

Delivery Plan

2022-2023





A1 Scotswood to North Brunton, North
Cover photo: M4 Junction 17, Stanton St Quintin, Bristol, South West

01

Foreword

03

Executive summary

05

Improving safety
for all

11

Providing fast and
reliable journeys

15

A well-maintained
and resilient network

19

Delivering better
environmental
outcomes

25

Meeting the needs of
all users

31

Achieving efficient
delivery

33

Enhancements

37

Designated funds

41

Preparing for the
third road period

43

How we run
our organisation

50

Annex A:
Funding
table

51

Annex B:
Performance
metrics

57

Annex C:
Enhancement
scheme list

61

Annex D:
Proposed pipeline
of future schemes

62

Annex E:
Changes we
have made

65

Glossary

Foreword



This year marks the mid-point of the second Road Period, and of our commitments that we set out in our 2020-2025 *Delivery plan*. In this annual update of our five-year *Delivery plan*, we look at our plans for the year, and how technology and a focus on net zero carbon will play key roles in helping us deliver for our customers.

In October last year, we welcomed the government's renewed commitment to our five-year programme that it set out as part of the 2021 spending review. The revision of our five-year budget from £27.4 billion to £24 billion is largely a consequence of expected changes to the timing of some of the biggest road projects, including Lower Thames Crossing and the A303 Stonehenge tunnels. The government was clear that the funding for these schemes is still in place, but some of it has moved to a future road period.

Our network is complex and varied, and it requires careful stewardship to keep it in the condition our customers rightly expect. Operating, maintaining and renewing our roads remains the bedrock of our activity.

The most visible sign of our work is our programme of renewals. But our work to provide safe and reliable journeys for our customers goes much further. Our teams work hard to ensure that our assets, including everything from bridges to roadside signs, are well maintained, and that we protect the surrounding environment.

Our investment doesn't end at the roadside. We are looking at the innovation and skills needed to keep our network open and fit for purpose, today, tomorrow and into the future. For example, our National Highways Concrete Roads Centre of Excellence is working on a range of educational materials to upskill and develop our own workforce, the supply chain and the wider industry. The centre was set up to test new technologies, tools and processes. This will help us work as efficiently and quickly as possible as we upgrade the concrete road network over the next 20 to 25 years.

We have delivered a lot in the first two years of this road period, and our Digital Roads roadmap will allow us to achieve much more for our customers. Launched last year, the roadmap describes how we will harness data, technology and connectivity to improve the way the strategic road network is designed, built, operated and used.

We'll also be looking at how we use data and technology to improve our customers' journeys. For example, by using software to distribute real-time information about our network that companies like Google and Waze can pick up, which can then be downloaded onto phones or sat navs.

We'll be working to use digital technology for more of our design and construction activities. Building as much as possible off site, so that customers face fewer delays from roadworks. And we'll use digital twin modeling technology to replicate what we plan to do, and then use the same technology to manage the asset for the remainder of its lifetime.

The road digital twin system is being developed as part of a collaboration with organisations including UK Research and Innovation, Horizon 2020 EU, the University of Cambridge and Costain. We want to explore further partnerships that result in longer term innovation; working in collaboration and across functional boundaries will be critical to creating digital roads for the future.

We also want to be at the forefront of trialling new technologies to make our work more efficient, both in terms of time and money. A good example of this are the trials we are running to establish how graphene can be used to extend the operational life of infrastructure on our network. We're working with the Graphene Engineering Innovation Centre at The University of Manchester and Pavement Testing Services to find out how the material can be used in four different areas; bitumen, asphalt, steel safety barriers and road markings. A recent trial on the A1 in the North East saw graphene added to the bitumen to increase the durability of the product and extend the life of the carriageway.

The roads of the future will be green and last year we set out our ambitious plans for how we will make our roads net zero for carbon by 2050.

We will also build on our work to make our maintenance and construction activities net zero by 2040. We will launch a zero carbon materials innovation programme, and will develop a 2040 zero carbon road map for concrete, asphalt and steel.

Following publication of our Net Zero Highways decarbonisation plan, our responses to planning applications where National Highways is a statutory consultee will be guided by the key points of this plan. We'll also ensure our traffic officers are ready for electric vehicle breakdowns by the end of this year, as well as continuing the roll out of our plug-in hybrid electric vehicles for our fleet.

We'll also focus on activities to make our own carbon emissions net zero by 2030. For example we'll reduce our estate where we can, and where we do need new offices, we'll ensure that they are more sustainable.

Delivery of our net zero ambitions will require strong collaboration, culture and embedding throughout our organisation and supply chain. We are now making carbon a central part to every decision we take across the organisation, and we're asking our supply chain colleagues to do the same.

In everything we do, the safety of those who travel and work on our roads remains our top priority. In line with the government's response to the Transport Select Committee report on smart motorways, we are pausing the rollout of new all lane running (ALR) schemes that have yet to start construction. During 2022-23 we plan to complete the remaining six ALR schemes already underway. We'll also implement enhancements to further improve safety and build public confidence.

As the country continues to recover from the pandemic, we will ensure our roads continue to play a key role in driving the economy. Roads are a convenient, efficient and relatively low-cost way to travel, which is why 34 per cent of all traffic and 68 per cent of all freight moves on our roads. We look forward to working with partners to deliver our part of the government's levelling up agenda, so that all parts of the country feel the benefits of our work.

Nick Harris
Chief Executive

Executive Summary

In this one-year *Delivery plan* update to our five-year *Delivery plan*, we set out what we will achieve in 2022-23. Our imperatives remain safety, customer service and delivery, and we see all three as critical to our delivery of the government's Road Investment Strategy.

We believe that no one should be harmed when travelling or working on our roads. This year will look at improving the safety across all groups who use our roads. For example, we will conduct research to better understand the challenges concerning new drivers on the network.

We'll continue to run our well-established programme of driver safety campaigns. This will include awareness campaigns aimed at improving driver knowledge, behaviour change campaigns targeted at unsafe behaviours, such as close following, and HGV blind spots. We'll also continue to promote prevention campaigns such as vehicle checks.

And in line with the government's response to the Transport Select Committee report on smart motorways we'll implement enhancements to further improve safety and build public confidence.

This includes delivering a £390 million programme to build more emergency areas on ALR motorways in operation and construction over the duration of Road Period 2 (RP2). We'll also complete the installation of radar stopped vehicle detection (SVD) technology on every existing ALR section by end of September 2022*.

Our network remains hugely important to our country's economic prosperity, and it is our role to keep it safe and free flowing. Our programme of renewals and maintenance is crucial to this.

Last year we completed [seven] major projects, five of which finished more than three months ahead of schedule, and we have started work on another four. In 2022-23 we plan to start work on a further nine projects, with 12 expected to open for traffic. We also expect decisions on a number of applications for Development Consent Orders where the Department for Transport has asked for further environmental information before determination.

We expect to submit our application for a Development Consent Order for the Lower Thames Crossing during the coming year, and await the Secretary of State's re-determination on the A303 (Stonehenge) Amesbury to Berwick Down scheme.

This year will see us increase our investment in renewals activity to pre-empt problems, particularly across concrete roads, our largest structures and safety barriers. We will also begin the replacement of the highest priority weather stations.

Our customers are diverse. They include the people who use our roads, as well as those who live and work alongside them. We know that our customers experiences vary when it comes to journey times, and that delays, especially when unexpected, can affect day-to-day lives.

Our customers have told us that they find speed limits in roadworks particularly frustrating. Safely improving our customers' experience is a key part of our customer service strategy. So this year we will expand our Highest Safe Speed (HSS) to all of the schemes where it is safe to do so.

We want to better understand the needs of pedestrians, cyclists and horse riders who use our roads, so this year we will work with Transport Focus to measure their satisfaction. And in line with our commitment to make our roads accessible for all, we'll continue to strengthen our collaboration with disability organisations through our Roads for All Forum. We will diversify membership even further, and work to find the right solutions for making our services more accessible and inclusive.

We want our roads to work harmoniously with the communities that live alongside them, and with the built, natural and historic environments that surround them. Our designated funds have supported multiple projects to improve lives, increase accessibility, protect the environment and support the nation's economy and we want to build on this work. This year, through our designated funds we will invest in schemes to reduce the risk of access for suicide related incidents. We will support projects which better integrate our network with other transport networks, improve outcomes for communities.

We value our people and we are committed to providing safe and inclusive working environments that foster innovation and employee engagement. We will continue to develop our people and organisation.

To ensure we have the right people and skills in 2022-23 and for the future, we will update the information that we use to attract new recruits and ensure we recruit from a diverse talent pool. To help attract and retain the very best people, we'll embed our talent management and succession planning processes throughout the organisation.

As we reach the mid-point of this Road Period, we will sharpen our focus on the work we are doing to prepare for the next one. The views of our customers and stakeholders are critical, and we continue to engage with them as we prepare to publish our SRN Initial Report. We will also progress with the development of our pipeline schemes for the next road period, to ensure that our work continues to connect the country.

Roads are the backbone of our transport network. Nine out of 10 of all miles travelled in England are by road. National Highways roads, or the SRN, are the motorways and major A roads that link the nations and regions to each other. It provides reliable road connections between cities and towns and the major ports and airports, bringing people together for business and leisure. The SRN is vital to economic growth and the flow of goods locally, regionally, nationally and internationally. This plan sets out how we'll continue to safely manage the network for our customers, as well as improve it by taking major projects through the planning process, into construction and finally full operation. This work supports economic growth and makes our roads safer for everyone.

*With the exception of approximately 0.6mile gap on the M25 Junctions 6 to 7 which will have SVD installed after September 2022

Improving safety for all

Safety is our first imperative and we want everyone who works with us, and everyone who travels on our network, to get home safe and well. We will refresh our Home Safe and Well approach by the end of 2022-23, which is our approach to health, safety and wellbeing. We will also continue to undertake in-depth analysis, interrogation and reporting of casualty and collision data on the SRN. Our response to the government’s smart motorway stocktake is covered in the Enhancements section of this report.

Key Performance Indicators	
KPI 1.1	The number of people killed or seriously injured (KSI) on the SRN
Performance Indicators	
PI 1.2	The total number of people killed or injured on the SRN
PI 1.3	The number of non-motorised and motorcycle users killed or injured on the SRN
PI 1.4	The number of injury collisions on the SRN
PI 1.5a and 1.5b	Accident frequency rates for National Highways staff and supply chain
PI 1.6	The % of traffic using iRAP 3 star or above rated roads



