

Highways England Delivery Plan 2019-2020





Highways England

Delivery Plan

2019-2020

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Foreword



Highways England is now four years old and during that time we have made real progress in our work to plan, improve, manage, operate and maintain England's strategic road network. I am particularly proud of the achievements we have made in our three imperatives: making our roads safer, improving our service to road users and delivering the Road Investment Strategy.

We have made significant investment across the network, opening 48 schemes since we began operations. This includes major improvement projects as well as schemes from our Growth and Housing Fund and Safety and Congestion Relief Programme. These schemes have provided motorists with faster and more reliable journeys by eliminating a total of 134 million hours of delay every year.

During 2018-19, we completed seven major schemes that will further improve motorists' journeys by adding around 60 lane miles of additional capacity to our network. These include:

- M60 junction 8 to M62 junction 20 smart motorway¹⁵

- A50 Uttoxeter (Project A)¹¹²
- M1 junctions 23a-24⁵⁷
- M1 junctions 24-25²⁷
- M6 junctions 16-19²¹
- A19/A1058 Coast Road²⁴
- M5 junctions 5, 6 and 7 junction upgrades⁶⁴

In 2019-20 we will start work on at least 26 projects, and seven will open to traffic.

All this is being done while remaining on track to deliver more than £1.2 billion of efficiencies that have either been used to offset costs or provided extra resources to build better roads. That reflects our efforts to improve the way we work, in particular by getting a better understanding of our assets through our Asset Delivery programme and investment in our asset management processes and systems.

Our aim is that no one should be harmed when travelling or working on the strategic road network. While we can't eliminate all risk on our road network or in the things that we do, we can recognise it, assess it correctly, and ensure that people are as far as possible protected from it.

In the year ahead, our programme of targeted safety campaigns will improve driver behaviour further. 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.

*Numbers refer to the map numbers used in Annex 1

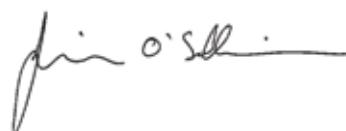


One of our most important achievements over the past four years has been improving our responsiveness to road users. We have focused on improving customer information about roadworks, journey time and delays so that they can more easily manage their journeys. We want to understand their needs and future priorities even better and over the next year we will take further steps to reduce delays and minimise the impact of our work on drivers.

We are focused on finding and implementing the best innovation and new technology which can help save lives and enable more efficient ways of using roads. That includes more use of digital technologies to manage the capacity and availability of the network and enhance communication with vehicles and their users. We have already started to use advanced technologies for the design and construction of new road schemes. This will help us gain more certainty over the budgets for road schemes, improve the safety of our workers and minimise disruption.

Four years is a short time in the life of a new organisation but this delivery plan shows what we are doing to establish ourselves as an effective custodian of our roads, with a credible plan for the future. We have put safety, customer service, and delivery at the heart of what we do and built a reputation for listening to stakeholders and developed real expertise in the wider transport challenges.

We recognise though that there is more to do to improve our performance and meet the expectations of our stakeholders and all those who use our network, but we are ambitious for the future and our record of development and our delivery in the first road period means we are well placed to meet those ambitions.



Jim O'Sullivan
CEO





Morning fog on M62





1. Executive summary

Our three imperatives of making our roads safer, improving our service to road users, and delivering the Road Investment Strategy remain at the centre of what we do. In this Delivery Plan Update, we set out what we will deliver in 2019-20 to continue to meet those imperatives, how they will support economic growth and how we will make sure our work minimises the effect of the road network on the environment.

Improving safety remains central to all we do. During the year we will build on our successful campaigns to inform motorists about the potential risks on the network and help tackle inappropriate driver behaviour. This will include a particular focus on commercial vehicles and new drivers as well as increasing awareness and understanding of how to use smart motorways. We will improve our understanding of the causes of road collisions and support the development of new technologies which improve road safety and reduce risk.

One of the most significant ways we can improve safety is through modernising and maintaining our network and delivering the Road Investment Strategy. In 2019-20 we will invest over £3 billion in our road network. This will be supported by the continued roll out of our asset delivery approach through which we directly manage network maintenance, operations and the delivery of schemes. Early indications from our current asset delivery areas suggest the approach is improving safety, customer satisfaction and delivering work more efficiently.

Improving our service to road users means addressing their concerns about delays on the road network. We will take further action to help clear motorway incidents faster and we are improving the planning, co-ordination and scheduling of all roadworks.

The investment we make in upgrading the road network also plays a critical role in supporting economic growth. During 2019-20 we will improve the capacity and connectivity of the strategic road network through our Safety and Congestion Relief Programme and by opening seven major improvement schemes.

Our Growth and Housing Fund helps the economy prosper and has been very successful in enabling new housing developments. The projects it has funded over the first road period will support the creation of 45,000 homes and 44,000 jobs. We will start 16 of these schemes in 2019-20 and complete two others.

We know that we have to meet our imperatives and minimise the effect on the environment so we are stepping up our action to reduce air and noise pollution. Among the projects for 2019-20 are further installations of noise insulation projects and noise barriers funded by the Environment Designated Fund.

We are working with local authorities and the private sector to install new rapid chargers as part of our programme to encourage the use of electric vehicles. In addition, we are making up to £10 million available in an open innovation competition for air quality projects.



We recognise that pedestrians, cyclists and horse riders also use the road network and we need to address their needs as well as those of motorised users. Our work on accessibility and integration will deliver 109 schemes of this type. We have also awarded a contract to Sustrans to deliver a £3 million programme to build on work we have already started, making it easier to cycle and walk across and alongside our roads through safer crossings and connecting cycle schemes.

We are discussing the future with our supply chain, with wider industry and in alignment with the aims and ambitions of the government – both the Department for Transport and of other departments responsible for the environment, for growth and housing and for industrial strategy. We are also working with suppliers

to create a stable, long-term flow of work which makes better planning and investment possible. This portfolio approach is helping to keep major projects, such as the £1.4 billion A14 programme, on budget and on time.

As we near the end of the first road period, we will continue to plan for the second Road Investment Strategy. We have started work with our partners to set the priorities for the five years from 2020. This will then be used to develop a detailed practical plan, informed by the lessons of the current road period, to ensure we have the right skills and resources in the organisation to deliver the future improvements in the network motorists want to see.





2. A safe and serviceable network

Key performance indicator (KPI)

Making the network safer



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



A reduction in the number of KSIs from the baseline figure of 2,969 to 1,782 by 31 December 2020¹

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



¹RIS1: Making the network safer - target of a 40% reduction against the 2005-09 average baseline by the end of 2020.

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**.



What we plan to deliver in 2019-20

Enhancing our health, safety and wellbeing culture

In order to further improve health, safety and wellbeing in our organisation, we have launched our new 'home safe and well' approach. This approach promotes increased ownership of health and safety through improvement plans, sponsored by Executive members. During 2019-20, progress against these plans will be reported to the Executive and Board Safety Committees. This new approach will support our aim of reducing the number of those killed or seriously injured and integrating health, safety and wellbeing into everything we do.

We and our partners aim to remove or reduce risks associated with working in or near to live lanes. This includes developing innovative technology and automation that eliminate or minimise time our workers spend on high-risk processes. During 2019-20 we will develop the second generation of automated Impact Protection Vehicles aimed at reducing risk for our road workers. We will start using our overhead variable signs and signals to warn drivers about road works rather than using manually placed signs at ground level. Later in the year, we will start to use one vehicle rather than two to perform rolling road blocks on wider motorways on our network and introduce automated ways to place and remove traffic cones at road works, reducing the time workers spend next to live lanes.

We want to improve the wellbeing of our employees and we will take further action to reduce our sickness absence. We will increase the capability of our line managers to deal with both physical and mental health issues in their teams. In 2019-20 these steps include a review of our sickness absence management policy. We will also work to improve the take up of our employee support services, such as PAM Life, our wellbeing platform. For example, health genies (equipment that takes key health measurements such as blood pressure, weight and body mass index) and wellbeing coaches (specialists in providing personal wellbeing advice and guidance) will visit the majority of our locations to locally promote PAM Life to employees. In addition, we will encourage volunteering as we know this improves employee engagement and wellbeing.

Better information and compliance

Campaigns and education

To inform road users about the potential risks on the network and tackle inappropriate driver behaviour we will run a number of road safety campaigns in 2019-20. These campaigns cover:

- Vehicle checks and roadworthiness
- Close-following/tailgating
- Motorcycling
- Commercial vehicles
- Fatigue

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

A key focus will be on commercial vehicles where we will develop and deliver a range of initiatives and interventions to improve behaviours. These include:

- the launch of our Driving in the UK toolkit. This will give practical safety advice for non-GB commercial vehicle drivers, including blind spots and converting kilometres to miles per hour
- a Commercial Vehicles Hub to provide easy access to all the best practice guidance we have developed around tyre management, load security, diesel spillages, vehicle weight and blind spots

Motorways and smart motorways

We will launch a new campaign in summer 2019 to increase awareness and understanding of how to use motorway infrastructure. The campaign will cover Red X, breakdowns, emergency areas and highlight the benefits of all lane running.



In addition, we will carry out further education and enforcement to encourage compliance on smart motorways, for example, issuing warning letters for drivers who break the law and drive in lanes with a Red X or on the hard shoulder illegally. We will work closely with the police to implement automated detection and enforcement of Red X offences.

Improving intelligence and innovation

During 2019-20, we will continue to work with our partners to address road users' concerns about inappropriate driver behaviours such as mobile phone use, tailgating, overloading commercial vehicles and driving without insurance and an MOT. This work includes trialling emerging technologies and roadside cameras to detect these behaviours. We will also make further use of CCTV in our traffic officer vehicles, which are now fitted with front and rear cameras, using footage to support road safety compliance activities and, where appropriate, police prosecutions.

Our research and development activities improve our understanding of factors which affect driver behaviour. In 2019-20 we will cover perceptions of enforcement and compliance activities and the key factors that result in driver stress, frustration and aggression. We will also build on wider insights from our Customer Insight Survey to enhance this work.

Commercial Vehicle Incident Prevention Programme

Our Commercial Vehicle Incident Prevention Programme, which started in 2015, helps to reduce the number of incidents involving commercial vehicles which result in someone killed or seriously injured by 20% by end of Q4 2019-20. The programme includes the provision



of three heavy goods vehicle (HGV) tractor units to support the police to target unsafe driver behaviour, as well as national support for drivers' hours checks in 25 police forces. We will focus on engagement activities and sharing best practice by providing guidance on load security, diesel spills, vehicle fires and improved tyre husbandry.

This will be reinforced by work with our partners to develop an Incident Prevention module for commercial vehicle drivers, building on best practice and guidance we have developed with industry. The goal is that this module, which will form part of the mandatory Certificate of Professional Competence test, will lead to a reduction in incidents through increased commercial driver education.

Light goods vehicles

In response to the increase in light goods vehicles (vans) on the network and a rise in the number of incidents and casualties relating to these vehicles, in 2019-20 we will carry out a gap analysis of our current approach to van safety, which includes checks of load security and vehicle compliance as part of our Commercial Vehicle Incident Prevention and Driving for Better Business programmes. This analysis will inform the future development of a strategy to improve the safety and operation of vans on our network.

Towing Incident Prevention Strategy and Delivery

In partnership with stakeholders on the National Towing Working Group we will work to reduce the number of towing related incidents and to improve road users' understanding of best practice and the need for compliance.

Our programme will be based on an intelligence-led approach, supported by customer insight and will target both business and leisure users. Activities to be implemented in 2019-20 include multi-agency vehicle towing checks, improving guidance to drivers through targeted publications and working with partners to develop legislation which improves tyre safety, such as a maximum tyre age.

Supporting new drivers

New drivers can be at higher risk on our network and our New Driver programme, which is provided in partnership with the DfT, the Driver and Vehicle Licensing Agency, the Driver and Vehicle Standards Agency (DVSA) and Approved Driving Instructors, gives training, guidance and advice to new and young drivers. We will update the Driving Hub website with new material such as a Smart Motorways Module and testimonials from learner drivers, instructors and parents.

We will also work with the DfT and DVSA to understand the impact of changes to the new driving test and support The Driver 2020 project. Led by the DfT, this project aims to find out which education and training approaches are effective for young drivers. For example, we will launch an app for learners to track aspects of their lessons, such as the type of road driven on and the time of day, enabling instructors to design bespoke lessons for each individual.

Supporting safer roads

Since 2015 we have completed a range of infrastructure improvements to modernise and maintain our network and make it safer. These include the roll out of smart motorways,

2. A safe and serviceable network

better routes for non-motorised users, safer verges, improved signage and road marking, measures to prevent wrong way driving, and technology to prevent, detect and monitor incidents.

Our Designated Fund Safety programme will continue to deliver targeted route treatments for single carriageway corridors, for example on the A49, A47 and A21 corridors.

We are investing £77 million by the end of the first road period (RP1) in these corridors to deliver a range of improvements, including:

- Enhanced lining and signing
- Safer verges through removal of obstacles
- Improved visibility through vegetation clearance
- Improved vulnerable road user facilities
- Overtaking bans
- Speed limit reviews

We have completed approximately 100 of these schemes and will deliver a further 60 schemes, investing over £30 million in 2019-20. For example, as part of improvements to the A64 between York and Scarborough, we will deliver:

- A programme of village gateways
- Lower speed limits where appropriate at these locations
- Pedestrian refuges and improved crossing points
- Enhanced bus stop facilities

- Dedicated right turns
- Additional footways

Through the Designated Fund, we are also funding our suicide prevention programme at key locations across the network. Examples to be delivered in 2019-20 include crisis signage at high frequency locations and more complex infrastructure improvements at M62 Scammonden Bridge and A19 Leven Valley.

To address safety concerns on A1 North of Ellingham⁹² we have started a number of safety works ahead of schedule in 2018-19, these replace the three stretches of climbing lanes which were originally proposed.

Our investment programmes will continue to improve the in-built safety of the SRN and further increase its rating (1* – least safe, 5* – most safe). A key area of attention is our single carriageways, where the star rating is generally lower. Our Designated Fund Safety Programme focuses on these corridors, delivering targeted route treatments which improve the star rating. Based on the International Road Assessment Programme (iRAP) safety rating model on which the target was established we will achieve our target of 90% of travel on 3-star roads by the end of 2020.

