highways england
driving forward

Highways England
Delivery Plan
2015-2020

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Foreword

Highways England is a new company with a big brief. As a result, while we are operating and improving the country's roads, we will grow our own capability – investing in our people and working with our strongest suppliers.

Every customer wants less congested roads to enable swift, safe, comfortable and informed travel. This means increasing road capacity while modernising the motorway network and our major A roads.

This will require England's largest road investment programme for a generation. And, we need to reduce congestion and disruption at the same time.

Responsibility for that transformation lies in the hands of Highways England. We are a public service company operating a public network. Everything we do is determined by the public interest, from supporting local authorities with their development plans to reducing the environmental impact of the road network.

The specific requirements, along with a 25 year strategic vision, for the strategic road network were presented by the Government in its Road Investment Strategy. This Delivery Plan has been created to explain how we will meet them and the context within which we will work. It is the first to be published by Highways England and covers our first five years of operation to 2020.

The road to successful implementation will not be straightforward, but we understand that our job is to deliver results and satisfy the people we serve. We will define success as the efficient, effective and safe implementation of this plan, resulting in a better road network for our customers and our neighbouring communities.

Colin Matthews
Chairman

Graham Dalton
CEO

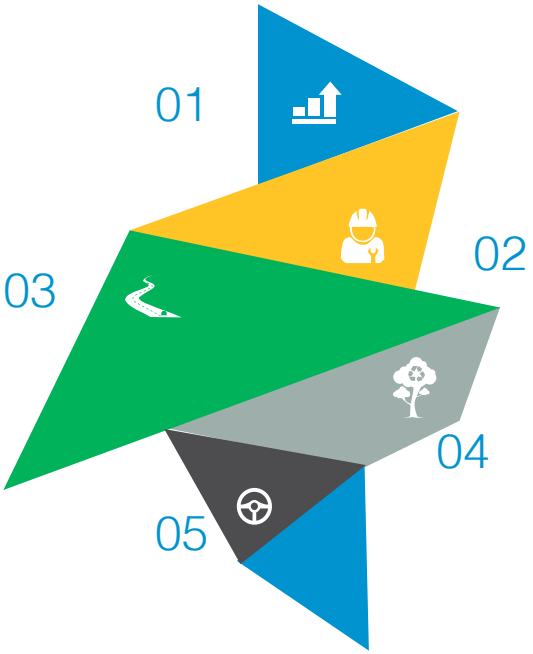
1. Executive Summary

Highways England's role is to operate, maintain, and modernise the strategic road network in the interests of customers.

Our Strategic Business Plan (SBP)[1] published in response to the Government's Road Investment Strategy RIS[2] sets out Highways England's main activities, strategic outcomes and describes how we will go about delivering the Investment Plan and meeting of our Performance Specification[3].

Delivering our strategic outcomes

The Delivery Plan builds on the SBP, setting out in detail how we will deliver our strategic outcomes, how we will measure our success, and how we will identify future goals and plans to keep improving our customers' and neighbours' experience of the strategic road network. Over the course of this road period we will maintain and endeavour to improve on a 90% customer satisfaction rating.



01 Supporting Economic Growth

In order to relieve congestion and minimise delay, we will deliver 112 individual schemes generating £4 in long term economic benefit[4] for every £1 invested. Between 2015/16 and 2019/20 (Road Period or RP1), we will start work on 15 Smart motorways projects as identified in Spending Round 2013 (SR13), with eight of these to be completed by the end of RP1. This means starting work on 480 lane miles by the end of the Road Period and completing 286.

We will also complete all junction improvement, road widening and bypass projects identified in Spending Review 2010 (SR10), and complete four of the ten projects identified in SR13, while beginning work on the remainder.

Additionally, wider investments will be used to cycle proof the network and we will use resources like the Innovation Fund and the Growth and Housing Fund to boost economic growth. We will publish a long term Strategic Economic Growth Plan by the end of 2016.

02 A Safe and Serviceable Network

Our target is to reduce the number of people killed or seriously injured on the network to no more than 1,393 in year by the end of 2020, a 40% reduction from 2010. We will set out exactly how we plan to achieve this in our five-year plan, Driving Forward Safety, which we will publish in autumn 2015.

By the end of RP1, we will invest £3.658bn in renewing the strategic road network. We will maintain the road pavement in good condition, to ensure it does not fall below the 95% target.

[1] https://www.gov.uk/government/publications/highways-england-strategic-business-plan-2015-to-2020
[2] https://www.gov.uk/government/collections/road-investment-strategy
[3] https://www.gov.uk/government/publications/road-investment-strategy-performance-specification
[4] https://www.gov.uk/government/collections/road-investment-strategy

We will develop an overall asset management system and capability that is consistent with ISO55000 industry standards. The framework and guiding principles for this will be detailed in our Asset Management policy, which we intend to update and issue in August 2015. This will be followed by our Asset Management Strategy in April 2016.

Through the investment and wholesale modernisation of the network we will ensure that by the end of 2020 more that 90% of travel on the strategic road network is on roads with a safety rating of EuroRAP 3* (or equivalent). We will also ensure that the majority of those roads with 1* and 2* safety rating have improved to 3*.

We will work with our partners to address issues that impair safe driving, as well as raising awareness of the inherent potential dangers of using the network. We will work closely with police and other emergency services to open roads more quickly after incidents, and work with the Driver and Vehicle Standards Agency and other agencies to reduce the number of poorly-maintained vehicles on the network.

03 A More Free-Flowing Network

We will ensure that lane availability does not fall below 97% in any one rolling year, and clear at least 85% of all motorway incidents within one hour, in line with Government requirements. To this end, we will publish our Operational Strategy by December 2015, setting out how we will manage demand and increase availability of the network. Over RP1, we will invest over £11bn which will contribute to a more free-flowing network.

04 Improved Environment

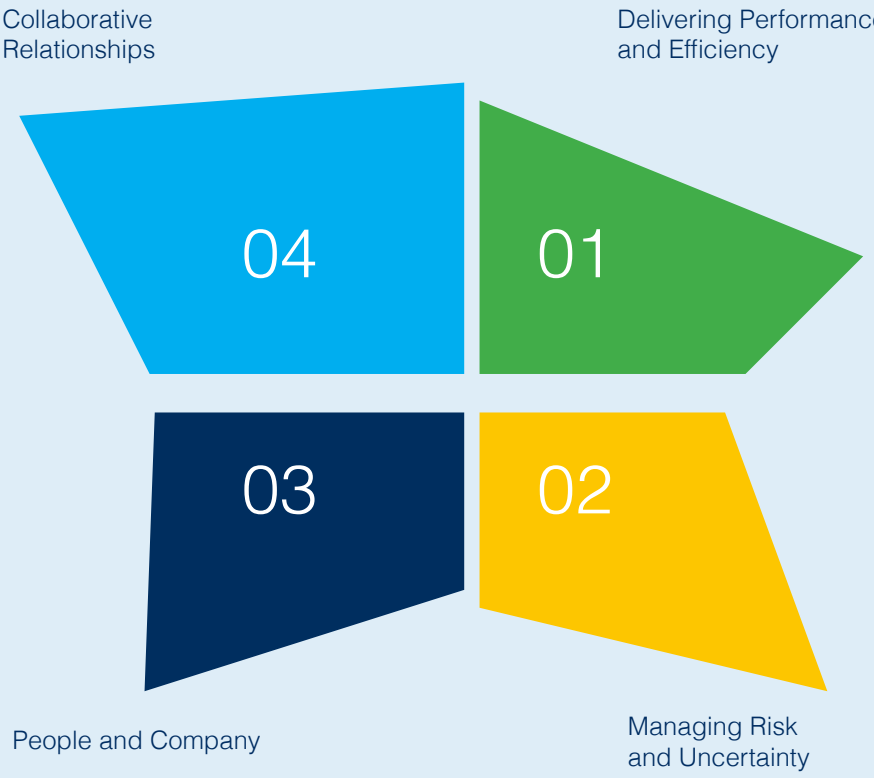
We are committing to mitigate at least 1,150 Noise Important Areas over RP1, and publish a Biodiversity Action Plan by June 2015, reporting annually on how we are halting net biodiversity loss. In addition, we will invest £300m over RP1 through the designated Environment and Air Quality Funds to deliver specific environmental enhancements on or around the network with regard to water and flooding, carbon emissions, landscape and cultural heritage. Our full plans will be set out in our Environment Strategy, which we will publish by March 2016.

05 An Accessible and Integrated Network

We will upgrade and increase the number of safe crossings on the network in the interests of the safety and convenience of more vulnerable customers; and ensure we integrate with other networks including local roads, existing and emerging rail links, ports and airports. We will work with key stakeholders and partners to develop a package of integration measures during 2015-16 and develop an Accessibility and Inclusion Strategy by March 2016. Overall, we will invest £100m from the Cycling, Safety and Integration Designated Fund to deliver an Accessible and Integrated Network.

Making the most of our key enablers:

To deliver our five strategic outcomes we will use four key enablers:



01 Delivering Performance and Efficiency

We allocate funding based on an assessment of what is of most value to our customers. To monitor our performance, we will publish information on a number of key performance indicators for each of the five strategic outcomes. We have also committed to making capital efficiency savings of £1.212bn by 2020 (in nominal terms). Our exact approach to measuring, recording and monitoring efficiencies will be set out in an Efficiency and Inflation Monitoring Manual, to be published in September 2015, having been agreed with the Department for Transport and the Highways Monitor.

02 Managing Risk and Uncertainty

There is inevitably some uncertainty about our estimates of customer demand for the network and of the cost of enhancements and renewals, as well as assumptions about the weather and other external events. Whilst we will manage those risks that are within our control, we will work with others to mitigate the impact on our operations, maintenance and modernisation of the network to deliver the RIS. We have also commented on the key sources of additional uncertainty under the RP1 settlement.

03 People and Company

We recently set-out our new people strategy which is underpinned by four pillars: Accountable Leadership; Capable Employees; Customer-Focused Delivery and Rewarding Performance. We will use this as a platform to anticipate future needs and deploy the right people, with the right skills, at the right time, across the business.

04 Collaborative Relationships

To ensure our customer needs are being met, Highways England will set up a customer panel to help clarify customer needs and ensure customer satisfaction.

We are also engaging in two new key relationships with the Highways Monitor and Transport Focus. The Highways Monitor will monitor how well we are delivering against the Performance Specification, Investment Plan and aspects of its Licence, while Transport Focus, will have the role of watchdog.

The launch of Highways England is an opportunity to strengthen relationships with existing stakeholders and to work with new ones. We will review and improve our approach to stakeholder engagement to promote better and more frequent liaison with our key stakeholders, and publish an updated account of how we engage with them in the summer this year.

We will also seek to deepen our relationships with our supply chain to deliver the outcomes more effectively. We will work closely with the emergency services and roadside assistance organisations which play a key part in supporting our delivery. Other key relationships including freight organisations, local authorities, technology and innovation partners, sustainability and environmental bodies and motorway service operators.

2. Introduction

Our role
Highways England's role is to operate, maintain and modernise the strategic road network in line with the RIS, reflecting public interest and to provide effective stewardship of the network's long term operation and integrity.

2.1 Context

2.1.1 Our network

England's strategic road network consists of more than 4,300 miles of motorway and major A roads, including a highly complex asset base of more than 16,000 structures, 21,870 miles of pavement, and 110,000 technology assets.

2.1.2 Our legal status and responsibilities

Highways England Company Limited (Highways England) is a corporate body established on 8 December 2014 as a company limited by shares, and wholly owned by the Secretary of State for Transport. It was appointed as a strategic highways company by way of an Order made by the Secretary of State pursuant to section 1 of the Infrastructure Act 2015[5].

2.1.3 Our functions and obligations

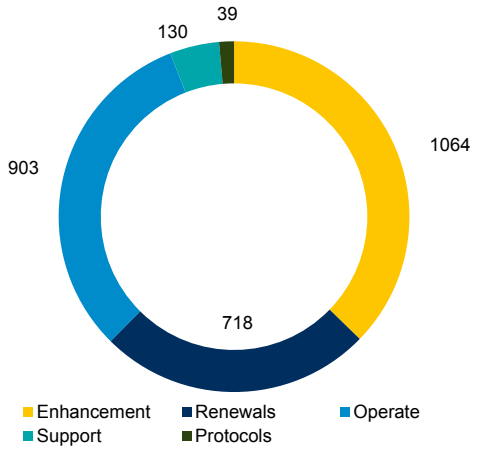
Highways England is tasked by the Act with delivering the RIS set by the Secretary of State, and to prepare and publish route strategies as directed by the Secretary of State. Highways England carries out its functions in accordance with directions and guidance given by the Secretary of State. These are set out in our Licence[6] from Government.

2.1.4 Our funding

Highways England is funded from the public purse by grants-in-aid from the Department for Transport. Our five year funding allocation set out in the RIS Statement of Funds Available (SOFA) totals[7] £11.351bn of capital expenditure across the RP1.

This total five-year fixed capital settlement from the Government includes all funds that we will use to enhance and renew our network; resource funds required to operate our network are set out in the Government's Resource Delegated Expenditure Limit (RDEL). A single year resource settlement of £1.072bn has been agreed for 2015/16. A breakdown of the funding for 2015/16 is shown below with additional detail set out in Annex C.

Figure 1: 2015/16 funding Settlement



Key: Figures = £ millions

[5] http://www.legislation.gov.uk/ukpga/2015/7/contents/enacted
[6] https://www.gov.uk/government/publications/road-investment-strategy-performance-specification
[7] https://www.gov.uk/government/publications/road-investment-strategy-investment-plan

2.2 Document purpose

This Delivery Plan shows how we will achieve Government's objectives and long term vision for the strategic road network, as set out in the RIS. It sets out exactly what we deliver during RP1 covering 2015-20, including how we will:

- Use our budget allocation
- Effectively manage this critical national asset
- Deliver outcomes for our customers
- Transform our organisation and be more effective
- Measure our success

The Delivery Plan builds on Highways England's recently published Strategic Business Plan (SBP), which was our response to the Government's RIS. The RIS sets out the performance requirements for the network and our company and a five year investment plan.

These investment plans take account of the Government's policy[8], not to introduce national road pricing to manage demand on the Strategic Road Network. Therefore, Highways England are not doing any work in this area.

In turn, this plan sets out exactly what we will deliver and by when, in order to achieve our five key strategic outcomes. These are:

Supporting Economic Growth – through a modern and reliable network that reduces delays, thereby creating jobs, helping businesses and opening up new areas for development.

A Safe and Serviceable Network – where no one should be harmed when travelling or working.

A More Free-Flowing Network – where routine delays are less frequent and journeys are safer and more reliable.

An Improved Environment – where our activities ensure a long term and sustainable benefit to the environment.

A More Accessible and Integrated Network – where we will work with local authorities and other transport hubs to facilitate other modes of transport and enable safe movement across and alongside our network.

This is Highways England's first Delivery Plan, which we have developed to coincide with the launch of the company. These plans range from short-term activity delivering near term goals to longer term programmes delivering benefits that will be realised towards the end of this Road Period (RP) and beyond. As we progress through RP1 our plans will be further refined in key strategy documents.

The early years of RP1 will not only define the latter years, but also set in place foundations for delivery well into the next RP covering 2020 to 2025 and beyond.

This Plan will demonstrate how we will maintain efficient and effective working practices, managing risk and uncertainty whilst remaining true to our vision and values.

2.3 Our vision and ambition

2.3.1 Vision

Highways England will be a confident, energetic, agile and connected organisation, fully realising our people and our partners' potential to benefit our customers.

Our ambitious plans to deliver government's aspirations for the strategic road network will be far from easy. To deliver the investment over this Road Period, and continued investment in future Road Period's will require a step-change in performance. We don't underestimate the challenge that lies before us.

2.3.2 Transformational Journey

Our organisation is moving towards a bold future, focussing on performance based delivery. How successful we are at delivering a performance step-change in this new landscape will be down to how we transform our organisation. We recognise this new territory will be challenging, and therefore we must be better at:

- Planning for the future
- Growing our capability
- Building stronger relationships
- Efficient and effective delivery
- Improving customer service

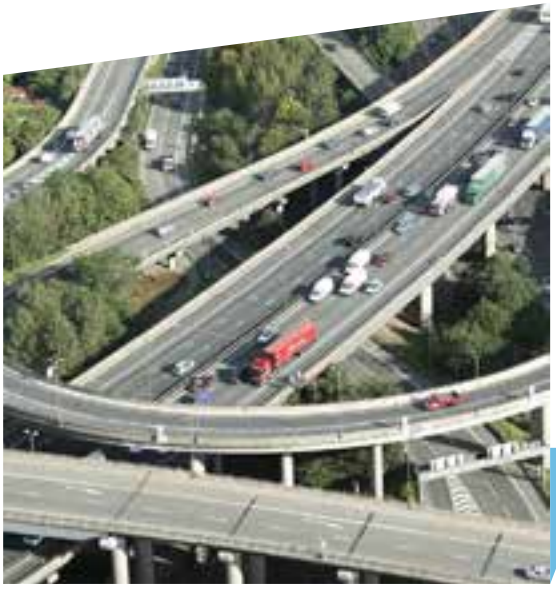
[8]National Policy Statement – National Networks

2.4 What we will deliver

We will focus on the issues that matter most to our customers and stakeholders. These are woven into the fabric of our Delivery Plan:

- Improving the safety of all our customers, partners and Highways England staff members
- Increasing road capacity to meet the nation's future needs
- Reaching milestones on time and to budget
- Delivering value for money and demonstrating real efficiency
- Significantly improving the environment for national health and wellbeing
- Collaborating and engaging to deliver better outcomes
- Utilising designated funds to; improve air quality, improve the environment, stimulate economic growth and housing, make the network safer and more accessible for cyclists and vulnerable users, and stimulate new innovative ideas to support in-vehicle systems and improvements to technology on the network.