mobile phone safety campaign

Our RIS2 commitments: Improving safety for all

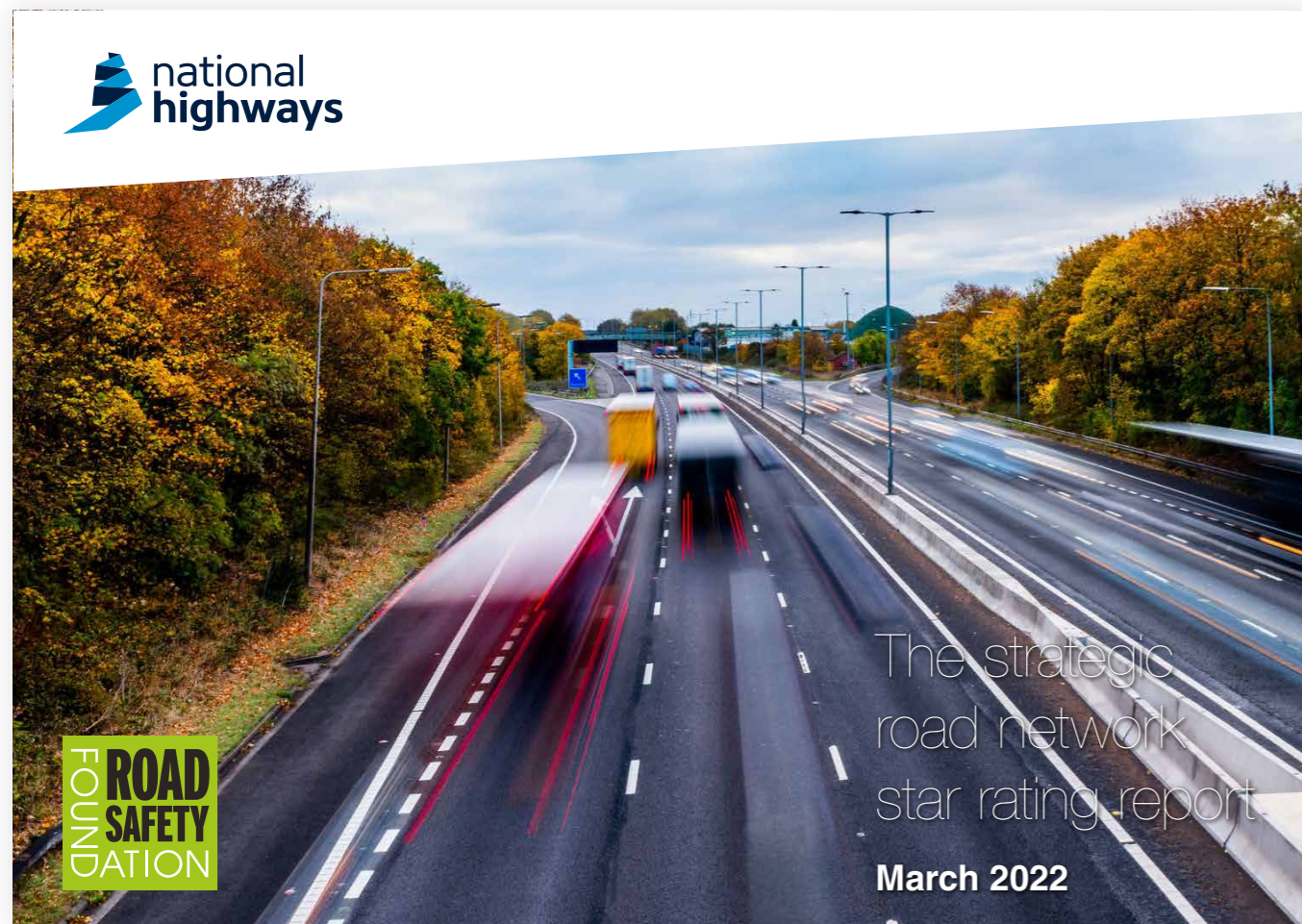
KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 1.1 and PI 1.1 - 1.4</p> <p>Target: Ongoing reduction in number of people KSI on the SRN to support a decrease of at least 50% by the end of 2025, against the 2005-09 average baseline</p>	<p>Systems and reporting</p> <p>During 2022-23 we will continue to maintain the National Highways Fatal Research Database, now the largest of its type in Europe. The data and learning continue to be used across the business to inform policy and strategic business decisions including infrastructure investment. We will build on fatal collision data research to analyse fatality root causes to direct funding and inform business decisions and focus on the in-depth research to specific road users' types e.g. motorcyclists and vans and different road types.</p> <p>We will complete development of a Road User Risk Management System, a key pillar in our safe system approach. The project will ensure we have a clearly defined framework for identifying, mitigating and monitoring road user risk using the safe system approach and that this is embedded effectively within the organisation.</p> <p>This year we will also develop a Post Collision Reporting system within Data-as-a-Service to remove some repetition and risks of human error whilst improving consistency of high-value quick-time unvalidated data.</p> <p>Engagement and awareness campaigns</p> <p>As part of the National Roads Policing Review, in 2022-23 we will undertake joint pilots with the police and other organisations, covering motorcycles, vans/light commercial vehicles and Network Intelligence Tool. This will demonstrate the value of a joined-up approach to improving road safety and reducing incident related congestion on the SRN, and, how roads policing is key to achieving this.</p> <p>This year we will gather further evidence and develop interventions for our Running out of Fuel Prevention programme. This will take place on a section of smart motorway with a history of fuel related breakdowns. Monitoring the impact of the interventions on reducing the number of incidents as part of the Roads Policing Review.</p> <p>We will further develop and enhance the support the Driving for Better Business Programme, raising awareness of the duty of care that employers have in managing those in their organisations who drive on business. We will continue to improve awareness of work-related road risk, employers' duty of care and employees' responsibilities.</p> <p>We will continue to deliver a programme to target reductions in commercial vehicle KSIs. A range of products will be delivered such as best practice guides, safety cards, improved joint agreements with Police and DVSA and collaboration with various stakeholders and partners to improve safety on the SRN.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p data-bbox="121 260 344 289">KPI 1.1 and PI 1.1 - 1.4</p> <p data-bbox="121 333 492 512">Target: Ongoing reduction in number of people KSI on the SRN to support a decrease of at least 50% by the end of 2025, against the 2005-09 average baseline</p>	<p data-bbox="528 260 753 289">Training and capability</p> <p data-bbox="528 298 706 323">In 2022-23 we will:</p> <ul data-bbox="537 333 1294 646" style="list-style-type: none"> <li data-bbox="537 333 1294 401">■ develop an e-learning crisis intervention training product which is bespoke to the road sector. <li data-bbox="537 422 1294 527">■ produce a Trauma Response framework. This will set out what can and should be done to plug the time gap between when a crash happens and when the emergency services arrive. <li data-bbox="537 548 1294 646">■ develop our capability to consider suicide risk in all schemes, by providing a new risk management tool and new resources for designers, to help reduce the risk. <p data-bbox="528 667 1294 919">This year we will build on the success of other warning letter campaigns. Where offending vehicles / drivers were contacted by letter, jointly from us and the police, about the offence and asking them to complete an online survey to provide more details of why it occurred, and we contact those customers who have broken down on the network. We will gather intelligence on why the incidents occurred to try to better understand the actions of our customers. It is hoped this will lead to behavioural change and new interventions can be considered.</p> <p data-bbox="528 961 1294 1182">We will develop access to expert advice, both national and international, to support us in taking forward the Safe System Approach throughout the organisation. It will also enable us to access specialist technical support across the road safety community, and the vehicle and insurance industries. This will help to identify crash causation and location, develop suggested opportunities for collaboration, as well as wider opportunities with other key road safety stakeholders.</p> <p data-bbox="528 1224 626 1253">Research</p> <p data-bbox="528 1262 706 1287">In 2022-23 we will:</p> <ul data-bbox="537 1297 1294 1570" style="list-style-type: none"> <li data-bbox="537 1297 1294 1409">■ conduct research to better understand the challenges concerning new drivers on the network. Identifying what interventions should be led by us, or if not, which bodies are best placed for us to work with to engage this road user group. <li data-bbox="537 1430 1294 1570">■ carry out and complete research on tyre tread depths to identify at point of sale how many tyres were already illegal - below 1.6mm, below 2mm or below 3mm. It will also look at tyre condition where the customer has made the choice to have their tyres checked. <p data-bbox="528 1623 700 1652">Motorcycle users</p> <p data-bbox="528 1661 1294 1839">During 2022-23 we will continue to develop and explore the recommendations from the gap analysis and the implementation of the motorcycle safety framework. We are working in partnership with experts and key stakeholders within the motorcycling community on key routes and strategies to reduce motorcycle casualties and improve rider behaviour choices.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p data-bbox="1653 260 1822 289">PI 1.5a and 1.5b</p>	<p data-bbox="2059 260 2825 401">In 2022-23 we will connect our Highways Accident Reporting Tool, for accident and incident reporting, to Data-as-a-Service. As more corporate systems become connected, we'll be able to gain more and more meaning from our people safety data, so we can further protect them from harm.</p> <p data-bbox="2059 443 2825 512">We will deliver a new digital visitor briefing across our estate to enhance the visitor experience and improve our Duty of Care.</p> <p data-bbox="2059 569 2825 747">This year we will also introduce a comprehensive wellbeing app to give employees the tools to improve their mental and physical wellbeing. It will include a whole host of tools and information, as well as a corporate activity challenge platform to encourage physical exercise and team engagement - to prevent and manage stress, anxiety, and related conditions.</p> <p data-bbox="2059 789 2825 900">Re-evaluation of our Workplace Wellbeing Charter is due in 2022-23 Q4. The aspiration is to achieve Excellence in all areas of the charter - showing that we have adopted a holistic approach to wellbeing which is embedded into our culture.</p> <p data-bbox="2059 942 2825 1054">We will deliver an updated enterprise safety risk model resulting in an improvement in our Safety Risk Modelling activities. This is fundamental to safety decisions made across the business and that technical safety risk is being managed appropriately.</p> <p data-bbox="2059 1096 2825 1236">This year we will complete roll out of the Health Safety and Wellbeing Management System (HSWMS) by embedding through our communications processes and through our HSW team network. And, we will continue to develop and enhance the HSWMS using feedback from our users to continually improve content and accessibility.</p> <p data-bbox="2059 1278 2825 1348">In 2022-23, in line with our National Highways Corporate Home Safe and Well plan:</p> <ul data-bbox="2068 1390 2825 1747" style="list-style-type: none"> <li data-bbox="2068 1390 2825 1631">■ Our Major Projects Directorate will deliver against its internal Home Safe and Well Strategy and Plan. This aims to achieve a cultural shift in the Directorate and support achievement of a level 4 culture maturity by 2025. The Strategy and Plan comprises of five workstreams. The principal ones being 'Supplier Performance and Learning' and 'Engaging and Developing our People'. The final three are cross-cutting workstreams of 'Data and insight', 'Design for Safety' and 'Wellbeing'. <li data-bbox="2068 1652 2825 1747">■ Our Operations Directorate will deliver against its internal Home Safe and Well plan. Aimed at achieving a level 4 culture maturity by 2025, to further improve overall health, safety and wellbeing performance and maturity. <p data-bbox="2059 1799 2190 1829">Publications</p> <p data-bbox="2059 1837 2825 1906">We will review our Home Safe and Well approach by the end of 2022-23, ensuring it remains fit for purpose. This is our approach to health, safety and wellbeing.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>PI 1.6 iRAP 3 star or above rated roads</p> <p>Descriptive commitment: iRAP baseline to be established in 2021, and 2025 - forecast developed, based on latest iRAP methodology</p> <p>Target: N/A - Complete</p>	<p>During 2022-23 we will develop the iRAP future tool for improved suitability to assess the SRN, in particular digital roads and smart motorway. We will ensure we have secured the correct data sources before resurveying commences (which may commence during 2023).</p> <p>We will develop our capability to use iRAP data by launching and delivering our training programme:</p> <ul style="list-style-type: none"> engage with areas of the organisation to build interest and appetite with our target audience, those with responsibility for safer network design. develop forms for Major Projects and Designated Funds to drive the right behaviours concerning star rating. To ensure that the principles underpinning star ratings improvements are part of the design process.

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>Descriptive commitment: Work with Transport Focus to investigate a rate-based measure for non-motorised user casualties</p> <p>Target: N/A - Ceased</p>	<p>Following our research and engagement we found this measure is not feasible at present and have officially ceased the commitment.</p> <p>We are now considering other information that we could provide to demonstrate our commitment to improving routes and facilities for walkers, cyclists, and horse-riders, including consideration and improvements relating to safety.</p>



The strategic road network star rating report – 2020 survey



Traffic cones

Providing fast and reliable journeys

We know that our customers' experiences vary when it comes to journey times, and that delays, especially when unexpected, can affect day-to-day lives. Last year we published our *Managing delay on the SRN* plan.

Covering three strategic focus areas of optimising our roadworks, innovating to address congestion and reducing the impact of incidents. This year we will continue to deliver against the plan to ensure we do everything we can to support our customers and the wider economy. Such as expanding our highest safe speed approach and using 60mph instead of 50mph in suitable schemes.

Key Performance Indicators

KPI 2.1	Average delay
KPI 2.2	Roadworks network impact
KPI 2.3	Incident clearance rate

Performance Indicators

PI 2.4	Delay on smart motorways
PI 2.5	Delay from roadworks
PI 2.6	Journey time reliability
PI 2.7	Delay on gateway routes
PI 2.8	Average speed



South West Traffic Officer

Our RIS2 commitments: Providing fast and reliable journeys

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 2.1 and PI 2.4 - 2.8</p> <p>Target: Performance to be no worse at the end of the second road period than it was at the end of the first road period</p>	<p>Our Enhancement programme (Annex C) and schemes from our Safety and Congestion Designated Fund, will be completing improvements to the road network this year which will improve journey times.</p> <p>During 2022-23 we will continue progressing the current round of route strategies, to help identify where future investment is most beneficial to improving journey times.</p> <p>We will also be building and delivering a forward programme of research into delays and journey times, to inform future investment and operational decision making.</p>
<p>KPI 2.2</p> <p>Target: Roadworks network impact to not exceed the monthly average target of weighted lane metre days set for each year (see Annex B for figures)</p>	<p>In 2022-23 we will be expanding our highest safe speed approach to all suitable schemes - where we use 60mph instead of 50mph where possible - monitoring and reporting on those that adopt the highest safe speed principles.</p> <p>And we will take a bold approach to road improvement projects – looking at the benefits of closing roads altogether for short periods, to reduce the impact of roadworks on local communities, improving the experience for customers.</p> <p>This year we will improve the experience through our roadworks; delivering a customer communications toolkit, building on Roadworks: A customer view to deliver consistent quality and tailored information to customers.</p>
<p>KPI 2.3</p> <p>Target: 86% of motorway incidents cleared within one hour</p>	<p>In 2022-23 we will be improving our understanding about incidents on all our roads by providing access to crowd source data in all of our Regional Operations Centres.</p>
<p>Descriptive commitment: Working with Transport Focus, investigate the development of new metrics on journey time reliability which reflects more accurately road users' understanding of reliability, and delay from roadworks</p> <p>Target: Development to be completed during the second road period</p>	<p>We are aiming to complete the development stage by end of Q2 and Q3 2022-23 for, journey time reliability which reflects more accurately road users understanding of reliability, and, delay from roadworks. The outcome of the development stage will determine whether these are suitable to move onto validation stage.</p>

Our RIS2 commitments: Providing fast and reliable journeys

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>Descriptive commitment: Investigate new PIs on delays from incidents and delays on the local road or SRN boundary, and an alternative performance measure for smart motorways operation to keep track that these roads are delivering their intended journey-time related objectives</p> <p>Target: Development to be completed during the second road period</p>	<p>We are aiming to complete the development stage by end of 2022-23 Q2 for, delays from incidents, and, an alternative performance measure for smart motorways operation to keep track that these roads are delivering their intended journey-time related objectives. The outcome of the development stage will determine whether these are suitable to move onto validation stage.</p> <p>We have ceased the current activity as defined in the RIS for a metric covering delays on local road or SRN boundary. We recognise this is an important subject we should seek to understand, therefore we will continue investigations in this area. We are developing new data sources that will become available as we modernise our traffic data services, and we continue to develop the other new metrics we committed to investigate as part of RIS2 (such as delay from roadworks, reliability and delay from incidents). As we learn from this development work, in 2023-24 we will review the feasibility of using this new data to assess the experience of road users as they move between the SRN and the local road networks, which was the original intention of this commitment.</p>



A well-maintained and resilient network

Maintaining and renewing our network remains a core part of our activities. We will continue to keep our network open and fit for purpose, today, tomorrow and into the future, with programmes based on the needs of our customers and our assets. This year we will also produce a road map for the implementation of the Asset Management System Strategy and commence on-site replacement of the highest priority weather stations.

