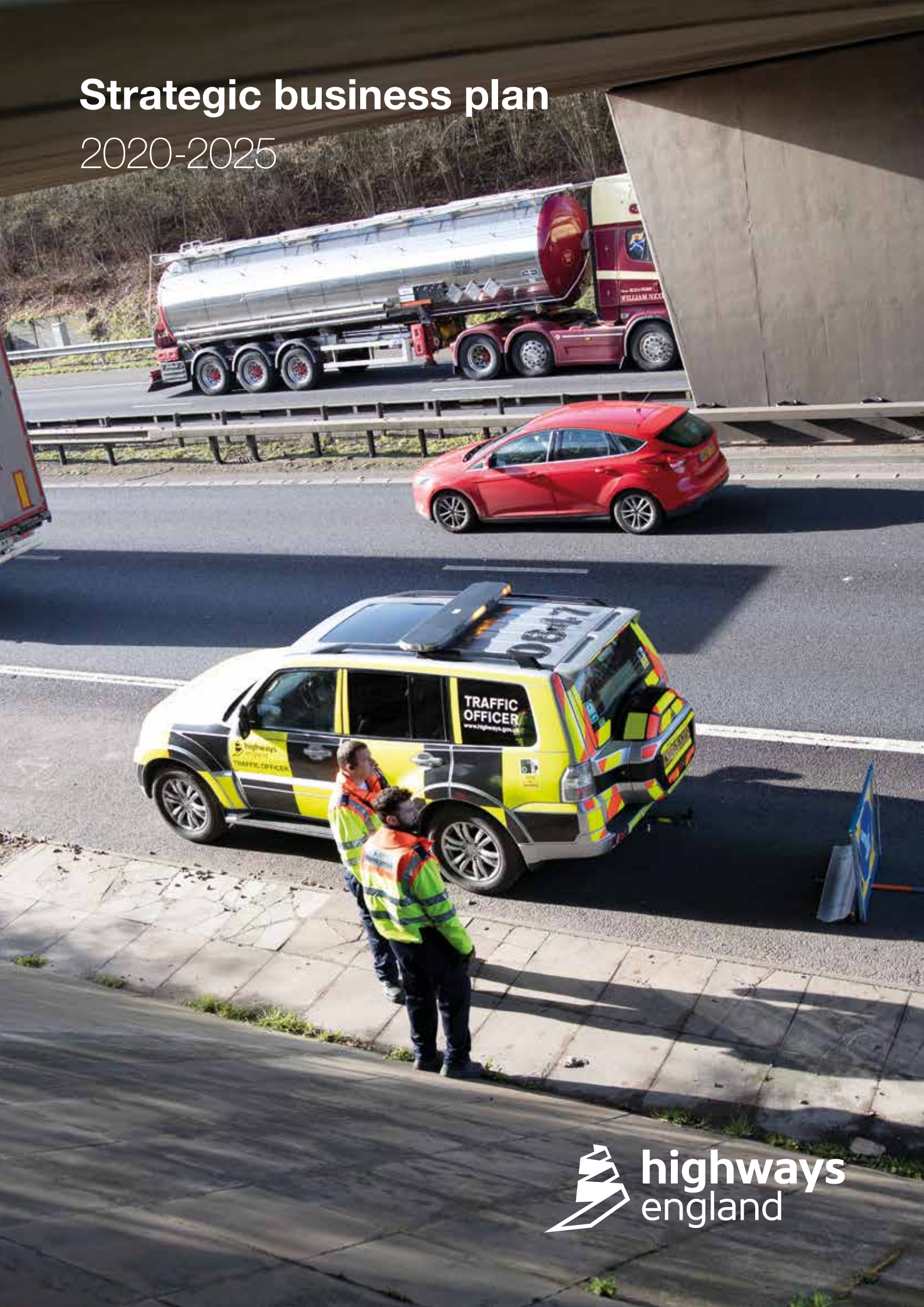


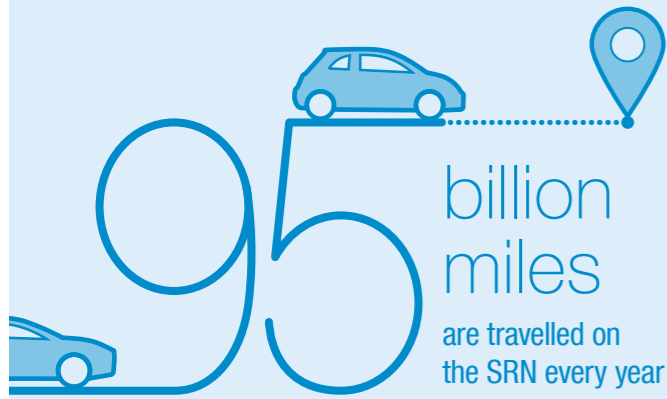
Strategic business plan

2020-2025

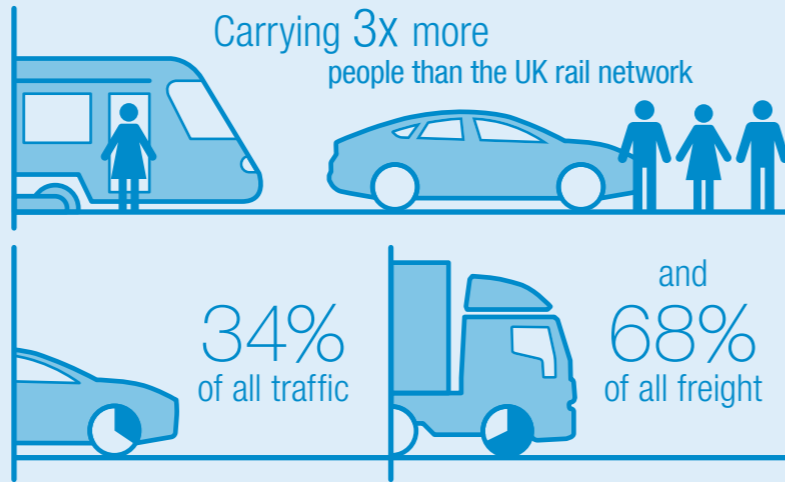


We are Highways England

People rely on our roads

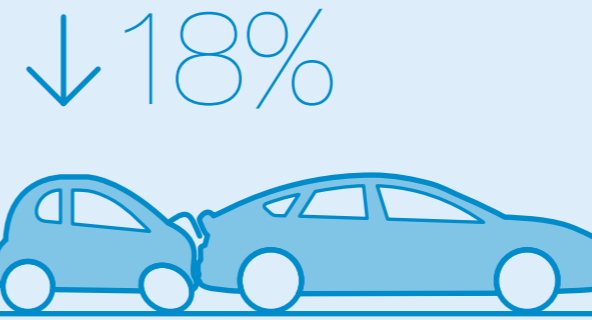


to connect people and drive the economy



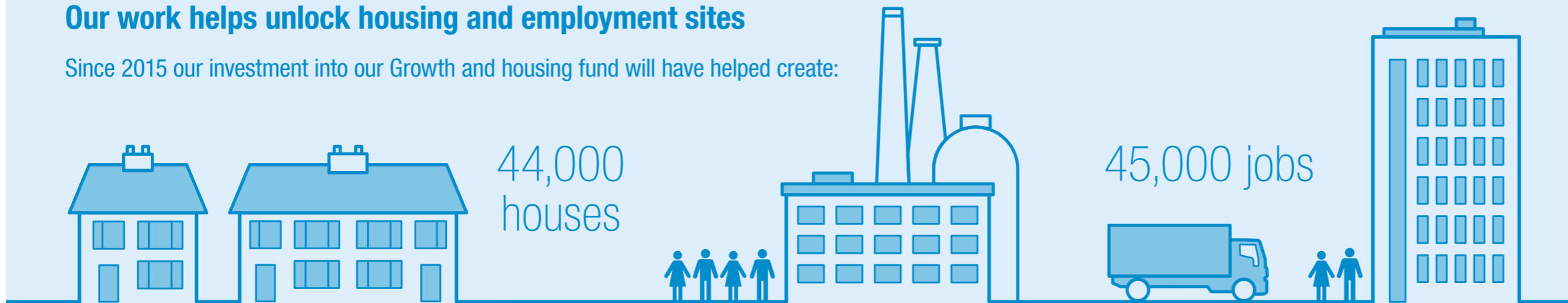
Since 2015

We have reduced the number of casualties on our roads by



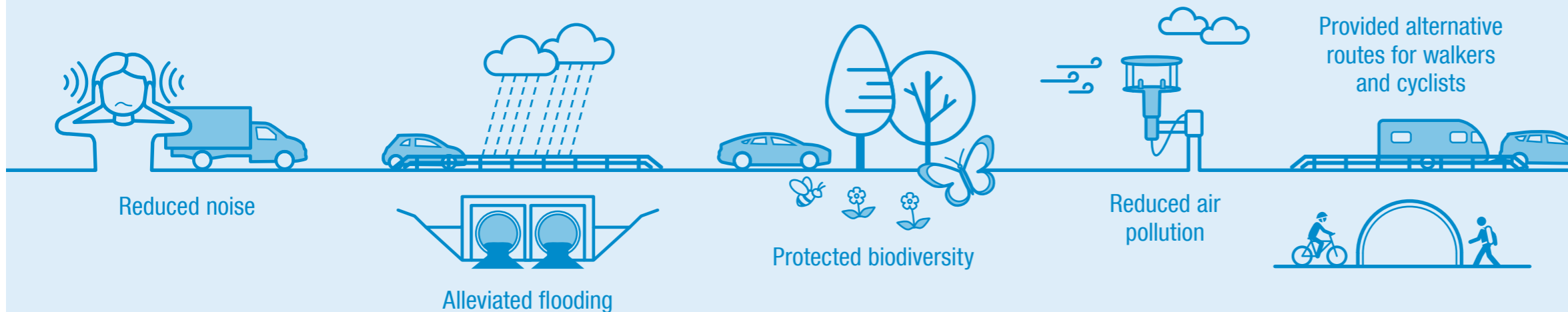
Our work helps unlock housing and employment sites

Since 2015 our investment into our Growth and housing fund will have helped create:



We care about the communities that live near our roads

Since 2015 we have committed over £528 million to projects which have:



Since 2015, we have helped customers make safer and more reliable journeys on our roads. Our 4,300 miles of motorways and major A-roads help people travel from Berwick-upon-Tweed to Penzance, and from Carlisle to Dover. Everything we do, from designing our roads to clearing incidents, helps keep traffic moving 24 hours a day, 365 days a year.

