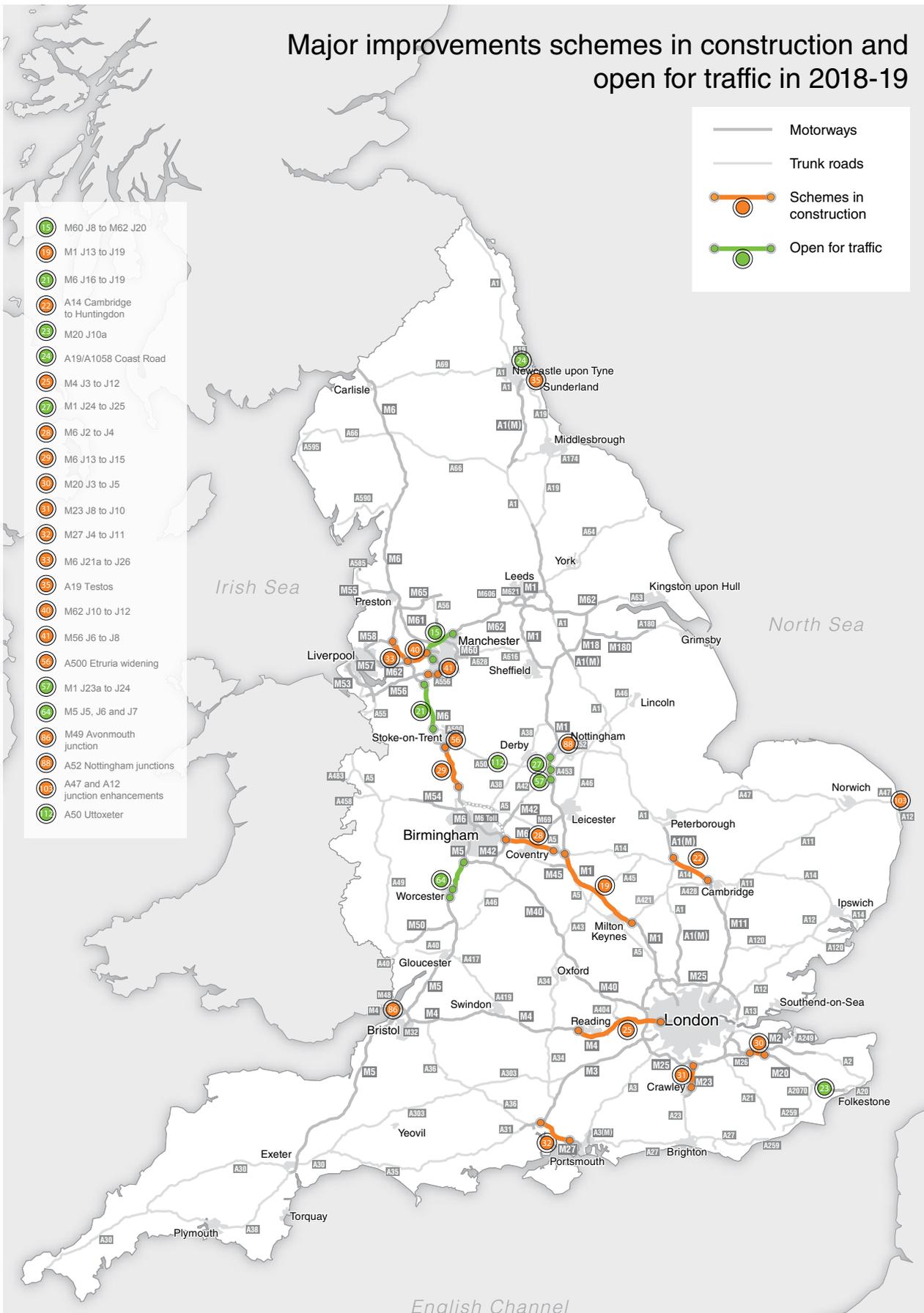
<sup>35</sup> Changes to the scheme being progressed.

<sup>37</sup> The DfT have confirmed that the project will be privately financed and will be scheduled for delivery in the second road period to manage this change in funding strategy.

