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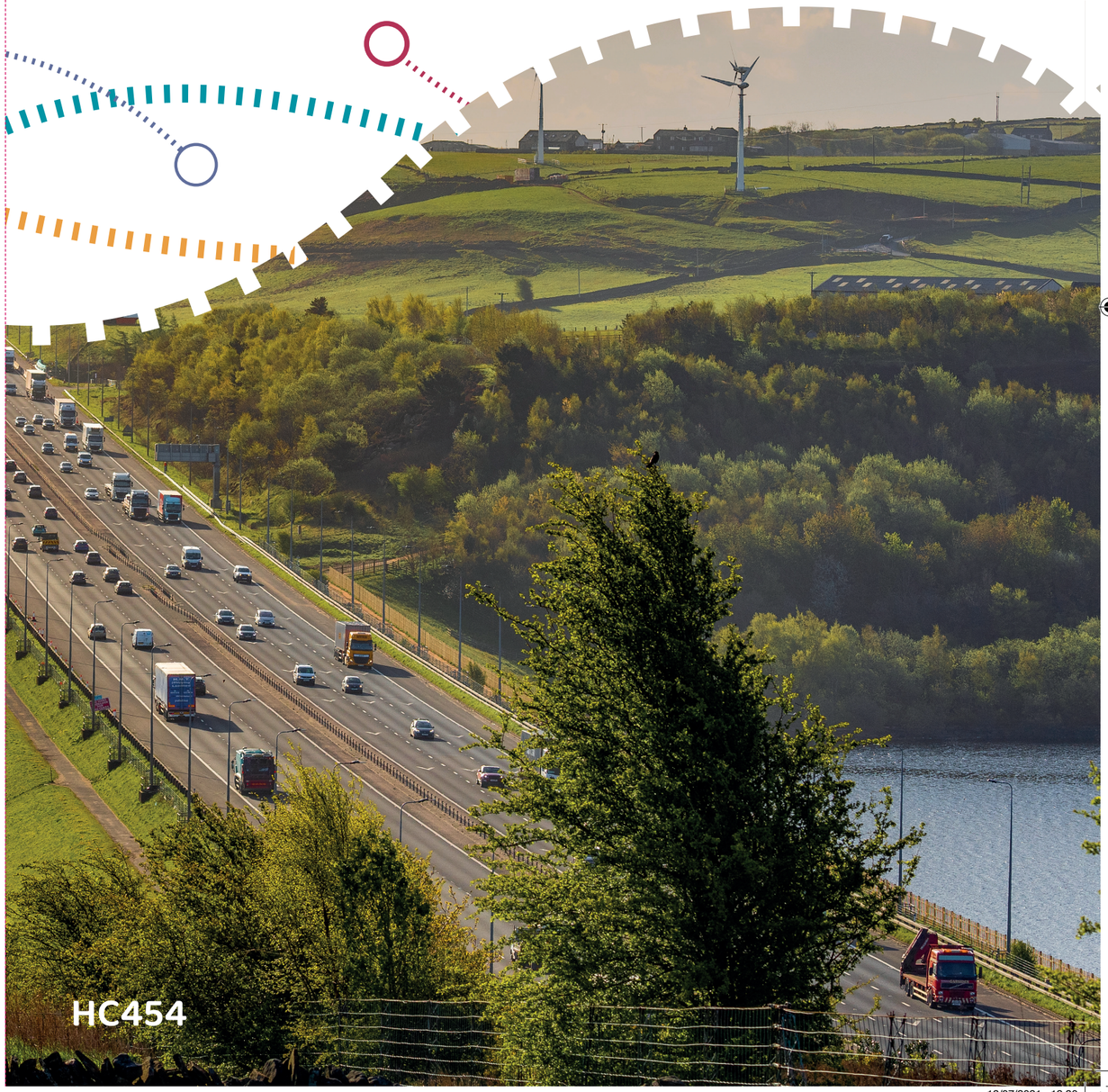
OFFICE OF RAIL AND ROAD

Annual Assessment of Highways England's Performance

April 2020 to March 2021



HC454

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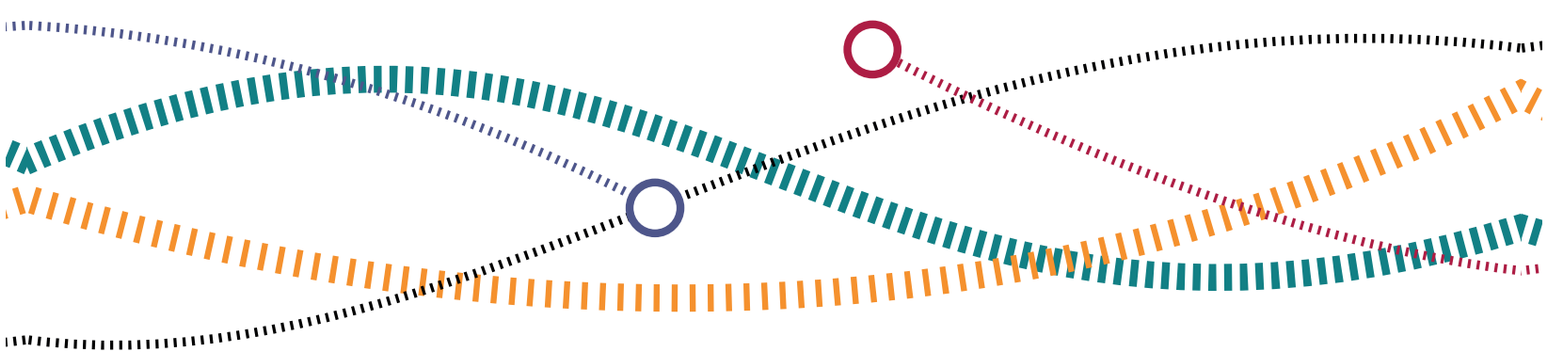

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Foreword

This assessment of Highways England is the first of a new road period. It builds on the lessons learned during the first road period, sets out current performance, and looks at prospects for the rest of this road period to 2025, and beyond.

But it is necessarily more than that. The world has changed. Over the past year Highways England has faced a set of extraordinary circumstances, unprecedented in its short life. We as the Highways Monitor have also faced our own challenges as to how we hold Highways England to account for its performance and weigh the effects of those extraordinary circumstances on future benchmarking.

The impacts of the coronavirus (COVID-19) pandemic over the past year and the end of the transition period for the UK's exit from the EU in December 2020 could have dramatically affected the operation of the strategic road network. However, Highways England responded well, and we credit them with keeping the network open for the smooth flow of essential goods and people around the country. It remains to be seen how the long-term effects of both events will play out over the remainder of this road period.

Elsewhere, whilst Highways England has almost certainly met its safety target for 2020, it knows that it must maintain a laser-like focus on road safety. We expect it to deliver on the safety-focused changes to the all lane running motorway programme mandated by the Department for Transport. Also, the Secretary of State tasked us with independently reviewing the data and evidence associated with all lane running motorways. The Secretary of State will publish our findings once he has considered them.

Highways England has met its key performance targets, albeit in some circumstances with unusually favourable conditions caused by the decline in traffic that happened because of the pandemic-related lockdowns. We will want to see evidence over the next year that it can maintain and improve on this performance as traffic levels increase.

On capital enhancements and programme delivery, the evidence shows that Highways England has performed satisfactorily over the past year. However, we are concerned about the future delivery of the RIS2 enhancement portfolio. We have already seen schemes moving further along in the road period and into the next as well as some significant underspends. Given that we are only 12 months into this road period we are concerned that this demonstrates a lack of appropriate capability in the planning and risk management of the portfolio on the part of Highways England. Delays to delivery of these schemes also threatens Highways England's efficiency and wider performance targets. We formally escalated this matter with the company and expect it to take significant steps to mitigate our concerns at the next spending review.

Looking ahead across the remainder of this road period and the next, Highways England will have to provide assurance to us, to road users and to the wider public about how it will appropriately steward the environment, support biodiversity, and lead on the broader decarbonisation of the road network. We are pushing the company hard to set challenging targets in this area and we will hold it to account to achieve those targets.

This and other issues will form part of our thinking about what we want to see in the third road period, which will begin in 2025. We will be seeking your views on our initial thoughts later this year.

As I began by saying, this has been in many ways a unique year for Highways England. Its workers have risen to the challenge, kept the network running and delivered upgrades and renewals. But strategically there remains much more to do to deliver the remainder of the RIS2 programme on time and to budget. We will report back on this next year.

John Larkinson
Chief Executive

Executive summary

Introduction

1. Highways England was set up as a government-owned company in 2015, tasked with managing the strategic road network – the motorways and major A-roads of England. In its second road investment strategy (RIS2) the government specified a set of outcomes and investments that it requires Highways England to deliver over road period 2 (RP2), from April 2020 to March 2025.

2. The Office of Rail and Road (ORR) independently monitors Highways England's delivery of the requirements set out in the RIS. This report sets out our assessment of Highways England's performance in 2020-21.

3. Overall, Highways England has worked hard this year to deal with the extra challenges presented by the coronavirus (COVID-19) pandemic and the end of the transition period for the UK's exit from the European Union. It maintained a strong focus on safety, but we agree with the company that further action is needed to achieve its long-term ambitions. The company completed its in-year actions against the Smart Motorway Action Plan that it agreed with the Secretary of State for Transport. It delivered its commitments for enhancement schemes and the majority of its renewals commitments, but there are risks it needs to mitigate to meet its remaining RIS2 commitments in full.

4. This is supported by three key messages, set out below.

Key message 1 – Extraordinary circumstances

Highways England worked hard to support the movement of goods and people during the first year of the second road period, whilst dealing with the extraordinary circumstances of the COVID-19 pandemic and the end of the transition period for the UK's exit from the EU on 31 December 2020. The company successfully put in place measures to meet the needs of road users and reacted quickly when conditions changed at short notice.

5. Last year, 2020-21, marked the start of a new five-year road period. It brought new challenges for Highways England, for example, to embed new performance metrics, a new process for funding risk and new delivery programmes. These challenges placed extra requirements on the company that it managed without detriment to its usual business.

6. The company performed well against its key performance indicators (KPIs) in 2020-21. The COVID-19 pandemic differently affected the company's ability to achieve its KPI targets. Some targets became more difficult because of workplace social distancing, whilst others were less challenging due to reduced levels of traffic on the strategic road network. Therefore, this year's assessment focuses on the actions taken by the company to support road users, in addition to its performance in meeting quantitative KPI targets.

7. Highways England met all targets in its key performance indicators for providing fast and reliable journeys and maintaining the network. At the end of 2020-21 the company:

   - achieved 98% network availability against a target of 97.5%;
   - cleared 88.6% of incidents within one hour against a target of 86%;
   - reported average delay of 6.7 seconds per vehicle mile, lower than the baseline of 9.5 seconds per vehicle mile; and
   - reported that 95.2% of the road surface did not need further investigation for possible maintenance, against a target of 95%.

8. In 2020-21, traffic on the SRN was approximately 67% of the expected annual total, although traffic volumes varied throughout the year. At its lowest point, during the first national lockdown in April 2020, it fell to about 25% of normal levels before returning to almost 90% in August 2020 and then declining again during subsequent lockdowns. The largest impact was on car traffic. This was around 60% of normal levels during 2020-21, whilst heavy goods vehicle traffic was close to normal levels.

9. Highways England continued to support road users, for instance through its traffic officer service and regional control centres. In response to the COVID-19 pandemic, the company adapted how it delivers these services to safeguard the safety of its staff and the wider public.

10. Transport Focus paused its face-to-face interviewing used to collect data for the annual Strategic Roads User Satisfaction survey (SRUS) because of the COVID-19 pandemic. In the absence of this quantitative measure, we have used a more qualitative approach to assess Highways England's performance. This uses a combination of the company's own Highview survey and evidence of where the company delivered customer service projects and trials. Highways England's delivery of the majority of the initiatives in its customer service plan, and the general trends shown by the Highview journey experience score collectively indicate that the company has focussed on the appropriate activities and made progress to improve user satisfaction, despite a changing and challenging operational environment.

11. Highways England delivered its enhancement scheme commitments and the majority of renewals commitments for 2020-21. This included the earlier than committed start of work on an enhancement scheme and the opening for traffic of another enhancement scheme. In achieving this, it had to deal with the impacts of the COVID-19 pandemic. The company could not have foreseen these impacts when it agreed with DfT its annual Delivery Plan commitments for enhancements and renewals in Q3 2019.

12. Highways England prepared well for potential disruption around ports linked to the end of the transition period for the UK's exit from the EU on 31 December 2020. The company engaged with Local Resilience Forums to identify risks and took successful steps to manage disruption, particularly in Kent and at the Port of Dover as part of a multi-agency effort.

13. The company also performed well in handling additional disruption and complexity at the Port of Dover around Christmas 2020, when French authorities closed the border at Calais for 48 hours due to the risk of a new coronavirus variant identified in the UK.

14. The government set up Project Speed in summer 2020 to review every part of the infrastructure project lifecycle. Its intention is to address longstanding challenges such as complex planning processes, slow decision-making, and low productivity in the construction sector while learning lessons from the COVID-19 pandemic, and to leverage the opportunities presented by the UK's exit from the EU. Highways England responded to the Project Speed challenge by bringing forward the start of works for the project to improve the A66 between Penrith and Scotch Corner and halving the planned construction time.

Key message 2a – Safety: overall performance

Highways England maintained a strong focus on delivering safety improvements to the strategic road network. But we agree with the company that there remains more work to do.

15. Highways England is likely to achieve its first road investment strategy (RIS1) target of a 40% reduction in the number of people killed or seriously injured (KSIs) on its network compared to the 2005-09 average baseline. This will be confirmed when road casualty estimates for 2020 are released later in 2021. This target level was less difficult to achieve by lower traffic levels on the network due to the COVID-19 pandemic. Therefore, it is important that the company focuses on its RIS2 target to achieve a 50% reduction in KSIs by 2025 against the same baseline, and its longer-term goal of KSIs that are at a level approaching zero by 2040. The company continued to deliver safety improvements during 2020-21, and it will need to make further interventions to meet future targets.

16. DfT's provisional estimates of road traffic casualties on the SRN in 2020 show a large decrease. Highways England's own data sources show a similar trend.

17. Highways England delivered interventions to improve safety during 2020-21. These included working with police forces to support enforcement on the SRN, undertaking research to better understand the causes of fatal collisions, and delivering small scale safety schemes through its designated funds.

Key message 2b – Safety: smart motorways

Highways England delivered its 2020-21 requirements in the safety-focused Smart Motorway Action Plan. Delivering the remaining tasks will be challenging. We will continue to monitor this closely.

18. In this report, we focus on the work Highways England has undertaken in the reporting period on the delivery of the Smart Motorway Safety – Evidence Stocktake and Action Plan (the Smart Motorway Action Plan). At the end of 2020-21, the company had delivered the first eight actions of the 18-point plan in accordance with the Stocktake, with one further action delivered by DfT. It delivered some of these actions earlier than planned and reports that it is on track to deliver the remaining actions, although achieving this will be challenging.

19. Highways England has worked with DfT to accelerate some of the actions in the Stocktake, for example, the installation of stopped vehicle detection technology. Further details are set out in the Smart Motorway Stocktake First Year Progress Report that the company published in April 2021. In that report Highways England also committed to delivering new measures to improve safety on smart motorways. This includes working with fleet operators through its Driving for Better Business programme to encourage the use of advanced driver assistance systems that will reduce the likelihood of rear end collisions involving heavy goods vehicles.

20. We commissioned a report that looked at the deliverability of the Action Plan, including the processes involved. At the time of publication, it is currently being finalised. We will assess its conclusions and recommendations and publish the report once complete.

Key message 3 – Delivery and risk to RIS2 KPIs performance

Highways England delivered its commitments on enhancement schemes and the majority of its renewals commitments in 2020-21. However, there are significant risks, including underspends, to the successful delivery of the remaining RIS2 commitments in full, with potential knock-on impacts for road users. Highways England must urgently consider how these risks should be mitigated.

21. Highways England started work on five schemes and opened three schemes for traffic in 2020-21, meeting its revised commitments for enhancement schemes. It also delivered the majority of its renewals commitments for its key assets in 2020-21 and began to deliver efficiency against its KPI target. However, an increasing number of enhancement schemes have been delayed due to planning issues, causing RP2 forecast underspends on some large schemes in development. We are concerned that planning risks may impact more schemes as the road period progresses. This in turn could detrimentally affect road users, for example by causing more road works to be carried out concurrently than originally planned. Highways England must set out more clearly the steps it is taking to mitigate the impact of this on road users.

22. Highways England responded positively to the March 2020 publication of the government's Smart Motorway Action Plan. To align with its First Year Progress Report, the company accelerated five recommendations of the Action Plan, including the installation of the stopped vehicle detection (SVD) technology. This resulted in a delay to the opening for traffic commitment of four enhancement schemes.

23. For 2020-21, Highways England initially committed to start construction on six enhancement schemes, with two further schemes to be started by third parties. The company agreed a revised commitment with DfT to start work on four schemes, instead of the six originally committed. The company successfully met its revised commitment to start work on those four schemes in 2020-21. In addition, it brought forward one project from 2021-22, bringing the total to five schemes.

24. Highways England opened for traffic two schemes in 2020-21, as per its planned commitment, in addition to one scheme brought forward from 2021-22. It also opened for traffic one further scheme (M271/A35 Redbridge roundabout upgrade) that was a missed commitment from RIS1 and therefore not in its RP2 Delivery Plan. The company exceeded its commitment by opening for traffic three RIS2 schemes in 2020-21.

25. There were 28 enhancement schemes in construction on the SRN at the end of 2020-21. The company's current programme is to have up to 39 schemes in construction during 2021-22.

26. Highways England published its Delivery Plan in August 2020, as agreed with DfT through the appropriate governance process. This resulted in several changes to enhancement scheme delivery timescales, compared to the plans we reviewed in the 2019 draft Strategic Business Plan. More schemes are now due to begin construction or open for traffic later in the road period. These changes and scheme delays required a significant reprofiling of funding in the 2020 Spending Review.

27. Since the 2020 Spending Review, an increasing number of large enhancement schemes have reported delays, creating a capital forecast underspend of £583 million (2.8%) at Q4 for the whole road period as costs have moved into RP3. These delays and a £363 million forecast total cost increase on the Lower Thames Crossing project have contributed to an increasing cost pressure on funding requirements for RIS3.

28. For 2020-21, Highways England reported a capital in-year underspend of £173 million, mainly due to enhancement scheme slippage and a resource underspend of £19 million resulting from lower private finance initiative (PFI) contract traffic volumes. The capital funding is a concern because unspent funding cannot usually be carried forward. The underspend emerged after the opportunity for reprofiling ('capital flex') had passed. Highways England is working through options with DfT for the use of the RP2 underspend.

29. We are concerned that there is a significant risk to the company obtaining timely planning consents for all schemes where it is required. Thirty-four schemes require a Development Consent Order (DCO) in RP2 of which 21 are yet to receive DCO approval. It is a complex and nuanced picture and with the evidence we have available to us it is difficult to judge the extent to which Highways England should be held to account for these planning delays. Highways England has provided us with further detail of its DCO applications and the company's estimate of approval dates, so that we can better assess the risks to delivery of the RIS2 portfolio. The company is also carrying out its own review.

30. We initiated a joint review with Highways England to look at its capability to deliver enhancements. Its key findings are set out below. Highways England has committed to provide us with a plan setting out how it will address the review's recommendations in August 2021.

- **Change initiatives:** the Company has put in place a programme of change initiatives in response to the increased scale and complexity of the RIS2 programme.

- **Corporate ethos:** the initiatives reflect an evident corporate desire to drive improved performance and appear to have sound underlying rationale. The findings highlighted three risks to the RIS2 portfolio:

- **Competence of the integrated project teams:** for 'below Tier 1' projects there is a dependence on external supply chain resource, the procurement process does not sufficiently assess the competence of any supply chain resource that are seconded to Highways England In that event, the number of core Highways England staff could be insufficient to absorb the changes required to deliver the RIS2 portfolio;

- **Making timely and effective decisions:** there is concern about the time taken to make clear decisions on changes to projects, for example, project committees tend to exercise caution and 'escalate if in doubt'; and

- **Knowledge management:** the identification of lessons learnt is strong, however the formal process of sharing and learning lessons is ineffective from the perspectives of timeliness (lessons are only 'reported' near the end of the project) and usability (they are hard to locate).

31. Taken together, we are concerned that changes to scheme timescales in the RIS2 Delivery Plan 2020-25, newly reported delays, the risk of further slippage and the need to utilise the underspend, could lead to a concertina effect and result in RIS2 key performance indicators not being achieved.

32. Highways England is reporting that it met its 2020-21 efficiency savings milestone and that it is on track to meet the RIS2 efficiency KPI (measured at the end of RP2). Our review of the efficiency evidence found that the company made a promising start in a challenging year. However, it must work to improve the evidence provided in some expenditure categories and consider the impact of inflation, programme change and use of the central risk reserve on reported efficiency. We will work with Highways England in 2021-22 to evaluate how changes made in 2020-21 that have delayed schemes into RIS3 will impact the portfolio programme and therefore affect its ability to achieve the RIS2 efficiency KPI.

33. Highways England delivered the majority of its planned renewals in 2020-21. The company delivered more renewals than planned in 17 out of the 19 asset types, delivering twice as much than planned in four asset types. Current asset condition and performance reporting does not adequately show the value this over-delivery brings to the SRN asset base. Highways England must improve the way it reports renewals to show the extent to which it delivers the right renewals intervention at the right time, a key principle of its asset management governance.

Summary of performance

34. We measure Highways England's performance against the expected outcomes set out in RIS2. There are eight outcome areas, each with one or more KPIs, as well as performance indicators. Our assessment of delivery against each KPI is summarised in the table below.

Outcome	KPI and target	Performance March 2021	RAG 2020-21	RAG RP2
Improving safety for all	**Killed or seriously injured** Target: 50% reduction by end of 2025 (2005-09 baseline)	2,189 killed or seriously injured in 2019, a 34% reduction on the baseline and 106 fewer than 2018.	2020 casualty data not yet available	2020 casualty data not yet available
Fast and reliable journeys	**Average delay** Target: No worse than at the end of RP1	6.7 seconds delay per vehicle mile, a decrease of 2.8 seconds from the baseline.	G	G
	Network availability Target: 97.5% availability in 20-21	98% availability – above the target of 97.5%	G	New metric in 2021-22
	Incident clearance rate Target: 86% of motorway incidents cleared within one hour	88.6% of incidents on motorways cleared within one hour – above the target of 86%	G	G
A well-maintained and resilient network	**Pavement condition** Target: 95% of road surface does not require further investigation	95.2% of pavement does not require further investigation at the end of March 2021. Performance remains above target although has dropped from its 95.5% figure in March 2020.	G	G

Outcome	KPI and target	Performance March 2021	RAG 2020-21	RAG RP2
Delivering better environmental outcomes	**Noise** Target: 7,500 households in noise important areas mitigated	2,111 households in noise important areas mitigated in 2020-21 – on track to mitigate 7,500 by the end of RP2.	G	G
	Biodiversity Target: No Net Loss of biodiversity by the end of RP2	Baseline of 130,848 biodiversity units set in 2020-21. Highways England is developing its plans to maintain this level of biodiversity in RP2.	G	A
	Air Quality Target: Bring links into compliance in the shortest possible time	31 links in exceedance of nitrogen dioxide levels. Highways England has delivered mitigation measures on five of these links.	A	A
	Highways England carbon emissions Target: Baseline and target setting in 2020-21	Highways England set a baseline of 88,147 of carbon dioxide and has agreed a target to reduce this by 75% by the end of RP2.	G	New metric in 2021-22
Meeting the needs of all road users	**Road user satisfaction** Target: 82% road user satisfaction score in 2020-21	The Road user satisfaction survey, which used face-to-face interviews, was suspended due to COVID-19 in March 2020 for the whole of 2020/21.	No survey data	No survey data
	Road works information timeliness and accuracy Target: 90% of accurate seven days in advance by 2025	54.5% of overnight road closures accurately notified in 2020-21. Performance has improved significantly during 2020-21.	G	A

Outcome	KPI and target	Performance March 2021	RAG 2020-21	RAG RP2
Achieving efficiency delivery	**Total efficiency** Target: £2.23bn of capital and ops efficiency by the end of RP2	2020-21 reported £243 million, ahead of the annual milestone. Evidence indicates a promising start but needs further development to support reported figure. Strong pipeline of efficiency initiatives for RP2.	A	G

Looking ahead to 2021-22

35. Throughout the next year we will maintain a focus on the issues discussed throughout this report. We will report back on in these matters in the 2021-22 Annual Assessment. In particular, we will:

- continue to monitor Highways England's progress in delivering the Smart Motorway Action Plan and publish an update on the company's safety performance later in 2021;
- monitor Highways England's progress in improving its organisational capability and capacity to plan and deliver its RIS2 capital enhancement portfolio;
- press Highways England to improve its reporting of efficiency;
- ensure Highways England develops improvements in its renewals reporting;
- monitor Highways England's delivery of a smoothly functioning network when the post-EU exit full border controls on goods entering the UK are implemented from 1 January 2022;
- monitor Highways England's delivery against new baselines and targets for RP2 on carbon and biodiversity;
- work with the DfT, Highways England and Transport Focus to monitor the emerging user satisfaction data from the new online version of SRUS; and
- continue to work with Highways England on the development of regional reporting and benchmarking and will report on progress in our next benchmarking report in early 2022.

36. In addition, we have started to plan how we will approach our role in the development process of the third road investment strategy (RIS3) covering the third road period from 2025 to 2030. We have an important role in providing advice to the Secretary of State on whether the draft RIS and Highways England's draft Strategic Business Plan are challenging and deliverable with the financial resources available. We will be consulting with stakeholders in autumn 2021 on our proposed approach to developing and providing our advice to the Secretary of State.

1. Key message 1: Extraordinary circumstances

Highways England worked hard to support the movement of goods and people during the first year of the second road period, whilst dealing with the extraordinary circumstances of the COVID-19 pandemic and the end of the transition period for the UK's exit from the EU on 31 December 2020. The company successfully put in place measures to meet the needs of road users and reacted quickly when conditions changed at short notice.

Highways England performed well against its key performance indicators in 2020-21. However, some targets were less challenging due to reduced levels of traffic on the strategic road network – the motorways and major A-roads of England, caused by the pandemic. Therefore, this year's assessment focuses on the actions taken by the company to support road users.

Circumstances of 2020-21

1.1 April 2020 marked the start of a new five-year road period and the start of the delivery of a new road investment strategy (RIS2). Highways England was able to build and develop upon its work in the first road period in the strategic design of its Delivery Plan. The new road period brought new tactical challenges for Highways England, for example, to embed new performance metrics, an entirely new process for managing and funding significant risk on capital projects and new capital delivery programmes. Creating and embedding internal processes to meet these challenges placed extra requirements on the company that it managed without detriment to its usual business.

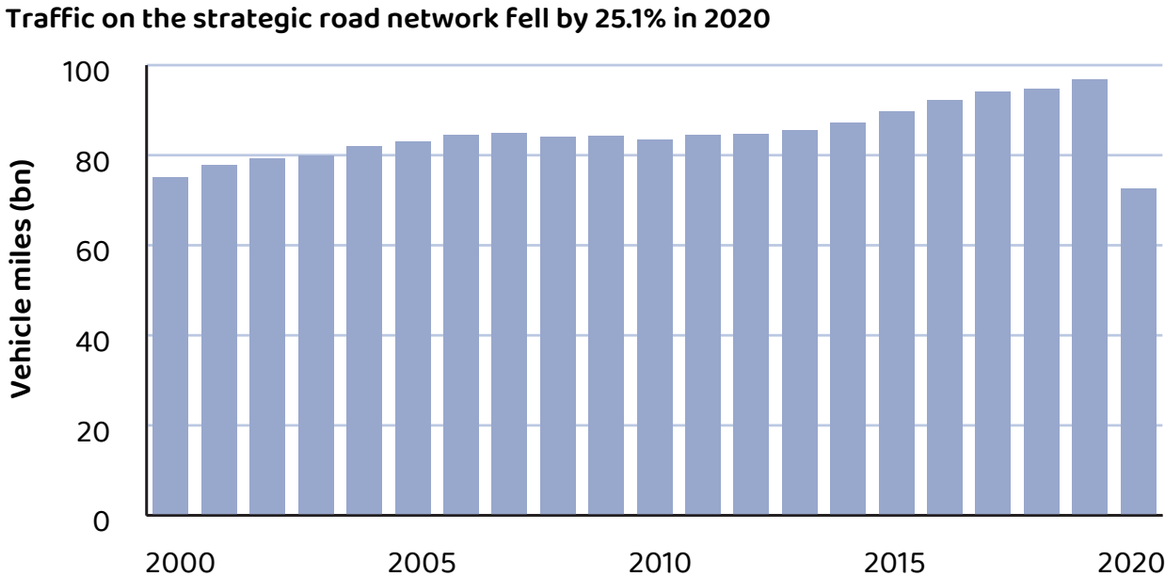
1.2 When Highways England's objectives and targets for the second road period (RP2) were published in March 2020, the impacts that the COVID-19 pandemic were unknown. In our 2019-20 Annual Assessment we said that we were mindful that the new road period had begun in extraordinary circumstances and that we would take a pragmatic and flexible approach to our monitoring, while still holding Highways England to account for delivering efficiently and effectively. That approach is reflected throughout this assessment.

1.3 Lower traffic levels meant there were fewer collisions on the network. This resulted in better-than-expected performance against targets in areas such as safety and delays. In other areas, Highways England needed to adapt its working practices to maintain performance levels. For example, the company increased the amount of single-crewed traffic officer patrols to ensure its staff had a COVID-19-safe working environment and were still able to effectively support road users and clear incidents.

1.4 Elsewhere, delivery was more challenging – for example some designated funds projects that are dependent on working with third parties where the workforce was affected by COVID-19 pandemic related restrictions. One enhancement scheme, M2 Junction 5, delayed its start of work due to the pandemic restrictions on the holding of public inquiries, in this case scheduled for Spring 2020. However, the pandemic had no detrimental impact on the delivery of Highways England's maintenance commitments.

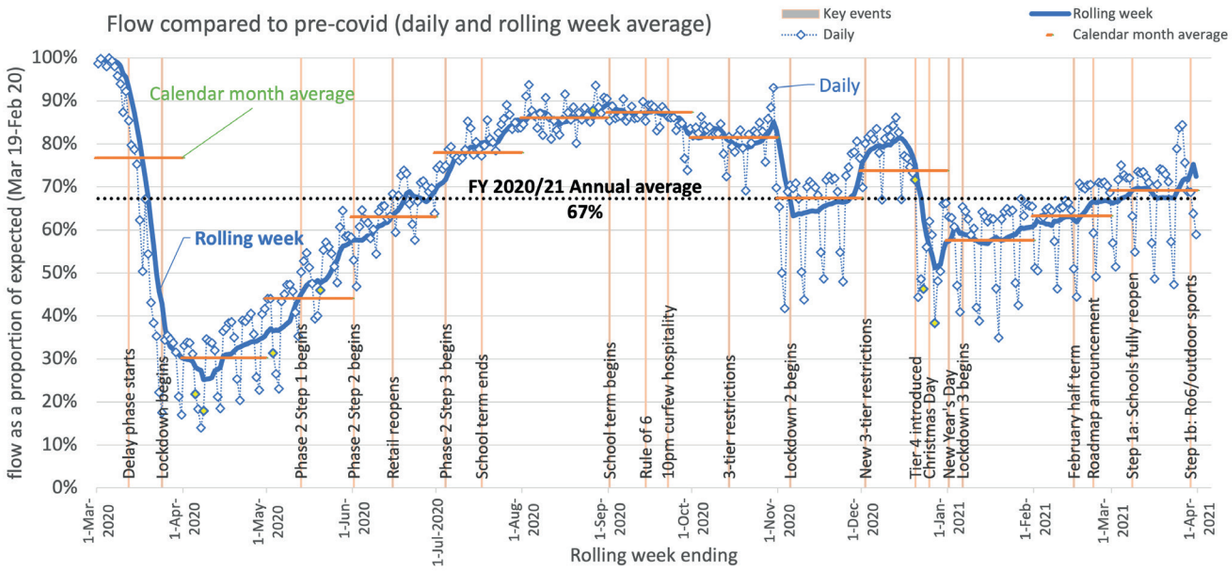
1.5 The COVID-19 pandemic had a significant impact on traffic levels in 2020-21. The Department for Transport (DfT)'s road traffic estimates show that in 2020 traffic on the strategic road network was 25.1% lower than in 2019. As set out in the DfT's road traffic estimates for 2020, this is by far the largest annual decrease since records began and compares to a fall in traffic of 21.3% on all roads in Great Britain. The largest previous decrease, associated with the OPEC oil embargo in 1973, resulted in a fall in all traffic in Great Britain of around 2%.

Figure 1.1: Traffic on the strategic road network, 2000-2020. Source: DfT



1.6 The decline in traffic was not uniform throughout the year. Highways England's operational data shows that, during the first national lockdown between March and June 2020, traffic on the strategic road network fell to below 30% of normal levels. It then increased to around 90% of normal levels in summer 2020, before falling back to 50% during the third national lockdown in late 2020/early 2021. Car traffic fell the most, while both heavy and light goods vehicle traffic was close to normal levels for large parts of the year and above normal levels at some points. Highways England produced the chart in figure 1.2 that shows traffic levels on the SRN between March 2020 and April 2021. This chart is based on the company's operational data and therefore the headline figures may differ from official traffic statistics.

Figure 1.2: Daily traffic flow on the SRN, March 2020 to April 2021. Source: Highways England



1.7 In addition to dealing with the COVID-19 pandemic, Highways England also had to manage the effects on the SRN of the transition period for the UK's exit from the EU that ended on 31 December 2020. As a result, Highways England had to react quickly to events, particularly where the strategic road network connects with ports, such as at Dover.

Case study – End of the transition period for the United Kingdom's (UK) exit from the European Union (EU): Kent

The end of the transition period for the UK's exit from the EU happened on 31 December 2020. There was a risk that the additional customs requirements at ports would cause significant delays and congestion, with knock-on consequences for the strategic road network. This risk was particularly acute in Kent due to the high volume of heavy goods vehicles crossing the Channel there.

Highways England is a partner of the local Kent Resilience Forum, made up of multi-agency stakeholders involved in managing the traffic impacts of the transition. This relationship with key stakeholders helped the company to identify risks and develop plans to mitigate them. Following the outbreak of the COVID-19 pandemic, Highways England had to put additional traffic officers into its existing plans, to ensure that it had the right people in the right places in Kent.

Highways England used various methods to manage traffic and mitigate congestion. It proactively utilised Operation Brock, its traffic management system comprising of physical barriers and managed speed limits. The company also effectively used its variable message signs to disseminate useful information, for example regarding COVID-19 testing.

The company also coped well with additional issues like bad weather and increased disruption around Christmas 2020 when French authorities closed the border at Calais for 48 hours due to the risk posed by the new coronavirus alpha variant, first identified in the UK.

The Secretary of State wrote to Highways England to praise its handling of the transition, particularly the rapid response to the challenges at Christmas 2020.

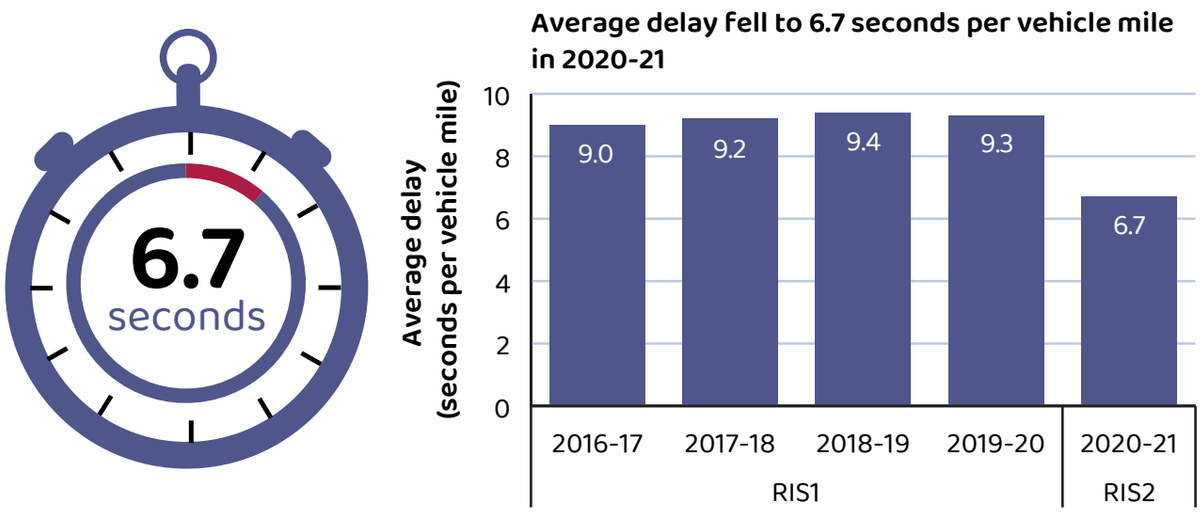
Image courtesy of Highways England

Providing fast and reliable journeys

1.8 In the second road investment strategy (RIS2), DfT set Highways England a key performance indicator (KPI) that average delay (measured in seconds per vehicle mile) on the strategic road network should be no worse at the end of RP2 than it was at the end of RP1. Throughout 2020-21, delays were lower than expected due to the low traffic levels on the network. Therefore, DfT agreed to change the baseline period for this KPI to February 2020, the most recent month when traffic was unaffected by COVID-19 pandemic-related restrictions.

1.9 At the end of March 2021, average delay was 6.7 seconds per vehicle mile, compared to 9.3 seconds per vehicle mile at the end of RP1 and 9.5 seconds per vehicle mile at the end of February 2020.

Figure 1.3: Average delay on the strategic road network, 2016-17 to 2020-21

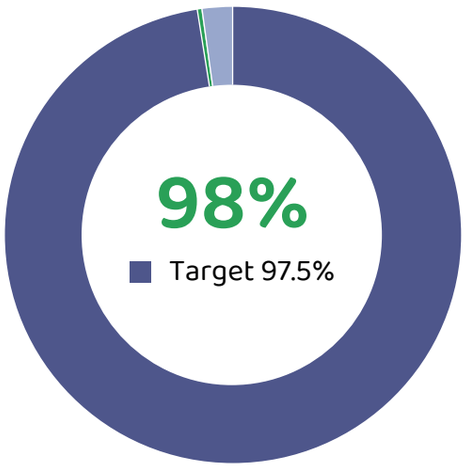


1.10 Highways England also met its other KPI targets for providing fast and reliable journeys. At the end of 2020-21, network availability (the percentage of the SRN that is free from lane closures due to roadworks) was 98% against a target of 97.5%. This was largely unchanged from the company's performance throughout RP1. From 2021-22, Highways England's management of roadworks will be measured by a new KPI that will better reflect road user experience by taking account of speed limits and narrow lanes in place due to roadworks. We will report on performance against this metric in our 2021-22 annual assessment.

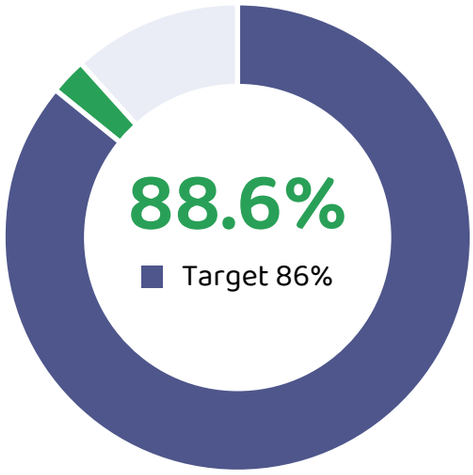
1.11 In 2020-21 Highways England cleared 88.6% of incidents within one hour, against a target of 86%. For RP2, this metric has been extended to include 24 hours a day (in RP1 it only included incidents between 6am and 10pm).

Figure 1.4: Network availability and incident clearance performance in 2020-21

Network availability was 98% against a target of 97.5%



88.6% of incidents were cleared within one hour against a target of 86%



1.12 Lower levels of traffic in 2020-21, because of the pandemic, meant that some of these KPIs were less challenging to achieve in-year than intended when they were set by DfT at the start of RP2. In particular, delays on the SRN were significantly lower than would otherwise have been expected.

1.13 Highways England had to adapt how it delivered services to support road users in 2020-21. To ensure the safety of its staff, the company implemented COVID-secure workplaces in its regional and national control centres. This enabled it to provide uninterrupted services. It also delayed decommissioning traffic officer vehicles to support the single crew/dual attendance model that it developed to maintain performance standards. These actions helped ensure that the company met its targets for providing fast and reliable journeys on the SRN.

1.14 Highways England must continue to focus on delivering fast and reliable journeys for road users as we emerge from the COVID-19 pandemic and traffic levels return to normal. To support this, the company has implemented a new operating system in two regions. The new operating system is known as CHARM (the Common Highways Agency Rijkswaterstaat Model programme), a joint initiative between Highways England and the Dutch road authority to create a single, more efficient operating system. The company expects the new system to improve its ability to deploy traffic officers more flexibly at particularly busy times or during emergency incidents.

1.15 Alongside this assessment, we have published a study into how Highways England manages congestion and delay. It includes several recommendations for our future monitoring in this area.

1.16 The study recognises that Highways England continues to manage a well-coordinated programme of interventions and improvements to manage delay. The company has also increased its understanding of traffic and delay information to better support its national strategy and regional operations. The recommendations from the study include:

- increasing the 'visibility' of congestion and delay information for the all-purpose trunk road network (A-roads on the SRN) to better match how delays are managed on the motorway network;
- further developing its focus on regional performance; and
- continuing to monitor the impact of physical interventions and operational improvements to increase capacity and shorten journey times and learning lessons from this to inform the design of schemes for RIS3.