Key Performance Indicators	
KPI 3.1*	Pavement condition
Performance Indicators	
PI 3.2	Structure condition
PI 3.3	Technology availability
PI 3.4	Drainage resilience
PI 3.5	Geotechnical condition

*New pavement metric and performance target introduced in for 2022-23



Cycling off network

Our RIS2 commitments: A well-maintained and resilient network

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 3.1</p> <p>Target: 96.2% of the network (excluding DBFOs) in good condition</p>	<p>In 2022-23 Q1 we introduced a new pavement metric and performance target that we will report for the remainder of the year. This metric is an enhancement on our previous KPI, providing an improved measure of overall pavement condition.</p> <p>Areas of enhancements are:</p> <ul style="list-style-type: none"> - coverage of all lanes rather than Lane one only. - alignment with maintenance programme and standards. - alignment with the ride quality metric. <p>We will also further develop and document our lifecycle plans for our flexible pavements to form the basis of decisions on our pavement schemes and manage asset performance.</p>
<p>PI 3.2</p>	<p>During 2022-23 we will continue to report annually on the structures condition metric covering SCav (takes account of all the elements of a structure), SCcrit (condition of importance to load bearing) and Structural Condition Index (percentage of structures rated as 'Good'). To enable these to use the most current information the inspection programme will be monitored for timeliness, and action taken where there are concerns.</p>
<p>PI 3.3</p>	<p>In 2022-23 we will complete the alignment of data sources for roadside technology. To support a clear performance narrative from regional through to the national numbers published. This will also help provide the right operational incentives.</p>
<p>PI 3.4</p>	<p>Throughout the year we will continue to report the drainage resilience metric to monitor asset performance.</p> <p>We will also continue our validation on weather normalisation of the drainage resilience metric through a process of off-line shadow reporting. On implementation, weather normalisation will enhance our capacity to prioritise investment in those flood hotspot mitigation schemes that deliver the greatest benefit.</p>
<p>PI 3.5</p>	<p>Throughout the year we will continue to report the geotechnical asset metric to monitor performance and inform decision making.</p> <p>We will also update our geotechnical asset management plans, including planned inspections and interventions, to inform decisions on our schemes and how we manage the asset to maintain stable performance.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>Descriptive commitment: Implement the Asset management development plan (AMDP) for the second road period</p> <p>Target: Annual deliverables</p>	<p>The Asset management development plan (AMDP) has evolved into an Asset Management Transformation Programme (AMTP) which builds on the existing AMDP on a programme footing.</p> <p>In 2022-23 we will be rolling out the following activities :</p> <ul style="list-style-type: none"> ■ Launch and embedment of Asset Management policy, strategy. ■ Launch and embedment of Asset Class strategies. ■ Development of technical handbook with asset management processes (as-is). ■ Development of to-be asset management processes where there are gaps identified including strengthening the technical assurance. ■ Development of a risk based guidance of maintenance standards. ■ Produce a road map for the implementation of the Asset Management System strategy.
<p>Descriptive commitment: Investigate an improved structure condition metric during the second road period, and an alternative indicator for technology assets</p> <p>Target: Development to be completed during the second road period.</p>	<p>We are committed to investigating an improved structures condition metric during RP2. The feasibility stage has been completed and in 2022-23 we will continue to investigate the development of this improved metric, including the reconsideration of our structure condition bands, to reflect our current asset management practices.</p> <p>In 2022-23 we will review our feasibility stage outputs based on the updated technology availability work to produce a new draft delivery roadmap. To support the potential delivery of an alternative metric development phase.</p>
Other supporting activities	Our activities during 2022-23
Maintenance	While undertaking maintenance on the road network, we routinely identify defects that need to be repaired to ensure road user safety.
Renewals	Each year regions plan their renewals programmes and identify the key outputs and milestones they will deliver. These are laid out in the renewals deliverables table on the right. We have summarised the key renewal activities we will carry out in 2022-23 for the five main asset classes and provided information on some of the supplementary asset classes.
Dealing with adverse weather	Following a study to determine the best locations for replacement weather stations - utilising expert Met Office research - this year we will commence the first year of the on-site replacement, of the highest priority weather stations.

Renewals deliverables for 2022-23

Asset	Number	Unit	Description
Monitoring			
Asphalt road surface (pavement)	839	Lane miles	Total length of existing asphalt road surface resurfaced
Concrete road surface (pavement)	48	Lane miles	Total length of existing concrete road surface reconstructed and replaced with asphalt surface
Safety barriers (steel)	217	Miles	Total length of steel safety barriers installed or renewed
Safety barriers (concrete)	8	Miles	Total length of concrete safety barriers installed or renewed
Significant structures	39	Number	Number of significant structures
Assurance			
Road markings	3,300,000	Linear metres	Length along the centre line of the road markings, including markings on new or replacement road surfacing
Kerbs	9,500	Linear metres	Total length of kerbs laid or renewed
Safety barriers (steel)	350,000	Linear metres	Total length of steel safety barriers installed or renewed
Safety barriers (concrete)	12,500	Linear metres	Total length of concrete safety barriers installed or renewed
Drainage	130,000	Linear metres	Total length of drainage installed or renewed
Geotechnical	1,800	Linear metres	Total length of embankment/cutting treated parallel to the carriageway
Traffic signs (non-electrical)	2,000	Number	Number of permanent non-electrical traffic signs installed or replaced
Guardrail	500	Linear metres	Total length of new or replacement pedestrian guardrail
Boundary fencing	57,000	Linear metres	Total length of new or replacement boundary fencing
Lighting	600	Number	Number of road lighting columns installed or replaced
Bridge joint	350	Number	Number of bridge deck expansion joint installations installed or renewed
Bridge bearing	100	Number	Number of bridge bearing units installed or renewed
Parapet	4,500	Linear metres	Total length of vehicle parapet installed or renewed
Waterproofing	24,000	Square metres	Total surface area treated for waterproofing
Motorway communications equipment	300	Number	Number of new or replaced motorway communications equipment items
Technology renewals	450	Number	Number of technology assets renewed or improved

Delivering better environmental outcomes

We continue our journey to make a positive impact which reaches beyond our network, with an aim to improve lives, and to protect the environment and neighboring communities. Our roads are also a key part of the net-zero future and supporting delivery of a carbon-free economy by 2050. This year we will also develop our Environmental Sustainability Action Plan and publish our Environmental Sustainability Strategy by the end of 2022-23.

Our infrastructure design should be respectful of place, and where roads pass through areas of substantial environmental and cultural value. To support this, we will issue landscape design advice to complement Design Manual for Roads and Bridges (DMRB) landscape requirements and commence review of the DMRB environmental impact assessment and design requirements.

Key Performance Indicators	
KPI 4.1	Noise
KPI 4.2	Biodiversity
KPI 4.3	Air quality
KPI 4.4*	National Highways carbon emissions
Performance Indicators	
PI 4.5	Supply chain carbon emissions
PI 4.6	Condition of cultural heritage assets
PI 4.7	Water quality
PI 4.8	Litter

*This KPI has been re-baselined to a of figure of 90,286 tonnes of carbon

Our RIS2 commitments: Delivering better environmental outcomes

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 4.1</p> <p>Target: 7,500 households benefiting from noise reduction in mitigated 'noise important areas</p>	<p>The Conference of European Directors of Roads (CEDR) FAMOS project (Factors Moderating - people's subjective reactions to noise), which we're financially supporting, will be completed in 2022-23. This project will identify measures that can improve perception of noise that can apply to sensitive areas such as National Parks and areas with population density.</p> <p>We will continue with the Noise Important Area Improvement Programme, delivering mitigations to over 1000 households in 2022-23. Which will consist of noise barrier construction, replacement of older, noisier surfaces with newer, quieter surfaces, and the installation of noise insulation in homes close to the network.</p>
<p>KPI 4.2</p> <p>Target: Achieve no net loss of biodiversity across all National Highways activities by the end of the second road period (130,848.1 biodiversity units)</p>	<p>Throughout 2022-23 we will continue to manage dynamic programmes to respond effectively to change, and, to build upon existing pipelines of work.</p> <p>To support no net loss by the end of RP2, we will progress opportunities to maximise biodiversity delivery on our land and with 3rd parties. To maintain a level of over-programming and to manage risks to achievement of our KPI.</p> <p>This year we will produce a Biodiversity Report to comply with regulations within the Environment Act 2021.</p> <p>We will continue to improve our processes to capture biodiversity metrics into the design and assessment process and to further refine our assumption based approach to quantifying biodiversity loss within our operational estate.</p> <p>We will produce a Major Projects Instruction (MPI) as a guide for our Major Projects this year. The MPI will identify how we capture biodiversity metric outputs and quantitative reporting for biodiversity into our scheme designs and assessment in a consistent manner. This will enable us to take a proactive approach to prepare the business to respond to the requirements of the Environment Act 2021, following the transition period for the implementation of the net gain mandate.</p> <p>In 2022-23 we will complete an efficient verge management trial which is hoped will lead to benefits for landscape and biodiversity on our soft estate. If the trial successful we will explore whether rolling out similar techniques to our operational teams is feasible. This will help with increasingly mainstream environmental considerations across its everyday business activities.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 4.3</p> <p>Target: Bring links agreed with the department and based on the Pollution Climate Mapping model into compliance with legal NO2 limits in the shortest timescales possible</p>	<p>During 2022-23 we will progress the measures that can be taken forward for identified links, and, publish our agreed assessment reports of these measures. These include speed limit trials, traffic management measures or constructing barriers.</p> <p>We will support local authorities with clean air plans, such as, through the design and provision of SRN signing for their Clean Air Zones.</p> <p>We will also work with local authorities as they implement and operate electric van try-before-you-buy schemes to help maximise benefits.</p>
<p>KPI 4.4</p> <p>Target: Reduce National Highways carbon emissions as a result of electricity consumption, fuel use and other day to day operational activities during the second road period by 75% from April 2017- March 2018 baseline of 90,286 tonnes</p>	<p>This year we will undertake the following activities to help change behaviour and support National Highways carbon emission reductions by:</p> <ul style="list-style-type: none"> ■ Delivering greening projects to improve the lighting and heating, ventilation and air conditioning across our estates and depot sites. ■ Using the Renewable Energy Guarantees of Origin (REGO) Certification to support our purchase of renewable electricity. The REGO scheme provides transparency on the proportion of electricity that suppliers source from renewable generation. ■ Continuing the Electric Vehicle (EV) infrastructure programme to deliver charging capability for National Highways fleet. ■ Engaging with the business to raise awareness and support delivery of sustainability projects. ■ Holding energy audits of our sites to identify opportunities across our estate. ■ Trialling installation of the solar membrane project at the renewable energy centre in Northumberland. The project is to prove the suitability of using solar membranes on our messaging signs to generate the energy for use - reducing demand from our supply. ■ Renewing our lighting on the network to LED's.
<p>PI 4.5</p>	<p>In 2022-23 we will again complete an annual review and update of carbon factors to ensure the best and latest industry standard and government carbon intensity factors are used in our tool.</p> <p>We are keen to understand the potential for carbon reporting coupled with innovation analytics, reading and presenting from a digital supplier analytics platform. We will explore this further during 2022.</p> <p>We will be seeking greater emphasis and alignment in carbon footprinting and carbon intensity between the supplier's carbon reporting and their overall performance reporting.</p>

Other supporting activities	Our activities during 2022-23
<p>Net Zero</p>	<p>In 2021-22 we published <i>Net zero highways: our 2030 / 2040 / 2050 plan</i> and created a team dedicated to providing day-to-day coordination of our carbon performance and supporting implementation of the actions and governance devolved to each directorate.</p> <p>In 2022, to support net zero for our own operations by 2030, we will:</p> <ul style="list-style-type: none"> ■ Zero carbon memoranda agreed with our landlords. <p>In 2022, to support net zero for maintenance and construction by 2040, we will:</p> <ul style="list-style-type: none"> ■ Develop a near-zero plan for each of our procurement categories. ■ Implement and certify a construction carbon management system. ■ Launch a zero-carbon construction innovation programme. ■ Develop a 2040 zero carbon road map for concrete, asphalt and steel. <p>In 2022-23, to support net zero carbon travel on our roads by 2050, we will:</p> <ul style="list-style-type: none"> ■ Publish our proposed approach to zero carbon HGV trials by the end of 2022. ■ Integrate net zero into our statutory consultee responses to planning applications from 2022. ■ Ensure traffic officers are ready for EV breakdowns by end 2022. <p>In 2023, to support net zero carbon travel on our roads by 2050, we will continue to:</p> <ul style="list-style-type: none"> ■ Deliver a report to improve lorry movements in 2023. ■ Launch a programme to improve coach passenger experience. ■ Publish a blueprint for EV charging services on our roads. <p>In 2022-23, to support all the actions we are taking within our Net Zero Plan, we will continue to:</p> <ul style="list-style-type: none"> ■ Establish and maintain clear governance – from a carbon team to clear roles agreed for delivery and execution. ■ Have a clear carbon data improvement programme that sets out what data we need when and the actions we need to take to deliver this.