We have identified a number of areas where the iRAP model can be further improved to better reflect our network and will work with the Road Safety Foundation and international partners to develop the model.

Driving for Better Business

In 2019-20 we will extend the Driving for Better Business programme to target van drivers and motorcyclists to reduce their risk

⁹²Numbers refer to the map numbers used in Annex 1



as they commute to work. This will change how businesses and their employees think about road safety by raising awareness and compliance.

Improving safety of unplanned incidents

Another important safety initiative is our research to improve our understanding and approach to managing unplanned incidents (such as breakdowns, collisions, medical situations), as well as the advice and guidance we give to motorists to reduce their risk. Our casualty analysis indicates that drivers are being struck while getting out of their vehicles following these unplanned incidents, so in 2019-20 we will publish better guidance on the correct behaviour to adopt in these situations.

Improving safety and reporting

We have an ongoing programme of research to improve the way we analyse collision data and we will work to record details of more incidents. This will give us a clearer picture of the safety risks on the network and the action we can take to reduce those risks.

Following the successful upgrade of our incident reporting system, we will improve the analysis of our collision and incident data relating to our employees and suppliers. Publicising and improving access to the information will continue to encourage our supply chain and internal users to capture more incidents. Further work will take place by the end of Q3 2019-20 to record safety inspections, leadership tours and other forms of checks and assurance.

We will carry out further work with the DfT, the Office of Rail and Road (ORR) and the Office for National Statistics (ONS) to understand the

impact of the Collision Recording and Sharing (CRASH) system. The work will be developed from analysis completed by ONS in 2018 and ongoing efforts by the Standing Committee on Road Accident Statistics to improve the recording of personnel injuries, collisions and casualties on our network. This will build an improved understanding of the factors involved in collisions and casualties, informing the development of improved interventions. By improving the recording of journey purpose, for instance, we can better target our approach to occupational road risk management through our Driving for Better Business programme.

Operating our network

To improve the effectiveness of our maintenance work, we will continue to implement our Asset Delivery (AD) approach which means we will be able to directly manage network maintenance, operations and the delivery of schemes. Evidence from areas where it is currently in place show it is bringing improvements in safety, road-user satisfaction and delivering work more efficiently.

At the start of 2019-20 we introduced AD in Greater Manchester and Merseyside. Next, we will introduce it in the East Region in Q3 2019-20. This means that by the end of 2019-20 approximately 50% of our network will have fully adopted the AD model.

In the Hampshire and the Home Counties and the West Midlands regions we are implementing a phased transition to AD. This is referred to as Progressive Asset Delivery and will allow us to secure some of the key benefits in advance of full implementation. These two areas will transition to partial adoption of AD in Q2 2019-20.

2. A safe and serviceable network

Our maintenance and renewals programme keeps the SRN and its assets in a safe and serviceable condition. The programme reflects the needs of motorists, our assets and our capability to deliver the investment effectively. Our planned renewals activities are set out in Table 1.



Table 1: 2019-20 Indicative renewals output

| Deliverables | Total quantity | Metrics description |
|---------------------------------------|-------------------------|---|
| Pavement (road surface) | 901 lane miles | Total length of the pavement to be resurfaced. |
| Road markings | 3,300,000 linear meters | Length along the centre line of the road markings. This includes markings on new or replacement road surfacing. |
| Kerbs | 11,600 linear meters | Length along the centre line. |
| Vehicle restraint system | 114,000 linear meters | Length along the centre line. |
| Drainage | 115,000 linear meters | Summation of individual lengths measured along the centreline of the drain. |
| Geotech | 7,200 linear meters | Length of embankment/cutting treated (parallel to the carriageway). |
| Traffic sign (non-elec) | 400 | Number of permanent traffic signs installed or replaced. |
| Guardrail | 350 linear meters | Length along the centre line of the new or replacement pedestrian guardrail. |
| Boundary fencing | 24,500 linear meters | Length along the centre line of the new or replacement boundary fence. |
| Lighting | 750 | Number of road lighting columns installed or replaced. |
| Bridge joint | 320 | Number of bridge deck expansion joint installations (installed or renewed). |
| Bridge bearing | 180 | Number of bridge bearing units (installed or renewed). |
| Parapet | 3,400 linear meters | Length along the centre line of the vehicle parapet (new or renewed). |
| Waterproofing | 69,000 square meters | The surface area treated for waterproofing. |
| Motorway comms equipment | 160 | Number of new or replaced motorway communications equipment items. |
| Tech renewals and improvements | 550 | Counts of the number of assets renewed or improved. |
| Winter resilience | 42 | Counts of the number of schemes on completion. |
| Network resilience | 36 | Counts of the number of schemes on completion. |

Note 1: There may be variances against the target throughout the year due to reprioritisation of programmes.

Note 2: Soft Estate measure removed as it represents a wide range of landscape and ecology components, and does not accurately provide comparison between schemes.

Note 3: Footways measure removed as it includes channels, edgings, combined drainage and kerb blocks and linear drainage channel systems so is not an accurate reflection of simple length of footways constructed or renewed.

Note 4: Measurement rules and definitions apply.



Improved network knowledge

Understanding the condition of our assets is critical to effective management of the network and making the right investment at the right time. In 2019-20 we are improving the quality of the information we hold on our assets and the way we monitor their condition. Towards the end of the year, we will carry out an asset management assessment to benchmark our progress towards becoming an excellent asset management organisation.

As part of achieving this, our Asset Information Improvement Plan has already advanced our asset data throughout the Road Investment Strategy (RIS1). These improvements include the development of our asset information requirements, better asset data capture and asset inventory, and enhanced asset data visualisation tools. In addition, our asset steward review process has been updated and will be implemented in AD areas in 2019-20.

Our Informed Asset Management Plan (IAMP) sets out the improvements we need to make to achieve effective and connected asset management across the company. We will

use outcomes of the 2018-19 review of the IAMP to improve our asset management further in 2019-20. This work will focus on our asset management framework and supporting asset data and information, as well as the implementation of a consistent risk-based approach across our regions. The IAMP will also now form the basis of our asset management maturity metric. As a result it is being refreshed throughout 2019 to detail improvements across the whole asset lifecycle, from early planning to operation and replacement.

One of our most important assets is road pavement and our pavement investment tool has been used to support the development of a prioritised pavement renewal programme. It will be also used regularly to monitor the end of year forecast during 2019-20 to provide assurance we remain on course to meet our target. We will continue to use our existing pavement asset indicator, defined as the percentage of pavement asset not in need of further investigation for maintenance, and to report our performance internally each month and quarterly to the DfT and the ORR.

Safety remains our first imperative and our long-term ambition is that no one should be harmed whilst travelling or working on our network. To achieve this, we will continue to focus on action to improve safety through driver education, enforcement and by refining our understanding of the causes of accidents. The safety of our workforce is a key priority and we will take further steps to improve their health, safety and wellbeing. All this work will be supported by further investment in the renewal of our assets using our improved 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 RP1 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 2019-20

Driving strategic economic growth

Businesses need fast and reliable routes to connect them both to UK customers and with global markets. To enable them to prosper we are investing in schemes to reduce congestion by increasing capacity on the network. The economy also needs new homes and business developments and our Growth and Housing Fund helps to enable these schemes, contributing to local prosperity. As well as creating a network to support the wider economy, our own major investment programme provides jobs, skills and opportunities for our supply chain and the wider population.

Our work to minimise delays caused by incidents is another important aspect of what we do to improve the reliability of all our road users' journeys and during 2019-20 we will take further action to support this aim, including a continued focus on clearing motorway incidents as soon as possible.

To reduce average delays on the network, we will carry out more work at night when there are lower traffic volumes and ensure that we mitigate the impact on those who have to use the network at this time, such as hauliers and couriers. To do this, we will work with key stakeholders, such as Royal Mail, to:

- share our data with customers on the details of planned closures
- use our regional mapping tool to highlight potential opportunities to work more efficiently and with a stronger customer focus by visualising where projects are being delivered

In addition, we will continue to report our performance on the average delay (gateway routes) performance indicator in 2019-20.

New analysis considered alongside further recent improvements providing access to the Mersey Gateway Bridge shows that the M56 new junction 11a⁵⁴ will offer lower value for money than expected and the scheme needs further appraisal.

⁵⁴Numbers refer to the map numbers used in Annex 1

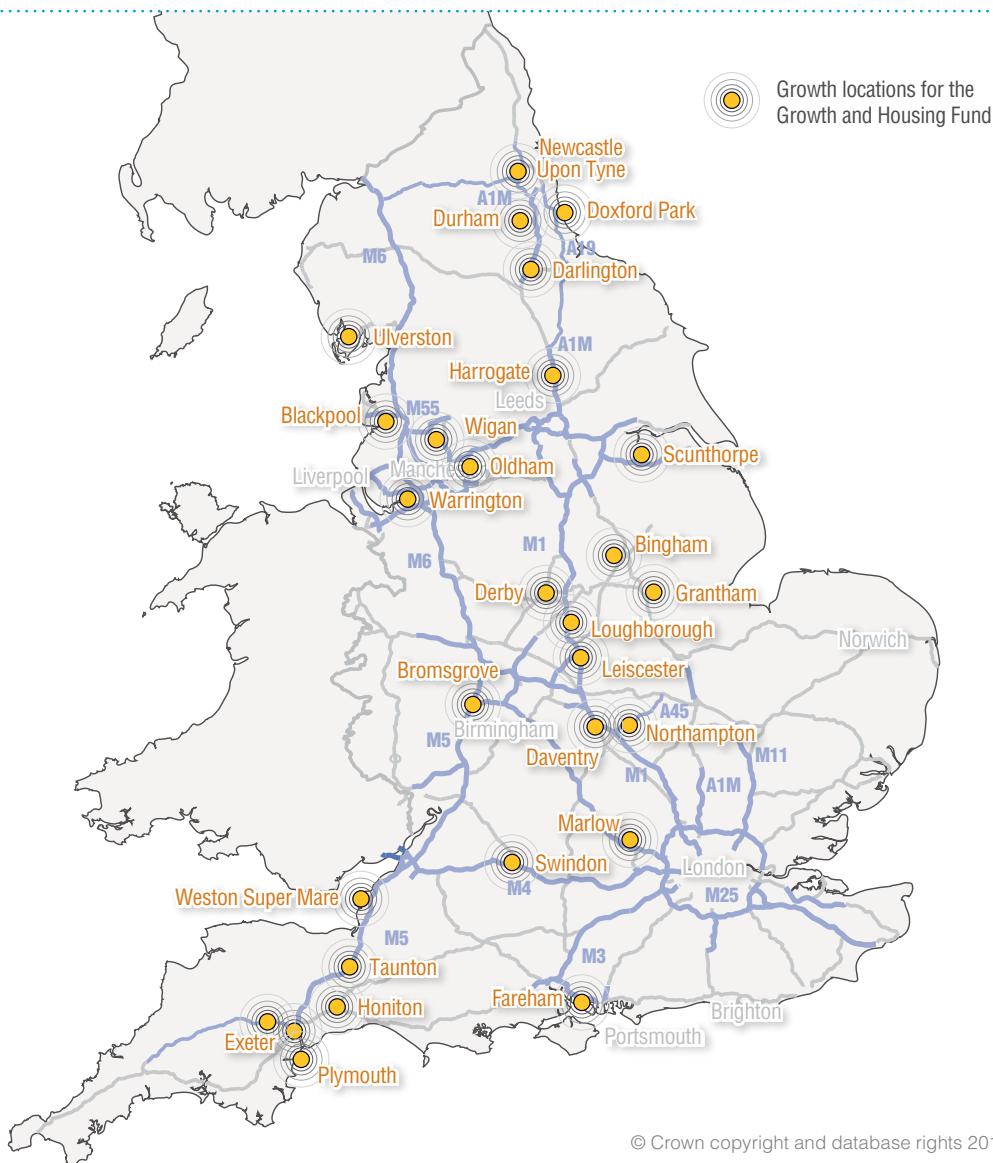


Investing through our Growth and Housing Fund

Our Growth and Housing Fund programme is used to match-fund infrastructure projects with third parties such as developers and local authorities. This contributes towards the cost of road improvements that are needed for new housing developments. We estimate this will support the creation of over 45,000 homes and 44,000 jobs over the lifetime of the developments.

To manage popular oversubscription and programme risk we have approved 28 projects, at a total cost of £93 million. This investment has attracted £102 million matched funding from the private sector as well as £129 million from other public funding sources. We will be actively seeking to fund and complete the total programme in the second Road Investment Strategy (RIS2).

Map 1: Investing through our Growth and Housing Fund



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Ten of these projects have been completed and opened to traffic. We will start the following schemes during 2019-20:

- A46 RAF Newton and Bingham, Nottinghamshire
- M5 J4 Bromsgrove and A38 / M42 J1 Bromsgrove
- M1 J23 Loughborough, Leicestershire
- A1 Grantham (Spitalgate)
- A38 Forder Valley, Plymouth
- A590 Cross-a-Moor, Cumbria
- M55 J4 Heyhouses, Blackpool
- A404/A4155 Westthorpe, Marlow
- M27 J9 Fareham, Hampshire
- M4 J15/A419 Swindon
- M5 J21 Weston-Super-Mare
- M5 J25 Taunton
- A30 Moor Lane, Exeter
- M181 Lincolnshire Lakes
- A1 J47/A59 Harrogate
- A19 Doxford Park

During 2019-20 we expect to complete two schemes: A52 Wyvern and M58/M6 Wigan.

Working in partnership with local authorities

Our key planning performance targets, including our performance indicator for 99% of formal planning application consultation responses being undertaken within 21-days, will remain in place.

We will implement a new Development Control Database as part of a wider corporate

Customer Relationship Management system in 2019-20. This will mean we can carry out a more targeted analysis of planning performance, particularly in relation to different types of development and complex consultations. We will also give new planning guidance to our regional planning teams to improve consistency of response to planning applications, development plan proposals and wider stakeholder engagement.

During the year we expect the government to publish a revised Planning Circular (planning policy related to the SRN) for consultation. This will make key areas of policy clearer for everyone involved in submitting and reviewing planning proposals in and around the SRN.