1.17 Highways England is currently developing its longer-term plans for managing network delay on the SRN in RP2 and beyond. The key areas of focus for this work are around optimising roadworks management, reducing the impact of incidents and identifying innovative ways to address congestion. We will review the company's plans as they develop.

Well maintained and resilient network

1.18 The condition of the strategic road network is monitored by a key performance indicator (KPI) that measures the percentage of road surface that does not require further investigation for possible maintenance.

1.19 At the end of 2020-21, 95.2% of the network did not require further investigation. This means that the quality of the road condition had reduced during the year by 0.3 percentage points but remained above target condition (95.0%). Highways England has reported that the change in performance is within the normal range of variation and not an indication of a long-term downward trend. Our concern is that Highways England's in-year forecasts were more positive about the year-end condition than was achieved. We also expected road condition to be better than forecasting indicated given the company delivered more road surface renewals than planned. The company should therefore improve its performance forecasting to provide better confidence.

1.20 A key limitation of the road condition metric (unchanged from RIS1) is that it reports the road surface condition of lane one only and therefore only considers part of the total road surface area. Lane one is used because it is the most heavily used lane and so is most likely to deteriorate and require maintenance. As set out in para 1.5 above, car use was lower than usual on the SRN over 2020-21 while freight levels proved more buoyant. Given the heavy use of lane one by freight traffic, its rate of deterioration is unlikely to have been reduced significantly by the overall lower levels of traffic.

1.21 The three indicators of performance of structures assets, such as bridges, that we monitor are consistent across RP1 and RP2. They all show a slight improvement over the year. A full breakdown of asset performance is presented in Annex A.

Renewals and enhancements delivery

1.22 Highways England's annual Delivery Plan sets out its plans for the year ahead, including renewals types and volumes. The company delivered the majority of its renewals commitments in 2020-21. In doing so it had to deal with the impacts of the COVID-19 pandemic. These could not have been foreseen when the plan was finalised in 2019.

1.23 This has limited the company's ability to take advantage of reduced traffic on the network to deliver more renewals, especially for larger complex renewal schemes. Similarly, the impact on working practices to accommodate social distancing, and the impact on staff health was not factored into these initial plans. Despite these challenges, the company delivered the majority of its renewals plans in 2020-21. This suggests its contingency planning was good in the face of a disruptive year.

1.24 Highways England reported that it experienced some cost increases to accommodate COVID-19 working practices in delivering its renewals schemes. These cost increases were met in part using risk funding, reducing the impact on renewals budgets.

Case study – COVID-19 pandemic: adapting enhancement consultations

Before Highways England starts construction on a scheme it puts considerable effort into development to ensure that stakeholder views are properly considered. The COVID-19 pandemic presented a particular challenge during year one of RP2 and as a result Highways England had to be more innovative in carrying out these consultations. This case study sets out one such instance from 2020-21.

The M60/M62/M66 Simister Island interchange enhancement scheme is designed to improve capacity at this important junction and is estimated to cost £147 million. Highways England was forced to delay consultation on two options by six months due to pandemic-related restrictions. The company's usual method of communicating with stakeholders was at face-to-face events where plans would be presented, and feedback discussed. The pandemic-related lockdowns meant that the company had to use methods of consultation, other than face-to-face. It recognised that this presented a challenge to itself and to stakeholders and allowed an additional two weeks for consultation.

Highways England has reported that it used the following alternative measures to consult with its stakeholders about this scheme:

- **telephone consultation** – it established a call centre with a dedicated phone number, allowing stakeholders to speak directly to project staff. It only received seven calls, lower than the company expected;
- **online question and answer sessions** – the company set up a website where stakeholders could ask the project staff questions. This method of communication was less successful than other methods, with only five enquiries raised. The company has reported that the low response level may have been due to lack of publicity – it did not feature on the consultation materials initially sent to stakeholders;

Case study – COVID-19 pandemic: adapting enhancement consultations (continued)

- **virtual stakeholder meetings** – the company invited all affected landowners to a virtual meeting: 11 attended the event. The company invited community groups and local authorities, who represent a broad array of stakeholders, to other virtual meetings. It considered that these meetings were essential to effectively disseminating the overall benefits of the scheme;

- **digital** – Highways England uses various forms of social media. The pandemic increased its value as a method of communication. The company tweeted about the scheme from its account on the social media platform Twitter. Together, these tweets had over 7,000 interactions. In addition, Transport Focus, local authorities, the Institute of Advanced Motorists, and the Secretary of State all tweeted in support of the scheme. Highways England also used paid-for social media content. The highest single driver to the site was the Manchester Evening News that directed 250 people there. The scheme webpage received 6,100 visits and 22,000 clicks;

- **consultation video with simulated drive through** – without access to hard-copy plans that the project staff can talk about, it can be difficult for stakeholders to visualise the scheme. Highways England therefore used a simulated drive through of the scheme and placed it on their scheme website, to give stakeholders a more easily understood 'view' of the scheme. This received good media coverage and stakeholder feedback. The company received particularly positive feedback about the simulation part of the video; and

- **engagement van and posters** – Highways England acknowledged that some stakeholders would be unable to engage with the consultation digitally. It used a van to visit local areas with high footfall and display posters in public areas. This method received no stakeholder feedback, making it difficult to assess its success.

Despite the challenging circumstances, Highways England received 817 formal responses to the public consultation, with 67% supporting its preferred option.

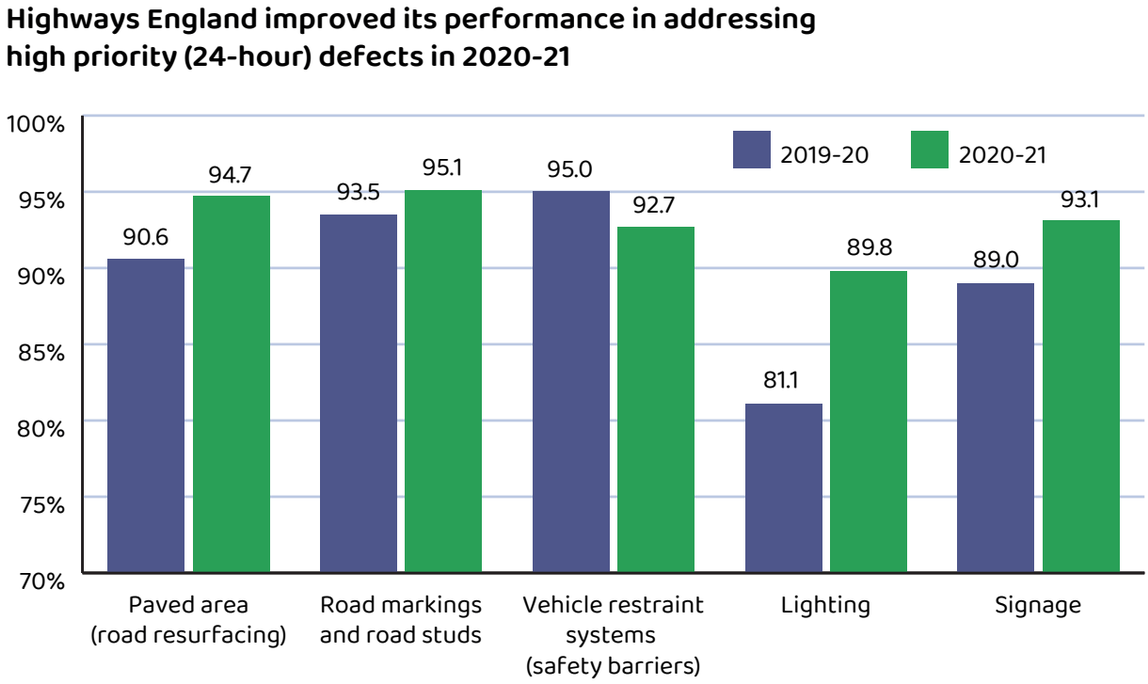
The pandemic challenged Highways England's traditional approach to scheme consultation, forcing it to adopt more virtual tools. The company believes they were successful in increasing the numbers engaging with the scheme. We expect the company to feed lessons learned into future consultations, presenting stakeholders with more choice as to how they engage with consultations.

Maintenance

1.25 Highways England reported that because of reduced traffic flows in 2020-21 it was able to carry out additional maintenance activities. The company was also able to invest additional funding in maintenance activities, like fixing potholes, due to savings of £41 million on private finance initiative (PFI) contracts. The saving is made up of £12 million due to the annual contract reconciliations, driven by lower inflation rates and a one off saving of £35 million due to lower traffic volumes. These savings were slightly offset by a £6 million one-off cost from the way the company modelled their annual operational expenditure charge highlighted at audit, after budget setting.

1.26 Highways England's additional maintenance activities have contributed to improved defect resolution performance, for example on filling potholes. Maintenance performance reporting shows that over 2020-21, Highways England improved its performance in addressing high priority (24-hour) defects, and defects within the required timescale, across the majority of defect types. Performance across a selection of defect types is shown in figure 1.5 below. Further details are given in Annex C.

Figure 1.5: Percentage of highway priority defects completed within 24 hours in 2019-20 and 2020-21. Note that the East and South-East regions are excluded from data in 2019-20 as they had not transferred to Highways England's asset delivery contract.



Meeting the needs of all users

1.27 Highways England continues to focus on the needs of road users. However, because of the pandemic, Transport Focus paused the face-to-face interviewing used to collect data for the Strategic Roads User Satisfaction survey (SRUS). In the absence of this quantitative measure, we have used a more qualitative approach to assess Highways England's performance. This uses a combination of the company's own Highview survey, findings from a study we commissioned of Highways England's approach to developing its customer service plans, and evidence of where customer service projects and trials were delivered by the company.

1.28 The previous measurement of road users' satisfaction, using the former National Road Users' Satisfaction Survey (NRUSS), ended RP1 with an overall satisfaction score of 89.2%, just below the 90% target. Transport Focus introduced the new survey methodology, SRUS, and a revised target of 82%, for the first year of RP2 (2020-21). Transport Focus ran NRUSS and SRUS in parallel for two years to check for data stability and to ensure they properly understood the effect of the SRUS methodology on the achievability of the KPI.

1.29 SRUS gathers users' feedback on overall satisfaction and specific issues such as journey time and safety. There are six topics in all: journey time, management of roadworks, surface quality, feeling safe, information on permanent signs and information on electronic signs.

1.30 An online version of SRUS was successfully trialled by Transport Focus in November and December 2020. However, this was primarily to test the concept rather than to provide data for monitoring purposes. In addition, the change in the composition of traffic and journey purposes of trips on the SRN during the past year will likely have impacted on user satisfaction levels compared to the pre-COVID-19 pandemic baseline conditions. As a result, the initial data needs to be examined with a degree of caution. Furthermore, the online survey was suspended in January 2021 due to the third national lockdown.

1.31 Although there was a long break in SRUS data collection the ORR continued to meet with the company's customer service directors to review progress and discuss priorities and future plans. Of the 54 initiatives contained in Highways England's customer service plan, Connecting Our Customers 2020-21, the company delivered 49 initiatives and delayed five due to COVID-19 restrictions. The five delayed projects have subsequently been delivered or are underway.

1.32 Initiatives included improving customer information during or ahead of journeys, enhancing information for disabled users (see case study) new equipment to assist the quicker removal of stranded vehicles, and closer liaison with the freight industry.

Case study – Meeting the needs of all road users

Highways England's research shows that, every day, over 750,000 journeys are undertaken by a disabled person on the SRN. To better understand the different needs of its customers, the company extended the membership of its Roads For All Forum. The insight this group provided enabled the company to develop its services and better meet specific needs. For example, in 2020-21, Highways England worked with the British Deaf Association (BDA) to produce a video where people used British Sign Language to communicate what steps to take to remain safe in the event of a vehicle breakdown. The BDA used its own channels to distribute the video to its members.

Highways England acknowledged that that the Emergency Roadside Telephones were not appropriate for some road users, for example Deaf people, or people with hearing loss or a speech impairment. In response, the company launched a new text – short message service (SMS) – channel for these road users that enabled them to quickly report their whereabouts to the company's contact centre. Highways England replaced the information notification stickers at all 6,000 roadside devices to ensure that road users who needed the new SMS number had access to it.

The ability to plan reliable journeys on the SRN is particularly important for users who have a disability or who may need to stop for a medical or any other reason. In RP1 Highways England was not able to provide any information on how accessible roadside Motorway Service Areas (MSAs) were. To address this, in 2020-21 the company surveyed over 100 sites and will be making this information available in 2021-22. The company is aiming to provide a new service that will support disabled road users with journey planning, enabling them to access information about facilities and motorway service areas along their route that best meet their specific access needs.

Image courtesy of Highways England

1.33 Alongside this Annual Assessment we have published a report looking at how Highways England used data sources to inform its customer service plans and to recommend to us what sources we could use to monitor the company's performance against its key performance indicator.

1.34 The report recommended using Highview in the interim, the company's online road user survey, to monitor user satisfaction in the absence of Transport Focus' SRUS. The company surveyed an average of 1,600 road users per month between April 2020 and March 2021 and used the survey results to understand key drivers of satisfaction such as journey time and overall journey experience. However, SRUS and Highview are not directly comparable, and have different methodologies and purposes. We have used Highview as a temporary measure to understand user satisfaction using trend analysis. This allows us to spot patterns without placing undue weight on monthly variations.

1.35 In the first year of RP2, the Highview performance score for 'overall journey experience' rated at 'very good' or 'fairly good' was broadly stable at 80% with a slight variation, between monthly scores, of one and two percentage points. While there is no comparable measure, the conclusion we draw from the data is that Highways England maintained overall journey experience for road users. We will continue to review the survey, along with other options to understand the steps the company is taking to improve road user satisfaction, in the interim until the SRUS survey data is available.

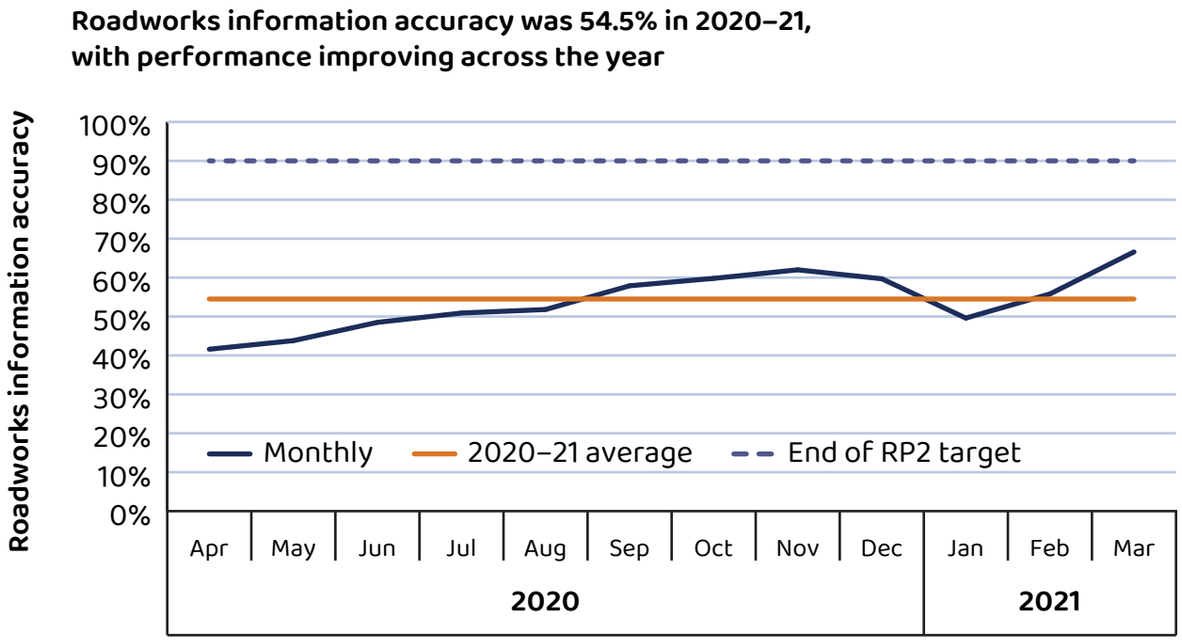
1.36 Highways England has a new KPI for RP2 to improve the accuracy and timeliness of its roadworks information, with a target to achieve 90% accuracy by the end of 2024-25. The measure is calculated from the percentage of road closures that commence within one hour of the start time stated seven days in advance on the company's Network Occupancy Management System (NOMS).

1.37 Highways England achieved an average score of 54.5% for accuracy of its roadworks information across 2020-21, see figure 1.6. Over the course of 2020-21 the company achieved a significant increase in its monthly performance scores ahead of its internal targets, from 41.6% in April 2020 to 66.6% in March 2021.

1.38 At the start of RP2, Highways England identified significant variations in how its regions performed. By identifying and sharing best practice from the better performing regions, the company was able to improve performance at a national level. Examples include a better focus on planning of works and developing and improving its ability to analyse the reasons for why some roadworks did not start on time.

1.39 The company has more work to do if it is to achieve its RP2 target. It must embed the new ways of working it has developed in the past year and focus on delivering incremental improvements. We will continue to monitor the company's performance closely and assess its progress in achieving this target.

Figure 1.6: Accuracy of roadwork information per month, 2020-21



2. Key message 2a: Safety – overall performance

Highways England maintained a strong focus on delivering safety improvements to the strategic road network. But we agree with the company that there remains more work to do.

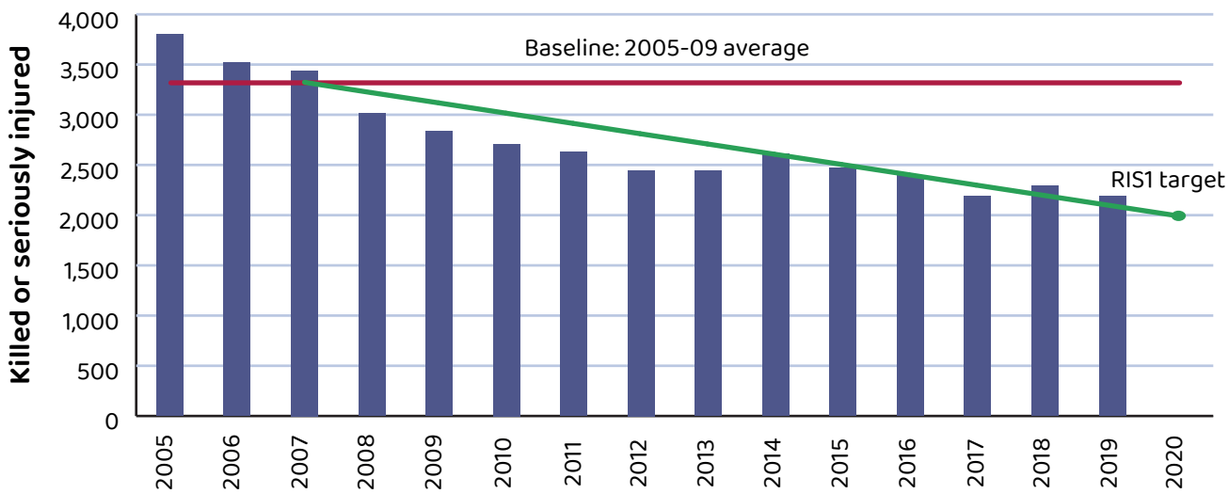
2.1 This assessment focuses on Highways England's performance in the first year of the second road period (RP2), however we are still monitoring the company against its RP1 safety target. This is because DfT has not yet published its final 2020 road casualty statistics that will be used to determine the outcome against this target. Data for 2020 are due to be published later in 2021.

2.2 RIS2 states that safety is Highways England's "first imperative and informs everything it does".[1] The company's key performance indicator (KPI) for RP2 is to achieve a 50% reduction in the number of people killed or seriously injured (KSIs) on the strategic road network by 2025, compared to the 2005-09 average baseline. This builds on its target in the first road period to achieve a 40% reduction in KSIs by the end of 2020 against the same baseline.

2.3 The latest road casualty statistics show that there were 2,189 KSIs on the strategic road network in 2019, 34% below the baseline, see figure 2.1.[2] The outcome against the RIS1 safety target will not be confirmed until later in 2021 when DfT publishes the final 2020 road casualty statistics.

Figure 2.1: KSIs on the strategic road network (adjusted data) 2005-2019

In 2019 KSIs were 34% below the baseline; reduced traffic due to the COVID-19 pandemic means that we expect the target 40% will be achieved by 2020.



[1] DfT, Road Investment Strategy 2: 2020–2025, 11 March 2020, p21

[2] DfT, RAS30081: Reported road casualties on the strategic road network by road class and severity: England, 30 September 2020

2.4 DfT's provisional estimates of road casualties for all roads in Great Britain in 2020 show that reported KSIs were 22% lower than in 2019.[3] This trend is affected by the reduction in traffic in 2020 due to the COVID-19 pandemic and is consistent with trends observed by Highways England's own operational data. As KSIs were already 34% below the baseline in 2019, the anticipated further reduction in 2020 means that we expect that the company will meet its RP1 target of a 40% reduction in KSIs by the end of 2020.

2.5 As traffic levels return to normal, it is likely that the number of people killed or seriously injured on the SRN will increase. Therefore, it is important that Highways England focuses on its RIS2 target of achieving a 50% reduction in KSIs by 2025, compared to the 2005-09 baseline, and its longer-term goal for KSIs to be at a level approaching zero by 2040.

2.6 In 2020-21 Highways England demonstrated its continued commitment to improving safety on the strategic road network by delivering a range of interventions. The company:

- continued to work with police forces to support enforcement. Operation Tramline detected 7,020 offences in 2020-21. This involved Highways England providing funding for police forces to operate unmarked heavy goods vehicle (HGV) tractor units to capture evidence of driving offences;
- conducted research to better understand the causes of fatal collisions on the SRN and to inform future interventions to either avoid or reduce the severity of the collision. In 2020-21 this work focussed on motorcycles, rear-end collisions, smart motorways and vans;
- provided support and guidance through its Driving for Better Business programme to help companies ensure that their vehicles were safe to drive after being dormant due to the first COVID-19 pandemic national lockdown; and
- delivered schemes through designated funds, including support for suicide prevention. Other schemes focused on improving safety for non-motorised users and speed limit compliance on the network.

[3] DfT, Reported road casualties Great Britain, provisional results: 2020, 24 June 2021

Case study – Safety and congestion designated funds: A64 Whitwell Duals scheme

Highways England's designated funds, worth £936 million over RP2, enable the company to deliver projects that address a range of issues beyond the traditional focus of road investment. This includes a £145 million safety and congestion fund which is designed to help address pinch-points where small-scale interventions can bring about significant improvements to congestion or safety.

In 2020-21, the safety and congestion designated fund was used to deliver a £1.5 million safety scheme at the A64 Whitwell Duals scheme, in the Howardian Hills Area of Outstanding Natural Beauty.

Highways England's assessment of collisions at this location reported 17 personal injury collisions (PIC), four of which resulted in vehicles leaving the carriageway.

To mitigate this risk, the company installed over 5,700 metres of vehicle restraint system that is predicted to reduce PIC frequency by 0.64 PICs (0.16 KSIs) per year.

Reflecting that the scheme is in an environmentally sensitive area, it was also designed to have a minimal visual impact. This was achieved by using an innovative product that applied timber cladding to the traditional steel system.

Image courtesy of Highways England

2.7 Looking ahead, Highways England is in the process of completing research that will inform its safety plans for the remainder of RP2 and its longer-term priorities towards 2040. A key deliverable for the company in 2021-22 is to complete the re-baselining of the network using the iRAP Safety Rating model. This will provide a baseline star rating assessment for the 2020 network and a forecast for 2025. This will be a key source of evidence for informing future investment decisions. The star rating work is due to complete in summer 2021.

2.8 Other plans for 2021-22 include trialling technology to identify and mitigate high risk behaviours on the network such as tailgating, mobile phone use and seatbelt non-compliance.

2.9 We will work closely with the company to understand how it is using the data and knowledge from these projects to deliver improved safety outcomes for road users.

3. Key message 2b: Safety – smart motorways

Highways England delivered its 2020-21 requirements in the safety-focused Smart Motorway Action Plan. Delivering the remaining tasks will be challenging. We will continue to monitor this closely.

The company has completed on time the first eight actions in the Smart Motorway Safety – Evidence Stocktake and Action Plan with DfT completing one further action, as agreed with the Secretary of State.[4]

3.1 In March 2020, DfT published its Smart Motorway Stocktake and Action Plan. This included 18 actions designed to improve safety on smart motorways.

3.2 During 2020-21, Highways England delivered nine of 22 actions from the plan (four of the original 18 actions have each been split into two sub-actions) in accordance with the Stocktake, with some completing earlier than planned. The company reports that it is on track to deliver the remaining actions, we consider that achieving this will be challenging.

3.3 Highways England's delivery of the Action Plan to date has included:

- increased visibility of emergency areas;
- ten additional emergency areas added on the M25; and
- a national communications campaign, 'Go Left', to educate drivers on what to do in the event of a breakdown on the motorway.

3.4 Figure 3.1, below, summarises all the actions that the company completed in 2020-21. Further details were provided in Highways England's Smart Motorway Stocktake First Year Progress Report, published in April 2021. That report also set out the company's plans to accelerate delivery of actions to retrofit stopped vehicle detection technology on existing all lane running motorways and upgrade cameras that automatically detect vehicles that are illegally driving in lanes where a 'Red X' is displayed.[5]

[4] 'Smart motorways' is a term that describes a series of different interventions on the SRN, including controlled motorways, all lane running and dynamic hard shoulder running. There is a short explanation of these different types of smart motorway on the AA website.

[5] Smart motorways show a 'Red X' light in the overhead gantry to control traffic and indicate that the lane is closed.

Figure 3.1: Smart Motorway Action Plan: actions delivered in 2020-21

Description	Completion date
Review of the use of red flashing lights by recovery vehicles (DfT led action)	March 2021
Large-scale trial of CCTV analytics	December 2020
Delivering 10 additional emergency areas (EAs) on the M25	December 2020
Reviewing existing emergency areas where the width is less than the current standard	December 2020
Investigate M6 Bromford viaduct and sections of the M1	November 2020
Making it easier to call for help if broken down	November 2020
New standard for placing of spaces to stop in an emergency	November 2020
Closer working with the recovery industry	September 2020
Making emergency areas more visible	May 2020

3.5 We monitor Highways England's delivery of the Smart Motorway Action Plan by reviewing the company's progress against the delivery dates it agreed with DfT. We will continue this work across RP2. In 2021-22 the company is due to complete four actions, including delivering further information campaigns to increase understanding of smart motorways, and to contribute to an update of the Highways Code to provide guidance for driving on smart motorways (the proposed update was laid before Parliament in June 2021). It has also implemented changes to traffic officer service patrols where the distance between places to stop in an emergency is more than one mile. This is to help reduce attendance time from an average of 17 minutes to an average of 10 minutes.

3.6 In 2020-21 we commissioned a report to review the deliverability of, and processes involved with the Smart Motorway Stocktake and Action Plan. The review focused on two areas: Highways England's progress against five of the most critical actions in the Action Plan, and an assessment of the capacity of the company's operational resourcing to manage smart motorways, including the traffic officer service. At the time of publication, the report is being finalised. We will assess its conclusions and recommendations and publish the report once complete.

4. Key message 3: Delivery and risk to RIS2 KPIs performance

Highways England delivered its commitments on enhancement schemes and the majority of its renewals commitments in 2020-21. However, there are significant risks, including underspends, to the successful delivery of the remaining RIS2 commitments in full, with potential knock-on impacts for road users. Highways England must urgently consider how these risks should be mitigated.

Highways England started work on five schemes and opened three schemes for traffic in 2020-21, meeting its revised commitments for enhancement schemes. It also delivered the majority of its renewals commitments for its key assets in 2020-21 and it began to deliver efficiency against its KPI target. However, an increasing number of enhancement schemes have been delayed due to planning issues, causing RP2 forecast underspends on some large schemes in development. We are concerned that planning risks may impact more schemes as the road period progresses. This in turn could detrimentally affect road users, for example by causing more road works to be carried out concurrently than originally planned. Highways England must review scheduling and its capacity to deliver the programme, and if necessary, replan to secure the successful delivery of its RIS2 commitments.

RIS2 enhancement portfolio overview

Enhancement portfolio overview

4.1 Highways England's Delivery Plan for 2020-25, published in August 2020, listed 77 schemes:

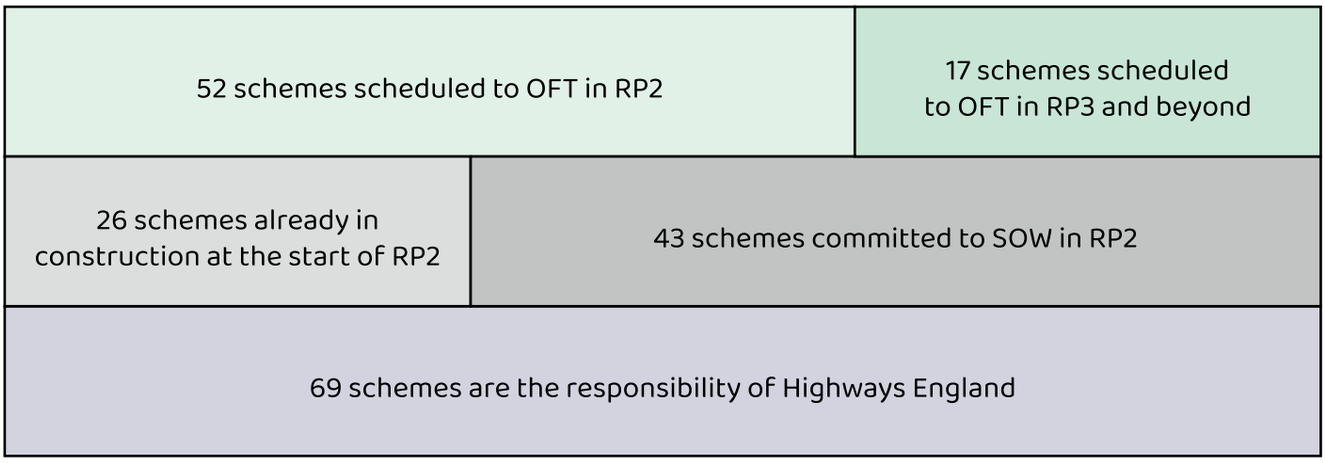
- there are 69 schemes that are the responsibility of Highways England, of which:
  - 26 are RIS1 schemes already in construction;
  - 43 schemes have a commitment to start work (SOW) in RP2; and
  - 52 schemes have a commitment to open for traffic (OFT) in RP2.
- four schemes will be delivered by local authorities with funding from the Housing Infrastructure Fund (HIF), with support from the company. During RP2:
  - all four schemes are scheduled to start work; and
  - three schemes are scheduled to OFT in RP2 and one in RP3.

- four schemes will be delivered by a third party, with a funding contribution and support from the company. During RP2:
  - one scheme started construction in RP1;
  - three schemes are scheduled to start work; and
  - three schemes are scheduled to open for traffic.

4.2 Highways England's Delivery Plan also included a RIS3 pipeline of 32 proposed future schemes.

4.3 Figure 4.1 illustrates the schemes scheduled for delivery by Highways England. Annex C figures C2 and C3 give schedules of RIS2 schemes.

Figure 4.1: Highways England's enhancement schemes

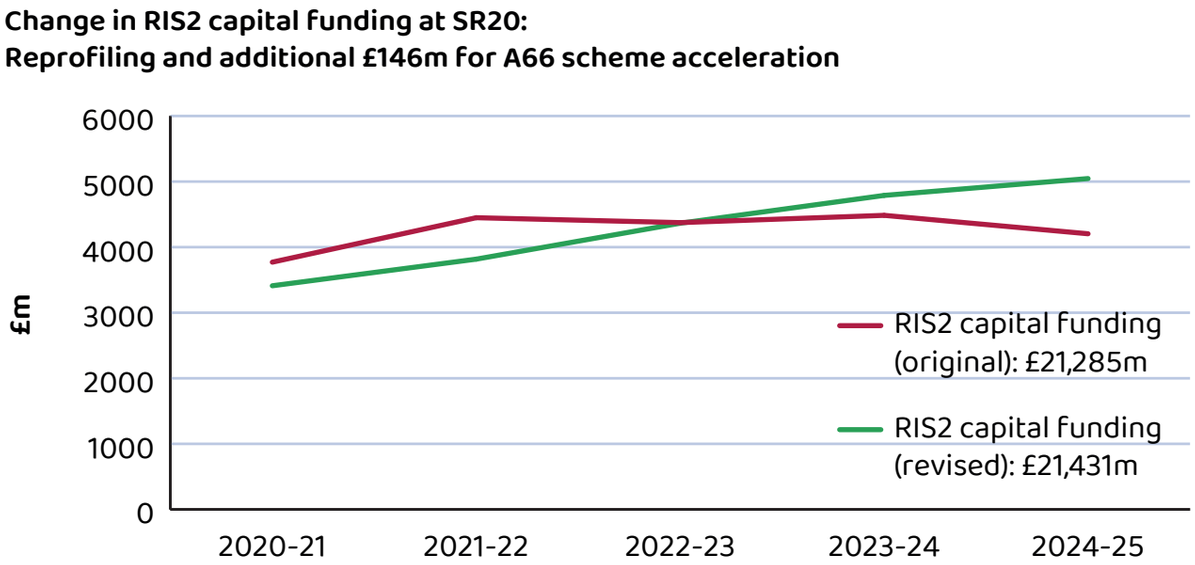


RIS2 enhancements scheme funding

4.4 The government allocated £14,176 million for the delivery of enhancements during RP2.[7] In Spending Review 2020, it allocated a further £146 million for the acceleration of the A66 Northern Trans-Pennine scheme, bringing the total to £14,322 million. The government also agreed to a reprofiling (change in annual allocation) of Highways England's capital funding for RIS2. This was due to changes Highways England made to delivery timescales on several enhancement schemes in late 2019-20 and early 2020-21 in part due to planning delays and the impact of the COVID-19 pandemic.

[7] Overall capital funding was £27,358 million (DfT, Road Investment Strategy 2:2020–2025, 11 March 2020, p119

Figure 4.2: Original and revised RIS2 capital funding profile



4.5 The original RIS2 funding profile was based on pre-RP2 assumptions about the delivery of enhancement schemes in RP2, before several schemes were affected by delays (see paragraph 4.7). It was clear early in RIS2 that a funding reprofile would be required. Highways England and Department for Transport (DfT) agreed to defer this to the Spending Review 2020, which subsequently also allowed for the early 2020-21 impacts of the Smart Motorway Stocktake and Action Plan, and the COVID-19 pandemic to be reflected. The government agreed to move £1 billion of funding from years 1-3 (2020-23) to years 4 and 5 (2023-25).

4.6 The government allocated £472 million of funding in RP2 for RIS3 development. This funding is to develop 32 enhancement schemes in RP2 so that they can enter construction during RP3, and for separate work on existing and new strategic studies.[8]

RIS2 enhancements portfolio complexity and risk

4.7 In June 2019, we reviewed Highways England's draft Strategic Business Plan for RIS2 and advised DfT of potential risks associated with the delivery of a more demanding RIS2 programme. We also recommended Highways England completed a quantified schedule risk assessment. We note that most schemes within the Delivery Plan now have later commitments than assumed in the draft Strategic Business Plan. This may have addressed schedule risk for many individual schemes. However, if the later commitments are not met, it may increase the risk of work slipping in to RP3.

[8] Reviews of challenging network areas potentially requiring several complex projects.

4.8 Highways England agreed to deliver this notably more complex portfolio of enhancement schemes in RP2, compared to the first road period. The complexity derives from:

- **more Tier 1 scheme commitments:** Highways England is committed to start work on seven and to open for traffic three Tier 1 schemes (cost over £500m or 'novel and contentious')[9] in RP2. This is a significant increase compared to RP1 commitments, where the company was committed to start work on only one Tier 1 scheme, which it did. RIS2 Tier 1 projects are larger than RIS1 project, more complex and contain novel engineering challenges. Annex C Figures C4 and C5 list Tier 1 schemes.

- **more schemes requiring Development Consent Orders (DCOs):**[10] In the RIS2 portfolio, Highways England has 34 schemes classed as Nationally Significant Infrastructure Projects requiring a DCO. Although Highways England is responsible for managing the risks to approval, the Planning Inspectorate will also be assessing other major infrastructure projects and collaboration with them will be necessary to ensure the applications are successful. Twenty-one schemes have yet to receive DCO approval and are programmed to start work in RP2 (including A46 Coventry Junction, though one phase of construction has already started that did not require a DCO). Annex C Figure C6 lists schemes that require DCOs.

- **additional smart motorways scope:** Seven of the company's 17 RIS2 smart motorway schemes originate from the DfT's Smart Motorway Action Plan. The plan highlighted additional safety measures that the company should incorporate into existing smart motorways (detection systems, emergency areas etc.). There is significant national interest in these projects and Highways England will need to ensure that it has robust communications in place with all stakeholders. Annex C Figure C1 contains a breakdown of the portfolio.

- **construction activities on the strategic road network:** The high level of RIS2 investment means there will be a significant number of schemes in construction at any time during RP2. There were 28 schemes in construction at the end of 2020-21, this number is expected to peak at 47 during 2022-23. In general, there will be more schemes in construction concurrently during RP2 compared with RP1. Figure 4.11 illustrates the number of schemes in construction during RP2.

[9] HMT, Managing Public Money, updated June 2021, para 2.3

[10] This is a form of planning consent for Nationally Significant Infrastructure Projects (NSIPs) as defined under the Planning Act 2008, section 22.

RIS2 enhancements portfolio changes

4.9 During the first year of RP2, Highways England reviewed the RIS2 portfolio with particular attention on delivering value for money, the impacts of planning processes, the impact of the Smart Motorway Stocktake and Action Plan and accelerated delivery timescales. The company proposed a revised portfolio schedule and secured agreement from DfT for the following changes to the portfolio:

- start of work commitments:
  - one scheme was cancelled due to poor value for money (A5 Dodwells to Longshoot);
  - three schemes were delayed within RP2 due to external factors, such as planning delays (M2 Junction 5 Improvement, A303 Sparkford – Ilchester, A303 Amesbury to Berwick Down (Stonehenge));
  - one scheme was advanced by Project Speed to start work earlier in RP2 (A66 Northern Trans-Pennine); and
  - one scheme was advanced from the RIS3 pipeline to become a committed scheme in the RIS2 portfolio to address significant safety concerns (A21 safety package).
- open for traffic commitments:
  - four schemes were delayed within RP2, these were schemes already in construction that must now include the accelerated roll out of the stopped vehicle detection (SVD) technology (M56 J6-8, M4 J 3-12, M6 J13 –15, M27 J4 –11); and
  - one scheme was advanced from the RIS3 pipeline to become a committed scheme in the RIS2 portfolio to address significant safety concerns (A21 safety package).

4.10 The changes to the RIS2 portfolio described above and other individual project movements within the portfolio have not resulted in an overall change to the number of enhancement schemes starting work in RP2 (43). However, the changes have increased the number of schemes scheduled to open for traffic by one, to 53. Changes are summarised in figures 4.3 and 4.4. More detail is given in Annex C figures C7 and C8.