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>PI 4.6</p>	<p>In accordance with Design Manual for Roads and Bridges we have updated two Cultural Heritage Asset Management Plans (CHAMPS) in 2021-22 which reached the end of their four year cycle. The remaining 11 CHAMPS will all be brought up-to-date during 2022-23.</p> <p>In 2022-23 we will complete metric assessment documentation for all heritage assets affected by works within the SRN. The cultural heritage metric assesses the value and condition of each asset expressed in Cultural Heritage Units (CHUs).</p>
<p>PI 4.7</p>	<p>During 2022-23 we will enhance the length of waterbodies by 3.5km through the mitigation of priority outfalls, introduction of fish passes, river improvements or the introduction of natural flood management measures in a catchment.</p> <p>Through stakeholder engagement with the Environment Agency, in 2022-23, we will identify and develop a collaborative programme of enhancement projects.</p> <p>This year we will complete our Microplastics Phase 2 field studies and publish our findings. This will inform policy options to reduce microplastics generated by vehicles entering watercourses.</p>
<p>PI 4.8</p>	<p>Using the research undertaken by Keep Britain Tidy, in 2022-23, we will nationally deliver three targeted anti-littering interventions focussing on changing our customers' behaviour.</p> <p>In 2022-23 we will take part in Keep Britain Tidy's Great British Spring Clean and support our staff in picking litter in the communities where they live or work.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>Descriptive commitment: Investigate, and as appropriate develop, new environmental metric(s) informed by the natural capital approach</p> <p>Target: N/A - Ceased</p>	<p>Natural capital metrics are a fast-developing area in government, and we have reviewed our existing metrics against Defra's Environmental Indicator Framework. The review concluded that it would not be feasible to develop new environmental metric(s) informed by the natural capital approach and we have officially ceased this commitment.</p> <p>Our landscape, air quality and noise metrics may ensure we are well placed to be an early adopter of any future metric(s) that combine different aspects of environmental performance. We will consider how these are measured as part of RIS3 performance specification.</p>
<p>Descriptive commitment: Investigate and assess incorporating into new and existing contracts air quality standards for supply chain vehicles deployed on National Highways work, and associated reporting requirements</p> <p>Target: End of second road period</p>	<p>In 2022-23 the supply chain is being asked to submit a carbon reduction plan, after which we assess the returns. This will support the understanding of levels of market capability, preparedness, and ambition.</p> <p>Once the carbon reduction plan returns are assessed, an action plan for future or legacy contract conditions will be made. These will be based on an assessed self-generated reduction or the need for an incentivised reduction requirement. Supporting consideration of implementing beneficial provisions into both legacy and new contracts.</p>

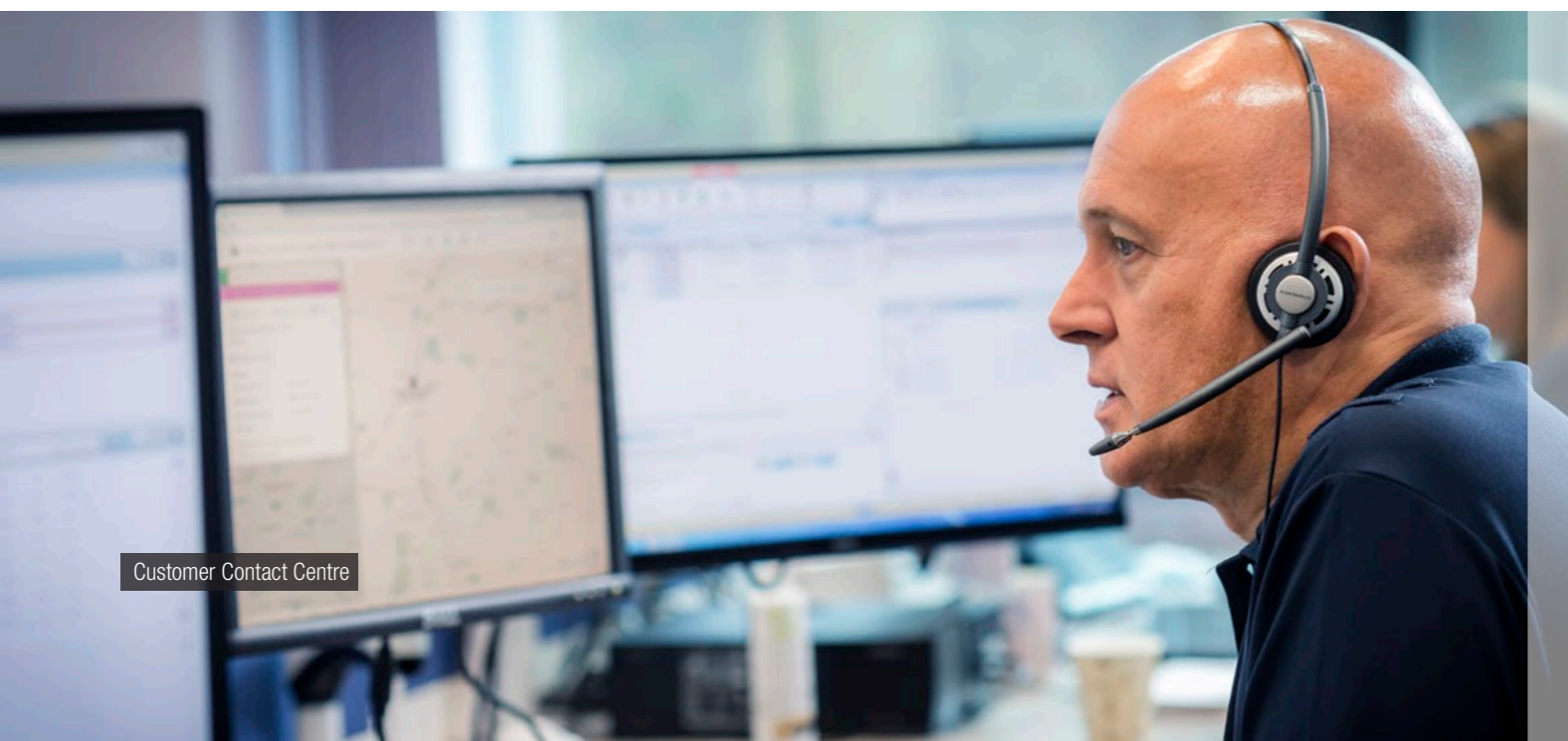


A120 pond, South East

Meeting the needs of all users

We want to enable stress-free journeys that meet and exceed our customers' expectations. We aim to build, maintain and operate a road network and deliver services that meet the needs of our customers and communities. This includes understanding their needs and helping them safely complete their journey.

Key Performance Indicators	
KPI 5.1	Road user satisfaction.
KPI 5.2	Roadworks information and accuracy.
Performance Indicators	
PI 5.3	Timeliness of information provided to road users through electronic signage.
PI 5.4	Ride quality
PI 5.5	Working with local highways authorities to review diversion routes for unplanned events.



Customer Contact Centre

Our RIS2 commitments: Meeting the needs of all users

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 5.1</p> <p>*Target: Achieve an 82% road user satisfaction score, with year-on-year increases in following years</p>	<p>This year, we will:</p> <ul style="list-style-type: none"> Reduce the impact of roadworks on the driving public and local communities, by supporting projects within our Regional Investment Programme to explore an alternative approach to road closures. We'll look at the benefits of closing a road off completely for a short time period, against our traditional longer weekend closure methods. Actively review how we handled incidents from a customer's perspective, by launching a new customer focused debriefing and monitoring process. Implement the Travel Demand Management Programme for Concrete Roads Replacement and Repair to minimise disruption to customer journeys. Use insight from our freight customers to identify and deliver improvements to three facilities on or near our network. Continue to improve our diversion routes for customers. We'll embed new guidance for our supply chain and start trials on two of our major improvement schemes. Develop a corporate approach to accessibility that ensures the needs of all our customers are designed in across all areas of our business. Improve roadside communication through roadworks to help our customers have safer, more informed journeys. Commence the roll-out of progress-o-meters to all major schemes. Deliver customer-focused messages using electronic billboards. Share best practice on signage de-cluttering. Enhance our self-service channels to make it easier for customers to report issues they see whilst travelling on our roads, encouraging uptake through active promotion. Develop a process and template for customer journey mapping, case studies to help us identify service and process improvements. Increase our peoples' customer centric capability, through the implementation of our Customer Centric Action plan, aligning with the company's wider people capability programme.

*Due to the alternative methodology the suspension of 2022-23 target has been approved

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 5.2</p> <p>Target: Achieve 90% accuracy of roadworks information seven days in advance of works by 2024-25, with an increasing trajectory of improvement through the second road period from the level of performance achieved by the end of the first road period</p>	<p>During the year we will maintain our focus on improving the accuracy of our overnight road closures information and work towards the 90% target, 7 days in advance, by March 2025.</p>
<p>PI 5.3</p>	<p>In 2022-23 we will:</p> <ul style="list-style-type: none"> ■ drive to increase capacity, consistency and bring resilience to the marking process. ■ continue to develop the work of our National Signs and Signal Metric Best Practice Group. This group has representation from all regions and has a focus on supporting our regional improvement plans and sharing best practice.
<p>PI 5.4</p>	<p>In 2022-23 Q1 and Q2 we will continue to report our current ride quality metric to monitor asset performance.</p> <p>In 2022-23 Q3, working with Transport Focus, we will introduce a new ride quality metric which reflects road user experience. This will then be reported for the remainder of the 2022-23.</p>
<p>PI 5.5</p>	<p>Following on from the successful trial undertaken in 2021-22 on the use of new legends - message signs - on our roadside, providing customers with enhanced information about the diversion they are following. This year we will formalise our position going forwards and create the climate for their adoption in all regions.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>Descriptive commitment: Develop with Transport Focus during the second road period a measure of ride quality which reflects road users' experience of the network</p> <p>Target: Year 3</p>	<p>Working with Transport Focus, we will develop a new ride quality metric which reflects road user experience. Development and validation of the updated metric will be complete by 2022-23 Q2, with analysis of results and recommendations for future use.</p>
<p>Descriptive commitment: Investigate expanding the scope of the timeliness of electronic signage information PI to potentially include the time take to adjust and clear signs</p> <p>Target: N/A - Ceased</p>	<p>Having undertaken the necessary consultation with key stakeholders this metric in development has been ceased. Following a period of running the metric it was found that fewer incidents had measurable adjustments and clearances making the measure far less statistically valid and the time recorded was stable, offering no real opportunity to drive improvements.</p>
<p>Descriptive commitment: Work with Transport Focus to develop satisfaction surveys for cyclists and walkers that can be used, if possible, as the basis of a PI later in the second road period</p> <p>Target: During/end of the second road period</p>	<p>In 2022-23 we will work with Transport Focus to:</p> <ul style="list-style-type: none"> ■ Respond to and use, insight and regional qualitative research of walkers, cyclists and horse riders (WCH) journeys on the SRN, to better understand and meet the needs of these customers. ■ look at the feasibility of measuring the performance of our WCH infrastructure in specific locations. ■ consider options for a future performance metric. <p>We will develop a national approach to resolve severed rights of way for walkers, cyclists and horse-riders on or near our roads network.</p>

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>Descriptive commitment: Work with Transport Focus to develop satisfaction surveys for logistics and coach managers that can be used, if possible as the basis of a PI later in the second road period</p> <p>Target: During/end of the second road period</p>	<p>In 2022-23 we will launch a programme to improve coach and bus customers experience.</p> <p>We will explore opportunities and identify gaps in the sector where we can intervene to give greater choice to our customers. For example, by looking at where lorry parking facilities do not currently meet the needs of our customers and working to improve these using insight from our professional drivers' experience panel.</p>
<p>Descriptive commitment: Investigate expanding the scope of the working with local highways authorities PI to include diversion routes linked to planned roadworks</p> <p>Target: N/A - Ceased</p>	<p>Following our research and engagement in 2020-21, we found this measure is not feasible at present and have officially ceased the commitment. We will consider any potential future measures as part of RIS3 performance specification.</p>
other supporting activities	Our activities during 2022-23
<p>Embedding equality, diversity and inclusion</p>	<p>We will continue to strengthen our collaboration with disability organisations through our Roads for All Forum by diversifying membership even further. Entering into partnership agreements with more organisations and engaging with the forum to find the right solutions for making our services more accessible and inclusive. We will also ensure there is greater awareness of the Forum and the issues that it has helped us to address, both within National Highways and our supply chain, by holding a Roads for All conference by 2022-23 Q3.</p>



Achieving efficient delivery

The efficiency target for RP2 is £2.111 billion. We will deliver this through cost control and innovation linked to four themes of procurement, effective operations, improved capability and effective processes. Our year-end efficiency report evidences our delivery and our trajectory to date and we will continue to work across our organisation and supply chain to make further efficiency savings for the taxpayer.

Key Performance Indicators	
KPI 6.1	Total efficiency
Performance Indicators	
PI 6.2	Cost performance index (CPI) and schedule performance index (SPI)



M6 Cumbria, North West

Our RIS2 commitments: Achieving efficient delivery

KPI / PI / Descriptive commitment	Our activities during 2022-23
<p>KPI 6.1</p> <p>Target: Demonstrate efficiency of £2.111bn of capital and operational expenditure by the end of the second road period</p>	<p>We will achieve the cumulative three-year efficiency milestone of £776m by 31 March 2023. This will be achieved through the continued development and roll-out of the RP2 efficiency levers as set out in the efficiency delivery plan.</p> <p>We will also continue to work with the transport infrastructure efficiency strategy Living Lab project, sharing ideas and data with the Analytical Consortium to allow best practice to be identified and shared.</p>
<p>PI 6.2</p> <p>Descriptive commitment: Investigate and look to develop new or improved metrics to monitor cost and schedule for enhancement scheme development and construction, engaging with ORR</p> <p>Target: N/A</p>	<p>Over the last year there has been a significant amount of work that has taken place to implement the reporting of CPI / SPI, with the focus on cost and schedule integration, baseline management and project data quality. In 2022-23 we plan to progress with the following:</p> <ul style="list-style-type: none"> ■ Increased focus on assurance of earned value outputs. ■ Work with integrated project teams to improve consistency of earned value. ■ Continue to develop earned value awareness and application across Major Projects.

Enhancements

Our network plays a critical role in the success of the UK economy. It provides efficient links to international gateways, and plays a part in the government's levelling up agenda. Our major enhancement schemes help reduce journey times, increase reliability and improve connections for our customers, and are a crucial element of our balanced investment portfolio. This year we plan to start work on nine major improvement projects, and open 12 for traffic. We will invest over £1.9 billion of our capital funding to complete some of the enhancements started in the first road period, as well as developing and constructing some of the RIS2 enhancement schemes. We will also continue to deliver the actions against the government's smart motorway stocktake and the Transport Select Committee recommendations.