As one of England's largest landowners, we have a strong focus on sustainability. We are proud of the work we do to look after the wildlife that lives alongside our network, and to protect and improve the environment for future generations. We work closely with local communities, making sure our roads benefit them.

We have opened 36 enhancement schemes for traffic since 2015. Some have helped connect communities to work. Others have stimulated economic growth and housing. Many have provided alternative routes for walkers and cyclists. All have helped to connect the country.

We are always innovating and looking at more efficient ways of delivering our projects, making sure we deliver value for money for the taxpayer. With demand for our roads set to increase, we are already looking ahead to make sure our network is ready for future generations.

The strategic documents at a glance

In the second *Road investment strategy* (RIS2), government set out their vision. They depict a safer, more reliable and greener strategic road network (SRN) that uses new technology, supports the economy and is integrated into the national transport network.

This document, our *Strategic business plan*, responds to and aligns with government's RIS2. It provides the high-level direction for every part of Highways England for the second road period (2020 to 2025), setting the outcomes we will work to deliver and the strategic priorities for our business.

This *Strategic business plan* is supported by our *Delivery plan*, which provides the detail of specific funding, activities and projects we will deliver over the five years. It also discusses how we approach efficiency and risk management. Our *Delivery plan* includes our performance framework, which brings together all our delivery aims for the second road period.

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Jim O'Sullivan, Chief Executive, Highways England

Foreword

Our *Strategic business plan* sets out our approach to building on our work in the first road period between 2015-2020. It describes a balanced portfolio of investment to maintain and operate the strategic road network (SRN) safely, and provide new capacity where it is most needed. It sets out our commitment to protecting the environment and communities, while getting our roads ready to support future businesses, jobs and homes. Our work will improve journey times and reliability for the freight industry, and help drive the country's economy.

On 11 March 2020, as part of the Budget, the chancellor announced a £27.4 billion budget for investment in the SRN between 2020 and 2025. The publication of the government's second *Road investment strategy* (RIS2) on the same day provided more detail. It recognised the importance of the SRN to the economy, social wellbeing and connecting the country. It demonstrated government's confidence in our ability to deliver our challenging programme of activity, which we have now presented in this document. It is a big plan, and we are confident in our abilities to deliver it because of what we have achieved in the last five years.

Thinking back to how we were building roads five years ago shows us how far we've come. Traditional road design and build techniques that had not changed significantly for decades were the standard. But, on schemes like our flagship A14 Huntingdon to Cambridge*, we have introduced new practices which have transformed the industry.

Techniques like modular, off-site construction have helped reduce disruption to customers, increased the safety of our people and delivered benefits faster.

Having the certainty of long-term investment, and a schedule of committed schemes and targets, has helped us move away from managing the SRN as individual pieces of asset, such as tarmac, concrete, bridges and signs. We've reached a place where government considers our roads as a fully integrated system, and a part of the broader UK transport network. As a result, we can work better with our stakeholders and with our supply chain as partners. We offer much improved customer service, and we are starting to clear the back log of decades of under investment in the country's most important transport network.

The last five years have also presented challenges, and we've learnt much. We have balanced a programme of works to maintain our ageing network alongside the need to build new roads.

* The £1.4bn A14 scheme was delivered on time and on budget with a number of sections opening up to a year early.

We understand that a poor travel experience and delays on our network can have big impacts on individuals, businesses and communities.

We're taking our learning from our first five years into this new road period. Over the next five years, the safety of our road users and our people will remain our first imperative. We will reduce the number of people killed or seriously injured on the SRN by 50%.

We will also clear incidents more quickly and keep our roads better maintained. We will clear at least 86% of incidents within an hour and will make sure that 95% of our road surfaces meet our standards.

We will keep our customers well informed by making sure that at least 90% of the information we publish about roadworks is accurate. And we will be a good neighbour to those who live and work near our roads, doing even more to minimise our impact on the environment we live in.

We want our network to create a positive legacy for future generations. In this road period we will reduce our own carbon emissions and support government's ambition to achieve net zero carbon by 2050.

We will also use our data and knowledge to get ready for a fully digital era and the developments that will bring, such as digitally connected and autonomous vehicles.

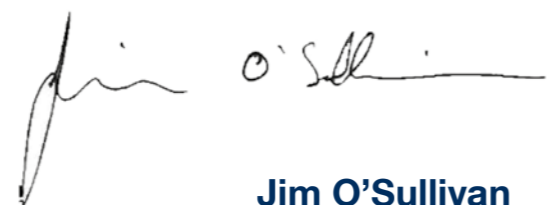
Building on the stakeholder partnerships we have developed through our Designated Funds programme, we will work with others so our projects have even bigger benefits for the communities alongside our roads. And by working with organisations such as sub-national transport bodies, we will make sure that every part of the country feels the benefit of our work.

We'll do all of this and deliver efficiencies of £2.23 billion, providing even better value to the taxpayer than achieved in the last five years.

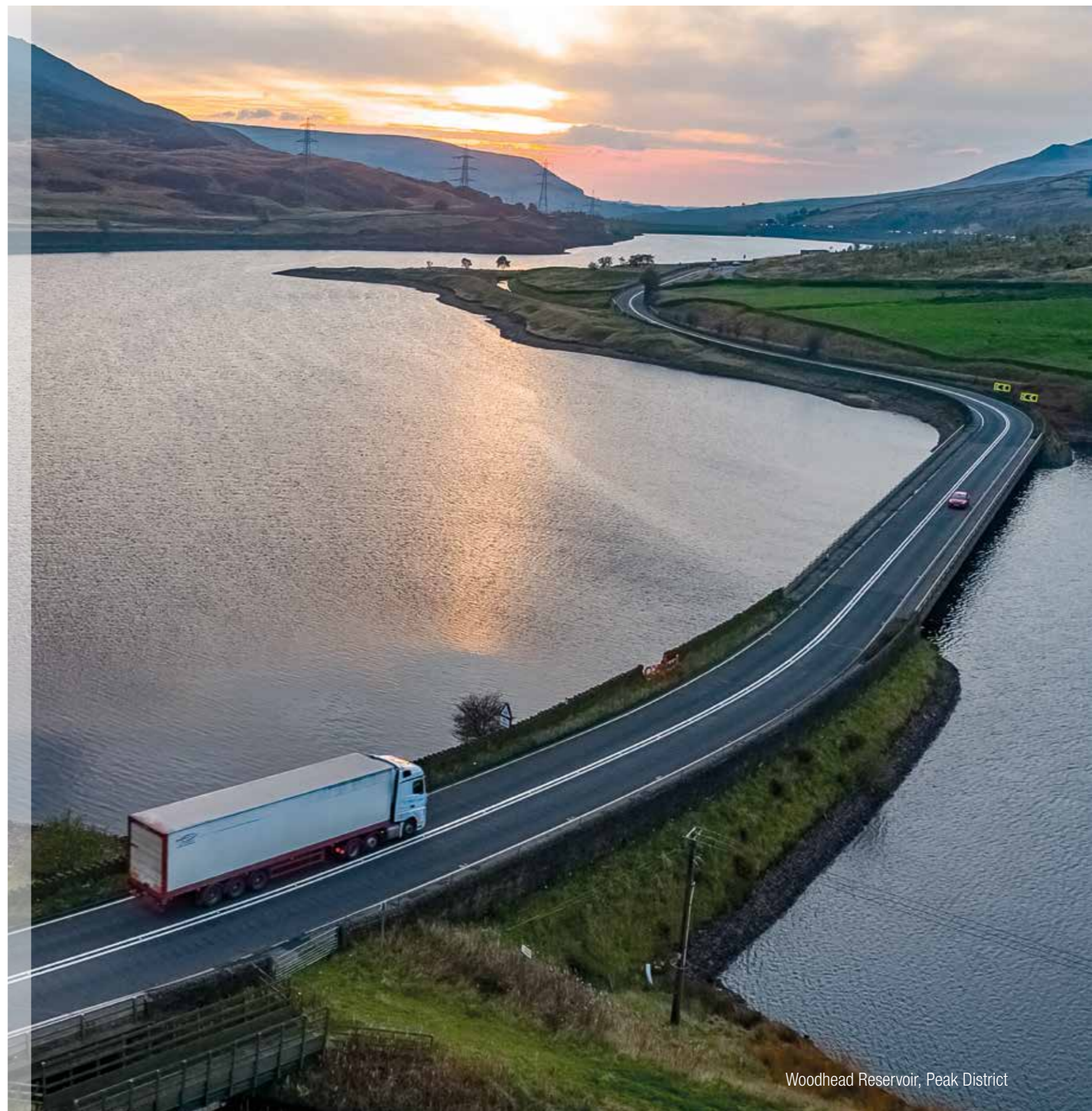
Looking further, we will develop our plans for the third road period and beyond. By working closely with our supply chain, we will understand the challenges they face, and make sure they are equipped for the future.

We have set out more detail about how we will achieve all of this in our *Delivery plan 2020-2025*, which is published alongside this document.

We know that society faces complex challenges over the next decade and beyond. How, for example, we can improve air quality, cut carbon emissions and improve biodiversity as part of a vibrant, forward-looking economy. Our aim is to create a sustainable SRN that meets the future needs of our stakeholders, road users, communities and the environment we live in.



Jim O'Sullivan



Woodhead Reservoir, Peak District

What our customers can expect

Over the second road period

Responding to government's RIS2, we have developed a clear programme for the second road period. We will balance our funds across enhancements schemes and operating, maintaining and renewing our roads. We will use our designated funds to address issues beyond the traditional focus of road investment, including to help reduce our carbon footprint. Our whole programme will keep the country moving and create greater capacity to connect businesses, families and friends. We will help sustain up to 64,000 construction industry jobs and enable growth and housing, as well as supporting regional and national economies.