Figure 4.3: Start of work portfolio movements approved through DfT's formal change control

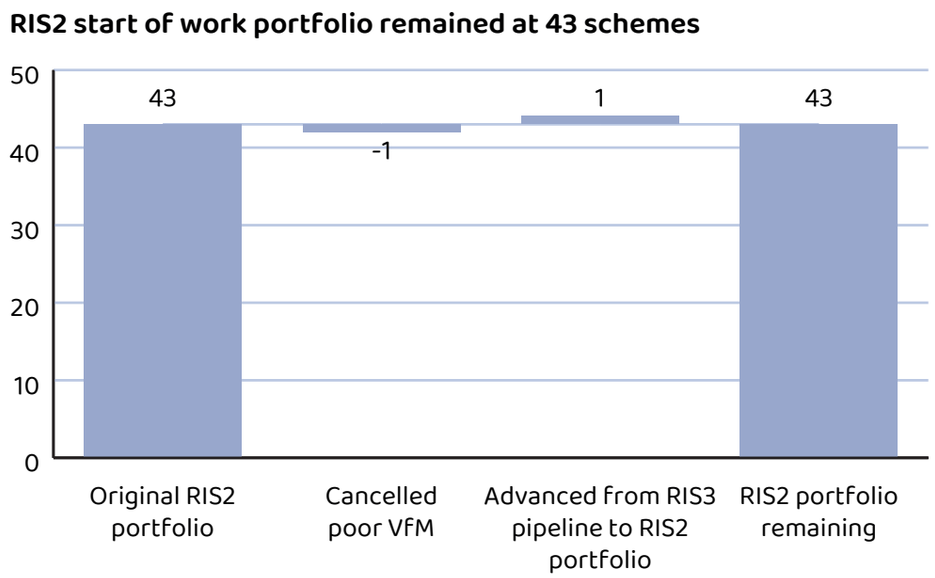
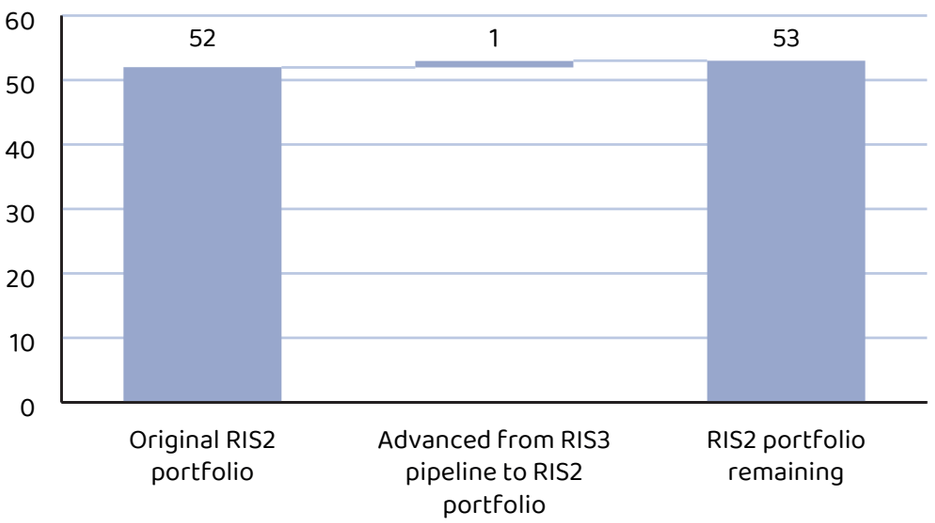


Figure 4.4: Open for traffic portfolio movements approved through DfT's formal change control

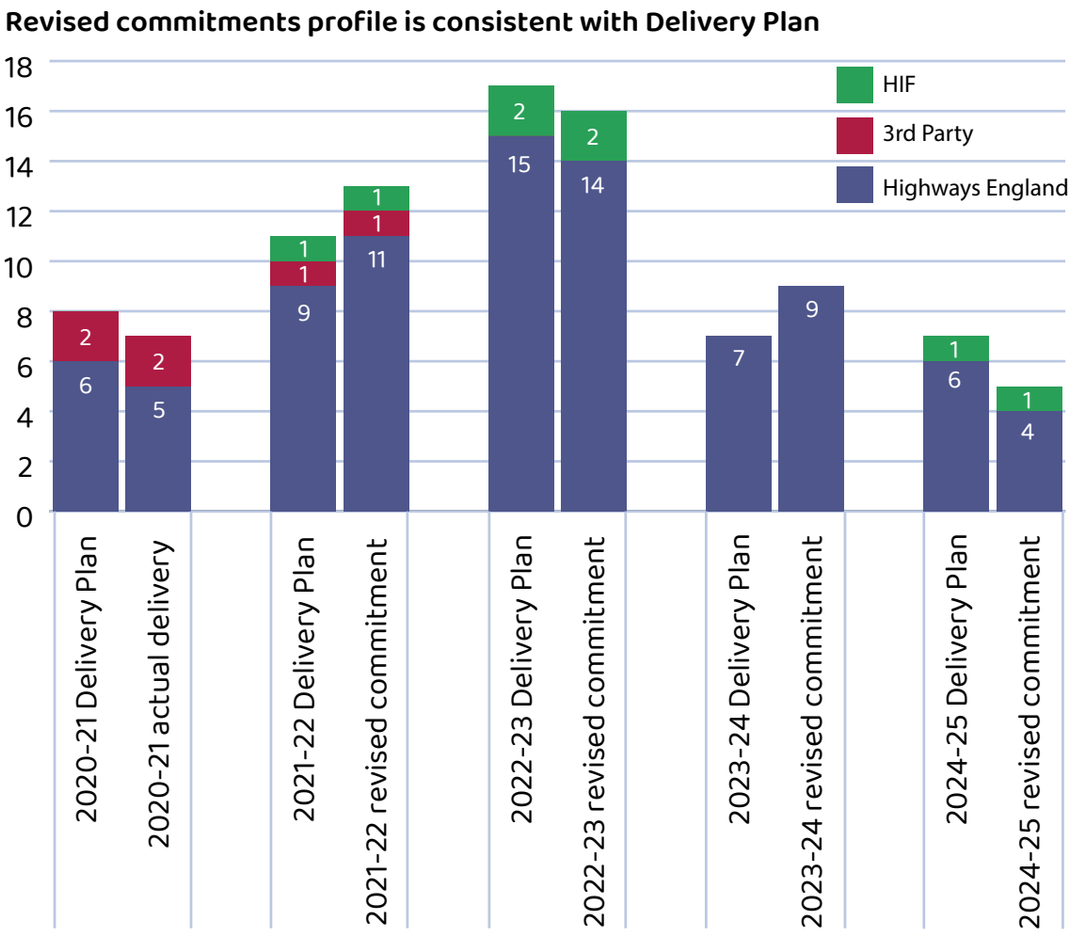


4.11 One additional scheme added to RIS2, funded by Ministry of Housing, Communities and Local Government (MHCLG), will be delivered by Highways England as a third party funded improvement; A5 Dordon to Atherstone, although the start of work will commence during RP3.

4.12 These changes were agreed through DfT's formal change control process,[11] except for the four schemes affected by the accelerated roll out of SVD technology. These are awaiting agreement from the Secretary of State for Transport.

4.13 During the first year of RIS2, some schemes' start of works and open for traffic commitment dates moved into later years of the road period. Figures 4.5 and 4.6 show the movement and distribution of schemes during RP2 according to organisational responsibility. More detail on the changes to the RIS2 portfolio are given in Annex C, figures C7 and C8. The map (Annex C, figure C11) shows the status of RIS2 schemes at the end of 2020/21.

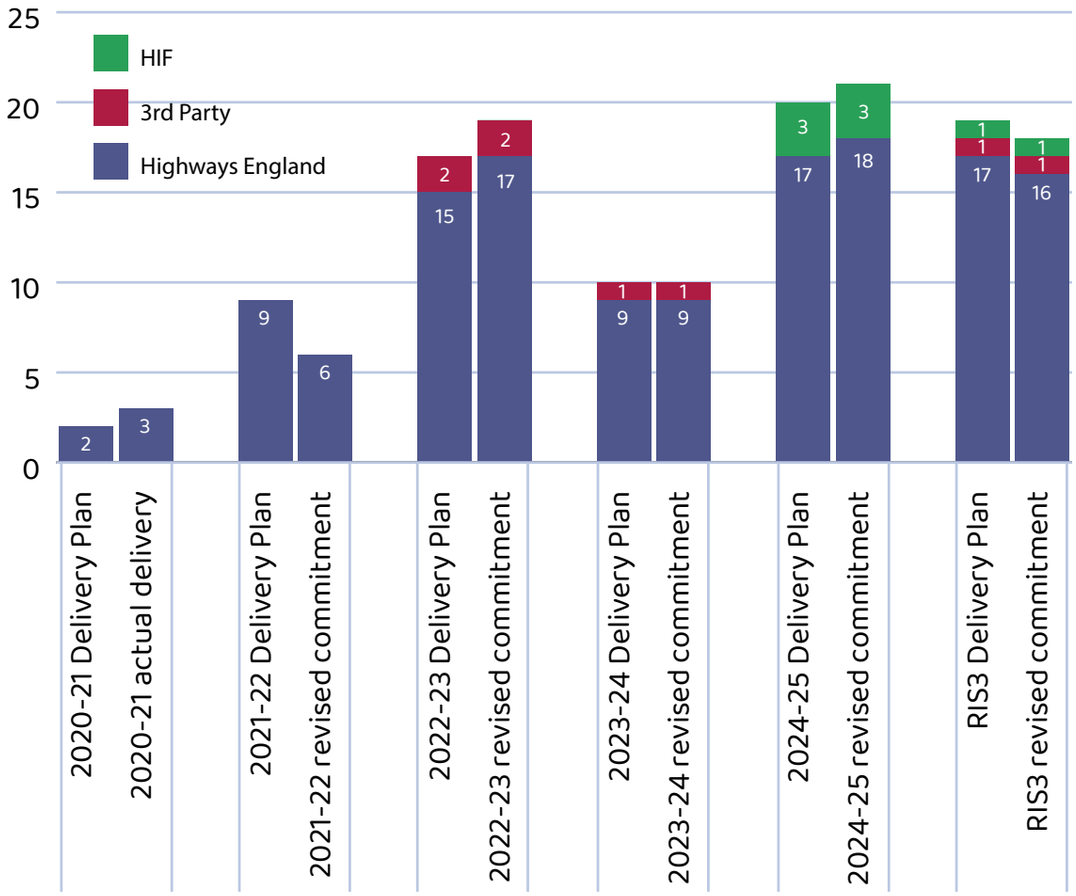
Figure 4.5: RIS2 enhancement schemes starting work comparing Delivery Plan commitments with agreed changes



[11] Change control is a formal agreement between Highways England and the Secretary of State to change Delivery Plan commitments.

Figure 4.6: RIS2 enhancement schemes opening for traffic, comparing Delivery Plan commitments with agreed changes

Projects forecast to open for traffic, schemes are moving further into RIS2



4.14 The commitment changes have altered the original delivery profile, with two more schemes now committed to open for traffic later in RP2 and one has moved from RIS3 pipeline to open in RP2. As currently programmed, commitments are scheduled to be delivered. However, we are concerned that as RP2 progresses, if this pattern of start of work and open for traffic delays continues this would put additional strain on resources and negatively impact road users and stakeholders. Ultimately, it could impact the achievement of all the RIS2 KPIs.

4.15 Highways England has forecast to deliver some commitments earlier. ORR supports the company's broad approach to improving its scheduling. We will continue to review the company's start of work and open for traffic forecasts.

RIS2 enhancement delivery 2020-21

4.16 At the start of RP2, Highways England originally committed to start work on six enhancement schemes in 2020-21, with two further schemes to be started by third parties.

4.17 During the year, the company agreed a revised commitment with DfT to start work on four schemes, instead of the six originally committed. In addition, it started work early on one scheme that was committed in 2021-22.

4.18 The company successfully met its revised 2020-21 start of work commitments, as follows:

- four schemes met their commitment to start work in 2020-21 (A19 Down Hill Lane – six months early, M6 Junctions 21A-26, A47 Guyhirn Junction and M25 Junction 25);
- two schemes were subject to a statutory planning delay. The start of work was deferred to 2021-22, due to extended time required for a planning decision. This was agreed through the DfT's formal change control process (M2 Junction 5 and A303 Sparkford to Ilchester); and
- one scheme started work ahead of its planned 2021-22 commitment (A31 Ringwood).

4.19 Highways England opened three enhancement schemes for traffic in 2020-21, one more than was committed:

- two schemes opened for traffic ahead of schedule within the committed year (A500 Etruria, A14 Cambridge to Huntingdon); and
- one scheme opened for traffic ahead of its planned 2021-22 commitment (A61 Westwood roundabout).

4.20 Figures 4.7 and 4.8 summarise 2020-21 delivery. Full detail is included in Annex C figures C9 and C10. These schemes added 135 lane miles to the network.

Figure 4.7: Start of work delivery during 2020-21

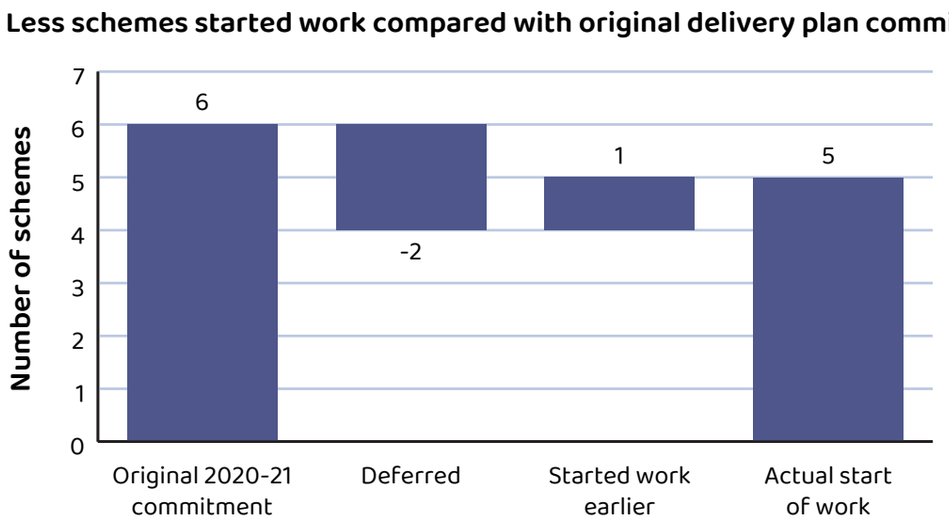
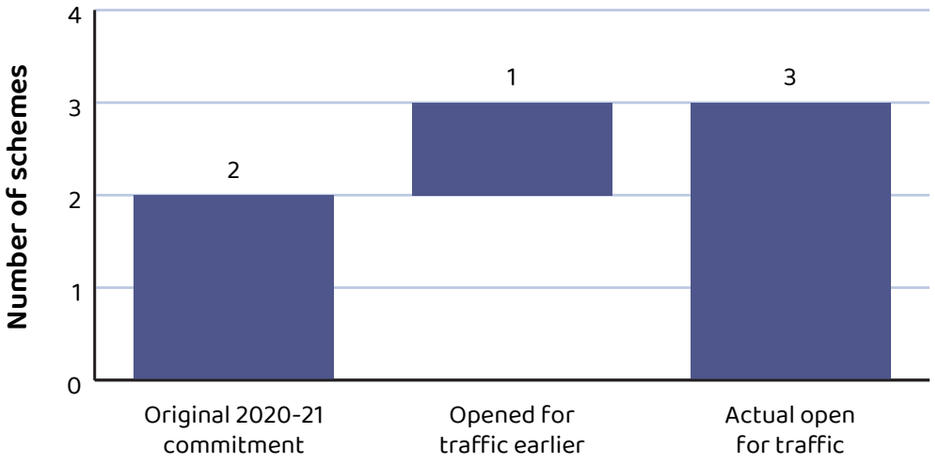


Figure 4.8: Open for traffic delivery during 2020-21

More schemes opened for traffic compared with original delivery plan commitment



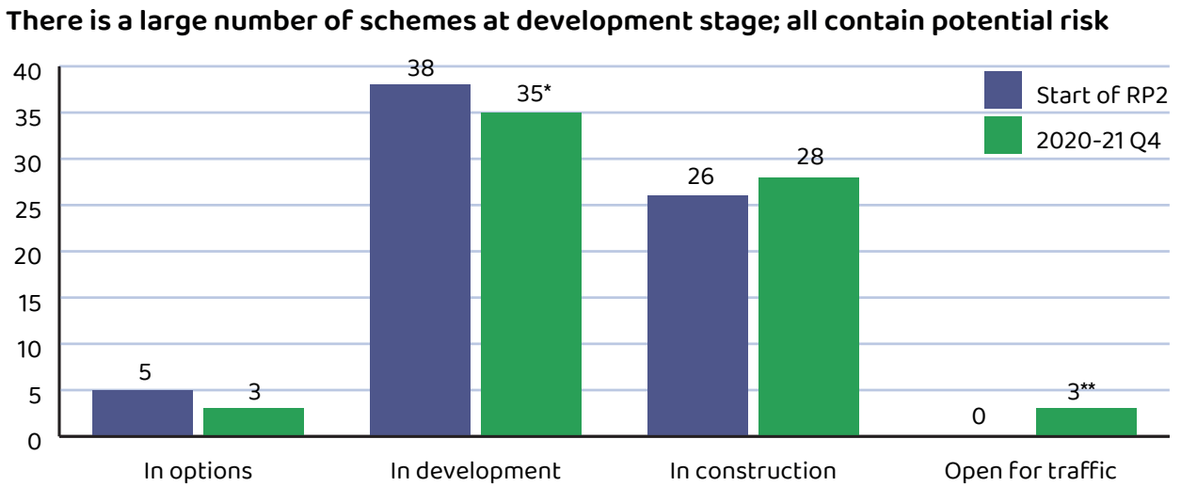
Development of the RIS2 portfolio

4.21 During 2020-21, Highways England made progress in developing schemes prior to construction. The company progressed two schemes from options into development, reverted one scheme from development to options, progressed five schemes from development into construction and one scheme moved from the RIS3 pipeline to development. At end of March 2021, 28 schemes were in construction.

4.22 This movement of schemes through the different project lifecycle stages indicates that Highways England has continued to develop and deliver a steady pipeline of schemes and has not purely focussed on construction activities. A breakdown of enhancement schemes' progress during 2020-21 is shown in figure 4.9.

4.23 At the end of the first year of RP2, 35 schemes were in the development stage, and three within options. In our experience the early stages of project development are crucial to mitigating, as much as possible, risks which may only become apparent during the construction stage. Due to the complexity of schemes in RP2 it is therefore imperative that Highways England maintains a focus on pre-construction activities to enable successful, efficient, project delivery.

Figure 4.9: The progress of enhancement schemes during 2020-21, comparing the start of RP2 with the end of year one of RP2



* A21 Safety package advanced from RIS3 pipeline so included in development stage
* A5 Dodwells cancelled from RIS2 and therefore excluded from development stage
** M271/ A35 was a RIS1 scheme and is excluded from open for traffic stage

4.24 Highways England will use RIS2 funding to develop 32 RIS3 pipeline schemes during RP2. Highways England has committed to advance RIS3 pipeline schemes during RP2 by at least one full stage of its project control framework (PCF) process. By the end of 2020-21 the company was on track to achieve this. It had started pre-options work on 25 schemes of which 17 schemes in stages PCF1 (option identification) and PCF2 (option selection), seven schemes in stage PCF0 (strategy, shaping and prioritisation) and one scheme advanced to be delivered in RP2. We will continue to monitor progress of schemes within the RIS3 pipeline.

Delivery for the remainder of RP2

4.25 We have carried out analysis looking at Highways England's ability to deliver across the remainder of RP2.

4.26 The company identified two schemes at risk of not starting work on time and one scheme at risk of not opening for traffic on time. Figure 4.10 illustrates enhancement deliverables and schemes at risk for the remainder of the road period.

Figure 4.10: Summary of enhancement deliverables for the remainder of RP2

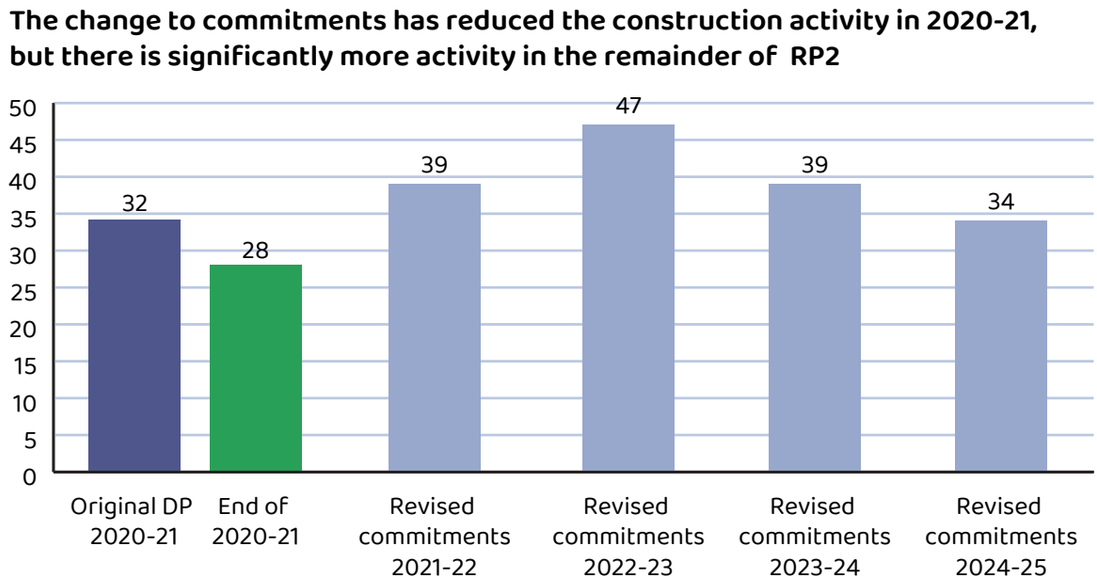
Phase	2020-25 Delivery Plan	Progress during 2020-21			Planned for the remainder of RP2			
		Schedule impact	No.	Detail	No.	Schedule impact	No.	Detail
Start of work	43	Started as planned	–4	A19 Down Hill Lane M6 Junctions 21A-26 A47 Guyhirn Junction M25 Junction 25	38	On schedule	36	
		Started ahead of planned	–1	A31 Ringwood		At risk of delay	2	A38 Derby Junction – HE was notified of a judicial review. The claim is a live litigation case. Lower Thames Crossing – The DCO application was withdrawn in Nov 2020 and is pending resubmission by HE.
		Stopped	–1	A5 Dodwells to Longshoot				
		Advanced from RIS3 pipeline	–1	A21 Safety Improvements				
Open for traffic	52	Opened as planned	–2	A500 Etruria A14 Cambridge to Huntingdon	50	On schedule	49	
		Opened ahead of schedule	–1	A61 Westwood Roundabout		At risk of delay to OFT	1	A417 Air Balloon – risk to OFT movement from RP2 to RP3 due to design changes.
		Advanced from RIS3 pipeline	1	A21 Safety Improvements				

4.27 The enhancement schemes Highways England has programmed to construct during RP2 are not evenly distributed throughout the road period. There is a forecast activity peak in 2022-23. Figure 4.11 illustrates the number of schemes in construction in any one year during RP2. We have carried out an assessment of the number of schemes that could cause disruption to road users. Across the remaining years of RP2 a significant number of enhancement schemes will be on the footprint of existing roads. This could cause disruption to road users as it is likely to involve traffic management measures.

4.28 Highways England must ensure that its enhancement programme is deliverable. It must mitigate significant risks including but not limited to company's own resource pressure and challenges of achieving DCOs together with any disruption to road users, non-road users and communities. ORR will closely monitor Highways England to ensure that it is doing everything it reasonably can to deliver these commitments.

4.29 Highways England has recognised the close interaction between the construction of High Speed 2 (HS2) and the SRN. To better manage impacts on the SRN from HS2 construction activities, the company is developing traffic models to understand and mitigate identified risks. Highways England and HS2 are developing plans including road maintenance responsibilities during HS2 construction and the ownership of structures on HS2 project completion.

Figure 4.11: Total number of schemes in construction comparing the 2020-25 Delivery Plan with Highways England end of year commitments



4.30 Development Consent Orders (DCOs) have been and remain the highest risk to the development and delivery of RIS2 portfolio. Over 2020-21 we were concerned about: Highways England's ability to plan, submit and gain approvals for its DCO applications; its lack of transparency on scheduling DCO dates; and the quality of DCO applications. We challenged the company to provide accurate dates for applications and approvals so that we can review the risk to key delivery milestone commitments and the effect on the company's wider performance, as measured by other KPIs. The company provided us with its expected DCO submission dates and has also devised a plan to improve its delivery of DCOs. This will inform our monitoring of RIS2 commitments. We note that the DCO process involves a wide spectrum of stakeholders and some elements of the DCO process are outside the company's influence and control.

4.31 During RP1, we challenged Highways England over its compliance with its processes to report scheme benefits by publishing post-opening project evaluation (POPE) reports. Subsequently, the company brought POPE report delivery in-house and increased its staff capacity and capability. The company also produced a revised programme with forecast dates for completing data collection and analysis for RIS1 POPE reports. The company is currently on target to meet its revised dates.

Capability and capacity to plan and deliver RIS2

4.32 During RP1, we raised concerns with Highways England regarding its capability and capacity to plan and deliver its capital programme. We, together with the company, addressed this by jointly commissioning an independent review, published alongside this report.

4.33 The review concluded that the company had put in place a programme of initiatives that reflected its evident corporate desire to drive improved performance.

4.34 The review highlighted three potential threats to the delivery of the RIS2 portfolio:

- **Competence of the integrated project team:** the number of core company staff, for below Tier 1 projects, is insufficient to manage complex project delivery and absorb the necessary new capabilities required to deliver the portfolio. Highways England utilise supply chain resources but lack effective contract controls to ensure that supply chain resource capability is optimised;

- **Timely and effective decision making:** the company takes too long to make clear decisions on changes to projects; and

- **Knowledge management:** the identification of lessons to be learnt is strong, however the formal process of sharing those lessons is ineffective from the perspectives of timeliness (lessons are only 'reported' near the end of the project) and usability (they are hard to locate).

4.35 The review made seven recommendations. We have agreed a timeline for the company to provide us with a plan detailing how it will address the recommendations and will report progress against this plan in our annual assessment for next year.

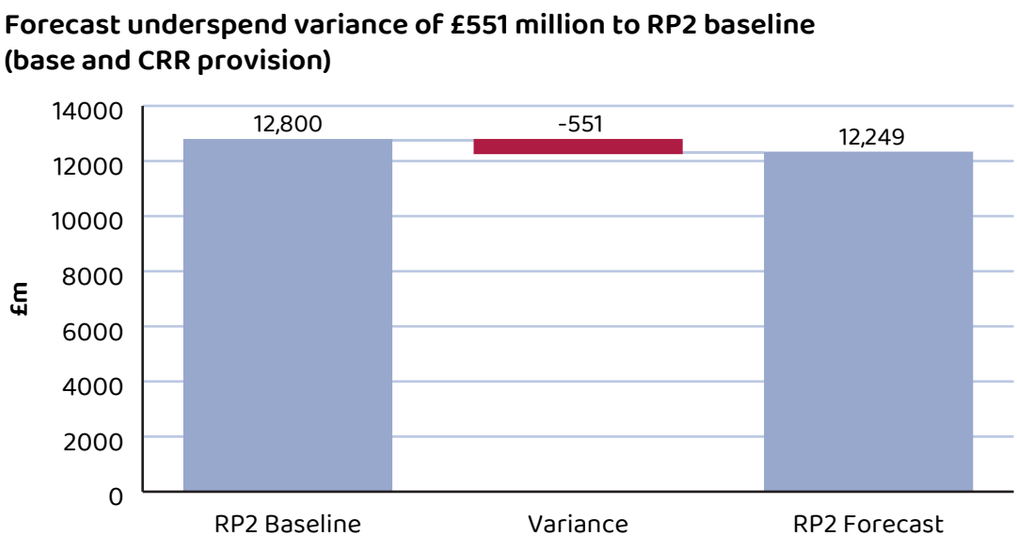
RIS2 enhancements financial performance

4.36 Highways England has allocated £12,800 million of its £14,322 million enhancements funding to deliver the schemes under construction or committed to start construction in RP2 as set out in its Delivery Plan (i.e. to start work on or open for traffic 69 enhancement schemes). The remainder covers legacy costs of schemes opened in RP1, further rollout of Stopped Vehicle Detection technology on all lane running motorways and any unallocated funding to mitigate risk, held in the company's Central Risk Reserve (CRR).

4.37 The funding provided in RIS2 for Highways England includes a risk reserve that currently stands at £1,716 million. This is to meet portfolio level risks, primarily on enhancement schemes. To date, the company has provisionally allocated £935 million (54%) of which £905 million relates to enhancements. This is a new feature of the settlement for RP2, and we need to undertake some work to better understand how it is functioning and whether its use can be improved. We will review this and report next year. The CRR is discussed further in Annex B.

4.38 Highways England is forecasting to spend £12,890 million on enhancements overall in RP2 including £12,249 million on the 69 enhancement schemes with Delivery Plan commitments (figure 4.12). For these schemes this results in a forecast underspend of £551 million (4.3%) to base funding and CRR provision.

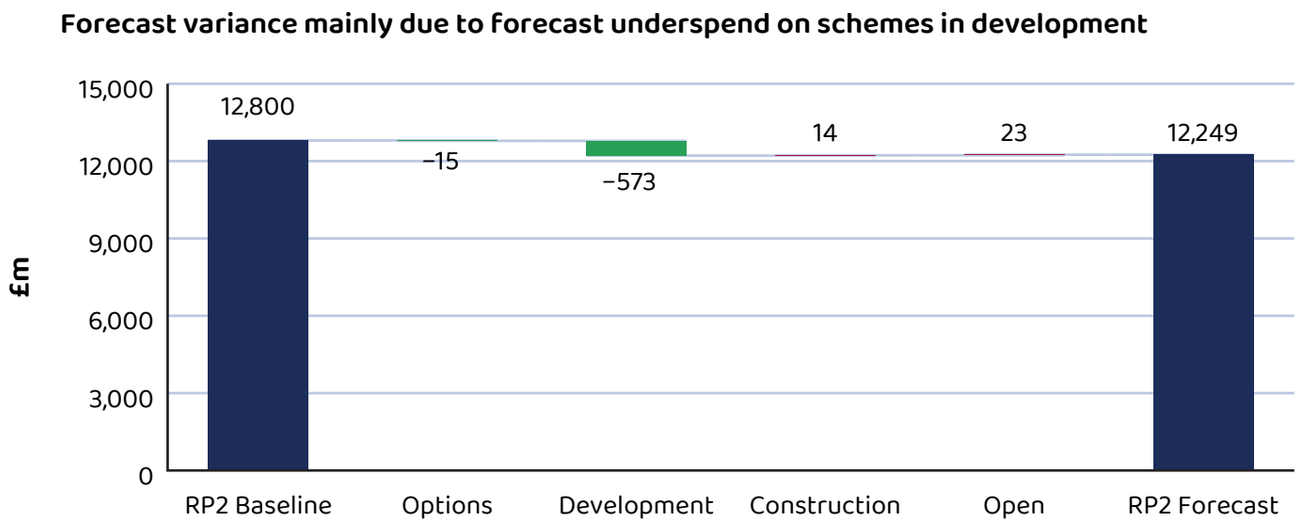
Figure 4.12: RP2 forecast variance to RP2 enhancement scheme baseline including CRR provision



4.39 The underspend is driven by a small number of variances on large schemes. However, it increased through 2020-21 as more schemes were deferred.

4.40 Figure 4.13 breaks down the variance to baseline by scheme phase. Of the 34 schemes in the development phase at the end of 2020-21, 15 were forecasting an underspend. The two largest underspends for schemes in the development phase are the Tier 1 schemes: A303 Amesbury to Berwick Down (£269 million) and A358 Taunton to Southfields (£199 million). These relate to the cost of work deferred from RP2 to RP3, caused by planning changes and increases in the governance process of the A358 as a result of it being classed as a Tier 1 scheme. In addition, on Lower Thames Crossing there is 12-month delay in the development phase because Highways England is resubmitting its planning application. This is not currently reflected in the forecast as the company has not yet completed its assessment of the financial impact of this delay. Therefore, the underspend is likely to increase once this is included in the forecast.

Figure 4.13: RP2 forecast variance on enhancement schemes to RP2 baseline (including CRR provision) by scheme phase

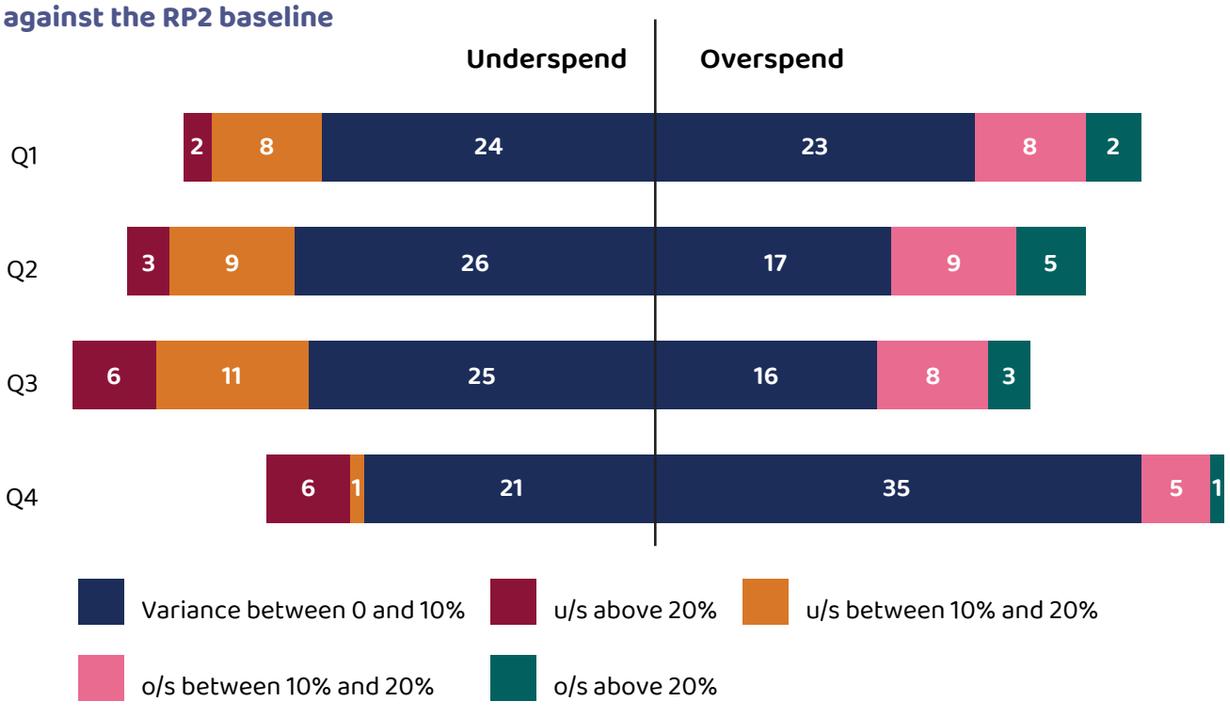


4.41 The forecast underspend on schemes currently in development is offset slightly by one development scheme forecasting an overspend, the A66 Northern Trans-Pennine (£31 million). This is taking account of the additional funding of £146 million in the RIS2 period for the scheme's acceleration as part of Project Speed, moving the start of works date forward to 2023-24, from 2024-25.

4.42 Schemes in the options phase have a net underspend of £15 million, and the schemes in the construction and open phases have net overspends of £14 million and £23 million, respectively. These are all relatively small variances to baseline.

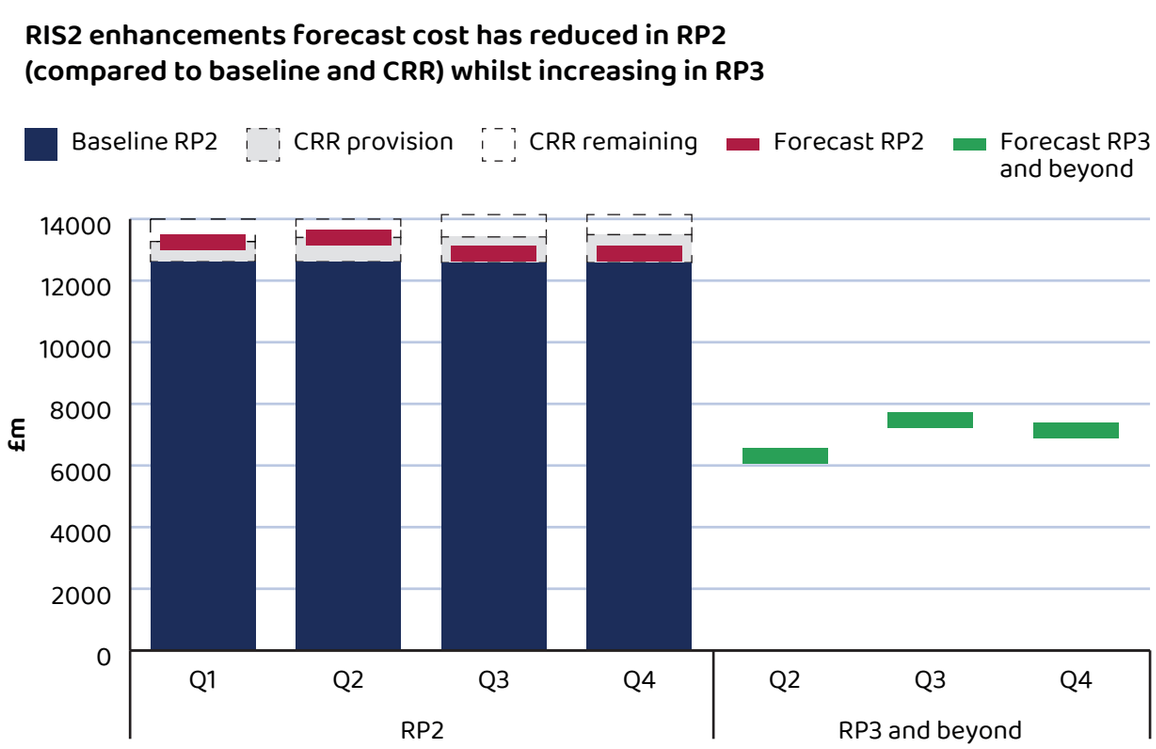
4.43 The number of enhancement schemes for which Highways England is forecasting underspends or overspends changed notably during the year. Figure 4.14 shows that in the first three quarters of 2020-21, an increasing number of schemes reported forecast underspends. This was due to some schemes being delayed and others delivering cost savings due to new Regional Delivery Partnership (RDP) contracts for Regional Investment Programme (RIP) schemes. At Q4, Highways England moved the underspend on many RIP schemes to the CRR leaving most schemes with forecast variances between 10% underspent or overspent.

Figure 4.14: Number of schemes forecasting underspend or overspend variances against the RP2 baseline



4.44 Delays to some schemes in RP2 have caused a cost deferral forecast from RP2 to RP3. Figure 4.15 shows how, as the RP2 forecast has decreased between Q2 and Q4, the expected cost of enhancements in RP3 has increased. The increase in the 'RP3 and beyond' forecast cost since during 2020-21 is also driven by increased outturn forecasts for Lower Thames Crossing (£363 million, 6%) and the A66 Northern Trans-Pennine (£280 million, 28%).

Figure 4.15: Enhancements forecast and baseline (including RP2 CRR provisioned)



Enhancements financial performance: 2020-21

4.45 In 2020-21 Highways England spent £2,020 million on enhancements, £395 million (16%) less than its budget.

4.46 As explained in paragraph 4.4, in the Treasury 2020 Spending Review, Treasury agreed to Highways England's proposal to reprofile its RP2 capital funding. This removed £360 million from the 2020-21 capital allocation, £300 million of which was for enhancements. The remaining £95 million of in-year underspend on enhancements forms part of an overall £173 million 2020-21 capital underspend variance that occurred after the reprofiling. As such it was too late in the financial year (2020-21) for the company to use the Treasury agreed 'capital flexibility' facility to carry the unspent funding forward.

4.47 We recognise the unique circumstances of the COVID-19 pandemic in 2020-21 but consider that Highways England should have done more to anticipate further slippage within its enhancement portfolio and other activities meaning that 'capital flexibility' could have been used. The company is in the early stages of discussions with government on options for the use of the 2020-21 underspend and RP2 forecast underspend reported this year. The Spending Review expected later in 2021 provides an opportunity to further align funding with planned delivery.

Renewals Planning and Delivery

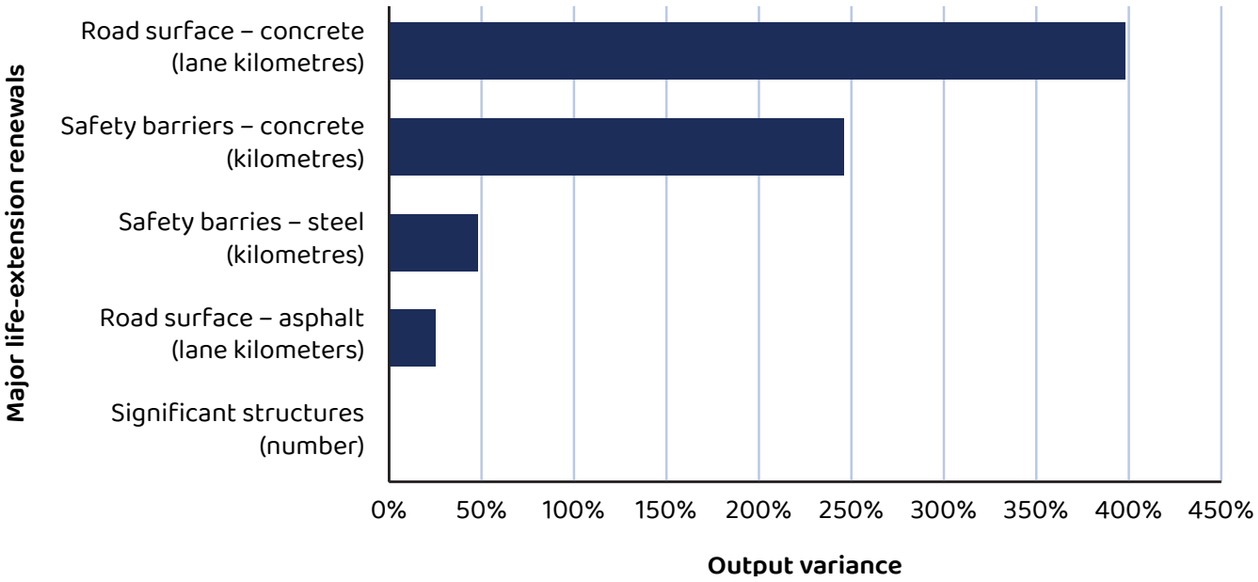
4.48 Highways England delivered the majority of its capital renewals commitments in 2020-21, significantly over-delivering its planned volumes for some asset types. This included commitments on concrete pavement and concrete safety barriers that form part of the company's major life-extension asset renewal programme.

4.49 Highways England's Delivery Plan for 2020-21 set out the volumes of renewals work it planned to deliver during the year. Renewals work is reported under two categories in RP2: routine cyclical renewals, which are similar to reporting in RP1; and a new category of work termed major life-extension renewals. This is to reflect the specific additional requirement of RIS2 to address the condition of assets with significant need. Major life-extension renewals include:

- road surfacing – asphalt and concrete;
- safety barriers – steel and concrete; and
- significant structures (such as the refurbishment of bridges with greatest need).

4.50 A summary selection of the renewals volumes the company delivered against planned commitments in 2020-21 is shown in figure 4.16.

Figure 4.16: Volumes of major life-extension renewals delivered compared to plan over 2020-21



4.51 The company met its renewals commitments against all its major life-extension renewals assets. The company's renewal of four out of the five asset types exceeded planned volumes, including concrete road surfacing that was five times greater than planned. Highways England told us this over-delivery was due to bringing renewals schemes forward from later years of RP2, primarily in the East region, to avoid clashes with re-programmed major enhancement schemes. Whilst this reflects poor initial planning by the company of its RP2 investment plan delivery, its re-profiling of major renewals delivery is a positive step and improves the likelihood of it delivering the overall programme.