Our activities during 2022-23

Responding to the government's smart motorway stocktake

We have listened to the concerns raised by some members of the public about the spacing of places to stop in an emergency. In taking forward the Transport Select Committee's recommendations the government is investing £390 million to install over 150 additional emergency areas on all lane running (ALR) motorways in operation and construction over RP2. The emergency area programme, setting out the details of the retrofit, will be available later this year, showing where and when drivers will see the remaining additional emergency areas.

We have accelerated the completion of our sign installation programme, so that by the end of September 2022 drivers will almost always be able to see a sign informing them of the distance to the next place to stop in an emergency.

By the end of September 2022 we will have installed radar SVD technology on every existing ALR section. All new schemes will have radar SVD technology installed before they open, including the six schemes currently in construction*.

By the end of September 2022 we will have completed our programme to have upgraded all enforcement cameras across the ALR and dynamic hard shoulder smart motorways, to enable automatic detection of Red X violations that can then be enforced by the police.

We will continue to monitor our network, to evaluate whether ALR smart motorways are as safe as, or safer than, the conventional motorways they replace. In Spring 2022, we published the Smart Motorway Stocktake Second Year Progress Report, which includes the latest safety data position.

*With the exception of approximately 0.6mile gap on the M25 Junctions 6 to 7 which will have SVD installed after September 2022

Our activities during 2022-23

Responding to government's smart motorway stocktake

In 2022-23, and further to extensive independent investigations which were published in September 2021, we will continue to introduce extra measures on the following sections of the M6 and M1 smart motorway where we committed in the 2020 Action Plan to look further at clusters of incidents**. These measures may include new overhead signage and/or redesign of barrier locations at traffic merging points to increase visibility on:

- M6 Junctions 5 to 6 (Bromford viaduct),
- M1 Junctions 10 to 13,
- M1 Junctions 30 to 35, and
- M1 Junctions 39 to 42

Our activities during 2022-23

Enhancement schemes in the north

This year we will open three schemes for traffic, most of which started work in the first road period:

- A1 Scotswood to North Brunton which includes narrow lane widening between junction 74 (Scotswood) and junction 79 (North Brunton) to allow three lanes of traffic through the junctions, and four lanes between some junctions.
- Upgrading the M6 to smart motorway between junction 21A (M62 Croft Interchange) and junction 26 (Wigan).
- M56 Junction 6-8 - we will complete an ALR motorway on the M56 between junctions 6 and 8, increasing capacity and maximise the use of the existing road.

We will start work on two schemes:

- A1 Morpeth to Ellingham which will upgrade multiple sections of the A1 to dual carriageway to provide continuous high quality dual carriageway from Newcastle to Ellingham, north of Alnwick.
- Mottram Moor link road & A57 link road - provide a dual carriageway bypass around the town of Mottram near Manchester. This will also serve as an alternative route for traffic heading north-south on the A57.

Enhancement schemes in the midlands

This year we will open two schemes for traffic:

- Adding additional capacity on M6 junction 10, which includes the replacement of two bridges allowing the widening of the roundabout to four lanes.
- Update the busy 28km stretch of the M6 between junction 13 at Stafford and junction 15 near Newcastle under Lyme and Stoke on Trent to make it a smart motorway.

We will start work on one scheme:

- Improve the link between the M54 to the M6.

**With the exception of those that were due to be taken forward as part of the DHS to ALR conversion works

Our activities during 2022-23

Enhancement schemes in the south and west

This year we will open six schemes for traffic:

- Improve the M4 between junction 3 at Hayes and junction 12 at Theale by upgrading it to a smart motorway, increasing capacity, reducing congestion and providing more reliable journeys.
- Widen the A31 to three lanes at Ringwood, between the A31 junction for Ringwood town centre, the B3347 Mansfield Road and the B3081 Verwood Underpass.
- Support the economic development and housing growth in north Kent around the A2 Bean and Ebbsfleet junctions.
- Reduce congestion on the A27 (A27 East of Lewes Package).
- Upgrade junction 25 on the M25 to provide greater capacity.
- Upgrade the M27 to smart motorway between junction 4 (M3 interchange) and junction 11 (Fareham), linking with the smart motorway scheme on the M3.

We will start work on one scheme this year:

- Make improvements to the Wisley interchange to allow free-flowing movement, together with improvements to the neighbouring Painshill interchange on the A3 to improve safety and reduce congestion (M25 junction 10).

Enhancement schemes in the east

This year we will open one scheme for traffic:

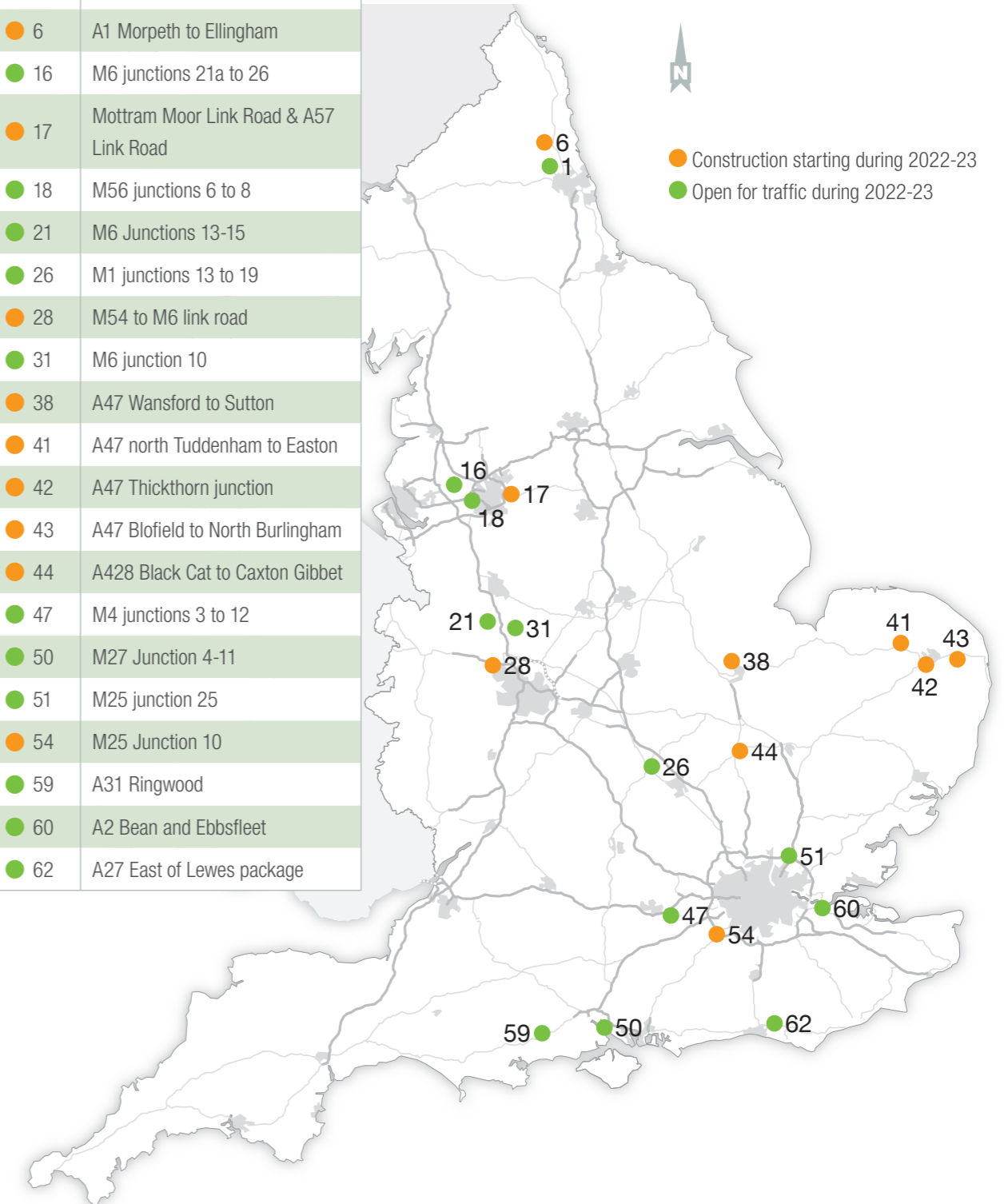
- Upgrading M1 to smart motorway between junction 13 and 19.

We will start work on five schemes this year:

- Subject to receiving planning consent we will start work on dualling the A47 between the A1 and the dual carriageway section west of Peterborough (A47 Wansford to Sutton).
- Dualling the single carriageway section of the A47 between Norwich and Dereham (A47 North Tuddenham to Easton).
- Improve the interchange between the A47 and A11, improving access to Norwich (A47 Thickthorn junction).
- Upgrade the A47 east of Norwich to fill a gap in the dual carriageway section between Norwich and the Acle Straight (A47 Blofield to North Burlingham).
- Dualling the remaining single carriageway section between Cambridge and the M1, including three grade separated junctions (A428 Black Cat to Caxton Gibbet).

Enhancement schemes starting works and opening for traffic in 2022-23

No.	Name
1	A1 Scotswood to North Brunton
6	A1 Morpeth to Ellingham
16	M6 junctions 21a to 26
17	Mottram Moor Link Road & A57 Link Road
18	M56 junctions 6 to 8
21	M6 Junctions 13-15
26	M1 junctions 13 to 19
28	M54 to M6 link road
31	M6 junction 10
38	A47 Wansford to Sutton
41	A47 north Tuddenham to Easton
42	A47 Thickthorn junction
43	A47 Blofield to North Burlingham
44	A428 Black Cat to Caxton Gibbet
47	M4 junctions 3 to 12
50	M27 Junction 4-11
51	M25 junction 25
54	M25 Junction 10
59	A31 Ringwood
60	A2 Bean and Ebbsfleet
62	A27 East of Lewes package



Designated funds

We want our roads to work harmoniously with the communities that live alongside them, and with the built, natural and historic environments that surround them. Our designated funds will support projects to improve lives, increase accessibility, protect the environment and support the nation's economy. This year we will invest in schemes to reduce the risk of access for suicide related incidents and improve the experience of cyclists and pedestrians using or crossing the SRN. We will also support efforts to tackle the shortage of lorry parking and the provision of sufficient and optimally-located parking and rest facilities by identifying gaps on the SRN where facilities do not exist or do not have appropriate provision.

Our activities during 2022-23

Safety and Congestion fund

In 2022-23 we aim to invest £18 million to deliver a safety and congestion programme which goes beyond our business as usual activities. Schemes we will be investing in will include:

- A47 Kings Lynn to Pentney Safety Improvements. We will be implementing a package of route consistency measures and site-specific measures, including; rationalise and improve signs and road markings, improvements to laybys, high friction surface at strategic locations and improvements to forward visibility to improve safety on our network.
- A5 Oswestry Roundabouts Congestion Scheme. We will be designing and starting implementation of the scheme. The project will deliver changes to the entry and exit of two roundabout junctions on the A5; Whittington Roundabout and Five Crosses Roundabout. This will reduce the delay at the junction for road users.
- M60 J27-1 Parapets (Wellington Rd N) Suicide Prevention Scheme. We commence and complete implementation and close out. This structure is identified nationally as a priority site for implementing measures to reduce the risk of access for suicide related incidents and regionally as Priority 3. We will replace existing parapets with new 1.8m high parapets and remove and re-construct plinths to minimise access to the wrong side of the parapets.

Our activities during 2022-23

User and Communities fund

In 2022-23 we aim to invest £24 million across a programme of works to better integrate our network with other transport networks and to improve outcomes for communities. Schemes we will be investing in will include:

Undertaking a survey of the 1400 bus stops on the SRN to perform a gap analysis on bus stops facilities in order to develop a programme with local highways authorities for bus stops improvements and upgrades.

Work with local highway authorities, Sheffield City Region, Leeds City Region and South Yorkshire Passenger Transport Executive on the M1 Park and Ride Demonstration project. Looking at options to implement a park and ride site on the M1 to ease the demand on the identified corridor and promote a more sustainable mode of travel.

Continue work on the A27 Bus Demonstration project for more reliable access to bus, coach and rail services between Falmer and Lewes, near the University of Sussex and Amex Stadium. Which includes new bus lanes, lay-bys and shelters, and installing technology to make it safer for buses re-entering the A27.

To support efforts to tackle the shortage of lorry parking and the provision of sufficient and optimally-located parking and rest facilities. In 2022-23 we will begin developing our plan for improvement to the quantity and quality of facilities for freight and logistics drivers by, identifying gaps on the SRN where facilities do not exist or do not have appropriate provision. In parallel we will work with our regions to fill the highest priority gaps using designated funds / local authorities as appropriate. We will also start developing a framework and support network that will enable us to identify gaps.

To improve the experience of cyclists and pedestrians using or crossing the SRN, in 2022-23 we will enhance the A1 at J66 (Eighton Lodge roundabout), and J67 (Coal house roundabout). The project will connect existing shared use cycleways, introduce signalised crossings and improved pedestrian/cycle infrastructure at the junction, to improve connectivity between local centres with communities, and encourage more journey by active modes.

To maintain routes and facilities for non-motorised users, and address safety issues or where non-motorised users are required to use the SRN, in 2022-23 we will be developing a Schools Access programme which will then be delivered in subsequent years. We have prioritised all educational institutes within a 100m distance of the SRN to understand which have entrances directly onto the SRN, which have entrances onto secondary roads, and which have overbridges or underpasses across the SRN in close proximity. There are 60+ schools that have been prioritised and we will be working with key stakeholders to understand the cost of providing interventions at each of them.