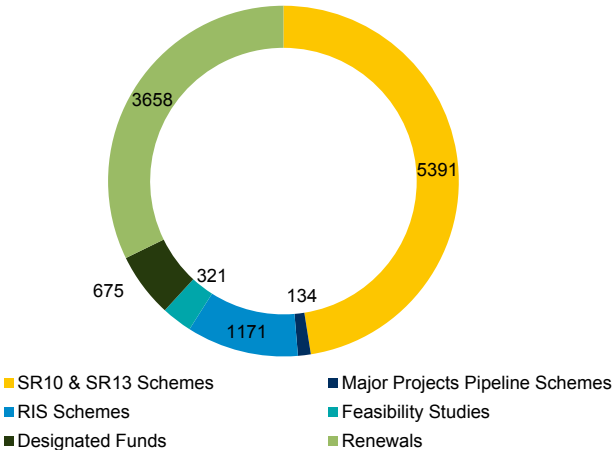
To focus on the issues that matter most, we will deliver outputs and interventions to operate, maintain and modernise the strategic road network.



2.4.1 Capital Expenditure

Highways England will invest £11.351bn in the modernisation of the network and maintenance of existing assets. This capital expenditure for RP1 is shown in figure 2 below.

Figure 2: Total capital expenditure – RP1

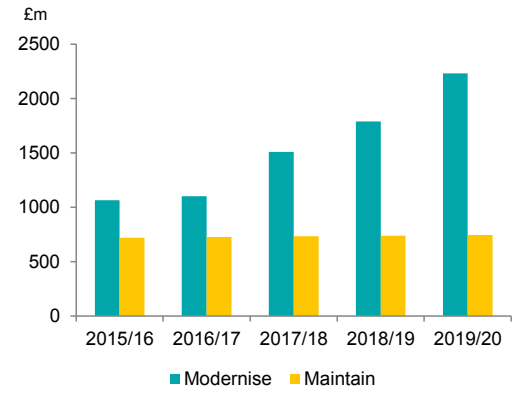


Key: Figures = £ millions

As shown in figure 3, investment in the enhancement of our network will increase across RP1, while capital expenditure on renewals will remain fairly stable. It is this stability and certainty in the maintenance funding that will enable Highways England to take a longer-term approach to asset management; ensuring we maintain the network in a safe and serviceable condition, while minimising delays to our customers.

As investment increases so too will our delivery output right across the network. This in turn will generate rapid efficiency growth in the final years of this Road Period, as further elaborated in Section 8.

Figure 3: Capital split by theme and year

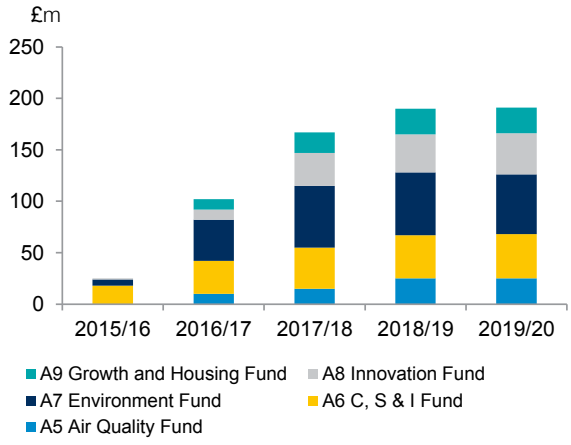


Our enhancement programme will upgrade some of the most important major routes to provide more capacity and better connections, and maintain the network safely and efficiently with minimal impact on drivers and communities.

2.4.2 Designated funds

The Government has created a series of designated funds, to address a range of issues over and above the traditional focus of road investment. The funds are worth £900m over a six year spending period covering 2015 – 2021. This document sets out Highways England's five year investment plan for these funds, totalling £675m. These funds allow for actions beyond business as usual and will help Highways England to invest in retrofitting measures to improve the existing road network as well as maximising the opportunities offered by new road schemes to deliver additional improvements at the same time. The figure 4 below shows how we plan to spend the designated funds over RP1.

Figure 4: Designated funding split by year



2.5 What does this mean?

We will deliver better value for money; improve customer satisfaction, providing more capacity and a better quality of service to the millions who use or rely on our roads every day.

2.5.1 What this means for customers

With journeys totalling up to 85 billion miles per year, our customer base is vast:

- Four million users every day
- Millions of neighbours who live near the network
- Numerous logistic and freight companies
- Industries from all corners of the country
- Thousands of walkers, cyclists and equestrians
- Many local communities connected by the road network.

Engaging with all our customers to ensure the network meets their longer-term needs is central to all our plans set out in this document.

Our greatest challenge will be balancing our customers' competing priorities while maintaining or improving customer satisfaction. This plan sets out how we will listen to customers, and act upon their feedback. Highways England is confident of achieving all it has been asked to deliver, while forging an ambitious new future for the strategic road network.

We will strive to improve user satisfaction over this Road Period. Our performance in this area will be measured against the Key Performance Indicator (KPI) from the Performance Specification set out below:

Government key performance indicator
User satisfaction

KPI — The percentage of NRUSS Respondents who are Very or Fairly satisfied

Target — Achieve a score of 90% by 31 March 2017 and then maintain or improve it

The move towards longer term funding certainty, away from stop-start decision making and towards greater commercial flexibility will enable us to respond more positively to customer demands and speed up delivery. We want to ensure that every journey is safe and our customers are well-informed so they can predict and react to changing network conditions.

2.5.2 What this means for stakeholders and partners

Our partners and stakeholders expect us to live up to our vision and values at all times. We will:

- Be more mature, open, flexible and collaborative in our working relationships
- Understand each other's priorities and objectives, and always put the customer first
- Share high-quality information
- Maintain high performance and effective delivery
- Work to build a more sustainable business

2.6 Delivering measurable success

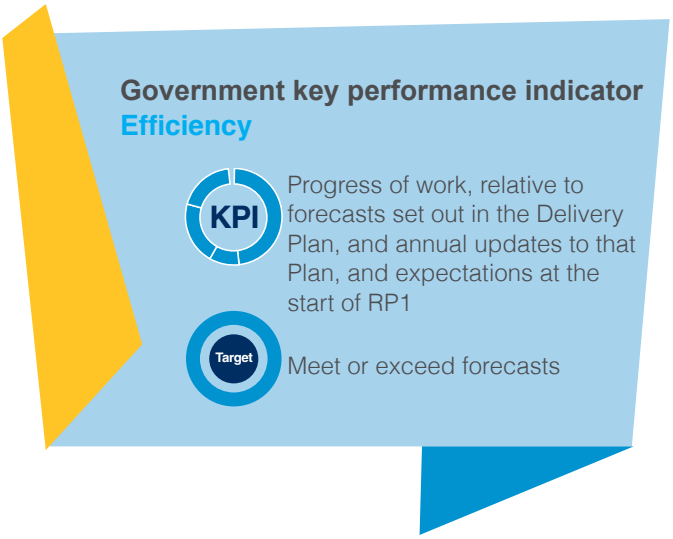
In preparing our first Delivery Plan we have set out a number of:

- Deliverables, interventions and outputs
- Core strategy documents
- Action plans and reports
- Programmes of work
- Key milestones

These all form a plan of how we will deliver Government's Performance Specification, Investment Plan, longer term Strategic Vision, along with Highways England's plans for the strategic road network.

2.6.1 Delivery Plan success

Progress against this Delivery Plan will be reported through a Key Performance Indicator. This indicator will measure progress against a number of key strategic outputs and interventions set-out within this document, and subsequent updates of the Delivery Plan.



We will develop a performance dashboard by July 2015 to track progress of these interventions and provide an overall rating of achievement against the plan. This information will be updated on a quarterly basis, and reported back to our Shareholder and the Highways Monitor. We anticipate this dashboard will cover areas such as; strategies delivered, new programmes defined, environmental delivery, programme updates for major projects and renewals, and progress updates on development of new performance measures and indicators.

This indicator is part of a suite of KPIs that seek to focus our activities on; meeting the needs of all our customers and the country as a whole, maintaining a reliable and effective strategic road network that supports the economy while also contributing to wider environmental and social aims.

Within this document each of the KPIs from the Performance Specification has been aligned to our strategic outcomes, or core enabling activities. The two exceptions are progress against the Delivery Plan as referenced above, and delivering improved customer satisfaction. Highways England views customer satisfaction as an overarching indicator of our performance.

These KPIs are supported by Performance Indicators (PIs) to give additional information on our performance. Some PIs are identified in the Performance Specification, while others have been identified and developed by Highways England. Those PIs from the Performance Specification and our associated activity are referenced throughout the Delivery Plan.

For ease of reference, Annex B clearly sets out what activities contribute to each of the Government's performance requirements.

2.6.2 Operational Metrics Manual

Alongside our Delivery Plan we have published our Operational Metrics Manual (OMM) which details the mechanics behind how each of these indicators function. The OMM defines, for each KPI and PI, how the data is collected, transformed and reported. The manual details ownership of Requirements contained in the Performance Specification. The OMM also explains Highways England's expectations of our organisation as we move to a performance based culture. It also sets out the contributions others' are expected to make to deliver performance.

We will evolve the manual over time, as reporting processes change. The OMM details a change control process to facilitate this.

The manual is owned by Highways England, and has been produced in collaboration with the Department for Transport, and the Highways Monitor.

The OMM will be used to ensure all performance measures, associated methodologies and success factors are clearly understood. The manual will be used by the Monitor to gain further details and understanding of the metrics to enable more robust monitoring of performance within the agreed parameters, performance measures and definitions as set out in the document's technical notes.

Further information about Highways England can be found on our website **www.highways.gov.uk**

3. Supporting Economic Growth

At the heart of Highways England's plans for delivering the RIS for RP1 is a drive to support and encourage economic growth across England and the wider United Kingdom. We will do this by modernising the network to relieve congestion and reduce delays, helping businesses to grow, encouraging investment, creating jobs and opening up new areas for development.

Investment into the strategic road network across England has progressively grown over the past few years. Investment in major improvements has grown from around £450m in 2012/13 to more than £750m this year as we head toward investing around £3bn on major improvements in 2020.

Delivery over the last four years has outperformed expectation. We planned to start investment on the ground on 22[9] schemes. We have started construction on 24 schemes, completed seven, delivered around £2.7bn of investment and expect to have achieved over £1bn of savings against previously approved estimates.

When this programme completes at the end of RP1, we will have delivered more than 300 miles of additional lanes, including junction, road widening and 286 lane miles of Smart motorways – providing much needed capacity to heavily congested routes and unlocking potential for developments to support further economic growth. This investment is expected to enable £4 of benefit to the economy for every £1 spent. To deliver this benefit we will be working closely with our key suppliers in the construction sector; to support the five goals set by Government in Construction 2025, the industrial strategy for construction.

Benefits are not just felt as a result of this investment but also through its delivery. Each scheme now takes an opportunity to support industry and grow skills as well as provide jobs that support their local community. Through this we have delivered more than 37,000 training events that not only help to train the workforce but provide employment opportunities.

The Government has asked us to focus on reducing average delay times, and the various ways we will do this are set out within this section. (our performance in this area will be measured against the Key Performance Indicator (KPI) from the Performance Specification set out below). Many factors influence average delay, some of which are not within our control, so although we have not set a target for this measure, we will be seeking to reduce delays as far as possible and report annually on Average Delays.

Government key performance indicator
Economic growth

KPI — Average Delay (time lost per vehicle per mile)

Target — No target set

Supporting economic growth is a broad goal, and in addition to other measures discussed in this section, it is woven into the Delivery Plan as a whole. The OMM has set out a suite of PIs to illustrate the impact of our activities, and other external factors on traffic flow. This includes a measure of the reliability of journey times. The central challenge will be reducing average delay times and keeping the network as available as possible to customers in the short term, while delivering an investment programme that will modernise the network to ensure shorter journey

[9] When adjusting for combining the three schemes around Manchester in a single project and excluding A30 Temple to Carblake – being delivered by Cornwall County Council.

times and maximum availability in the long term. In line with the Government requirement we will annually report on average delay across our network.

3.1 What we will deliver

We have an agreed programme of major improvements that we are taking forward over the next five years that totals around £7bn of capital expenditure and comprises 112 individual schemes and the development of a further 15 schemes for Road Investment Strategy 2 (RIS 2).

We are organising these into programmes of work to help make future steps in efficiency improvements and will measure progress of schemes after PCF stage 5 during the construction phase through cost and schedule performance[10] measures.

Set in this section is a summary of what we are planning to do where and when over the next five years. These plans assume that the associated schemes continue to demonstrate value for public money and achieve necessary statutory approvals. We have set out in the following sections programmes of work to prepare for delivery of 112 schemes.

Annex A provides a set of maps that set out the major improvements planned to be delivered across the network.

3.1.1 Types of solution

There are a number of solutions that we consider when seeking to tackle the different issues faced by customers and neighbouring communities.

Smart motorways

Smart motorways use active traffic management techniques such as variable speed limits and hard shoulder running in order to increase capacity and smooth the flow of traffic. This allows for more reliable journey times as well as fewer accidents, less noise and pollution.

Our long term goal is a Smart motorway spine linking London, Birmingham, Manchester and Leeds. During RP1 we are committed to starting 480 lane miles of Smart motorways and will complete 286 lane miles of Smart motorways from existing SR10 schemes and new SR13 schemes. The balance will be completed by 2022/23.

Junction improvements, road widening and bypasses

In addition to the innovative Smart motorway product, we will complete a number of more conventional improvements. These include junction improvements at some of the worst pinch-point locations, widening certain sections of the road network and upgrading poorer quality single carriageway trunk roads to dual carriageway standard.

3.1.2 Schemes already in construction

Around £1bn of investment is associated with 16 schemes already in construction. These schemes are primarily those announced following the SR10 and also those announced in the Autumn Statements in 2011 and 2012.

Below we set out a summary by region of these investments and set out what will be delivered and the benefits we plan on delivering.

North East and Yorkshire

Four schemes currently in construction will:

- Provide an additional 28 lane miles of capacity on the A1 between Leeming and Barton to relieve congestion, and improve the section between Coal House and the Metro centre to support the creation of 18,900 jobs and 21,900 homes in the Newcastle and Gateshead area
- Increase capacity on the M1 by delivering a four lane Smart motorway which will improve connection from Rotherham to Sheffield and Wakefield to Leeds. Together these schemes will add a further 41 lane miles to the network.

[10] Cost Performance Index (CPI) and Schedule Performance Index (SPI)

North West

Two schemes currently in construction will:

- Add capacity on the M60 and M62 motorways around Manchester through the delivery of a further 9 lane miles using Smart motorways
- Improve the A556 Knutsford to Bowdon, which will make journeys more reliable along this key transport corridor linking Birmingham and the South of England with Manchester, Manchester Airport and the North of England.

Midlands

Six schemes currently in construction will:

- Enhance capacity on the M1 between Derby and Nottingham, reducing congestion and aiding economic growth in the region
- Improve the interchange of the M1 with the M6 and A14 near Rugby. Removing a key bottleneck and reducing significantly the number of accidents
- Tackle delays on the A453 near Nottingham by replacing rural sections with dual carriageway and widening urban sections to two lanes, which will also improve access to the railway station and East Midlands airport
- Improve capacity on the M6 by providing an additional 19 lane miles to relieve congestion in Staffordshire
- Carry out widening of the A14 near Kettering to allow for increased traffic flow on one of the key strategic routes linking the Midlands to the Haven Ports
- Improve the A45/A46 junction south of Coventry facilitating plans for housing and employment in the surrounding areas.

East

One scheme currently in construction will:

- Improve the A505 at Dunstable by providing a new dual carriageway linking the A5 to a new junction on the M1, supporting local development plans to increase housing and employment opportunities in the area.

South East

Two schemes currently in construction will:

- Add capacity on the M3 from the M25 to Farnborough, supporting economic growth and development along the M3 corridor and the Thames Valley by adding a further 27 lane miles to the network
- Carry out significant junction improvements on the M25 at J30 to improve access to wider UK markets for the Thurrock area and the users of the Ports of Tilbury and London Gateway.

South West

One scheme being delivered by Cornwall Council will tackle the current congestion and journey delays on the A30 in Cornwall and remove a major constraint that hinders economic sustainability and future growth in Cornwall.

The table 1 below sets out when we expect to bring the new investments into operation i.e. opening up the new routes or improvements to traffic. For each scheme we identify the quarter period within the year that we expect operations to begin.