Safer roads

Safety remains our first imperative. Our ambition over the second road period is to ensure our network is safe, dependable and durable. We aim to at least halve the number of people killed or seriously injured on our roads by the end of 2025, against the 2005-2009 annual average baseline. Achieving this target will keep us on course to reach our goal of zero harm on our network by 2040.

Responding to Covid-19

Our plans were developed before the outbreak of Covid-19, and we remain committed to delivering them.

Throughout this unprecedented time, our network has remained open. Working in line with government advice, we have kept our customers, people and suppliers safe, enabled essential travel, undertaken critical maintenance and progressed our schemes.

This has supported the construction industry and kept our roads ready for normal levels of traffic. If, over time, Covid-19 affects our ability to meet our targets or means we need to update our plans, we will set out relevant changes in our annual *Delivery plan update*.

Well-operated and maintained roads

Operating, maintaining and renewing our network will remain the bedrock of our activity, and we have made £10.8 billion of funding available for this purpose. We will work to keep our roads running safely and smoothly, and our customers informed and prepared. We will ensure that our assets, including everything from bridges to roadside signs, are well maintained, and that we protect the surrounding environment. We will increase investment in renewals activity to pre-empt problems, particularly across concrete roads, our largest structures and safety barriers.

How we run our network

Investing in our people and our organisation to develop new technology and further improve our capabilities and information systems.

Designated funds

Delivering projects which will have wider benefits for customers, neighbouring communities, the environment and the economy, and addressing issues beyond the traditional focus of road investment.

Scheme development

Preparing for the third road period and planning for a network that meets the future needs of the country, our customers and neighbouring communities.



£1.1bn



£347m



£936m

£27.4 billion
to invest in the
second road period*



£10.8bn

Operations, maintenance and renewals

Repairing and replacing our road surfaces and other assets, such as bridges, barriers and signage, while keeping traffic moving on our roads, 24/7, 365 days a year.



£14.2bn

Enhancement schemes

Investing in large and often complex schemes to improve the quality and capacity of our roads, while also preparing for a digital future.

*Figures do not add up due to rounding. See funding table on page 47 and the *Delivery plan* for a full description of our activities.

Enhancement schemes across the country

We will invest over £14.2 billion in enhancements schemes across the next five years, providing a benefit of £27 billion to customers, local communities and the wider economy. These benefits will come from improved journey times and access to employment and housing developments.

We plan to open 25 schemes started in the first road period, begin construction on 12 new schemes, and develop over 30 pipeline schemes. Every part of the country will see the positive effect of our investment. We will improve connectivity and enable safe, reliable and timely journeys. By responding to local growth priorities and increasing productivity, we will also help government build a stronger, more balanced economy.

We will consider the environment in all parts of our schemes, from design through to delivery. Our aim is to achieve no net loss of biodiversity through our activities, as well as to tackle air and water quality, improve our carbon footprint and reduce noise pollution.

Addressing issues beyond the traditional focus of road investment

In the second road period, our designated funds will help us deliver improvements in a range of areas, from conserving cultural heritage to strengthening flood resilience. They will also help us improve integration and support walkers, cyclists and horse riders. We will use the themes we set out in our long-term vision, *Connecting the country*, to guide our funding of innovation.

We will work flexibly with customers and stakeholders to invest these funds where they are most needed over the next five years.

Our designated funds:

- Safety and congestion fund
- User and communities fund
- Environment and wellbeing fund
- Innovation and modernisation fund

Improved integration with wider transport infrastructure

We are working collaboratively to improve integration with wider transport infrastructure across the country. This will help our customers travel more easily, support businesses to operate more effectively, and provide better access to ports and airports. Our schemes will improve resilience and connections between ports, helping prepare for the forecast increased demand for freight capacity. Over 27 million vehicles are also forecast to use our flagship Lower Thames Crossing in its first year of operation, 4.5 million of which will be heavy goods vehicles (HGVs).

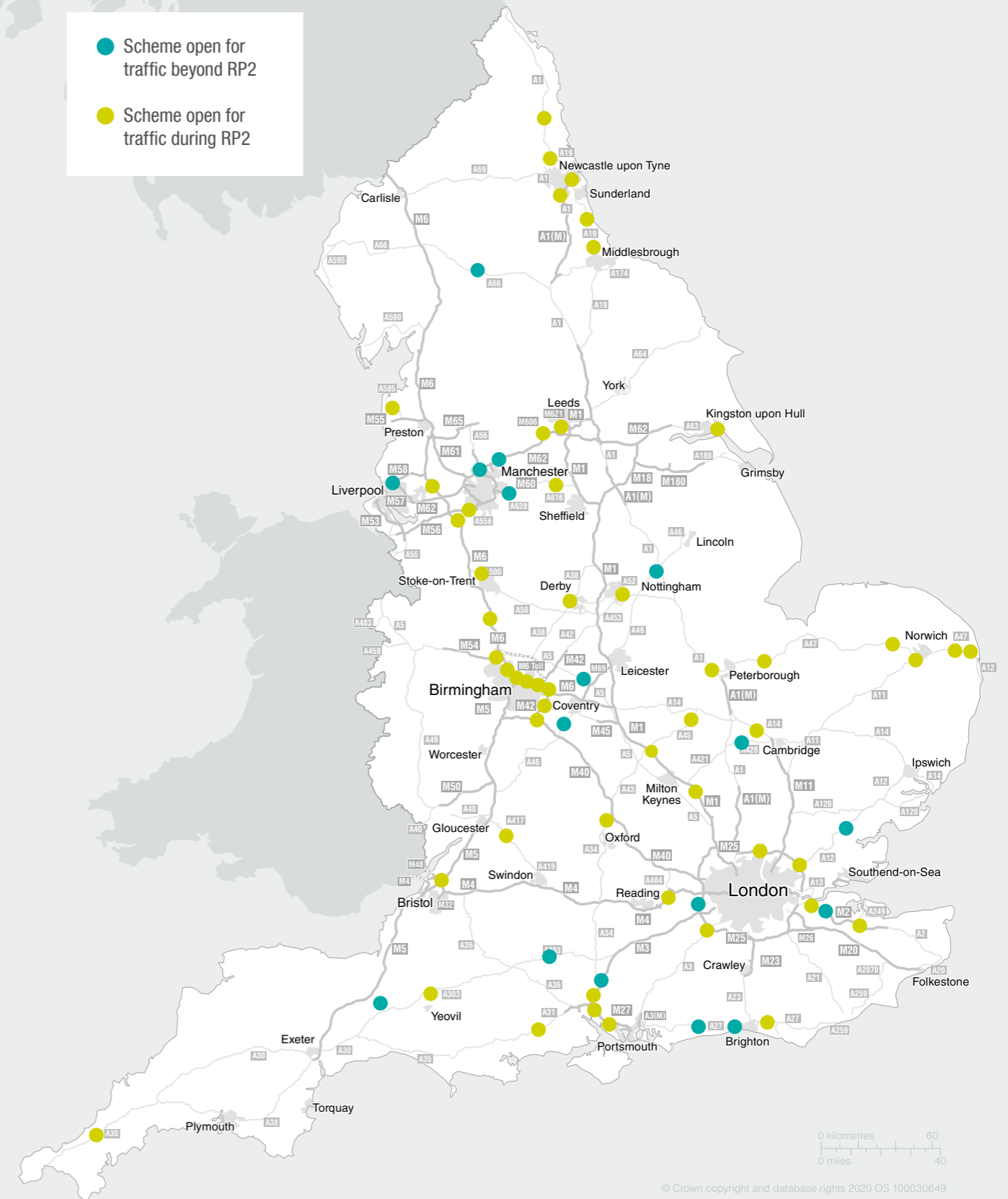
Efficient, cost-effective delivery

We expect to achieve £2.23 billion of efficiencies in the second road period through a variety of innovations and improvements. This will mean that our customers will see even more investment for their money than has been possible in the past. With funding now directly linked to the money that people pay through vehicle tax, we recognise that efficient delivery, alongside excellent customer service and responsiveness, is more important than ever.

Enhancement schemes

For the full scheme list, please read our *Delivery plan*.

- Scheme open for traffic beyond RP2
- Scheme open for traffic during RP2



Smart motorway stocktake

In March 2020, government published its *Smart motorway safety evidence stocktake and action plan*. Government supports smart motorways as a safe and effective way of providing faster and more reliable journeys, recognising that they reduce the disruption and destruction otherwise needed to widen our busiest roads.

Government want smart motorways to be even safer than conventional motorways. We will directly deliver 17 of the 18 actions in the stocktake and will support the Department for Transport (DfT) in delivering the remaining one. These actions focus on making smart motorways even safer and increasing public confidence.

Working with DfT, we have developed a package of measures. While still in our programme, we have rescheduled schemes to prioritise the stocktake actions. We have set out scheme dates in our *Delivery plan*, along with more details about what we are doing to make smart motorways even safer.

We have already started delivering the stocktake actions and show completion dates below. They are being taken forward as a priority and we will meet all the deadlines in the action plan. We will seek to minimise disruption on the network, for example, by installing new signs and enforcement cameras, when we have planned road closures in place for other activities.

The actions we will take are set out below:

We will end the use of dynamic hard shoulder motorways, upgrading them to all lane running by converting the hard shoulder into a permanent traffic lane. **We will upgrade all existing dynamic hard shoulder motorways by March 2025.** We know that some road users are not

always clear whether the hard shoulder is in use on dynamic hard shoulder stretches of smart motorway; all lane running will provide a more consistent experience for motorists.

We will roll out stopped vehicle detection to existing all lane running smart motorway by the end of March 2023 with a clear public timeline. We have already trialled this system on two smart motorway sections of the M25. The system uses radar technology to detect stationary vehicles. It can alert a control centre operator, who can see the incident on camera, close lanes and dispatch traffic officers. This will help motorists who do have a live lane breakdown and are unable to get to an emergency area. **By December 2020 we will also complete a large-scale trial of a system that analyses CCTV images.**

The trial will identify the viability of using our CCTV coverage on smart motorways to provide another option alongside stopped vehicle detection.

We will make changes to traffic officer patrols on smart motorways where the existing spacing between safe places to stop in an emergency is more than one mile.