Our activities during 2022-23	
User and Communities fund	To continue making the SRN more accessible for non-motorised users and deliver seamless connections for between paths and routes, in 2022-23 we will be developing a map of all Public Right of Way (PRoW) and Green Spaces and where they interact with the SRN to understand where the severance issues appear to be. Once completed the map will provide us with a starting point to have discussions with Local Highways Authorities about the PRoWs and undertake any improvements to reconnect them.
Environment and Wellbeing fund	<p>In 2022-23 we aim to invest £66 million to support our vision of a greener, more sustainable road network. Schemes we will be investing in will include:</p> <p>Noise We will continue delivery of our Noise Insulation Scheme which will reduce noise from the SRN in customer's houses</p> <p>We will deliver a noise barrier scheme on the M6 J21a - J26 near Wigan. We expect this project to contribute 736 households to our RP2 noise KPI</p> <p>Biodiversity We will move into the implementation phase on our Network for Nature programme. We expect this to deliver biodiversity units across RP2.</p> <p>Flooding and water quality We will deliver a project to reduce the risk of flooding on the A36 near Wilton. This will treat one flooding hotspot which will contribute to our flooding PI.</p> <p>We will start construction on our habitat restoration project at Billingham Beck. This is expected to enhance 1km of watercourse and deliver biodiversity units. These outputs will contribute to our KPIs and PIs for RP2.</p> <p>We will design and deliver a flood mitigation project at the Queen Elizabeth Country Park near the A3 in Hampshire. This is expected to treat one flooding hotspot.</p> <p>Carbon We will finish our project to implement energy efficiency improvements at 20+ depots. This will reduce our carbon emissions and support the corporate carbon KPI target. The works will include lighting, lighting controls and heating upgrades.</p>

Our activities during 2022-23	
Environment and Wellbeing fund	<p>Cultural heritage We will deliver a project to protect and restore a scheduled monument comprising of an historic trackway in the Salisbury Plain region.</p> <p>We will fund an enhancement project to a church situated just off the M67 which has been impacted by proximity to the SRN</p>
Energy Storage Systems (ESS)	To support efforts to tackle the shortage of lorry parking and the provision of sufficient and optimally located parking and rest facilities, in 2022-23 we will begin developing our plan for improving the quantity and quality of facilities for freight and logistics drivers. We have also ring-fenced £20m to improve roadside facilities across England over the next three years.
Innovation and Modernisation fund	<p>In 2022-23 we aim to invest £57 million to research and develop emerging technologies which have the potential to revolutionise travel on our roads. Schemes we will be investing in will include:</p> <p>The Midlands Future Mobility (MFM) Project supports the development of the infrastructure standards of the connected and autonomous era, by identifying how new technology can be effectively rolled out across the network in a way that is both safe and speedy. In 2022-23 the project will:</p> <ul style="list-style-type: none"> ■ provide access to our CCTV on the MFM routes that cover the SRN. ■ support transfer of our data sources (e.g. NTIS) into an MFM Data Hub Benefits. ■ support increased use of UKCITE roadside assets, providing more data for analysis. <p>The National Urban Traffic Control Signals project is due to be completed in 2022-23 and will deliver a single consistent platform and a digital infrastructure, modernising roadside signal equipment. The project delivers beyond just a signals platform and supports strategic objectives, paving the way for us to deliver other innovation aligning to the Connected and Autonomous Vehicles (CAV) Road Map and the Operational Excellence 2025 aspirations. It also supports the broader CAV roadmap. Without digital infrastructure, it isn't possible to alter timings of traffic signals for CAV purposes or interrogate in real time the expected timing phases of any particular asset. By having digital infrastructure, fault finding, diagnosis and rectification can be done remotely for many issues, reducing the need for human intervention in asset management and routine maintenance.</p>

Preparing for the third road period

Year three of this Road Period is an important time for us to continue delivering the current Road Investment Strategy (RIS2) as set by government and plan for the next road period. We will continue to engage with our customers and stakeholders as we prepare to publish our *Strategic Road Network initial report*. We will also progress with the development of our pipeline RIS3 schemes.

Our activities during 2022-23

Developing the next Road Investment Strategy Programme

This year we are planning to:

- Deliver and publish the Strategic Road Network initial report and supporting suite of documents which includes an update to the Connecting the Country vision and the Route Strategies initial reports in Summer 2022.
- Commence development of the draft Strategic Business Plan for RIS3.
- Continuing RIS3 customer and stakeholder engagement to help form our RIS3 approach by taking account of feedback provided on our proposals.

Engagement with sub-national transport bodies (STBs)

We will continue to work closely with sub-national transport bodies (STBs) to understand their emerging strategies and priorities for investment on our network. Key deliverables for 2022-23 include:

- Development of joint engagement action plans (JEAPs) with each STB for 2022-23 which set out a programme of work to be undertaken;
- Support the development of STB strategies and key thematic work programmes, providing inputs and evidence;
- Take forward scheme development activities which reflect STBs emerging priorities.

Our activities during 2022-23

Developing our pipeline of RIS3 schemes

During 2022-23 we will continue development on all RIS3 Pipeline schemes in preparation for potential inclusion for RIS3 (see Annex D).



A14 resurfacing, East

How we run our organisation

We value our people and we are committed to providing safe and inclusive working environments that foster innovation and employee engagement. We will continue to develop our people, and organization through our corporate transformation programme which will help us mature as a company. Alongside this, we will manage our PFI contracts and deliver protocol services on behalf of the DfT.

Our activities during 2022-23

National Highways Transformation Programme

This year we will build a baseline and a fully integrated portfolio view of the National Highways Transformation Programme. Focused on the four priority areas of Net Zero Carbon, Digital Roads, Asset Management and Operating Model.

We will evolve the quality of our reporting of benefits delivery and of governance of the National Highways Transformation Programme in line with Executive priorities.

We will also establish an operating model group (which might evolve into a formal design authority).

This year we will agree priorities for next stage of process maturity development across National Highways.

In 2022-23 we will complete a pilot of our new Business Management System (process management system) and apply the learning from that to ongoing wider roll-out.

Our activities during 2022-23

Right People, Places and Skills

To ensure we have the right people and skills in 2022-23 we will deliver the following:

- A revised recruitment and workforce planning operating model.
- An updated employer value proposition, employer branding and attraction approach.
- Embedding our talent management and succession planning processes.
- People capability framework that guides our people investment and planning.
- A platform for accessing learning, competency assessment and career guidance aligned to the people capabilities.
- Embedding our new managed services contract for learning and development.
- A revised learning and development planning cycle that drives consistent demand and budget management, aligned to the people capability framework and business planning.
- Deliver our mandatory and operational training plans.

To continue developing our early talent pipeline, this year we will deliver a centralised early talent structure, workforce plan, budget and programme delivery. Our pipeline will be aligned to our people capabilities, and will include traineeships, interns, year in industry placements, graduates and apprenticeships.

Accountable Leadership

To ensure we continue to have accountable leadership across the organisation in 2022-23 we will deliver the following:

- Embedding the themes of the 'Lead, Collaborate, Succeed' programme aligned to transformation programme.
- Complete the delivery of the 'Licence to Led' programme for Operations.
- Deliver the 'Home, Safe and Well: Be the Change' programme for Operations and Major Projects.
- Support the development of our listening culture through leadership development programmes and 'People Manager Essentials'.
- Deliver ongoing senior leadership, directorate leadership team and people manager development.
- Embed a consistent and effective skillset and approach to change leadership and management, aligned to the transformation programme.



Our activities during 2022-23

A diverse and inclusive culture

To support our diverse and inclusive culture in 2022-23 we will deliver the following:

- Creation of safe, welcoming, and enabling work environments, through focussed awareness raising campaigns and removal of physical and psychological barriers.
- Annual targeted recruitment campaigns to attract diverse talent pools.
- Annual production and analysis of Pay Gap data and prioritised action plans to make improvements where required.
- Annual management assurance of equality, diversity and inclusion activity carried out across the business through equality impact assessments.

Digital Roads

Digital Roads will harness data, technology and connectivity to improve the way the SRN is designed, built, operated and used. This will enable safer journeys, faster delivery and an enhanced customer experience for all. Our vision and ambition for Digital Roads are aligned to achieving these outcomes. In 2022-23 we will deliver:

- A standardised system for measuring and communicating Connected and Autonomous Plant expectations to the supply chain, driving the adoption of autonomous construction techniques in future projects.
- Enhanced machine-led, human-aided design tools across all major schemes, enabling increased efficiencies and improved accuracy.
- Online roadwork booking portal, enabling streamlined roadworks planning, better co-ordination across schemes, and supporting better decision making.
- Predictive asset management analytics tools, enabling more effective maintenance, increasing efficiencies, and reducing failures on the network.
- Roll-out of Advanced Traffic Management System and analytics tools, increasing the performance of the road network whilst enabling efficiencies in management costs.
- The business case and road map for the Digital for Customer programme that customers will be better informed and have trust in the journey information they access, ensuring that they feel safe and in control of their journeys.

Our activities during 2022-23

Design Panel review

The company's Licence required the establishment a design panel of 'experts and stakeholders' to provide advice on sensitive schemes and relevant design standards. The Strategic Design Panel was established in 2015. It meets quarterly, and is chaired by the Chief Highway Engineer with membership including a range of stakeholders and professional design bodies. Initial work had focussed on what good design was encompassing the ten principles of good road design. Over the years the Panel had changed, prompting a review. The key review recommendations to be taken forward are:

- To focus on promoting and embedding principles of good design so they become 'business as usual' by providing advice, training and guidance.
- More schemes to be independently reviewed and at earlier stage in the design process.
- Internal 'Design champions' to be appointed as advocates of good design.
- The Design Panel to be improved by replacing it with a new panel of design experts and representatives from directorates.
- Engagement would be with a wider group of stakeholders on good design via other existing Company groups and forums.

Stakeholder engagement

To demonstrate how we engage with our key audiences and stakeholders, in 2022-23 we will be developing a comprehensive stakeholder list, touchpoint map and launch a refreshed engagement strategy. We will also begin rolling out a Customer Relationship Management system to track stakeholder interactions and ensure clear points of contact and enable the smoother delivery of two-way stakeholder communication. We will monitor the effectiveness of our stakeholder engagement through a new stakeholder survey.

Private Finance Initiative (PFI) funding

We currently operate 11 design, build, finance and operate (DBFO) contracts, awarded to the private sector through PFIs. These relate to roads which are funded and managed by private companies for a set period of time. We have recently triggered the start of the five-years to handback for a number of DBFO's and during 2022-23 we will continue to work on eight of the 11 contracts due for handback in 2026-27, where assets will return to National Highways ownership.

Our activities during 2022-23

Delivering the Protocol services

We will continue to deliver the functions included in the seven protocols we agreed with the Secretary of State relating to activities which are not core to our role as a strategic highways company. These are:

Abnormal loads

- In 2022-23 we will roll out delivery of the new ESDAL system (Electronic Service Delivery for Abnormal Loads), the new development will provide a more modern user-friendly system that meets GDS requirements.
- Continue to manage and authorise the movement of Special Order and VR1 category abnormal loads on all roads in England & Wales and authorise moves in Scotland.
- Continued implementation of the Governments Water Preferred Policy to ensure abnormal loads are delivered to the nearest suitable port; avoiding unnecessary congestion on GB's road network including the SRN.
- Continue to provide stakeholder management to industry to support strategies for moving the largest and heaviest abnormal loads to site for high profile infrastructure projects (such as HS2) whilst implementing the governments water preferred policy.
- Provide support to industry, police and road/bridge authorities on the use of the ESDAL service.

Dartford Crossing free-flow

We will deliver ongoing provision of the existing Road User Charging service at the crossing until Q3 2022-23.

Dartford and local authority pension schemes

We are responsible for discharging the liabilities from the DfT's commitment to fund any future deficits for these pension schemes.

National salt stocks

We will maintain a strategic salt stock as an emergency reserve for local highway authorities, keeping the salt available and in good condition. We will also manage the allocation of the salt and co-ordinate its collection by local authorities.

M6 Toll

We will be responsible for fulfilling government's M6 Toll concession arrangements and will continue regular liaison with Midland Expressway Limited (MEL), and gain confirmation of MELs timely submissions to the DfT.

Our activities during 2022-23

Delivering the Protocol services

Severn River Crossings

We will operate and maintain the M4 and M48 Severn River Crossings on behalf of the Secretary of State. In 2022- 23 we will:

- develop internal detailed long-term asset management plans for our bridges in Specialist Bridges Inspection & Maintenance. This will allow us to better manage our asset giving surety of bridge health and also deriving best value for money.
- enhance our asset data knowledge and use - with a new system called Pearl. This will allow us to better capture asset condition, report in real time and using AI create a full understanding of the condition of our bridges. Allowing for better timed and effective maintenance interventions.
- we will undertake the principle inspection of the main cable on M48 Severn Bridge. This has to be completed to allow us to demonstrate the continued safe operation of the bridge and that the cables are in a stable state.

Technical regulations

We will continue the ongoing development and maintenance of standards, guidance and specifications for all works on the motorway and all-purpose trunk road network. These will underpin the efficient delivery of cost effective improvement, maintenance and operation of motorways and all-purpose trunk roads in the United Kingdom.

In addition, we will deliver cross-government projects that sit outside of the RIS2:

- We will continue to develop and deliver a second-generation free-flow changing service (primarily driven by Dartford Crossing – Dart Charge replacement). Provision of existing road user charging service at the crossing post Q3 2022-23 and transition to new service.
- Manage the Historical Railways Estate on behalf of the Secretary of State. The future of this estate, including who will be responsible for managing it from April 2022 onwards, will be decided during the second road period.