Scheme	Open for Traffic		
	2015/16	2016/17	2017/18
A14 Kettering Bypass Widening	Q1		
A453 Widening	Q2		
M6 J10a-13 (SM)	Q3		
M1 J39-42 (SM)	Q3		
M1 J28-31 (SM)	Q4		
A1 Coal House to Metro Centre		Q1	
A45-A46 Tollbar End		Q3	
M1 J19 improvement		Q3	
A30 Temple to Carblake[11]		Q3	
A556 Knutsford to Bowdon		Q4	
M1 J32-35A (SM)		Q4	
A1 Leeming to Barton			Q1
M3 J2-4A			Q1[12]
M25 J30			Q1
A5/M1 J11a Link			Q1
M60 J8 to M62 J20 (SM)			Q2
Completions in year	5	6	5

Table 1: New routes or improvement to traffic

These timescales may change, particularly if we see opportunities to combine other local improvements or undertake renewal of adjacent infrastructure.

3.1.3 Schemes announced in June 2013

Around £5bn of investment is associated with schemes that are being developed or nearing construction. Following their announcement in the SR13, these schemes have now completed background work to inform the plans on how we will take them forward. We expect to start work on all 26 of these schemes within this Road Period, with nearly half expected to complete within the period.

Below we set out a summary by region of these investments, what we plan to deliver and the benefits we anticipate they will create.

North East and Yorkshire

Four schemes to start construction will:

- Improve junctions on the A19 in Tyne and Wear, supporting regeneration at the Port of Tyne, Newcastle Airport and further development at Cobalt Business Park. This will also complement improvements to the local network, notably an additional Tyne crossing
- Make improvements along the A63 in Hull, supporting existing businesses, attracting new businesses and promoting local development
- Early stages of construction are underway to improve the junction between the A160 and A180 near Immingham plus a full dual carriageway link from the A180 to the Port of Immingham, improving journey time reliability and supporting economic growth in the area.

North West

Five schemes to start construction, supporting the Northern Powerhouse, will:

- Improve the M6 between Stoke and Knutsford and also between Warrington and Wigan by upgrading to Smart motorway, adding 56 lane miles of capacity to relieve congestion

[11] Highways England is contributing toward the cost of this scheme which is being delivered by Cornwall County Council
[12] When including for the extensive maintenance and asset renewals works thats has recent been identified

- Upgrade further sections of the M60 and M62 near Manchester to improve journey time reliability by providing an additional 32 lane miles of capacity
- Upgrade to Smart motorway the M56 from Manchester Airport to the A556, increasing capacity and improving access to the airport by adding eight lane miles to the network.

Midlands

Seven schemes to start construction will:

- Upgrade further sections of the M6 to Smart motorway around Coventry, and from Stafford to Stoke. This will increase capacity by adding 58 lane miles to the network
- Upgrade the M5 between Bromsgrove and Worcester. Adding another 17 lane miles of increased capacity
- Further upgrades to Smart motorways on the M1 from Milton Keynes up to the M6/A14 interchange and also at East Midlands Airport to the Nottingham/Derby junction which will relieve congestion and add 84 lane miles
- Replace the roundabouts on the A38 in Derby with grade separate junctions to reduce high levels of congestion and improve safety
- Provide a new link road connecting the M54 and M6 and the M6 Toll road which will improve journey time reliability and reduce high levels of congestion in the area.

East

One significant scheme to start construction will:

- Improve the A14 by providing a new bypass to the south of Huntingdon and the widening of some of the existing carriageway near Cambridge
- In total this will add a further 44 lane miles to the network and support development of the new Alconbury Enterprise Zone and the potential of up to 100,000 new homes and many more highly skilled jobs.

South East

Nine schemes to start construction will:

- Enhance capacity on the M3 between Winchester and Southampton and on the M27 from Southampton to Fareham to support growth aspirations for the area by adding a further 49 lane miles to the network
- Upgrade the M20 near Maidstone to a Smart motorway, adding 11 lane miles to the network and improving traffic flow in the area
- Upgrade the M4 between the M25 and Reading, adding more than 60 lane miles to the network and providing a significant increase in capacity along the M4 corridor
- Early stages of construction are underway to tackle a heavily congested section of the A21 between Tonbridge and Pembury by providing dual carriageway which will also improve safety and accessibility
- Carry out upgrades on the A27 at Chichester through junction improvements and a bypass, removing congestion from the local villages
- Provide junction improvements on the A2 in Kent to support the level of growth proposed for Kent Thameside including Ebbsfleet Garden City, supporting potential development of 50,000 homes and 20,000 jobs in the area.

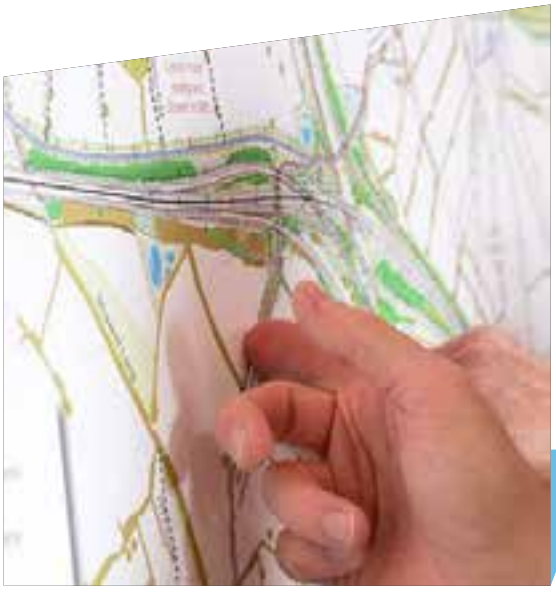


Table 2 below sets out when we plan to start work on site for each of these 26 schemes, it also identifies when we expect to bring the new infrastructure into operation – for example, opening up the new route to traffic.

These timescales assume certain types of solution and impact. As solutions are developed, particularly in response to consultation and environmental impact, and the programme is developed to make a more efficient flow of work that reduces disruption some of these timeframes may alter.

For the first year of the Road Period we have greater certainty around timing and have also included the quarter period within that year for the planned start work on site.

Table 2: Timescales for delivering schemes announced in June 2013

	Anticipated Start of Works Year						Anticipated Open for Traffic Year						
	RIS 1						RIS 1				RIS 2		
	2015/16	2016/17	2017/18	2018/19	2019/20		2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
A160/A180 Immingham	Q1						√						
A21 Tonbridge to Pembury	Q1						√						
M5 J4a-6	Q3							√					
M6 J16-19	Q3								√				
M1 J13-19	Q3											√	
M1 J24-25		√						√					
A19 Coast Road		√							√				
A63 Castle Street		√									√		
A14 Cambridge to Huntingdon		√									√		
M4 J3-12		√										√	
M20 J10a			√						√				
M6 J2-4			√							√			
M20 J3-5			√							√			
M23 J8-10			√							√			
M27 J4-11			√								√		
M6 J13-15			√									√	
M6 J21a-26				√						√			
M60 J24-27 & J1-4				√						√			
A19 Testos				√							√		
A27 Chichester Bypass				√							√		
M54 to M6 / M6 toll				√								√	
M56 J6-8					√							√	
M3 J9-14					√							√	
M62 J10-12					√								√
A38 Derby Junctions					√								√
A2 Bean & Ebbsfleet					√								√
Totals in year	5	5	6	5	5		2	2	3	5	5	6	3

3.1.4 Schemes announced in December 2014

This funding will also enable the company to take forward the new schemes that were announced last December.

Exact timings are yet to be confirmed but we plan to start construction within the period on all 49 projects which will deliver around £1bn of investment by the end of 2019/20.

Below we set out a summary by region of these investments, what we plan to start over the course of RP1 and the benefits we anticipate they will create.

North East and Yorkshire

Seven schemes to start construction will:

- Improve connections to Sunderland, Teesside and Newcastle along the A19 to support economic growth
- Improve connection to Leeds and road safety along the M621 and M1, enabling planned developments to go ahead and that will create around 13,500 new jobs
- Tackling the severe delays experienced by commuters travelling between Leeds and Bradford on the M62 and M606
- Making further capacity improvements along the M62 – completing a four lane Smart motorway that connects Leeds and Manchester.

North West

Six schemes to start construction will:

- Improve connections on the M6 to help support Liverpool's economic aspirations and provide improved access along the M6 corridor of Cheshire and Manchester. This will assist in the development of 67,000 new houses in Manchester and the creation of 120,000 new jobs, which includes the Airport City Enterprise Zone
- Increase capacity on the M53 by providing an additional 13 lane miles to relieve congestion around Ellesmere Port

- Improve road safety and add capacity to facilitate growth at the Port of Liverpool
- Enhance the A585 near Blackpool to improve accessibility to local services
- Relieve congestion on the M56 corridor by improving accessibility of proposed development / growth sites and improving access to Daresbury, Mersey Multi-Modal Gateway and the wider corridor.

Midlands

Thirteen schemes to start construction will:

- Increase capacity on the M1 by extending the Smart motorway planned between East Midlands Airport and the Nottingham junction
- Improve connections on the M5 between Droitwich and Worcester to facilitate housing and economic growth
- Improve connections on the A14 near Kettering to support the delivery of the Kettering East Sustainable Urban Extension
- Provide access along the A46 to further residential developments and key employment sites near Binley and Walsgrove.
- Improve traffic flow along the A43 and A5 near Northampton supporting development of 23,000 houses and creation of 32,000 jobs
- Widening the A5 near Hinckley to dual carriageway, supporting proposed development of 23,000 homes and releasing the potential to access 580 hectares of employment space
- Carry out improvements on the M6 near Walsall to increase access to the motorway and to the Darlaston Enterprise Zone
- Introduce Smart motorways around the M42/ M40 interchange to provide better access to the A45, Birmingham Airport, and the new High Speed 2 railway station
- Deliver a package of measures to improve junctions along the A52 near Nottingham to assist with the development of the Nottingham Enterprise Zone adjacent to the M52.

East

Six schemes to start construction will:

- Increase capacity on the A1(M) providing an additional 14 lane miles to relieve congestion in Hertfordshire, including Stevenage and Welwyn Garden City
- Upgrade technology at junctions on the M11 from Stansted Airport to Cambridge which will improve safety, relieve congestion and support plans for additional housing
- Provide technology along the A12 from the M25 to Ipswich and widening the stretch between Chelmsford and Colchester to three lanes, adding 30 miles of additional lane capacity, improving safety, reducing congestion and supporting economic growth

- Provide a new 13 mile stretch of dual carriageway on the A428 between western Cambridgeshire and the north east of Bedfordshire, relieving congestion, improving safety and supporting significant levels of planned economic growth in the area.

South East

Fourteen schemes to start construction will:

- Improve the A34 between the M4 at Chieveley and the M40 at Wendlebury to ease congestion, improve safety and incident management
- Increase capacity on the M2 to improve flows between Sittingbourne and Maidstone and the east/west link across Kent
- Deliver improvements on several junctions of the M3, enabling developments that will create up to 17,200 new jobs in the region, and around 11,000 new homes in Winchester
- Make improvements along the M27 and M271 around Southampton, supporting employment, housing and access to the port
- Tackle delays on the A31 at Ringwood, supporting growth plans, employment opportunities and housing
- Improve access from the M25 to the A12 and A3 trunk roads, and upgrade the M25 to a five lane Smart motorway between the M40 and Chertsey.

South West

Three schemes to start construction will:

- Provide a new junction on the M49 at Avonmouth, releasing the potential for a further 8,000 jobs in the Severnside and Avonmouth area and act as a catalyst for future growth
- Improve the M5 at Bridgwater where there are proposals to develop around 5,000 new homes and create more than 4,400 new jobs. This will also improve access to the new power station planned at Hinckley Point
- Provide more than eight miles of new dual carriageway on the A30 in Cornwall, facilitating the planned increase of over 22,000 homes and more than 11,000 jobs.

Given the early stage of these schemes, we are not yet in a position to commit to the timescales for the start of construction work. However, we set out in the table 3A the nature of work we plan to do next, along with their anticipated timescales. These are stated in the quarter period of 2015/16 when we expect to start this work.

Table 3A: Next Steps for Schemes Announced in December 2014

Project	Key next step in year 1	
	Starting	Activity
Projects where a project specific plan is already forming		
M5 Junctions 5, 6 and 7 Upgrades	Q1	Developing the more detailed options at Junction 6 and undertaking further surveys to inform the final design, this element of the scheme will be included as part of the M5 Junction 4a-6 Smart Motorway scheme which is planned to start construction in 2015. We also expect to start construction at junctions 5 and 7 in 2015.
A19 Down Hill Lane Junction Improvement	Q1	Developing options and undertaking surveys to inform initial designs ahead of consultation with stakeholders. Proposals are also being developed to package this scheme with the previously announced A19 Testos scheme, due to start work on site in 2018. Taking this approach will enable greater efficiency and reduce the impact of delivery to customers.
A1 & A19 Technology Enhancements	Q1	Feasibility and initial design work has completed. During 2015 we will be undertaking more detailed design work and anticipate starting construction in 2016.
A30 Chiverton to Carland Cross	Q1	Public engagement meetings have already been run jointly with Cornwall County Council, which have helped to inform development of the options. During 2015 we will be appointing designers to prepare the scheme for wider public consultation which is planned for 2016. We plan to start construction in 2020.
M42 Junction 6	Q1	We will be developing the options in more detail and preparing the scheme for public consultation in 2016, this will take into account planned station developments linked to High Speed 2. We anticipate being able to recommend a preferred route in early 2017. We are planning to start construction in 2020.
A45/A6 Chowns Mill Junction Improvement	Q1	Site survey works ongoing, which will inform develop of the options to take forward in discussion with stakeholders with an expectation to start detailed design in 2016 and construction in 2019.
M5 Bridgwater Junctions	Q1	Discussions with Somerset County Council and EDF, to better understand the impacts with Hinkley Point Nuclear Power Station, have started and will start preparing design options. We expect to complete the design in 2015 and are looking to start construction in 2016.
M2 Junction 5 Improvements	Q1	Traffic and environmental surveys will commence. We will also engage with key stakeholders to help develop design options. During 2015 and 2016 we will widen the engagement and further develop and assess the options, leading to a public consultation in 2017. We are aiming to start construction on these improvements in 2019.
M6 Junction 10 Improvement	Q2	Work with Walsall Council, which is undertaking and promoting development of a package of solutions across the local road linking up to junction 10 on the M6. This will include the development of initial designs and site surveys. We expect to start consultation in 2015 and to have prepared the scheme to take through the planning process in 2016. We expect to start construction in 2020.
M621 Junctions 1-7 Improvements	Q2	During 2015 we will be developing options and engaging with stakeholders, including Leeds City Council, with a view to finalising proposals and starting design in 2016. Construction of the scheme is expected by 2020.
A5036 Princess Way – acc. Port of Liverpool M6 Junction 19 Improvements	Q2	Appointing designers to undertake environmental and traffic surveys to inform initial designs for a range of options. Following engagement with stakeholders, we anticipate this leading to a public consultation in 2016. We plan to start construction on the A5036 scheme in 2019, with the remainder following on in 2020.
A585 Windy Harbour – Skippool		
M62/M606 Chain Bar		
M49 Avonmouth Junction	Q2	Topographical surveys of possible locations for new junction will be completed, until then we will be uncertain over the planning route required for this scheme. However, we will start engaging with stakeholders on the options through 2015. We are looking to target start of construction for this scheme in 2017, assuming planning consent is not required.
M1 Junction 45 Improvement	Q3	More detailed plans will be developed around a number of options and early engagement will take place between key stakeholders and local authorities in 2015. We are targeting to start construction on site in 2017.
A43 Abthorpe Junction	Q3	Site surveys completed, during 2015 we will be undertaking public engagement to seek wider views to inform detailed design to commence early 2016. We are looking to target the start of construction works later in 2016.

Table 3B: Next steps for schemes announced in December 2014

Key next step in year 1				
Project	Starting	Project	Starting	Activity
Projects at an earlier stage where more generic initial activities are planned				
M56 new Junction 11A	Q2	M25 Junction 25 Improvement	Q2	Identifying options and initiating surveys to inform the more detailed development, including engagement with wider stakeholders. Typically we would expect this stage to take a year to 18 months to complete. Following which we will prepare the schemes for consultation ahead of progressing with detailed design.
A5 Dodwells to Longshoot Widening	Q2	M25 Junction 28 Improvement	Q2	
A14 Junction 10a	Q2	M25 Junction 10/A3 Wisley Interchange	Q2	
A428 Black Cat to Caxton Gibbet	Q2	M271/A35 Redbridge Roundabout Upgrade	Q2	
M11 J8 to 14 Technology Upgrade	Q2	M3 Junction 9 Improvement	Q2	
A12 Chelmsford to A120 Widening	Q2	A31 Ringwood	Q2	
A12 Whole-route Technology Upgrade	Q2	M3 Junction 10-11 Improved Slip Roads	Q3	
A1(M) Junctions 6-8 Smart Motorway	Q2	M3 Junctions 12-14 Improved Slip Roads	Q3	
M11 Junction 7 Junction Upgrade	Q2	M27 Southampton Junctions	Q3	
A34 Oxford Junctions	Q2	A5 Towcester Relief Road	Q3	
A34 Technology Enhancements	Q2			
A19 Norton to Wynyard	Q1	M40/M42 Interchange Smart Motorways	Q1	Initiate procurement for design consultants, needed to work up and assess a range of options. This stage will typically take six to nine months to complete, following which we will be in a position to start engaging stakeholders in the development and assessment of the options.
M62 Junctions 20-25	Q1	M4 Heathrow Slip Road	Q1	
M53 Junctions 5-11	Q1	M25 Junctions 10-16	Q1	
A500 Etruria Widening	Q1	M6 Junction 22 Upgrade	Q3	
M1 Junctions 23A-24	Q1	A52 Nottingham Junctions	Q3	
A46 Coventry Junction Upgrades	Q1			

3.1.5 Progressing the outcomes from the six Feasibility Studies

In addition to the investments previously outlined, we will take forward and develop solutions to the issues investigated last year as part of a range of feasibility studies.