4.52 The type of work Highways England delivered is a key factor in understanding how renewal plans can be significantly over-delivered. For example, concrete road resurfacing renewals activity can range from general maintenance to complex removal and replacement. Current output reporting does not make that distinction clear; instead only showing lane kilometres of work delivered.

4.53 In 2020-21, all the concrete road surfacing works delivered were maintenance works, such as joint sealing and local concrete pothole repairs. As such, acceleration of less complex activity is more straightforward and potentially less disruptive to scheduling and supply chain resource. However, the road surface condition KPI does not measure this type of maintenance work and so despite significant over-delivery of planned outputs the impact made on the asset is unclear. This highlights the need for renewals reporting that goes beyond basic output units. It is a priority for us that the company develops new reporting that reflects this.

4.54 Highways England delivered the majority of its routine cyclical renewals, with only two of the 14 asset types returning fewer volumes than committed: boundary fencing and lighting. The company reported that this was due to design delays with boundary fencing schemes and diversion route issues with a large lighting scheme. Highways England does not report the performance or condition of these asset types so the impact of under-delivery on the assets or on road users is not clear. This again highlights the need for improved renewals reporting in the absence of asset performance reporting.

4.55 During the year, we challenged Highways England to improve its reporting of renewals activity. This was partly to demonstrate a clearer line of sight between its asset management policy and strategy and the renewals schemes it delivers. For example, to move beyond simply reporting renewals output volumes, to show that the right asset intervention is made at the right time. We also want to see reporting that provides confidence that renewals activity is adding value to the SRN or addressing a particular need where current asset performance metrics are limited or do not exist. This is so that, for example, the impact of delivering 254% and 48% more concrete and steel safety barrier respectively is clearer on asset performance or risk to road users.

Renewals financial performance

4.56 Highways England overspent their 2020-21 renewals budget of £734 million by £25 million (3.4%). This overspend was caused in part by Highways England bringing forward some renewals works as discussed above.

Case study – Renewals reporting

During 2020-21, we worked with the company to better understand its renewals planning processes to inform development of improved renewals reporting. The purpose of this reporting is to go beyond showing only renewals outputs to showing whether the right asset is delivered at the right time. This will provide a clearer picture on the link between Highways England's asset management governance versus what happens on the ground – to show that consistent policy is applied when renewals work is planned and delivered across all regions of the SRN.

The reporting is designed to show whether renewals schemes are delivered as planned, are deferred or moved from another year of the road period or were not planned (for example urgent asset need). Highways England has supported the trial by supplying detailed renewals scheme information, associated change control and output volumes for its East Midlands area.

The trial has allowed us to prove the concept of the reporting mechanism. We wanted to see the company extend its application to all its regions in the year ahead, to provide a picture of its entire renewals programme. However, the company has since told us that the resource burden of providing these reports nationally would be too great.

The company must now consider how it will satisfy our requirement to demonstrate that it is taking an efficient approach to asset management and treating the right assets at the right time.

Image courtesy of Highways England

Designated funds

4.57 The RIS2 investment plan includes designated funds with a total value of £936 million. The purpose of these funds is to address a range of issues beyond the traditional focus of road investment and are split across four separate funds: environment and wellbeing; users and communities; safety and congestion; and innovation and modernisation.

4.58 Highways England also separated its reporting of spend against air quality from the wider environment and wellbeing fund to ensure transparency of an additional £21.3 million carried over from RP1.

4.59 In 2020-21, the company spent £163 million across all funds, against a budget of £183 million for the year.

Figure 4.17: Designated fund spend in 2020-21

Fund (total value for RP2)	2020-21 budget	2020-21 spend (% of 2020-21 budget)	Outputs in 2020-21
Environment and Wellbeing (£410m)	£51m	£54.1m (106%)	Projects implemented in 2020-21 comprised: • biodiversity (3) • noise (5) • flooding (4) • water quality (3) • cultural heritage (1) • landscape (5) The original 2020-21 budget revised down from £72m to reflect that more feasibility work was required on the biodiversity KPI in year 1. The spend was above budget due to schemes planned for the air quality budget being transferred into environment and wellbeing fund.
Air quality (part of Environment and Wellbeing)	£14m	£4m (26%)	Three air quality projects were implemented in 2020-21. The original 2020-21 budget reduced from £21.3m to £14m following agreement from DfT. The reduced outturn is due to an instruction from DfT to invest £11m of the Air Quality budget to provide power capacity at motorway service areas for electric vehicle charge points.

Fund (total value for RP2)	2020-21 budget	2020-21 spend (% of 2020-21 budget)	Outputs in 2020-21
Users and communities (£167m)	£40m	£31.6m (79%)	The projects implemented in 2020-21 comprised: • integration (3) • walking, cycling and horse riding (9) The underspend against budget was due to several large schemes being unable to complete due to performance issues with third party delivery partners, legal agreements, and planning issues which were not resolved within the expected timescales. Highways England has developed grant guidance aimed at improving performance on third party schemes in RP2. The company is confident that the current underspend will be addressed over the remainder of the road period.
Safety and congestion (£145m)	£37.6m	£33.6m (89%)	20 safety and two congestion projects were implemented in 2020-21. The original 2020-21 budget was revised, up from £30m. The in-year underspend is a result of a historic (pre-RP1) scheme receiving a return of funds of £3.8m following negotiations with the contractor.
Innovation and modernisation (£213.5m)	£40m	£39.1m (98%)	One customer mobility project was implemented in 2020-21, with eight further projects in either feasibility or detailed design stages. There was some slippage to delivery in 2020-21 due to the effects of the COVID-19 pandemic. Some technology development work was delayed due to businesses closing during the third national lockdown. Lower traffic level meant that some road trials were also delayed.
Total (£935.5m)	£182.6m	£162.5m (88%)	

4.60 Highways England's Delivery Plans for designated funds show a more even spend profile throughout RP2 compared to RP1, when a heavily backloaded profile was identified as a risk to delivery. This is because the company had a more developed pipeline of schemes at the start of RP2 that enabled it to make better progress in the first year of the new road period.

4.61 At the end of March 2021, Highways England had approval in place for £70.5 million worth of schemes in 2021-22, against a budget of £197 million. The company is aiming to have the full annual programme allocated by the end of June 2021.

Delivering Better Environmental Outcomes

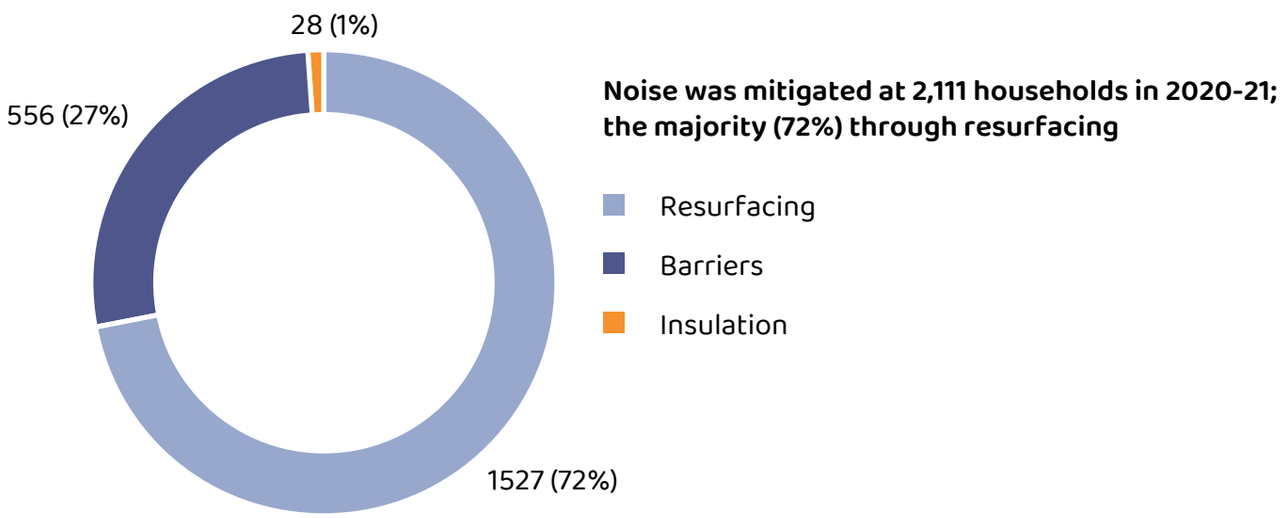
4.62 RIS2 requires Highways England to manage the strategic road network to achieve more environmentally beneficial outcomes. RIS2 sets four KPIs for the company, covering biodiversity, noise, carbon, and air quality to measure its performance in delivering these outcomes.

Noise

4.63 Highways England has a KPI to mitigate noise for 7,500 households over RP2. In 2020-21, the company mitigated noise for 2,111 households (28% of the RP2 target). This is ahead of its internal performance plans and puts the company on track to achieve its RP2 target.

4.64 A resurfacing scheme on the M602 made the largest contribution to the KPI by mitigating noise for 1,527 households. The remaining mitigations were delivered through noise barriers (556 households) and noise insulation (28 households).

Figure 4.18: Noise mitigation in 2020-21 by type



4.65 Only mitigations funded through the environment and wellbeing designated fund count towards the KPI. In addition to the 2,111 households reported above, Highways England has mitigated noise at a further 710 properties through its business-as-usual activities that do not count towards the KPI.

4.66 Other work undertaken by the company to help reduce the impact of noise from the strategic road network includes part-funding a research project on low-noise tyres. This project is being delivered in partnership with other European road authorities through the Conference of European Directors of Roads (CEDR). It is intended to develop a better understanding of perceptions of noise and reviewing the methods for testing the efficacy of noise barriers. The project is due to complete in 2022.

Biodiversity

4.67 Highways England has a target to achieve no net loss in biodiversity on its soft estate (natural habitats that line the network) by the end of RP2. The key task for the company in 2020-21 was to set the baseline against which this target will be measured. This work was completed and resulted in a baseline of 130,848 biodiversity units (calculated from the size, distinctiveness, condition, significance and connectivity of a parcel of land).

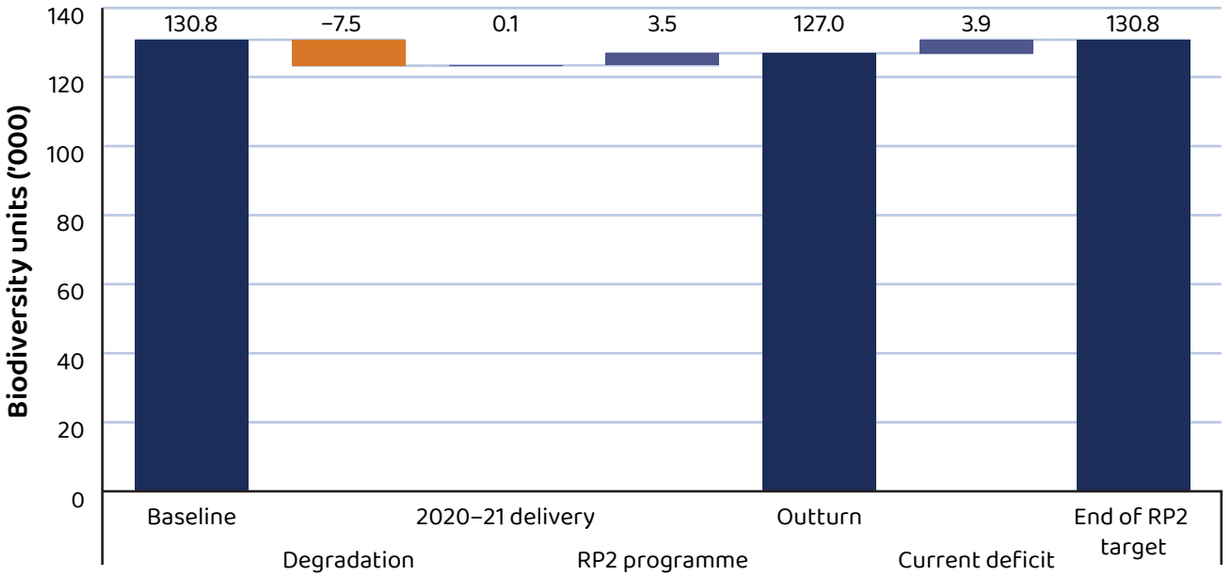
4.68 In 2020-21 Highways England delivered 115 biodiversity units across four projects:

- Burton Woodland (7.95 biodiversity units);
- M6 Grasslands, phase 3 (96.44 biodiversity units);
- A1 Scotswood to North Brunton – Shibdon Meadow (9.98 biodiversity units); and
- A1 Scotswood to North Brunton – Shibdon Pond (1.03 biodiversity units).

4.69 Highways England has developed a forward programme that will deliver 3,572 biodiversity units over RP2. However, the company's modelling currently shows a shortfall of 3,878 biodiversity units at the end of RP2 compared to the baseline. It is working to develop a programme for the remainder of the period that will close this gap. We are continuing to scrutinise the company's plans as they are developed in 2021-22.

Figure 4.19: Baseline and progress towards biodiversity target

Highways England set a baseline for biodiversity in 2020–21.
It is now developing a forward programme to deliver the RP2 target.



Air Quality

4.70 RIS2 includes a KPI to address air quality on the strategic road network. Highways England has a target to bring pollution climate mapping (PCM) links that are above legal levels for nitrogen dioxide (NO2) into compliance as soon as possible.[12] At the start of RP2, DfT asked Highways England to review 127 PCM links to assess compliance with legal limits for nitrogen dioxide. The company identified 31 links that were non-compliant and required intervention.

4.71 By the end of 2020-21, Highways England had mitigated five of the 31 links by introducing lower speed limits and was working on mitigation measures at a further 12 sites. This included three speed limit reductions that were paused due to reduced traffic levels associated with the COVID-19 pandemic. These speed limits were subsequently implemented in early 2021-22 as traffic levels increased towards normal levels.

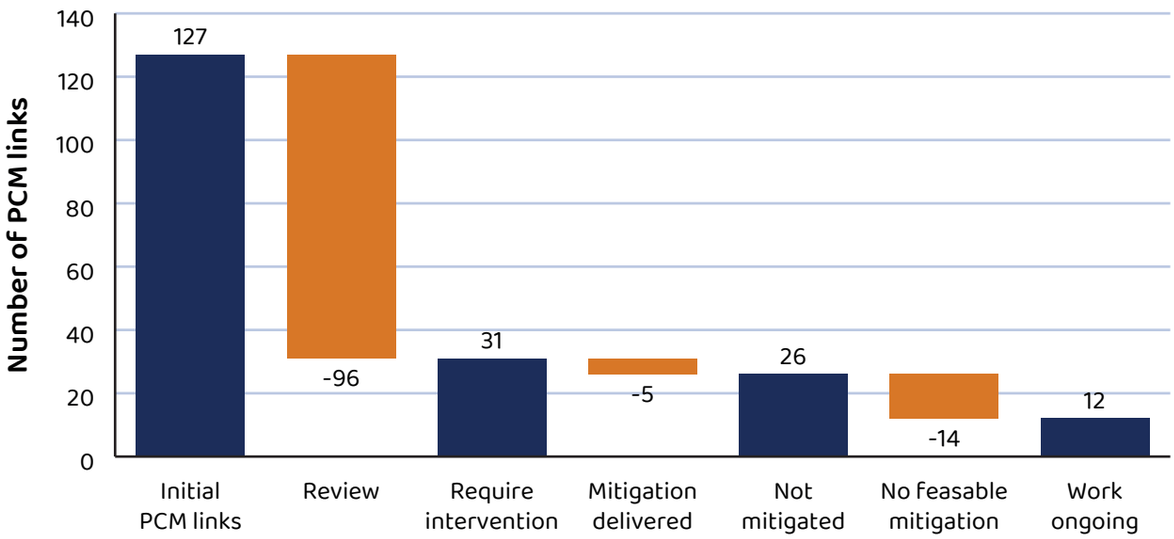
4.72 At the end of 2020-21, 14 locations were identified as having no feasible mitigation measures. Highways England wrote to DfT to set out this position. The company and the government are continuing to investigate possible measures to help achieve compliance in the shortest timescales possible.

4.73 Highways England will publish the Air Quality Update Report, along with four technical reports and associated annexes and data that underpin the report, later in 2021. The report will set out further details on PCM links on the SRN that are above legal limits for nitrogen dioxide and include an update on the status of those links where the company has identified that there are no viable actions it can take to address air quality in the shortest time possible.

[12] Links are sections of the SRN as defined in Defra's pollution climate mapping model.

Figure 4.20: PCM links mitigated during 2020-21

At the end of 2020-21 Highways England had delivered measures to improve air quality on five PCM links



4.74 Highways England delivered further actions to support improved air quality in 2020-21. The company:

- used designated funds to invest in six electric van centres of excellence aimed at accelerating the update of low emission vehicles amongst local businesses; and
- developed a timetable to incorporate air quality standards for supply chain vehicles into all new and existing contracts to begin implementation during 2021-22.

Carbon

4.75 Highways England has a KPI target to reduce its corporate carbon emissions (defined as those emitted through electricity, fuel use and other day-to-day activities) in RP2. In 2020-21, DfT asked the company to set a baseline and target for reducing carbon throughout the remainder of the road period. Highways England set a baseline of 88,147 tonnes of carbon dioxide (CO2), based on its emissions in 2017-18. The company agreed a target with DfT to reduce these emissions by 75% by the end of RP2. We will monitor Highways England's performance against this target.

4.76 In 2020-21, Highways England delivered actions to reduce its corporate carbon emissions. The company:

- increased the amount of LED lighting on the strategic road network to reduce electricity consumption compared to traditional lighting;
- purchased 117 Ultra Low Emission Vehicles (ULEVs) that increased the proportion of its fleet that is ULEV to 25.7%, which is ahead of DfT's target for 25% of its car fleet to be ULEV by 2022; and
- conducted energy audits of its office locations to target improved energy usage.

Case study – Supply chain carbon

Highways England must support the wider government goal for net-zero carbon across all activities by 2050. Later in 2021, the company will publish its carbon strategy that will set out details for how it will help deliver reduced carbon emissions in three main areas: corporate activities, supply chain and road users.

Highways England's supply chain emitted an estimated 365,353 tonnes of carbon dioxide equivalents in 2020-21. This highlights the scale of the challenge the company faces.

In 2020-21, Highways England delivered an innovative resurfacing scheme on the A590 in Cumbria that was the first carbon neutral minor works scheme in the UK. The lessons learned from this scheme will help the company understand how it can rise to this challenge.

The company undertook several actions to help reduce carbon emissions last year. In particular, it:

- recycled materials from the existing road surface into the new surface. This reduced the volume of material needed for the work and the number of the truck movements required to deliver these materials;
- used solar power for site lighting, signage, CCTV and catering facilities; and
- used electric vehicles on site.

As a result, its carbon emissions were 40% less than for a conventional scheme, with the remaining emissions offset through other schemes. Learning lessons from schemes such as this, and incorporating new ways of working it into business as usual, will become increasing important for Highways England as it moves towards achieving net-zero across the remainder of this road period and beyond.

Image courtesy of Highways England

4.77 Highways England also has a new set of environmental performance indicators (PIs) for RP2, covering supply chain carbon, water quality, litter and cultural heritage. The company's performance against each of these measures is set out in Annex A of this report.

4.78 Although PIs do not have targets, they provide additional context to Highways England's delivery of the RIS and cover areas of specific focus for ORR's monitoring. In particular, the data reported at the end of 2020-21 has highlighted the company's performance in keeping the network clear of litter. Highways England reported that, in the first year of RP2, 49.2% of the SRN was graded A or B for litter, as defined in Defra's code of practice on litter and refuse.[13] This is the first time that performance has been reported against this metric. In 2021-22 we will work with Highways England to understand more about the company's plans to improve performance against this metric.

Efficiency

4.79 Highways England reported £243 million of efficiency savings against the RIS2 efficiency KPI target of £2,230 million (revised from the original KPI of £2,304 million following the Smart Motorway Safety – Evidence Stocktake and Action Plan changes to the RIS). This was £10 million more than the milestone Highways England set itself for 2020-21.

4.80 Our review of the evidence Highways England presented to support its reported efficiency found that the company made a promising start given the challenging circumstances of 2020-21. There is further work required to improve the quality and depth of evidence presented by the company to ensure it fully supports the reported efficiency. This includes considering the impact of inflation, use of the CRR and formal change to the RIS (this may in turn require a change to the KPI). Efficiency is discussed in greater detail in Annex A.

[13] Defra, Code of Practice on Litter and Refuse, updated September 2019. Grade A means no litter or refuse, and grade B means predominately free of litter and refuse apart from some small items.

5. Looking ahead

Performance monitoring priorities in 2021-22

5.1 Over the next year we will maintain focus on the issues discussed elsewhere in this report, as set out below. In addition, we will examine how Highways England delivers a smoothly functioning network when the post-EU exit full border controls on goods entering the UK are implemented from 1 January 2022.[14] We will report back on in these matters in the 2021-22 Annual Assessment.

5.2 We will continue to monitor Highways England's progress in delivering the Smart Motorway Action Plan in 2021-22. We will also publish an update on the company's safety performance later in 2021, once road casualty statistics for 2020 become available. This will allow us to report the final outcome against its RP1 target to reduce KSIs by 40% by the end of 2020.

5.3 It is a priority for us that Highways England develops improvements to renewals reporting. The purpose of the reporting is to show the extent to which Highways England delivers the right renewals intervention at the right time, a key principle of its asset management policy. Having tested how the reporting will work using data from one geographical area in 2020-21, we have challenged the company to demonstrate efficacy at a national level.

5.4 As set out elsewhere, we have become increasingly concerned about Highways England's ability to plan and deliver its capital programme. With Highways England we commissioned an independent review into whether the company has in place the requisite organisational capability and capacity to plan and deliver its RIS2 capital enhancement portfolio. The review, by Nichols, is published alongside this report. We have agreed a timeline by when the company must provide us with a plan to address the recommendations and we will monitor its progress in implementing them. It is also important that the company considers the knock-on impact of changes during RP2 on funding required during RP3, especially as RIS3 planning will ramp up over the next 12 months. We will report back in our 2021-22 Annual Assessment.

5.5 On efficiency we will work with Highways England to support improvements in its reporting of efficiency evidence. In particular we want the company to focus on improving the quality of secondary evidence for efficiency, the impact of inflation, change within the RIS and use of the central risk reserve (CRR). We will commission a review into Highways England's use of the CRR during 2020-21, in part to identify any reporting improvements required to support its efficiency case.

5.6 In addition, where there are changes in RIS2 commitments or funding we will ask Highways England to more fully consider the implications for the efficiency KPI target and we will advise DfT on the need for changes when required.

[14] Institute of Export and International Trade, "Government delays new controls on GB border with EU 'in response to business concerns and Covid-19'", 11 March 2021

5.7 On the environment, our monitoring will focus closely on the company's performance in delivering its new carbon and biodiversity targets. We will also review its carbon strategy when it is published later in 2021.

5.8 We will work with the DfT, Highways England and Transport Focus to monitor the emerging user satisfaction data from the new online version of SRUS. Transport Focus re-started the online collection of SRUS data in April 2021. The move to an online methodology, and the subsequent impact on sampling and responses, may make future comparisons with data collected in 2018-19 and 2019-20, by the face-to-face method, challenging. In addition, the changes in travel patterns, journey purposes and how the SRN is used, following the COVID-19 pandemic, will take some time to settle down and be assessed. This will also impact the setting of a new baseline to compare user satisfaction.

Developing the third road investment strategy

5.9 We have started to plan how we will approach our role in the development process of the third road investment strategy (RIS3). RIS3, published by the Secretary of State for Transport, will set out the long-term strategic vision for the strategic road network, the performance standards Highways England must meet, the planned enhancement schemes it must deliver and the funding available during the third road period (2025-30).

5.10 In addition to ensuring Highways England fulfils its licence responsibilities in the development of RIS3, the ORR has an important role in providing advice to the Secretary of State on whether the draft RIS and Highways England's draft strategic business plan are challenging and deliverable with the financial resources available. We will be consulting with stakeholders in autumn 2021 on our proposed approach to developing and providing our advice to the Secretary of State.

Regional reporting

5.11 RIS2 requires Highways England to report on performance at a more disaggregated level. The ability to benchmark Highways England's areas and regions provides new insights and helps to identify the improvements in performance and efficiency we could expect Highways England to achieve in the future. Moreover, it increases transparency around the company's performance.

5.12 Highways England has made progress in expanding the range of performance indicators available at a regional level and has published additional regional data alongside its performance monitoring statements. More generally, we will continue to work with Highways England on the development of regional reporting and benchmarking and will report on progress in our next benchmarking report which will be published early in 2022.[15]

[15] The 2021 report is available at: ORR, Benchmarking Highways England 2020 Progress Report, 10 February 2021

Annex A: Performance against outcome areas

Outcome: Improving safety for all

Key Performance Indicator (RP1): Decrease in killed or seriously injured of at least 40% by the end of 2020 (against the 2005-09 average baseline).

Key Performance Indicator (RP2): Decrease in killed or seriously injured of at least 50% by the end of 2025 (against the 2005-09 average baseline).

2020-21 status: 2020 road casualty data not yet available	RP2 status: 2020 road casualty data not yet available

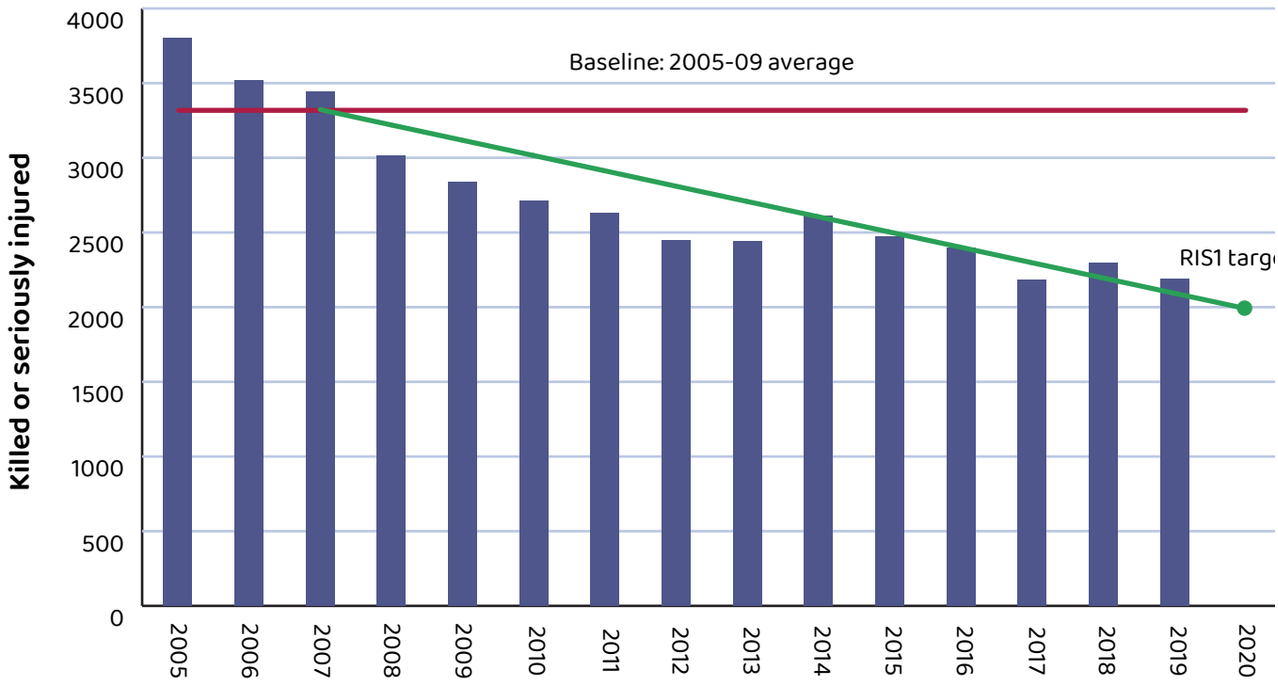
A.1 RP2 began on 1 April 2020. However, we will continue to report on Highways England's performance against its RP1 safety target until the Department for Transport (DfT) publishes the road casualty statistics for 2020 later in 2021.

A.2 The latest available road casualty statistics show that 2,189 people were killed or seriously injured (KSI)[16] on the SRN in 2019. This represents a 34.1% reduction compared to the 2005-09 average baseline. As discussed in chapter 1, lower levels of traffic in 2020 due to the COVID-19 pandemic, and the progress already made against the target in RP1, mean that we expect Highways England will achieve its RP1 target of a 40% reduction in KSIs compared to the baseline.

[16] Adjusted figures to account for changes in how police forces record road casualty data. Further details of this adjustment are published on the DfT website.

Figure A.1: KSIs on the strategic road network (adjusted data) 2005-2019

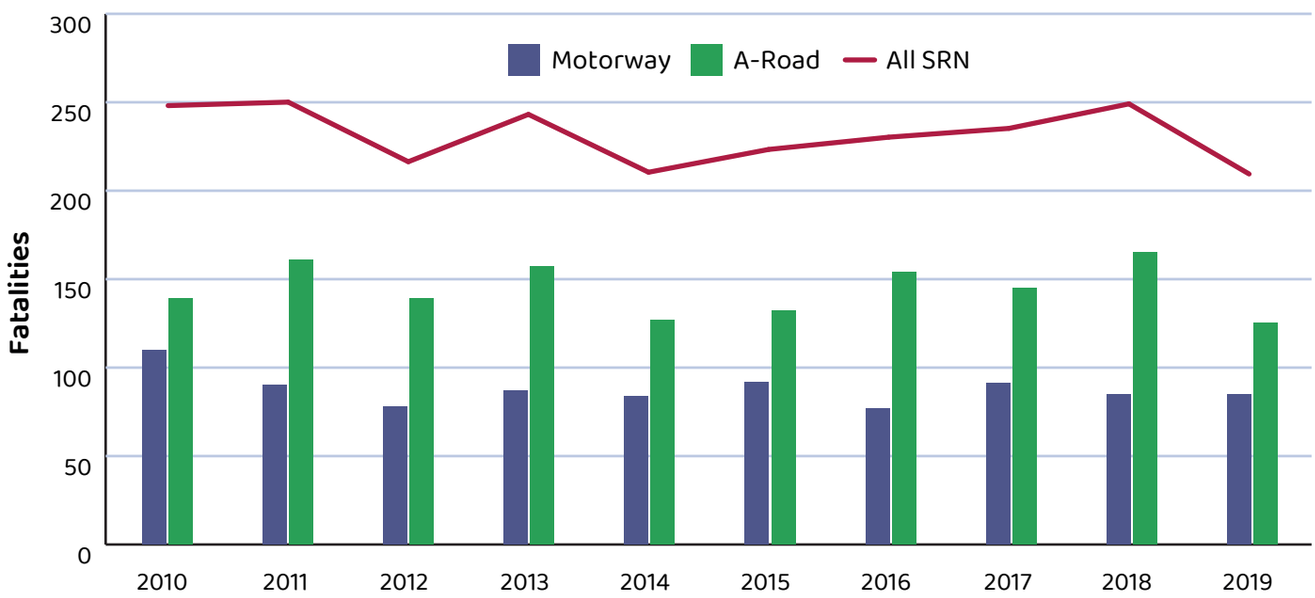
In 2019 KSIs were 34% below the baseline; reduced traffic due to the COVID-19 pandemic means that we expect the target 40% will be achieved by 2020.



A.3 In 2019, there were 210 deaths on the strategic road network (SRN). This was 40 (16%) lower than in 2018. This was the lowest recorded figure for the SRN (211 deaths were reported in 2014). However, the longer-term trend for fatalities since 2010 remains broadly flat, in line with all roads in Great Britain.

Figure A.2: Fatalities on the strategic road network, 2010-2019

There were 210 fatalities on the SRN in 2019, continuing a broadly flat trend over the past 10 years



Performance indicators

A.4 Highways England has five safety performance indicators (PIs). PIs provide additional context to Highways England's performance against the relevant outcome area and KPIs. PIs are normally untargeted.

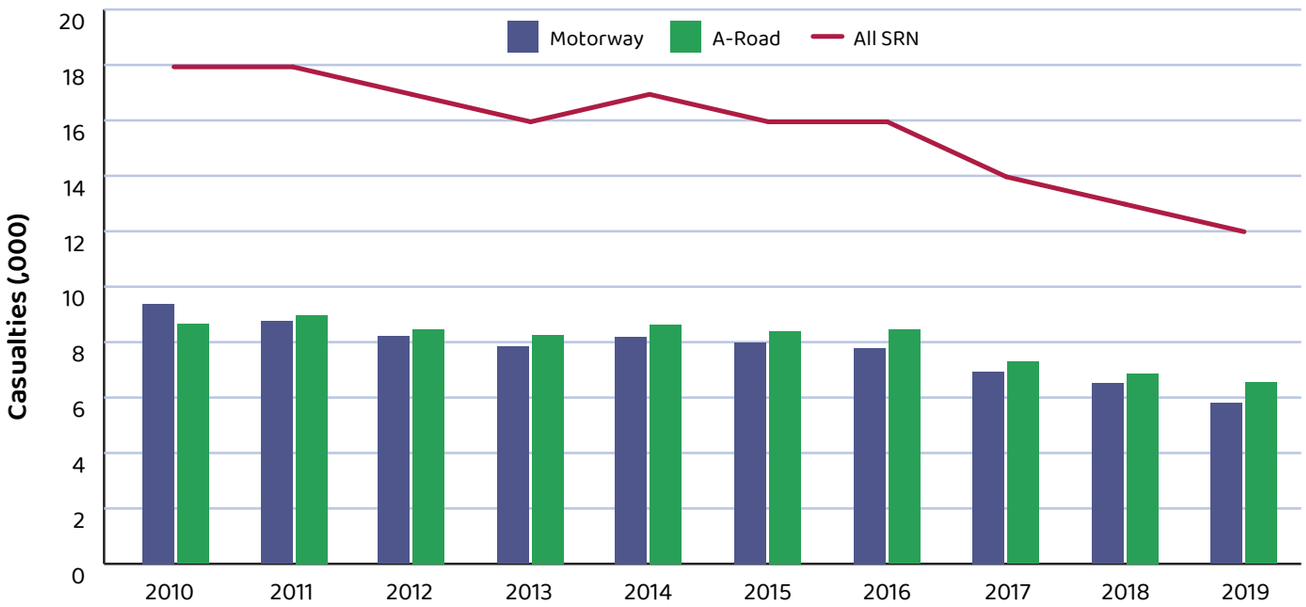
Total number of people killed or injured on the SRN

A.5 The DfT's road casualty statistics are also used to monitor the total number of casualties, of all severity, on the SRN. Unlike KSIs, these figures are unaffected by revisions made to road casualty data by the department. This is because the adjustment picks up changes in the relative proportion of minor and serious injuries over time.

A.6 In 2019, there were 12,347 casualties on the SRN, an 8% reduction on the previous year.

Figure A.3: Casualties of all severity on the SRN, 2010-2019

12,347 people were killed or injured on the SRN in 2019



Highways England and supply chain accident frequency rates

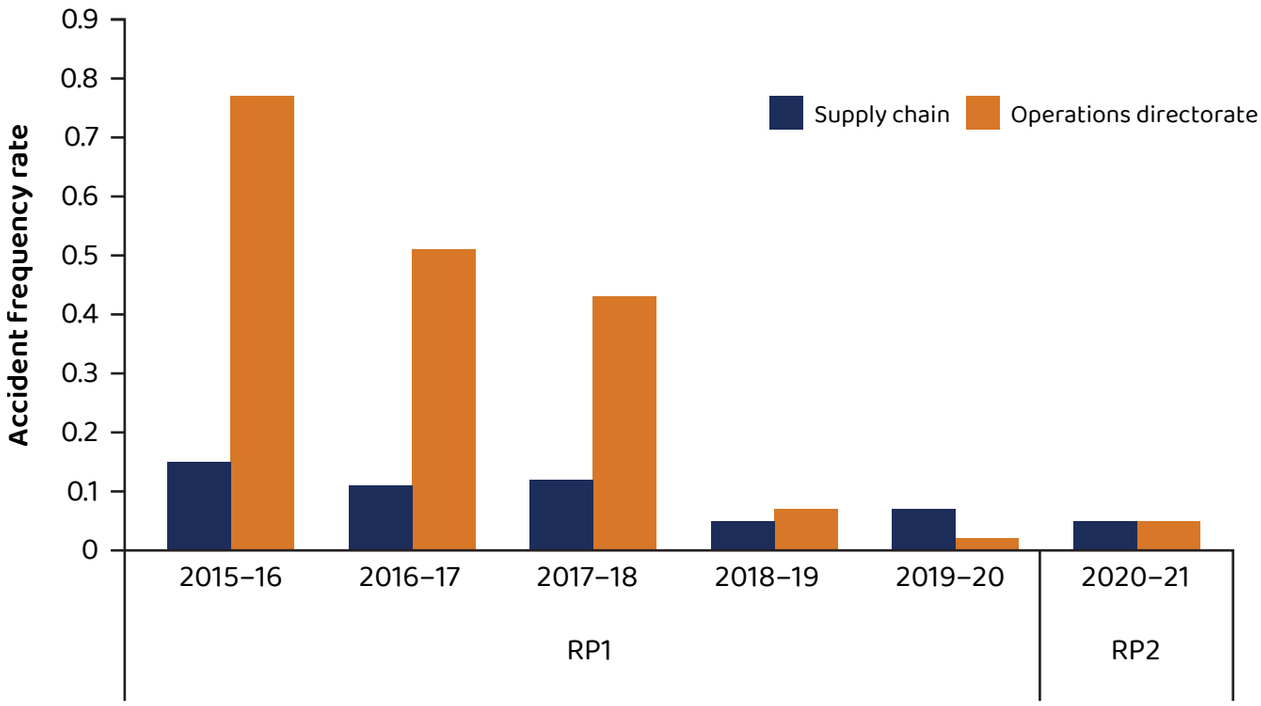
A.7 Highways England reports accident frequency rates for workers in its supply chain, as well as internal staff working in the operations directorate (including the traffic officer service). This is measured as the ratio of RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulation) accidents per 100,000 hours worked.

A.8 At the end of 2020-21, the accident frequency rate for staff in the operations directorate was 0.05. This is higher than the figure of 0.02 at the end of RP1.

A.9 The accident frequency rate for Highways England's supply chain was also 0.05 at the end of 2020-21. This is an improvement in the score of 0.07 recorded at the end of RP1.

Figure A.4: Accident frequency rates for Highways England's supply chain and operations directorate, 2015-16 to 2020-21

In 2020–21 the accident frequency rate was 0.05 for both Highways England's supply chain and operations directorate



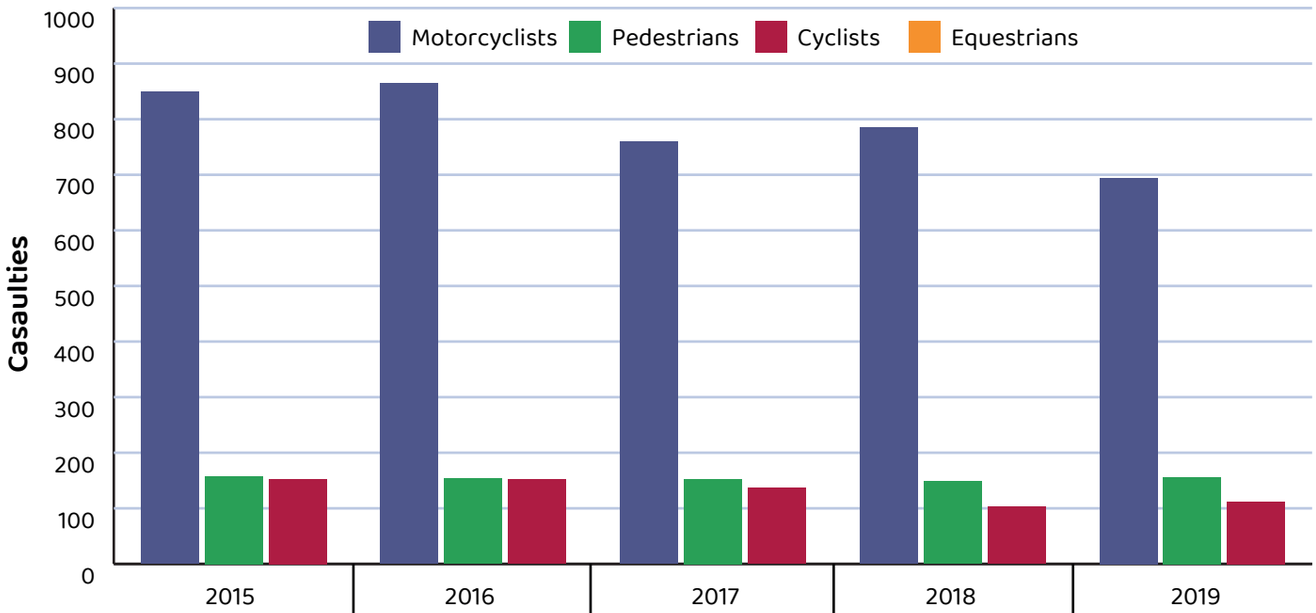
Non-motorised and motorcyclist user casualties

A.10 There were 962 non-motorised and motorcyclist user casualties on the SRN in 2019 (the latest year that data is available). This was 74 (7.1%) fewer than in 2018.

A.11 Figures for the most recent five years are summarised in the table below.