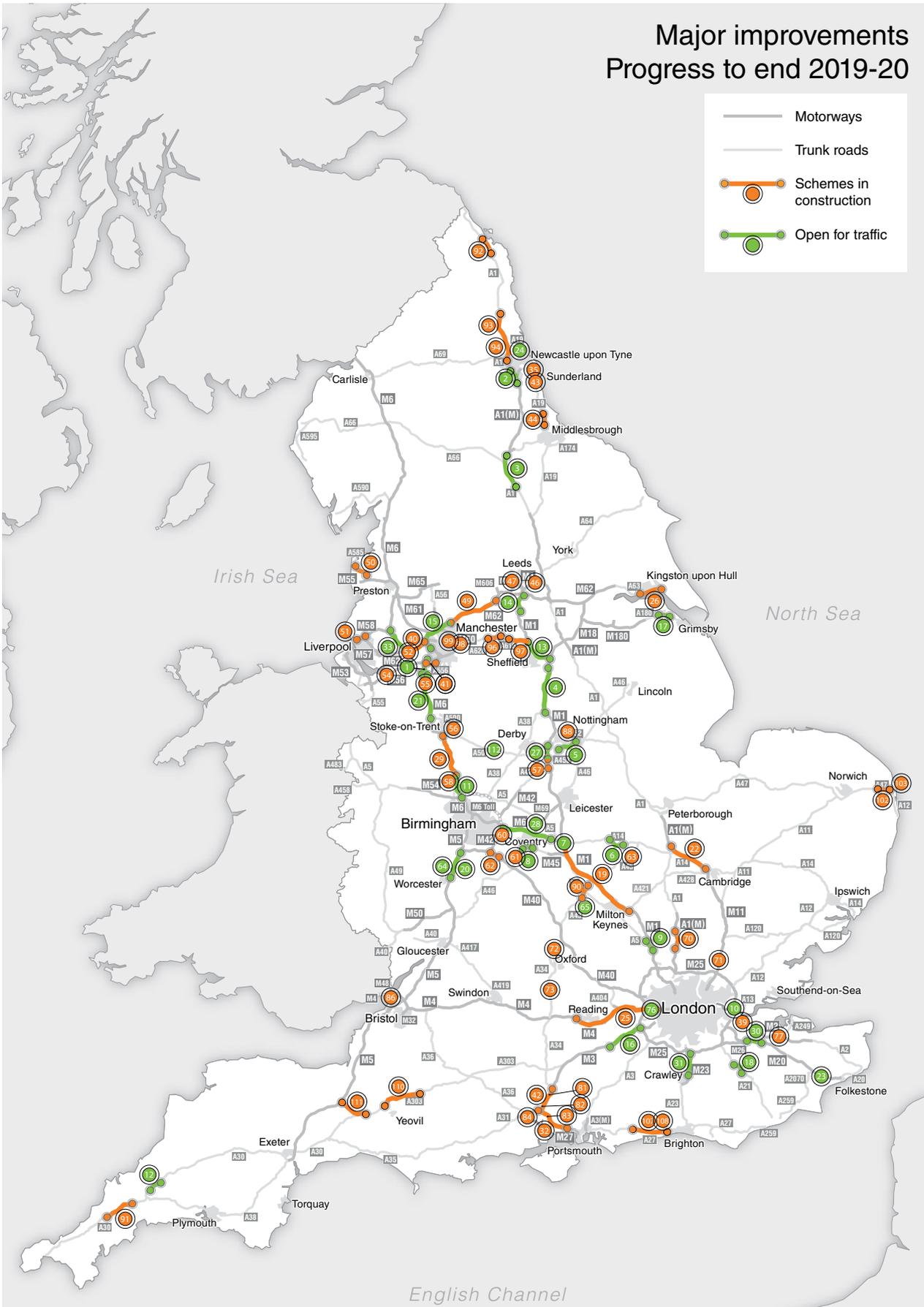
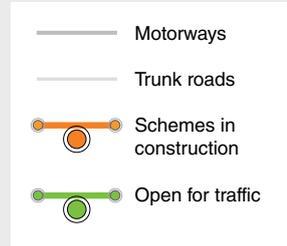
<sup>38</sup> This scheme is being delivered in a phased approach, with the first phase (Project A) currently under construction and for delivery in the first road period. We are progressing development of Project B, which is scheduled for delivery in the second road period, subject to the RIS2 prioritisation process.