These studies examined some of the most notorious and long-standing congestion hot-spots in the country, and sought to identify ways in which these could be tackled.

Below we set out a summary for each of the studies and what schemes we will develop:

- Around Newcastle and Gateshead – taking forward a programme of work that will add seven miles of additional capacity to the A1, relieving heavy congestion and providing much improved access to the Tees Valley employment zone
- North of Newcastle – plans to upgrade 13 miles of the A1 to dual carriageway standard linking the Morpeth and Alnwick bypasses, providing additional capacity and improved accessibility to sites across the region including Newcastle Airport
- Trans-Pennine Routes – a package of schemes between Manchester and Sheffield which will improve journey times between these two key cities in the north of England. These schemes will also address a number of safety concerns on the route and alleviate the impact of traffic in Mottram
- A47/A12 Corridor – a package of six schemes across a 115 mile section of the A47 between Peterborough and Great Yarmouth. This will include converting almost eight miles of single carriageway to dual carriageway and making improvements to three junctions, relieving congestion and increasing journey time reliability
- A27 Corridor – taking forward two schemes that will provide a total of six miles of dual carriageway across the A27, helping to relieve congestion at Arundel, 225 Worthing, Lancing and East of Lewes
- A303/A30/A358 Corridor – potentially creating up to 35 miles of dual carriageway between Amesbury in Wiltshire and Honiton in Devon which will improve the connectivity, journey time reliability and road safety.

These investments are at an early stage in their development, however, we set out in table 4 the nature of work we plan to do next and provide indicative timescales for key milestones that we expect to flow from this.

Table 4: Next Steps for Feasibility Schemes

Feasibility Study	Activity	Year
A1 North of Newcastle	■ Commence further development and appraisal work on a range of options to inform consultation with key stakeholders. ■ Initiate traffic and environmental surveys.	2015
	■ Hold public exhibitions and consult on the proposals.	2016
	■ Make recommendations on the preferred route for the A1 Morpeth to Ellingham dualling scheme.	2017
	■ Start construction on the A1 North of Ellingham enhancements in advance of the dualling scheme.	2018
A1 Newcastle-Gateshead Western Bypass	■ Develop the options for the A1 Birtley to Coalhouse scheme ■ Engage early with Network Rail as the scheme includes proposals to replace Allerdene Bridge which crosses the East Coast mainline rail link ■ Undertake environmental assessments of the potential impacts for both the A1 Birtley to Coalhouse and A1 Scotswood to North Brunton schemes.	2015
	■ Consult with the public on the proposals.	2016
A27 Corridor	■ Develop and assess a range of options to inform consultation with key stakeholders. ■ Engage more widely with local stakeholders on the A27 bypasses at Arundel and Worthing / Lancing. ■ For improvements east of Lewes, we will work with local enterprise partnerships and authorities to review long term growth plans and model future traffic demands in order to inform potential options.	2015
	■ Further develop proposals and assess traffic and environmental impacts.	2016
	■ Further and more detailed consultation on proposals for Arundel and Worthing / Lancing. ■ Make recommendations on the preferred routes for these two schemes.	2017
Trans-Pennine Routes	■ Develop design options in preparation for wider engagement, including initial assessments on environmental, traffic and economic impacts.	2015
	■ Carry out environmental surveys and complete assessments.	2016
	■ Present the higher performing options to the public through a consultation.	2017
A47/A12 Corridor	■ Undertake more detailed development of the options, upgrade the eastern regional traffic model and start surveys to inform initial designs. ■ Prepare the seven schemes into a single programme for consultation with stakeholders.	2015
	■ Consult widely with the public on proposals. ■ Subsequently, to make a recommendation on the preferred route.	2016
	■ Start construction on this programme of improvements.	2020
A303/A30/ A358 Corridor	■ Investigate and assess a range of options to understand traffic, environmental and economic impacts. ■ Engage with key stakeholders throughout, including with English Heritage and National Trust. Widening out discussions with stakeholder in the second half of the year.	2015
	■ Start public consultation on the A30 and A358 schemes.	2016
	■ Aiming to make a recommendation on the preferred routes for the A30 and A358 schemes. ■ For the A303, we expect to start a wider and public consultation on the scheme	2017

3.1.6 The Innovation Fund programme

The designated Innovation Fund will support the modernisation of the network by developing innovative services to support expressways, Smart motorways, information provision and data collection, as well as the safe, efficient and sustainable movement of people and goods.

This £120m Fund will stimulate new ideas and ways of working, enabling partnerships with key organisations such as Innovate UK[13], allowing Highways England to take advantage of different ways of procuring innovative solutions and sponsoring research. It will also enable us to learn from and share best practice with other sectors.

With this Fund we will develop a variety of technologies to support performance specification goals. As well as plans to support the testing and introduction of intelligent vehicles on the network, we will use the Fund to deliver, off-road trials of Wireless Power Transfer technologies during 2016/17, install an acoustic tunnel incident detection system at Hindhead and install of Wi-Fi technology in the South East.

We will develop our Innovation, Technology and Research Strategy by March 2016, setting out our longer term plans for driving forward innovation and technology to deliver a smarter network, including how we will make effective use of the designated Innovation Fund to support this Strategy. The delivery plan for the Innovation Fund programme will be reviewed on an annual basis to ensure that this reflects how new technologies have emerged or developed successfully.

3.1.7 The Growth and Housing Fund programme

The strategic road network has an important role in enabling the planning and delivery of new housing. We will work in a targeted way with developers to ensure that housing growth means better journeys and no longer tailbacks. This means upgrading junctions making improvements around towns and cities, and enabling works for potential Garden Cities.

This type of investment will be supported by a £80m fund, committed to unlocking housing and growth projects.

We will use the Growth and Housing Fund to unlock development sites in partnership with a broad range of stakeholders. This will accelerate the pace of delivery of development sites that have secured planning consent, but not yet implemented, and those emerging through the Local Plans and already contained within the Strategic Economic Plans of Local Enterprise Partnerships.

3.1.8 Road Investment Strategy 2 schemes

During RP1, we will prepare 15 new schemes for delivery in the next Road Period. The following sets out a summary by region of these future panned investments:

North East and Yorkshire

Five schemes identified for development and for delivery in the next Road Period:

- A64 with the York outer ring road – the route is significantly constrained at junctions with the local network and improvements are needed to both alleviate these constraints and support planned developments
- M1/M62 Lofthouse Interchange – increasing capacity to ease traffic flows and support wider growth in employment and housing
- A1 between Redhouse to Darrington and A1(M) around Doncaster. We will be undertaking a feasibility study in 2015 to identify potential solutions to be taken forward to improve congestion and safety and provide resilience on the North-South corridor in Yorkshire
- M1 between Rotherham and Wakefield – easing congestion by upgrading to Smart motorways and providing an additional 27 lane miles of capacity.

North West

One scheme identified for development and for delivery in the next Road Period:

- Simister Island interchange between the M62, M60 and M66 - introducing more free-flowing movements to substantially improve one of the busiest junctions to the north east of Manchester.

[13] https://www.gov.uk/government/organisations/innovate-uk

Midlands

Four schemes identified for development and for delivery in the next Road Period:

- A46/A616/A617 and A46/A1 junctions – improvements to create smooth running of the Newark bypass and to support planned growth in the region. Options will include use of technology to provide better information and promote greater network resilience
- M1 in the Midlands – upgrading the remaining sections to Smart motorway, a continuous Smart motorway link from London to Yorkshire. This is likely to include upgrades to junction 21, to improve links from the M1 to the M69
- M42/M5 interchange (M5 J4a) to M42 J3 – upgrading to provide a continuous section of four-lane Smart motorway
- A45 between Stanwick and Thrapston – upgrading the last single carriageway link between the A14 and M1, helping growth, including housing, in Northampton and reducing traffic pressure on Kettering.

East

Two schemes identified for development and for delivery in the next Road Period:

- A12 between junctions 25 and 29 - widening to three lanes and improving junction layouts to relieve congestion and improve access between London and Ipswich
- A12 carriageway between the M25 and the Chelmsford bypass – Widening to three lanes and providing technology to provide greater traffic information and potentially ramp metering at junctions.

South East

Two schemes identified for development and for delivery in the next Road Period:

- A3 in Guildford between the A31 Farnham Road and the A3/A320 Stoke Road - widening of the existing carriageway to provide additional capacity and safety improvements
- Lower Thames crossing – developing plans for an additional crossing to alleviate congestion and support the significant growth plans for the area, including proposals to create tens of thousands of new homes and jobs through a major new development around the high speed rail station in Ebbsfleet in Kent.

South West

One scheme identified for development and for delivery in the next Road Period. A417 near Birdlip in Gloucestershire – connection of the two dual carriageway sections, taking account of both the environmental sensitivity of the site and the importance of the route to the local economy.

3.1.9 Contributing to investment with local authorities

We will also be providing funds and working with local authorities to deliver some specific improvements.

In the North West we will be working with both Lancashire County Council and Rochdale Council to deliver a new junction to the M55 and to provide a new access road from Junction 19 of the M62 to Heywood.

The new junction on the M55 will improve access to the Warton site of the Lancashire Enterprise Zone, the Springfields nuclear fuel facility at Salwick and enable the comprehensive development of the North West Preston strategic housing location which will accommodate more than 4,000 new homes. Ground investigations are taking place together with environmental surveys, to enable detailed designs to be produced. Work on site is planned to start in 2018/19.

The new road from the M62 will provide a link between existing employment sites, including Heywood Distribution Park and Hareshill Business Park. In the coming months the council will be working on a business case to finalise the funding and preparing a planning application for submission later in 2015.

In the Midlands we will be working with Staffordshire County Council to provide improvements on the A50 around Uttoxeter providing improved access to a new housing and

employment site to the south of the A50 and the existing and new JCB factories to the north of the A50. Proposals, for first phase of the project, have been approved and works are expected to start on site in 2015. Options are being developed for the second phase of the project, which will be subject to an extensive public consultation exercise later in the year.

In the South West we have been working with Cornwall County Council on plans to dual the last section of single carriageway on the A30 between Temple and Higher Carblake which will improve opportunities for economic growth in Cornwall by removing a constraint to the capacity of the A30 route, which will improve safety and relieve congestion and delay. The start of construction on site is imminent with completion expected in 2016/17.

3.2 Route Strategies and the Strategic Economic Growth Plan

Underpinning the way in which we plan and coordinate future interventions on the network, from an operational, maintenance and modernisation perspective, is our route strategies. Working closely with Local Enterprise Partnerships and other local partners and stakeholders, we use route strategies to identify current and future constraints to economic growth that the performance of the strategic road network potentially causes, and identify how future delivery and investment plans might address them.

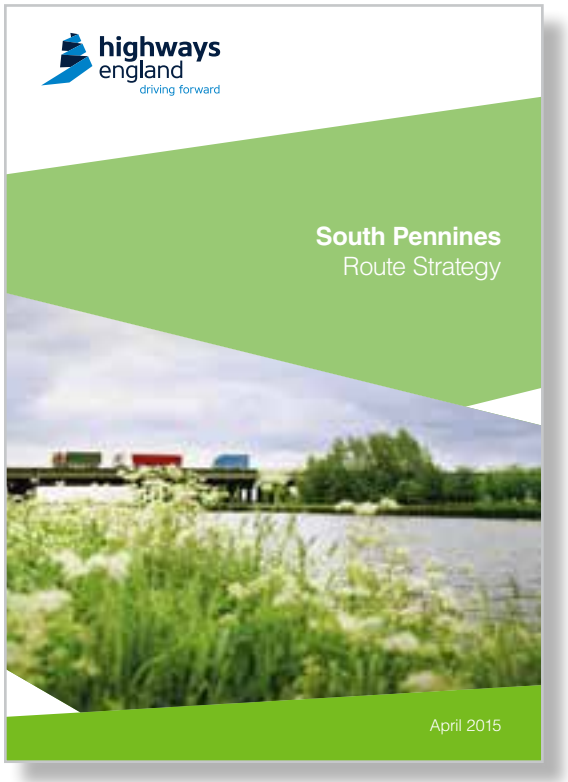
We have now completed our first set of route strategies. Looking forward to Road Period 2 (RP2) we will begin to develop our next iteration of the strategies and will publish them at the end of 2016/17 in order to inform our strategic road network Initial Report and the RIS 2.

Alongside this we are committed to doing more to ensure that the strategic road network does take account of local, regional and wider national economic growth. By the end of 2016 we will publish our joint Strategic Economic Growth Plan with our public and private partners (including Local Enterprise partnerships, developers, local authorities and the Combined Authorities.)

The plan will enable us to develop a better understanding of how investment contributes to economic growth, where it will deliver best value in the future and how we can collaborate and pool funding to unlock the greatest benefits. It will also form an important input to our future route strategies. Following evidence gathering and consultation in year one, we expect to publish the plan and begin implementation in year two.

Throughout this Road Period, we will evaluate what activities have been undertaken to support the economy. As a minimum we will include the following metrics:

- Being an active and responsive part of the planning system, by responding to 99% of all formal planning applications within 21 days
- Supporting businesses, and the freight and logistics sector
- Helping Government support Small and Medium sized Enterprises, by meeting Government target of 25% (SME) direct and indirect spend.



4. A safe and serviceable network

England's strategic road network is currently one of the safest in the world.
The Highways Agency always put safety at the core of its work, and as Highways England we will build on this legacy, working towards the goal of bringing the number of people killed or injured on the network as close as possible to zero by 2040.

One of the most important factors in providing a safe strategic road network is well-maintained and well-serviced road surfaces and associated infrastructure. Consequently, over RP1, we plan to use the increased certainty of funding to transform the way we maintain and modernise our assets – see 4.2.

4.1 Safety first

Both the Government and we are resolved that no one should be harmed when travelling or working on the strategic road network.

As a first step towards this goal, the Government has set a challenging target that we are determined to reach.

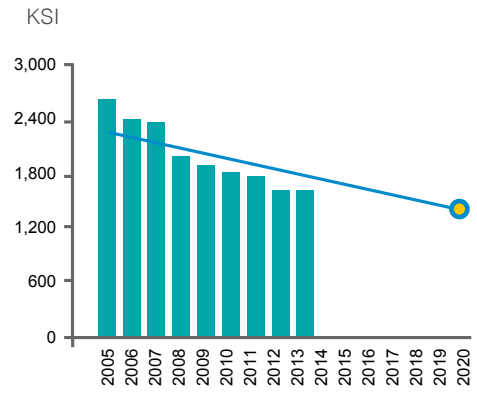
Government key performance indicator
Road Safety

KPI — The number of KSIs on the SRN

Target — Ongoing reduction in Network KSI's to support a decrease of at least 40% by the end of 2020 against the 2005-09 average baselines

Whilst the number of people Killed or Seriously Injured (KSI) on UK roads has generally been declining since 2005, over the last few years the number of fatalities has remained fairly consistent with a small increase in KSIs in 2013. We recognise that we must continue to improve safety by investing in our road network, both to prevent incidents from occurring and to reduce the severity of those that do. By end of 2020, we aim to have reached a target of no more than 1,393 KSIs across our network in a year. This will be achieved by a year on year reduction in those harmed across the network – see figure 5.

Figure 5: No. of KSIs on the network



We will set out exactly how we plan to achieve this in our five year plan, Driving Forward Safety, which we will publish in the autumn of 2015. Through these plans and the active support of our partners and their enforcement powers we will delivery safer roads, safer vehicles, and safer people.

4.1.1 Safer Roads

Over the course of RP1 we will invest over £11bn to modernise and maintain the network, this will also include a range of safety measures that will result in noticeable improvements for our customers and will contribute significantly to achieving the 40% reduction in KSIs.

The measures that we will implement include:-

- Upgrades to junctions and removing some of the worst bottlenecks
- Developing higher standard A roads, to be known as 'Expressways'
- Upgrading central barriers
- Providing safer verges with improved run off protection
- Improved road signing and markings
- Upgrading lay-bys
- Developing and deploying technology to prevent, detect and monitor incidents.
- Using designated safety funding to deliver targeted safety improvements.

Through the investment and wholesale modernisation of the network we will ensure that by the end of 2020 more that 90% of travel on the strategic road is on roads with a safety rating of EuroRAP 3* (or equivalent). We will also ensure that the majority of those roads with 1* and 2* safety rating have improved to 3*.