Figure A.5: Non-motorised and motorcyclist casualties on the SRN, 2015-2019

There were 962 non-motorised and motorcyclist casaulties on the SRN in 2019



	2015	2016	2017	2018	2019
Motorcyclists	849	864	760	785	694
Pedestrians	158	154	153	148	156
Cyclists	153	152	137	103	112
Equestrians	0	0	0	0	0

Total injury collisions

A.12 The total number of injury collisions on the SRN was introduced as a new performance indicator in RP2. Data for this metric will be made available when DfT publishes its 2020 road casualty statistics, later in 2021.

Road safety assessment (iRAP star rating)

A.13 Highways England is currently working to complete a re-baselining of the SRN using the iRAP Safety Rating model. This will provide a baseline star rating assessment for the 2020 network and a forecast for 2025 that considers the company's planned enhancement programme. This work is due to complete in summer 2021 and will enable Highways England to report on the percentage of the network that is rated as 3-stars or higher for safety in RP2.

Additional safety commitments

A.14 Highways England was set a commitment for RP2 to work with Transport Focus to investigate a rate-based measure for non-motorised user casualties.

A.15 In 2020-21, Highways England met its milestones for developing the concept for this metric. This identified challenges in collecting reliable data that could be used to develop a rate-based metric for non-motorised users. Following discussions with DfT, ORR and Transport Focus, further development has stopped, pending a final decision on next steps for this metric.

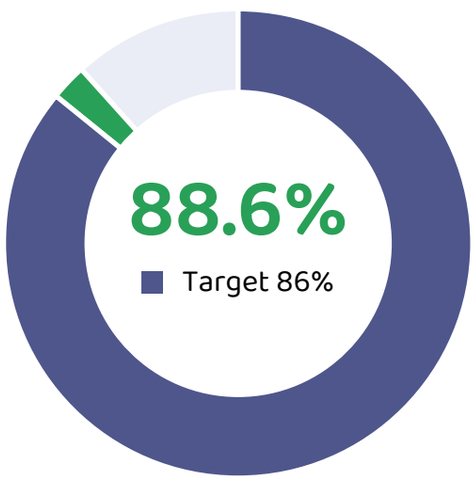
Outcome: Providing fast and reliable journeys

Key Performance Indicator: 86% of incidents cleared within one hour	
2020-21 status: green	RP2 status: green

A.16 In 2020-21, Highways England cleared 88.6% of motorway incidents within one hour – above the target of 86%. This metric has been expanded to cover incidents occurring at any time of day in RP2 (in RP1 it only covered incidents between 6am and 10pm). Therefore, performance in 2020-21 is not comparable with previous years.

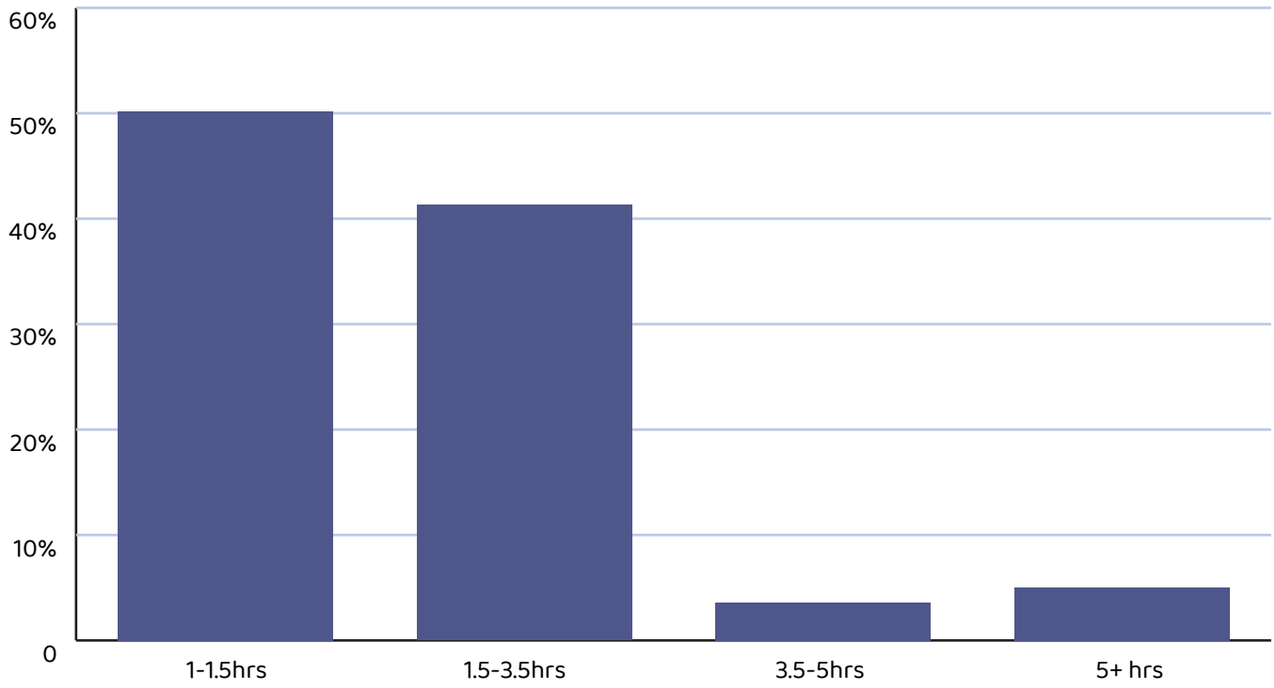
Figure A.6: Incident clearance performance in 2020-21

88.6% of incidents were cleared within one hour against a target of 86%



A.17 The distribution of clearance times for the remaining 11.4% of motorway incidents is shown below.

Figure A.7: Distribution of clearance times for incidents that were not cleared within one hour, 2020-21

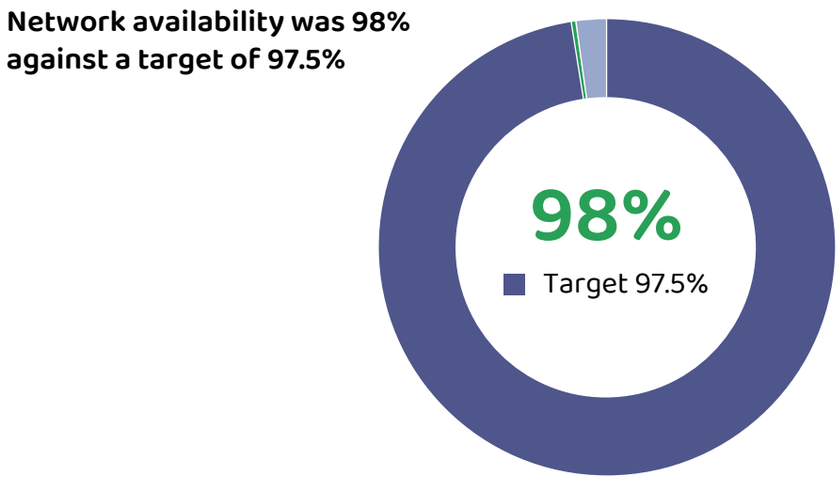


Key Performance Indicator: 97.5% network availability in 2020-21 then target against expanded metric	
2020-21 status: green	RP2 status: new metric

A.18 Network availability measures the percentage of road lanes that are available to traffic as a percentage of the total road lanes on the network. Performance is calculated over a rolling year.

A.19 In 2020-21, network availability was 98.2%. This was above the target of 97.5% and unchanged from performance at the end of RP1.

Figure A.8: Network availability performance in 2020-21



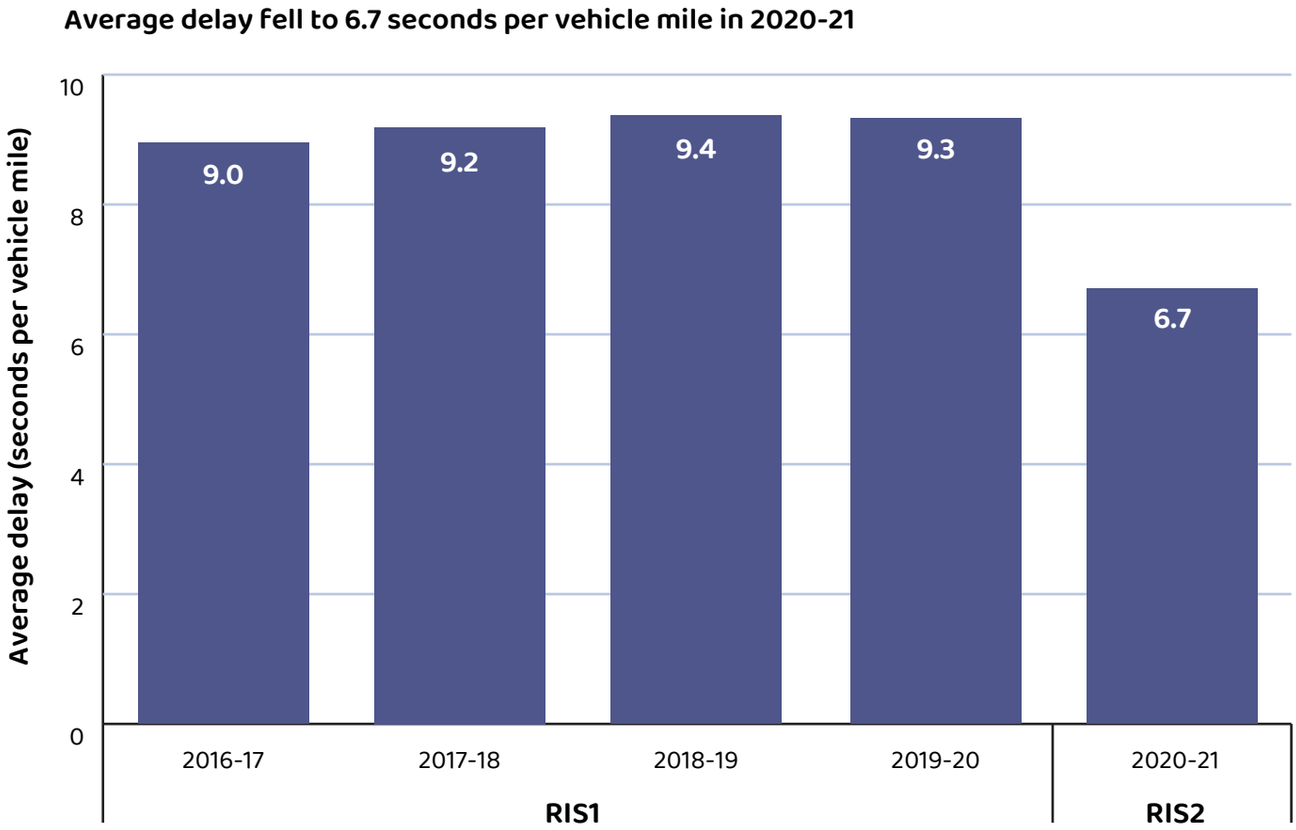
A.20 From 2021-22, Highways England's management of roadworks will be measured by a new KPI that will better reflect the road user experience. It will do this by taking account of speed limits and narrow lanes in place due to roadworks. We will report on performance against this metric in our 2021-22 annual assessment.

Key Performance Indicator: Ambition that average delay will be no worse in the end of RP2 than it was at the end of RP1	
2020-21 status: green	RP2 status: green

A.21 At the end of 2020-21, average delay on the SRN was 6.7 seconds per vehicle mile. This was significantly lower than the four prior years. This reduction in delay was due to lower levels of traffic because of the COVID-19 pandemic.

A.22 RIS2 set Highways England an ambition that average delay on the SRN should be no worse at the end of RP2 than it was at the end of RP1. However, average delay was also lower than would otherwise have been expected at the end of RP1 (9.3 seconds per vehicle mile). To account for this, DfT agreed to move the baseline back to February 2020, when average delay was measured at 9.5 seconds per vehicle mile and traffic was largely unaffected by the pandemic.

Figure A.9: Average delay on the strategic road network, 2016-17 to 2020-21



Performance indicators

A.23 Highways England has five performance indicators (PIs) that sit under this outcome area. PIs provide additional context to Highways England's performance against the relevant outcome area and KPIs. PIs are normally untargeted.

A.24 Performance against the metrics listed below was significantly affected by lower traffic levels on the SRN in 2020-21 due to the COVID-19 pandemic. To give an indication of the scale of the impact, performance is reported for the first and last month of 2020-21. This is summarised in the table below. All metrics indicate that the network was more free flowing towards the end of 2020-21 than at the beginning.

Figure A.10: Summary of performance indicators: Rolling years to April 2020 and March 2021

Performance indicator (unit of measurement)	Description	Year to April 2020	Year to March 2021
Delay from roadworks (minutes per hour travelled)	The additional journey time during roadworks for all vehicle types, compared to an average benchmark journey time measured before the roadworks were in place.	1.6	0.9
Journey time reliability (seconds per vehicle mile)	The average difference between observed travel time and the profile (normal) travel time.	2.9	1.9
Delay on gateway routes (seconds per vehicle miles)	The average delay on gateway routes compared to all vehicles travelling at the speed limit. Gateway routes are sections of the SRN serving the UK's most economically important ports and airports.	8.8	5.6
Smart motorway delay (seconds per vehicle mile)	The average delay on smart motorways compared to all vehicles travelling at upper limit for variable speed limit sections.	11.1	5.8
Average speed (miles per hour)	the average speed whilst travelling on the SRN.	58	60.7

Additional performance commitments

A.25 Highways England was set two other commitments for RP2 to support the outcome of providing fast and reliable journeys. These are:

- work with Transport Focus to investigate the development of new metrics on journey time reliability to reflect more accurately road users' understanding of reliability, and delay in roadworks.
  - in 2020-21, Highways England completed the concept stage for developing the new metrics on journey time reliability and delay in roadworks. The company is now working to complete the feasibility stage for developing these metrics.
- investigate new performance indicators on delays from incidents and delays on the local road/SRN boundary, and an alternative performance measure for smart motorway operation to keep track of whether these roads deliver their intended journey-time related objectives.
  - Highways England completed the concept stage for all three metrics in 2020-21. This work highlighted challenges in collecting appropriate data to measure the new metric for delays on the local road and SRN boundary. The company has planned further discussions with DfT, ORR and Transport Focus to consider next steps, including how existing metrics can support the desired outcome of this metric.
  - the company is on track to complete the feasibility stage of delay from incidents and the smart motorways operation metrics in 2021-22.

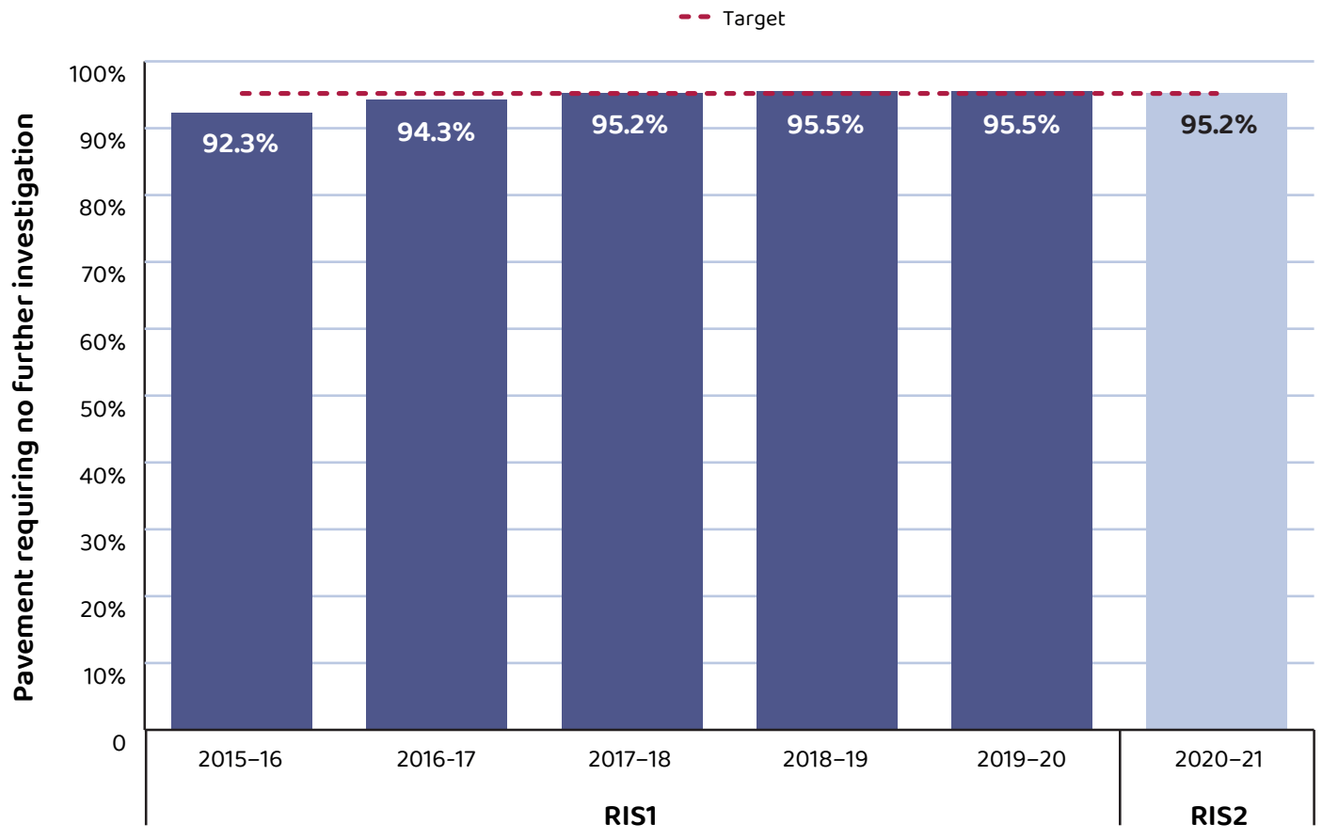
Outcome: A well maintained and resilient network

Key Performance Indicator: Achieve 95% of road surface that does not require further investigation for possible maintenance for years one and two of RP2. Target for years three onwards will be based on the concept of road surface in good condition and determined through parallel running using the new metric trialled in RP1.

2020-21 status: green	RP2 status: green

A.26 At the end of 2020-21, Highways England reported that 95.2% of its pavement (road surface) asset did not require further investigation for possible maintenance. This was above the target of 95% that the company has for the first two years of RP2, although it represents a decrease of 0.3 percentage points from the position at the end of 2019-20. Highways England reported that the change in performance was within the normal range of variation and not an indication of a long-term downward trend. Our concern is that Highways England's in-year forecasts were more positive about the year-end condition than was achieved. In addition, more road surface renewals were delivered than planned. Therefore the company needs to provide us with better confidence in its performance forecasting.

Figure A.11: Percentage of pavement not requiring further investigation for possible maintenance in 2020-21, and across RP1



Performance indicators

A.27 Highways England reports the performance of a selection of other key assets against four non-targeted performance indicators.

- **Structures** (including assets such as culverts, gantries, retaining walls and bridges): Highways England measures the condition of its structures by three performance indicators. The average condition of the stock (SCav), the condition of the assets' most critical elements (SCcrit) and the percentage of structures that have been inspected and rated as 'good' (SCI) all show a slight improvement in 2020-21, compared to 2019-20.

- **Geotechnical** (earthworks below the road surface and that support adjacent land): The performance indicator for geotechnical assets has changed for RP2 from that used in RP1. The new metric shows the percentage length of asset that is in a good condition, based on inspection. For 2020-21, Highways England reported that 99.62% of its geotechnical assets were in a good condition.

- **Drainage** (assets that collect, move or store surface water runoff): The performance indicator for drainage assets has changed for RP2 from that used in RP1. The new metric is a measure of resilience to carriageway flooding rather than measures of data coverage reported in RP1. For 2020-21, Highways England reported that 72% of the length of carriageway did not have an observed susceptibility to flooding.

- **Technology** (including assets such as cameras, electronic signs and weather stations that monitor and control traffic, conditions and inform users): The performance indicator for technology assets has changed for RP2 from that used in RP1. The new metric shows the percentage of time roadside assets are available and functioning. Highways England reported that at the end of 2020-21 its technology assets were available and functioning 95.06% of the time.

Figure A.12: Summary of asset performance indicators in 2019-20 and 2020-21 (where available)

Asset	Performance Indicator	2019-20 (%)	2020-21 (%)
Structures	Condition - average (SCav)	85.16	85.42
	Condition - critical (SCcrit)	63.23	63.33
	SCI rating of 'good'	80.49	81.20
Geotechnical	Condition	n/a	99.62
Drainage	Resilience	n/a	72.00
Technology	Availability	n/a	95.06

Additional asset management commitments

A.28 Highways England was set several other commitments for RP2 to support the outcome of a well maintained and resilient network:

- **implement the Asset Management Development Plan (AMDP) for RP2:** During 2020-21, Highways England transitioned the milestones outlined in its AMDP into an Asset Management Transformation Programme (AMTP). The company reported that it made good progress against year one deliverables and delivery of the programme was largely on track.

- **investigate an improved structures condition metric during RP2, and an alternative indicator for technology assets:** Highways England reported that it met its concept stage milestone in Q3 2020-21 for both structures and technology and is on target to deliver against its feasibility stage milestone by Q2 2021-22.

Outcome: Being environmentally responsible

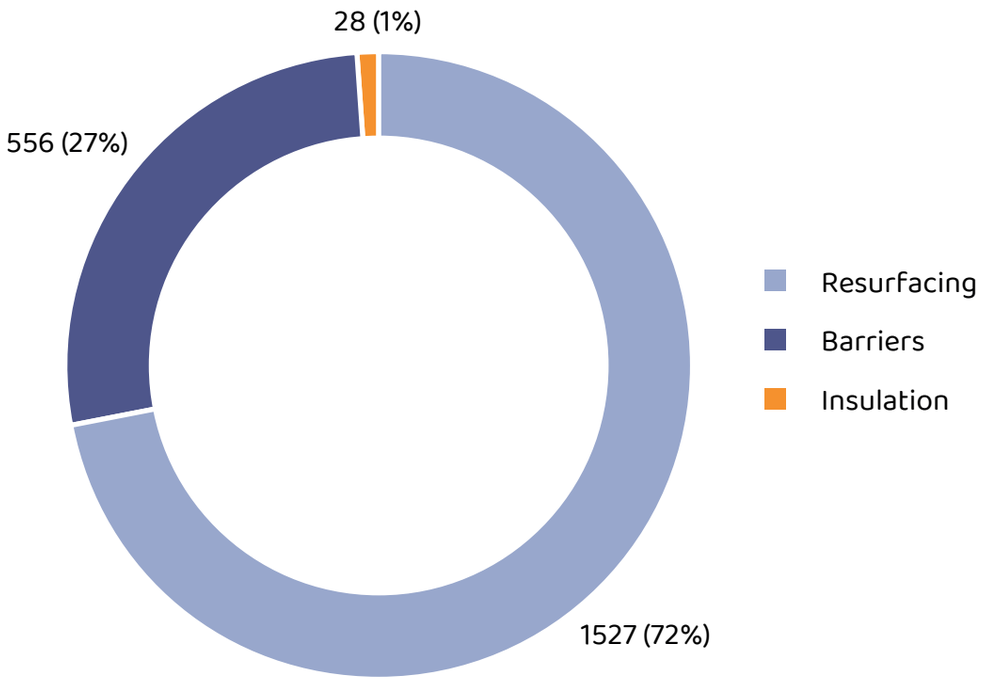
Key Performance Indicator: 7,500 households benefiting from noise reduction in noise important areas	
2020-21 status: green	RP2 status: green

A.29 Highways England's target for noise is to ensure that 7,500 households in noise important areas benefit form noise reduction by the end of RP2.[17] Only mitigations that the company delivers through the environment and well-being designated fund count towards the KPI.

A.30 In 2020-21, Highways England mitigated noise at 2,111 households (28% of the overall RIS2 target). This means that the company is on track to achieve the target. The majority of households were mitigated through a resurfacing scheme on the M602 (1,527 households). The remainder were delivered through noise barriers (556 households) and noise insulation (28 households).

Figure A.13: Noise mitigation in 2020-21 by type

Noise was mitigated at 2,111 households in 2020-21; the majority (72%) through resurfacing



[17] Noise Important Areas (IAs) are 'hotspot' locations identified by Defra as requiring further investigation, available to view online here: http://www.extrium.co.uk/noiseviewer.html

Key Performance Indicator: No net loss of biodiversity across all Highways England activities by the end of RP2

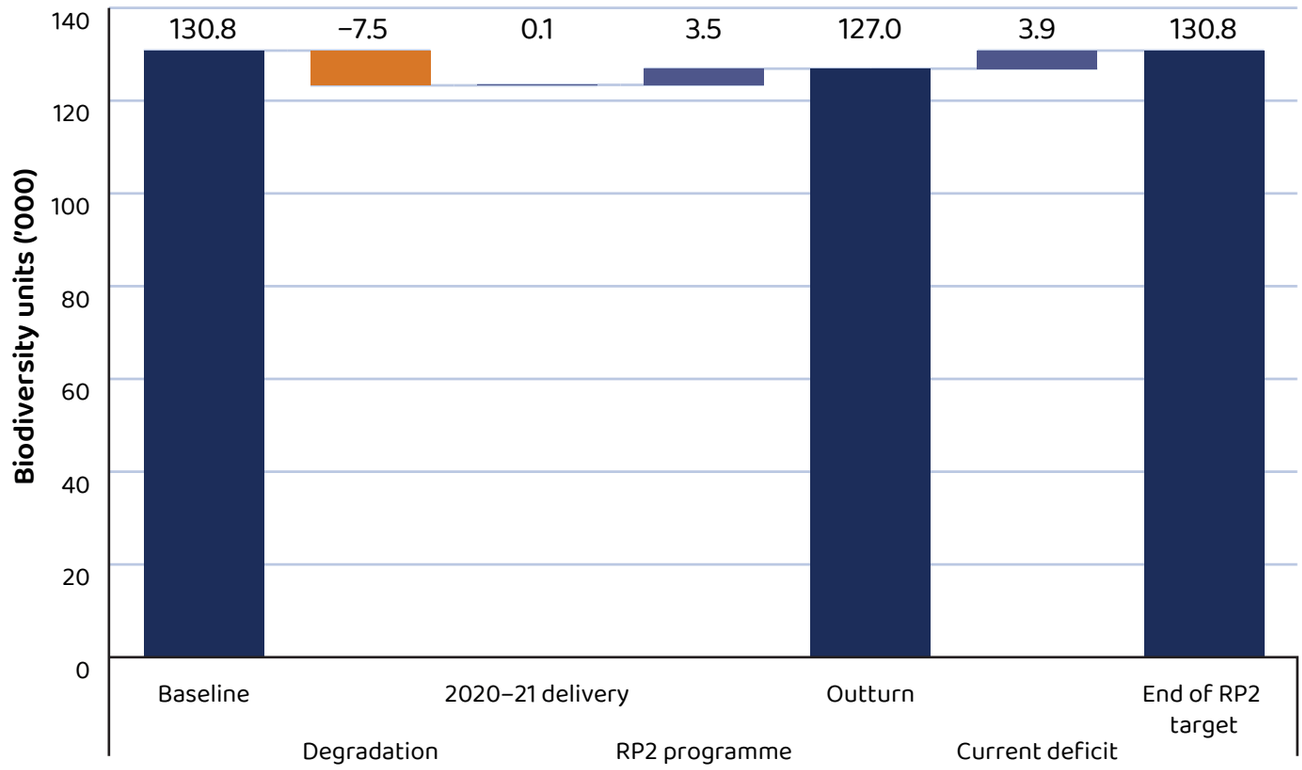
2020-21 status: green	RP2 status: amber

A.31 Highways England's target is to achieve no net loss of biodiversity across all its activities by the end of RP2. A key deliverable for the company in 2020-21 was to calculate the baseline level of biodiversity at the start of RP2. It completed this work and calculated a baseline value of 130,848 biodiversity units, which is the level of biodiversity that Highways England must achieve at the end of RP2.[18]

A.32 In 2020-21, Highways England delivered 115 biodiversity units through four projects (listed in chapter 4 of this report) and has developed a forward programme that will deliver 3,572 biodiversity units over RP2. However, the company's modelling currently shows a shortfall of 3,878 biodiversity units at the end of RP2 compared to the baseline. The company is working to develop a programme for the remainder of RP2 that will close this gap.

Figure A.14: Biodiversity performance in 2020-21

Highways England set a baseline for biodiversity in 2020–21.
It is now developing a forward programme to deliver the RP2 target.



[18] A single biodiversity unit is calculated from the size, distinctiveness, condition, significance and connectivity of a parcel of land and can differ from half a football field of very high-quality forest to several football fields of farmland. Further details can be found on Natural England's website.

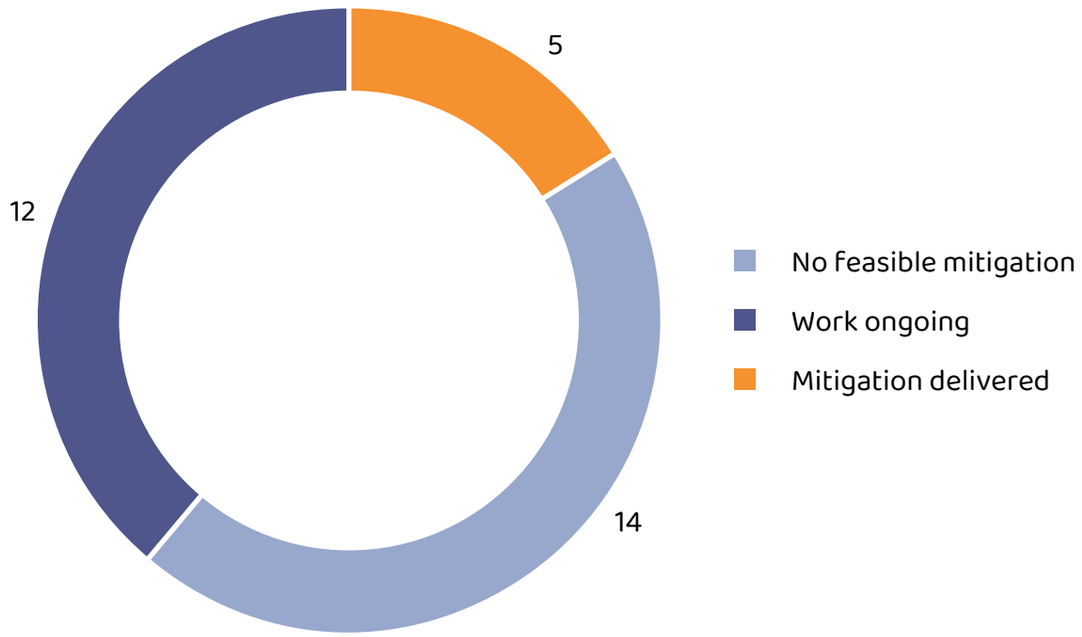
Key Performance Indicator: Bring links within Highways England's control into compliance as soon as possible	
2020-21 status: amber	RP2 status: amber

A.33 At the end of 2020-21 31 pollution climate mapping (PCM) links[19] on the SRN were in exceedance of legal limits for nitrogen dioxide. Of these links, Highways England:

- delivered five mitigation measures (all speed limits);
- identified no feasible mitigation measures at 14; and
- had work ongoing at 12 to identify possible mitigation measures (this includes three speed limits that were paused due to reduced traffic levels associated with the COVID-19 pandemic and were subsequently implemented in early 2021-22).

Figure A.15: Air quality mitigation measures delivered by Highways England in 2020-21

Highways England delivered mitigation measures to improve air quality at five locations in 2020-21



[19] Links are sections of the SRN as defined in Defra's pollution climate mapping model.

Key Performance Indicator: Reduce Highways England's carbon emissions; target to be defined in 2021-22

2020-21 status: green	RP2 status: target begins in 2021-22

A.34 Highways England has a KPI target to reduce its corporate carbon emissions (defined as those emitted through electricity, fuel use and other day-to-day activities) in RP2. In 2020-21, the company was required to set a baseline and target for the remainder of RP2. It set a baseline of 88,147 tonnes of carbon dioxide equivalents, based on the company's emissions in 2017-18. It agreed the target with DfT to reduce its corporate carbon emissions by 75% by the end of RP2. Measurement against the target began on 1 April 2021.

Performance Indicators

A.35 Highways England has four environmental performance indicators (PIs). PIs provide additional context to Highways England's performance against the relevant outcome area and KPIs. PIs are normally untargeted.

Supply Chain Carbon

A.36 Highways England's supply chain emitted 365,353 tonnes of carbon dioxide equivalents in 2020-21.

Condition of Cultural Heritage

A.37 This is a new performance indicator for RP2 that measures the aggregate 'quality score' of cultural assets (such as milestones and historic sites) on or near the SRN. The calculation takes into account a score for the value and vulnerability of each culturally significant asset owned by Highways England on the SRN. The condition score recorded in 2020-21 was 51,556 units.

Water Quality

A.38 This is a new metric for RP2 that measures the length of watercourse enhanced by Highways England through the mitigation of medium, high, and very high-risk outfalls as well as through other enhancements, for example river retraining or rewilding.

A.39 In 2020-21, Highways England enhanced 17km of watercourse. The company achieved this by delivering 23 outfalls, one fish pass and one natural flood management scheme.

Litter

A.40 This new metric measures the percentage of the SRN where litter is graded at A or B as defined in the code of practice on litter and refuse.[20] This was measured as 49.2% in 2020-21.

Additional environmental commitments

A.41 Highways England was set several other commitments for RP2 to support the outcome of being environmentally responsible. These are:

- investigate, and as appropriate develop, new environmental metric(s) informed by the natural capital approach.
  - in 2020-21, Highways England identified a potential metric and delivered its milestone to complete the concept stage for this metric. In 2021-22, it plans to progress work to determine the feasibility of the metric.
- investigate and assess incorporating into new and existing contracts air quality standards for supply chain vehicles deployed on Highways England work, and associated reporting requirements. A more detailed timetable for these investigations will be produced in Year 1 of RP2, as well as potential implementation opportunities identified by that stage.
  - in 2020-21, Highways England developed a timetable for incorporating air quality standards into new and existing contracts for supply chain vehicles that includes milestones to be delivered over the next three years of RP2. Work to identify implementation opportunities is now due to take place in 2021-22.

[20] Defra, Litter and refuse: code of practice, 26 September 2019

Outcome: Meeting the needs of all users

Key Performance Indicator: The percentage of drivers who are satisfied with their journey on the strategic road network: Target 82%	
2020-21 status: No data due to suspension of survey	**RP2 status: No data due to suspension of survey**

A.42 In the absence of Transport Focus' Strategic Roads User Satisfaction survey (SRUS), which provides the monitoring data for this KPI, the ORR has used a more qualitative approach to assess the company's performance. This uses a combination of evidence of where customer service projects and trials have been delivered and the company's own Highview on-line road user survey, to inform our monitoring of user satisfaction.

A.43 A summary of the initiatives delivered by the company in 2020-21 include the following:

- developed 30 new variable message sign legends, for example 'TRAFFIC HELD', 'REMOVING DEBRIS' and 'SLOW VEHICLE AHEAD' to better explain what is happening when roads are disrupted and to update those caught in traffic;
- deployed a new "Travel Alerts" software application that allows the company's National Incident Liaison Officers to publish information about incidents across Highways England's digital channels;
- developed a British Sign Language video contact service and a new short message service (SMS) text facility to help people with hearing and speech impairments contact Highways England (see chapter 1);
- provided vehicle skates and battery boosters to help remove vehicles that are stranded on the carriageway;
- implemented the Defect Reporting self-service tool;
- conducted in-depth qualitative surveys with freight drivers to help understand what is important to professional drivers who use the SRN daily;
- continued to convene the Freight Steering Group.

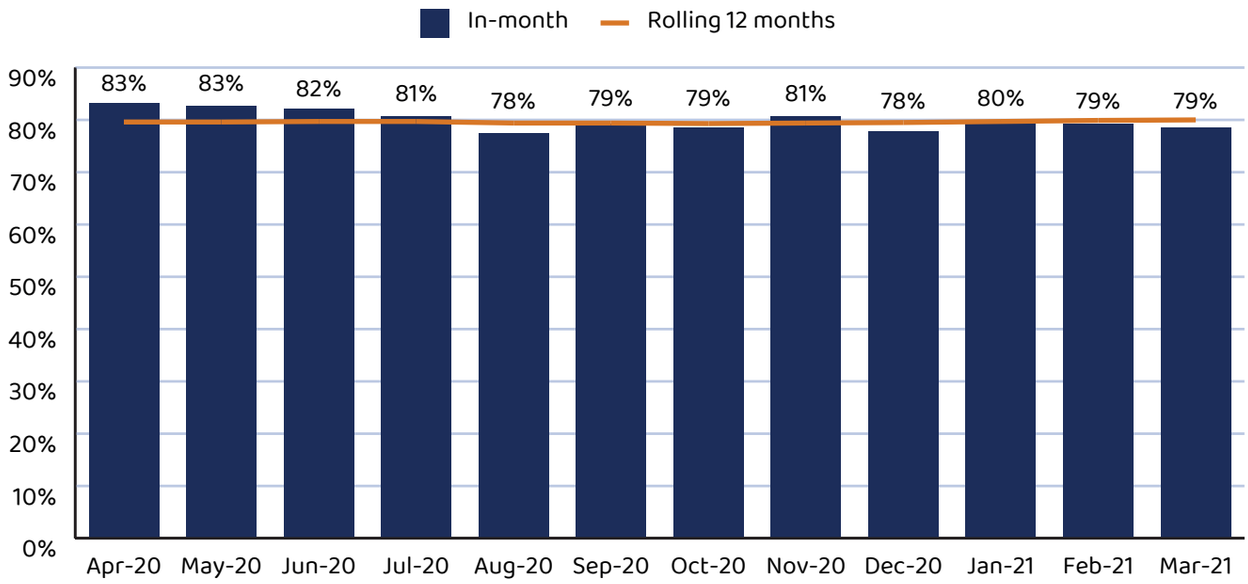
A.44 The company's Highview surveyed an average of 1,600 road users per month since April 2020 and has used the survey results from Highview to understand key drivers of satisfaction such as journey time and overall journey experience.

A.45 However, SRUS and Highview are not directly comparable, and have different methodologies and purposes. We have used Highview as a temporary measure to understand user satisfaction using trend analysis. This allows us to spot patterns without placing undue weight on monthly variations.

A.46 In the first year of RP2, the Highview performance score for 'overall journey experience' rated at 'very good' or 'fairly good' was broadly stable at 80% with a slight variation of between one and two percentage points. While there is no comparable measure, it is evident that Highways England maintained overall journey experience for road users.

Figure A.16: Highview Survey: road users' overall journey experience in 2020-21

Overall journey experience score in-month and rolling 12 months
Those stating a "very good' and "fairly good" journey experience



Key Performance Indicator: Roadworks information timeliness and accuracy to score 90% by the end of 2024-25, with increasing trajectory from RP1 levels

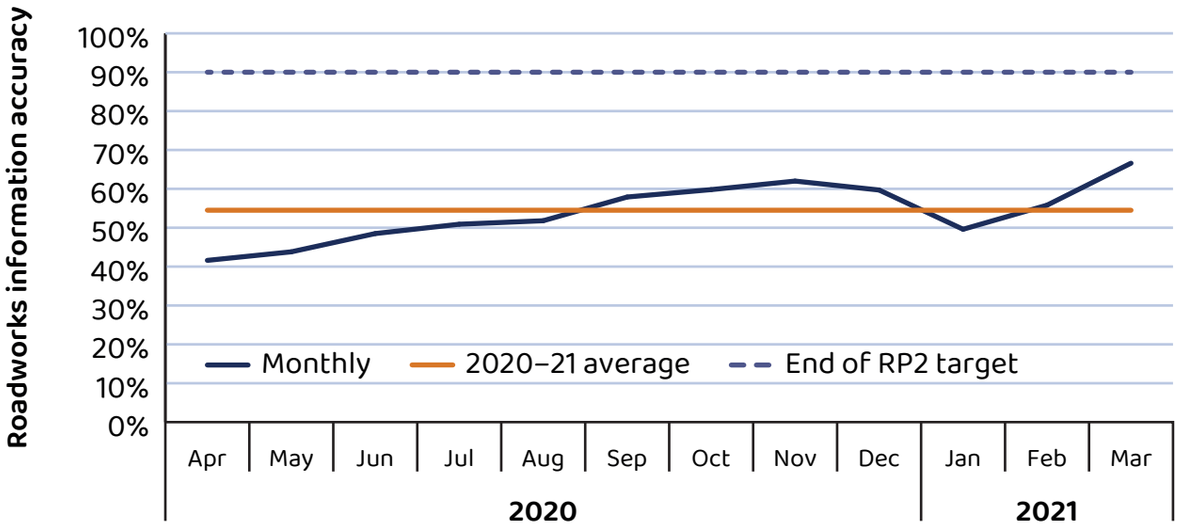
2020-21 status: green	RP2 status: amber

A.47 This KPI measures the percentage of overnight road closures that are accurately notified by Highways England seven days in advance. A correctly notified road closure is one that commences within one hour of the start time stated seven days in advance on the company's Network Occupancy Management System (NOMS).

A.48 Highways England's target is to achieve a score of 90% accuracy by the end of RP2. The company achieved an average of 54.5% accuracy for 2020-21, with the monthly score increasing from 41.6% in April 2020 to 66.6% in March 2021.

Figure A.17: Roadworks information accuracy performance during 2020-21

Roadworks information accuracy was 54.5% in 2020–21, with performance improving across the year



Performance Indicators

A.49 Highways England has three performance indicators (PIs) that sit under this outcome area. PIs provide additional context to Highways England's performance against the relevant outcome area and KPIs. PIs are normally untargeted.

Timeliness of information provided to road users through electronic signage

A.50 This indicator measures the average median time it takes Highways England to set signs and signals on all motorways from receiving notification of an incident that requires signs and signals to be manually set.

A.51 In 2020-21 the average time was 1 minute and 52 seconds.