# Major improvements schemes in construction and open for traffic in 2018-19



# Major improvements Progress to end 2019-20



A vertical sidebar on the right side of the page contains a series of white icons on a blue background. From top to bottom, the icons represent: a speech bubble, a person wearing a hard hat, a bar chart with an upward arrow, a curved arrow, a tree, a steering wheel, a calendar, a building with people, a handshake, a circular arrow, a road with an arrow, a location pin, a magnifying glass, a calendar, and a hamburger menu icon.



# Annex 2: Key performance indicators and performance indicators

As set out in January 2018 Operational Metrics Manual			
Topic	Performance specification	Measure	KPI target
Encouraging economic growth	KPI	Average delay (time lost per vehicle per mile).	The government did not set a target for this measure in the first road period, but Highways England should act in a way that will minimise delay as far as possible.
	PI	The percentage of formal planning applications responded to within 21 days of receipt by Highways England.	99% of formal planning applications should be responded to within 21 days.
	PI	Average delay (time lost per vehicle per mile) on gateway routes.	No target
	PI	Meet the government target of 25% small and medium sized enterprise direct and indirect spend.	N/A
	Requirement	Highways England should report on average delay.	N/A
	Requirement	Actively support the Construction 2025 goals.	N/A
	Requirement	Deliver the Roads Academy programme across the industry.	N/A
	Requirement	Develop Highways England's approach to innovation, technology and research, and agree an implementation plan by 31 March 2016.	N/A
Making the network safer	Requirement	Through route strategies identify constraints to economic growth that the performance of the SRN could help to alleviate and identify how future delivery and investment plans might address them.	N/A
	KPI	The number of KSIs on the SRN.	A reduction in the number of KSIs from the baseline figure of 2,321 to 1,393 by 31 December 2020. A +/- variance of 5% each year has been agreed with the DfT Road User Safety Division to support this target.
	PI	Incident numbers and contributory factors for motorways: a) Incident numbers for motorways b) Casualty numbers and contributory factors on motorways	a) To report on incident numbers b) To report the number of casualties on the motorway network which will contribute to the KPI target of a 40% reduction in KSI casualties on the SRN by 2020
	PI	Casualty numbers and contributory factors for all-purpose trunk roads (APTRs).	To report the number of casualties on the APTR network which will contribute to the KPI target of a 40% reduction in KSI casualties on the SRN by 2020.
	PI	International Road Assessment Programme based road safety investigations, developed in conjunction with the DfT, to feed into subsequent route strategies.	90% of travel on the SRN will be on roads with a safety rating of EuroRAP 3* (or equivalent to a new Highways England star rating system) by the end of 2020.
	PI	Accident Frequency Rate for construction and maintenance workers, and for Operations.	N/A

As set out in January 2018 Operational Metrics Manual			
Topic	Performance specification	Measure	KPI target
Keeping the network in good condition	KPI	The percentage of pavement/road surface asset that does not require further investigation for possible maintenance.	The percentage of the network (as defined by HAPMS, excluding DBFOs) requiring no further investigation to be maintained at 95% or above.
	PI	Geotechnical asset inventory and asset condition.	N/A
	PI	Drainage asset – inventory and condition data coverage.	N/A
	PI	Technology asset availability.	N/A
	PI	Structure asset – inventory and condition.	N/A
	Requirement	Produce an implementation plan, by 31 March 2016, to show how Highways England will improve asset information quality over the first road period.	N/A
	Requirement	Develop new condition indicators for pavements/road surface and structures for agreement by 31 March 2017 and complete validation for these by 31 March 2019.	N/A
	Requirement	Develop new condition indicators for technology, drainage, and geotechnical works for agreement by 31 March 2018 and complete validation for these by 31 March 2020.	
Improving user satisfaction	KPI	The percentage of NRUSS respondents who are very or fairly satisfied.	Achieve a score of 90% by 31 March 2017, using a cumulative score over a 12 month period, and then maintain or improve.
	PI	The percentage of NRUSS respondents who are <i>very</i> or <i>fairly satisfied</i> with: journey time; information and signs; management of roadworks; feeling safe; upkeep.	N/A
	Requirement	Demonstrate what activities have been undertaken, and how effective they have been, to maintain and improve user satisfaction.	N/A
	Requirement	Support the Watchdog as it develops replacements for the NRUSS.	N/A