We will provide funding for a number of developments led by local enterprise partnerships, including the M55 junction 2 and M62 junction 19. The A27 Worthing to Lancing improvements¹⁰⁸ scheme is under review in order to best meet the needs of the local stakeholders. The local authority has requested that the A47 and A12 junction enhancements¹⁰³ scheme be paused to avoid unnecessary disruption whilst the third river crossing is being constructed. The scope of the scheme is also being reviewed in light of the new crossing.

Stimulating growth

Small and Medium Enterprises (SMEs) play a key role in the economy and we are opening up further opportunities for them to secure work from us. As part of our SME performance indicator, we will provide SMEs with information about our procurement plans. We will attend Meet the Buyer events and support Highways UK, a major annual event which brings together a full range of contractors involved in work on

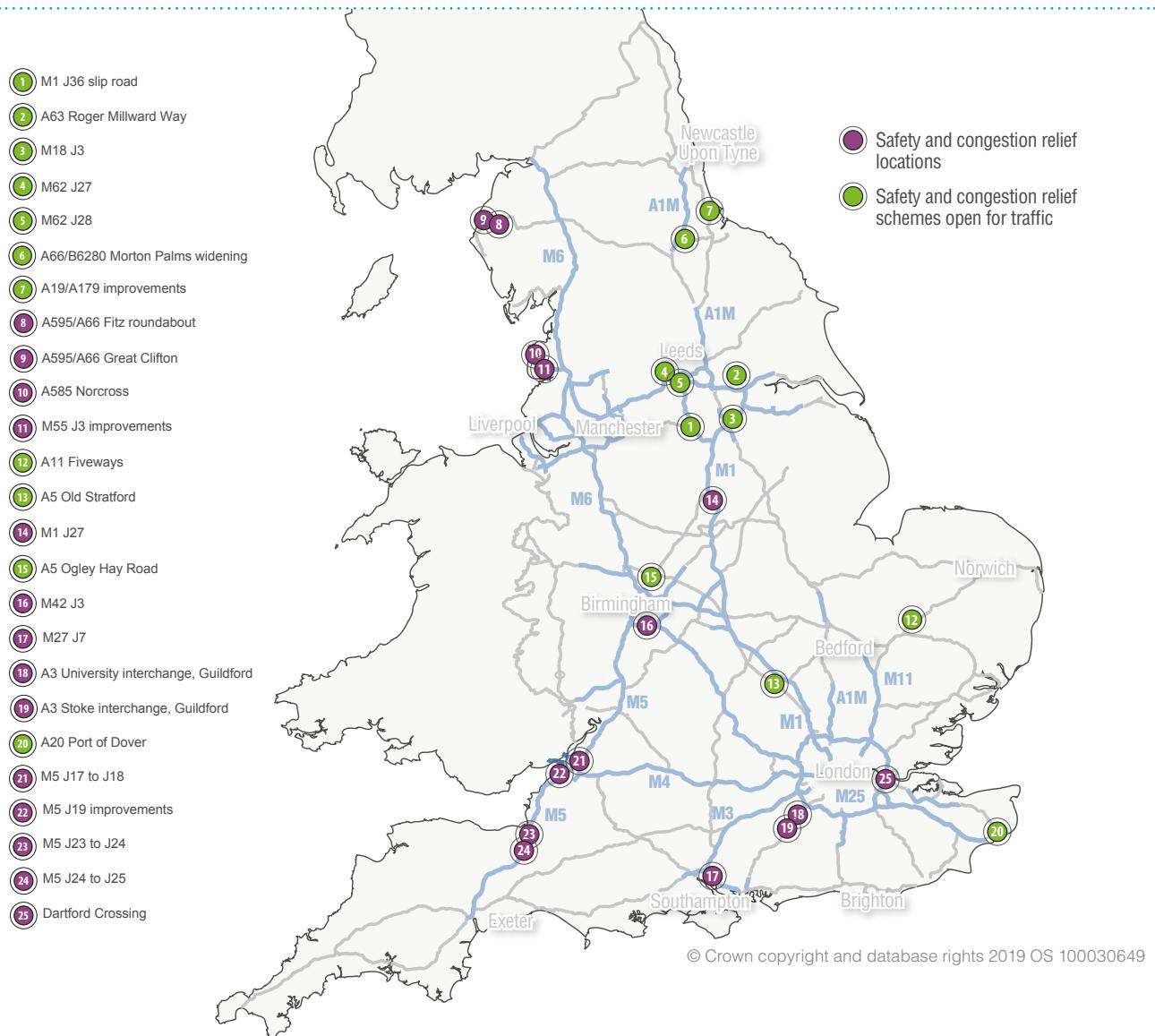
¹⁰⁸Numbers refer to the map numbers used in Annex 1



the UK's roads. We are also developing, in conjunction with our supply chain and key industry bodies, a guidance toolkit to help SMEs engage with Highways England and Tier 1 suppliers. We expect to finalise a draft toolkit by the end of Q4 2019-20.

The A5 Towcester relief road⁹⁰, while not part of the SRN, will provide relief to the A5 through Towcester. This scheme is being delivered by developers and the commitment to provide funds for the scheme is dependent on the developer meeting the committed date.

Map 2: Safety and Congestion Relief Programme



3. Supporting economic growth

Schemes planned to start construction in 2019-20

In 2019-20 we will start work on at least 26[†] major improvements.

| Bypass / grade separation | A63 Castle Street ²⁶ | Creating a new junction by lowering the level of the A63 at Mytongate junction, providing improved access to the Port of Hull, improved connections between the city centre (to the north) and developments, and the tourist and recreational facilities to the south. |
|----------------------------------|---|--|
| | A585 Windy Harbour – Skippool ⁵⁰ | A new bypass of two congested junctions on the A585(T) at Fleetwood north of the M55; this will reduce the impact of traffic on two villages and remove a major bottleneck on the main road to Fleetwood. |
| Dualling | A303 Sparkford – Ilchester dualling ¹¹⁰ | Dualling of a single carriageway section of the A303, linking together the Sparkford and Ilchester bypasses. |
| | A30 Chiverton to Carland Cross ⁹¹ | Upgrading the A30 to dual carriageway north of Truro, linking existing dual carriageways around Bodmin with the Redruth bypass; coupled with the Temple to High Carblake scheme will improve the A30 to Expressway standard between Camborne and the M5. |
| | A2 Bean and Ebbsfleet ³⁹ | Improvements to the junctions on the A2 near Bluewater to enable major developments in the vicinity of Ebbsfleet. |
| | M621 junctions 1-7 improvements ⁴⁷ | Junction enhancements and localised widening of sections of the M621 in central Leeds. |
| | M6 junction 19 improvements ⁵⁵ | Upgrades to help the movement of traffic from the upgraded A556 to the new section of smart motorway from Cheshire to Stoke. |
| Junction improvements | M6 junction 10 improvement ⁵⁸ | Providing additional capacity at the junction, including the replacement of both bridges allowing the widening of the roundabout to four lanes as part of the Black Country Local Growth Deal. |
| | A46 Coventry junction upgrades ⁶¹ | Upgrading the roundabouts at Binley and Walsgrave to provide grade separated junctions on the A46; upgrading the trunk road sections of the A45/A46 between the M6 and M40 to Expressway standard. |
| | A45/A6 Chowns Mill junction improvement ⁶³ | Improvements, including segregated lanes, signalisation and construction of some additional carriageways at the A45/A6 junction at Higham Ferrers in Northamptonshire. |
| | M2 junction 5 improvements ⁷⁷ | Providing additional capacity at the junction through improvements to slip roads and enhanced approaches to the junction. |
| | M271/A35 Redbridge roundabout upgrade ⁸⁴ | Junction improvements to provide a dedicated left turn lane for traffic leaving the M271 for Southampton Port and free flow traffic from the Port onto the M271 (a 'hamburger' roundabout). |
| | M3 junction 10-11 improved sliproads ⁸¹ | Improvements for merging traffic, including technology, widening and lane realignment; lane gain and lane drop will smooth flow of traffic onto the M3 and assist flow to Southampton port. |

[†]Numbers refer to the map numbers used in Annex 1

[†]M11 junction 7a – junction upgrade: Highways England commitment met with transfer of funds to Essex County Council, who are delivering the scheme.

| | | |
|------------------------------|--|---|
| | M3 junction 12-14 improved sliproads ⁸² | Carriageway widening and junction reconfiguration to improve capacity through the junction. |
| Junction improvements | M42 junction 6 ⁶⁰ | Upgrading the junction to allow for better movement of traffic on and off the A45, supporting access to the airport and preparing capacity for the new HS2 station. |
| | A34 Oxford enhancements ^{72/73} | We have changed the scope of two schemes and combined them together, because an alternative proposal provided a better value safety improvement and will better support the plans for the Oxford to Cambridge Expressway project. |
| | M56 junctions 6-8 ⁴¹ | Upgrading to smart motorway, including all lane running; together with improvements to the A556, M6 junction 19 and M6 smart motorway this forms part of a comprehensive upgrade to Manchester's southern access. |
| | M3 junctions 9-14 ⁴² | Upgrading to smart motorway, linking with the smart motorway scheme on the M27. |
| Smart motorway | M62 junctions 20-25 ⁴⁹ | Smart motorways across the Pennines, from Rochdale to Brighouse. Links two existing smart motorway sections to create a continuous smart route from Leeds to Manchester. |
| | M40/M42 interchange smart motorways ⁶² | Upgrading to smart motorway from junction 16 of the M40 and from junction 3 to 3a of the M42 including the introduction of all lane running to the existing smart motorway section between junction 3 and 3a of the M42. |
| | A1(M) junctions 6-8 smart motorway ⁷⁰ | Upgrading to smart motorway including widening of two lane section to dual three lane and all lane running. |
| Widening / capacity | A1 Scotwood to North Brunton ⁹⁴ | Narrow lane widening to allow dual three lane through the junctions, with dual four lane between some junctions. |
| | A19 Norton to Wynyard ⁴⁴ | Widening the Billingham bypass to dual three lanes; replacing the concrete surface with low-noise surfacing. |
| Trans-Pennine Upgrade | A61 Westwood Roundabout ⁹⁷ | Improvements to reduce congestion and improve the flow of traffic on the A61 and the roundabout with A616 at Tankersley have replaced the original A61 Dualling scheme. |



In addition to this, we have two schemes on the A69 which were proposed as a result of the Northern Transpennine Strategic Study and announced in the 2016 Autumn Statement. These two schemes are currently under review.

We have agreed with the DfT to extend our design and development programme on A19 Downhill Lane junction improvement⁴³. Start of construction has now been moved into RP2 to align delivery with the new International Advanced Manufacturing Park, which the scheme is supporting.

The A5036 Princess Way - access to Port of Liverpool⁵¹ was subject of an unsuccessful challenge by judicial review and has been delayed by 12 months as a consequence. The A358 Taunton to Southfields¹¹¹ went to a second consultation following improvements to the route suggested by the first consultation.

The M27 Southampton junction⁸³ was delayed while a number of alternative approaches such as changes to the supporting road network were considered.

Schemes opening for traffic in 2019-20

At the end of year four in the RP1, we had 15 major enhancement schemes in construction – seven of which are committed to be open for traffic in 2019-20. These include a number of smart motorways and junction improvements.

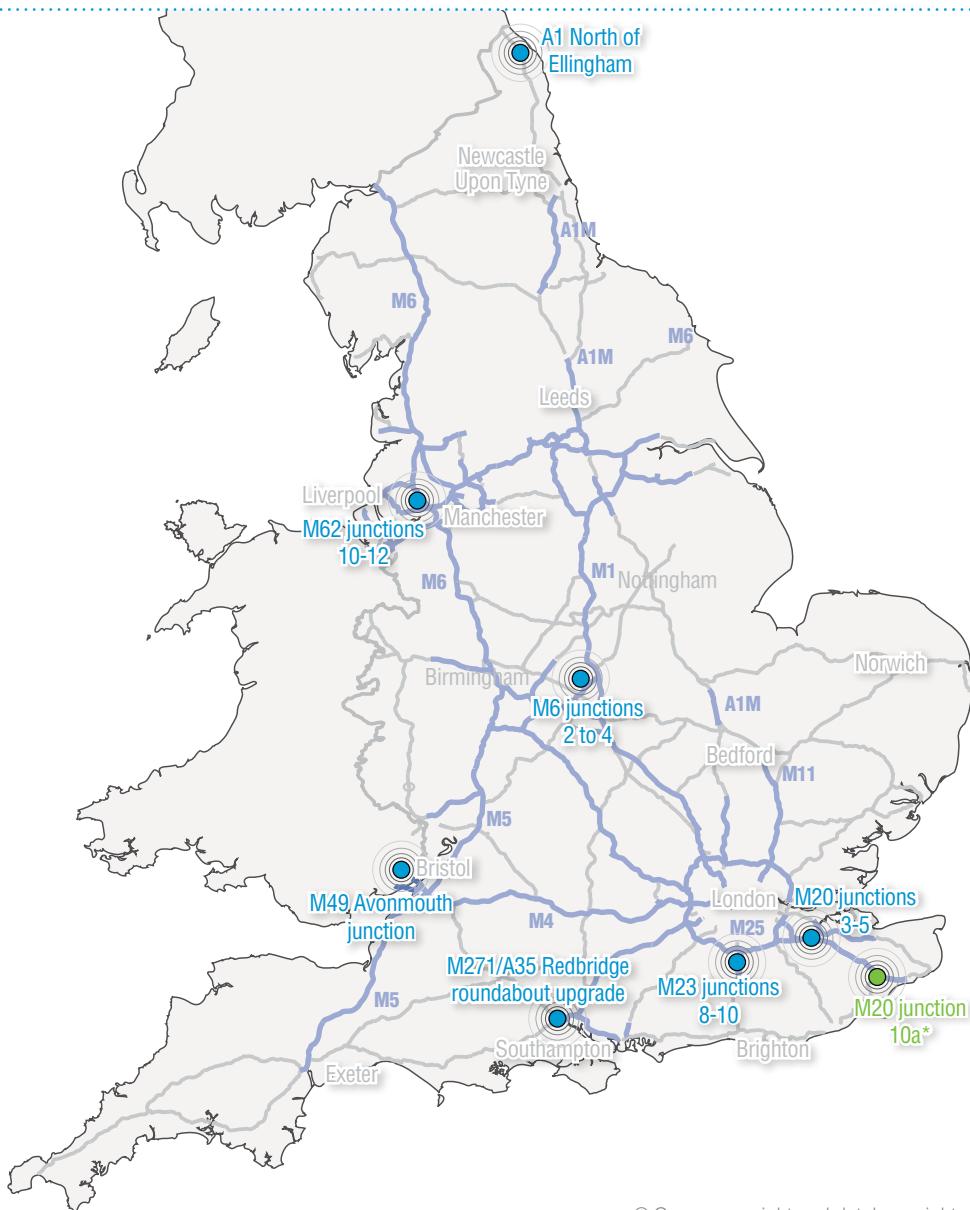
Our schemes opening for traffic in 2019-20 include:

- M6 junctions 2-4²⁸: junction 2 (M69 interchange) to junction 4 (M42 interchange) upgrading to smart motorway including all lane running. Along with other improvements this is part of the 'smart spine' linking London and the North West
- M20 junctions 3-5³⁰: junction 3 (M26 interchange) to junction 5 (Maidstone) upgrading to smart motorway including all lane running
- M23 junctions 8-10³¹: junction 8 (M25 interchange) to junction 10 (Crawley) upgrading to smart motorway, improving connections to Gatwick Airport
- M62 junctions 10-12⁴⁰: junction 10 (M6 Croft interchange) and junction 12 (M60 Winton interchange) upgrading to smart motorway including all lane running; this links with the M60 smart motorway schemes to the east and M6 schemes to the west
- M271/A35 Redbridge roundabout upgrade⁸⁴: junction improvements to provide a dedicated left turn lane for traffic leaving the M271 for Southampton Port and free flow traffic from the Port onto the M271 (a 'hamburger' roundabout)
- M49 Avonmouth junction⁸⁶: new junction to provide strategic access to Severnside and Avonmouth; this will support the Enterprise Zone and local growth in the Bristol area
- A1 North of Ellingham⁹²: a set of measures to enhance the performance and safety of the road

¹Numbers refer to the map numbers used in Annex 1



Map 3: Schemes opening for traffic in 2019-20



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We make a vital contribution to economic growth through our work to provide a safe, high-performing SRN. This includes our investment in upgrading and renewing the network to tackle congestion and provide more reliable journeys and connections to market for businesses. In 2019-20 we will see a number of major schemes start across the country. Our Growth and Housing Fund also provides specific funding to support the creation of new jobs and new housing developments which are critical to the UK economy.

*M20 Junction 10a: The programme has been extended to manage a clash between gas main and bridge foundations. It is expected to be open for traffic in 2019-20 Q3. On the M20 we have also been instructed by the DfT to deliver Operation Brock, which is our plan to keep two lanes of the M20 to Dover open in both directions even when we are using the Dover bound carriageway for parking trucks. In parallel, following the withdrawal of the original Lorry Park proposal, we are developing new options to be agreed with the DfT for the implementation of a permanent solution for Operation Stack on the M20.



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 2019-20

Enhancing customer experience

We plan to improve the way we communicate and to make sure our staff and supply chain have the tools to respond effectively to road users, with a focus on improving their experience of roadworks and incidents on the network.

We will take part in the National Customer Service Week in Q3 2019-20. As part of this we will highlight the importance of customer service at regional conferences and other events, as well as providing toolkits for our staff.



In 2019-20 we will launch our next customer service plan, which will set out how we will address the key areas highlighted for improvement in the National Road Users' Satisfaction Survey (NRUSS). Our customer service plan focuses on improving journey times through enhanced incident management; upkeep of the network; roadworks; information and signage and promoting safety.

■ Improving journey times through better incident management

We will use improved technology to provide better information about the length of time road users will have to wait and to help them avoid the area. We will work to create a culture of 'every second counts' to support better understanding and co-ordination of incident management across our business. Leading this will be our Collision, Lead, Evaluate, Act and Reopen (CLEAR) initiative which will improve how we coordinate with the other services who respond to incidents. This will help us to reduce incident durations, improving journey times.

■ Upkeep of the network

We will overhaul our maintenance requirements to allow our teams to focus on activities that make a difference to customer satisfaction. This includes trials of targeted action, such as cyclic maintenance, where motorists will see increased levels of activity (including white lining, litter picking, and cutting of vegetation) at trial sites. In 2019-20 we will use our own research, supplemented by that from Transport Focus, to

identify specific areas for improvement at roadside facilities on trunk roads. Through these targeted actions, we will better understand how maintenance work directly influences customer satisfaction.

■ Roadworks

We have developed a customer-focused standard for diversion routes for unplanned events. There are 2,700 of these routes, and in 2019-20 we will set out how we will inspect and improve their quality. In addition, we will carry out further work to improve the accuracy of roadworks closure information.

■ Information and signage

Following the review of variable speed limits (VSLs) in 2018, we will be improving the appropriateness of mandatory and advisory VSLs to ensure that they feel relevant and appropriate to the traffic conditions. This includes investigating the potential for changing, increasing or removing VSLs in specific scenarios. Through more accurately set VSLs, drivers will experience improved journey times and increased trust in the information we provide, resulting in improved customer satisfaction.

■ Promoting safety

To address road user concerns about safety, we will carry out further work to develop our understanding of the factors that affect how safe they feel and the relationship between the numbers of casualties and perceptions of safety. That information will then be used to develop a plan to address these issues.

We have worked closely with Transport Focus on the development of the new Strategic Roads User Survey (SRUS), which will replace the NRUSS. In 2019-20 we will continue to supply insight, commentary, peer review and technical expertise. This will help to refine the survey to increase the information we have about the interests of our customers and collect more data about the different groups who use our network. We will also work with Transport Focus to develop a joined-up programme of research and insight for 2019-20.

Improving customer communication

Improving the way we manage our contact with road users will remain a priority and a new customer contact approach is due to be launched during 2019-20. This five year plan will modernise the way we engage with motorists throughout our business and supply chain. Subject to funding approval, the plan's first year will involve the launch of a customer feedback platform across the business and a reduction in correspondence response timescales from 15 to 10 days. We will also improve the standard of our customer communication by revising our correspondence quality indicator and providing additional training to staff.

Using the research we conducted in conjunction with Transport Focus and the ORR, we will review the existing Traffic Information Strategy and produce a new version in 2019-20. This will help us to maintain our focus on improving the accuracy of roadworks information to provide details of planned closures up to seven days in advance and use social media to give drivers more timely information about real-time incidents.

Resilience and extreme weather

Minimising the disruption caused by bad weather is a vital part of our work and in 2019-20 a new contract will be awarded for the operation and management of the existing Severe Weather Information Service (SWIS). We will take the opportunity to develop and improve SWIS, taking into account user feedback and we will continue to provide an integrated source of real-time weather information to the teams who grit and treat the roads in winter. It will also be connected to the new winter vehicle fleet to ensure it collects data on all our winter activity.



Highways England
salt spreader



Exploring innovative approaches

In Q1 2019-20 we notified the winners of our open innovation competition, worth £20 million, for projects which will shape the future SRN. Up to £10 million was available for innovation projects and a further £10 million for air quality projects.

One innovative approach that we have been interested in is the European project FABRIC (Feasibility analysis and development of on-road charging solutions for future electric vehicles), which has investigated different electric vehicle charging infrastructure solutions including in-road options. In 2019-20 we will research electric vehicle mapping with the aim to explore how we can support the provision of electric vehicle infrastructure and consider the outcomes of the FABRIC project.

Systems that can automatically detect queues are an important safety measure and we have been reviewing the operation of our queue protection system (known as HIOCC) and congestion management. We have identified improvements that can be made by using different data sets and we intend to test this approach using simulations.

During the year we expect to complete our evaluation of the motorway-to-motorway traffic management trial. This trial, located where the M62 merges with the M6, is used to manage congestion and to smooth out traffic flows.

Supporting connected and autonomous vehicles

We are assisting the development of autonomous vehicles by carrying out freight platooning trials, which will commence in

2019-20 with off-road trials. These trials are to ensure the technology is safe for UK roads and to evaluate its potential to benefit air quality. We are also part of the HumanDRIVE consortium, led by Nissan and funded by InnovateUK, which will carry out an autonomous vehicle trial journey of over 200 miles on country roads, A-roads and motorways in late 2019. As part of this project, we are developing safety risk assessments to identify measures to ensure it is conducted safely. We will also use computer modelling to simulate the effect of autonomous vehicles at different locations on the SRN. We will investigate their impact on safety, emissions, journey time and road capacity before reporting our findings back to the consortium by the end of 2019.

The UK Connected Intelligent Transport Environment (UK CITE) has now completed connected corridor on-road performance tests on the M42, which have shown that Wi-Fi-like communications can directly transmit signage into a vehicle. The technology deployed for UK CITE will now form part of the Midlands Future Mobility testbed, where we are working in collaboration with Transport for the West Midlands and private sector partners. To further support the Midlands testing environment we are working with the Department for Culture, Media and Sport to support their feasibility study of 5G deployment.

Using the learning from our Midlands trial, we have started to install technology that will deliver connected services on the A2/M2 in the South East. Part of the Interoperable Corridors (InterCor) project, these connected services can be delivered via cellular or Wi-Fi-like communications technologies.

4. More free-flowing network



A2M2 Connected Corridor
TestFest 2018

In 2019-20, we will deliver a more comprehensive trial of services and use their evaluation to inform international standards that will be agreed with the automotive sector. By deploying connectivity infrastructure in the South East and Midlands we are supporting the Government-funded testbeds in these areas, which are being led by Zenhic.

Technology can also help to tackle congestion and make the network safer. A stopped vehicle detection (SVD) system, which uses radar technology, has been in operation between M25 junctions 23 and 27 since April 2018. In 2019-20 we will:

- start the installation of a similar system on the M3 junctions 2-4a¹⁶
- work on developing a programme to retro-fit and implement SVD on other all lane running sections
- examine the options for further trials of other SVD systems

Working with others

Research partnerships and collaboration help us to access and develop leading-edge innovation. We will publish our research and innovation priorities for RIS2 on our Innovation Portal. These will set out key challenges against the themes in Connecting the Country: Planning for the long term:

- Design, construction and maintenance
- Operations
- Connected and autonomous vehicles
- Customer and mobility
- Energy and environment

This work includes targeted innovation and research activity to support the development of the Digital Roads agenda and will provide updated requirements, guidance and best practice for conducting pilots and trials. In 2019-20 we will look to develop research opportunities with a number of universities with the expertise that will help us achieve our objectives.

Improving signage and roadwork management

Following our successful demonstration that 60mph can be safely implemented in certain roadworks, we will test expanding 60mph speed limits in roadworks in a new range of scenarios such as in contraflow and narrow lanes. The tests will monitor driver behaviour and how they feel about driving at the higher speed limit in narrow lanes. This will support our future aim of having 60mph limits through most of our major roadworks on motorways, the majority of the time.

In addition, we will improve the information for drivers as they are travelling through roadworks by providing more estimates of travel times and more detail on what works are happening. This will be reinforced by improvements to our website and a focus on minimising the impacts of multiple closures on road users.

Incident management

Our CLEAR initiative ensures we reopen the network safely and quickly after major incidents. In 2019-20 we will carry out research to establish how the initiative can be enhanced further. This will involve working with our three key partners, the National Police Chiefs Council, the National Fire Chiefs Council and the National Ambulance Resilience Unit. We will also conduct further research on the traffic incident debriefing process and review and improve publication of lessons learnt, trends, themes and issues and share best practice.

We conducted a successful trial in the Yorkshire and North East region, which showed that by deploying traffic officers in new locations we could reduce travel time and improve incident clearance rates. We have now provided recommended locations to all other regions and in 2019-20 we will assess the feasibility and practicality of opening new traffic officer outstations.

We continue to work to make delays less likely and to provide better information to road users when problems occur. We are working with our partners, and our new control centres, to improve the way we manage incidents to minimise the time before we can return traffic to normal running. In addition, we are taking further steps to reduce the impact of roadworks on journey times.





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 RP1, on an ongoing annual basis



Environmental survey
in Cumbria

Indicators that will be used to measure performance:

- Number of air quality pilot studies completed
- Carbon dioxide equivalents (or CO₂e) in tonnes associated with Highways England's activities
- Carbon dioxide equivalents (or CO₂e) 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 2019-20

Investing through our Environment Designated Fund

In 2019-20 we will spend around £95 million from our designated fund, including £11 million for schemes in the noise insulation and carbon programme.

We published our Sustainable Development and Environment Action Plan in December 2018, including milestones for 2019-20 that will support our work on a low carbon economy and sustainable development.



By the end of 2019-20 we will have completed:

- an update to all of our environment and sustainability guidance documents in our Design Manual for Roads and Bridges
- work to update our assessment of risks from climate change, using the latest evidence
- improvements to the quality of supply chain carbon reporting
- the initial phases of a pilot project to demonstrate circular economy good practice
- engagement with suppliers to influence sustainable behaviours including the Strategic Alignment and Review Tool

We will also report to the Department for Environment, Food & Rural Affairs (Defra) on our performance under the Climate Change Act to allow greater scrutiny of our ongoing climate risk assessment work.

Improving air quality

We have recently completed and reported on 10 air quality pilot studies. One of these studies investigated how to improve air quality by influencing driver behaviours. This study made a number of recommendations and we will explore how we can implement these. In Q2 of 2019-20 we will publish an external report which will summarise all of our air quality research work undertaken over the last few years.

Our programme to create a network of continuous air quality monitoring stations is nearing completion with 45 out of the 50 stations in operation. The purpose of these

¹Numbers refer to the map numbers used in Annex 1

stations is to collect data which will enable us to identify trends and differences in air quality across our network. This knowledge will help us plan how to improve these areas, as well as informing future scheme delivery. We will complete the remaining five monitoring stations in 2019-20.

We are working closely with the Joint Air Quality Unit, a collaboration between the DfT and Defra, to support the delivery of the national Air Quality Plan. This includes working to meet limits on nitrogen dioxide in the shortest timescale possible.

As a result of complex air quality challenges and the design taking longer than planned to enhance the overall solution, three schemes are expected to start in RP2. These are A57 (T) to A57 Link Road⁹⁹, Mottram Moor Link Road⁹⁸ and A1 Morpeth to Ellingham dualling⁹³.

Another important element in our work on air quality will be our support for local authorities that are implementing charging clean air zones. We will establish if additional advisory signs are needed to inform motorists about the zones. Using our Air Quality Designated Fund, we plan to design and implement these signs by the end of Q3 2019-20.