Alongside this we will work closely with the International Road Assessment Programme[14], the Road Safety Foundation[15] and the Department for Transport to inform the development of a new comprehensive star rating system.

Understanding causation factors behind incidents and improved intelligence in respect of road safety will allow us to target investment more efficiently. As a result we are committed to develop road safety intelligence profiles on each of the strategic routes by the end of September 2015.

[14] http://www.irap.net/en/
[15] http://www.roadsafetyfoundation.org/

We will also conduct annual progress reviews on scheme delivery to ensure we are making progress towards our safety KPI.

Where there are gaps in our current understanding and knowledge we will address this over the Road Period. We will commission road safety research projects to improve our understanding of the causes of fatalities in collisions on the network, current state of roadworthiness of vehicles and the impact of road works on driver stress for completion by the end of April 2016. We will also develop an improved monitoring capability to ensure incidents on the All Purpose Trunk Road (APTR) are captured by the end of April 2018.

As required by Government as we improve our safety intelligence we will gather data on a range of performance indicators and report annually to the Department for Transport, the Highways Monitor and Transport Focus. These include:

- Incident numbers and contributory factors for motorways
- Incident numbers and contributory factors for APTR
- Number of vulnerable user casualties across the network (cyclists, pedestrians, motorcyclist and equestrians.

4.1.2 Safer vehicles

Where faulty vehicles account for incidents on the network, we know that the majority of them are down to poor car maintenance.

To tackle this we will work with industry bodies, motoring organisations and enforcement agencies to improve vehicle maintenance. In the first instance we will develop a series of campaigns focused on the improvement of vehicle maintenance.

We will also expand our engagement with car manufactures and other organisations to develop technologies that improve safety, including collision-avoidance technology and autonomous vehicles, which mitigate against key contributory factors in incidents.

4.1.3 Safer people

Customers

Driver behaviour and human error remain the most likely cause of incidents on our roads today. As the steward of the network we are reliant on drivers complying with the Highways Code and the support of enforcement authorities when they do not.

To achieve our 40% reduction target we will need a higher level of commitment not just from ourselves but also from our partners who have a huge part to play. We will work closely with them to develop targeted enforcement and education interventions to address a wide range of non-compliance issues which impair driving, such as fatigue, distraction, alcohol and drugs.

We will target improvements in safety for vulnerable customer groups such as cyclists, pedestrians, the young and elderly drivers.

Our people and supply chain

We have a well-established approach to safety for our people and our supply chain. However, we will embed a more mature safety culture while focussing on measures to reducing risk that have the biggest impact.

To develop and evolve our safety leadership and culture approach, we will:-

- Implement a safety leadership and cultural change programme across the Road Period which recognises that change is as much about personal responsibility as it is corporate action
- Manage risks through the development of a single health and safety management system to address both customer and workforce risks. This system will include, rationalised company procedures and processes to create systems of work that are pragmatic and risk based
- Measure performance through the development of enhanced lead indicators
- Raise standards for safety employed by our supply chain, wider industry and our own company over the Road Period

- Eliminate crossings of live carriageways by road worker.

As required by Government we will report annually on the following performance indicators related to our company and supply chain.

- The Accident Frequency Rate for construction and maintenance workers our supply chain
- The Accident Frequency Rate for Customer Operations (the Traffic Officer Service and office-based staff).

4.2 A serviceable network

The Government has asked us to keep the network in a good condition, therefore in our SBP we committed to ensure a more dependable and durable network that requires less time and money to maintain.

We will do this, and in turn enhance the long term safety of the network, by moving to a longer term, more efficient approach to planning our maintenance of the network and improving our asset management capability. We will also improve the way we work with our maintenance supply chain.

4.2.1 Planning the long term maintenance of the network

Over the next five years, we will invest more than £3.65bn in maintaining the strategic road network in order to meet the Government's requirement to keep the network in good condition. This will include an ambitious resurfacing programme covering a significant proportion of the network.

Government key performance indicator
Network Condition

KPI — The percentage of pavement asset that does not require further investigation for possible maintenance

Target — Percentage to be maintained at 95% or above

In 2015/16 we will invest a total of £718m in renewing our road surfaces, structures and technology assets. We will deliver:

- 1,200 lane miles of new road surface
- 178,000 lane miles of vehicular barriers
- 230,000 lane miles of drainage
- 375 technology renewals and upgrades.

The renewals outputs that we will deliver in the first year of RP1 are set out in table 5 below[16].

Table 5: 2015/16 renewals outputs

Renewals Type	Deliverables	Total Quantity
Renewal of Roads (RoR) Pavement	Pavement	1,200 (Lane miles)
Renewal of Roads (RoR) Pavement	Road markings	2,304,000 (lin m)
	Kerbs	13,000
	Vehicle Restraint System – Concrete	59,000 (lin m)
	Vehicle Restraint System – Non Concrete	119,000 (lin m)
	Drainage	231,000 (lin m)
	Drainage – Other	1,435 (no.)
	Geotech	46,000 (linm)
	Traffic Sign (non-electric)	1,525 (no.)
	Guardrail	1,000 (lin m)
	Boundary Fencing	58,000 (lin m)
	Footway	13,000 (lin m)
	Lighting	3,649 (no.)
	Roads - Other	0 (no.)
	Soft Estate	7 (no.)
Renewal of Structures	Bridge Joint	222 (no.)
	Bridge Bearing	214 (no.)
	Parapet	1, 000 (lin m)
	Waterproofing	20,000 (sq. mtrs)
	Vehicle Restraint System – Non Concrete	0 (lin m)
	Drainage	0 (lin m)
	Structures – Edge protection	0 (no.)
	Structures – Other	58 (no.)
Renewal of Technology (RoT)	Motorway coms equipment	100 (no.)
	Technology renewals & improvements	375 (no.)
	Technology Projects – Economy	0 (no.)
	Technology Projects – Safety	0 (no.)

[16] Outputs based on current asset knowledge and assumptions for RP1 and subject to change control procedures outlined in Section 9

This work will be done in a way that minimises disruption to customers and neighbouring communities, and will include low-noise surfacing of the network. This will contribute significantly to the achieving the target to mitigate at least 1150 noise important areas over RP1.

We will measure our overall performance through annual inspections of the road pavement to ensure that we meet our KPI requirement.

We will embark upon a significant departure from the way we have traditionally planned asset renewal works based on an annual cycle of funding. This often resulted in planning work in the spring and summer before carrying it out in the autumn and winter when the weather is poor. A longer-term and more integrated view of maintenance and modernisation, based on better asset knowledge, will offer huge benefits in terms of minimising disruption to our customers and ensuring best value whole-life cost from the asset.

By December 2015, we will define our programme for renewal and small scale enhancement for 2016/17. At the same time, we will develop a methodology for getting inputs for regional delivery plans that will adopt a longer term view, the outputs of which will be updated throughout RP1. The development of our plans will be controlled by Regional Programme Boards and coordinated through an integrated portfolio management approach that packages together all our renewals, major schemes, and routine maintenance activities for both now and in the future.

This will mean we can carry out all necessary works in one go, with an aspiration to not return back to the same location to carry out further work on any given part of the network for at least five years. Naturally, it will also contribute to our KPI target of ensuring lane availability does not fall below 97% in any given year.

We will also ensure the most critical and vulnerable parts of the network are prioritised for enhanced resilience and contingency measures. This includes implementing our Metal Theft Strategy to prevent the theft of cables, which causes significant disruption.

4.2.2 Improving our asset management system and capability

Building on our existing asset management capability, by the end of RP1 we will have in place an asset management system that is consistent with ISO55000 industry standards.

Our asset management guiding principles will be outlined in our Asset Management Policy, which we will issue in August 2015. This will be followed by our Asset Management Strategy in April 2016. This Strategy will outline how we will deliver our asset management approach outlined in the Asset Management Policy. Our organisation's asset management capability will be measured through a series of asset management maturity assessments carried out across RP1.

A critical element to any successful asset management system is a good knowledge of the condition and performance of the existing asset base. As such one of the key enablers of our new approach will be a comprehensive asset data information system (the Integrated Asset Management Information System, or IAMIS). This will be introduced in stages over the next five years, adding one asset type after another as we gather improved data and the associated sub-systems come online.

To meet our commitment to keeping the network in good condition we will submit an implementation plan in March 2016 to demonstrate how we are improving asset information quality. The plan will be aligned to our Asset Management Policy and Strategy and will provide confidence that we are progressing towards our objective of improving our asset management capability. Additionally, as we introduce IAMIS, we will work to develop and complete validation of new condition indicators for:

- Pavements and Structures for agreement by March 2017 and complete validation for these by March 2019
- Technology, Drainage and Geotechnical Works for agreement by March 2018 and complete validation for these by March 2019.

4.2.3 A new operating model for maintenance

A key element in our journey to improving our overall asset management capability will be significant change in our operating model for maintenance

Starting in the East Midlands at the point of contract renewal in July 2016, the new model will see us directly manage both routine maintenance and the coordination and planning of capital renewal schemes.

To drive improvements in efficiency and the quality of services delivered to customers we will increase our direct knowledge of the asset and the factors which generate waste and inefficiency. Working more closely with the suppliers who undertake these activities on the ground will open opportunities for us to collaborate more effectively with them to identify innovations in planning and scheduling and the methods employed to improve the quality and value for money of these services.

In this new model the works which were previously undertaken by the maintenance contractor will be split into three principle packages. These include a design package, a term maintenance package, and a management and direction of operations package. The direction and management of operations elements will be insourced and the other two packages let to suppliers. We will also contract directly with a range of specialist providers who had previously worked to the direction of the maintenance contractor.

By increasing our direct exposure to works we will better placed to ensure that the quality of work undertaken is optimised. Quality of workmanship also has a major impact on the durability of asset renewals generating assets which need less future maintenance. Reducing the need for work in the future represents better long term value for money, reduces future disruption to road users and reduces safety risks for road workers.

This change in approach will require a different internal capability to reflect the different role that we will be being adopting.

A key objective of this approach is to build our internal knowledge of the asset and build commercial insight, particularly the causes of waste. We will then utilise our increased asset and commercial insight to drive improved performance across the traditionally contracted maintenance operations in other parts of the country.

To support this transfer of practice we will also be enhancing our central areas of expertise who will work closely with the East Midlands team and other areas.

There are many examples of good practice which have been generated by maintenance contractors across the network and the sharing of best practice in the new arrangements will very much be two way, but with increased Highways England capability to ensure that improvements generated in one area or on one scheme are embedded more widely.

5. More free flowing network

Highways England in line with the RIS, aims to provide a much more free-flowing strategic road network, where all journeys are easier, safer and more reliable, and delays are less likely. In responding to the RIS and listening to our customers we know they currently see the management of roadworks and resulting journey times as one of the least satisfactory aspects of the network we service.

Improvement in this area will have a positive effect not only on the experience of our customers, but also on the wider communities the network serves and ultimately on the national economy. For this reason, the government has rightly set Highways England a challenging target for Network Availability.

Government key performance indicator
Traffic Flow – Network Availability

KPI — The percentage of the SRN available to traffic

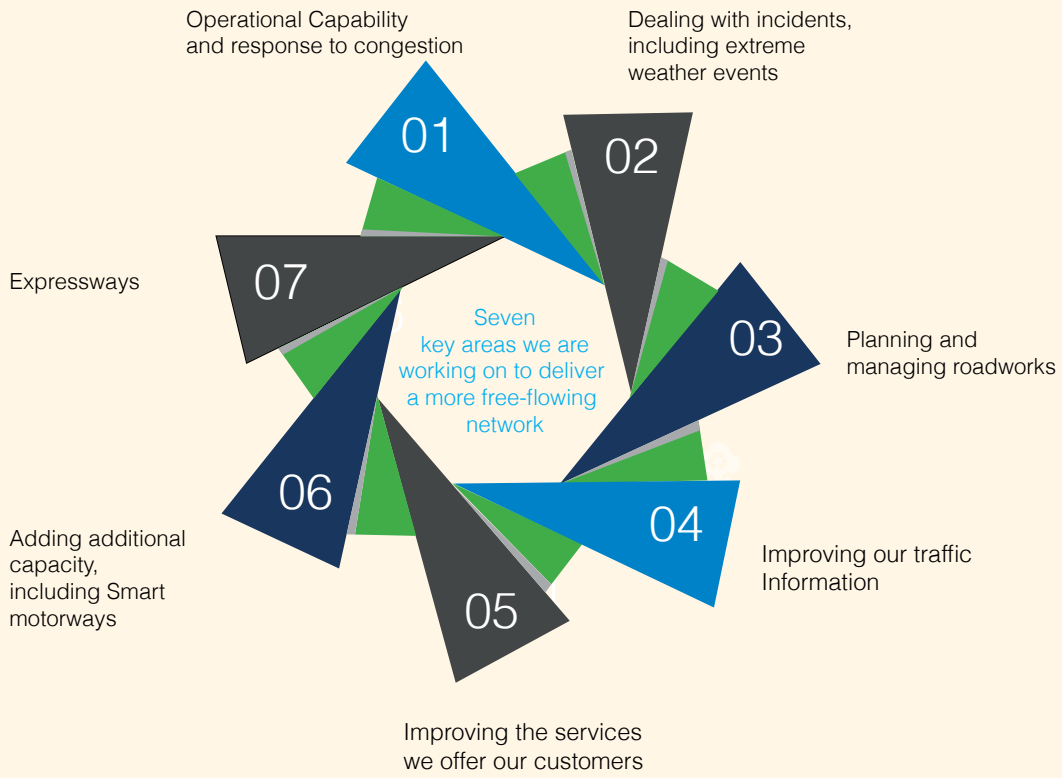
Target — Maximise lane availability so that it does not fall below 97% in any one rolling year

5.1 What we will do

We will set out the principles of how we will support the smooth flow of traffic in a Concept of Operations, which we will publish by July 2015. Our full plans to strengthen the company's network management function, maximise network availability and reduce the impact of incidents and recurrent congestion will be published in a new Operational Strategy by the end of December 2015.

The work will change the operating model for our on-road service, providing greater coverage of the network, greater flexibility to respond to variations in demand an increased safety both on our network and for our customers and neighbouring communities. This is one of the key tools to ensure lane availability does not fall below 97% in any one rolling year. We expect to pilot this new operating model in one region by the end of 2016.

There are seven key areas we are working on to deliver a more free-flowing network:



5.11 Operational capability and response to congestion

Operational capability determines how Highways England tackles predictable congestion. This includes cyclical increases in demand around peak times of the day, or holiday periods throughout the year. We commit to providing more effective information well in advance in order to influence travel patterns, and real-time data in a useful format while customers travel on the network.

We will strengthen our response to congestion through preventative measures like communicating alternative routes and additional roadside technology to facilitate these measures, such as customer information signs. Over the four year period from 2016/17 we will use the designated Innovation Fund to deliver incident detection technology on the network.

Over RP1 we will continue to upgrade our regional control centres systems through joint strategic initiatives that embed new control systems such as CHARM, a joint initiative between Highways England and the Dutch road authority, Rijkswaterstaat. These will interlink all key command and control systems into a single more efficient operating system, enabling remote operation and response from any control centre. This will improve our effectiveness, resilience and our ability to flex operational capability at particularly busy times or during emergency incidents.

We will be introducing a new system for managing traffic into one of our control centres by the end of March 2017 and will continue to roll out thereafter.

While we are implementing these initiatives, we will be reviewing our operational approach to delivering information, operating the network and utilisation of on-road Traffic Officers to realise greater value from continued investment in these service. We will complete this review process by the end of December 2015.

5.1.2 Dealing with incidents, including extreme weather events

When incidents do occur we commit to responding more promptly, and deploying the right level of response to resolve the issue and prevent any further escalation. We will coordinate Traffic Officers, our asset maintenance and vehicle clearance contractors in a timely manner to clear the incident and reopen the affected lanes or road to traffic.

Government key performance indicator
Traffic Flow – Incident Management

KPI — Percentage of motorway incidents cleared within one hour

Target — At least 85% of all motorway incidents should be cleared within one hour

We will also develop new incident detection technology to identify and respond to incidents more quickly; for example trialling an acoustic tunnel incident detection system in the first three years of RP1. These systems utilise the latest technology to detect incidents within a tunnel through abnormal sounds; in turn notifying our control rooms, where if required action can be taken to halt tunnel access and activate other emergency measures.

We will continue to work with our partners to refine and improve strategic development of the initiatives and protocols aligned to the CLEAR initiative (Collision, Lead, Evaluate, Act, Re-open) and the Joint Emergency Services Interoperability Programme (JESIP). This includes close liaison with other roads responders, such as emergency services or other government vehicle enforcement agencies to reopen the network quickly after major incidents.

Strengthening collaborative partner relationships like these will also assist us to operate the strategic and local road networks more effectively around planned events.

We will also work alongside industry bodies, motoring organisations and enforcement agencies to improve driver behaviour and vehicle maintenance in order to reduce the number of incidents, and maximise lane availability.

Congestion and road closures caused by extreme weather events are more unpredictable. While such events are out of Highway England's control, we can control how effective our preventative forward planning initiatives and reactive response measures are. We therefore commit to delivering and maintaining an enhanced, Integrated Severe Weather Information Service, to support effective decision making and management of our response to severe weather.