 KPI	 PI	 Requirement
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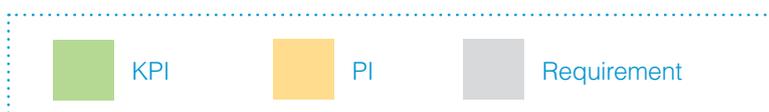


## As set out in January 2018 Operational Metrics Manual

Topic	Performance specification	Measure	KPI target
Supporting the smooth flow of traffic	KPI	The percentage of the SRN available to traffic.	Maximise lane availability so that it does not fall below 97% in any one rolling year. For the avoidance of doubt this means that short-term spikes in lane use for works are permitted both from month to month, and from one part of the network to another. The target applies to an all-network rolling year average, calculated each month using data from the preceding rolling year.
	KPI	The percentage of motorway incidents cleared within 1 hour.	In any one rolling year, maintain performance of at least 85% of all motorway lane impact closures between 06:00 and 22:00 being cleared within 1 hour.
	PI	Planning time index (reliability of journeys).	No target
	PI	Traffic (vehicle miles travelled) on the SRN.	No target
	PI	Acceptable journeys.	No target
	PI	Average speed.	No target
	Requirement	Report annually on how Highways England has minimised inconvenience to road users through roadworks over the previous year.	N/A
	Requirement	Demonstrate that Highways England is working effectively with its partners to improve incident response.	N/A
Delivery of better environmental outcomes	KPI	Number of Noise Important Areas mitigated.	1,150 Important Areas where interventions are used to reduce the noise exposure of the population within the Important Area.
	KPI	Delivery of improved biodiversity, as set out in Highways England's Biodiversity Plan.	Reduction in the net loss of biodiversity by end of the first road period, on an ongoing annual basis.
	PI	Number of air quality pilot studies completed.	N/A
	PI	Carbon dioxide equivalents (or CO <sub>2</sub> e) in tonnes associated with Highways England's activities.	N/A
	PI	Carbon dioxide equivalents (or CO <sub>2</sub> e) in tonnes associated with the Supply Chain's activities.	N/A
	PI	The number of flooding hotspots and culverts (high risk and very high risk) mitigated.	N/A
	PI	The number of outfalls and soakaways (high risk and very high) mitigated.	N/A
	Requirement	Demonstrate what activities have been undertaken, and how effective they have been, to improve environmental outcomes.	N/A
Requirement	Highways England should develop metrics covering broader environmental performance. These should include: a) a new or improved biodiversity metric b) carbon dioxide, and other greenhouse gas emissions arising from the use of the network.	N/A	

As set out in January 2018 Operational Metrics Manual			
Topic	Performance specification	Measure	KPI target
Helping cyclists, walkers and other vulnerable users	KPI	The number of new and upgraded crossings.	N/A – measure of success is the increase in the number of completed: a) new crossings b) upgraded crossings
	PI	Number of vulnerable user casualties (broken down by cyclists, pedestrians, motorcyclists and equestrians).	To report on the number of vulnerable user casualties on the SRN.
	PI	Identification and delivery of the annual cycling programme.	N/A
	Requirement	Report annually on the number of new and upgraded crossings.	N/A
	Requirement	New indicators which demonstrate improved facilities for cyclists, walkers and other vulnerable users.	N/A
	Requirement	Report on how Highways England is delivering against the Public Sector Equality Duty.	N/A
Achieving real efficiency	KPI	Savings on capital expenditure.	£1.212bn
	KPI	Delivery Plan progress: progress of work, relative to forecasts set out in the Delivery Plan, and annual updates to that plan, and expectations at the start of the first road period.	Meet or exceed forecasts within the Delivery Plan or subsequent 'annual updates' of that plan.
	PI	Cost Performance Indicator and Schedule Performance Index for schemes at Project Control Framework stage 5 and beyond.	N/A
	Requirement	Demonstrate on an annual basis how efficiencies have been achieved.	N/A

This table sets out Highways England's planned activities in response to the KPIs, PIs and requirements as specified by government in the Road Investment Strategy.