Our aim is to reduce attendance time from an average of 17 minutes to 10 minutes, and to reach those who need assistance quicker. Roll-out will start as soon as possible, with full coverage of the relevant elements on our network by July 2021.

We have already implemented a design standard that reduced the distance between safe places to stop in an emergency to a maximum of one mile.

We now propose that, where feasible, the maximum spacing should be three quarters of a mile. This new standard will be applied to future schemes when they enter the design stage from November 2020.



M42 junction 3a, Warwickshire

We will construct ten additional emergency areas on the M25 by December 2020. These will be on the sections of smart motorway with a higher rate of live lane stops, which coincides with the biggest spacing between places to stop in an emergency. We will closely monitor and evaluate the impact of these additional emergency areas on the level of live lane stops.

Following the installation and evaluation of the ten additional emergency areas on the M25, we will review by March 2022 the impact of a national programme for installing more emergency areas on existing smart motorways. This will build on lessons learnt from the M25 programme around the practicalities and impact of additional emergency areas on an operational smart motorway, as well as the wider implications of a national programme.

We will continue to monitor our network, as per our licence agreement. Should a cluster of road traffic accidents be identified, we will investigate and, where required, take action.

Some existing emergency areas are narrower than the current 15 foot standard when measured from the edge of the carriageway, although they are still significantly wider than a traditional 11 foot hard shoulder. **We will evaluate all existing emergency areas identified to be less than 15 foot standard by October 2020, and if feasible and appropriate, widen to the current standard.**

We have updated all existing emergency areas on our smart motorways to have a bright orange road surface and dotted lines, as well as better and more frequent signs on approach showing where to stop.

We will investigate what more can be done on the M6 Bromford viaduct and sections of the M1 identified in the stocktake. We will assess these sections to understand contributory factors and consider if there are potential further suitable interventions by November 2020. This work is already underway and we will share findings with DfT before the end of this year.

We will also continue with our ongoing safety monitoring to evaluate whether existing and new smart motorways are as safe as, or safer than, the conventional motorways they replaced. We will provide annual reporting from October 2020.

We will install more traffic signs between places to stop in an emergency. By March 2023, these will typically be between approximately 330 and 440 yards apart.

To improve public perception and increase understanding of driving on motorways without hard shoulders, including smart motorways, we will develop a multi-channel 'emergency aware' driver campaign.

We will work in partnership with DfT as well as other key stakeholders, including the recovery and insurance industry, Driver and Vehicle Standards Agency and the police. The campaign will include an advert to be aired across prime-time television, video on demand, radio, out of home and social media advertising. We will launch the campaign once traffic levels have stabilised following the impact of Covid-19.

Using our stopped vehicle detection system, **we plan to roll out the automatic display of a 'report of obstruction' message.** This will warn oncoming drivers of a stopped vehicle ahead. We are already trialling this on the M25, and expect to start the full roll-out of automation by the end of 2022.

We will make information available to SatNav providers to allow identification of emergency areas on their systems, if requested. We will work with providers and create a database of our emergency areas to enable them to use and display the information. **We will provide location information to SatNav providers by March 2021.**

We will engage with car manufacturers by November 2020 to understand how we can help build greater awareness and understanding of 'eCall' or SOS buttons.

Increasing numbers of new cars come with these buttons, which can be used to call for help in the event of a breakdown or emergency anywhere on the roads, not just on smart motorways.

The law has now changed to enable automatic detection and enforcement of 'Red X' violations using cameras. The vast majority of drivers comply with Red X signs but, for the very small minority who do not, the police have the powers to prosecute. The penalty is three points on the driver's licence and a £100 fine, or the driver can be referred to an awareness course. We have already started the work, and **we will complete the upgrade of all existing smart motorway enforcement cameras (known as HADECS3) by July 2023 to automatically detect such violations and enable Red X enforcement.**



M6, West Midlands

We will lead the update to the Highway Code to provide more guidance for motorists on smart motorway driving, including emergency area signage. This will require close working with DfT and the Driver and Vehicle Standards Agency. We expect the updated Highway Code to be published by March 2022.

In March 2020, we signed a partnership agreement to unite with the independent recovery industry. The agreement sets out several initiatives. These include identifying opportunities for how we can support recovery operators' safety through educational material and information promoting safe working practices on the SRN. **We will undertake a review of our current touchpoints and activities with the recovery industry, and develop a plan for improving engagement and partnership working by September 2020.**

We will also support DfT with their review of whether recovery vehicles can use red flashing lights.

Our roads are already some of the safest in the world. The stocktake has been a welcome opportunity to review the evidence on smart motorways and look at where there are opportunities to improve. We will continue to evaluate the effectiveness of all these measures as part of our standard evaluation processes, and work towards our aim of zero harm on our network by 2040.

Over the long term

While planning for the second road period, we also looked to the future. While no one can forecast with absolute certainty, we undertook extensive research and consultation to understand the likely future and our role within it. We used this information, and government's strategic vision, to set out how we will make our roads work better over the short, medium and long term.

Planning for the future

We expect, and are planning for, technological advances over the next 30 years that will revolutionise transportation, road travel, and personal and commercial mobility. The rise of connected and autonomous vehicles, for example, is likely to radically change travel as we know it. Connected systems promise better information direct to users, while autonomy could increase people's mobility, reduce incidents and improve national productivity. Our roads, our infrastructure and even our ways of working will need to change to embrace and enable this new way of travelling.

In *Connecting the country*, published in December 2017, we identified the trends that will shape the SRN and influence our operations over the next 30 years and beyond. Following widespread research and consultation, we grouped these trends into three areas: demand, infrastructure and vehicles.

Using these trends, we explored the potential future scenarios that might occur and what we believe is most likely to happen. We have considered how our network may need to change to reflect this possibility. We have also worked through the practical steps that we expect to undertake over the short, medium and long term.

Laying the foundations for digital roads

We are already working with others in the road sector and beyond to prepare for a fully digital age. Our ambition is to integrate digital technology into every aspect of our project life cycles, from scheme design through to construction and operation. We are laying the foundations for connected vehicles and enabling two-way communication between roadside infrastructure and in-car devices.

Demand

Demographic and usage shifts



On-demand consumption



Connectivity

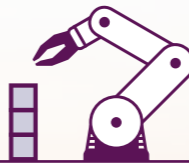


Infrastructure

Smart assets



Construction innovation



Reducing impact, increasing resilience



Vehicles

Electrification



Connectivity and autonomy



Mobility as a service



What do we mean by digital roads?

Digital roads is a concept based on using connectivity, data and technology to improve the way the SRN is designed, built, operated and used. We will invest in our digital capabilities to drive fundamental shifts in the way we work across three core areas. This could lead to providing better information directly to customers based on real-time data, an increase in remote asset monitoring, and further efficiencies in project design and delivery.

Our vision

1. Digital for customers

Our customers will increasingly be given high-quality information without having to seek it out. Trusting the information we provide, our customers will feel safe, better informed and in control of their journeys.

2. Digital operations

Our operations will use data to drive increasingly pre-emptive interventions, leading to a safer, smoother running network with increased asset life and reduced asset failure.

3. Digital design and construction

Our activities will be increasingly automated, modular and conducted off site. This will result in safer production, increased productivity, reduced disruption on our roads, and smoother journeys for our customers.

Our performance goals

Commitments

Our performance framework for the second road period brings together all our delivery aims for the next five years, including those from government's RIS2, into one place. It will provide the basis for monitoring by the Office of Rail and Road (ORR), along with our *Delivery plan*. We have built this framework based on research, insight and consultation, as well as from observing best practice in other sectors. We have worked closely with Transport Focus, recognising their role in representing the interests of our customers.

Our framework covers the following areas:

- Key Performance Indicators (KPIs), with targets used to measure the service we provide.
- Other indicators that we will report on every year to demonstrate performance.
- Commitments without a numeric measure.
- Government's RIS2 enhancement schemes and their key milestones.
- The Designated Funds definition list.
- A summary of our key asset renewals.
- A list of protocol services that we carry out for government, such as maintaining the national strategic salt stock.

This framework will enable monitoring and measurement of our activities in a fair, balanced and transparent way. We will use it to demonstrate the progress we make across projects and services, and the performance we provide in areas that are important to our customers and stakeholders.

Outcomes

As agreed with DfT, Transport Focus and ORR, our framework reflects how we will deliver the following six outcomes:

- 1 Improving safety for all**
- 2 Providing fast and reliable journeys**
- 3 A well-maintained and resilient network**
- 4 Delivering better environmental outcomes**
- 5 Meeting the needs of all users**
- 6 Achieving efficient delivery**

These outcomes respond to and align with government's priorities, as set out in RIS2: a network that supports the economy; a greener network; a safer and more reliable network; a more integrated network; and a smarter network.

In the rest of this document, we have set out under each outcome our priorities for the second road period and some of the key activities we will deliver to make progress towards them. These priorities also provide the foundations for the strategies we will develop across our business.

Our KPIs

<p>1. Improving safety for all</p> <p>At least a 50% reduction in the number of people killed or seriously injured on the SRN by the end of 2025, compared with the 2005-09 average baseline.</p> 	<p>2. Providing fast and reliable journeys</p> <p>Ambition that average delay per mile driven will be no worse by the end of RP2 compared to the end of RP1.</p> <p>97.5% of lanes free from closures caused by roadworks in 2020-21. Revised metric and target for remaining years of RP2.</p> 	
<p>3. A well-maintained and resilient network</p> <p>95% of road surface in a condition that requires no further investigation for maintenance for years 1 and 2 of Road Period 2.</p> 	<p>Achieve 86% of motorway incidents cleared within one hour, based on 24-hour coverage.</p> 	<p>5. Meeting the needs of all users</p> <p>82% road user satisfaction score for first two years of RP2 with year-on-year increases in the following years.</p> 
<p>4. Delivering better environmental outcomes</p> <p>Road noise mitigation for 7,500 households in 'noise important areas', funded through designated funds.</p> <p>No net loss of biodiversity across all Highways England activities by the end of RP2.</p> 		<p>By 2024-25, 90% of overnight road closures information accurately issued seven days in advance of work starting.</p> 
<p>Bring agreed sections of the SRN into compliance with legal NO₂ limit values as soon as possible.</p> 	<p>Reduce carbon emissions resulting from Highways England's electricity consumption, fuel use and other day-to-day operational activities during RP2.</p> 	<p>6. Achieving efficient delivery</p> <p>Achieve efficiency target of £2.23 bn on capital and operational expenditure by the end of RP2.</p> 

Further details of the performance measures we will be monitored against can be found in our *Operational metrics manual*.