Our network of Air Quality Focal Points will inform our joint work with councils to tackle poor air quality and if this work produces specific ideas to improve air quality we will look to make appropriate investments to implement them.

Air quality barriers

Following our monitoring of the use of sound barriers in the Netherlands, we know that in some locations an effective way to make a

significant improvement to the quality of air for our closest neighbours is to install high barriers. We recently completed studies examining the feasibility of these barriers in up to 14 locations and are now working to design and install barriers in those locations confirmed as feasible, and where the barrier will help support achieving compliance with the legal limit for nitrogen dioxide.

To help reduce the visual impact of these tall barriers, and ensure a good design that facilitates our neighbours, we are developing a Barrier Aesthetics Design Guide in line with our Road to Good Design document. We are investing around £20 million in this programme of activity during 2019-20 and expect to have some barriers well advanced, and possibly completed, by the end of Q4 2019-20.

In addition to the national programme of air quality barriers, we are proposing to implement a barrier alongside the M1 in South Yorkshire. This is a £10 million project and we plan to complete this barrier by end of Q4 2019-20.

In 2019-20 we will start trialling a specific brand of air quality barrier in the East Midlands. This will help us to independently test the manufacturer's claims of pollution reduction. The goal of the trial is to assess whether this type of barrier could be implemented as part of our national barrier programme.

Travel demand management

Travel demand management (TDM) seeks to reduce demand on the road network by providing opportunities for motorists to re-time or reroute their journeys or use other forms of transport. During 2019-20 we will implement a programme of TDM measures to support

scheme delivery, enhance road user journey choices, help reduce high routine congestion and improve air quality. In 2019-20 TDM interventions are being put into practice on:

- the remainder of the Manchester smart motorway programme and for the South East region, including support for the M27 and M3 smart motorway schemes
- the A27 Corridor
- the area surrounding Greater London

We will oversee further roll-out of a TDM best practice guide across our company, our local authority partners and the supply chain in 2019-20. This will drive increased capability and the capture and dissemination of best practice. TDM will be further embedded after the development of a TDM requirement for roadworks, which will be complete in Q4 2019-20.

Electric Van Centre of Excellence

We are contributing almost £2 million to Leeds City Council to implement an electric van centre of excellence. This will incentivise van operators in and around the city to try electric vans for a period of up to two months. As a result, we expect that we will be able to convince many to go on to buy this kind of zero emission vehicle and help contribute to cleaner air on our respective networks.

Tackling noise

Noise pollution is a significant concern for our neighbours and we have a range of projects planned or underway to mitigate it. Porous asphalt significantly reduces noise generated by tyres, but it is less durable than our current



surfaces and has different maintenance requirements. We have completed an investigation which demonstrated that these issues could be overcome on parts of the network. A trial is needed to confirm this, and in 2019-20 we are working to shortlist several possible trial locations.

Our noise insulation scheme, which runs from 2017 to 2020, provides noise mitigation for our neighbours through installation of acoustic glazing and ventilation. The programme for 2019-20 will focus on Noise Important Areas (NIAs) containing fewer than 10 properties. In addition, during the year we plan to complete up to four noise barriers within NIAs. We expect to meet our RIS1 target of mitigating 1150 NIAs by the end of Q4 2019-20.

We have provided sound demonstrations during public consultations at Stonehenge to reassure the public about noise levels. In 2019-20, we will further this work by starting the procurement process for a mobile sound demonstration facility which we will use for future consultations.



Air monitoring station

We participated in the Conference of European Directors of Roads (CEDR) noise call 2018 which invited research proposals on tyre noise, performance of noise barriers and psycho-acoustics (examining how people's reaction to noise can change because of changes to their environment). These research proposals will be reviewed by the CEDR project board, which includes Highways England representatives, in early 2019-20. Approved projects will then start during the year.

Supporting electric vehicles

Chargepoint provision

We are making progress in providing the infrastructure to support the take up of electric vehicles. At the end of 2018, 83% of the strategic road network was within 20 miles of an electric vehicle charge point.

We have awarded a contract, worth £2.8 million, to provide a further 59 charge points where there is currently limited or no coverage. These 59 charge

5. Improving the environment



Electric vehicle charge point

points will extend coverage to meet our RIS1 commitment of 95% coverage and should all be commissioned by the end of Q4 2019-20.

During 2019-20, using the grants we have given them, local authorities will deliver a total of 19 charge points at those locations on the network where there is currently limited or no coverage.

Zero emission vehicles

We will use our Air Quality Designated Fund to support the government's Road to Zero Strategy by piloting delivery of additional electrical capacity at a motorway service area. We will work closely with the Office for Low Emission Vehicles and the Department for Business, Energy & Industrial Strategy to carry out a feasibility study and detailed design by the end of Q4 2019-20.

We expect that recommendations from the Zero Emission HGV Project, a collaboration with the DfT which researched the most promising technology capable of achieving zero emission

at the tailpipe of HGVs, will be clear by early 2019-20. Subject to the recommendations, we will continue to support the DfT develop preferred options to support achieving the long-term ambition for zero-emission HGVs.

Reducing our carbon footprint

We are working to support the government's commitments in the Climate Change Act to achieve an 80% reduction in carbon emissions by 2050, compared to a 1990 baseline. We are required to contribute towards the Greening Government Commitments set for the DfT. The current DfT target is a 44% reduction in emissions by 2019-20, against the 2009-10 baseline. The trend of our reductions shows we remain on target to exceed this figure, and we expect to record a reduction of more than 46% against the baseline.

In 2019-20 we will launch updates and revisions to the carbon tool we use to collect data about CO₂ emissions to improve reporting by the supply chain and ensure suppliers meet



the reporting requirements. This will include improving the software and consistency of reporting in the carbon tool and introducing a mechanism to follow up any missing submissions.

The Design Panel and the principles of good design

To help us reduce the aesthetic and environmental impact of our roads and bridges, we published our design vision and principles, 'The road to good design', in January 2018. We expect to include these principles in our Design Manual for Roads and Bridges, the latest version of which will be published in 2019-20, and to embed them within our Project Control Framework process. We will also review and apply key recommendations from the Design Review Panel's annual report.

Protecting heritage assets

During the year, we will work with partners such as the National Trust and English Heritage to assess and develop applications for projects in the cultural heritage part of the Environment Designated Fund.

To support our work to protect culture and heritage sites near our network we will carry out a thorough review of the Cultural Heritage Asset Management Plan data and make sure that it is compatible with our environmental information system. In 2019-20 we will also publish the cultural heritage updates to the Design Manual for Roads and Bridges.

The conservation and enhancement of cultural heritage continues to be an integral part of all our road improvement projects. The A14

Cambridge to Huntingdon project included the largest archaeological excavation ever undertaken in the UK and post-excavation analysis will continue in 2019-20. The A303 Stonehenge Bypass scheme will proceed to the examination stage and, subject to the Secretary of State's consent, will significantly enhance the World Heritage Site.

Landscape improvements

We will use our Environment Designated Fund to mitigate the visual impacts of the network through suitable interventions, to enhance landscape character and quality. We expect to complete feasibility studies for the Visual Impact Severity Priority list and the Landscape Enhancement list by Q4 2019-20. We will carry out detailed design for 80% of those schemes identified as feasible and plan to complete 75% of schemes by Q4 2019-20. Further work with stakeholders will help to identify new areas where the SRN's impact on the landscape can be improved and to understand potential concerns about proposed schemes.

These schemes include the A30 Chiverton to Carland Cross⁹¹, which will provide an innovative programme of landscape improvements by working in close partnership with stakeholders and landowners in the area. The work will be overseen by local stakeholders on our behalf and long-term management contracts will be drawn up with landowners to ensure our investment is properly established and managed. If this approach is successful, we will use it to deliver other landscape improvements.

Following consultation with stakeholders, to avoid detrimental landscape impacts within the Peak District National Park, the A628 climbing lanes⁹⁶ have been removed from the programme.

⁹¹Numbers refer to the map numbers used in Annex 1



A556 Green bridge

Reducing litter

We will carry out further work in our Influencing Littering Behaviour campaign, including installing more drive-up bins at a number of motorway service areas. As we have done in previous years, we will support Keep Britain Tidy's Great British Spring Clean through cleaning hotspots, providing car and lorry-height bins, anti-littering posters, signs and time lapse cameras.

Improving water quality and resilience to flooding

We have set out plans worth £64.6 million to tackle flooding in 2019-20. As part of this, we expect to carry out work at up to 37 flooding hotspots and 53 outfalls. A further 100 water projects are in feasibility or design phase in preparation for RIS2.

Working with the Environment Agency and the Canal & River Trust, we are developing a partnership programme of schemes for RIS2 and have identified six partnership projects to be delivered 2019-20, including:

- M5 – Titford Pools with the Canal & River Trust
- A38 – Stover Park with Natural England
- A34 – Oxford Flood Alleviation with the Environment Agency

This work will be supported by improvements in our assurance and reporting processes. The 2019-20 introduction of a water environment performance metric in the Routes to Market contracts will strengthen performance in this area, incentivising suppliers to consider and introduce enhancement initiatives as part of scheme design.

Enhancing biodiversity

Our next annual biodiversity report will be produced in the summer of 2019. We will deliver biodiversity enhancement schemes through the Environment Designated Fund, including grassland improvement schemes and connectivity projects, targeting 20 schemes for delivery in 2019-20.

To meet our commitments on Nature Improvement Areas we have worked closely with Natural England and the Yorkshire Wildlife Trust to identify three locations in the Humberhead Levels. Subject to budget approval and value for money assessment, we will be starting work on the first location in this project (M18 Potteric Carr) in 2019-20.

The Morecambe Bay Nature Improvement Area delivery works will continue until the end of Q4 2019-20. This project is part of the Green Transport Corridor Pilot Partnership project

which started in 2015 in partnership with Natural England and Cumbria Wildlife Trust. In 2019-20 we will carry out further species rich grassland management work, reptile and botanical survey work, woodland improvement works and the removal of invasive species. The habitats created will be managed in future road periods through our Asset Delivery Maintenance and Response contractor and surveyed by our in-house Environment Team. This will ensure that the biodiversity of these habitats is maintained and that lessons learned are recorded.

Reducing our impact on the environment is an important part of all our work. We will continue to use the Environment Designated Fund to support specific projects to reduce noise and pollution and the visual impact of our roads. In addition, we will take further steps to reduce carbon emissions and support the take up of electric vehicles.





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



A27 Cycle path network

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 2019-20

Delivering our cycling and accessibility strategies

During 2019-20 we will deliver 109 schemes from our Cycling, Safety and Integration Designated Fund, including local schemes and some from our major projects programme. These will deliver a total of 57 new or improved crossings and 50 cycle schemes.

As part of our M49 Avonmouth Junction⁸⁶ scheme, we will create a network of walking and cycling routes in the port area of Bristol. In 2019-20 we will develop and deliver four routes, totalling over 10km of segregated cycle paths. This work will involve a community-led redesign of Avonmouth High Street that will significantly enhance the experience of cycling in the area. The new and improved routes will directly link to the National Cycle Network.

We have awarded a contract to Sustrans to deliver a £3 million programme of work to make it easier to cycle and walk across and alongside our network. The project has identified seven new schemes in West Yorkshire, Lincolnshire, Oxfordshire, Kent and Devon. It will enhance the National Cycle Network by extending it and improving existing links. The project illustrates how we are meeting our designated fund commitments by using alternative supply chains and external expertise.

During the year we will introduce counters to log the numbers of pedestrians, cyclists and equestrians at certain locations on our network. This information will help us develop more targeted and relevant performance metrics and identify improvements to meet these users' needs.

We will support the delivery of the Cycling and Walking Investment Strategy: Safety Review, published by the DfT in 2018, which identified a number of new measures and ideas, covering infrastructure design, law and guidance, enforcement, education, risk reduction and planning policy. We will change our approach as required, for example, by updating our design standards.

In 2019-20 we will develop and launch a pedestrian, cycling and equestrian scheme toolkit which will include best practice examples and development materials, such as how to assess propensity to take up active travel. This will improve the capability of our planners, designers, supply chain and service providers to provide better quality and more consistent schemes.

This year we will also complete a review and publish an update of our Interim Advice Note 195/16 Cycle Traffic and the Strategic Road Network and the Cycling, Walking and Horse-Riding Assessment and Review (HD42). These are design standards to support the development of infrastructure to provide direct, safe and segregated routes for vulnerable road users.

As part of our work to develop integration with the rail network, in 2019-20 we will deliver the A30 St Erth Multi-Modal Hub. Here we are contributing to the modernisation of an existing facility alongside the A30 at St Erth Railway Station and are supporting the One Public Transport System for Cornwall project. Our improvements to the highway infrastructure around the station will ease congestion and enable motorists to switch to public transport, providing the integration of rail, bus, walking and cycling.

We share the government's ambition to make the SRN more accessible, connected and integrated with other modes of transport. A range of projects in 2019-20 will make the roads safer for vulnerable users and provide better links with the network for pedestrians, cyclists, and horse riders.





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 RP1 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 RP1



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



Night work on the A14

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 2019-20

Focusing on efficiency

As set out in our Capital Efficiency Delivery Plan, our in-year efficiency milestone for 2019-20 against our RIS1 efficiency target is £490 million and our RIS1 cumulative efficiency milestone is £1.212 billion.

We are updating our commercial reporting systems, which collect data on supplier performance and costs in our Major Projects directorate, to enable more timely and efficient analysis of this data. We expect to start using the new system on major projects during 2019-20.

Adopting new approaches to delivery

Through our Routes to Market procurement programme we have established regional delivery partnerships. These partnerships bring together small and large scale contractors and

technical advisers who we will work alongside to deliver projects. We have awarded 13 contracts to companies who will become part of the Regional Delivery Partnership and will develop, design and construct £8.7 billion of projects across the SRN from 2019 to 2024. The contracts are primarily performance-based and will incentivise companies to improve the management of roadworks, operate more efficiently and safely, as well as encourage innovation.

We will also use the Routes to Market approach to award contracts for technical advisors for the Regional Delivery Partnership during 2019. These advisors will explore options for schemes, put forward the preferred option and provide assurance about work of our partners. The next planned Routes to Market contract is Technical Advisor Tranche 2, which we will award by the end of 2019-20.