A616 natural flood measure, North East & Yorkshire



Employees

Annex A: RP2 Funding Table 2022-23

£m	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Operations and maintenance (Opex)	1,034	1,014	1,029	1,033	1,079	5,189
Operations and maintenance (Capex)	238	350	322	259	202	1,371
Renewals	734	858	902	859	914	4,267
Enhancements	2,027	1,773	1,983	2,228	2,474	10,485
Designated funds	162	150	165	232	247	956
RP3 preparation and development	20	70	130	180	143	543
How we run our network (Opex)	167	146	162	171	174	820
How we run our network (Capex)	76	85	66	66	85	378
Total	4,458	4,446	4,759	5,028	5,318	24,009

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

As agreed with the government this plan was originally £27,358m as set out in the RIS and which was re-profiled in Spending Review 2020 as well as including additional funding (£146m) for the acceleration of the A66 as part of Project Speed. The funding profile and total £24,009m has been amended to reflect the outcome of the (SR21) 2021 Spending Review as confirmed in the government's Autumn Budget. The Enhancements total post SR21 funding has been re-categorised from £10,535m to £10,485m with a project now being shown in RP3 preparation and development and the moveable barrier on the M20 being shown in Enhancements (from Operations and Maintenance capex). Note the impact of TSC report is not reflected in the table and will change the annual funding profiles only, but not the overall funding total.

We were allocated additional funding of £49m during 2020-21 to 2020-23 for deliverables outside the scope of RIS2 such as: the Historical Rail Estate (HRE) and Operation Brock. These amounts are not included in the table above which captures the funding within the scope of RIS2 only.

Annex B: Performance metrics

Key Performance Indicators (KPIs)

Unique ID	Metric	Target	Target type	Unit	2020-21 performance target	2021-22 performance target	2022-23 performance target	2023-24 performance target	2024-25 performance target
Outcome: Improving safety for all									
1.1	The number of people killed or seriously injured (KSI) on the SRN	Ongoing reduction in the number of people KSI on the SRN to support a decrease of at least 50% by the end of 2025, against the 2005-09 average baseline	Achieve	Number	Ongoing reduction				At least a 50% reduction in KSIs by the end of 2025, against the 2005-09 average baseline
Outcome: Providing fast and reliable journeys									
2.1	Average delay	Performance to be no worse at the end of the second road period than it was at the end of the first road period	Ambition	Seconds per vehicle per mile	N/A	N/A	N/A	N/A	Ambition of being no worse than at the end of the first road period
2.2	Roadworks network impact	Roadworks network impact to not exceed the monthly average target of weighted lane metre days set for each year	Achieve	Weighted lane metre days	97.5% (against first road period network availability metric)	43 million	47 million	48 million	47 million
2.3	Incident clearance rate*	86% of motorway incidents cleared within one hour	Achieve	%	86%	86%	86%	86%	86%
Outcome: A well-maintained and resilient network									
3.1	Pavement condition (road surface)	Percentage of the network (as defined by Highways Agency Pavement Management System, excluding DBFOs) in good condition to be maintained at 96.2% or above**	Achieve	%	95%	95%	96.2%	96.2%	96.2%

*We will continue to monitor this metric to understand any impacts from the smart motorway stocktake

**New pavement metric and performance target introduced in for 2022-23

Unique ID	Metric	Target	Target type	Unit	2020-21 performance target	2021-22 performance target	2022-23 performance target	2023-24 performance target	2024-25 performance target
Outcome: Delivering better environmental outcomes									
4.1	Noise	7,500 households benefiting from noise reduction in mitigated 'noise important areas', defined by Defra, using funding from the Environment and wellbeing fund during the second road period	Achieve	Number	N/A	N/A	N/A	N/A	7,500 households benefiting from noise reduction in mitigated noise important areas
4.2	Biodiversity	Achieve no net loss of biodiversity across all National Highways activities by the end of the second road period	Achieve	Biodiversity units	N/A	N/A	N/A	N/A	No net loss over RP2. No less than 130,848.1 biodiversity units
4.3	Air quality	Bring links agreed with the department and based on the Pollution Climate Mapping model into compliance with legal NO2 limits in the shortest timescales possible	Achieve	Number of links	Following periodic reviews of the Pollution Climatic Mapping model by DfT and Joint Air Quality Unit, they will recommend the number and locations of existing sections of the SRN (links) likely to exceed the annual mean NO2 legal limit value. We will undertake a detailed assessment of those links and, after agreement of the outcomes with DfT and Defra, we will, where required, introduce measures to help support compliance in the shortest timescales possible				
4.4	National Highways carbon emissions	Reduce National Highways carbon emissions as a result of electricity consumption, fuel use and other day to day operational activities during the second road period by 75% from April 2017-March 2018 baseline of 90,286 tonnes	Achieve	Tonnes of carbon	N/A creating baseline	Ongoing reduction	Ongoing reduction	Ongoing reduction	Less than 22,571.5 tonnes
Outcome: Meeting the needs of all users									
5.1	Road user satisfaction	Achieve an 82% road user satisfaction score in 2020-21 and 2021-22, with year-on-year increases in following years	Achieve	%	82%*	82%*	Road user satisfaction targets will be reviewed during 2022-23		
5.2	Roadworks information timeliness and accuracy	Achieve 90% accuracy of roadworks information seven days in advance of works by 2024-25, with an increasing trajectory of improvement through the second road period from the level of performance achieved by the end of the first road period	Achieve	%	Increasing trajectory of improvement through the second road period from the level of performance achieved by the end of the first road period				90%
Outcome: Achieving efficient delivery									
6.1	Total efficiency	Demonstrate efficiency of £2.111bn*** of capital and operational expenditure by the end of the second road period	Achieve	£bn	£233.3m**	£471m**	£776m**	N/A	£2.111bn

Table 1 KPIs

*Due to the social distancing restrictions no data was available and due to the alternative methodology the suspension of target has been approved.

**This is an indicative efficiency milestone and not a performance target.

***We have agreed a revised efficiency target following SR21 reduction in the SoFA, and government's Transport Select Committee response.

Performance Indicators (PIs)

Unique ID	Metric	Unit
Outcome: Improving safety for all		
1.2	The total number of people killed or injured on the SRN	Number
1.3	The number of non-motorised and motorcycle users killed or injured on the SRN	Number
1.4	The number of injury collisions on the SRN	Number
1.5a	The accident frequency rate for National Highways staff	Accidents per 100,000 hours worked
1.5b	The accident frequency rate for National Highways supply chain employees	Accidents per 100,000 hours worked
1.6	The % of traffic using iRAP 3 star or above rated roads	%
Outcome: Providing fast and reliable journeys		
2.4	Delay on smart motorways	Seconds per vehicle per mile
2.5	Delay from roadworks	Minutes per hour travelled
2.6	Journey time reliability	Seconds per vehicle per mile
2.7	Delay on gateway routes	Seconds per vehicle per mile
2.8	Average speed	Mph
Outcome: A well-maintained and resilient network		
3.2	Structures condition	Average condition score/critical condition score/% of structures rated 'good' in opinion of inspector
3.3	Technology availability	% of time when available and functioning
3.4	Drainage resilience*	% length of carriageway that does not have an observed significant susceptibility to flooding
3.5	Geotechnical condition	% length in good condition
Outcome: Delivering better environmental outcomes		
4.5	Supply chain carbon emissions	Tonnes of CO2e and tonnes of CO2e/£m
4.6	Condition of cultural heritage assets	Condition score
4.7	Water quality	Km of watercourse enhanced
4.8	Litter	% of SRN where litter is graded at A or B
Outcome: Meeting the needs of all users		
5.3	Timeliness of information provided to road users through electronic signage	Average time (mins:secs) to set manual signs and signals on motorways
5.4	Ride quality	% of pavement asset delivering ride quality consistent with the three-metre Enhanced Longitudinal Profile Variance value in National Highways standards
5.5	Working with local highways authorities to review diversion routes for unplanned events	% of local highway authorities engaged with
Outcome: Achieving efficient delivery		
6.2	Cost performance index and schedule performance index	Index

Table 2 PIs

*From 2024/25 it is intended that this metric will be weather normalised.

Descriptive commitments

Commitment description	Completion date
Outcome: Improving safety for all	
Work with Transport Focus to investigate a rate-based measure for non-motorised user casualties	Ceased
iRAP baseline to be established in 2021, and 2025 forecast developed, based on latest iRAP methodology	Complete
Outcome: Providing fast and reliable journeys	
Working with Transport Focus, investigate the development of new metrics on journey time reliability which reflects more accurately road users' understanding of reliability, and delay in roadworks	Development to be completed during the second road period
Investigate new PIs on delays from incidents and delays on the local road or SRN boundary, and an alternative performance measure for smart motorways operation to keep track that these roads are delivering their intended journey-time related objectives	Development to be completed during the second road period
Outcome: A well-maintained and resilient network	
Implement the Asset Management Development Plan for the second road period	Annual deliverables
Investigate an improved structure condition metric during the second road period, and an alternative indicator for technology assets	Development to be completed during the second road period
Outcome: Delivering better environmental outcomes	
Investigate, and as appropriate develop, new environmental metric(s) informed by the natural capital approach	Ceased
Investigate and assess incorporating into new and existing contracts air quality standards for supply chain vehicles deployed on National Highways work, and associated reporting requirements. A more detailed timetable for these investigations will be produced in year 1 of the second road period, as well as potential implementation opportunities identified by that stage	End of the second road period
Outcome: Meeting the needs of all users	
Review Strategic Roads User Survey performance in year 2 of the second road period to determine the road user satisfaction targets for post 2021-22	End of year 3
Develop with Transport Focus during the second road period a measure of ride quality which reflects road users' experience of the network	Year 3
Investigate expanding the scope of the timeliness of electronic signage information PI to potentially include the time taken to adjust and clear signs	Ceased
Work with Transport Focus to develop satisfaction surveys for cyclists and walkers that can be used, if possible, as the basis of a PI later in the second road period	During/end of the second road period
Work with Transport Focus to develop satisfaction surveys for logistics and coach managers that can be used, if possible, as the basis of a PI later in the second road period	During/end of the second road period
Investigate expanding the scope of the working with local highways authorities PI to include diversion routes linked to planned roadworks	Ceased
Outcome: Achieving efficient delivery	
Investigate and look to develop new or improved metrics to monitor cost and schedule for enhancement scheme development and construction, engaging with ORR	N/A

Table 3 Descriptive commitments

Annex C: Enhancements scheme list

Enhancements

North-east schemes			
Scheme number	Scheme	Start of works	Open for traffic
1	A1 Scotswood to North Brunton	Started	2022-23 Q2
2	A19 Testo's	Started	Opened
3	A19 Norton to Wynyard	Started	Opened
4	M621 junctions 1 to 7	Started	2024-25
5	A61 Westwood roundabout	Started	Opened
6	A1 Morpeth to Ellingham	2022-23 Q2*	2024-25*
7	A1 Birtley to Coal House	Started	2024-25
8	A19 Downhill Lane	Started	Opened**
9	A63 Castle Street	Started	2024-25
10	M62 junctions 25 to 30 upgrade dynamic hard shoulder running to all lane running	Paused***	Paused***

* Date subject to conclusion of development consent order process

** Note this scheme has opened for traffic six months ahead of 2022-23 commitment

*** Paused as part of Government response to Transport Select Committee report

North-west schemes			
Scheme number	Scheme	Start of works	Open for traffic
11	A585 Windy Harbour to Skippool	Started	2023-24 Q4
12	M62 junctions 20 to 25	Paused*	Paused*
13	M6 junction 19	Started	Opened
14	A66 Northern Trans-Pennine	2023-24 Q4	RP3
15	A5036 Princess Way	RP3**	RP3
16	M6 junctions 21a to 26	Started	2022-23 Q4***
17	Mottram Moor Link Road and A57 link road	2022-23 Q4	RP3
18	M56 junctions 6 to 8	Started	2022-23 Q2***
19	M60/M62/M66 Simister Island interchange	2024-25 Q4	-

* Paused as part of Government response to Transport Select Committee report

** Date revised due to planning constraints and stakeholder input

*** Scheme may be subject to future change to align with the outcome of Transport Select Committee report

Midlands schemes			
Scheme number	Scheme	Start of works	Open for traffic
20	A500 Etruria	Started	Opened
21	M6 junctions 13 to 15	Started	2022-23 Q2
22	M42 junction 6	Started	2024-25
23	A46 Coventry junctions	Started	RP3
24	M40/M42 interchange	Paused*	Paused*
25	A45/A6 Chowns Mill junction	Started	Opened
27	A38 Derby junctions	2023-24 Q2**	RP3
28	M54 to M6 link road	2022-23 Q4	RP3
29	A5 Dodwells to Longshoot	Cancelled	Cancelled
30	A52 Nottingham junctions	Started	2023-24 Q4
31	M6 junction 10	Started	2022-23 Q1
32	A46 Newark bypass	RP3	-
33	M42 junctions 4 to 7 upgrade dynamic hard shoulder running to all lane running	Paused*	Paused*
34	M6 junctions 4 to 5 upgrade dynamic hard shoulder running to all lane running	Paused*	Paused*
35	M6 junction 5 to 8 upgrade dynamic hard shoulder running to all lane running	Paused*	Paused*
36	M6 junctions 8 to 10a upgrade dynamic hard shoulder running to all lane running	Paused*	Paused*

* Paused as part of Government response to Transport Select Committee report

** Date subject to positive outcome of development consent order decision

East schemes			
Scheme number	Scheme	Start of works	Open for traffic
26	M1 junctions 13 to 19	Started	2022-23 Q4
37	A14 Cambridge to Huntingdon	Started	Opened
38	A47 Wansford to Sutton	2022-23 Q4	2024-25
39	A47 Great Yarmouth junctions	2023-24 Q4	2024-25
40	A47 Guyhirn junction	Started	Opened*
41	A47 North Tuddenham to Easton	2022-23 Q4	2024-25
42	A47 Thickthorn junction	2022-23 Q4	2024-25
43	A47 Blofield to North Burlingham	2022-23 Q4	2024-25
44	A428 Black Cat to Caxton Gibbet	2022-23 Q3**	RP3
45	A12 Chelmsford to A120	2023-24 Q4	RP3
46	M1 junctions 10 to 13 upgrade dynamic hard shoulder running to all lane running	Paused***	Paused***