Ride quality

A.52 This new measure for RIS2, to gauge the ride quality of the SRN, uses a subset of the metrics applied to assess carriageway condition. It is represented by the percentage of network delivering ride quality consistent with a standard which is based on engineering factors and driver comfort.

A.53 In 2020-21 the measure of ride quality was 98.5%.

Working with local highways authorities to review diversion routes for unplanned events

A.54 This metric is measured by the percentage of local highway authorities that Highways England engaged with, to review diversion routes for unplanned events. In 2020-21, the company engaged with 53% of local highways authorities within asset delivery areas that have a diversion route for unplanned events in their area.

Additional all users commitments

A.55 Highways England was set several other commitments for RP2 to support the outcome of meeting the needs of all users. These are:

- review Strategic Roads User survey (SRUS) performance in year two of RP2 to determine the road user satisfaction targets for post 2021-22.
  - following suspension of the face-to-face SRUS survey due to the COVID-19 pandemic, the department has agreed to suspend the target for 2020-21 and 2021-22. Transport Focus has developed an alternative online survey that commenced in April 2021, following a successful trial in November and December 2020.
- develop with Transport Focus a measure of ride quality which reflects road users' experience of the network.
  - Highways England met its milestones for developing the concept and feasibility of this metric in 2020-21. The company is undertaking further development work in 2021-22.
- investigate expanding the scope of the timeliness of electronic signage information Performance Indicator to potentially include the time taken to adjust and clear signs.
  - in 2020-21, Highways England undertook work to develop the concept of this metric. This highlighted limitations in how appropriate data can be collected and calculated. The company will consider next steps in discussions with DfT, ORR and Transport Focus.
- work with Transport Focus to develop satisfaction surveys for cyclists and pedestrians that can be used, if possible, as the basis of a Performance Indicator later in RP2.
  - Transport Focus carried out a pilot of the survey in Spring 2021 and is in discussion with Highways England about how its findings can be used to inform the company's activities. Further surveying will be carried out in 2020-21.
- work with Transport Focus to develop satisfaction surveys for logistics and coach managers that can be used, if possible, as the basis of a Performance Indicator later in RP2.
  - Transport Focus published the results of the Logistics and Coach Survey: Strategic Roads 2020-21 on 27 May 2021. The company will consider its next steps following the analysis of these results.
- investigate expanding the scope of the 'working with local highways authorities' Performance Indicator to include diversion routes linked to planned roadworks.
  - in 2020-21, Highways England developed the concept of this metric and in 2021-22 the company plans to progress work to consider the feasibility of the metric.

Outcome: Achieving efficient delivery

Key Performance Indicator: Evidence the efficiency target of £2.230 billion capital and operational expenditure is demonstrated by the end of RP2	
2020-21 status: amber	RP2 status: green

A.56 Highways England is required to deliver £2,230 million of efficiency by the end of RP2 (March 2025). We monitor Highways England's delivery of the KPI which includes reviewing efficiency evidence reported by the company.

Efficiency KPI

A.57 The efficiency KPI, as set out in RIS2, originally required Highways England to deliver £2,304 million of efficiency in RP2. Subsequently, Highways England and DfT agreed to revise the Efficiency KPI to £2,230 million due to changes made to enhancements because of the Smart Motorway Action Plan.

A.58 The company sets internal milestones to track its progress towards the KPI set for the end of RP2. We support its progress by monitoring and reporting on the quality of the evidence presented during the road period and for its final reported position in March 2025. The milestone set for year 1, 2020-21, was £233 million.

Changes to efficiency monitoring and reporting in RP2

A.59 The approach to monitoring and reporting efficiency in RP2 has changed from in RP1. It retains the principles of using evidence from three different sources to support reported efficiency. These are:

- delivery of RIS outputs to (post-efficient) funding;
- case-study descriptions of efficiency initiatives and
- unit costs/activity metrics.

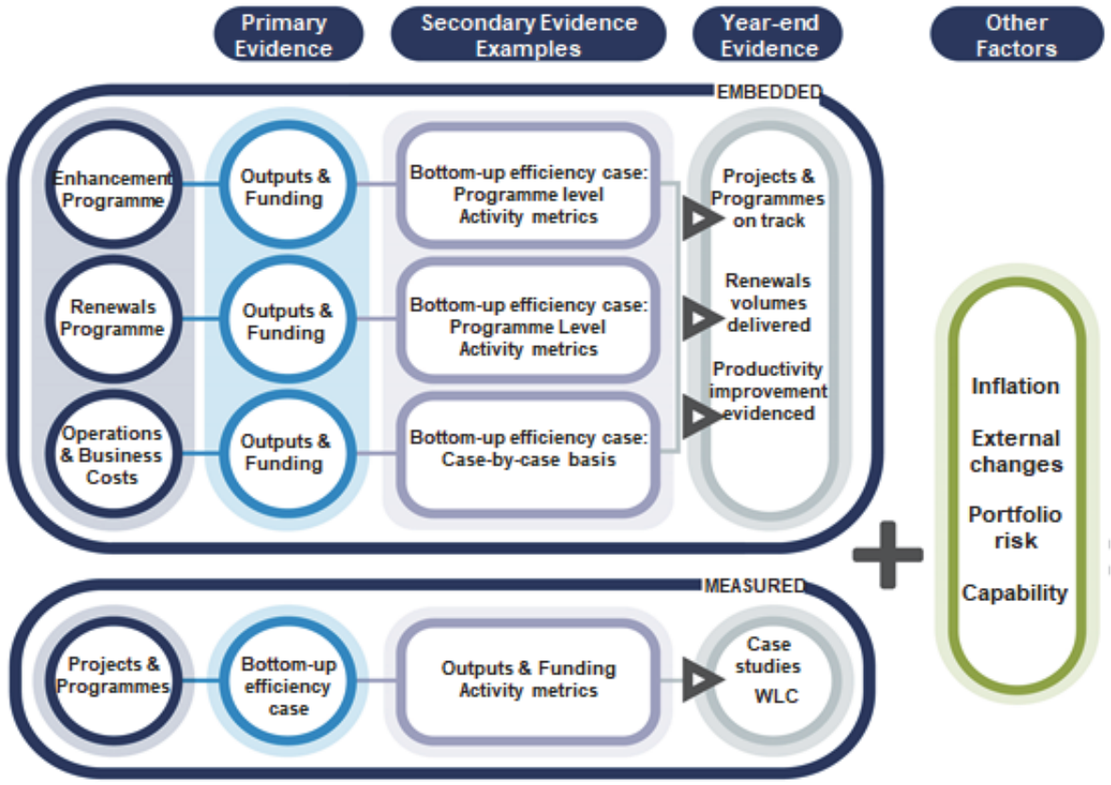
However, the balance between the evidence sources differs depending on expenditure category and whether the efficiency is:

- embedded: 'baked-in' to the Delivery Plan, through reduced funding.
- measured 'RP2 generated': does not reduce funding but reduces risk in RP2 or the cost of future road periods; or
- measured 'carry over': representing the RP2 element of RP1 delivered efficiency.

A.60 Figure A.18 summarises the types of evidence that will be used to support embedded and measured efficiency. The assessment of carry-forward efficiency is based on a review of any changes to the RP2 efficiency forecasted at the end of RP1. The rationale and approach to monitoring and reporting efficiency is set out in greater detail in Highways England's Efficiency and Inflation Monitoring Manual (EIMM).

Figure A.18: Sources of evidence for different type of efficiency and expenditure category

Highways England's approach to monitoring and reporting efficiency

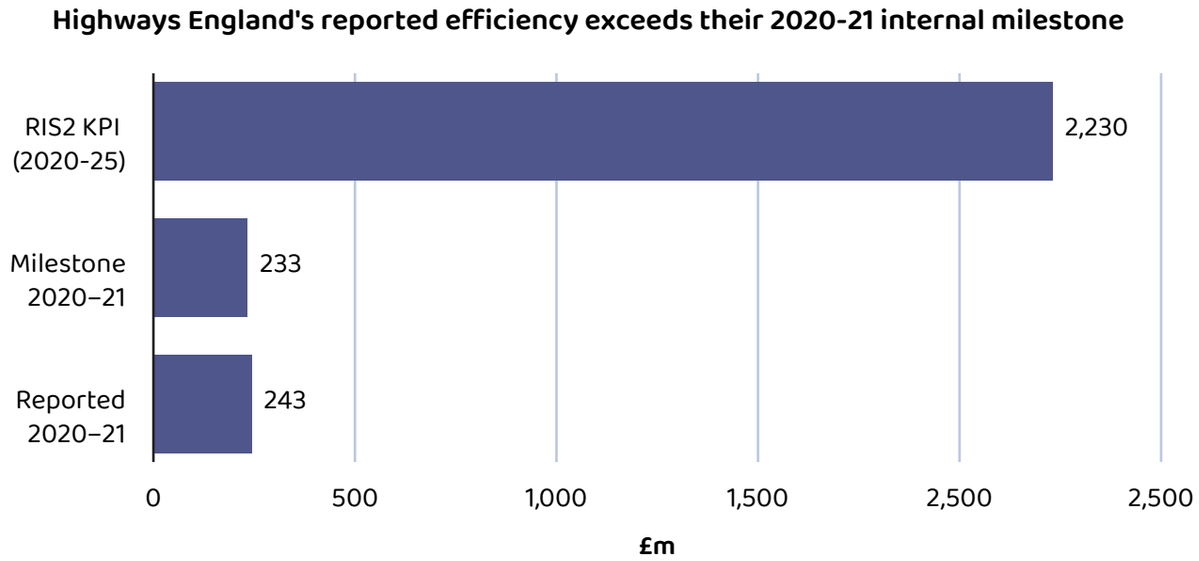


Source: Highways England – Efficiency and Inflation Monitoring Manual

Highways England reported efficiency in 2020-21

A.61 Highways England reported a total of £243 million against the efficiency KPI (Figure A.19). This is 11% of the RP2 target and £10 million more than the company's internal 2020-21 milestone. Our assessment of the evidence presented, follows in the next section.

Figure A.19: Efficiency KPI target (RP2), 2020-21 internal milestone and reported efficiency

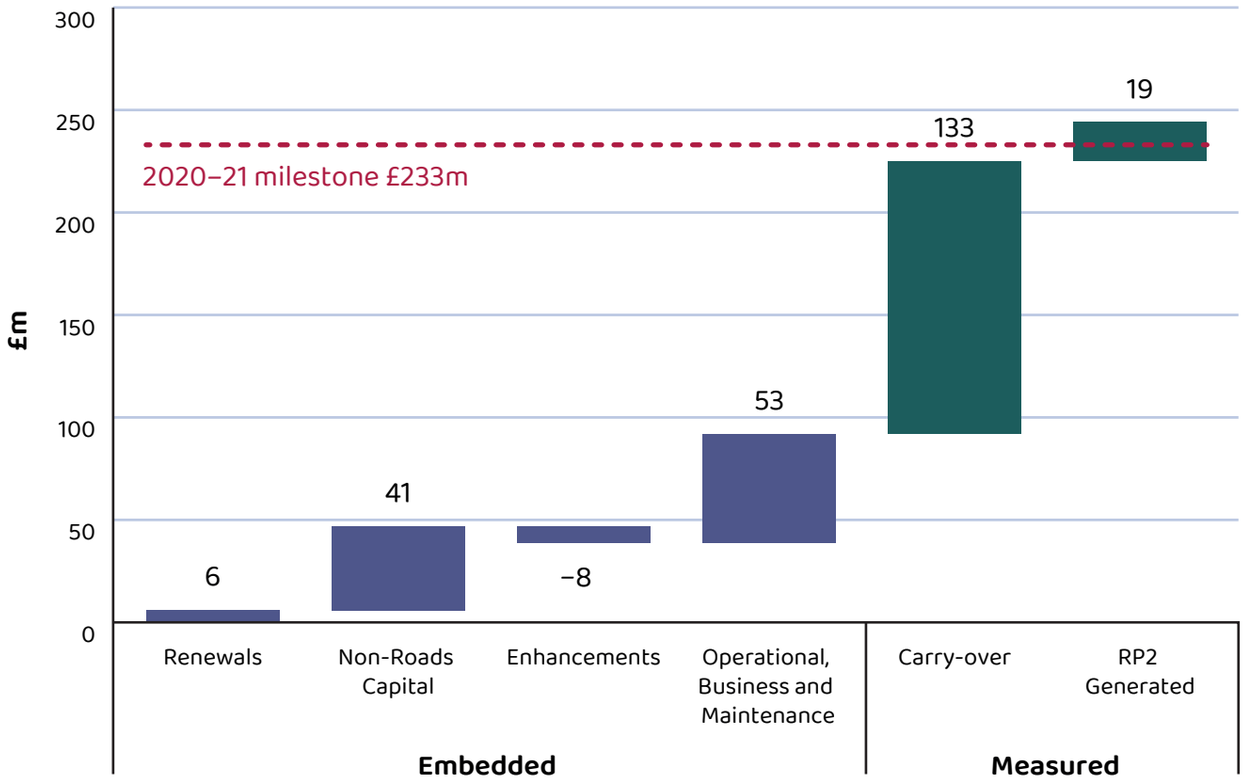


A.62 The efficiency report provided a breakdown of the updated £2,230 million efficiency KPI between embedded efficiency (£1,594 million) and measured efficiency (£636 million). At the end of 2020-21, Highways England is forecasting that it will meet the £2,230 million KPI target over RP2. It developed an efficiency pipeline [21] (forward-plan) which exceeds the KPI target to provide confidence that the target will be met.

[21] This approach has included collaboration with other parties and working on initiatives linked to the Government's Transport Infrastructure Efficiency Strategy.

A.63 Figure A.20 shows the breakdown of the £243 million reported efficiency for 2020-21. The efficiency is split £91 million from embedded and £152 million from measured which includes carry-over (£133 million).

Figure A.20: Highways England reported efficiency in 2020-21



Assessment of efficiency evidence

Embedded efficiency: renewals

A.64 The five key deliverables in capital renewals: significant structures, pavement (asphalt and concrete) and road restraint systems (steel and concrete) account for 76% of the £760 million capital renewals spend in 2020-21. Highways England delivered more than the agreed outputs for the five key assets (and 12 of the 14 assurance measures), overspent its renewals base funding by £25 million and drew-down £30 million of the Central Risk Reserve (CRR). The company reduced its reported efficiency to reflect the overspend but needs to determine how it thinks the reported over-delivery in 2020-21 should be recognised for efficiency purposes.

A.65 We note that Highways England has not yet been able to demonstrate delivery of the greater pavement depth renewals for which it received RIS2 funding. As discussed in Annex C, we would also like the company to improve its reporting to fully explain the reason for the quantity of renewals delivered, where this differs from its plans.

A.66 Highways England is developing efficiency case-studies to support its renewals efficiency case (these form part of its Efficiency Report), however these have not yet been provided to ORR. The company has made good progress with developing activity metrics for some renewals asset classes which support the efficiency case.

Embedded efficiency: non-roads capital expenditure

A.67 Whilst Highways England did not plan to deliver efficiency within this category in 2020-21, it has reported £41 million of efficiency based on having underspent its funding. This is in part due to tightly managed staff costs and fewer staff on Asset Delivery contracts than anticipated, however some of the underspend is attributable to some Operations projects being delayed. As the savings were unplanned not driven by specific efficiency initiatives it has not shared case-studies for this area. It has also not yet developed activity metrics but reports that it plans to do so as per the Efficiency and Inflation Monitoring Manual (EIMM).

Embedded efficiency: enhancements

A.68 In RP2, all efficiency relating to enhancements schemes is reported when a scheme is opened for traffic. The difference between the schemes RP2 outturn cost and RP2 pre-efficient funding is recorded as efficiency. However, the schemes that opened in 2020-21 were in the very final stages of construction so there was no planned efficiency this year. Highways England has reported £8 million inefficiency in 2020-21. This was based on overspend to baseline for the four schemes that opened in 2020-21, offset by underspend on other enhancements activity including legacy costs of previously opened schemes and additional smart motorway stopped vehicle detection works. As there was no planned efficiency in this area there were no case-studies or activity metrics developed.

Embedded efficiency: operational, business and maintenance expenditure

A.69 Highways England has delivered key outputs (notably maintenance) and made use of underspends arising due to lower traffic volumes, to invest in other areas. The company has described key efficiency initiatives in case-studies which include PFI refinancing and the roll-out of Asset Delivery, avoiding future cost increases on Asset Support Contracts. It has yet to develop activity metrics as evidence for this area.

Measured efficiency: RP1 carry over

A.70 RP1 carry over is efficiency relating to RP2 from projects and programmes that commenced in RP1, with expenditure that spans both RP1 and RP2, that has been captured, audited, and reported using the RP1 assurance process.

A.71 The reported £133 million of RP1 carry over efficiencies in 2020-21 includes £75 million of smart motorway enhancement efficiencies, as determined by a unit cost model which was reviewed by ORR in RP1. It is important to note that the efficiency reported in 2020-21 relates to the whole of RP2 and is based on a forecast at the end of RP1. The reported embedded efficiency relating to Smart motorway enhancements will be updated annually to reflect any adjustments to efficiency values for the carry-over schemes as they open for traffic.

A.72 The remainder of the 2020-21 carry over value (£58 million) is supported by case studies and efficiency guides presented during RP1. Through Highways England's continued ongoing assurance of the claims, some of the values (relating to RP2) have been updated. We will continue to monitor this throughout RP2 to understand any significant changes in value based on previously presented case studies.

Measured efficiency: RP2 generated

A.73 RP2 generated efficiency applies to areas of the portfolio which were funded at pre-efficient costs, usually because at the start of the RIS the scheme scope was not sufficiently established. An efficiency challenge still applies through the KPI and efficient delivery in this area reduces the draw on the CRR and cost for future road periods. This mainly applies to new RIS2 capital enhancement schemes that are at early stages of development, but also includes the designated funds and the RIS3 development programmes.

A.74 Highways England have reported £19 million of RP2 generated efficiencies in 2020-21. This was evidenced by case studies across several themes. The company has not provided supporting evidence based on delivering outputs for funding or activity metrics.

Other factors

A.75 Highways England reports that inflation assessed using its own measure is lower than assumed within its funding. The company's modelling of how much it is exposed to lower prices is not yet complete, but information shared to date suggests it that could be material to its reported position. It has not reported/attributed any additional outputs or efficiency to lower inflation.

A.76 There has been more formal change to the portfolio during 2020-21 than was anticipated. The KPI was revised only for changes made to enhancements because of the Smart Motorway Action Plan (2020), discussed further in chapter 3. Highways England recognise other funding and programme changes could alter the target or affect efficiency reporting in future years.

A.77 During 2020-21 thecompany reported that it had allocated significant provision of the CRR for future risks in RP2 (discussed further in Annex B) which combined with portfolio/ funding changes creates challenges for reporting and understanding of efficiency. We plan to commission a deep dive in 2021-22 to identify any improvements needed to the way the CRR operates and how financial performance and efficiency is reported.

Evidence assessment summary

A.78 Highways England has reported £91 million of embedded efficiency in 2020-21. It has presented good primary evidence for £53 million efficiency and £8 million inefficiency. For the remaining £44 million, some parts of the evidence are also good, but other areas (including secondary evidence) are not yet as developed. This includes activity metrics which we recognise take time to develop, in particular for types of expenditure where they were not used as evidence in RP1.

A.79 The company has reported £152 million of measured efficiency. There is good primary evidence, with the caveat of reported smart motorway enhancement carry-over efficiency being an RP2 forecast and subject to change. Secondary evidence has not been provided for measured efficiency.

A.80 Overall, the largest area of uncertainty for the 2020-21 reported position is inflation. More widely, there are challenges with annual reporting of efficiency against a five-year target, particularly when there has been change in the programme and use of the CRR. There is a clear need for improvement in efficiency reporting in these areas as we move through RP2.

A.81 At this early point in the road period, it is difficult to draw conclusions about Highways England's efficiency KPI forecast. However, there are positive signs that the company is making good progress with planning (efficiency pipeline), delivery of efficiency and is developing its reporting under the new approach.

Performance indicators

A.82 We also monitor Highways England's performance using two commonly used earned value measures:

- cost performance index (CPI) – is a ratio of budgeted cost of work performed to date against actual cost to date.
- schedule performance index (SPI) – measures the relationship between the actual progress of work to date and planned (or scheduled) progress.

A.83 At the end of RP1, Highways England had difficulty in quality assuring the CPI and SPI data for all relevant schemes and was not able to report on all the schemes in construction.

A.84 At the end of 2020-21, CPI and SPI assured data was provided for all schemes in construction. For 16 of the 25 schemes presented, the values were calculated manually by the company. This is because of assurance issues regarding the data quality of system outputs. We will work with the company to further understand the relationship to scheme delivery performance and how the assurance of system outputs can be improved in the subsequent years of the road period.

Figure A.21: Earned value metrics for projects in construction

* values generated manually through assessments by PMOs

Project Name	CPI	SPI	Value generated manually
A63 Castle Street	0.95	1.13	*
A19 Norton to Wynyard	0.97	1.00	*
A1 Scotswood to North Brunton	1.00	0.98	*
M621 Junction 1 to 7 Improvements	0.20	0.04	
A19 Testos	1.05	0.95	*
A500 Etruria Valley	1.00	0.89	
M6 Junction 10 Improvement	0.92	0.70	*
M42 Junction 6 Improvement	1.03	0.80	*
A52 Nottingham Junctions	–	0.52	*
A46 Coventry Junction Binley	0.97	0.63	*

Project Name	CPI	SPI	Value generated manually
Westwood Roundabout and Technology Improvements	1.01	0.89	*
M6 Junction 19 Improvements	1.00	0.93	*
A585 Windy Harbour – Skippool	1.05	0.86	*
A2 Bean and Ebbsfleet	0.93	0.81	*
A27 East of Lewes	0.63	1.10	*
A30 Chiverton to Carland Cross	1.00	0.71	*
A1(M) Junctions 6–8	1.00	1.00	*
M3 Junctions 9–14	0.53	1.06	
M40/42 Interchange	0.61	1.09	
M62 Junctions 20–25	0.92	0.83	
M1 Junctions 13–16	0.77	0.75	
M4 Junctions 3–12	0.98	0.83	
M6 Junction 13–15	0.99	0.99	
M27 Junction 4–11	0.78	0.81	
M56 Junction 6–8	1.00	0.59	*

Annex B: Financial performance

B.1 This annex discusses how Highways England has spent its 2020-21 funding; forecast expenditure in RP2 and forecast total outturn expenditure for the enhancements portfolio.

2020-21 funding

B.2 Highways England set a 2020-21 budget of £5,054 million. This was £81 million more than the year's RIS2 funding, because of additional activities Highways England was required to undertake outside the RIS. It included £62 million for managing increased traffic flows in Kent following the end of the transition period for the UK's exit from the European Union on 31 December 2020.

B.3 The budget was set based on spending assumptions from mid-2019-20, so did not reflect planned changes to enhancement commitments which were emerging at the start of 2020-21. These changes (discussed in more detail below) were reflected in the Delivery Plan when it was published in August 2020 and led to a reprofiling of the total capital funding across RP2. This included moving £360 million from 2020-21 to later years. The Spending Review in November 2020 confirmed the revised RIS2 funding allocation of £4,612 million for 2020-21. Highways England revised its budget (including non-RIS expenditure) to £4,693 million, including £1,225 million for resource expenditure and £3,469 million for capital expenditure.

2020-21 capital expenditure

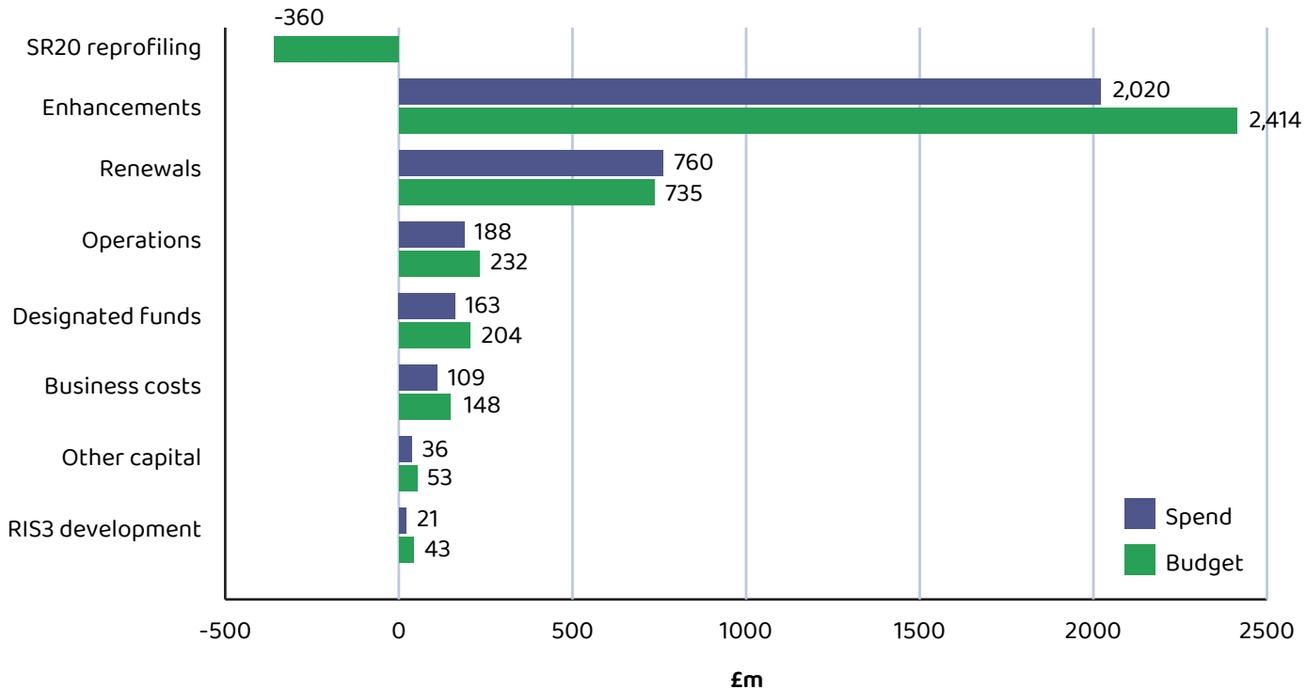
B.4 Highways England's original 2020-21 budget of £5,054 million included £3,829 million for capital expenditure. Against this budget Highways England spent £3,296 million, an underspend of £533 million. However, the budget was affected by the RIS2 funding reprofiling which removed £360 million funding in November 2020. Therefore, against the final 2020-21 capital funding position of £3,469 million there was an underspend of £173 million.

B.5 The company noted that it was aware of the need for some significant reprofiling at the start of 2020-21. However, the budget was set at an earlier stage and based on spending assumptions from mid-2019-20. Highways England also acknowledge that they were overly optimistic about the financial impact enhancement schemes, and operation's project, delays would have on 2020-21 financial performance and should have sought a larger movement of funding than the £360 million requested. In both respects, the company says it has reflected on this and implemented changes to budget planning and management processes.

B.6 Figure B.1 below shows the reprofiling and variance to budget across expenditure categories, discussed in the following section. The COVID-19 pandemic has clearly had an impact on Highways England's spending in 2020-21, in particular causing delays to the company's planned work. Highways England's own assessment is that c£100 million of its capital underspend is attributable to the COVID-19 pandemic.

Figure B.1: 2020-21 Capital expenditure compared to budget

Capital underspends in several categories prior to reprofiling.
£360m reprofiling impacted enhancements, designated funds and business costs



Enhancements

B.7 The enhancements budget of £2,414 million includes expenditure on:

- the 69 major schemes being delivered by Highways England;
- schemes delivered by third parties;
- Smart Motorway Stocktake Action Plan capital spending and
- other scheme related capital costs.

Highways England spent £2,020 million on enhancements in 2020-21, £394 million (16.3%) less than its budget.

B.8 A large proportion of this underspend (£293 million) forms part of the £360 million reprofiling request to move funding to later years of the road period. The remaining enhancement portfolio underspend is largely related to development consent order (DCO) planning delays on a small number of schemes, including the A303 Amesbury to Berwick Down (£36.2 million) and Lower Thames Crossing (£10.2 million). More widely, the timing of land purchases has been affected by delays in planning and starting new contracts under the Regional Delivery Partner framework. The A428 Black Cat to Caxton Gibbet is also underspending by £16 million because there have been delays in the development phase and issues obtaining land access. A further £16 million underspend is caused by a delayed decision on the public inquiry for M2 Junction 5.

RIS3 development

B.9 Highways England spent £21 million on RIS3 development work in 2020-21, £22 million (51%) less than planned. This was due to the late finalisation of RIS2 so there were delays in starting project delivery for RIS3 Development programmes. The company is confident that there is a robust plan for delivery over the remainder of RIS2.

Designated funds

B.10 Highways England spent £163 million across the four designated funds in 2020-21, £41 million (21%) less than planned. The underspend mostly relates to the Environment and Wellbeing fund. Some of it reflects part of the Spending Review 2020 reprofiling where £16 million was agreed for the Biodiversity fund, and £5 million for the Air Quality fund. However, there was £20 million more slippage after the reprofiling. This slippage is across several funds, such as Air Quality where £11 million total was reallocated to the Innovation and Modernisation, and the Environment and Wellbeing funds to be used on a project to provide power capacity at motorway service areas for electric vehicle charge points.

B.11 The COVID-19 pandemic impacted the Innovation and Modernisation, and Users and Communities funds where laboratories had to shut, workforces were affected, and some trials could not be undertaken due to social distancing. There were also some delays in moving projects through the planning process which has caused works to be delayed to later years of RP2. The underspend was reduced slightly by a return of £3.8 million to the safety and congestion fund relating to a pre-RP1 project, following a negotiation with the provider finalised at the end of 2020-21.

Renewals

B.12 Highways England spent £760 million on renewals in 2020-21, £25 million (3.4%) more than planned. The company also utilised £30 million of the CRR, earmarked for renewals.

B.13 This overspend was caused in part by Highways England bringing forward some renewals works. Initially, acceleration of concrete works was planned to avoid road space clashes with some enhancement schemes, particularly in the East region. However, contractual delays affected their delivery and the company also benefited from decreases in pricing. So, Highways England brought forward other renewals across all regions to utilise the approved funding. This process led to a delay in delivery while the company reshaped programmes, causing some back-end loading. Highways England plans to deliver concrete works in future years of RP2 to ensure concrete renewal spending is in line with plan.

Business costs

B.14 Highways England spent £109 million on business costs in 2020-21, £39 million (26%) less than planned. Most of this underspend relates to £36 million of budgeted lease costs that have dropped out of 2020-21. One area in the Midlands had slippage of £20 million on a lease following a change in estates strategy for the region. A further £12 million relates to other leases for office locations that have not been finalised in year due to delays from other Government departments. Working remotely due to COVID-19 impacted on the ability to progress the leases in a timely manner.

Operations

B.15 Highways England spent £188 million on operations in 2020-21, £44 million (19%) less than planned. This underspend consists of three elements:

- the COVID-19 pandemic reduced capitalised pay because of lower recruitment, and reduced travel and subsistence costs resulted in £17 million of underspend, mainly in the Operations directorate.
- a further £23 million underspend was identified in the Operations directorate across several initiatives, including Asset Delivery setup costs, Operational Excellence deliverables that has slipped into 2021-22 due to delivery partner delays, a Diversion routes programme that has been delayed and an underspend on the purchase of vehicles; and
- finally, £13 million of slippage comes from the National Roads Telecommunication Services 2 (NRTS2) Core Network Upgrade and CCTV Transformation. This was partially offset by other Information Technology projects brought into 2020-21.

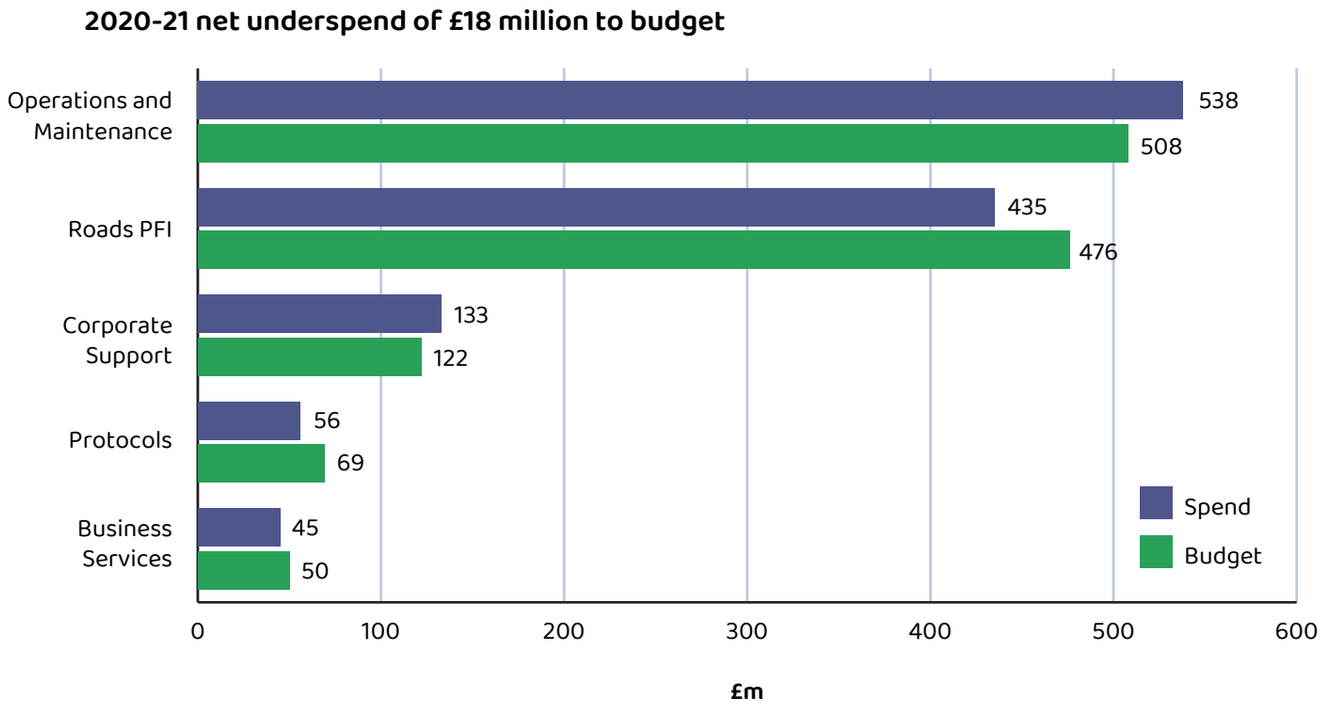
Other capital expenditure

B.16 Highways England spent £36 million on other capital expenditure, £17 million (32%) less than planned. This relates entirely to the M20 moveable barrier solution, which was in place and deployed in December 2020 in line with commitments to manage traffic flows in Kent after the end of the transition period for the UK's exit from the European Union. Following DfT decisions, some of the expected costs were not required within this financial year. This funding was separate to the original RIS funding. Ancillary works are scheduled for 2021-22.

Resource expenditure

B.17 Highways England set a 2020-21 resource expenditure budget of £1,225 million and spent £1,206 million an underspend of £19 million. Figure B.2 shows underspends expenditure on PFI contracts, protocols and business services were offset by overspends on operations and maintenance and corporate support.

Figure B.2: 2020-21 resource budget and expenditure



Operations and Maintenance

B.18 Highways England spent £538 million on operations and maintenance in 2020-21, £30 million (6%) more than planned. This was due to over-delivery/acceleration of maintenance works, making use of underspend on other budgets arising in part due to the COVID-19 pandemic. This additional maintenance delivery included; clearing vegetation and graffiti, dealing with a larger than usual number of defects, technology repairs, COVID-19 pandemic related claims where asset delivery (AD) contractors had to undertake more hygiene cleaning and settling a number of contract compensation events.

Private Finance Initiative contracts (PFI)

B.19 Highways England spent £435 million on PFI contracts in 2020-21, £41 million (9%) less than planned. The cause was contract savings due to the impact of COVID-19 lockdown measures on traffic volumes and lower inflation rates than predicted.

Corporate Support

B.20 Highways England spent £133 million on corporate support in 2020-21, £11 million (9%) more than planned. This is mostly due to an existing cost pressure of £19 million across several parts of Operation's expenditure. This was partly offset by underspends on projects and pay These included £8 million on Operation Brock [22] due to lower usage requirements and £2.6 million due to the COVID-19 pandemic impacting the planned media campaign schedule. Highways England postponed some campaigns while road usage was low to prioritise government's COVID-19 messaging and to maximise their reach and effectiveness at a later date.

Business Services

B.21 Highways England spent £45 million on business services in 2020-21, £5 million (10%) less than planned. This includes £1 million from not filling new job vacancies, £2 million from implementation of the company's pavement management system that has slipped into next year and £1 million of future technologies unbudgeted income.

Protocols

B.22 Highways England spent £56 million on protocols in 2020-21, £13 million (19%) less than planned. This is largely due to £11 million Dart Charge savings driven by a combination of gain share due to contractor performance, and lower traffic volumes because of COVID-19 pandemic lockdowns.

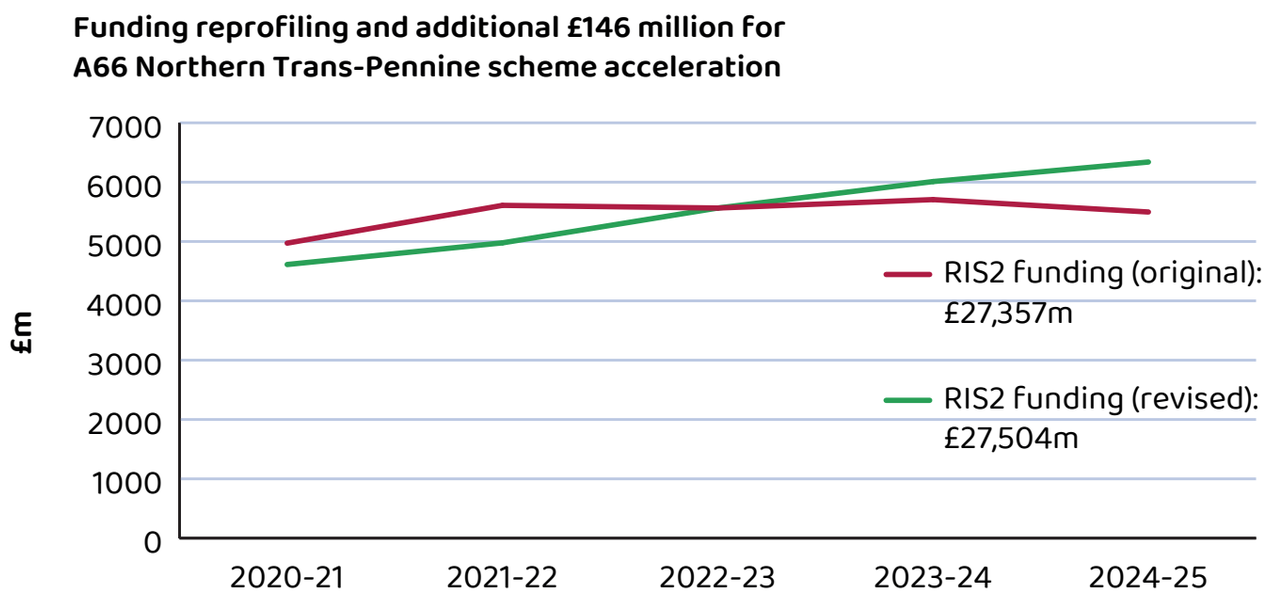
[22] Traffic management system in Kent used during cross-Channel traffic problems.

RP2 funding

B.23 The total funding allocated to deliver the requirements of RIS2 during RP2 was originally set at £27,358 million. In 2020-21, at the Spending Review, a further £146 million was announced to bring-forward the delivery of the A66 Northern Trans-Pennine scheme. This increased the RIS2 funding to £27,504 million.

B.24 More significantly, the Treasury also agreed to a request from Highways England to re-profile its capital funding, moving in total £1 billion back from 2020-21, 2021-22, 2022-23 in to 2023-24 and 2024-25. This was required mainly due to planning and COVID-19 related delays affecting the delivery timescales for major schemes, identified in the final years of RP1 and the start of RP2. The need for some reprofiling became known when RIS2 was being finalised, but it was agreed with DfT to defer this to the Spending Review later in 2020. This also allowed the impact of the Smart Motorway Action Plan and the COVID-19 pandemic to be better understood.

Figure B.3: Change in RIS2 funding at Spending Review 2020



B.25 In June 2019, prior to the start of RP2, we advised DfT on Highways England's draft plans for RIS2. Whilst overall we found that the plans met the requirement to be 'challenging and deliverable', we raised concerns about the complexity of schemes (size and DCO required) when compared with schemes delivered in RP1. The new SR20 funding profile reflects subsequent (pre-RP2 and early 2020-21) changes to Highways England's schedule assumptions, meaning later start of works and/or open for traffic dates for most of its enhancement schemes. We recognise that the changes may have reduced individual scheme schedule risk but are concerned that later commitment dates add risk that parts of the RIS will not be delivered during RP2 and therefore financial risk of funding being unused or used inefficiently.