To improve monitoring of incidents and our response to them, we will develop a new incident management measure in 2015, which will initially run alongside the existing measure while we assess and develop its efficiency before implementing it fully from 2020 onwards.

Our on and off-road Traffic Officers and control room staff play an important role in keeping traffic moving. This is especially true in the operation of Smart motorways. With the expansion of further 286 lane miles over the next five years, we will rely heavily upon them to effectively operate the motorway network, help our customers in the event of breakdown or collision and clear debris from the live lane before returning the road to use. During the early years of RP1 we will analyse and capture lessons learnt from the operation of Smart all lane running motorways to better understand and improve future schemes.

5.1.3 Planning and managing roadworks

Another crucial factor in achieving free-flowing roads and maximum lane availability is how effectively we plan and manage roadworks. Given that we are also committed to maintain and modernise the network, this makes RP1 a particularly challenging period.

We will continue to carry out works at times of minimal inconvenience to our customers and neighbours. When this is not possible, we will explore new methods to optimise our occupancy of the network, such as 'fence-to-fence' working. In this example combining improvements and renewal works at a location to limit disruption. On completion of such works, we do not expect to return to the location for major roadworks for a minimum period of five years thereafter. We will also utilise the Traffic Officer Service to play a role in network stewardship, monitoring how works are effecting traffic flow and noting visible asset defects while out on the network.

Through improving the quality of information that we provide to our customers about the most disruptive roadworks, and ensuring that planned roadworks are communicated more effectively our customers will be able to expect a better service in this area. We will also develop a delay in roadworks performance indicator during the first year of RP1. We will then report annually to the Government, the Highways Monitor and Transport focus on this and the activities that we have undertaken to minimise inconvenience to our customers in the previous year.

5.1.4 Improving our traffic information

As well as improving how we operate the network and manage roadworks, effective communication of our planned activity and up-to-date network condition information are critical to achieving a more free-flowing network. By December 2015, we will develop and publish Highways England's Traffic Information Strategy. This Strategy will set-out how we will engage with local highway authorities to integrate journey planning across our networks and improve communication to our customers. Providing our customers with better information on network conditions will allow them to plan their journeys effectively, and avoid incident-related congestion or works.

To support this Strategy we will continue to promote Traffic England, developing the website further so it is recognised as a trusted source of information making Highways England accountable for our customers' journeys. We will also explore using and sharing data and traffic information from the National Traffic Operations Centre to make a step change in the quality and accessibility of information to our customers.

In preparation for a more modernised and technologically advanced network, we will be trialling wireless internet in the south-east region between 2016-18. If this is successful we will investigate the benefits and case for targeted use at other key locations. Integration of the network and mobile technology will undoubtedly be crucial to providing our customers with real-time interactive travel data in the future. We will further explore the possibilities in the second Road Period.

5.1.5 Improving the services we offer our customers

By December 2015, we will develop and publish our Customer Service Strategy setting how we will deal with their needs, as well as taking into account their views and feedback. To develop and broaden our range of services, and to reflect the diversity of our customers and their preferences for contacting us, we will provide multiple channels of communication; for example, expanding social media and web chat contact with our customers.

The plan is to route customer and business contacts through a new centralised customer team within the National Traffic Operations Centre. By basing the team in our operations centre, we can not only answer their general enquiries, but also provide current network condition and traffic information. We expect this to have a positive effect on our customer satisfaction rating.

We will work with Transport Focus to help shape the new customer satisfaction measure they are developing, which will initially run in parallel to our existing Road User Satisfaction Survey. During the first two years of RP1, we will also develop new performance indicators for dealing with customer correspondence and telephone enquiries. Ultimately success will mean we are acknowledged externally for the quality of customer service we provide. We will gain greater customer insight by valuing their feedback and complaints, learning from our customers and responding in an appropriate manner.

Finally, we will also improve how we engage with our stakeholders, using an account management approach to obtain the best value from reciprocal, mutually beneficial relationships with key stakeholders.

5.1.6 Adding capacity, including Smart motorways

As described in Section 3, Supporting Economic Growth, the capital investment of more than £7bn will contribute significantly to increase capacity and remove bottlenecks to facilitate our ambition for a free-flowing strategic road network. The investment will also allow us to address the environmental impact on people and improve access to and from the strategic and local road networks.

5.1.7 Expressways

An expressway will provide a high-standard route normally associated with our modern Smart motorways on the APTR network. It will transform those busy all-purpose roads by creating a free-flowing route where currently there are frequent junctions and local turnings causing congestion.

An early example of how expressways will transform the strategic road network is being taken forward in our planning for the A14. We will be starting work on A14 Cambridge to Huntington project during this Road Period. This will make journeys more reliable through increased capacity, improved technology, better connected junctions and reduced congestion on this key arterial route linking the east coast ports with the Midlands and north of England. We will continue to develop the standards for the expressways concept with the aim of proposing and constructing a number of schemes in this Road Period and the next.

6. Improved Environment

Government has made a strong commitment to an ongoing improvement in environmental outcomes through the operation, maintenance and modernisation of the strategic road network. We are committed to ensuring that all activity on the network is delivered in a manner that does not harm the environment; but instead delivers long term benefits to the natural and built environment, creating a sustainable future for all.

The network has an effect in a variety of ways on the environment. We have set out below what we will do in RP1. Government has set specific targets in the areas of noise and biodiversity.

In recent years we have made significant progress on reducing the impacts of our network. As a result of quiet surfacing, early relocation of affected species, and more intelligent design and landscaping, our performance has improved and surrounding communities have been less effected. However, there is much still to be done. With the increase level of investment during this Road Period we will improve our environmental approach across all design and construction activities.

To meet our ambitions for the environment, we will set out our plans in an Environment Strategy which we will publish in March 2016.

We have substantial investment to start tackling some long standing environmental issues. These include:

- Further design and development making progress towards building a twin bore tunnel on the A303 at Stonehenge, to take traffic away from the surface and reunite the World Heritage Site, and consideration of some small scale work in the Blackdown Hills Area of Outstanding Natural Beauty (AONB), which will take account of the environmental sensitivity of the area.
- Making progress on the outputs from the Trans-Pennine study, including plans for two overtaking lanes on the A628 Woodhead Bridge, and Salter's Brook Bridge, in the Peak District National Park. We will work closely with the National Park Authority to ensure improvements are in keeping with the Park's protected landscape
- A bypass and junction improvements on the A27, whilst also developing sustainable transport measures at Arundel, Worthing, Lancing and East of Lewes.

We will also invest £225m over RP1 through a dedicated Environment Fund to deliver specific environmental enhancements on or around the network. In addition, the £75m from the designated Air Quality Fund is aimed at making real reductions in air pollution.

Measuring Environmental Performance

At this stage, there is no single metric to indicate the overall condition of the environment with respect to the strategic road network. Highways England will therefore develop a broader range of new measures that reflect our environmental performance, and this work will be completed by end of RP1 for use in the next Road Period. These new metrics will allow Highways England to demonstrate clearly what activities have been undertaken, and how effective they have been in improving environmental outcomes.

6.1 Specific areas of environmental action

There is scope for different interventions to deliver integrated solutions where there are opportunities for synergies across topics and geographical areas. For example, one intervention may secure outcomes ranging from biodiversity to water and landscape improvements. There may also be opportunities to lever contributions from other sources to achieve wider improvements.

We will work with statutory environmental bodies and other stakeholders in developing specific action plans and criteria for prioritising expenditure from the fund. We will commence consultation with stakeholders on the initial statement of prioritisation for the fund in summer 2015.

6.1.1 Noise

Concerns about noise represent the highest number of environmental complaints from customers. The design of new schemes includes mitigation to manage noise, but problems remain, particularly on the older parts of the network.

Government key performance indicator
Environment – Noise

KPI — Number of Noise Important Areas mitigated;

Target — Mitigate at least 1,150 Noise Important Areas over RP1.

The Government has challenged Highways England to mitigate noise in at least 1,150 Noise Important Areas over RP1. The programme consists of:

- Approximately 45% of the sites will be delivered through our network modernisation programme
- Approximately, a further 45% will receive noise mitigation through the planned quiet noise resurfacing programme
- The remaining 10% of noise sites will be delivered by stand-alone measures such as noise barriers or insulation
- A feasibility assessment of low-noise surfaces and if successful, a trial of Two Layer Porous Asphalt on one or more sections of urban motorway. The feasibility assessment will be completed by 2016 and if successful trial site locations identified by 2017.

We will publish our programme of measures to tackle the 1150 noise important areas for 2016 and beyond in our updates of the Delivery Plan.

6.1.2 Air quality

To support wider Government initiatives targeted at improving air quality, Highways England is committed to invest £75m in a range of projects to reduce pollution and ensure the air around the network is clean and healthy for our customers and neighbours.

We expect to undertake up to six air quality pilots in 2015/16 and a further four in 2016/17. Each of which will take approximately 12 months to complete. The locations for these studies will be identified by working with the Department for Transport and Department for Environment Food and Rural Affairs[17]. We will then identify further locations that would benefit from physical works to improve air quality throughout the remaining years of RP1 and beyond.

We will continue to meet and consult with scientific experts, local and national government, wider stakeholder groups and our delivery partners to discuss how best to achieve better air quality taking into account current legislation. We will build a clear picture of where pollution exists and the impact of our mitigation, support others in developing new approaches to reducing pollution, mitigate and design out pollution from new schemes we build, and actively reduce pollution through effective management of the network.

In the first year of RP1, we will:

- Set up the Air Pollution Strategy Board to govern activity and investment
- Develop an air quality action plan setting out our activities for the next five years
- Produce an update report on trials and research that have been commissioned by March 2016
- Publish a report highlighting lessons learnt and tools which have been successful in addressing the air quality challenge by June 2016.

We will provide further information on our future programme to develop a new performance indicator for air quality.

[17] https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs

6.1.3 Carbon emissions

Road transport is one of the main sources of greenhouse gas emissions, commonly referred to as carbon emissions, which contribute to climate change. We will play our part in reducing the UK's carbon emissions.

We are committed to maintaining our focus on reducing Highways England's carbon footprint, and working closely with our suppliers to reduce emissions from network related activity, and to move from carbon measurement to the challenge of carbon management. We will set out our plans for a low carbon future as part of Highways England's new Sustainable Development Strategy by March 2016.

The key areas of focus over RP1 will include:

- Assessing the feasibility of introducing a mixed fleet of ultra-low emission vehicles (ULEVs) for the Traffic Officer Service, comprising diesel, electric or hybrid vehicles. Our plans will be set-out with our Operational Strategy by December 2015
- Investigate feasibility of solar panel provision on the surplus land estate, and facilitating the generation of renewable energy adjacent to the network estate and delivered to the national grid. Identification of initial programme of interventions by March 2016, and updated annually thereafter
- Developing a programme to support uptake of ULEVs by installing rapid electric charging points along the strategic road network, with a future ambition to ensure 95% of the network has a charging point at least every 20 miles.

During this Road Period we will be measuring carbon dioxide and other greenhouse gas emissions originating from Highways England's or our supply chain's activity on the network. We will also develop a new indicator to determine what vehicle emission levels are from our customers' use of the strategic road network. We will develop the appropriate methodology and complete this work by March 2016.

6.1.4 Biodiversity

Government key performance indicator
Environment – biodiversity

Delivery of improved biodiversity, as set out in the Company's Biodiversity Action Plan

The Company should publish its Biodiversity Action Plan by 30 June 2015 and report annually on how it has delivered against the Plan to reduce net biodiversity loss on an ongoing annual basis

There are opportunities to improve the biodiversity of the existing network. Where roads have been constructed in deep cutting through areas of significant environmental value, there is scope to restore biodiversity by reconnecting severed landscapes. Highways England will identify works to fix deep-seated environmental problems and halt net biodiversity loss to contribute to Biodiversity 2020 outcomes. This work will also help meet the Government's commitments within the Natural Environment White Paper[18] and the National Pollinators Strategy[19].

We will set out our plans to halt the loss to biodiversity and the longer term ambition of no net loss in RP2, in our Biodiversity Action Plan by June 2015. Key priorities currently identified for action in RP1 are:

- Reviewing opportunities for specific measures to contribute to a coherent and resilient ecological network by enabling species to move between core areas
- Reviewing opportunities for contributing to restoration areas such as Nature Improvement Areas (NIAs), where strategies are put in place to create high value areas, restoring ecological functions and wildlife. We will continue work on two pilot schemes at the Humberhead Levels, and the Morecombe Bay Limestones and Wetlands NIAs.

[18] https://www.gov.uk/government/publications/natural-environment-white-paper-implementation-updates
[19] https://www.gov.uk/government/publications/national-pollinator-strategy-for-bees-and-other-pollinators-in-england

Further work on the network has the potential to contribute to other NIAs. We will assess what interventions can be undertaken at these sites and publish our draft programme of locations and potential interventions alongside our biodiversity action plan in June 2015

- Reviewing opportunities for contributing to Sites of Special Scientific Interest (SSSI) or core area of high nature conservation value which contain rare or important habitats or ecosystem services. Highways England owns the entirety of two SSSIs.

We will develop a metric to measure and report on progress in this area. The timetable for this will be set out in our Biodiversity Acton Plan.

6.1.5 Landscape

Highways England will invest £29m during RP1 to improve the look of our network, and both protect and enhance the character and quality of the built and natural landscape. Our key areas of focus over the next five years are:

- Addressing existing environmental problems, and specifically reducing visual intrusion to our neighbours. We will do this by reviewing and, where appropriate, revising our existing landscape mitigation to take account of changes in local priorities and land use
- Amending the design of our roads where appropriate, to better address national, regional and local priorities
- Promoting schemes that are better integrated with the surrounding environment at a landscape scale, which also deliver associated ecosystem service benefits. We will do this in-line with National Character Area profiles.

Highways England will continue to develop a programme of interventions to reduce visual impacts. We will further assess, design and appraise around 180 locations during 2015/16. By April 2016 we will have identified the future programme of interventions.

6.1.6 Water quality and flooding

Highways England will invest £78m over the next five years to address flooding and pollution from highway runoff through measures to attenuate and improve flood resilience on the strategic road network and to improve water quality. This investment will also help meet the Government's commitments within the Floods and Water Management Act 2010[20] and the EU Water Framework Directive[21].

We will focus our attention in the following areas:

- Improving resilience to flooding and reducing flood risk to communities adjacent to the network. Activity will focus on addressing all identified high priority flood risk locations recorded in our Drainage Data Management System
- Improving water quality through better environmental protection and specifically improving surface and groundwater quality by addressing priority locations of known pollution
- Working with the Environment Agency[22] to identify opportunities for delivering wider environmental benefits in partnership with other land-owners, and communities.

Highways England is currently developing a programme of interventions for implementation across the strategic road network. This is focusing on identified need from our existing priority outfall, soak away, culvert and flood hotspot registers. A draft of this programme will be available in summer 2015 for those locations where detailed design can be advanced during 2015/16. This programme will be subject to review and interventions will be based on on-going characterisation of the assets. Further plans will be developed by April 2016. We will also introduce additional performance indicators for water quality and flooding.

[20] http://www.legislation.gov.uk/ukpga/2010/29/contents
[21] http://ec.europa.eu/environment/water/water-framework/index_en.html
[22] https://www.gov.uk/government/organisations/environment-agency

6.1.7 Cultural heritage

Highways England will be utilising the Environment Fund to enhance the condition of cultural heritage sites and historic features either in our ownership or in proximity to the network. Key areas of focus will be:

- Reviewing and confirming the 'at risk' and 'unvalidated' condition status for assets identified in the Department for Transport's Historic Buildings Annual report, and identifying a future programme of interventions along with associated costs by March 2016
- Enacting conservation measures at those identified heritage assets most at risk by end of this Road Period
- Reviewing the influence of the network on the setting and condition of the historic environment close to the network, identifying and delivering enhancement opportunities

By delivering on these commitments we will also meet and comply with the requirements of the 'Protocol for the Care of the Government Historic Estate'[23] .

6.1.8 Design Panel

The Government has also asked Highways England to establish a Design Review Panel to encourage design excellence in the landscape, engineering and built environment aspects of our construction projects. The Panel will review development proposals and examine how their designs contribute positively to making better places for people by striking a better balance between aesthetics and the functional and maintenance attributes of schemes.

We will hold the first meeting of the Panel by the end of June 2015, at which point it will agree, refine and finalise its terms of reference.

6.1.9 Other environmental initiatives

Litter and vegetation

Highways England will deliver its duties under the Environmental Protection Act by removing litter from our motorway network. We will further improve our performance in this area by developing and delivering educational campaigns to inform people of the safety and environmental risks of discarding rubbish. We will continue to work with local authorities to reduce litter on the APTR.

We will target over grown vegetation to improve the visual aspects of the network, and reduce the impact that vegetation can have on our neighbours and physical asset.

Legacy initiative

Moreover, under our 'Legacy' initiative, as part of the delivery of any given highway project; we now aim to bring environmental benefits that deliver facilities and design features that go beyond what would be expected from routine assessment and design practices. Such features would be focused on supporting quality of life and, or promoting the distinctiveness and character of a place. Highways England will invest up to £7m on such efforts over the course of RP1. As part of the planning process, we will work with local communities, key stakeholders and the newly formed Design Review Panel. It is envisaged that Legacy initiatives and funded activities will be realised primarily through our programme of major projects, but we will set out an updated position on this by March 2016.