Our performance outcomes

1. Improving safety for all

We need to keep our customers, people and suppliers safe, above all else. Since 2015, we have reduced the number of casualties on our roads by 18%. We have reduced the accident rate among our traffic officers and regional control centre colleagues by 95%, and the incident rate among our supply chain by over 50%. Our roads are some of the safest in the world, but we know there is more we can do to. In June 2019, we launched *Home safe and well*, our integrated approach to health, safety and wellbeing, which underpins everything we do. In the second road period, we will work to prevent incidents occurring. We will also focus on reducing incident severity through a package of activities to promote safer roads, safer people, safer vehicles and coordinated collision response. We will use our Safety and congestion fund to deliver targeted schemes across the country. We will also learn from other organisations and stakeholders about what works best.

Building health, safety and wellbeing

We want everyone who works with us and travels on our network to get home safe and well. That means getting home to the people we love, and for the things that we love doing. In Highways England, and throughout our supply chain, this matters more than anything else. Our *Home safe and well* approach builds on our achievements since publishing our *Health and safety five-year plan* in 2015. As part of this approach, we will:

- build a positive health, safety and wellbeing culture
- promote greater ownership
- embrace innovation
- place more importance on health and wellbeing

We have identified six focus areas that are critical to how we will improve health, safety and wellbeing for our customers, people and suppliers:



What we are doing to improve safety for road workers

We know that our people are at risk every minute they work close to moving traffic and in construction sites. We are constantly testing possible solutions to minimise these risks. We are, for example, developing standardised, pre-fabricated infrastructure to reduce time and exposure on site. We are introducing giant mobile barrier lorries, giving physical protection for road workers and motorists. We are trialling SAFETYcam: an innovative camera system that aims to change driver behaviour by capturing dangerous driving and providing a visual deterrent. We are also trialling an automated cone-laying system that will reduce our workers' exposure to risk.



Providing safe, free-flowing roads

We know that better understanding the causes of incidents through collecting, analysing and sharing data and research will help us improve the safety of our roads. Building on work undertaken to date, we will use this insight to introduce initiatives to further reduce risks. We will develop and implement strategic approaches, like *Home safe and well*, that show how we will save lives and meet our legal duties. We will use our Safety and congestion fund to improve safety, reduce congestion and support economic development.

Reducing harm caused by road incidents

We already build safety considerations into the physical infrastructure on our roads to reduce the probability of incidents occurring, and the severity if they do. We assess the ‘star rating’ of our network, using the latest version of the International Road Assessment Programme model. We will improve our star rating through work such as removing roadside hazards and improving safety barriers. Our specialist teams are also constantly testing new products, including road surfacing materials, to evaluate the potential safety benefits. Alongside traditional road safety engineering measures, we will deliver new initiatives appropriate to the location. This could include sharing driver information and collaborating with police and safety partners to influence driver behaviour.

Keeping our people and suppliers safe, healthy and well

By caring for our people and helping them remain safe and healthy, we create a company that people want to work for. In the second road period, we will strengthen our focus on health, safety and wellbeing. We will develop a culture where mistakes can be reported more openly and lessons learned so they are not repeated elsewhere. We will analyse our performance to make informed decisions about how to improve, sharing what we have learnt. To improve safety across our supply chain, and raise industry standards, we will support our suppliers to achieve Driving for Better Business champion status. We will also use our Safety and congestion fund, and Innovation and modernisation fund, to make targeted improvements. We will, for example, use data and technology to increase the speed and quality of our design and construction, reducing the number of people exposed to traffic on site.

Improving safety for walkers, cyclists, horse riders and our communities

People that walk, cycle or ride on our roads need targeted interventions to protect them from harm. We will use our Safety and congestion fund, and our Users and communities fund, to deliver local schemes to improve their experiences. This could include improving existing crossings or providing new ones, enhancing or installing new cycle lanes, and improving signs. We will also identify opportunities within our enhancement schemes to deliver local benefits to these groups. We will use our National Road Safety Forum to lead an industry-wide approach to suicide prevention, aiming to eliminate suicides on our roads.

Driving for Better Business

Our Driving for Better Business programme raises awareness of the benefits for private and public sector employers of managing work-related driving more effectively. We provide tools, resources and guidance to help employers reduce the risk of their employees being involved in a collision. These resources also help decrease associated costs and improve compliance with current legislation and guidance.

We have led by example, achieving Driving for Better Business champion status. We are embedding the programme across our suppliers, who in turn are sharing with their own supply chain. As of May 2020, employers registered in our programme collectively manage over 900,000 drivers.



Saving lives through three-star roads

Halving road deaths and injuries is a United Nations sustainable development goal. Member states have agreed that all new roads will be built to a three-star or better standard, and by 2030 more than 75% of travel will be on the equivalent of three-star or better roads. It is estimated that achieving these targets will save 467,000 lives globally every year.

Encouraging better driver behaviour and safer vehicles

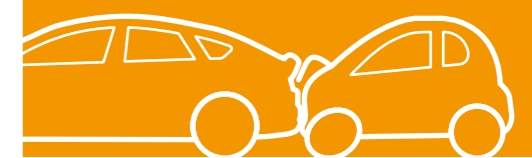
Unsafe drivers often present the greatest risk on our roads. We will focus our safety communications on building customer knowledge, changing driver attitudes and influencing behaviour on our network. We will build on our *National casualty reduction incident plan*, working with customers on how to safely use our roads and prepare for their journeys.

We will work with the freight and recovery industries to identify how we can help drivers to stop in safe locations, and collaborate on training. We will also support further efforts to tackle the shortage of lorry parking. Freight logistics businesses depend on our roads and their ability to move goods safely and efficiently is vital to the country’s economy.

Measuring success

Number of people killed or seriously injured on the SRN

↓ 50%
reduction by the end of 2025



vs. 2005-09 average

Our performance outcomes

2. Providing fast and reliable journeys

We want to help people and businesses have safe, reliable and efficient journeys. To do so, we will start work on government's priority schemes and invest in improvements where they are most needed, regionally and nationally. We will respond to the requirements of our customers, stakeholders and the businesses that rely on our network, and collaborate with partners such as sub-national transport bodies. Our Safety and congestion fund will support measures at a local level, such as improving traffic flow and journey reliability. Meanwhile, our traffic officers and control centre employees will improve customers' journeys by tackling and clearing incidents to restore the availability of the network, as soon as it is safe to do so.

Building a modern network

On average, a major enhancement scheme takes eight years from the start of development to road opening, including extensive consultation. We expect to open 25 schemes started during the first road period which will modernise our network. We will complete several smart motorway projects, connecting different parts of England and laying the foundations for technological advances. We will also start 12 new enhancement schemes.

Potential schemes for the third road period will need to enter development between now and 2025. Government's RIS2 includes a pipeline programme of over 30 such potential projects that we will examine over the next five years. We expect that other projects will emerge too.

We will take forward potential schemes to various levels of development, without committing to construction in the future. By seeking to balance available funding, competing pressures and risks, we will provide a sound basis for further planning. This will help us provide a range of options to support future decision making, carefully progress preferred schemes through statutory planning processes and ensure we are ready for the third road period. It will also help us build supply chain stability and enable efficient, cost effective delivery.

For more details on these pipeline projects, see our *Delivery plan*.



Port of Dover, Kent

Supporting national and international connectivity and trade

Government aims to make the United Kingdom a more attractive place to trade, invest and visit, improving our global competitiveness. To support this aim, we will provide transformational investment in key strategic and economic routes. We will progress major strategic schemes scoped in the first road period, including upgrading the A66 Northern Trans-Pennine route. We will move forward with other flagship projects, including the Lower Thames Crossing and upgrading the A303 and A358 between the M3 and the M5 to provide a high-quality south-west connection. We will also begin construction of a tunnel near Stonehenge, the largest environmental improvement ever made to one of our roads.

We will work with stakeholders and partners to increase national and international connectivity. This will include enabling national infrastructure projects, such as HS2. We will work closely with our freight customers to understand how we could better support their operations.



A66, Yorkshire

A66 Northern Trans-Pennine

The A66 is the most important east-west route for many of England's northern counties. Drivers in Scotland and Northern Ireland also choose this route to make many of their long-distance journeys. We will upgrade the A66 to dual carriageway between the A1(M) and the M6, creating the first new Trans-Pennine dual carriageway since 1971. We will start construction over the next five years, and deliver this work as a single coordinated programme into the following road periods.



Artists impression of Lower Thames Crossing

Lower Thames Crossing

The Dartford Crossing carries millions of tonnes of freight from the Channel ports, vehicles from the M25 and local traffic. Our 14.5 mile Lower Thames Crossing project will connect the A2/M2 in Kent, east of Gravesend, crossing under the Thames through twin tunnels, before joining the M25 in Essex. It will enable regional and national economic growth, improving access to jobs, housing, leisure and retail facilities on both sides of the river, as well as connecting communities. We are working closely with local authorities and neighbouring communities to turn these potential benefits into reality.

Connecting communities and enabling development and housing

We know our roads can impact the communities situated close to them, and that a lack of good links can limit the scope for growth and housing. Our Safety and congestion fund will enable us to deliver local measures, such as junction improvements.

Through these targeted projects, we will improve traffic flow, increase connectivity and create opportunities for growth and housing. We will collaborate with external organisations to achieve more than we could do in isolation. This includes working with local authorities, local enterprise partnerships, sub-national transport bodies and interested stakeholders to attract third party funding.

We will be a proactive statutory planning consultee, enabling new developments and ensuring the safe, efficient operation of our network. We will work collaboratively with the Ministry of Housing, Communities & Local Government and with DfT on government's Housing Infrastructure Fund projects. These projects will be delivered by local authorities, with our support.