## Annex 3: Funding table

£m	2015-16	2016-17	2017-18	2018-19	2019-20	Period 1
<b>Capital plans</b>						
<b>Modernise/enhance</b>						
SR10 & SR13 schemes	1,022	1,229	1,031	1,471	1,516	6,269
RIS schemes	20	70	120	165	292	667
Feasibility studies	4	36	44	63	123	270
Air Quality	-	5	18	19	33	75
Cycling, Safety & Integration	17	16	50	32	60	175
Environment	6	12	69	42	96	225
Innovation Fund	4	20	28	25	43	120
Supporting Growth schemes	-	5	23	19	33	80
<b>Sub total</b>	<b>1,073</b>	<b>1,393</b>	<b>1,383</b>	<b>1,836</b>	<b>2,196</b>	<b>7,881</b>
<b>Maintain/renew</b>						
Renewals	709	595	788	761	805	3,658
<b>Other</b>						
Non-RIS delivery	149	43	115	-	75	382
Autumn Statement 2016	-	-	111	111	45	267
<b>Total capital</b>	<b>1,931</b>	<b>2,031</b>	<b>2,397</b>	<b>2,708</b>	<b>3,121</b>	<b>12,188</b>

The total capital funding across the 5-year period is as per the Statement of Funds Available in the RIS with the following additions which have passed through formal change control:

- £140m provided in 2015-16 to complete delivery of small improvement schemes which were not funded in the RIS
- £8m provided to repair damage as a result of the Cumbria Flooding (in 2015-16)
- £161m for the acceleration of improvements to upgrade sections of the M62 to a four lane smart motorway
- £234m made available for the implementation of a solution for Operation Stack (M20)
- £267m of additional funding announced in the Autumn Statement 2016 (shown separately)
- £28m for the reclassification of Research & Development from resource to capital to be consistent with government budgeting rules applicable from 2016-17 onwards

The funding made available for the implementation of a solution for Operation Stack is subject to further change which has yet to pass through formal change control (which has not been reflected). Within the figures there is an assumption that some funding may need to be flexed between years to smooth the programme (in years 4 to 5).

<b>Resource/operational</b>						
<b>Operate the network</b>						
Operations	253	195	175	237	243	1,103
PFI contracts	394	416	429	413	420	2,072
Maintenance & renewals	279	254	256	257	263	1,309
<b>Sub total</b>	<b>926</b>	<b>865</b>	<b>860</b>	<b>907</b>	<b>926</b>	<b>4,484</b>
Support	107	143	158	105	107	620
Protocols	39	40	56	63	63	261
Autumn Statement 2016	-	-	6	11	10	27
<b>Total resource/operational</b>	<b>1,072</b>	<b>1,048</b>	<b>1,080</b>	<b>1,086</b>	<b>1,106</b>	<b>5,392</b>

The total resource funding across the 5-year period reflects the outcome from the 2015 Spending Review with the following additions which have passed through formal change control:

- £27m additional funds made available as part of the Autumn Statement 2016
- £28m reduction for the reclassification of Research & Development from resource to capital to be consistent with government budgeting rules applicable from 2016-17 onwards

The resource funding includes additional funds under the Severn River Crossing Protocol. This change reflects the new arrangements following the end of the concession which is subject to formal change control.



# Annex 4: Glossary

All lane running	A type of a road design where there is no dedicated hard shoulder. CCTV cameras and variable message signs are used to regulate speed and close lanes in the event of an incident or congestion
CHARM	Common Highways Agency Rijkswaterstaat Model project
CLEAR	Collision, Lead, Evaluate, Act and Reopen initiative
Designated funds	The government has created a series of designated funds, to address a range of issues over and above the traditional focus of road investment, including: growth and housing, innovation, environment, air quality, and cycling, safety and integration
DfT	Department for Transport
EDI	Equality, Diversity and Inclusion
ESDAL	Electronic Service Delivery for Abnormal Loads
InterCor	Interoperable Corridors project
KPI	Key performance indicator - a key metric used to define and measure progress towards organisational objectives
NRTS2	National Roads Telecommunications Services 2
Office of Rail and Road	Highways England monitor
OFT	Open for traffic
PI	Performance indicator - a metric used to define and measure progress toward organisational objectives
RIS	Road Investment Strategy (2015-2020)
RIS2	Second Road Investment Strategy (2020-2025)
RP1	Road period 1 (2015-2020)
RP2	Road period 2 (2020-2025)
SoW	Start of works
SRN	Strategic Road Network
SVD	Stopped Vehicle Detection
Transport Focus	The 'watchdog' responsible for gathering the views of SRN users and using them to shape policy and decision-making
VMS	Variable Message Signs



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