[23] http://www.doeni.gov.uk/niea/built-home/information/protocol_for_the_care_of_the_government_historic_estate.htm

7. Accessible and integrated network

Highways England and the Government have a shared ambition that people should be able to travel across and alongside our network. To this end, the Government has asked us to work to improve provision for walkers, cyclists and other users and report on the number of new and upgraded safe crossings of the network.

Government key performance indicator
Cyclists, walkers and other vulnerable users

KPI — The number of new and upgraded crossings

Target — No target set

At a strategic level, effective transportation of people and goods is not about any single form or mode; it is about integrated end-to-end journeys that benefit our customers, businesses and the wider communities located on or near the network. As operator of the strategic road network, Highways England will ensure we integrate with other networks, including local roads, existing and emerging rail links and ports and airports.

To continue on a path of integrating the strategic road network, the Government has set aside more than £100m in the Cycling, Safety and Integration designated fund for Highways England to deliver targeted infrastructure measures over the course of RP1.

This chapter sets out our RP1 delivery plans, first for integration and accessibility in general and then for cycling in particular.

7.1 Integration and accessibility

Integration includes accessibility and inclusion. In these terms, we recognise that the strategic road network has a significant effect on its surroundings and it is important that we minimise the negative effect of roads dividing communities.

We intend to be more ambitious in improving accessibility and inclusion. Instead of small scale improvements that deliver the minimum that's needed, we will deliver more comprehensive improvements that work more effectively with local authority roads and routes for cyclists, pedestrians and other users. To support this level of ambition we have a programme that will invest in the region of £25m targeting specific interventions in this area.

We are developing an analytical tool that uses demographic, social, population and economic information on a scheme-by-scheme basis to identify where accessibility and inclusion efforts should be focused for the greatest benefit to communities. This tool will be trialled and rolled-out across the business by March 2016.

Alongside this tool we have been developing a means for capturing details of accessibility and inclusion work that is delivered as part of wider schemes that Highways England deliver. We have recently started to build a portfolio of good practice case studies which our project managers will use to better understand what good looks like in this area. It will enable accessibility and inclusion measures to be built into both the design and the delivery of the scheme. This activity contributes to delivering our commitments under the Public Sector Equality Duty[24].

[24] https://www.gov.uk/government/groups/review-of-public-sector-equality-duty-steering-group

We will work with key stakeholders and partners to further develop a package of integration measures during 2015/16. Examples of the work we will undertake, includes:

- Working with Local Communities – through the Place-Making approach, we will listen to local people to identify how to improve the physical or environmental quality of a place, or the economic or social well-being of a community
- We will support the delivery of Park and Ride facilities to better link the strategic road network with local public transport
- Existing and emerging rail links – M42 junction 6, first High Speed 2 station outside of London
- We will support ports by improving the A160/A180 access to the ports of Immingham and Grimsby; upgrading links to Felixstowe through the various schemes planned for A14
- Airports – We will work with the Government of the day to examine the Airports Commission findings and take forward any recommendations
- Removing Barriers – delivering three crossing improvements on the A64 at Ganton, and East and West Heslerton.

Our focus for 2015/16 will be developing an Accessibility and Inclusion Strategy by March 2016.

7.2 Cycling

Although cycling is prohibited on our motorways and incompatible with major parts of our network, Highways England will play a key role in ensuring that the ambition set for growth in cycling through Cycle Ambition Bids, Local Transport Funds and the Department for Transport's recently published, Cycling Delivery Plan[25] is fully supported by a dedicated programme of work to improve cycle facilities on or near our network. These facilities will be designed to provide safe, direct and attractive routes, linking with wider cycle networks where appropriate, to address the barriers to cycling presented by the network. The development and delivery of these improvements will require close working with local stakeholders and partners, who understand local cycle travel needs and can help to identify locations which require improvement.

[25] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364791/141015_Cycling_Delivery_Plan.pdf

The objectives of our cycling proposal are to:

- Facilitate cycling on or near the trunk road network for all types of cyclist and make cycling on and over our network safer and easier; and
- Reduce the impact of our network as a barrier to cycling journeys.

The recently published RIS and SBP outlined a commitment to invest £100m between 2015/16 and 2020/21, £78m of that total during this Road Period to improve provision for cyclists on the APTR. This funding will be targeted to provide safe and direct routes that encourage cycling on and over our network as an alternative and sustainable form of transport.

Highways England have worked with key cycling stakeholders including Sustrans[26], Cyclists' Touring Club (CTC)[27], British Cycling[28] and The Times "Cities Fit for Cycling" [29]campaign, to identify and prioritise a comprehensive list of locations based on an assessment of safety, connectivity and accessibility for cyclists. Following further consultation with local stakeholders these locations will be assessed for feasibility to deliver improvement schemes funded through the £100m investment. An example of a successful intervention we have already made using this approach is improvement work along the A63 corridor in Hull, including the creation of a shared pedestrian and cycle path.

We will further expand on our cycling objectives, and set out Highways England's future identified programme of cycling schemes in our first Cycling Strategy by December 2015.

We currently have a package of more than 40 schemes in design and development where we are aiming to complete construction during 2015/16.This includes the provision of dedicated cycling lane facilities, improved crossing points and cycling safety measures. These will be delivered at specific network locations and as part of wider comprehensive corridor treatments. Our programme for 2015/16 is shown in table 6 overleaf.

[26] http://www.sustrans.org.uk/
[27] http://www.ctc.org.uk/
[28] http://www.britishcycling.org.uk/
[29] http://www.thetimes.co.uk/tto/public/cyclesafety/

Table 6: Cycling programmes 2015-16 – RP1

Region	Area	Scheme Name/Description
East	6	Bentley Drive/Foxburrow Hill Roundabout (Lowestoft)
	6	Bentley Drive/Foxburrow Hill Roundabout South arm (Lowestoft)
	6	Foxburrow Hill (lowestoft)
	6	High Street/Old Nelson Street (Lowestoft)
	6	Amold Street (Lowestoft)
	6	Gunton Church Lane to Hollingsworth Road (Lowestoft)
	6	Station Road to Gunton St. Peters Avenue (Lowestoft)
	6	Gunton Hall Pinch Point (Lowestoft)
	6	Katwijk Way/St Peters Road (Lowestoft)
	6	Jubillee Way (Lowestoft)
	6	Camden Street/High Street (Lowestoft)
	6	A12 Witham to Marks Tey
	6	A120 Parkeston Roundabout
	6	A12 Harfreys Roundabout, Great Yarmouth
	6	A47 Hockering to North Tuddenham
	8	A5 Dunstable North
	8	A5 Chalk Hill
	8	A421/A6 Interchange Bedford
Midlands	7	M1 - A609 Nottingham Canal subway, Trowell, N, Of J25 (Sandiacre)
	9	A49 - North of Holmer Road by Church
	9	A38 - Branston Underpass
	9	A5/A452 Roundabout (Cyclist Collision Site)
	7	A50 - Swarkstone
	9	M40 - J15 Longbridge Overbridge
SouthEast	4	A27 Continuation of cycling improvements between Lewes and Polegate
North West	13	A590 Brettargh Holt to Levens
	13	A590 East of Newby Bridge Services
	13	A590 Newby Bridge to Ayside
	13	A590 West of Barrowbanks
	13	A590 Gilpin Bridge Cycleway
	13	A590 Lindale Hill to Low Newton
	13	A595 Egremont to Iron Bridge
	13	A66 Great Clifton to A595 Papcastle via Brighton (Chapel Brow to Fitz)
	13	A66 Chapel Brow roundabout
	10	A663 Cycleway link
	10	M53 junction 2, Moreton Spur & flyover
	10	M53 junction 4 - near Bebington on the Wirral
	10	M57 Jct 2/A58 Prescot
	10	M58 junction 4
	10	M58 junction 1
	10	M58 overbridge close to j4 (footbridge)
	10	M6 Junction 29, Walton Summit
	10	M60 J1-J27 Stockport town centre (phase 2)
	10	M62/M57, Tarbock Island, junction 6 og M62

We will continue to develop an annual rolling programme of cycling schemes during 2015/16 and each year of the Road Period thereafter. This programme will ultimately deliver no fewer than 200 cycling facilities and crossing points on or around the strategic road network by 2021. We will deliver at least 150 of these by the end of RP1.

We will cycle proof all our investments by building in specific cycling facilities where appropriate, as well as supporting activities of local authorities surrounding our network. To ensure schemes deliver high quality cycling facilities we are updating design standards so that schemes are designed which reflect the most up to date and ambitious thinking. We are designing an e-learning training package for highway designers of schemes on our roads and for local authorities to support cycling provision being embedded into designers' thinking. This will also support local authority scheme designers who use our standards in developing their schemes.

To further inform what interventions we will make, and to ensure we evaluate their success appropriately, we will continue to engage and consult with relevant cyclist representation organisations. We will also look to improve our understanding of the nature of cyclist usage of the strategic road network.

Highways England will develop new metrics and indicators for future Road Period's; to help demonstrate that we are supporting the Government's aspiration for improving provision for cyclists, walkers, and other vulnerable users on and around the strategic road network. During this Road Period we will transparently report on an annual basis our progress to deliver new or upgraded network crossings.

8. Delivering performance and efficiency

As part of the RIS we agreed with the Government that we would deliver at least £1.212 billion in efficiencies over RP1 to reinvest in the network, and Government set a target that we meet or exceed the expectations set out in this Delivery Plan.

Government key performance indicator
Efficiency

KPI — Cost savings: savings on capital expenditure

Target — At least £1.212 bn over RP1

Highways England is committed to giving the public value for money, which we define in terms of economy and effectiveness.

This section explains what we intend to achieve, how we plan to deliver and how we will measure our performance. We will be transparent in our reporting of performance and support the Highways Monitor in their monitoring and review of our progress.

To monitor our performance, we will publish information on all the KPIs, PIs and requirements in the RIS, information about all these aspects are indicated below[30]. We will publish an annual report about how we are doing against this Delivery Plan.

8.1 What do we mean by effectiveness?

Our SBP sets out five strategic outcomes for the next five years linking back to the Performance Specification and our effectiveness will be assessed by the extent to which these outcomes are achieved with the funding available as measured against the KPIs, targets, requirements and outputs in the RIS.

We will work closely with the Highways Monitor and Transport Focus to develop the methods for reflecting the effectiveness of what we achieve. A key part will be to further develop our understanding of the views of our customers and to ensure that the outcomes for the strategic road network and the decisions that we make are aligned with customers' values and priorities.

8.1.1 To become more effective we are:

- Focusing on making the strategic road network more accessible and better integrated for everyone, especially more vulnerable road users.
- Implementing a number of customer-driven initiatives to help get the most out of the network's capacity, minimise the number and impact of incidents and improve the provision of information about network conditions and journey times

[30] Our methodology for calculating these KPIs and the supporting performance indicators (PIs) to be monitored will be outlined in our Operational Metrics Manual.

- Using long term funding certainty will allow us to balance the short-term robustness of the network with the need for long term sustainability. We intend to produce and update an asset management strategy and long term assessment management plans, which will develop the asset management capability of our staff.

8.2 What do we mean by efficiency and economy?

The new flexibility over day-to-day operations, procurement and contract management will allow us to change the way we plan, procure and deliver schemes and will facilitate greater productivity savings in the future, allowing Highways England to deliver a greater number of projects and a better quality of service with its allocation of funding than would otherwise be the case.

The funding certainty allows smarter procurement which can both drive down unit cost but more significantly, eliminate waste.

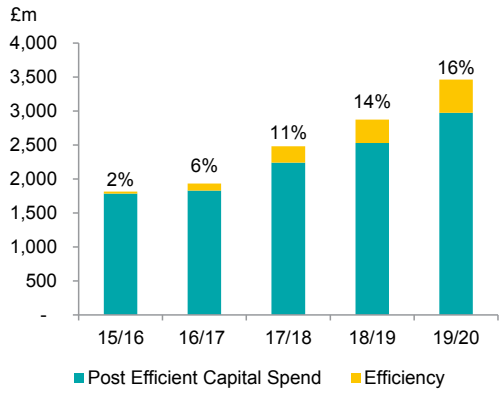
As outlined in the RIS, Highways England has committed to making capital efficiency savings of £1.212bn by 2020 (in nominal terms). These savings are consistent with our commitment to deliver total efficiency savings of £2.6bn over the next ten years and achievement requires a step-change in the way we run our business in RP1.

8.3 How will we become more efficient?

- We will introduce new contractual models (including the Collaborative Delivery Framework) to incentivise suppliers to deliver efficiencies. These will also encourage a more flexible approach to resourcing and greater collaboration with Highways England's supply chain
- We are committed to improving our commercial capabilities to ensure we undertake and procure operational activities and projects effectively. This will include better data gathering and analysis to enable improved commercial decision making. We will also develop our ability to benchmark costs and performance across our business, and to share best practice across the organisation
- Better risk management by analysing and understanding risks and placing the management of those risks with the most appropriate part of our supply chain.
- Category management of key products (e.g., gantries) to ensure we maximise our procurement power
- We are introducing Regional Programme Boards and Integrated Portfolio Office functions to improve resource allocation across regions, to coordinate bulk purchasing arrangements and save on costs by conducting fewer tendering exercises
- We will improve planning and integration of schemes to increase cost efficiency and reduce disruption for users
- Implement a Lean deployment strategy that will build a culture for continuous improvement throughout Highways England and its supply chain to deliver increased customer value and efficiency savings in support of the SBP
- We will continue to develop a portfolio of research, technology and innovation projects (collectively called the 'Innovation Programme'). Over the next five years, Highways England will introduce changes to our business as usual operation and realise benefits that stem from previous innovation work. We will set out the key principles in our Innovation, Technology and Research Strategy and more detailed plans.

These steps will enable us to meet the challenging efficiency targets as set out in figure 6.

Figure 6: Efficiency against Capital Spend



We will record efficiency cost savings on projects and programmes as they progress through the development to construction phases. These efficiencies will be recognised when the projects and programmes enter the construction phase, at which point sufficiently robust outputs and costs will enable monitoring. We will engage with the Highways Monitor on its proposed approach to monitoring which it is currently consulting on.

8.4 Measuring success

The efficiency monitoring regime and five-year funding settlement that will apply over RP1 are new features of our governance framework and we will need to adapt accordingly. In particular we recognise that companies operating under mature monitoring regimes have a better understanding of the link between costs and outputs and we will therefore improve this area.

We will develop this knowledge in the early years of RP1 with assistance from the Highways Monitor. We will produce an improvement plan that will outline the types of information we will need to collect and the processes that we will put in place to monitor our performance, as well as the steps that we will take to ensure that we have these processes in place as soon as possible.

Our exact approach to measuring, recording and monitoring efficiency cost savings will be set out in an Efficiency and Inflation Monitoring Manual, to be published in September 2015. This approach will be developed and agreed with the Department for Transport and the Highways Monitor. This will be based on the principles of transparency and proportionality, with emphasis placed on the activities our customers' value the most and those that involve the largest amount of spend.

9. Managing risk and Uncertainity

In this section we set out how we will manage risks and uncertainties associated with delivering the Government's requirements.

Our Delivery Plan is based on a series of explicit and implicit forecasts and assumptions. These include estimates of customer demand for the network and of the cost of enhancements and renewals, as well as assumptions about the weather and other external events. Clearly there is some level of uncertainty about all of these factors. Moreover given that this is the first time we have planned for a fixed five-year funding settlement, the uncertainties are perhaps greater this time than they will be in future.

In this section we describe:

- Our overall approach to Risk and Uncertainty Management
- Key Internal Risks and Uncertainties
- Key External Risks and Uncertainties
- Sharing of Financial Risk with the Department for Transport.

To ensure continuity in the transition to Highways England we will continue to use the former Highways Agency risk management processes, reviewing and developing these as part of our continuous improvement activity.

9.1 Our overall approach to risk and uncertainty management

This delivery plan explains how we will meet the requirements for the strategic road network as presented by the Government in its RIS.

It is the responsibility of Highways England to manage risk, opportunities and uncertainties in order to meet these requirements.

Our aim is to deliver the outcomes and outputs defined in the RIS. In cases where changes occur we will explain the options we have considered. In some circumstance we will need to demonstrate our proposed solution, taking into account our Shareholder and customer priorities.

We will adopt best practice risk management principles to align with the Companies Act[31] and general public sector requirements.

The former Highways Agency Risk Management Policy & Guidance[32] will be updated over the coming year to align against the Companies Act requirements and best practice principles.

9.2 Key risks and uncertainties – internal

Highways England will regularly review risks and mitigation and escalate issues to the Department for Transport as appropriate. The current risk assessment identifies successful achievement of the delivery plan will require effective mitigation of:

- Operational impact of severe weather, major incidents and clearance times

[31] http://www.legislation.gov.uk/ukpga/2006/46/contents

[32] Highways Agency Risk Management Policy & Guidance dated July 2013

- Resilience risks including supply chain, business continuity, and security issues
- Impact on programmes of severe weather, ground conditions, price inflation, and traffic modelling
- Capacity and capability across Highways England to meet the levels of ambition contained in the RIS and our SBP
- Health and safety of customers, contractors and staff
- Transformation of the culture and ways of working throughout Highways England
- Technical solutions for known environmental constraints
- Gaps in asset information
- Data and information management and dissemination.