Improving incident management

Our traffic officers work around the clock to resolve incidents and protect customers, while our people in control centres monitor and manage our network 24/7. New control room technology will help improve our effectiveness, resilience and ability to deploy our people more flexibly at busy times or during emergency incidents. We will work in partnership with others to support smooth and delay-free journeys from beginning to end.

This will help us manage unplanned disruptions, for example identifying alternative routes more efficiently, reducing congestion and preventing secondary accidents. We will learn from how we manage lengthy incidents to identify best practice, keeping customers' welfare at the forefront of our minds. The roll out of our Operational Excellence programme will further improve how we manage our network.

Operational Excellence

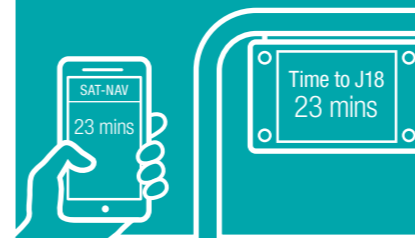
Operational Excellence is an internal package of initiatives and best practice across our business that supports better decision making and reduces the cost of our operational and maintenance activities. As part of this programme, for example, we will combine our control centres with our maintenance network control centre, currently outsourced, to establish single regional operations centres. This will allow us to respond to incidents more quickly, with close coordination between traffic officers and maintenance crews.

We will also train more of our traffic officers to review our assets as part of their safety patrols, freeing our inspectors to conduct more technical assessments. We will use performance data to develop deployment strategies from new and existing traffic officer base sites, helping us achieve our one-hour incident clearance target more often.

Measuring success

Average delay

No worse than end of RP1



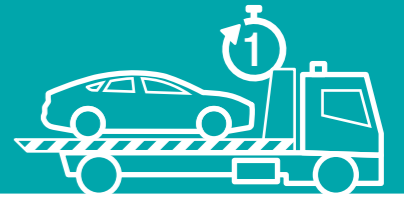
Network availability

97.5% of lanes clear in first year



Incident clearance rate

86% cleared within an hour



Our performance outcomes

3. A well-maintained and resilient network

Our network is complex and varied, and it requires careful stewardship to keep it in good condition. Our maintenance programme is essential to safety and keeping our roads open, while our renewals activity allows us to maintain, safeguard and modernise all our assets. We have used research and data to understand what our network will need over both the short and long term, and incorporated this insight into our planning. We are committed to delivering our work in a way that minimises disruption to our customers and maximises value to taxpayers.

Keeping assets safe and serviceable

We will work to keep our network in good condition and minimise disruption for our customers. We will carry out regular inspections and maintenance, such as litter clearance, graffiti removal and ensuring sign and road markings are visible. We will use asset data, network knowledge and customer insight to inform our activities and keep our roads in good condition. Our routine maintenance spending requirement for the second road period is broadly the same as the last five years, taking future needs and efficiencies into consideration.

Our *Asset management development plan* will describe improvements to better connect our activities, ranging from asset construction to maintenance, operations and renewals. This will help create an improved and more consistent level of customer service.

Renewing and reconstructing assets

We are improving the way we manage asset renewals, taking a planned, longer-term view. Over the next five years, we will need to substantially increase investment across three areas: concrete roads, safety barriers and our largest structures. As these complex assets near the end of their life, we have been looking at requirements for the coming and future road periods. This will allow us to smooth out peaks in spending, ensuring our network remains safe.

We anticipate that our other assets, such as asphalt roads and signage, will require predictable and cyclical renewals. We therefore expect renewals activities in these areas over the next five years to remain broadly the same as in the first road period.



Orwell Bridge, Ipswich

Improving driving conditions and ride quality

Research by Transport Focus has shown the important role that smooth road surfaces play in customer journey experience. During the second road period, we will work with Transport Focus to develop a ride quality metric that will measure this area.

We will improve our roads' resilience to severe weather and make sure our winter maintenance activities help keep roads safe and open. We will invest in a new fleet of winter vehicles and in our weather station replacement programme.



Misterton Salt Depot, Leicestershire

We will maintain the strategic salt stock as an emergency reserve for local highway authorities. We will also deliver more focused severe weather warnings, better recording of flood incidents and clear-up, and actions to prevent recurrence.



What we are doing to create smoother, more consistent roads

From our work with Transport Focus, we know that journey comfort is incredibly important to our customers. We are pioneering road resurfacing techniques that provide a smoother ride and, thanks to new technology and ways of working, are safer, saving both time and money.

Our A1 West Moor and Newton-on-the-Moor road renewal scheme in Northumberland was the first project in the UK to use a new recycling technique. We used a specialist machine that stripped the top layer of the old road and recycled the material as it moved along. Using this technique, old road becomes new road in just one pass, with more surface being covered in each shift. This means less moving of machinery, resulting in safer conditions for road workers. It also means fewer road joints, leading to a smoother road surface and better experiences for road users. There are environmental benefits too, including a 33% reduction in carbon emissions and a significant amount of recycling.

Tackling the impact of unplanned works

Our new maintenance programme should lead to fewer emergency repairs and other unplanned works. Even so, we must be able to respond quickly when the unexpected happens, such as fuel spillages and central reservation damage. We will therefore allocate some of our maintenance funding for emergency repairs, protecting our customers and getting traffic moving again.

Measuring success

Road surface maintenance
95%
 needs no further investigation



Cold pave technology: Image courtesy of A-one+

Our performance outcomes

4. Delivering better environmental outcomes

We want our roads to work more harmoniously with the communities that live alongside them, and the built, natural and historic environments that surround them. Every aspect of our business has a part to play in improving environmental performance, alongside ensuring we meet our statutory obligations. We will build on the progress made during the first road period and embed environmental considerations into all our activities, ranging from infrastructure design to scheme delivery. This will be supported by our Environment and wellbeing fund. We will also help government in delivering wider environmental strategies, including their *25-year environment plan*, *Road to zero strategy*, *Clean air strategy 2019* and *Air quality plan for nitrogen dioxide (NO₂) in UK*.



Air quality monitoring station

Improving the health and wellbeing of people living near our roads

Emissions from vehicles on our roads can affect the health of people living nearby. We will support government's *Air quality plan for nitrogen dioxide (NO₂) in UK*, ensuring our network is compliant with NO₂ limits in the shortest timescale possible. We will also explore the possibilities for including air quality standards and reporting requirements in supply chain vehicle contracts.

To improve the quality of life for those communities living close to our network, we will reduce the number of people affected by noise on the SRN. We will use quieter surfacing when renewing our roads. We will also invest through our Environment and wellbeing fund to erect noise barriers and install noise insulation in people's homes, where appropriate.



Supporting government's ambition to achieve net zero UK carbon emissions by 2050

We have a shared responsibility to tackle climate change. We are dedicated to minimising the greenhouse gases generated from the activities within our control. We will take responsibility for reducing emissions from our vehicles, rationalising equipment, and designing our schemes and services to be carbon and energy efficient. We will reduce our carbon footprint through initiatives such as introducing energy-saving measures for maintenance depots and using low-energy lighting and control systems for motorways.

Maximising opportunities for sustainability

We are committed to putting sustainable development into practice. We want to encourage economic growth while protecting the environment and improving safety and quality of life for current and future generations. We will use our resources more efficiently, minimising demand for materials extracted from the ground and maximising re-use. We will investigate the origins of our goods and materials, understanding that their production and handling can have local, national and global impacts. We will also work to increase the wellbeing of those who supply us with our materials and resources.

Our Annual report and accounts includes a sustainability report to show our progress, as well as how we are meeting our statutory and licence obligations.



What we are doing to protect and improve biodiversity

We are committed to protecting the natural environment that surrounds our roads and achieving no net loss of biodiversity through our activities. During the second road period, for example, we will improve the habitat along the M6 corridor from Preston to the border with Scotland. We will add to our existing 28 hectares of grassland, providing a further 90 hectares of species-rich habitat. This will improve the diversity of plants along the verge and provide a source of nectar for butterflies, moths and bees. We will create a four-year management plan for each plot to deliver, and maintain, long-term biodiversity benefits. This is just one example of the many projects that we will deliver over the next five years to help stop the loss of biodiversity.

Improving the natural, built and historic environment

We know that our work can have a detrimental impact on the local environment. We will identify where we can improve environmental performance, for example improving our understanding of why litter is discarded and developing measures to change behaviour. Less litter will also reduce the time that road workers spend on busy carriageways, improving their safety.

We will consider the impact on the surrounding environment as part of all new schemes. We will be respectful of place in our infrastructure design, and take care to incorporate roads sensitively into the landscape. We will undertake environmental mitigation as part of scheme delivery, such as relocating historic assets or replacing floodplains.

We will also use our Environment and wellbeing fund to address issues beyond the traditional focus of road investment, as well as to innovate and improve.

We will work across areas as varied as: carbon emissions and our network's carbon footprint; biodiversity; air quality; noise; water quality; flood mitigation; landscape; and cultural heritage assets. We will work with stakeholders to invest our funds carefully and efficiently.

Creating a network resilient to a changing climate

We will monitor, assess and respond to the impacts of climate change on our network. We will work in partnership with organisations such as the Environment Agency, the Met Office and local authorities to improve the resilience of our network to more severe weather. We will focus on reducing flooding on our roads and minimising risks for local communities, retrofitting our assets to meet new environmental and drainage standards. We will also improve the resilience of our concrete pavements to prolonged high temperatures as part of our concrete maintenance and renewals programme, taking remedial action where necessary.