RP2 capital expenditure forecast

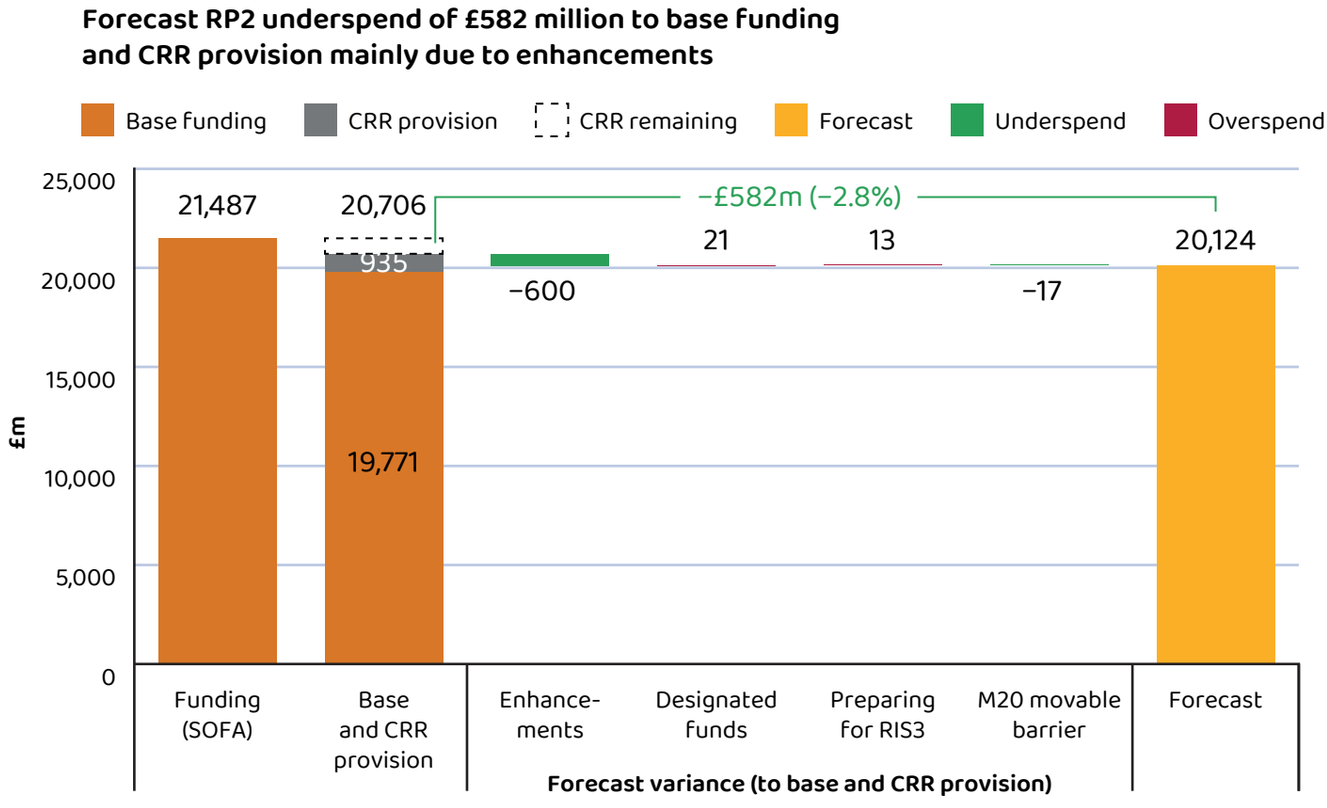
B.26 Highways England is forecasting capital spend of £20,124 million in RP2, £1,363 million (6.5%) lower than its total capital funding of £21,487 million as shown in figure B.4. For RIS2 the capital funding included £1,541 million (later increased to £1,716 million) of CRR to cover portfolio level cost risks in addition to base funding. As the company identifies future risks for which it does not have sufficient base funding it 'provisions' (sets aside within the reserve) CRR for that risk. Highways England reports its forecast spending against the base funding and CRR provisioned.

B.27 At the end of 2020-21, Highways England's forecast spending in RP2 was £582 million (–2.8%) lower than its base funding and CRR provision of £20,706 million. This was caused largely by a forecast underspend on enhancements of £600 million, (–4.4%) and is discussed further in the following section.

B.28 There were smaller value forecast variances in other areas. These are forecast overspends on: designated funds (£21 million, 2.2%) due to delivery of some RP1 air quality work in RP2, and preparing for RIS3 (£13 million, 4%) due to planned investment in ports infrastructure. There is also a forecast underspend on the M20 moveable barrier (–£17 million, –29.8%) in line with DfT decisions about its deployment.

B.29 Highways England and DfT have been considering options for use of the forecast underspend to ensure the funding allocated for RIS2 is spent on Government priorities for the SRN. The Spending Review expected later in 2021 provides an opportunity to address this issue and ensure funding and delivery timescales are aligned, recognising the impact of any further change since the reprofiling in November 2020.

Figure B.4: RIS2 base funding and CRR provision with forecast variance Q4 2020-21



Enhancements

B.30 Highways England is forecasting to spend £12,889 million on enhancements in RP2, an underspend of £600 million (4.4%) to baseline (base funding and CRR provision), with £652 million CRR currently unallocated to enhancements risk.

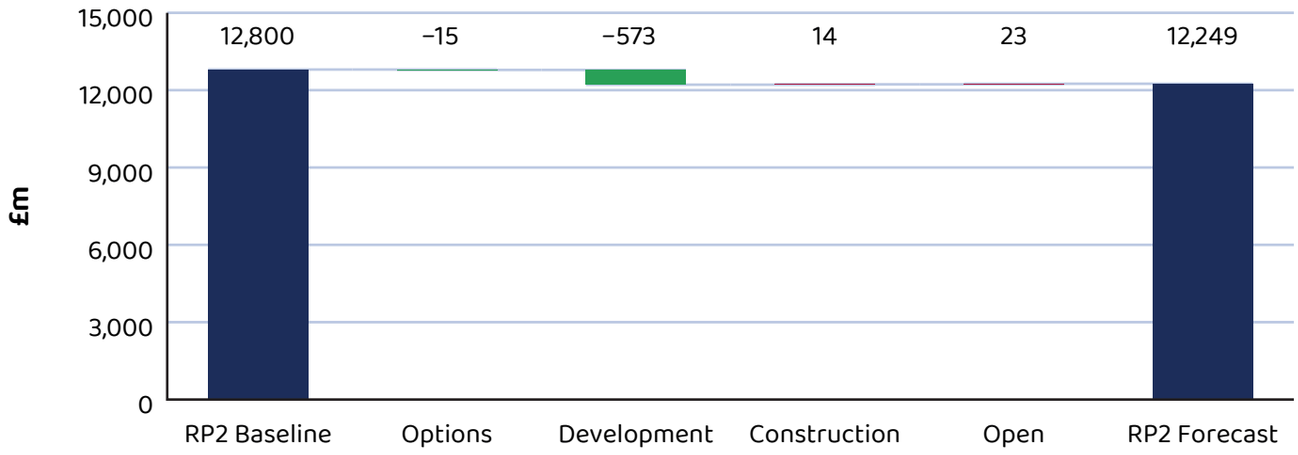
B.31 Within the enhancements funding, there are 69 schemes specified in the Delivery Plan, that have commitments to start work or open for traffic in RP2. These 69 schemes have a total RP2 baseline including CRR provision of £12,800 million and represent 95% of enhancement spend in the RP2 baseline.

B.32 Figure 5 below shows that overall, these schemes are forecasting to spend £12,249 million across RP2, resulting in a forecast underspend of £551 million (4.3%). This underspend is driven by a small number of variances on larger schemes currently in the development phase. The two largest underspends are Tier 1 schemes; the A303 Amesbury to Berwick Down (£269 million) and A358 Taunton to Southfields (£199 million). These underspends relate to cost of work deferred from RP2 to RP3, caused by planning and governance delays. The underspend does not include the expected financial effect of the 12-month delay on Lower Thames Crossing for resubmission of the planning application. We are concerned that whilst the delay was known in November 2020, Highways England was still evaluating the RP2 and total outturn impact at year-end.

B.33 The forecast underspend on schemes currently in development is offset slightly by a forecast overspend of £31 million on the development scheme A66 Northern Trans-Pennine, accelerated as part of Project Speed. The net position of schemes in the other phases are relatively small variances.

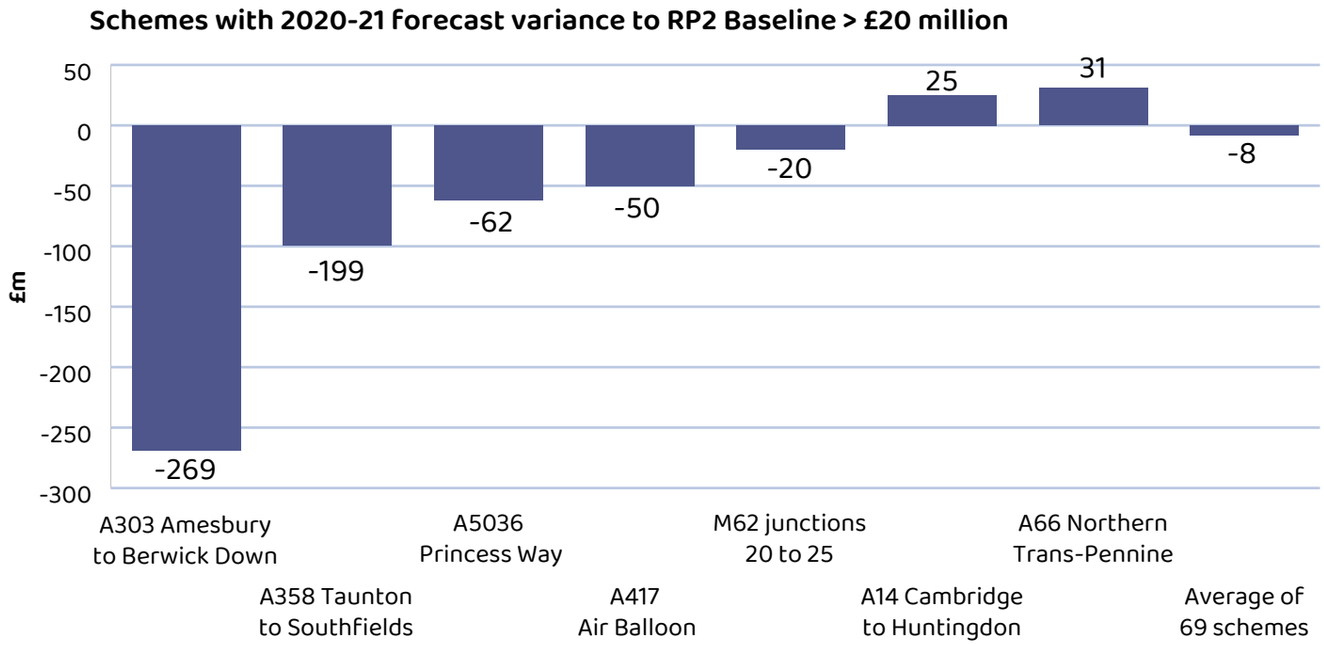
Figure B.5: Major scheme forecast variances by phase

Forecast variance mainly due to forecast underspend on schemes in development



B.34 Fifty-six of the 69 schemes within the portfolio are forecasting within 10% of their baseline, after CRR adjustments to their baseline. Of these schemes 21 have had baseline increases due to provision from the CRR (where a future risk has been identified) and 24 have had baseline decreases due to 'add-back' to the CRR (where a realisable saving has been identified). Figure B.6 below shows the schemes with the largest forecast (£m) variances.

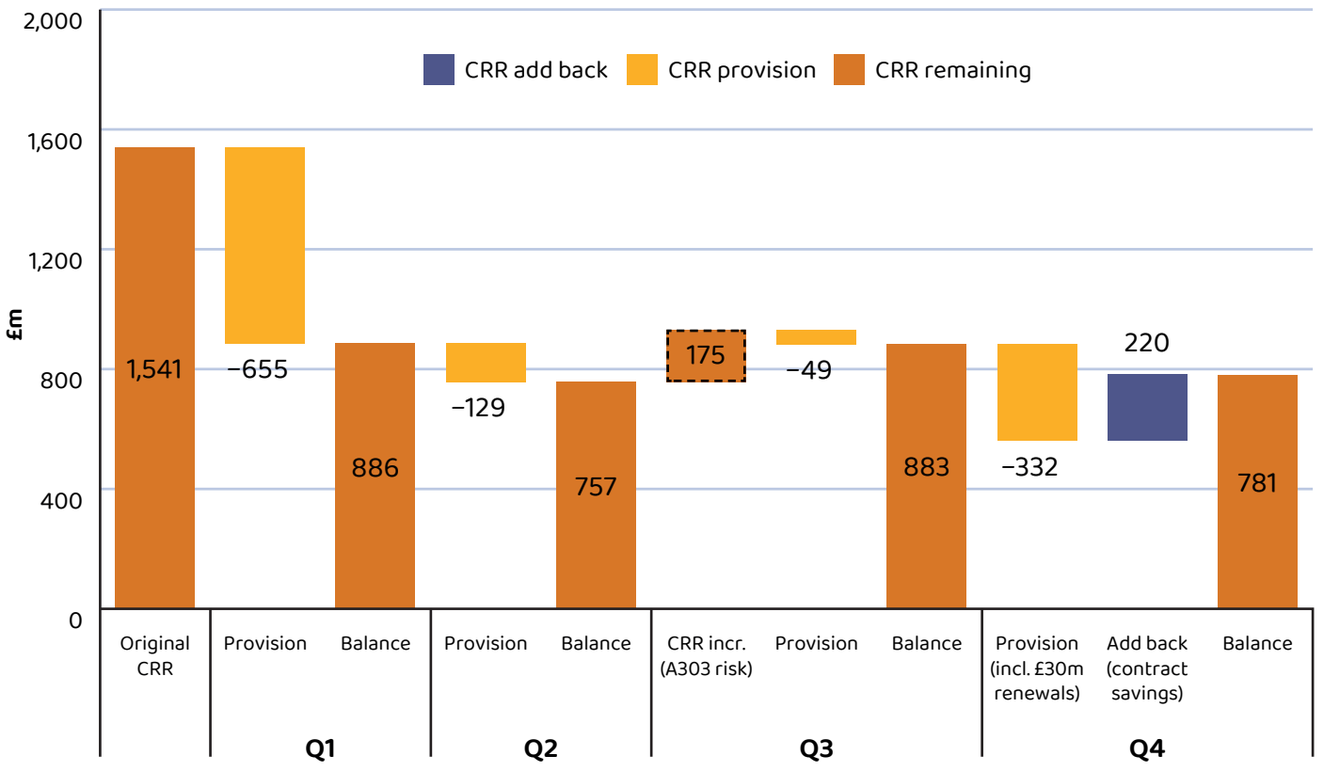
Figure B.6: Delivery Plan enhancement schemes with RP2 forecast variances +/–£20 million



B.35 Figure B.7 shows CRR movement in 2020-21. Highways England business planning at the start of RIS2 identified a need to spend £655 million more on enhancements than its base funding, so it made provision for this amount from its CRR. In subsequent quarters, it made a further provision of £500 million (for 21 schemes, other enhancements and renewals) but has also added back £220 million (for 24 schemes) in to CRR where there have been favourable outcomes in contract price negotiations[23]. In addition, the company moved £175 million of A303 Amesbury to Berwick Down base funding to the CRR during Q3, increasing the total CRR funds to £1,716 million. To date £781 million (46%) of the CRR remains unprovisioned (not yet allocated to a risk).

Figure B.7: CRR movement during 2020-21 affecting RP2 forecast expenditure.

Highways England has £781 million CRR remaining (unprovisioned to scheme and renewal baselines) for unidentified risks in RP2



[23] Highways England has not reported how many scheme's baselines were adjusted using the initial £655 million provision.

B.36 The use of the CRR is important for understanding Highways England's reported financial forecast because scheme baselines, and therefore variances, take account of any CRR provision/ add-back. However, draw-down of the CRR into scheme budgets only occurs after approval by the Highways England Investment Decision Committee when construction budgets are agreed. Of the £935 million provisioned to date, the company has drawn down £426 million for use in RP2.

B.37 In 2021-22 we will commission a review of Highways England's use of the CRR in RP2 to identify any improvements to policy for its use and reporting, toensure further clarity over financial performance, treatment of risk and efficiency performance.

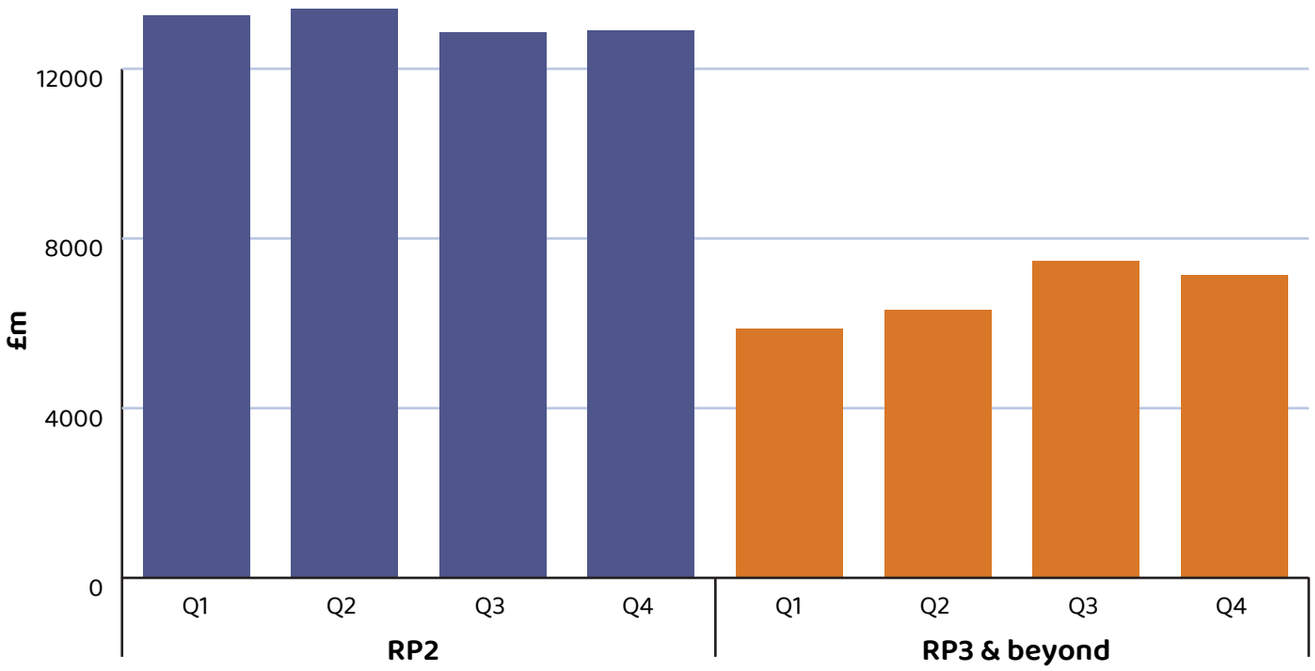
Major schemes – total outturn forecast capital expenditure

B.38 Total outturn refers to the cost of enhancement schemes to completion across all road periods. Highways England's total outturn forecast spend as at the end of 2020-21 is £22,803 million. This has increased by £756 million (3.4%) since Q1 of 2020-21.

B.39 Figure B.8 shows that during 2020-21 there has been cost movement from RP2 into RP3 and beyond as some schemes have been delayed.

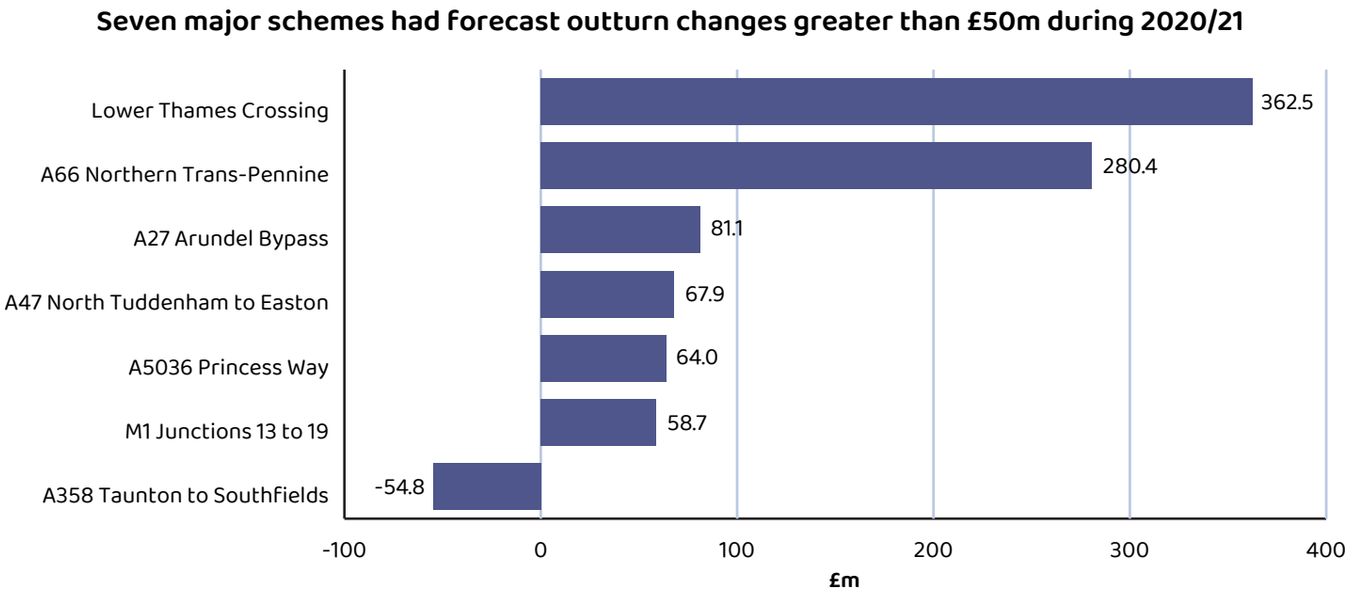
Figure B.8: Enhancement schemes expenditure forecast for RP2, RP3 and beyond

During 2020-21 expenditure forecast in RP2 has reduced whilst it has increased in RP3



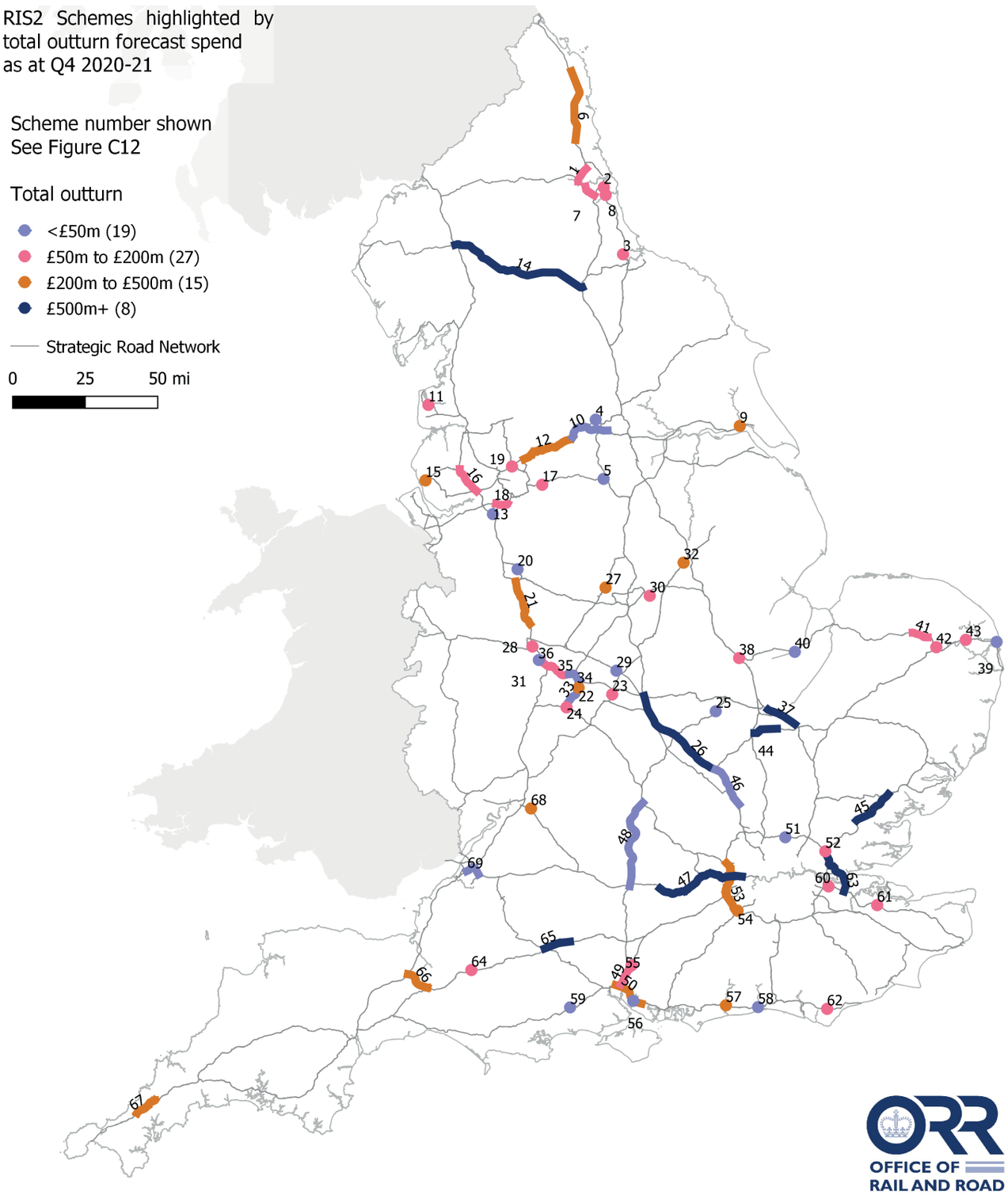
B.40 Figure B.9 shows the schemes with the largest change in forecast total outturn during the year. In general, the schemes where delay has caused cost to move from RP2 to RP3 do not appear to be the largest cause of total outturn cost increase. In fact, the A358 Taunton to Southfields had the second largest forecast underspend in RP2 (attributable to delay) also had the largest decrease in its forecast total outturn cost. The main cause of the forecast total outturn increase of £756 million are the Lower Thames Crossing scheme, largely due to scope changes to meet safety/environmental requirements and address scope uncertainty (£363 million) and the A66 where acceleration through Project Speed has increased the cost of the scheme by £280 million.

Figure B.9: Change in total outturn forecast Q1 – Q4 2020-21 for schemes where variance is greater than £50 million



B.41 Figure B.10 shows the 69 major schemes Highways England is required to deliver on the strategic road network and indicates their size based on forecast (total outturn) cost.

Figure B.10: RIS2 major schemes on strategic road network (colour represents cost)



Delegated expenditure controls

B.42 During RP1, we reviewed and reported to DfT annually on the financial controls that Highways England is required to have in place because the company has a broader level of delegated authority to incur expenditure on behalf of DfT.

B.43 In 2019-20, DfT agreed a change in approach reflecting the increased maturity of the company and the level of compliance with assurance arrangements found in our final review. Under the new approach of self-assurance, Highways England is required to conduct its own review, share the findings with ORR and report on the outcome in the Performance Monitoring Statements (PMS).

B.44 The PMS contained a statement that "Highways England maintains an effective assurance regime for the expenditure of public money and that its decision making meets the criteria set out in the Highways England Framework Document". The company has shared its 2020-21 self-assessment report with us and we are content that it supports the declaration in the PMS.

Annex C: Network investment delivery

C.1 This annex describes Highways England's performance against its investment plan in 2020-21. It also considers risks to delivery during the remainder of road period 2 (RP2).

C.2 The second road investment strategy (RIS2) sets out the outcomes and outputs for enhancements and renewals that Highways England must deliver over RP2. The investment plan, part of the RIS, outlines, a five-year capital funding settlement for Highways England to invest in maintaining, renewing and improving the strategic road network, this includes:

- a programme of enhancement schemes of £14,118 million;
- an operation, maintenance and renewals capital programme of £5,825 million;
- an operation, maintenance, renewals and business cost resource programme of £6,074 million;
- a £870 million programme of designated funds investment; and
- a £472 million scheme development fund for the third road period.

C.3 We monitor and report on Highways England's performance against the investment plan.

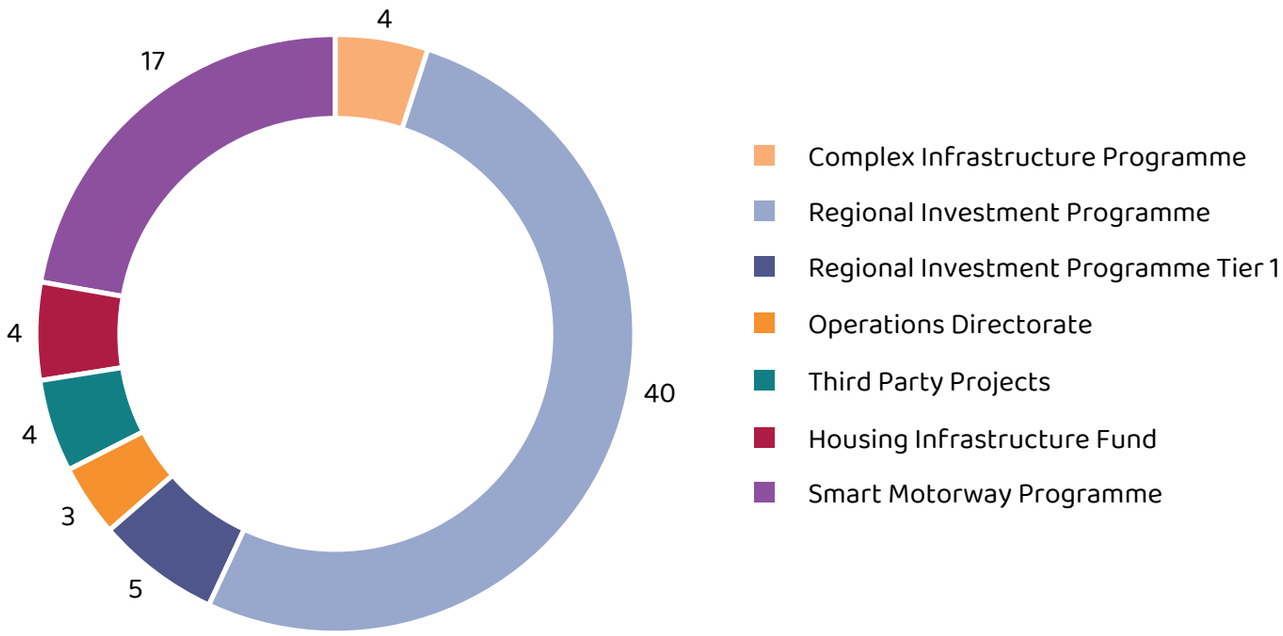
C.4 The Highways England Delivery Plan 2020-25 set out how the company plans to deliver the requirements of the RIS2 investment plan.

Enhancement portfolio overview

C.5 The RIS2 enhancement portfolio is illustrated in Figure C.1 Highways England is responsible for progressing the delivery of 69 enhancement schemes during RP2. These enhancements are intended to improve capacity and connectivity across the strategic road network (SRN), for example by improving junctions, adding new lanes, opening the hard shoulder for traffic or bypassing congested parts of the network. Highways England also supports the delivery of four Housing Infrastructure Fund (HIF) schemes and four third-party schemes.

Figure C.1: Breakdown of RIS2 portfolio

Project categories within RIS2 enhancement programme



C.6 Highways England's Delivery Plan said that the company would start work on 43 schemes and open for traffic 52 schemes over RP2. Highways England is required to support a group of third party schemes within the Delivery Plan. These schemes are associated with both commercial and residential developments or are a part of the HIF programme that specifically targets housing provision. The schemes in this group are:

- Third Party Schemes:
  - M55 Junction 2;
  - M11 Junction 7a;
  - M62 Junction 19; and
  - A5 Towcester relief road.
- Housing Infrastructure Fund Schemes:
  - A249: Swale Transport Infrastructure;
  - A120 Tendring / Colchester Borders Garden Community;
  - M5 Junction 10 and Link Road; and
  - M6 South Lancaster Growth Catalyst Junction 33a.

Figures C.2 and C.3 illustrates the distribution of RIS2 schemes during the road period.

Figure C.2: 2020-2025 Delivery Plan Start of Works schedule

	2020-21	2021-22	2022-23	2023-24	2024-25	RIS2 Total
Highways England commitments	6	9	15	7	6	**43**
Third Party (with funding contribution and support from the company)	2	1				**3**
HIF (supported by the company)		1	2		1	**4**

Figure C.3: 2020-2025 Delivery Plan Open for Traffic schedule

	2020-21	2021-22	2022-23	2023-24	2024-25	RIS2 Total	RIS3 and beyond
Highways England commitments	2*	9	15	9	17	**52**	17
Third Party (with funding contribution and support from the company)			2	1		**3**	1
HIF (supported by the company)					3	**3**	1

*M271/A35 Redbridge roundabout upgrade is excluded – missed commitment from RIS1 and therefore not included in Highways England Delivery Plan 2020-25.

C.7 Highways England has a further Delivery Plan commitment to develop a pipeline of 32 schemes for the third road period (2025-30).

C.8 At the end of RP1, Highways England had 32 schemes in construction. The company reviewed the portfolio. As a result, the number of schemes in construction at the beginning of RP2 was reduced to 26 schemes, excluding third party and HIF schemes. The company:

- combined three schemes into one scheme: M3 J9 – 14, M3 J10 – 11 and M3 J12 – 14 into M3 J9 – 14;
- combined two schemes into one scheme: A34 Oxford junctions and A34 Technology enhancements into A34 Newbury to Oxford enhancements;
- one scheme: M271/A35 Redbridge roundabout upgrade missed its RIS1 commitment, it carried over into RP2 and therefore not included in the Delivery Plan; and
- rescheduled two schemes as part of the Smart Motorway Safety – Stocktake and Action Plan: M62 J20 – 25 and A1M J6 – 8.

Enhancements portfolio complexity and risk

C.9 Highways England faces challenges to the successful delivery of the RIS2 portfolio. There are several key areas the company must manage, including but not limited to:

- large and complex Tier 1 schemes that involve engineering challenges and collaboration with a wide range of stakeholders; and
- development Consent Order (DCO) planning applications for any scheme categorised as a nationally significant infrastructure project.[24]

Tier 1 schemes

C.10 In RP2, Highways England has a significantly larger Tier 1 programme than in RP1. The Tier 1 schemes included in RIS2 are listed in figures C.4 and C.5.

[24] Under the Planning Act 2008, nationally significant infrastructure projects (NSIPs) are large scale projects falling into five general categories, one of which is transport. Section 22 of the 2008 Act sets out the parameters for highways schemes counted as NSIPs.

Figure C.4: Tier 1 schemes committed to start work in RP2

RIS2 portfolio No.	RIS2 scheme name	Start of work
14	A66 Northern Trans-Pennine	2023-24
44	A428 Black Cat to Caxton Gibbet	2022-23 Q2
45	A12 Chelmsford to A120	2023-24
63	Lower Thames Crossing	2022-23 Q4
65	A303 Amesbury to Berwick Down (Stonehenge)	2023-24 Q2
66	A358 Taunton to South and Westfields	2024-25
68	A417 Air Balloon	2022-23

Figure C.5: Tier 1 schemes committed to opening for traffic in RP2

RIS2 portfolio No.	RIS2 scheme name	Open for Traffic
37	A14 Cambridge to Huntingdon	2020-21 Q3*
47	M4 Junctions 3 – 12	2022-23 Q1**
68	A417 Air Balloon	2024-25

* Scheme opened for traffic 2020-21 Q1

** Subject to the Department for Transport's formal change control process, and expected to be confirmed in HE's Delivery Plan Update.

C.11 Two of the most significant and high-profile Tier 1 schemes are:

- **Lower Thames Crossing:** This will be the longest road tunnel in the UK and requires around 50 new bridges and viaducts to be built. It has a scheme budget of £6.3 billion and is intended to increase capacity across the River Thames (east of London) by 90%. The scale and complexity of the project is such that Highways England has set up a separate directorate under a dedicated executive director to manage it.

- **A303 Amesbury to Berwick Down (Stonehenge):** This £1.9 billion project has elicited significant interest from a wide range of stakeholders. In order to mitigate the impacts of the existing A303, Highways England is proposing to construct a tunnel that will run adjacent to and under the World Heritage site at Stonehenge. The proximity of the site poses significant engineering challenges and risk.

Development Consent Orders (DCOs)

C.12 The large number of DCO applications required to deliver the RIS2 portfolio poses a significant risk for the delivery of Highways England enhancement portfolio. Applying for planning permission involves collaboration with a wide range of stakeholders and the company need to ensure that sufficient time is allowed for this in their scheme programmes. Highways England has committed start of works dates and if the process of decision and any subsequent clarifications is extended then this can put pressure on the company's ability to meet those commitments. During the first year of RP2, we have seen examples of these pressures, which in some instances has led to changes needing to be made.

Figure C6 lists all 34 RIS2 schemes that have a DCO requirement, together with a view on risks to obtaining approval. There are 20 schemes that are due to start works in RP2 that have yet to receive DCO consent. Additionally, the A46 Coventry junctions (second phase) requires a DCO approval. The first phase has started work and did not require DCO approval.

Figure C.6: Schemes with a Development Consent Order in RP2

DCO has been approved

DCO application submitted

DCO application yet to be submitted

RIS2 Portfolio No.	RIS2 scheme name	Risks/issues
2	A19 Testos	In construction, start of construction commitment met
6	A1 Morpeth to Ellingham	Start of construction Q2 2022-23
7	A1 Birtley to Coal House	Changes were required to DCO. Construction due to commence Q2 2021-22
8	A19 Down Hill Lane	In construction, start of construction commitment met
9	A63 Castle Street	Deadline for a decision was delayed by 2 months, to allow Highways England to respond to clarifications requested by the Secretary of State. Now in construction
11	A585 Windy Harbour to Skippool	In construction, start of construction commitment met
14	A66 Northern Trans-Pennine	Tier 1 scheme with potential challenge
15	A5036 Princess Way	Start of construction 2023-24
17	Mottram Moor Link Road and A57 Link Road	Application delayed (environmental concerns)
19	M60/M62/M66 Simister Island	Pre application consultation extended to allow for COVID-19 restrictions

RIS2 Portfolio No.	RIS2 scheme name	Risks/issues
22	M42 Junction 6	In construction, start of construction commitment met
23	A46 Coventry Junctions	DCO required for second phase, first phase is under construction.
27	A38 Derby Junctions	DCO decision subject to judicial review
28	M54-M6 Link Road	Examination closed April 2021
31	M6 Junction 10	In construction, start of construction commitment met
32	A46 Newark Bypass	Start of construction 2024-25
37	A14 Cambridge to Huntingdon	Tier 1 scheme open for traffic
38	A47 Wansford to Sutton	Start of construction Q4 2022-23
41	A47 North Tuddenham to Easton	Start of construction Q4 2022-23
42	A47 Thickthorn Junction	Start of construction Q4 2022-23
43	A47 Blofield to North Burlingham	Start of construction Q4 2022-23
44	A428 Black Cat to Caxton Gibbet	Tier 1 scheme with potential challenge
45	A12 Chelmsford to A120	Tier 1 scheme with potential challenge
47	M4 Junctions 3-12	Tier 1 scheme in construction, start of construction commitment met
52	M25 Junction 28	Examination closed on 7 July 2021
54	M25 Junction 10	DCO decision has been delayed until November 2021 to allow further consideration of environmental issues
55	M3 Junction 9	Start of construction 2023-24
57	A27 Arundel Bypass	Start of construction 2023-24
63	Lower Thames Crossing	Tier 1 scheme. DCO application has been delayed by Highways England
64	A303 Sparkford to Ilchester	DCO experienced a challenge, but now approved
65	A303 Amesbury to Berwick Down (Stonehenge)	Tier 1 scheme approved but subject to current judicial review

RIS2 Portfolio No.	RIS2 scheme name	Risks/issues
66	A358 Taunton to South and Westfields	Tier 1 scheme with potential challenge
67	A30 Chiverton to Carland Cross	In construction, start of construction commitment met
68	A417 Air Balloon	Tier 1 scheme – environmental challenges

Enhancement portfolio changes

C.13 During the first year of RP2, Highways England proposed some changes to the enhancement portfolio. As a result, some enhancement schemes are now programmed for delivery in later years of the reporting period, while others have been brought forward within RP2 and one scheme has been cancelled due to poor value for money. Figure C.7 summarises the changes to enhancement portfolio.

Figure C.7: Summary of changes to RIS2 enhancement portfolio

Phase	Schedule impact	No.	Scheme name	Change description	Remarks
Start of Work	Cancelled	1	A5 Dodwells to Longshoot	Cancelled as a scheme for delivery in RIS2 and removed as a RIS commitment.	Increased complexity in design and significant cost increases caused the value for money to reduce. The scheme represents poor value for money.
	Advanced	2	A21 safety package	Advance SOW from RIS3 pipeline to 2021-22 Q1.	Removed from RIS3 scheme pipeline and advanced for delivery in RP2.
			A66 Northern Trans-Pennine	Accelerated SOW from 24-25 Q4 to 23-24 Q4. OFT date remains as RP3.	Included in Spending Review 2020 announcement as part of Project Speed.
	Delayed	3	M2 Junction 5	Moved SOW from 2020-21 to Q2 2021-22. OFT date remains 2024-25.	Delay in Public Inquiry due to impact of COVID-19 pandemic and subsequent planning permission.
			A303 Sparkford to Ilchester	Moved SOW from 2020-21 Q4 to 2021-22 Q3. OFT date remains 2023-24.	DCO delay and recommendation to refuse. Further Highways England input allowed DCO approval in January 21.
			A303 Amesbury to Berwick Down	Moved SOW from 2022-23 Q2 to 2023-24 Q2. OFT date remains as Q3 2028-29.	Examining Authority decision to refuse. SoS has given approval, but now subject to judicial review.