* Note this scheme has opened for traffic three months ahead of 2022-23 commitment

** Date revised due to planning constraints and stakeholder input

*** Paused as part of Government response to Transport Select Committee report

South-east schemes			
Scheme number	Scheme	Start of works	Open for traffic
47	M4 junctions 3 to 12	Started	2022-23 Q2
48	A34 Newbury to Oxford enhancements	Started	Opened
49	M3 junctions 9 to 14	Paused*	Paused*
50	M27 junctions 4 to 11	Started	2022-23 Q1
51	M25 junction 25	Started	2022-23 Q3
52	M25 junction 28	2023-24 Q1	RP3
53	M25 junctions 10 to 16	Paused*	Paused*
54	M25 junction 10	2022-23 Q3	RP3
55	M3 junction 9	2023-24 Q4	RP3
56	M27 Southampton junction 8	2023-24 Q3**	RP3
57	A27 Arundel bypass	2024-25 Q2***	RP3
58	A27 Worthing and Lancing improvements	2024-25 Q4	RP3
59	A31 Ringwood	Started	2022-23 Q4
60	A2 Bean and Ebbsfleet	Started	2022-23 Q1
61	M2 junction 5	Started	2024-25
62	A27 East of Lewes package	Started	2022-23 Q4
63	Lower Thames Crossing	2024-25 Q4***	RP3
70	A21 Safety Package	Started	2024-25

* Paused as part of Government response to Transport Select Committee report

** Scheme start of work revised and is subject to outcome of public inquiry

*** Date revised due to planning constraints and stakeholder input

South-west schemes			
Scheme number	Scheme	Start of works	Open for traffic
64	A303 Sparkford to Ilchester	Started	2023-24 Q4
65	A303 Amesbury to Berwick Down	2024-25 Q2*	RP3
66	A358 Taunton to Southfields	2024-25 Q4	RP3
67	A30 Chiverton to Carland Cross	Started	2023-24 Q4
68	A417 Air Balloon	2023-24 Q2*	RP3*
69	M4 junctions 19 to 20 and M5 junctions 16 to 17 upgrade dynamic hard shoulder running to all lane running	Paused**	Paused**

* Date revised due to planning constraints and stakeholder input

** Paused as part of Government response to Transport Select Committee report

Housing infrastructure fund and housing investment grant schemes			
Scheme	Region	Start of works	Open for traffic
A120: Tendring/Colchester Border Garden Community*	East	2023-24	RP3
M5 junction 10 and link road*	South-west	2024-25***	RP3
A249: Swale transport infrastructure*	South-east	Started	2024-25
M6: South Lancaster Growth Catalyst – junction 33a*	North-west	2024-25	RP3
A5 Dordon to Atherstone**	Midlands	RP3	RP3

* These schemes will be delivered by local authorities with our support and are subject to future planning decisions.

** This scheme will be delivered by National Highways and is subject to future planning decisions.

*** Scheme now requires a development consent order, therefore the start of work has been revised.

Schemes delivered by third parties with a funding contribution from National Highways			
Scheme	Region	Start of works	Open for traffic
A5 Towcester relief road	Midlands	2022-23	RP3
M11 junction 7a	East	Started	2022-23
M55 junction 2	North-west	Started	2022-23
M62 junction 19	North-west	Started	2022-23

These schemes will be delivered by third parties with our support.

Annex D: Pipeline of proposed future schemes

North schemes

A19 North of Newcastle junctions

A64 Hopgrove

M1 Leeds Eastern Gateway

M1/M62 Lofthouse Interchange

M6 junctions 19-21a Knutsford to croft extra capacity

M1 junctions 35a-39 Sheffield to Wakefield extra capacity

A1 Doncaster to Darrington

M6 junction 22

Manchester South East junction improvements

Manchester North West Quadrant

East schemes

A47/ A1101 Elm Road junction

A11 Fiveways junction

M11 junction 13 Cambridge West

A12/A14 Copdock interchange

A120 Braintree to A12

Tilbury link road

A34 North and South Oxford

Midlands schemes

M6 junction 15 Potteries Southern Access

A483 Pant-Llanymynech Bypass (in cooperation with the Welsh Government)

M1 North Leicestershire extra capacity

M1 Leicester Western Access

A5 Hinckley to Tamworth*

*In cooperation with work funded by the Ministry of Housing, Communities and Local Government on the A5 Transport Corridor.

South and west schemes

Severn Resilience Package

A404 Bisham junction

A2 Brenley Corner

A303 Phase 2 upgrade

A3/A247 Ripley South

A2 Dover Access

A27 Lewes to Polegate

A27 Chichester improvements

M27 Southampton Access

A38 Trerulefoot-Carkeel safety package

A404/M40 junction 4 High Wycombe

Annex E: Changes we have made

Changes to business commitments

Item	Reason for change	Changes from previous Delivery plan
Support end to end journeys on the A47 through improved bus infrastructure	The project did not represent value for money so was not progressed in year, requiring to revisions to the benefits / BCR.	Project extended from 2021-22, subject to the benefits case being agreed.
Delivering the UK's first automated lane closure system	Additional time was required to refine and prove the concept through 2021-22.	Project extended from 2021-22 to 2023-24.
Deliver a self-cleansing ditch scheme	The scheme requires access to labs which were repurposed for COVID-19 research.	Project delayed due to Covid-19 on site trials now expected from 2022-23.
Installing permanent clearway signs on the A27 between Lewes and Beddingham.	Feasibility completed and funding secured for the delivery phase.	Project extended from 2021-22 to 2022-23.
Starting construction on a green bridge over the A3	Start of works has been revised following a delay to the Development Consent Order decision	Start of works is deferred from 2021-22 to summer 2023
Trialling of in-vehicle information and advice on the M5 junction 23.	Design stage completed and implementation initiated in 2021-22.	Trial completion deferred from 2021-22 to 2022-23
Park and ride signage installed (M5 junctions 25 and 26, and the A64 Askham Bar)	The park and ride services have only been subsidised until April 2022.	Closure of 2021-22 commitment.
Delivering signage on the M60 and key radial routes around Greater Manchester, to sign the Greater Manchester Clean Air Zone.	The Government agreed to delay implementation of the Greater Manchester Clean Air Zone. The scheme has been paused.	We are engaging with Transport for Greater Manchester to agree revised timescales.
We will reduce the number of injury collisions that are occurring on the exit slip roads at junction 30 of the M62.	The scheme was redesigned to reflect an increase in scope.	Design is due for completion in 2022-23.
Roll out of CHARM to the remaining five Regional Control Centres.	CHARM programme was re-baselined to accommodate delay to NW due to COVID and delay to SE and E due to SVD stocktake actions for development of an interface for SVD.	Change from 2021-22 roll-out completion to 2022-23.

Changes to business commitments		
Item	Reason for change	Changes from previous Delivery plan
Right people, places and skills. Implementing a sharing of our apprenticeship levy investment with small and medium-sized enterprises (SMEs).	Conversations have begun with some supply chain organisations to establish relevance, but not delivered yet as other apprenticeship and supply chain development work having higher priority.	Change from 2021-22 to 2022-23 for establishing the appetite with our supply chain, for potential delivery from 2023-24.
Right people, places and skills. Using a strategic workforce planning tool to inform capability and resource requirements across our Major Projects and Safety, Engineering and Standards directorates.	We are reviewing our requirements for strategic workforce planning and this may impact the tool we are using.	Change from 2021-22, to proposing improvement actions in 2022-23.
Trialling and rolling out a move to a LED solution that is more economical to run and is lighter, and therefore easier, for traffic officers to deploy (also releasing valuable space in the back of the vehicles).	Completion has been impacted by supply chain issues, there are national shortages of cabling required for installation and manufacturer delays for the supply of the light units.	Completion for all remaining vehicles changed from 2021-22 to 2022-23.

Changes to the major enhancements programme		
Item	Reason for change	Changes from previous Delivery plan
M6 Junctions 4-5	Schemes paused following acceptance of the Transport Select Committee recommendations	Scheme start of work and open for traffic paused
M62 Junctions 25-30		
M42 Junctions 4-7		
M6 Junctions 5-8		
M6 Junctions 8-10a		
M1 Junctions 10-13		
M4 Junctions 19-20 and M5 Junctions 16-17		
M25 Junctions 10-16		
M62 Junctions 20-25		
M3 Junctions 9-14		
M40/M42 Interchange		

Changes to the major enhancements programme		
Item	Reason for change	Changes from previous Delivery plan
A38 Derby Junctions	Dates revised following delay to the development consent order decision	Start of works is deferred from 2021-22 Q2 to 2023-24 Q2. And open for traffic is deferred from 2024-25 to RP3
M54-M6 Link Road		Start of works is deferred from 2021-22 Q4 to 2022-23 Q4. And open for traffic has been deferred from 2024-25 to RP3.
M25 Junction 28		Start of works is deferred from 2021-22 Q4 to 2023-24 Q1. And open for traffic has been deferred from 2024-25 to RP3.
M25 Junction 10	Dates revised following a delayed public inquiry	Start of works is deferred from 2021-22 Q4 to 2022-23 Q3. And open for traffic has been deferred from 2023-24 to RP3.
M27 Southampton Junction 8		Start of works is deferred from 2021-22 Q2 to 2023-24 Q3. And open for traffic is deferred from 2022-23 Q4 to RP3
A27 Arundel Bypass	Dates revised due to planning constraints and stakeholder input	Start of works is deferred from 2023-24 Q4 to 2024-25 Q2
A303 Amesbury to Berwick Down		Start of works is deferred from 2023-24 Q2 to 2024-25 Q2
A5036 Princess Way		Start of works is deferred from 2023-24 Q4 to RP3
A428 Black Cat to Caxton Gibbet		Start of works is deferred from 2022-23 Q2 to 2022-23 Q3
Lower Thames Crossing		Start of works is deferred from 2022-23 Q4 to 2024-25 Q4
A417 Air Balloon	Open for traffic date revised to enable completion of additional Emergency Areas and assurance checks	Start of works is deferred from 2022-23 Q4 to 2023-24 Q2. And open for traffic is deferred from 2024-25 to RP3
M6 Junctions 13-15		Open for traffic is deferred from 2021-22 Q4 to 2022-23 Q2
M4 Junctions 3-12	Open for traffic date revised to enable additional assurance checks	Open for traffic is deferred from 2022-23 Q1 to 2022-23 Q2
M27 Junction 4-11		Open for traffic is deferred from 2021-22 Q4 to 2022-23 Q1
M621 Junctions 1-7	Open for traffic has been revised due to additional design changes to accommodate wider stakeholder requirements	Open for traffic is deferred from 2022-23 Q4 to 2024-25
A46 Newark Bypass	Date revised following delayed approval for Preferred Route Announcement	Start of works is deferred from 2024-25 to RP3

Glossary

All lane running (ALR)	A smart motorway which applies the controlled motorway technology, permanently converts the hard shoulder as a running lane, and features emergency areas
Asset Delivery	This approach 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 interventions, planning and sequencing. This will improve safety and quality, as well as reducing disruption and delivering better long-term value for money.
Asset management	The coordinated activity of an organization to realise value from assets.
CAVs	Connected and autonomous vehicles.
CHARM	Common Highways Agency Rijkswaterstaat Model project.
Designated funds	During the first road period, the government 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.
Digital Roads	Digital roads is a concept we have developed based on using connectivity, data and technology to improve the way the SRN is designed, built, operated and used.
Digital Twin	A digital representation of a physical entity and its operation that can be queried. This will enable us to simulate our assets and improve our ability to design, construct, operate and maintain them with safety, customer and environmental outcomes at the forefront
DMRB	Design Manual for Roads and Bridges.
Driving for Better Business	A government-backed National Highways programme to help employers in both the private and public sectors reduce work-related road risk, decrease the associated costs and improve compliance with current legislation and guidance.
Environment Agency	A non-departmental public body sponsored by the Department for Environment, Food and Rural Affairs, with responsibilities relating to the protection and enhancement of the environment in England.
First road period	The initial road period that followed roads reform (2015-2020).
HGV	Heavy goods vehicle.
Housing Infrastructure Fund	A government fund available to local authorities for infrastructure to unlock housing.
HS2	High Speed 2.
International Road Assessment Programme	The umbrella programme for Road Assessment Programmes (RAPs) worldwide that are working to save lives.
KPI	Key performance indicator – a key metric used to define and measure progress towards organisational objectives.

Metric	The individual measurements that we are judged on, that fit within the performance specification.
National Traffic Information Service	Provides up-to-the-minute traffic information for the strategic road network in England.
Noise important area (NIA)	Areas in England are adjacent to major roads.
ORR	Office of Rail and Road.
PFI	Private Finance Initiatives.
Protocols	Additional services to our day-to-day operational activities, not core to our role as a strategic highways company.
RIS1	First Road Investment Strategy (2015-2020).
RIS2	Second Road Investment Strategy (2020-2025).
RIS3	Third Road Investment Strategy (2025-2030).
RP2	Road period 2 (2020-2025).
RP3	Road period 3 (2025-2030)
Road Investment Strategy	Government's long-term strategy for the strategic road network. It is where government sets the performance and investment objectives for National Highways and the funding it will make available for each Road Period.
Route strategies	Route strategies present a high-level view of performance and constraints on existing road network as well as recommending areas for further study.
Second road period	Road period 2 (2020-2025).
Smart motorways	A smart motorway is a section of motorway that uses traffic management methods to increase capacity and reduce congestion in particularly busy areas. These methods include using the hard shoulder as a running lane and using variable speed limits to control the flow of traffic.
Strategic road network (SRN)	The network of roads managed by National Highways, comprising motorways and some A roads
Transport Focus	The 'watchdog' responsible for gathering the views of SRN users and using them to shape policy and decision making.



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