Measuring success

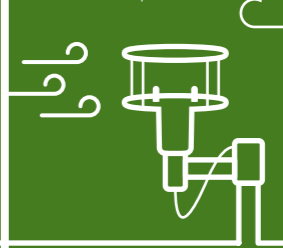
Noise mitigation target
7,500 households



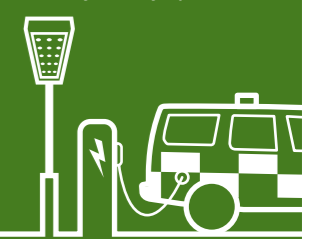
Biodiversity target
No net loss by end of RP2



Air quality target
Bring agreed sections of the SRN into compliance



Carbon emissions
↓ Reduce through electricity, fuel use and day-to-day operations



Our performance outcomes

5. Meeting the needs of all users

We want to exceed the expectations of all those who use our network. There are many touch points for our customers, from the infrastructure we provide and facilities we support, to the information we share and the control centres we manage. We have combined our own research and feedback with insight from others to understand how our services and roads may need to evolve. We will work with Transport Focus to deliver what our customers need and want, and to develop a pipeline of future activities. We will use our Users and communities fund to deliver local improvements, and we will work with local highway authorities and partners, such as sub-national transport bodies, to increase integration.

Improving customer contact and engagement

We know our customers want reliable information, and we are already using customer insight and feedback to improve how, when and what we put on our electronic message signs. We want to help customers feel safer by setting messages that will help them make timely decisions about their journeys. We will also set speed limits that are appropriate for the road conditions, and signals to help save customers' time.

We will improve our approach to customer contact and engagement, building greater trust by being easy to reach and by providing accessible and accurate information quickly, and in the ways customers prefer. As our stakeholders have told us that regular, wider sharing of information would help journey decisions, we will explore how best to share real-time data to support integrated planning with local highway authorities and other key partners.

Building inclusion into our work

In everything we do, we consider the needs of our diverse customers and neighbouring communities, extending our reach through customer forums. Aiming to create better solutions and services for everyone, we embed equality, diversity and inclusion into our engagement and decision-making. In the second road period, we will deliver accessible roads and infrastructure, and consider the ways we can help local communities. Working with partners, we will incorporate the needs of all customers, in particular disabled users of our network, into our planning.

We have worked hard to develop approaches that result in long-lasting outcomes for our customers and neighbouring communities. We will reinforce these through our Users and communities fund.

What we are doing to improve the experience of walkers, cyclists and horse riders

As part of improving our network across the country, we want to reduce the barriers that our roads can create for walkers, cyclists and horse riders. In the east of England, for example, we will fund seven projects on the A14 corridor alone to improve access and create a more sustainable network. These projects include extending an existing cycle path ending in Girton to provide a route into Cambridge. They also include providing a pedestrian and cycle path between Bar Hill and Longstanton. We contributed £3.4 million to the total package of measures. An additional £1.5 million from partner match funding dramatically increased the benefits for all customers.



Providing seamless and integrated journeys

Few journeys start and end on our network. We will work to improve access for everyone, whether they are in a car, on foot, cycling or using public transport. We will better integrate our network with local authority roads, as well as with wider transport modes. We will work in local, regional and national partnerships to support bus and coach companies in offering efficient, attractive services. We will also aim to improve passenger facilities and support transport hubs to improve integration and reduce pressure on our network.

Improving customers' experiences of our roadworks

We understand that the volume of work and associated roadworks can cause frustration for our customers. We will aim to build our customers' needs into the design and construction of all projects. We will use the 20 principles of our *Roadworks: a customer view* to guide our project teams and supply chain, as well as our operating and contractual models. This includes planning and designing traffic management, as well as engaging and communicating with our customers.

We will embed successful initiatives from the first road period, such as greater use of 60mph in roadworks where safe to do so. We will also collaborate with Transport Focus to identify new ways of improving our customers' experiences of roadworks, including when they are using diversion routes.

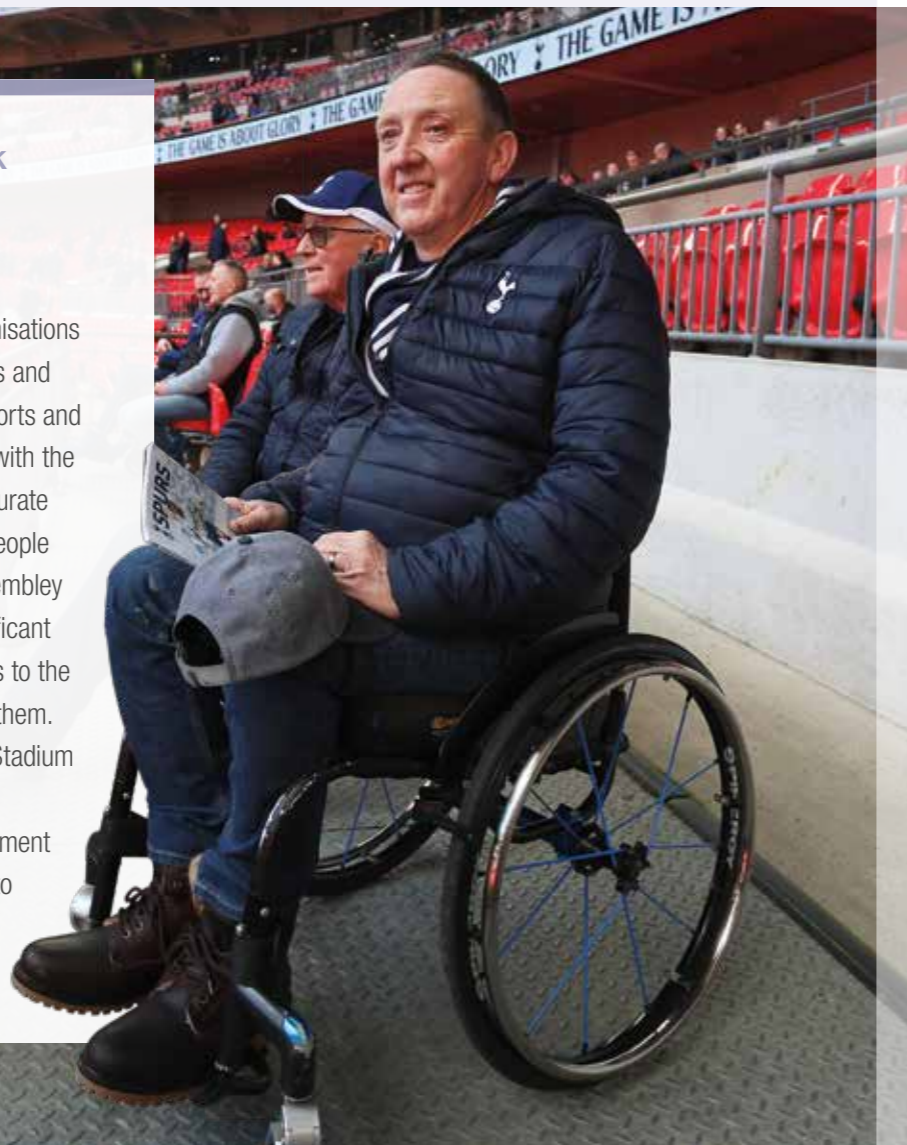
Reviewing and modernising our information systems

Modernising our information systems will help us work more effectively. We will invest in building our data-to-intelligence services and building an open-data architecture.

Such architecture will drive innovation and improve our ability to manage how we use and extract value from our data. We will, for example, be able to make better decisions about where and when we should invest, delivering efficiencies and increasing value for money. Better access to information will also help us provide more integrated transport planning. We will improve our data and information governance, helping give our customers greater confidence that what we hold is kept safe and used ethically.

What we are doing to work with partners to provide real-time updates

We are building relationships with organisations and venues ranging from music festivals and exhibition centres to sports stadiums, ports and airports. We are, for example, working with the Football Association (FA) to provide accurate information and real-time updates for people travelling to and from their events at Wembley and other stadiums. The FA has a significant social media following so getting access to the latest travel information is important to them. Moving 90,000 people from Wembley Stadium becomes much smoother with the right coordination, and our partnership agreement means we can get real-time updates into the stadium before people leave for the car park.



SpursAbility Chairman Peter Carr enjoying a match at Wembley Stadium

By integrating and simplifying dozens of systems and sources of data, we will also give our people, customers and partners the information they need at the right time, on the right device, in the right place. We will replace our National Traffic Information Service with an integrated solution that will keep our customers better informed about incidents and roadworks. We will also update our fibre telecommunications network, one of the largest in England, and use digital technology and fibre optic cables to improve our service. Supporting our ambition for digital roads, this will also help us enable the trial of the latest cellular communications and connected and autonomous vehicles.

Embracing digital technologies

We will work to develop the standards required for infrastructure to support connected and autonomous travel. Working with vehicle manufacturers, we will seek to understand how information should flow to and from vehicles.

We will ensure that our projects incorporate digital technology from planning through to construction, operation and maintenance.

We will use our Innovation Hub, a collaborative online platform, to gather new ideas from across the industry. This will be supported by wider innovation competitions. We are already working with academics, and internal and external stakeholders, to conduct problem-solving research, as well as with organisations such as Innovate UK and I3P, the infrastructure industry's innovation collaboration platform. Our Innovation and modernisation fund will help us fund projects in areas as diverse as digital design and customer mobility. We will also use our innovation programme to fund new products, services and processes.

Measuring success

Road user satisfaction target

82% in first two years



Roadworks information target

90% to be accurate seven days before work starts by end of RP2



Our performance outcomes

6. Achieving efficient delivery

We are setting out to deliver £2.23 billion of efficiencies, which will mean that taxpayers will see even more investment for their money than in the past. We will make improvements to how we procure and manage our suppliers, as well as to how we plan our own maintenance, operations and renewals. These activities will complement our internal capability and development programmes, and our steps to develop our company. All money saved through efficiencies will be reinvested into our network.

Delivering more value through our supply chain

The way we work with our suppliers is changing. In the second road period, our contracting models, including Asset Delivery, our alliance model and regional delivery partnerships, will help us work more efficiently with our supply chain. We will create a network of suppliers trusted to deliver ahead of time and below budget, without compromising on safety or delivery. We will reward suppliers based on performance, and encourage innovation. Our funding certainty means we can provide a pipeline of work, helping suppliers invest in new techniques and training to provide greater efficiency.

Understanding risks, inflation and efficiency

We know that, as projects are delivered, risks may materialise and the ability of funding to cover projects can vary. We have calculated our overall portfolio risk, which has been primarily informed by the maturity of individual schemes. We believe we have the right balance of risk, contingency, inflation and efficiency, and that our programme of investment is deliverable. If delivery is in line with expectations, or inflation is lower than anticipated, there will be scope to gradually release funds for re-investment in our network.