In addition, we have started the procurement for six partners to join the Smart Motorways Alliance and expect these contracts to be awarded in the latter half of 2019-20. The alliance has been designed to:

- generate efficiency by standardising design, delivery and logistics processes, as well as by linking profits to performance rather than being linked to volumes of work completed
- invest in off-site manufacturing and production approaches
- strategically develop skills across the lifecycle of schemes by incentivising contractors and designers to invest in technology and to improve staff skills

Lean ways of working

Lean ways of working remove waste, focus on customer value and deliver efficiencies. In 2019-20 we expect to make a £90 million efficiency saving using Lean techniques, resulting in us meeting our £250 million Lean contribution towards the overall RIS1 efficiency target.

We are leading and supporting our supply chain partners with Lean deployment. We expect to achieve a £30 million saving in



Highways UK 2018



2019-20 due to a 35% increase in productivity when laying road surfacing, which corresponds to an improvement of 240 to 325 tonnes per shift. This reduces the impact of our work on road users as well as reducing cost.

We anticipate that the remaining £60 million Lean efficiency contribution will be delivered in 2019-20 through other improvement work, including:

- £6.8 million from the M5 Oldbury Viaduct project where a process refinement reduced unnecessary travel within the scheme
- £4 million from Yorkshire and Humberside where Lean collaborative planning has reduced the cost of noise barrier installation

Improving data quality

During 2019-20 the National Roads Telecommunications Services (NRTS) aim to ensure we have 99% availability of the services to our Regional Control Centres and the National Traffic Operations Centre, and to our 30,000 roadside assets (e.g. message

signs, signals, cameras). We will supply and install new road telecommunications services to schemes being developed, including those which provide speed control, queue protection and reduced travel time.

We have started a transformation and modernisation programme to enable us to provide new services and the latest generation of telecommunications equipment. This includes services to support the implementation of the CHARM project*.

During 2019-20, we will offer a new wireless roadside NRTS service to road improvement schemes where there is no existing fibre cabling. Wireless services are expected to result in a cost saving and facilitate more rapid deployment as a result of requiring significantly less physical roadside infrastructure.

During 2019 we will upgrade our structures asset management software. This system provides details of physical assets on the network such as bridges and gantries. The new system will provide better and more accessible information to help us manage these structures more efficiently.

We are making good progress towards meeting our challenging efficiency targets of £1.2 billion by the end of the RP1. This reflects our ongoing efforts to improve the way we work, the use of Lean techniques and improvements in our monitoring and reporting systems.

*Due to complexities in delivering the solution in our business and technical environments, the Common Highways Agency Rijkswaterstaat Model (CHARM) project is now expected to go live in the first centre by Q2 2020-21 rather than in 2019-20. CHARM is a joint initiative between Highways England and the Dutch road authority that will create a single more efficient operating system.



Severn Bridge





8. People and our company

What we plan to deliver in 2019-20

Supporting skills development

We currently have 83 graduates and 84 apprentices on Project Management, Quantity Surveying, Finance, IT, Data and Digital, Customer Services, Engineering and Business Administration schemes across the business. We are planning to recruit a further 43 graduates and 52 more apprentices in 2019-20 across these schemes.

The Roads Academy programmes for senior leaders, emerging leaders and the step up to leadership diploma are playing a key role in providing the roads sector with the skills it needs to meet the challenges ahead. In 2019-20, we will open applications for two new intakes and offer new bitesize training for member organisations that may not be able to release staff for longer-term academic commitments. We will also work to increase the number of members through a new membership model aimed at local authorities.



³¹Numbers refer to the map numbers used in Annex 1

Delivering our equality objectives

We report annually to government on how we are delivering against our equality objectives and the wider Public Sector Equality Duty. We also use our internal audit and assurance activity to monitor how each directorate is meeting these duties. We will publish a progress report on this work in 2019-20. In addition, we will review the progress we have made on our equality objectives 2016-2020 as part of our Public Sector Equality Duty.

We are developing a new online community insight mapping tool to enable people to comment on the planning of road schemes. In 2019-20 we will implement this tool for the work at M27 Romsey Bridge and A45 Chowderhill. In addition, we will trial it with three smart motorway schemes:

- M27 junctions 4-11³²
- M4 junctions 3-12²⁵
- M23 junctions 8-10³¹

By the end of 2019-20 we will also have implemented a new community engagement benchmark across all projects. These measures will help us to check how effectively we are engaging with diverse communities and taking account of their needs when delivering schemes.

We will further develop our staff networks including the launch of a BAME (Black, Asian and minority ethnic) and a carers' network. Following from successes last year, our LGBT+



network will raise its profile by engaging in Pride events in Birmingham, Croydon, Leeds and Manchester in 2019.

In 2019-20, we will use our Suppliers Diversity Forum to enable more of the supply chain to align with our ambitions to embed equality, diversity and inclusion (EDI) into all areas of our business. This will include putting proportionate EDI requirements in tender and performance management documents and processes, as well as developing skills, knowledge and understanding among suppliers. We will measure progress in these areas using our strategic alignment review tool and the EDI assessments of our suppliers.

Providing additional services

We perform other services on behalf of the government outside of the RIS1. These are governed by protocols under our Framework document and are activities or functions specified by the Secretary of State for Transport^{*}. Examples of our activity in 2019-20 on these protocols include:

National Salt Reserve

We will continue to manage the National Salt Reserve on behalf of the DfT and a new contract for the storage of the Reserve began in April 2018. We will carry out regular site inspections of the salt stockpiles to ensure that the salt is stored safely and is protected from the weather to minimise stock loss. We also carry out annual surveys of the salt stockpiles and report the quantities held.

^{*}Following transfer of responsibility for the Severn River Crossing to Highways England on 8th January 2018, the existing Severn River Crossing protocol was revised to take account of the transition and ongoing operation, maintenance and toll charge management to the end of the RP1.

Historic Railways Estate

The Historic Railways Estate team will continue to deliver the functions and responsibilities required under the Protocol.

These responsibilities are to:

- seek to reduce the liabilities for the Secretary of State in terms of individual structure safety
- undertake an annual programme of inspection for all structures
- establish an appropriate maintenance programme based on safety, priority ranking, deliverability and affordability
- identify opportunities for the disposal of land and property assets, obtaining market value
- annually undertake audits of 5% of inspection reports and all major site works
- manage existing and future residual liabilities for structures sold or transferred to non-statutory bodies

Abnormal Loads

We will manage and authorise the movement of abnormal loads on all roads in England and Wales, as well as authorise moves in Scotland, on behalf of the Secretary of State. We will also investigate ways to enhance the Electronic Service Delivery for Abnormal Loads system to meet the needs of the Government Digital Service.

To ensure abnormal loads are delivered to the nearest suitable port to minimise congestion on the roads, we will continue to implement the government's Water Preferred policy. In addition, we will support the industry in developing its strategies for moving the largest and heaviest abnormal loads for high profile infrastructure projects such as HS2, Hinkley Point C and Thames Tideway.

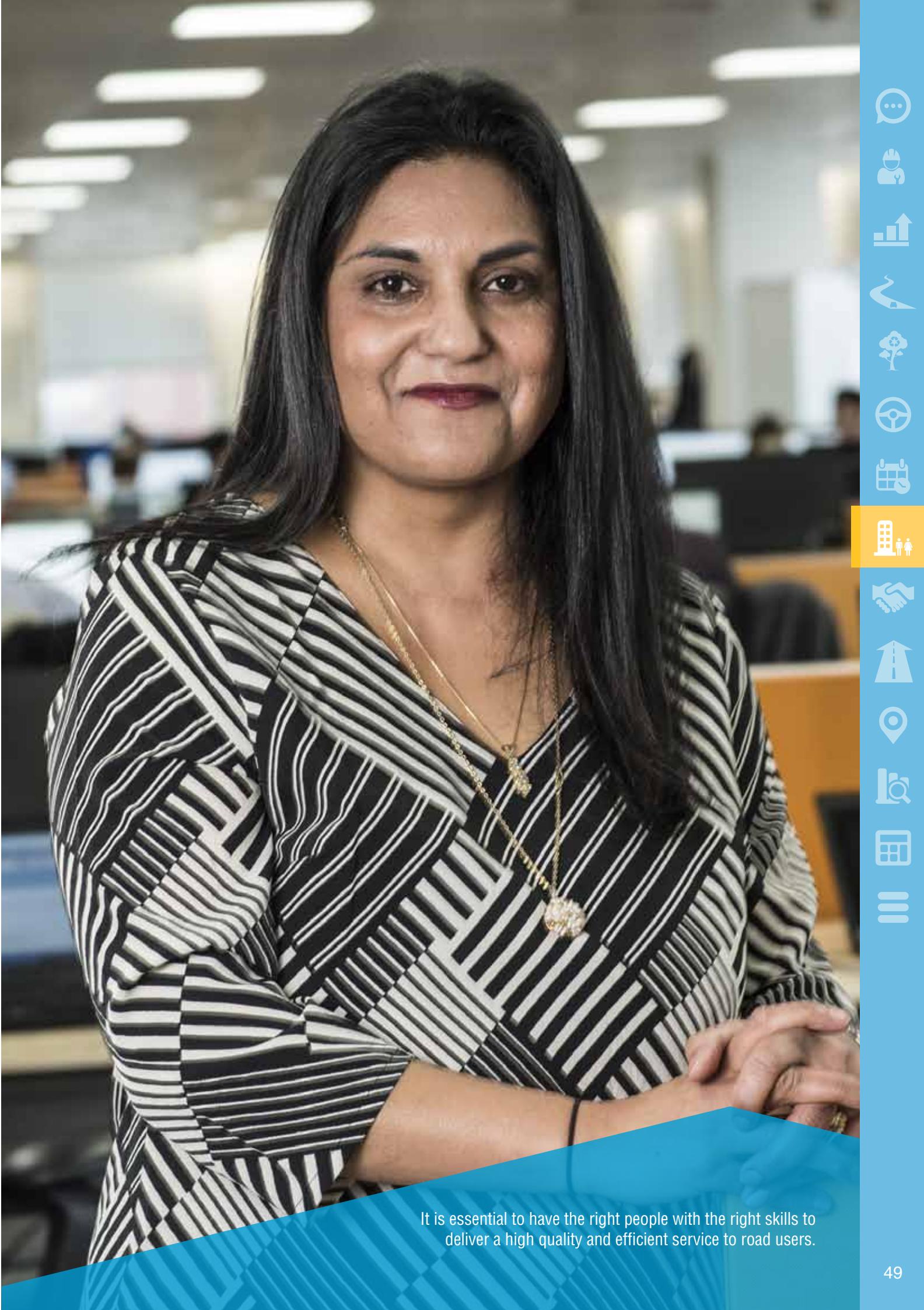
Technical Requirements

We have a responsibility to update, modernise and rationalise the Design Manual for Roads and Bridges. This is a series of 363 individual standards used throughout the UK and we are undertaking a significant review of these

standards, involving many technical specialists from Highways England, our supply chain and wider industry. We will digitalise the entire manual to create a single source of all the standards, making it easier to provide ongoing reviews and updates. We expect this work to be completed by the end of Q4 2019-20.

We have also started a review of the Manual of Contract Documents for Highway Works to ensure it supports innovation, efficiencies and enables digital construction systems. This digitalisation and updating work will be critical to our emerging vision for digital roads and for more efficient design and construction processes.

We know that it is essential that we have the right people, skills and incentives to meet our commitment to providing a high quality, efficient service to road users. Our work will continue to focus on providing effective training for our staff and embedding equality and diversity across both our own work and that of our suppliers.



It is essential to have the right people with the right skills to deliver a high quality and efficient service to road users.



9. Collaborative relationships

What we plan to deliver in 2019-20

Working collaboratively

We will launch a new corporate website during 2019-20 which will address the findings of our research into user needs. Its new features will mean we can increase our engagement with stakeholders and provide better social media and webchat functions. We have already successfully held consultations online for the A303 and Lower Thames Crossing, where we saw a significant increase in participation by stakeholders, and we will now review and improve this consultation process further.

In 2019-20 we plan to make greater use of Vimeo, a video streaming platform, in social media channels to support online public consultations and campaigns for complex infrastructure projects. In addition, we will develop our Instagram presence and carry out further research to understand which platforms drivers prefer to use.

By providing more information on Twitter from our regional control centres we can provide more localised and consistent updates about the network and increase engagement with projects. We expect all our regional control centre teams to have completed this training by Q2 2019-20. In the first quarter of this year we are rolling out a new service called Amplify which allows our staff, supply chain and partners to share Highways England social media content across their own accounts.

In discussions with stakeholders and to reduce network disruption around Manchester we have rescheduled two projects to phase delivery of works; starting with M56 junctions 6-8⁴¹ in 2019-20, followed by M6 junctions 21a-26³³ in RP2. We are reviewing the scope of the M6 junction 22 upgrade⁵² scheme to ensure it supports a local development and local highway improvements.

The A27 Arundel bypass¹⁰⁷ went to a second consultation based on feedback from the first consultation and the start of works has been postponed to RP2 as a result.