Phase	Schedule impact	No.	Scheme name	Change description	Remarks
Open for Traffic	Advanced	1	A21 safety package	Due to advanced SOW from RIS3 pipeline, this is an additional scheme to OFT.	Removed from RIS3 scheme pipeline and advanced for delivery in RP2.
	Delayed	4*	M56 J6 – 8	Delay OFT from 2021-22 Q4 to 2022-23 Q2.	Schemes are already in construction. The delay is due to the requirement to accelerate the installation of Stopped Vehicle Detection (SVD) technology.
			M4 J3 – 12	Delay OFT from 2021-22 Q4 to 2022-23 Q1.	
			M6 J13 – 15	Delayed OFT from 2021-22 Q2 to Q4.	
			M27 J4 – 11	Delayed OFT from 2021-22 Q2 to Q4.	

* Subject to the Department for Transport's formal change control process, and expected to be confirmed in HE's Delivery Plan Update.

C.14 As committed dates move later in the road period – a small in number at present – and more risks emerge, the combined impact may undermine the delivery of the RIS2 portfolio and its benefits. Highways England has not provided details to us about how it has assessed the potential impact of these changes at portfolio-level. There are risks associated with its supply chain's capacity to deliver a programme that condenses schemes into future years. If the programme for scheme delivery becomes more condensed there will be more roadworks on the network, which will impact the road user and communities.

C.15 At the start of the second road period, Highways England had a commitment to start work on 43 schemes. Although there have been changes to the composition of the portfolio the number of schemes remains at 43. The company had committed to open for traffic 52 schemes in RP2. That number has since increased to 53. Figure C.8 gives detail of these changes.

Figure C.8: Delivery Plan commitments comparing delivery at the start of 2020-21 with the end of 2020-21 position

Phase	Original Delivery Plan commitments (2020-25)	Progress	Sub-total	Details	Revised commitment total
Start of works	43	Start of works in 2020-21 (in construction)	5	A19 Down Hill Lane M6 Junctions 21A – 26 A47 Guyhirn Junction M25 Junction 25 A31 Ringwood	43
		Cancelled	–1	A5 Dodwells to Longshoot	
		Advanced as a new RIS2 scheme	1	A21 safety improvements (in development)	
		In development	35	On schedule	
		In options	3	On schedule	

Phase	Original Delivery Plan commitments (2020-25)	Progress	Sub-total	Details	Revised commitment total
Open for traffic in RP2	52	Open for traffic in 2020-21	3*	A14 Cambridge to Huntingdon A500 Etruria A61 Westwood Roundabout	53
		In construction	27	27 on schedule to OFT in RP2 in addition one scheme scheduled to OFT in RP3.	
		In options or development for delivery in RP2	22	On schedule to meet their RP2 committed OFT date.	
		Advanced as new schemes in the RIS	1	A21 Safety improvements	

* M271/A35 Redbridge roundabout upgrade is excluded from the total – missed commitment from RIS1 and therefore not included in Highways England Delivery Plan 2020-25

Enhancement delivery 2020-21

C.16 RIS2 contains eight schemes due to start work in 2020-21. Highways England's Delivery Plan said that it would start work on six enhancement schemes in 2020-21. Two further schemes will be delivered by third parties and supported by the company.

C.17 The company reached agreement with DfT to start work on four schemes, instead of six. Three started work on schedule and one, the A19 Down Hill Lane scheme, started work two quarters ahead of schedule. Of the remaining two schemes:

- M2 Junction 5 improvements – start of work was deferred to 2021-22 Q2 as a result of a planning inquiry delay: and
- A303 Sparkford to Ilchester – start of work was deferred to 2021-22 Q3. Examining Authority recommended refusal, the Secretary of State deferred his decision to allow Highways England time to respond to the issues raised.

C.18 During 2020-21, Highways England also started work early on one further scheme, A31 Ringwood. Its start of work has been brought forward from 2021-22 Q2. Figure C9 shows 2020-21 start of work committed and delivery dates.

C.19 The third parties have started work on two schemes, as planned.

Figure C.9: 2020-21 start of work commitment and delivery dates

Scheme name	Committed date	Delivery date
A19 Down Hill Lane	2020-21 Q4	September 2020 (ahead of programme)
M6 Junctions 21A-26	2020-21 Q4	March 2021 (on programme)
A47 Guyhirn Junction	2020-21 Q4	February 2021 (on programme)
M25 Junction 25	2020-21 Q4	January 2021 (on programme)
M2 Junction 5	2020-21 Q4	Deferred to 2021-22
A303 Sparkford to Ilchester	2020-21 Q4	Deferred to 2021-22
A31 Ringwood	2021-22 Q2	March 2021 (ahead of programme)

Milestone ahead of schedule | Milestone on schedule | Scheme deferred

C.20 Of the two schemes that Highways England planned to open for traffic in 2020-21, both opened for traffic ahead of schedule. The A500 Etruria opened for traffic one quarter ahead of schedule and the A14 Cambridge to Huntingdon opened for traffic two quarters ahead of schedule. The company also opened for traffic one additional scheme, the A61 Westwood Roundabout, ahead of its committed date of 2021-22 Q1. Additionally, the M271/A35 Redbridge roundabout upgrade was opened for traffic in 2020-21 Q2. It was a missed commitment, delayed from RP1, that did not have an RP2 Delivery Plan commitment. Figure C.10 shows 2020-21 open for traffic committed and delivery dates.Additionally, the M271/A35 Redbridge roundabout upgrade was opened for traffic in 2020-21 Q2. It was a missed commitment, delayed from RP1, that did not have a RP2 Delivery Plan commitment. Figure C.10 list schemes' open for traffic commitment delivery.

Figure C.10: 2020-21 open for traffic commitment and delivery dates

2020-21 SOW commitments	Committed date	Actual date
A500 Etruria	2020-21 Q3	July 2020 (ahead of programme)
A14 Cambridge to Huntingdon	2020-21 Q3	May 2020 (ahead of programme)
A61 Westwood Roundabout	2021-22 Q1	February 2021 (ahead of programmed 2021-22 commitment)
M271/A35 Redbridge roundabout upgrade*	Delayed from RP1	September 2020

*M271/A35 Redbridge roundabout upgrade – missed commitment from RIS1 and therefore not included in Highways England Delivery Plan 2020-25.

Delivery for the remainder of RP2

C.21 Highways England's Delivery Plan committed to start work on 43 enhancement schemes by the end of RP2. As a result of work in 2020-21, there are 38 schemes now programmed for delivery in the remainder of the road period (2021-25).

C.22 Of these 38 schemes, Highways England identified two schemes that are at risk of delay to start of work as follows:

- A38 Derby Junction due to a statutory planning process challenge. Highways England was notified of a judicial review. The claim is a live litigation case; and
- Lower Thames Crossing due to withdraw of the DCO application and more detail being supplied as part of the DCO application.

C.23 The Delivery Plan committed to open for traffic 52 schemes. The company later agreed to advance one scheme from the RIS3 pipeline, taking the total to 53 schemes. It has successfully opened for traffic three schemes, leaving 50 schemes programmed to open for traffic in the remainder of the road period.

C.24 For those schemes that are planned to open for traffic, Highways England identified the A417 Air Balloon scheme that is at risk of missing its commitment because of a design change following stakeholder consultation.

C.25 Highways England uses its project control framework (PCF) process to define lifecycle stages to develop and deliver enhancement schemes. Between the end of RP1 and the end of 2020-21, Highways England has largely kept a consistent number of projects in options and development stages, indicating that it is developing a consistent pipeline of schemes. It has reduced some risks associated with start of works dates and provided a pipeline of schemes for the start of RIS3.Between the end of RIS1 and the end of 2020-21, Highways England has largely kept a similar number of projects in options and development stages, indicating that it is developing a consistent pipeline of schemes. It has reduced some risks associated with start of works dates and provided a pipeline of schemes for the start of RIS3.

C.26 During 2020-21, Highways England made progress in developing schemes prior to construction. The company progressed two schemes from options to development and moved five schemes from development to construction. One scheme moved back from development to options, one scheme was cancelled, and one scheme moved from the RIS3 pipeline to development. By the end of March 2021, the company had 28 schemes in construction.

C.27 Highways England has provided us with its assumptions for the dates when its enhancement schemes will progress through the four lifecycle stages of development. We will continue to monitor progress against these in the remainder of the road period.

Figure C.11: RIS2 enhancement schemes on strategic road network 2020-21

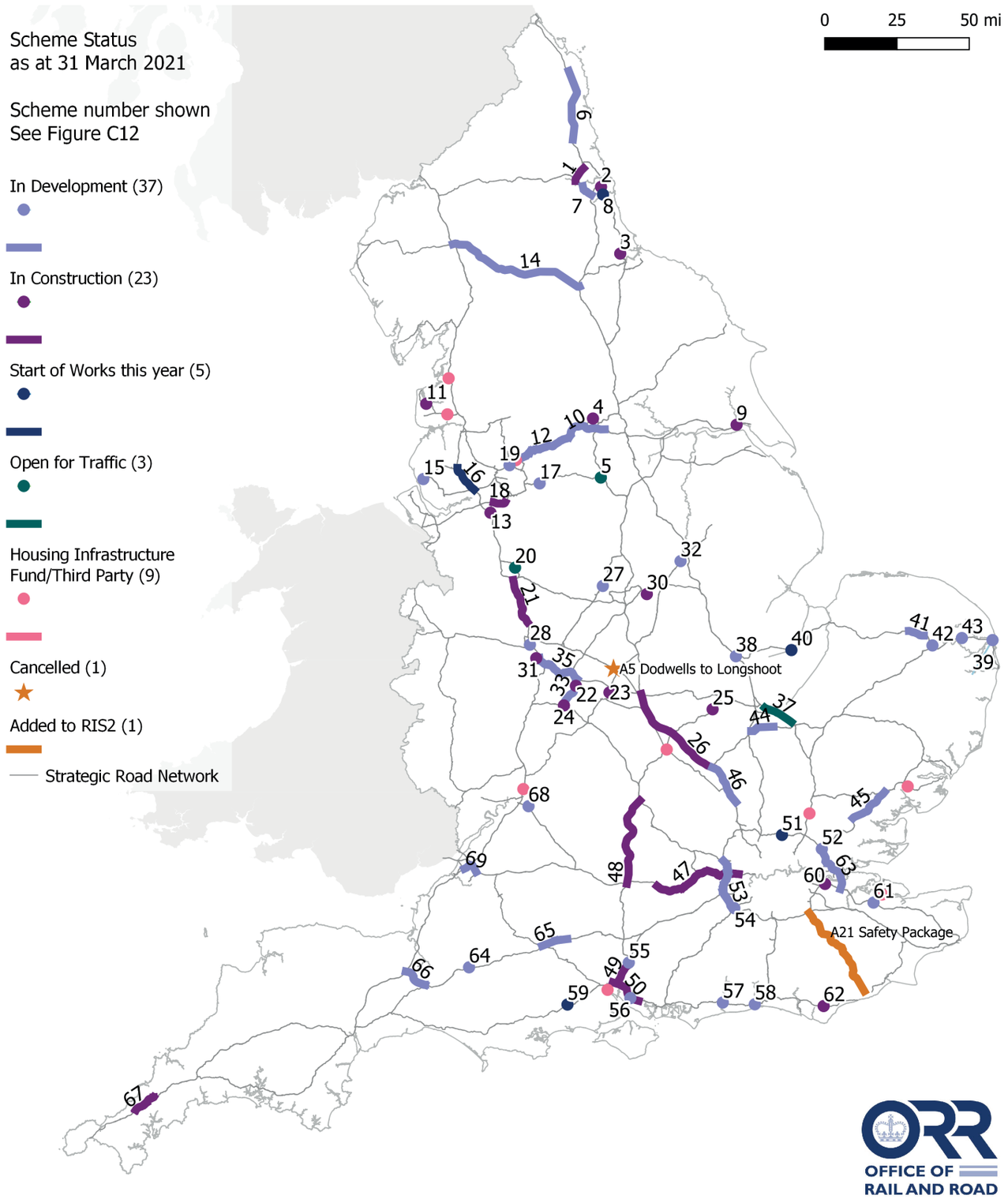


Figure C.12: Status of RIS2 enhancement schemes portfolio

RIS2 portfolio No.	Scheme name	Start of Work commitment	SOW on target	Open for Traffic commitment	OFT on target	Scheme status
1	A1 Scotswood to North Brunton	Started	✓	2022-23		In Construction
2	A19 Testos	Started	✓	Q3 2021-22		In Construction
3	A19 Norton to Wynyard	Started	✓	2022-23		In Construction
4	M621 Junctions 1-7	Started	✓	Q4 2022-23		In Construction
5	A61 Westwood Roundabout	Met	✓	Q1 2021-22	✓	Open for traffic
6	A1 Morpeth to Ellingham	Q2 2022-23		2024-25		Development
7	A1 Birtley to Coal House	Q2 2021-22		2024-25		Development
8	A19 Down Hill Lane	Q4 2020-21	✓	2022-23		In Construction
9	A63 Castle Street	Started	✓	2024-25		In Construction
10	M62 J25 to 30 retrofit	Q4 2021-22		2022-23		Development
11	A585 Windy Harbour to Skippool	Started	✓	2023-24		In Construction
12	M62 J20-25	Q4 2022-23		RP3		Development
13	M6 Junction 19	Started	✓	Q3 2021-22		In Construction
14	A66 Northern Trans-Pennine	Q4 2023-24		RP3		Development
15	A5036 Princess Way	2023-24		RP3		Development
16	M6 Junctions 21A-26	2020-21 Q4	✓	2022-23		In Construction

RIS2 portfolio No.	Scheme name	Start of Work commitment	SOW on target	Open for Traffic commitment	OFT on target	Scheme status
17	Mottram Moor Link Road and A57 Link Road	Q4 2022-23		RP3		Development
18	M56 Junctions 6 - 8	Started	✓	Q2 2022-23		In Construction
19	M60/M62/M66 Simister Island	2024-25		RP3		Development
20	A500 Etruria	Open	✓	Q3 2020-21	✓	Open for traffic
21	M6 Junctions 13-15	Started	✓	Q4 2021-22		In Construction
22	M42 Junction 6	Started	✓	2024-25		In Construction
23	A46 Coventry Junctions	Started	✓	RP3		In Construction
24	M40/M42 interchange	Started	✓	2023-24		In Construction
25	A45/A6 Chowns Mill Junction	Started	✓	Q4 2021-22		In Construction
26	M1 Junctions 13-19	Started	✓	2022-23		In Construction
27	A38 Derby Junctions	Q2 2021-22		2024-25		Development
28	M54-M6 Link Road	Q4 2021-22		Q4 2024-25		Development
29	A5 Dodwells to Longshoot	RP3		RP3		Cancelled
30	A52 Nottingham Junctions	Started	✓	2023-24		In Construction
31	M6 Junction 10	Started	✓	2022-23		In Construction
32	A46 Newark Bypass	2024-25		RP3		Options

RIS2 portfolio No.	Scheme name	Start of Work commitment	SOW on target	Open for Traffic commitment	OFT on target	Scheme status
33	M42 Junctions 4-7 Upgrade dynamic DHS to all lane running	2023-24		2024-25		Development
34	M6 Junctions 4-5 upgrade to DHS to all lane running	Q2 2021-22		2022-23		Development
35	M6 Junction 5-8 upgrade DHS to all lane running	2022-23		2024-25		Development
36	M6 Junctions 8-10a upgrade DHS to all lane running	2023-24		2024-25		Development
37	A14 Cambridge to Huntingdon	Open	✓	Q3 2020-21	✓	Open for traffic
38	A47 Wansford to Sutton	Q4 2022-23		2024-25		Development
39	A47 Great Yarmouth Junctions	Q4 2023-24		Q4 2024-25		Options
40	A47 Guyhirn Junction	2020-21 Q4	✓	2022-23		In Construction
41	A47 North Tuddenham to Easton	Q4 2022-23		2024-25		Development
42	A47 Thickthorn Junction	Q4 2022-23		2024-25		Development
43	A47 Blofield to North Burlingham	Q4 2022-23		2024-25		Development
44	A428 Black Cat to Caxton Gibbet	Q2 2022-23		RP3		Development

RIS2 portfolio No.	Scheme name	Start of Work commitment	SOW on target	Open for Traffic commitment	OFT on target	Scheme status
45	A12 Chelmsford to A120	2023-24		RP3		Development
46	M1 J10 to 13 retrofit (upgrade H/S to running lane)	Q2 2022-23		2023-24		Development
47	M4 Junctions 3-12	Started	✓	Q1 2022-23		In Construction
48	A34 Newbury to Oxford Enhancements (A34 Technology included)	Started	✓	Q4 2021-22		In Construction
49	M3 Junctions 9-14	Started	✓	2023-24		In Construction
50	M27 Junctions 4-11	Started	✓	Q4 2021-22		In Construction
51	M25 Junction 25	2020-21 Q4	✓	2022-23		In Construction
52	M25 Junction 28	Q4 2021-22		2024-25		Development
53	M25 Junctions 10-16	Q2 2022-23		RP3		Development
54	M25 Junction 10	Q4 2021-22		2023-24		Development
55	M3 Junction 9	2023-24		RP3		Development
56	M27 Junction 8 (Southampton)	Q2 2021-22		2022-23		Development
57	A27 Arundel Bypass	2023-24		RP3		Development
58	A27 Worthing and Lancing Improvements	2024-25		RP3		Options

RIS2 portfolio No.	Scheme name	Start of Work commitment	SOW on target	Open for Traffic commitment	OFT on target	Scheme status
59	A31 Ringwood	Q2 2021-22	✓	2022-23		In Construction
60	A2 Bean and Ebbsfleet	Started	✓	2022-23		In Construction
61	M2 Junction 5	Q2 2021-22		2024-25		Development
62	A27 East of Lewes Package	Started	✓	2022-23		In Construction
63	Lower Thames Crossing	Q4 2022-23		RP3		Development
64	A303 Sparkford to Ilchester	Q3 2021-22		2023-24		Development
65	A303 Amesbury to Berwick Down	Q2 2023-24		RP3		Development
66	A358 Taunton to South and Westfields	2024-25		RP3		Development
67	A30 Chiverton to Carland Cross	Started	✓	2023-24		In Construction
68	A417 Air Balloon	Q4 2022-23		2024-25		Development
69	M4 J19-20 and M5 J16-17 upgrade DHS to all lane running	Q2 2022-23		2023-24		Development
Third Party	M55 Junction 2	Started	✓	2023-24		In Construction
Third Party	M11 Junction 7a	2020-21 Q2	✓	2022-23		In Construction
Third Party	M62 Junction 19	2020-21 Q3	✓	2022-23		In Construction
Third Party	A5 Towcester Relief Road	2021-22		RP3		Development

RIS2 portfolio No.	Scheme name	Start of Work commitment	SOW on target	Open for Traffic commitment	OFT on target	Scheme status
HIF	A249 Swale Transport Infrastructure	2021		2024		Development
HIF	A120 Tendring / Colchester Borders Garden Community	2022		2024		Development
HIF	M5 Junction 10 and Link Road	2022		2024		Development
HIF	M6 South Lancaster Growth Catalyst J33a	2024		RP3	RP3	Development
RP1 Scheme	M271/A35 Redbridge roundabout upgrade	Open	✓	Q2 2020-21	✓	Open for traffic missed RP1 commitment
New	A21 Safety Package	Q1 2021-22		2024-25		Development

☑ Start of work prior to RP2

✓ Scheme met commitment earlier

✓ Scheme met commitment date

Scheme Programmed ahead of commitment (not yet delivered)

Scheme on programme to meet commitment (not yet delivered)

Scheme advanced within RS2

Scheme advanced from RS3 Pipeline

Scheme cancelled

RP1 scheme

HIF Housing Infrastructure Fund scheme

Third Party A scheme delivered by a third party with funding contribution from Highways England

Maintenance and inspections

C.28 During RP1, we worked with Highways England to develop reporting that would show how well it is inspecting and maintaining the SRN. Because 2020-21 was the second year that the suite of metrics was consistently reported, it now provides us with a basic performance trend. A key catalyst in this reporting has been the transition from legacy contracts with its service providers and supply chain to the Asset Delivery (AD) contract model. This is because under the AD contract model, Highways England is in direct control of data collection and associated decision making.

C.29 A full breakdown of the maintenance performance data can be found within the company's published performance monitoring statements. A summary of this performance is presented and discussed below.

Maintenance activity performance

C.30 Figure C.13 shows how Highways England's performance at delivering winter services, collecting litter and undertaking reactive maintenance has improved since 2019-20. Cyclical maintenance performance has however dropped over the year from 81.4% completion within required timescales in 2019-20 to 77% in 2020-21. The company reports that the changes in cyclical maintenance performance are due to inconsistencies in regional reporting prior to 2020-21, rather than necessarily actual changes in performance. Now that the company has noted better consistency with regional reporting we will monitor performance for improvement, as the lowest performing area of maintenance activity.

Figure C.13: Summary of Highways England's maintenance activity performance in 2019-20 and 2020-21, and 2018-19 where data is available

Maintenance Activity	Activity Description	2018-19	2019-20	2020-21
Winter service	The percentage of precautionary salting delivered within time	96.0%	99.9%	100.0%
	Percentage of instances where running lanes were available	95.0%	100.0%	100.0%
Litter	Percentage of planned litter clearance activities undertaken	No data	89.0%	95.0%
Cyclical maintenance (activities carried out on an asset against a predefined frequency) (AD Areas only)	Percentage of cyclic works that are completed within the required timescales	82.0%	81.4%	77.0%
Reactive maintenance (fixing asset defects within the required timescale) (AD Areas only)	Percentage of reactive <24hr works that are completed within the required timescales	No data	88.0%	91.0%

Defect management

C.31 An important indicator of maintenance performance is how promptly Highways England addresses defects such as potholes. Figure C.2 summarises defect performance in 2019-20 and 2020-21. Two categories of performance are provided:

- the percentage of high priority defects addressed within 24 hours; and
- the percentage of other defects addressed within the required timescale for that defect type.

C.32 Highways England reported that it has seen strong performance in defect management in 2020-21. The figures reported to us generally support its assertion. All reported 24-hour priority defect performance has improved since 2019-20 except for safety barriers and sweeping and cleaning. Highways England told us that a key challenge with developing defect reporting was ensuring a consistent approach to recording defects across all its regions. With improved consistency and therefore accuracy, we expect that greater focus can be given to improving performance in the future. It is likely that the COVID-19 pandemic has allowed defect management performance to improve where additional spend has been invested and where reduced traffic has created more opportunities to access the SRN.

Figure C.14: Summary of Highways England's defect performance in 2019-20 and 2020-21

Defect type	24hr priority defects		Required timescale	
	2019-20*	2020-21	2019-20	2020-21
Paved area (road surfacing)	90.6%	94.7%	85.6%	95.4%
Road markings and road studs	93.5%	95.1%	77.4%	93.4%
Vehicle restraint systems (safety barriers)	95.0%	92.7%	77.7%	93.0%
Lighting	81.1%	89.8%	84.3%	86.3%
Signage	89.0%	93.1%	81.7%	93.5%
Soft estate (AD areas)	90.3%	90.9%	75.8%	87.7%
Reactive sweeping and cleaning actions (excluding graffiti) (AD areas)	96.9%	97.4%	90.0%	95.1%
Sweeping and cleaning – offensive graffiti	100.0%	80.0%	78.3%	95.6%
Fences (safety defects)	91.2%	97.7%	79.4%	95.1%
Drainage (AD areas)	91.1%	94.0%	69.5%	91.0%
Geotechnical (AD areas)	83.3%	100.0%	77.3%	100.0%
Structures (AD areas)	85.1%	98.3%	75.3%	96.2%

*Note – South East and East region data excluded from 24 hour defects data in 2019-20 as they transition to AD contracts

C.33 During 2020-21, we commissioned a review of Highways England's management of defects. The report was largely supportive of Highways England's approach to identifying and fixing defects on the SRN, finding that recently updated documented processes had improved the consistency of approach. The report said that the mitigation of safety risk appeared to be the primary driver for the company's approach to defect identification and repair, rather than necessarily whole life cost, although this was judged as appropriate considering the importance of safety on the SRN. Improvements in reporting consistency should enable the company to challenge performance across its regions for the future.

Insurance claims processing

C.34 Green and red claims summarise insurance claims against motorists or their insurers, or against Highways England. They provide an indication of Highways England's performance against its statutory obligations and how well it is recouping financial loss. Green claims occur where the SRN has been damaged by a road user, for example from a collision, and the company needs to recoup costs to repair the asset damage. Red claims are processed where a loss has occurred to a road user as a result of the company not meeting its requirements to maintain the highway.

C.35 A summary of the number of claims and number of settled claims of each type is shown in figure C.15. Highways England reported that an improved process for processing claims has enabled higher percentages of claims to be settled. Green claims saw 75% of claims settled in 2020-21 compared to 18.1% in 2019-20. A reduction in red claims may be partly attributed to lower traffic volumes in 2020-21, but also due to improved defect and maintenance performance.

Figure C.15: Summary of Highways England's red and green claim performance between 2018-19 and 2020-21, where data is available

Claim type	Number of claims			Number of settled claims		
	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Red claims	2239	1751	1284	992	394	764
Green claims	4937	3906	5155	no data	706	3848

Asset inspection performance

C.36 Inspection performance is important because it not only shows that Highways England is meeting its requirements for inspecting the SRN, but also confidence that asset performance reported under RIS KPIs and PIs is based on accurate, timely condition data. Figure C.16 provides a summary of Highways England's planned inspection performance. The company has improved the percentage of inspection programme completed for structures, safety barriers and geotechnical assets in 2020-21. Traffic signs and technology inspection performance reduced. The performance of lighting inspections improved in 2020-21, with the figure of 116% representing the completion of additional inspections from other years. The reporting of inspection performance does not currently include safety inspections but this is something we have challenged Highways England to report on in future maintenance statements.

Figure C.16: Summary of planned inspections that Highways England completed in 2019-20 and 2020-21

Asset Type	Percentage of programme completed	
	2019-20	2020-21
Structures	92.2%	97.0%
Vehicle restraint system (safety barriers)	79.4%	84.7%
Lighting	66.3%	116.0%
Geotech	82.8%	95.0%
Traffic signs and technology	92.3%	85.0%

Asset renewal delivery

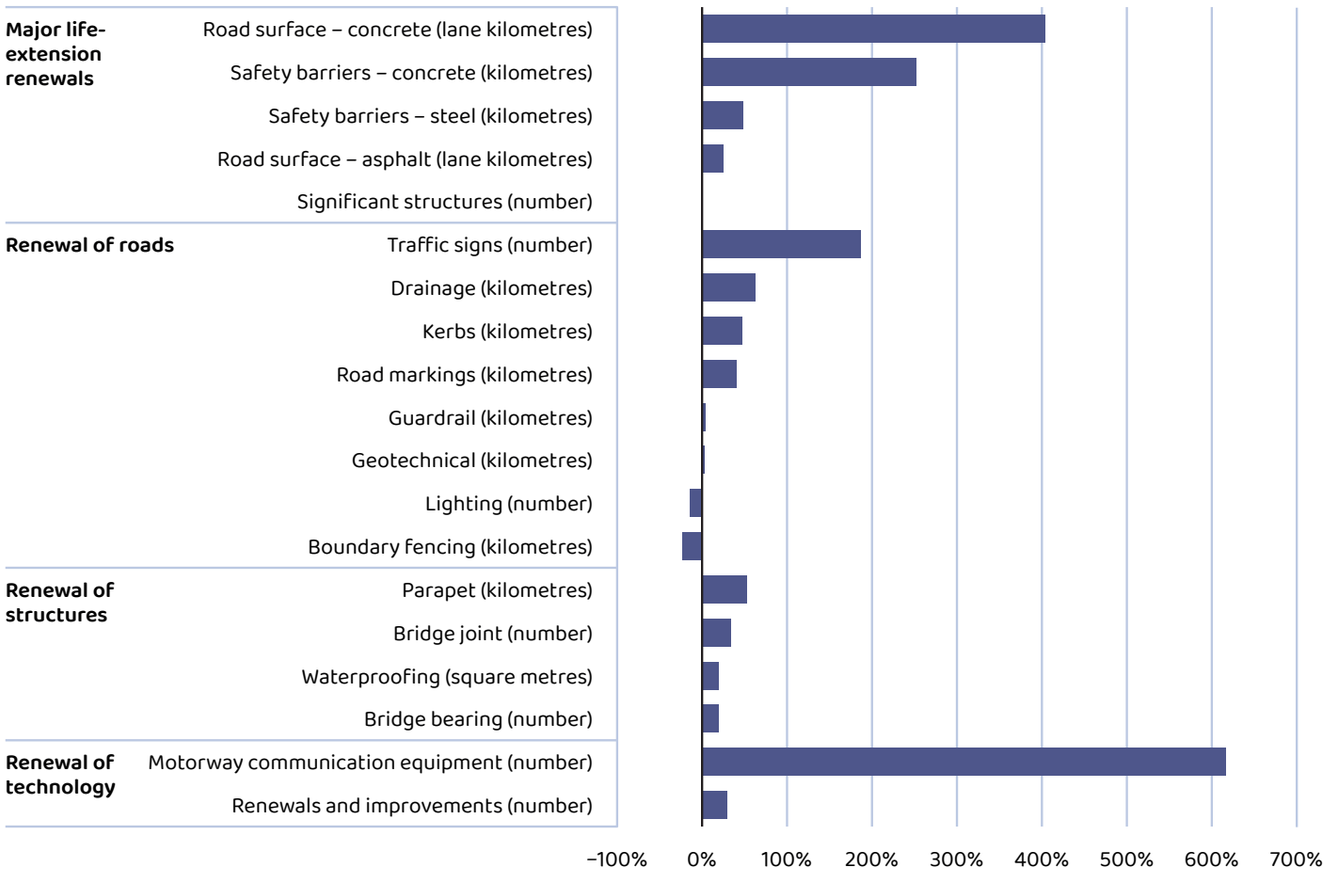
C.37 In 2020-21, Highways England delivered its planned volumes of renewals against all but two asset types, lighting and boundary fencing. The company significantly over-delivered renewals volumes against a number of asset types, reporting the following reasons;

- concrete pavement (407%) – programme of renewals accelerated to avoid road space clashes in the latter part of RP2 due to delays with the major enhancement schemes in the East region;
- concrete safety barriers (254%) – additional renewals scheme brought into the programme in the Yorkshire and North-East region; and
- motorway communication equipment (622%) – the precise number of components to be renewed are not known until schemes are on the ground.

Figure C.17: Volumes of renewals delivered compared to plan in 2020-21

2020-21 Commitments		Planned Output	Actual Output	Output Variance
Major life-extension renewals	Road surface – concrete (lane kilometres)	12.0	60.8	407%
	Safety barriers – concrete (kilometres)	4.0	14.2	254%
	Safety barriers – steel (kilometres)	143.0	211.9	48%
	Road surface – asphalt (lane kilometres)	1,495.0	1,859.3	24%
	Significant structures (number)	44	44	0%
Renewal of roads	Traffic signs (number)	475	1,363	187%
	Drainage (kilometres)	98.0	158.4	62%
	Kerbs (kilometres)	20.5	30.1	47%
	Road markings (kilometres)	3,450.0	4,829.8	40%
	Guardrail (kilometres)	2.3	2.4	3%
	Geotechnical (kilometres)	3.0	3.1	2%
	Lighting (number)	1,300	1,131	–13%
	Boundary fencing (kilometres)	80.0	62.2	–22%
Renewal of structures	Parapet (kilometres)	4.8	7.2	52%
	Bridge joint (number)	525	696	33%
	Waterproofing (square metres)	28,000.0	33,340.2	19%
	Bridge bearing (number)	110	130	18%
Renewal of technology	Motorway communication equipment (number)	150	1,083	622%
	Renewals and improvements (number)	325	420	29%

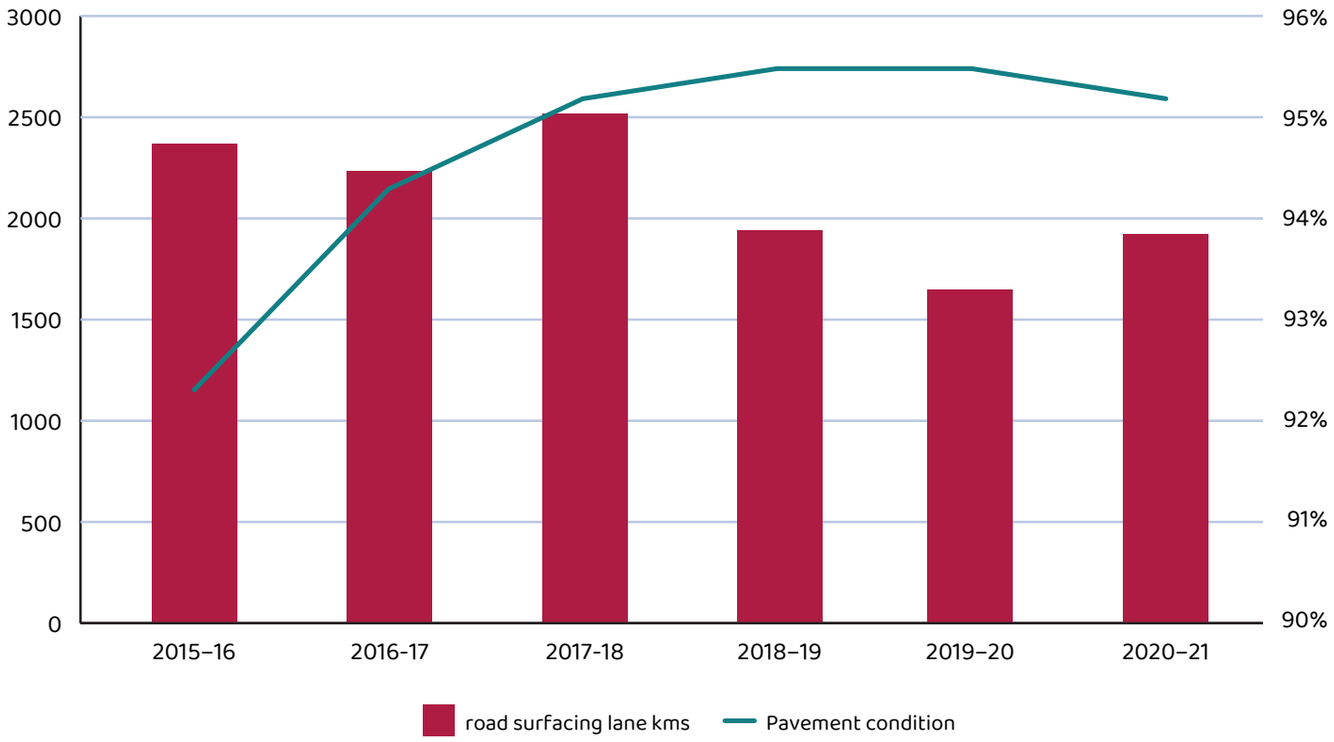
Figure C.18: Volumes of renewals delivered compared to plan in 2020-21



C.38 Despite road surfacing renewals delivered being greater than planned in 2020-21, the total volume of renewals delivered were the second lowest annually since the start of RP1. The road condition KPI reports the condition of lane one of the SRN only and so comparing it with road surfacing renewals delivered does not necessarily provide a direct correlation. This is because only a proportion of road surfacing renewals are delivered in lane one. However, it is worth reflecting on the general trend between the two datasets, as shown in Figure C.19. The chart shows that pavement condition improved during the first three years of RP1 when road surfacing renewals volumes were highest. Since 2018-19, road surfacing volumes have dropped below 2000 lane kilometres and road condition has flattened out, although has remained above KPI target condition.

C.39 We will be working with the company to better understand the correlation between renewals work and asset condition. This is particularly relevant with the forthcoming changes to the road condition KPI, where the condition of all lanes, rather than just lane one, will be reported from 2022-23 against a new target.

Figure C.19: Annual volumes of pavement renewals delivered against road condition

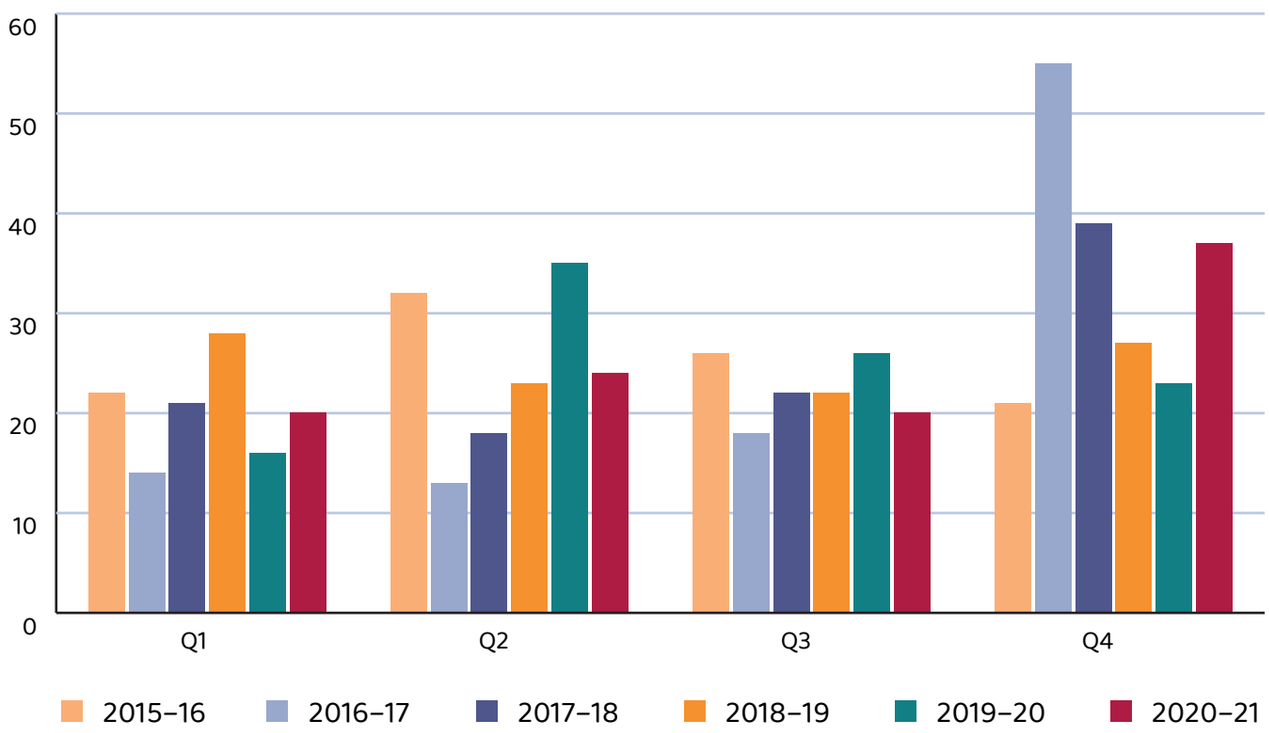


C.40 Highways England reported that over-delivery of planned renewals volumes across other asset types was in places as a result of bringing schemes forward by using the central risk reserve (CRR) funding, or due to efficient scheme delivery. We have been working with the company to develop reporting that shows that the right asset intervention is made at the right time. This will improve our understanding of the impact delivering more or less renewals has on asset condition and need. This is particularly important where asset performance does not feature in current reporting, for example safety barriers or lighting.

C.41 In addition to the routine, cyclical renewals programmes funded in RIS1, RIS2 introduced a specific category of renewals activity referred to as major life-extension renewals. This is to address needs associated with an ageing SRN and includes the renewal of bridges, replacement of safety barriers and retiring the first generation of concrete road surfaces. This emphasises the need for clear reporting that demonstrates the value from renewals interventions made. In 2020-21, Highways England delivered more road surfacing (concrete and asphalt) renewals than it originally planned to at the start of the year, and yet the road surfacing condition KPI level dropped. Similarly, more safety barriers (concrete and steel) renewals were delivered than planned, but it is not clear to what extent this has improved condition or reduced risk to the road user.

C.42 Delivering more renewals than planned for the same budget might be assumed to be good financially, but it should be demonstrated that the extra delivery addressed a need or added value to the asset. Figure C.20 shows that the majority of pavement (concrete and asphalt) renewals were delivered in Q4 in 2020-21, undoing a trend observed since 2016-17 where the volume of Q4 delivery was reducing. If over-delivery of renewals is done at a time of year prone to adverse weather conditions, this is less likely to achieve a high-quality outcome. Therefore the value added to the asset from a whole life perspective may not be optimal. It is important that pursuit of short-term budget expenditure or output goals are not made to the detriment of long-term asset need or value. By the same approach, delivering fewer renewals than planned may not necessarily be problematic if it can be shown that, for example, the asset was in a better state than predicted. As well as the development of better renewals reporting, we have been seeking improvements to asset performance reporting with the company to improve our confidence that renewals delivered support a well maintained and resilient network.

Figure C.20: Quarterly volumes of pavement renewals delivered in 2020-21, and in each year of RP1



Privately funded initiative contracts handback

C.43 Eight design, build, finance, operate (DBFO) contracts will come to an end in RP3 and therefore the routes will be handed back to Highways England. Those contracts are:

- A30/A35 Exeter to Bere Regis - 30 March 2026
- A1(M) Alconbury to Peterborough - 31 March 2026
- A417/A419 Swindon to Gloucester - 31 March 2026
- M1-A1 Link Lofthouse to Bramham - 1 April 2026
- A69 Carlisle to Newcastle - 1 April 2026
- A50 Stoke to Derby - 30 June 2026
- M40 Denham to Warwick - 5 January 2027
- A19/A168 Dishforth to Tyne Tunnel - 24 February 2027

C.44 There are various requirements set out in DBFO contracts to manage the handback process. Highways England reported that it has made progress against those requirements, including the development of a methodology for defining residual asset life and commencing asset inspections. The company has also started planning for the wider impacts of the handback including the transfer of staff, maintenance and operation contract preparation for each route, assessing operational cost impact, depot strategies and winter fleet requirements. We have already started working with the company to understand the impact and potential risks, such as maintenance liabilities, of this process and will continue to monitor in the year ahead.