Driving efficiencies through our contracting models

Asset Delivery

Asset Delivery enables clearer decision making as we bring some of the key early investment strategies and decisions in house. It enables us to directly manage maintenance, operations and scheme delivery. Through Asset Delivery, we will improve our asset knowledge and increase our control, including over schemes and the planning and scheduling of our activities.

Alliance model

Our alliance model uses a design and build approach to improve the design process and outputs, creating repeatable and stable delivery. One example of this is off-site fabrication, which allows for quicker and cheaper construction through saving time and materials. It also minimises disruption to our customers and reduces our impact on the environment.

Our model provides access to a framework of incentivised partners to design, assemble and manage smart motorway technology. We have common objectives with our partners, with financial incentives to innovate and succeed.

Regional delivery partnerships

We have set up our regional delivery partnership model to drive our supply chain to improve safety and journeys on our roads. It contains incentives for: shorter and better management of roadworks; buying more efficiently and locally; using regional capability to benefit the region; and encouraging innovation. It represents a fundamental change in the way we deliver road projects. It will be performance rather than cost-based, focusing on building the right projects with the best outcomes for our customers and our neighbouring communities.

Better planning of maintenance, operations and renewals

We want to use our resources in the right way at the right time, causing the least disruption for our customers. We will better plan our work, for example combining renewals activities and other operational and maintenance tasks into work packages to make the best use of lane closures. We will also take the opportunity to create a national programme for the delivery of large capital renewals work, including for structures and concrete barriers.

We are committed to delivering our frontline services in a more effective way to increase capacity and improve the service we offer to our customers. This means that we will be able to respond to incidents as quickly and effectively as possible.

Reducing design costs and construction time

We have already shortened the time it takes to develop and build enhancement schemes, and we will make further reductions by introducing the next generation of our Rapid Engineering Model. This will draw on data analytics and modular construction to reduce the design and build period of new schemes. Our Lean programme will also focus on the areas that will provide the biggest benefit. We will ensure that our supply chain is trained in Lean, and we will integrate Lean maturity assessments into our supplier assessments for both design and construction.

Building skills and capability, and understanding future requirements

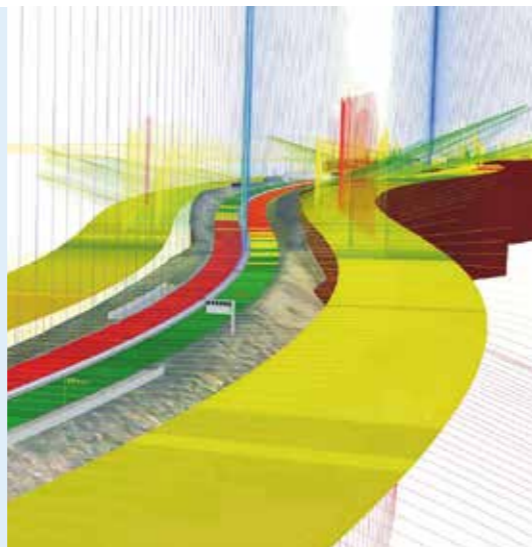
We value the people and skills we have today, and we will work to identify those we will need in the future. Through our *Highways England 2025* organisational plan and our *People strategy*, we are taking steps to develop our company and improve our capacity and capability. We are confident we will improve each year. We recognise the benefit of a diverse talent pool, and we want our people to reflect the communities we work in.

Our increasing use of Lean thinking will help us work successfully across functions and develop a culture of continuous improvement.

Our Rapid Engineering Model

Several different terms are used to describe the increasing use of digital technology and manufacturing in construction. Our Rapid Engineering Model is enabling quicker development of smart motorways through automatic digital design. Using the model, we analyse three-dimensional topographic and environmental data to help identify opportunities and risks within a specific project, or along an entire asset in our network. This has reduced design time from months to weeks, and means that we can produce and assess scheme options much faster.

We are digitising the *Design manual for roads and bridges* to future proof our standards. This manual will help us further develop our Rapid Engineering



Model. The next generation of this model will reduce the cost and delivery time for other major schemes, using data analytics and modular construction techniques. By providing a data-driven approach to asset management, our model will also support business operations.

People strategy

We are a business built around our people and our collective capability to deliver. Our *People strategy* sets out our vision to support our business as well as the delivery of our investment programme over the second road period. Underpinned by our values and behaviours, we have focused this strategy around key themes:

- A great employee experience
- Right people, right place, right skills
- Accountable leadership
- Rewarded for high performance
- Engaged and motivated colleagues
- A diverse and inclusive culture

This strategy supports our aim to build an organisation where our people can reach their potential. Using this strategy, we will develop the right skills and capabilities to meet the needs of our business and customers, both now and in the future.

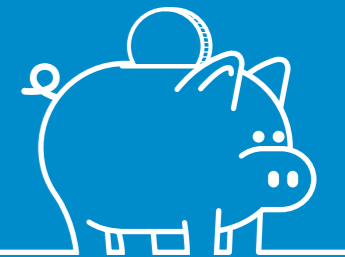


We will collaborate and coordinate our activities more effectively and ensure that we have the right balance between centralised and decentralised decision-making. As we will have broadly the same number of people, re-skilling and re-training will become important for us. When defining our future organisational capability, we will need to make decisions on whether expertise is developed or bought.

We will also work closely with our supply chain and other organisations to improve skills, provide apprenticeships, launch graduate schemes, and get people into work. We will collaborate with stakeholders and other interested parties to support the government's *Transport infrastructure skills strategy*.

Measuring success

Efficiency target
£2.23bn



Planning for future road periods

In this document, we have set out the strategic direction for every part of our company over the second road period. Alongside this detailed planning for the next five years, we have also been actively working with government, customers, stakeholders and partners to plan for the longer term. This includes understanding the likely trends, demands and priorities to ensure our network and our organisation will be fit-for-purpose for years to come. As nobody can predict the future with certainty, this will remain our focus throughout the second road period.

Understanding future challenges

Understanding strategic influences and external trends

We expect, and are planning for, advances over the next 30 years that will revolutionise transportation, road travel and personal and commercial mobility. Our roads, our infrastructure and even our ways of working will need to change to embrace and enable new ways of travelling.

In *Connecting the country*, we identified the trends which will shape the SRN and influence our operations over the next 30 years and beyond. Using these trends, we explored the potential future scenarios and what we believe is most likely to happen.

Refining our findings

We are empowered by government to shape the network of the future, and this is not something we take lightly. Building on *Connecting the country*, we will refine our conclusions on the most prominent influences and trends that will impact the future operation of our network. This will include adapting to the challenge of climate change, supporting low carbon transport, increasing automation and digital technologies, and responding to changing travel preferences.

We will identify the potential improvements which may be needed for our network. We will undertake research to fill any knowledge gaps and take into account nationally-significant projects that could impact on the SRN.



A30 Bodmin, Cornwall

Developing our standards and vision for our network

We have developed standards to guide how we design and operate our network, which are detailed in the *Design manual for roads and bridges*. These standards are essential for:

- ensuring our roads remain among the safest in the world
- providing a consistent and reliable experience for all customers, and improving journey times and reliability
- embedding environmental considerations into our activities and encouraging sustainable development
- ensuring our network is managed as part of a wider, integrated transport network, accessible for all customers

We will use our understanding of external trends and our future plans to further develop these standards over the short, medium and long term. We anticipate, for example, that there will be a greater need to specify digital requirements for all standards of road. As part of this, we will consider working with experts and innovators in digital technologies to incorporate vehicle-to-infrastructure connectivity in future standards.

Developing our network

Delivering government's vision

In RIS2, government set out their vision for a safer, more reliable and greener SRN that uses new technology, supports the country's economy and is an integrated part of the national transport network.

Looking beyond the second road period, we will keep our customers at the centre of our long-term planning approach. We will work collaboratively with communities and partner organisations to best achieve government's strategic vision, using the plans set out in this *Strategic business plan* and our *Delivery plan*. This will ensure we will develop and operate the network our country needs to prosper in the decades to come.

Understanding national, regional and local priorities

Our route strategies process provides an opportunity for us to understand pressing priorities and be clear about what we intend to do where, why and when. We are already working on the next generation of our route strategies, building on committed enhancement schemes and the pipeline of possibilities for the third road period. We are currently in early discussions about these strategies and will publish further information following agreement with government.

As part of this process, we are engaging widely to understand the priorities of different groups and the resulting strategic, regional and place-based needs.

This includes consulting with and bringing together information from customers, local communities, stakeholders such as sub-national transport bodies, environmental groups and our supply chain. Working together, we will consider how our plans can support regional aspirations, including considering opportunities for integration and sustainable development. We will collaborate with Transport Focus to ensure we deliver what our customers need and want.

Addressing complex problems

Our *Strategic studies* address complex problems on our network and, along with our *Route strategies*, inform our longer-term plans for our network.

Our *Strategic studies* from the first road period have created an ambitious programme of work that will affect our plans into the third and fourth road periods. We are currently working on five *Strategic studies* and government has commissioned a further three studies that will inform the future planning of our network.

Annex: Funding table

£m	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	RP2 Total
Operations and maintenance (Opex)	1,034	1,015	1,037	1,050	1,119	5,254
Operations and maintenance (Capex)	355	317	217	318	226	1,434
Renewals	676	765	844	888	935	4,108
Enhancements	2,460	3,081	2,995	2,918	2,722	14,176
Designated funds	182	180	185	200	189	936
RP3 preparation and development	31	43	81	92	99	347
How we run our network (Opex)	167	145	162	171	174	820
How we run our network (Capex)	66	63	52	69	33	283
Total	4,973	5,609	5,572	5,708	5,496	27,358

Note: Some activities are classified differently in this table compared to the Statement of Funds Available (SoFA).

Our plans for delivering RIS2 have been set out according to our capital baseline. As agreed with government, this plan will be delivered within the £27.358 billion set out in RIS2, with the need to revise the allocation of funding in each year from that shown in this table. It is planned that the profile of spend should be updated later in 2020/21 once the impacts of Covid-19 are fully understood.



The Severn Bridge, Gloucestershire

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