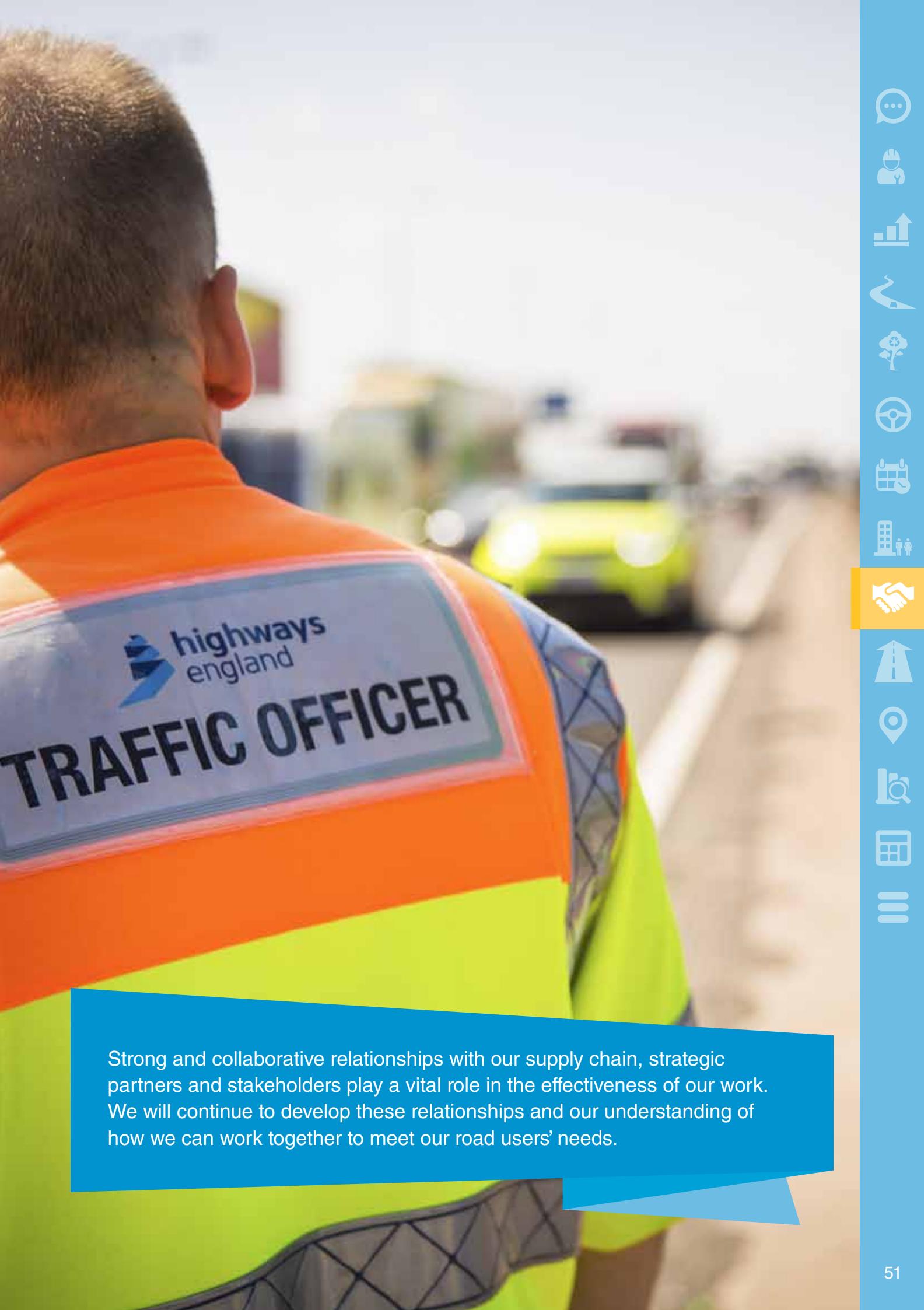
The M54 to M6³⁶ scheme now links the M54 and M6 directly rather than to the M6 Toll.

Developing a smart motorways training package

We will continue to provide the smart motorway driver education course to national organisations in the freight and logistics sector, building on the 80 organisations which have already received the training. We aim to deliver the training to up to another 50 organisations over 2019-20.

In 2018-19 we provided the course to 20 companies that are accredited to deliver Driver Certificate of Professional Competence training and this year we will gather regular feedback from all these organisations to understand how the course has been used. In addition, we have started to develop a version of the training package specifically for bus and coach operators which we will make available in 2019.

⁴¹Numbers refer to the map numbers used in Annex 1



Strong and collaborative relationships with our supply chain, strategic partners and stakeholders play a vital role in the effectiveness of our work. We will continue to develop these relationships and our understanding of how we can work together to meet our road users' needs.





10. Planning

We are applying our learning from RP1 and planning for the next road period from April 2020 to March 2025.

Over the course of the last year we have been co-ordinating activity from across the business and gathering feedback from our stakeholders, including the DfT, the ORR and Transport Focus, to write our draft Strategic Business Plan. This is in response to the draft RIS2 that was published by the DfT in October 2018, and is undergoing an efficiency review by the ORR.

Within our plans for RIS2 our ambition is:

- to enable safer, more reliable journeys, directly supporting the UK economy
- to be a greener network, working harmoniously with the environment
- to be a network that enables seamless and integrated journeys
- to be a smarter network, responding to the predicted rapid technological change

The RIS2 performance specification will set levels of performance that we are expected to achieve using the available funding.

The expectation is that the performance specification will be split into six outcome areas:

- improving safety for all
- fast and reliable journeys
- a well maintained and resilient network
- being environmentally responsible

- meeting the needs of all users
- achieving efficient delivery

In the next road period, we will focus on our core activities: to operate, maintain and upgrade the SRN; run the company; deliver the committed RIS1 schemes; and deliver Protocol services.

We will continue to challenge ourselves on costs. And, we will continue to assess deliverability until the investment plan is confirmed in the final RIS2. Some of the start dates for our schemes have moved from the end of 2019-20 into the next road period. Work is continuing on these schemes and the start of works date will be confirmed as part of the next RIS. We are taking steps to further develop the company and improve our capacity and capability, and we are confident we can continue to improve each year.

Our supply chain is integral to the successful implementation of the investment plan, and our preparations for the next road period, along with new contracting arrangements, will help create a sustainable, diverse and balanced supply chain for roads delivery over the next decade.

The DfT's final RIS2 is expected to be published in autumn 2019 and in response our final Strategic Business Plan and our Delivery Plan for 2020-25 will follow in 2020.

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.



M25 at night





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 | North West | | Complete | 2017-18 Q2 | Complete |
| 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 | Complete | 2018-19 Q4 | Complete |
| 22 | A14 Cambridge to Huntingdon | East | 2016-17 Q3 | Started | 2020-21 | |
| 23 | M20 junction 10a ¹ | South East and London | 2017-18 Q4 | Started | 2018-19 Q4 | |
| 24 | A19/A1058 Coast Road | North East and Yorkshire | 2016-17 Q2 | Complete | 2018-19 Q4 | Complete |
| 25 | M4 junctions 3-12 | South East and London | 2016-17 Q4 | Started | 2021-22 | |
| 26 | A63 Castle Street | North East and Yorkshire | 2019-20 Q4 | | 2024-25 | |
| 27 | M1 junctions 24-25 | Midlands | 2016-17 Q4 | Complete | 2018-19 Q3 | Complete |
| 28 | M6 junctions 2-4 | Midlands | 2017-18 Q4 | Started | 2019-20 Q4 | |

¹The programme has been extended to manage a clash between gas main and bridge foundations. Expect open for traffic in 2019-20 Q3.

| Updated scheme schedule 2015-2020 | | | | | | |
|-----------------------------------|---|--------------------------|----------------|----------|------------------|----------|
| Map Ref | Scheme | Region | Programme | | | |
| | | | Start of works | | Open for traffic | |
| | | | Commit | Status | Commit | Status |
| 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 Q4 | |
| 31 | M23 junctions 8-10 | South East and London | 2017-18 Q4 | Started | 2019-20 Q4 | |
| 32 | M27 junctions 4-11 | South East and London | 2018-19 Q3 | Started | 2020-21 | |
| 33 | M6 junctions 21a-26 ² | North West | RP2 | | | |
| 34 | M60 junctions 24-27 and junctions 1-4 ¹⁰ | North West | RP2 | | | |
| 35 | A19 Testos | North East and Yorkshire | 2018-19 Q4 | Started | 2020-21 | |
| 36 | M54 to M6 ¹¹ | Midlands | RP2 | | | |
| 37 | A27 Chichester bypass ¹⁴ | South East and London | | | | |
| 38 | A38 Derby junctions | Midlands | RP2 | | | |
| 39 | A2 Bean and Ebbsfleet | South East and London | 2019-20 Q4 | | 2022-23 | |
| 40 | M62 junctions 10-12 | North West | 2017-18 Q4 | Started | 2019-20 Q4 | |
| 41 | M56 junctions 6-8 ⁷ | North West | 2019-20 Q4 | | 2021-22 | |
| 42 | M3 junctions 9-14 | South East and London | 2019-20 Q4 | | 2021-22 | |
| 43 | A19 Downhill Lane junction improvement ² | North East and Yorkshire | RP2 | | | |
| 44 | A19 Norton to Wynyard | North East and Yorkshire | 2019-20 Q4 | | 2022-23 | |
| 45 | A1 and A19 technology enhancements ¹⁵ | 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 Q3 | | 2021-22 | |
| 48 | M62/M606 Chain Bar ¹⁵ | North East and Yorkshire | | | | |
| 49 | M62 junctions 20-25 | North East and Yorkshire | 2019-20 Q3 | | 2024-25 | |
| 50 | A585 Windy Harbour – Skippool | North West | 2019-20 Q4 | | 2022-23 | |
| 51 | A5036 Princess Way – access to Port of Liverpool ² | North West | RP2 | | | |
| 52 | M6 junction 22 upgrade ⁶ | North West | 2019-20 | | | |
| 53 | M53 junctions 5-11 ¹⁵ | North West | | | | |
| 54 | M56 new junction 11a ⁶ | North West | 2019-20 | | | |
| 55 | M6 junction 19 improvements | North West | 2019-20 Q4 | | 2021-22 | |
| 56 | A500 Etruria widening | Midlands | 2018-19 Q4 | Started | 2020-21 | |

²Schemes SoW have been moved to RP2 to align with stakeholder and network requirements - as agreed with the DfT this year. Work is continuing on these schemes.

⁶Schemes under review.

⁷Scheme SoW altered from 2018-19 Q4 to 2019-20 Q4 as agreed with the DfT.

¹⁰Schemes will be included in the RIS2 planning prioritisation process.

¹¹Scope clarified as agreed with the DfT.

¹⁴Scheme has been stopped as agreed with the DfT.

¹⁵Scheme paused for consideration in RIS2.



Updated scheme schedule 2015-2020

| Map Ref | Scheme | Region | Programme | | | |
|---------|---|-----------------------|----------------|----------|------------------|----------|
| | | | Start of works | | Open for traffic | |
| | | | Commit | Status | Commit | Status |
| 57 | M1 junctions 23a-24 | Midlands | 2019-20 | Complete | 2018-19 Q3 | Complete |
| 58 | M6 junction 10 improvement | Midlands | 2019-20 Q4 | | 2022-23 | |
| 59 | A5 Dodwells to Longshoot widening | Midlands | RP2 | | | |
| 60 | M42 junction 6 | Midlands | 2019-20 Q4 | | | |
| 61 | A46 Coventry junction upgrades | Midlands | 2019-20 Q4 | | | |
| 62 | M40/M42 interchange smart motorways | Midlands | 2019-20 Q4 | | 2021-22 | |
| 63 | A45/A6 Chowns Mill junction improvement | Midlands | 2019-20 Q4 | | 2021-22 | |
| 64 | M5 junctions 5,6 and 7 junction upgrades | Midlands | 2019-20 | Complete | 2018-19 Q4 | Complete |
| 65 | A43 Abthorpe junction | Midlands | 2019-20 | Complete | 2017-18 Q1 | Complete |
| 66 | A428 Black Cat to Caxton Gibbet | East | RP2 | | | |
| 67 | M11 junctions 8-14 – technology upgrade ¹⁵ | East | | | | |
| 68 | A12 Chelmsford to A120 widening | East | RP2 | | | |
| 69 | A12 whole-route technology upgrade ¹⁵ | East | | | | |
| 70 | A1(M) junctions 6-8 smart motorway | East | 2019-20 Q4 | | 2021-22 | |
| 71 | M11 junction 7a – junction upgrade ⁴ | East | 2019-20 Q4 | | 2022-23 | |
| 72 | A34 Oxford junctions ⁵ | South East and London | 2019-20 Q2 | | 2021-22 | |
| 73 | A34 technology junction enhancements ⁵ | South East and London | 2019-20 Q2 | | 2021-22 | |
| 74 | M25 junction 25 improvement | South East and London | RP2 | | | |
| 75 | M25 junction 28 improvement | South East and London | RP2 | | | |
| 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 Q4 | | 2021-22 | |
| 78 | M25 junctions 10-16 | South East and London | RP2 | | | |
| 79 | M25 junction 10/A3 Wisley interchange | South East and London | RP2 | | | |
| 80 | M3 junction 9 improvement | South East and London | RP2 | | | |
| 81 | M3 junction 10-11 improved sliproads | South East and London | 2019-20 Q4 | | 2021-22 | |
| 82 | M3 junctions 12-14 improved sliproads | South East and London | 2019-20 Q4 | | 2021-22 | |
| 83 | M27 Southampton junctions ² | South East and London | RP2 | | | |
| 84 | M271/A35 Redbridge roundabout upgrade | South East and London | 2019-20 Q1 | | 2019-20 Q4 | |
| 85 | A31 Ringwood | South East and London | RP2 | | | |
| 86 | M49 Avonmouth junction | South West | 2019-20 | Started | 2019-20 Q4 | |

²Schemes SoW have been moved to RP2 to align with stakeholder and network requirements - as agreed with the DfT this year. Work is continuing on these schemes.

⁴Commitment met by Highways England with agreement to transfer funds to Essex County Council.

⁵Schemes combined in to the A34 Oxford enhancements scheme.

¹⁵Scheme paused for consideration in RIS2.

| Updated scheme schedule 2015-2020 | | | | | | |
|-----------------------------------|--|--------------------------|----------------------------|----------|------------------|----------|
| Map Ref | Scheme | Region | Programme | | | |
| | | | Start of works | | Open for traffic | |
| | | | Commit | Status | Commit | Status |
| 87 | M5 Bridgwater junctions ¹⁰ | South West | RP2 | | | |
| 88 | A52 Nottingham junctions | Midlands | 2019-20 | Started | 2023-24 | |
| 89 | A14 junction 10a ¹⁵ | Midlands | | | | |
| 90 | A5 Towcester relief road ⁹ | Midlands | 2019-20 | | | |
| 91 | A30 Chiverton to Carland Cross | South West | 2019-20 Q4 | | 2023-24 | |
| 92 | A1 North of Ellingham | North East and Yorkshire | 2019-20 | Started | 2019-20 Q4 | |
| 93 | A1 Morpeth to Ellingham dualling ⁸ | North East and Yorkshire | RP2 | | | |
| 94 | A1 Scotswood to North Brunton | North East and Yorkshire | 2019-20 Q4 | | 2022-23 | |
| 95 | A1 Birtley to Coal House widening | North East and Yorkshire | RP2 | | | |
| 96 | A628 climbing lanes ³ | North East and Yorkshire | | | | |
| 97 | A61 Westwood Roundabout ¹² | North East and Yorkshire | 2019-20 Q4 | | 2021-22 | |
| 98 | Mottram Moor link road ⁸ | North West | RP2 | | | |
| 99 | A57(T) to A57 link road ⁸ | North West | RP2 | | | |
| 100 | A47 North Tuddenham to Easton | East | RP2 | | | |
| 101 | A47 Blofield to North Burlingham dualling | East | RP2 | | | |
| 102 | A47 Acle Straight | East | 2019-20 | Complete | 2017-18 Q4 | Complete |
| 103 | A47 and A12 junction enhancements ¹³ | East | 2018-19 (Original date) | | | |
| 104 | A47/A11 Thickthorn junction | East | RP2 | | | |
| 105 | A47 Guyhirn junction | East | RP2 | | | |
| 106 | A47 Wansford to Sutton | East | RP2 | | | |
| 107 | A27 Arundel bypass ¹⁶ | South East and London | RP2 | | | |
| 108 | A27 Worthing and Lancing improvements ⁶ | South East and London | 2019-20 | | | |
| 109 | A303 Amesbury to Berwick Down | South West | RP2 | | | |
| 110 | A303 Sparkford – Ilchester dualling | South West | 2019-20 Q4 | | 2022-23 | |
| 111 | A358 Taunton to Southfields ² | South West | RP2 | | | |
| 112 | A50 Uttoxeter (Project A) | Midlands | 2015-16 Q3 | Complete | 2018-19 Q4 | Complete |

²Schemes SoW have been moved to RP2 to align with stakeholder and network requirements - as agreed with the DfT this year. Work is continuing on these schemes.

³Due to detrimental impact within the national park, this scheme will not be taken forward as agreed with the DfT.

⁶Schemes under review.

⁸Due to complex options development, these schemes will start in RP2.

⁹Scheme is being delivered by developer.

¹⁰Schemes will be included in the RIS2 planning prioritisation process.

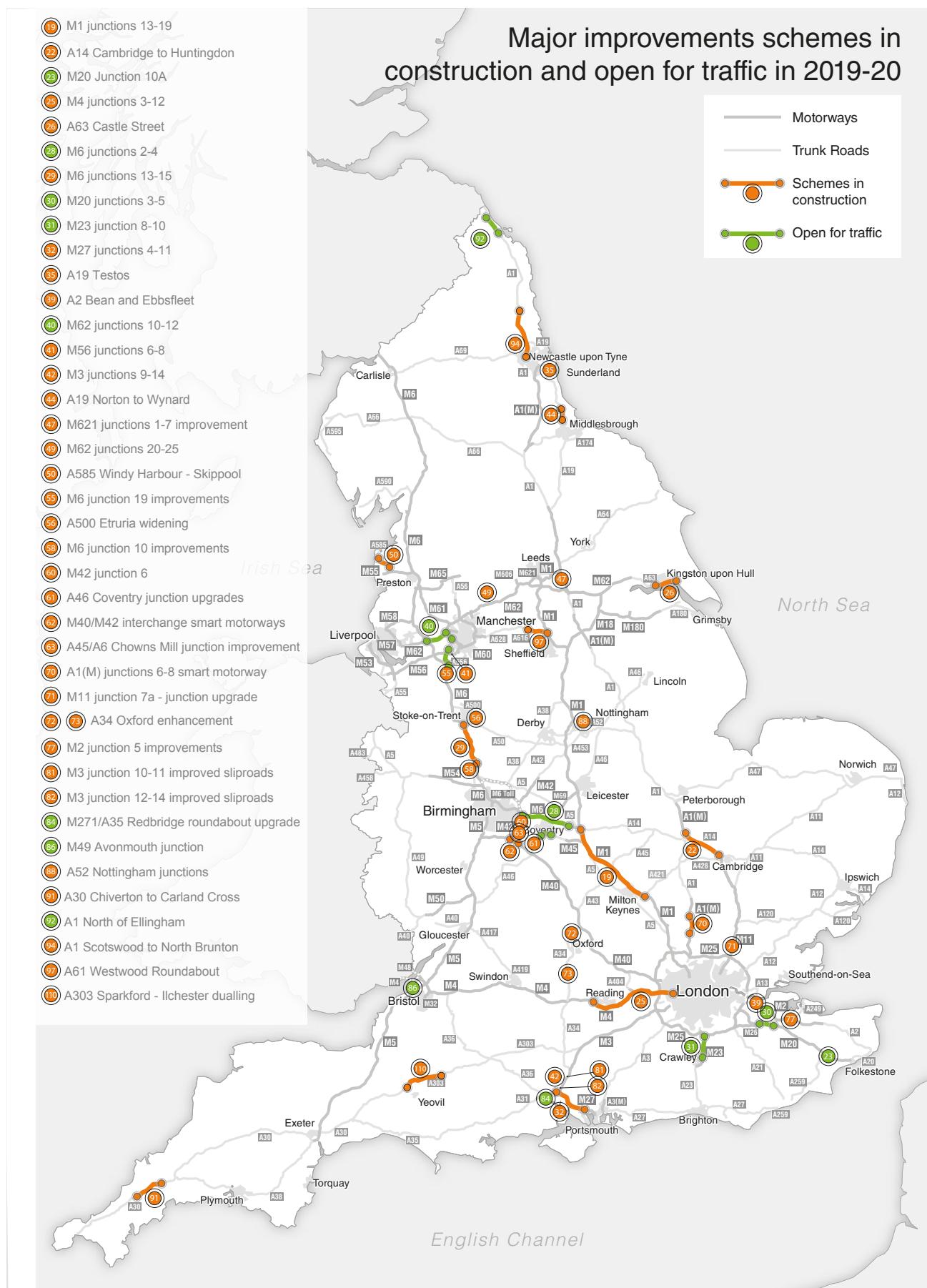
¹²A61 Dualling replaced with A61 Westwood roundabout as agreed with DfT.

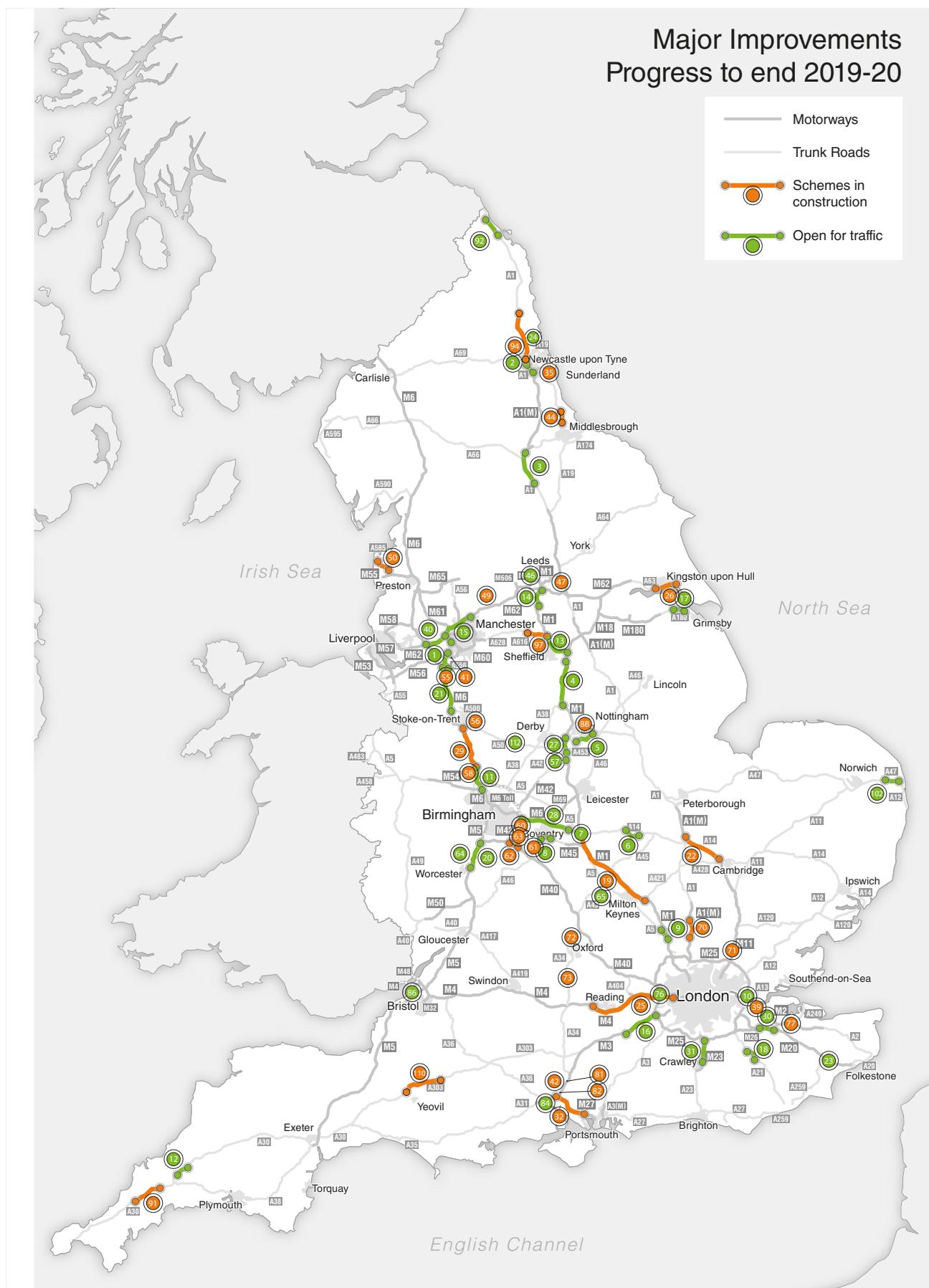
¹³Scheme is under review in light of the third river crossing.

¹⁵Scheme paused for consideration in RIS2.

¹⁶Due to complex options development and responding to stakeholder concerns, this scheme will start in RP2.







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*Numbers refer to the scheme numbers used in the Annex 1 scheme tables





Annex 2: Key performance indicators and performance indicators

| As set out in January 2019 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 RP1, 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 |
| | 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 |
| Making the network safer | KPI | The number of KSIs on the SRN. | A reduction in the number of KSIs from the baseline figure of 2,969 to 1,782 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 2019 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 RP1. | 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 or 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



| As set out in January 2019 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 RP1, on an ongoing annual basis. |
| | PI | Number of air quality pilot studies completed. | N/A |
| | PI | Carbon dioxide equivalents (or CO ₂ e) in tonnes associated with Highways England's activities. | N/A |
| | PI | Carbon dioxide equivalents (or CO ₂ 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 2019 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 RP1. | 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

| £ million | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | RP1 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Capital plans | | | | | | |
| <i>Modernise/enhance</i> | | | | | | |
| 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 |
| Sub total | 1,073 | 1,393 | 1,383 | 1,836 | 2,196 | 7,881 |
| <i>Maintain/renew</i> | | | | | | |
| Renewals | 709 | 595 | 788 | 761 | 805 | 3,658 |
| <i>Other</i> | | | | | | |
| Non-RIS delivery | 149 | 43 | 36 | -60 | 134 | 302 |
| Autumn Statement 2016 | - | - | 111 | 111 | 45 | 267 |
| Total capital | 1,931 | 2,031 | 2,318 | 2,648 | 3,180 | 12,108 |

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:

- £140 million provided in 2015-16 to complete delivery of small improvement schemes which were not funded in the RIS
- £8 million provided to repair damage as a result of the Cumbria Flooding (in 2015-16)
- £161 million for the acceleration of improvements to upgrade sections of the M62 to a four-lane smart motorway
- net £49 million made available for M20 related enhancements for both interim and long term solutions to Operation Stack
- £267 million of additional funding announced in the Autumn Statement 2016 (shown separately)
- £28 million increase from 2016-17 onwards reflecting the reclassification of Research & Development budgets from resource to capital

The table also includes budget changes agreed with the Department for Transport (DfT) in relation to 2018-19 and 2019-20 which have been, or will be, incorporated into the DfT Main or Supplementary Estimates:

- £105 million of additional funding included in the 2019-20 Main Estimate for additional activity not included in the original RIS funding, £100 million of this is being brought forward from future years (RIS2).
- transfer of funding between 2017-18, 2018-19 and 2019-20 to smooth the programme across these three years (no change to total RIS funding)

| Resource/operational | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | RP1 |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Operate the network</i> | | | | | | |
| <i>Operations</i> | | | | | | |
| Operations | 253 | 195 | 175 | 203 | 224 | 1,050 |
| PFI contracts | 394 | 416 | 429 | 413 | 418 | 2,070 |
| Maintenance and renewals | 279 | 254 | 256 | 257 | 256 | 1,302 |
| Sub total | 926 | 865 | 860 | 873 | 898 | 4,422 |
| <i>Support</i> | | | | | | |
| Support | 107 | 143 | 158 | 139 | 147 | 694 |
| Protocols | 39 | 40 | 56 | 72 | 71 | 278 |
| Autumn Statement 2016 | 0 | 0 | 6 | 11 | 10 | 27 |
| Total Resource/Operational | 1,072 | 1,048 | 1,080 | 1,095 | 1,126 | 5,421 |

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:

- £27 million additional funds made available in the Autumn Statement 2016 for Strategic Studies
- £70 million additional funds made available for the Severn River Crossing Protocol. This reflected the change in arrangements following the end of the concession
- £28 million reduction from 2016-17 onwards reflecting the reclassification of Research & Development budgets from resource to capital

The table also includes budget changes agreed with DfT in relation to 2018-19 and 2019-20 which are part of the DfT Main or Supplementary Estimates:

- £20 million reduction from original funding level partly offset by £9 million additional funding agreed at the 2018-19 Supplementary Estimate relating to the Dart Charge Protocol
- £18 million of additional funding included in the 2019-20 Main Estimate for additional activity not included in the original funding



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 |
| AD | Asset Delivery |
| 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 |
| HGV | Heavy goods vehicle |
| InterCor | Interoperable Corridors project |
| KPI | Key performance indicator - a key metric used to define and measure progress towards organisational objectives |
| NRTS | National Roads Telecommunications Services |
| ORR | 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 |
| RIS1 | 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 |
| VSL | Variable speed limit |





M25 junction 25

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