We will manage these risks we will manage within our organisation and routinely reported to our Board on the status of these risks and the actions being taken.

9.3 Key risks and uncertainties – external

We have reviewed the key external risks and uncertainties. Below we discuss and explain how we intend to manage these where we can or work with others to mitigate the impact. In these situations we would discuss the implications with the Department for Transport and agree a way forward.

9.3.1 Changes in priorities, requirements or budgets

We recognise that requirements and budgets may change during RP1. We would expect that most changes in costs or outputs would be addressed through the change control process. In exceptional circumstances the Shareholder (see 9.4.1) can use the process set out in the Licence to help resolve the situation.

9.3.2 Macroeconomic factors, including demand risk and inflation risk

We have based our network availability target and our network management approach on reasonable forecasts of traffic growth. These would need to be re-visited if traffic changes significantly.

In our planning we have adopted a set of inflation assumptions that we have agreed with the Department for Transport. In practice, actual inflation may be substantially different (i.e. real prices are higher or lower than the agreed forecast). The Efficiency and Inflation Monitoring Manual will set out how we deal with inflation.

The terms of the Private Finance Initiative (PFI) contracts that we have inherited, have inflation uplifts that are not necessarily linked to our overall SR13 funding. Any significant disparity between our income and the payments due to such PFI contracts would be addressed by the change control process (see 9.4.1).

In the next five years we are planning to deliver a significant increase in enhancements and renewals to achieve the RIS requirements. This will require significant additional supply chain resources to be available, which is a key uncertainty. So far as is practicable we have considered this risk and possible mitigations in our planning.

9.3.3 Aging assets

Our asset base is highly complex including more than 16,000 structures, 21,870 pavement miles, 110,000 technology assets and various major structures such as the Midlands Links, Tinsley and Thelwell Viaducts and Dartford Crossing. Our asset management plans reflect the nature of this critical infrastructure, but the age and rate of deterioration will always be uncertain.

9.3.4 Environmental compliance risk

Legally binding limits for some pollutants are set in EU Directives. The UK and most other Member States are struggling to comply with these in many urban and roadside locations, and there remains a significant risk that our road schemes may be delayed as a result of their air quality impacts. This is because the additional vehicle movements they help facilitate often lead to a worsening of air quality in the immediate vicinity. We will seek to mitigate this, including working with local authorities to support their own initiatives and look for other solutions to improve air quality.

9.4 Sharing of financial risk with the Department for Transport

It has been agreed with the Department for Transport that we should not set aside any specific funds for contingency or strategic risks (other than for inflation) and we have no ability to raise further third party revenue. This means our primary mechanism for dealing with unexpected costs (higher or lower in each year) will be to adjust outputs to compensate through change control. Where there are fundamental changes in circumstance, our Licence provides for a formal variation of the RIS settlement.

The RIS provides a significant opportunity for Highways England to start to develop the strategic road network towards the Strategic Vision, benefitting the economy and customers. However, our agility and flexibility to respond to customer needs and emerging priorities is limited during RP1 due to earlier commitments given for specific schemes. The impact of this will be reviewed regularly throughout RP1 with the aim of agreeing more flexibility for RP2.

9.4.1 Change Control

We are committed to deliver as much as possible within the allocated level of funding. If risks materialise, we will manage this through a transparent change control process with key changes in outputs agreed on a quarterly basis and reported annually in our Annual Report.

Any significant changes in outputs would be discussed with the Highways Monitor and agreed with the Department for Transport.

Successful management of risk or out-performance will allow contingent monies to be released as time progresses. This ‘recycling’ of risk allowances will also be considered through the change control process such that we will identify suitable additional outputs to match the released funds.

10. People and our Company

10.1 People

The key to successfully delivering our plan over the next five years will be the commitment and capability of our people. That's why we have recently set out our people strategy, which is underpinned by four pillars: Accountable Leadership, Capable Employees, Customer-Focused Delivery and Rewarding Performance.

- Accountable Leadership – We require positive, proactive and engaging leadership at all levels of the organisation. We expect leaders to empower their teams and all employees to take accountability for decisions.
- Capable Employees – We will support and invest in the development of our people using structured career paths, including apprenticeships, and blended learning programmes. We will hire talented individuals to drive growth and innovation at pace.
- Customer-Focused Delivery – We will create a modern working environment that puts our people and customers at the heart of the business. We will support our employees to build stronger, more effective relationships that meet the needs of our customers (both external and internal) and to go the extra mile to help one another.
- Rewarding Performance – We will use robust performance management, including a recognition programme and financial and other rewards, to retain high-performing individuals who offer excellent service to our customers and demonstrate the company values and behaviours.

During RP1, we will anticipate future needs and deploy the right people with the right skills at the right time across the business. We understand that in order to achieve the challenging requirements set out in the RIS and this Delivery Plan, we will need to accelerate the delivery of schemes, as well as grow and improve our asset management capability, all under an increased level of scrutiny

It will require high performance across our organisation to meet the increased volume of business and we will need to develop new ways of working to deliver this agenda. It will also require a significant increase in the size of our workforce, so we anticipate that by early 2016 we will have recruited an additional 600 people.

We will ensure that our people have the right tools for the job and create innovative and inspiring workplace environments that reflect our culture and respond to an increasingly diverse set of workforce requirements. Our Workplace Strategy and associated delivery plan which we will develop and publish by the end December 2015 will set out how we will achieve this over RP1.

Every member of our staff will understand that by holding fast to our vision and values, we will keep the public's trust, remain approachable, dependable and focused on our customers. And that is how we will succeed in delivering the contents of this plan.

10.2 The company

10.2.1 Vision and values

Our vision for Highways England is to be a confident, energetic, agile and connected organisation, fully realising our people and our partners' potential to benefit our customers.

The values we have adopted are as follows:

- Driven to improve – Building on our professionalism and expertise, we are always striving to improve, delivering a network that meets the needs of our customers
- Leading the way – We have a clear vision for the future of the network. Each of us understands our personal contribution towards it, and we take others with us on the journey

- A trusted friend – We have an open and honest dialogue with each other, as well as our customers, stakeholders and delivery partners
- A responsible custodian – We are custodians of the network, acting with integrity and pride in the long term national interest
- A creative thinker – We find new ways to deliver by embracing difference and innovation, while challenging conventions.

10.2.2 Governance and future planning

As a public owned company Highways England operates in line with required governance including the Corporate Governance Code[32], Treasury Guidance and Managing Public Money[33]. We will ensure that our governance processes are proportionate and support the effective delivery of our business and Licence requirements, whilst ensuring that they also meet the needs of our Shareholder and the Highways Monitor. Further information on the overall framework within which we are required to operate can be found in our Framework Document[33].

This Delivery Plan forms the basis under which our performance and progress in delivering our agreed commitments and outputs will be measured and monitored externally. In terms of reporting and developing our future plans, in consultation with our Shareholder and Highways Monitor, we will report progress annually against our delivery plan. In year progress will be formally reported on a quarterly basis. We will issue an annual report to the Highways Monitor and the Department for Transport, detailing how we are performing against the Delivery Plan and the requirements. We will also produce and publish an annual update to our delivery plan to account for any changes to the way we expect to deliver our plans and outputs.

Looking forward to the next Road Period, and preparing our longer term plans for operation and investment on the network, we will produce our first strategic road network Initial Report by the end of 2016/17. Informed by the outputs of the refreshed route strategies, including asset management plans and route safety assessments, we expect the reports to present options for

[33] https://www.frc.org.uk/Our-Work/Codes-Standards/Corporate-governance/UK-Corporate-Governance-Code.aspx

performance targets, outputs, and investment which can be used to form the basis of the next RIS. Our next five year Strategic Business Plan, along with its associated Delivery Plan, will be developed ready for implementation and delivery during the next Road Period.

10.2.3 Corporate responsibility

Highways England role and remit is mandated by Government, but we have scope to play a more active role now to leverage our position and influence the debate on how to develop a sustainable transport system. Given our contribution to economic development, there is also a need for our voice to be heard in a strategic role in broader transport planning.

We will continue to deliver investment on the strategic road network; demonstrating ethical behavior, by balancing the need of contributing to economic development and improving peoples quality of life.

The Government has a clear requirement on Highways England to develop and implement plans that demonstrate how we aim to support and promote sustainable development. In response we will develop a new Sustainable Development Strategy to sit alongside our core delivery plans and other key strategies. This Strategy will be completed by March 2016, setting out our plans for this Road Period and the longer term.

10.2.4 Public Sector Equality Duty

As a public body, there are four key equality objectives we must and are committed to delivering:

- Encourage our supply chain to take the incremental steps in improving equality outcomes
- Improve our understanding of, and responsiveness to, the needs of protected groups within local communities that are affected by our activities on the strategic road network
- Promote an inclusive culture where the needs of a diverse workforce are valued and promoted
- Successfully encourage talented people from a broad range of backgrounds to join and progress through our business.

Throughout this Road Period we will report annually to Government on how we are delivering against these objectives and the wider Public Sector Equality Duty.

10.3 Other services provided by the company

There are a number of services and areas of responsibility that we will continue to manage on behalf of the Secretary of State for Transport over the course of RP1. These are generally activities we undertake outside our core role as a highways authority, but that we are nonetheless committed to delivering in an effective, efficient and professional manner with the public interest and value for money at its heart. These services are listed below and are set out in Annex C of the Highways England, Framework Document:

- National Salt Reserve
- Abnormal Loads
- Historic Railways Estate
- Technical Requirements
- Dartford Free Flow Charging
- Severn Bridge Crossing Concession
- M6 Toll
- Dartford and Local Authority Pension Scheme.

11. Collaborative Relationships

The launch of Highways England represents a fresh start and an opportunity both to strengthen relationships with existing stakeholders and work with new ones. We will set out our approach in this area within our external Communications Strategy by December 2015.

11.1 Strengthening existing relationships

We will look to strengthen the relationship we have with the Government, Department for Transport and their representatives and work to provide an effective and trusting environment for other interest groups to achieve the objectives set in the RIS. The clear separation of the Shareholder from the Client function, ensures clarity and transparency in decision making as between Shareholder, policy, regulation and customer interests. To ensure that Highways England does not receive conflicting instructions, the Department for Transport and the Highways Monitor have committed to work together to ensure clarity and consistency in respect of advice, decisions and instructions.

We will continue to provide expert advice to the Secretary of State and other parts of Government on relevant policy areas and technical matters, including in relation to relevant EU activities, where necessary.

We are developing a new approach to engaging with stakeholders and have developed an appropriate account management process. As a result, we will publish an updated account of how we engage with all our stakeholders by the end of December 2015.

In addition, there will be regular progress meetings throughout the year facilitated through the relevant account manager. We will also ensure there are ongoing opportunities to apprise our stakeholders of our work at regular intervals through our Highways England newsletter and topical campaigns.

We will set out the information services we wish to provide to customers and partners in the future. By the end of December 2015 we will publish our Traffic Information Strategy explaining how we will provide better traffic information to customers and show how we will cooperate with others to facilitate the safe and swift movement of traffic. Our aspiration is that by the end of RP1, all our customers will have the excellent quality door-to-door journey information they need to make the right travel choices. This will be available through a variety of channels, making full use of current and emerging technology.

11.1.1 Local authorities

Over the past three years we have developed relationships with more than 120 Local Authorities (and in particular the Traffic Managers of those authorities) by entering into Partnership Agreements. We will further develop those agreements and move towards the new phase agreements from April 2015, working on an incremental basis commencing with the core cities, and covering the whole of the local highways authority community by April 2017.

This phase will see our agreements becoming much more specific in order to secure effective collaboration to strengthen operations and support to local authorities in their planning and management of their own network. The reciprocal use of variable message signs, co-ordinated event plans and, where possible, system-to-system level communications will speed up our response and provide a better and more efficient service for our customers.

By December 2015, we will have completed targeted consultations with Local Enterprise Partnerships.

11.1.2 Emergency services and roadside assistance

We will work with our partners to address a range of issues that impair safe driving, as well as raising awareness of the inherent potential dangers of using the network. We will work closely with police and other emergency services to open roads more quickly after incidents, and work with the Driver and Vehicle Standards Agency[34] and other agencies to reduce the number of poorly-maintained vehicles on the network.

11.1.3 Supply chain

Significant emphasis will be placed on transforming our approach to engaging and communicating with our supply chain to harness the capability of suppliers to deliver efficient and effective services and products. By transforming these key relationships, we will reduce tender assessment baseline for major procurements by 10% and meet the Government's 25% Small and Medium Enterprise spend target by end of March 2016. Our Supply Chain Strategy will highlight how we intend to drive a step change in relationships and growth in capacity and capability. This will be published by the end of September 2015.

Our approach will derive supply chain intelligence from performance management and earned value analysis. We will maintain an appropriate balance between collaboration and commercial tension in order to build excellence, enable delivery and create value. We will also develop commercial intelligence to support informed decision making and create a collaborative shift from cost negotiation to value assurance.

We recognise our responsibility in supporting the supply chain, particularly in how we can develop skills and capability for the longer term. We will carry out an industry review of skills and capability by December 2015 and following this review publish our skills and capability development plan March 2016. We are also championing 'Lean working' e.g. remove waste in process and systems to reduce the proportion of our effort which does not drive customer value.

From the start of this Road Period, increased emphasis will be placed on developing supplier relationships - in particular of tiers 2 and 3 to identify areas where specific action can be taken to improve performance. An approach to measure the maturity of our collaborative relationships with supply chain will be developed by the end of summer 2015. This will lead to the development of new contractual and category management models to support programme delivery.

Having developed a range of delivery models by March 2016, we will commence implementation in April 2016 across the investment portfolio in a way that builds stronger relationships; grows internal and supply chain capability and provides efficient and effective delivery that secures innovation and year on year improvement in quality, safety, cost and value.

11.1.4 Freight

We will consult representatives of the freight transport and road haulage sectors to assist in future network planning, taking into account customer needs across all transport modes and working with others to support sustainable rail freight, for example.

11.1.5 Technology and innovation partnerships

We will work with partners to promote the development of information technology to improve access to information, as well as co-operating with Government and other partners on wider research and development activities. We will publish our Innovation, Technology and Research Strategy by March 2016 with plans for research, development and how we will demonstrate and deploy innovative technology.

[34] https://www.gov.uk/government/organisations/driver-and-vehicle-standards-agency

11.1.6 Working with sustainability and environmental bodies

Through closer working with sustainability and environmental partners, we will reduce pollution and enhance our built, natural, rural and historic environment in order to provide a positive legacy for the future. During RP1, a designated Environment Fund has been set up to help reduce noise and flood risk to our neighbours, and to prevent the loss of biodiversity. Specific attention will be given to improving water quality, protecting SSSIs supporting NIAs. The Fund will support the conversion of operations to low-carbon technology. Our plans will be further refined following the publication of our Sustainable Development and Environmental Strategies in March 2016.

11.1.7 Motorway service operators

We will continue to develop our relationships with the operators of roadside facilities to meet the needs of our customers. Existing legal agreements and processes will be reviewed with the Operators with a view to removing site-specific regulatory provisions that make it difficult for Operators to develop their businesses.

11.1.8 The strategic road network and the delivery of sustainable development

During the first half of RP1 the Stakeholder Advisory Panel will be set up. It will provide expert advice on issues relevant to the operation of the strategic road network, in particular strategic planning and Highways England's role in facilitating economic growth. It will take an overview of these matters with regard to the RIS and SBP, providing additional insight into strategies and opportunities, as well as technical advice and commercial intelligence. The panel should include representatives from Local Government, the Homes and Communities Agency[35], business and planning sectors and other stakeholders, including environmental and safety groups.

[36] https://www.gov.uk/government/organisations/homes-and-communities-agency

11.2 Making the most of new relationships

As part of its long term funding plan for Highways England, the Government has established two new roles. The Highways Monitor will take responsibility for monitoring our performance and efficiency, while Transport Focus, will protect the interests of our customers and others who are affected by the strategic road network. We expect both roles to evolve over time as we, and the industry, learn from experience. Consequently, we will remain flexible in our approach.

11.2.1 The Highways Monitor

The monitoring role (defined in Sections 10 to 13 of the 2015 Infrastructure Act) has been established to place a high level of scrutiny on us. Specifically, the Highways Monitor will monitor how well Highways England is delivering against the Performance Specification, Investment Plan and aspects of our Licence. We explain in the Delivering Performance and Efficiency section of the Delivery Plan how we aim to achieve the planned efficiencies of £1.212bn. We will work collaboratively with the Highways Monitor to develop processes to meet the new reporting requirements and to make necessary improvements to the robustness and coverage of the relevant data sets.

The key benefit of this new relationship is a step change improvement in transparency in the roads sector that will allow us to demonstrate we are doing the right amount of work to maintain and modernise our assets economically, efficiently and effectively.

11.2.2 Transport Focus

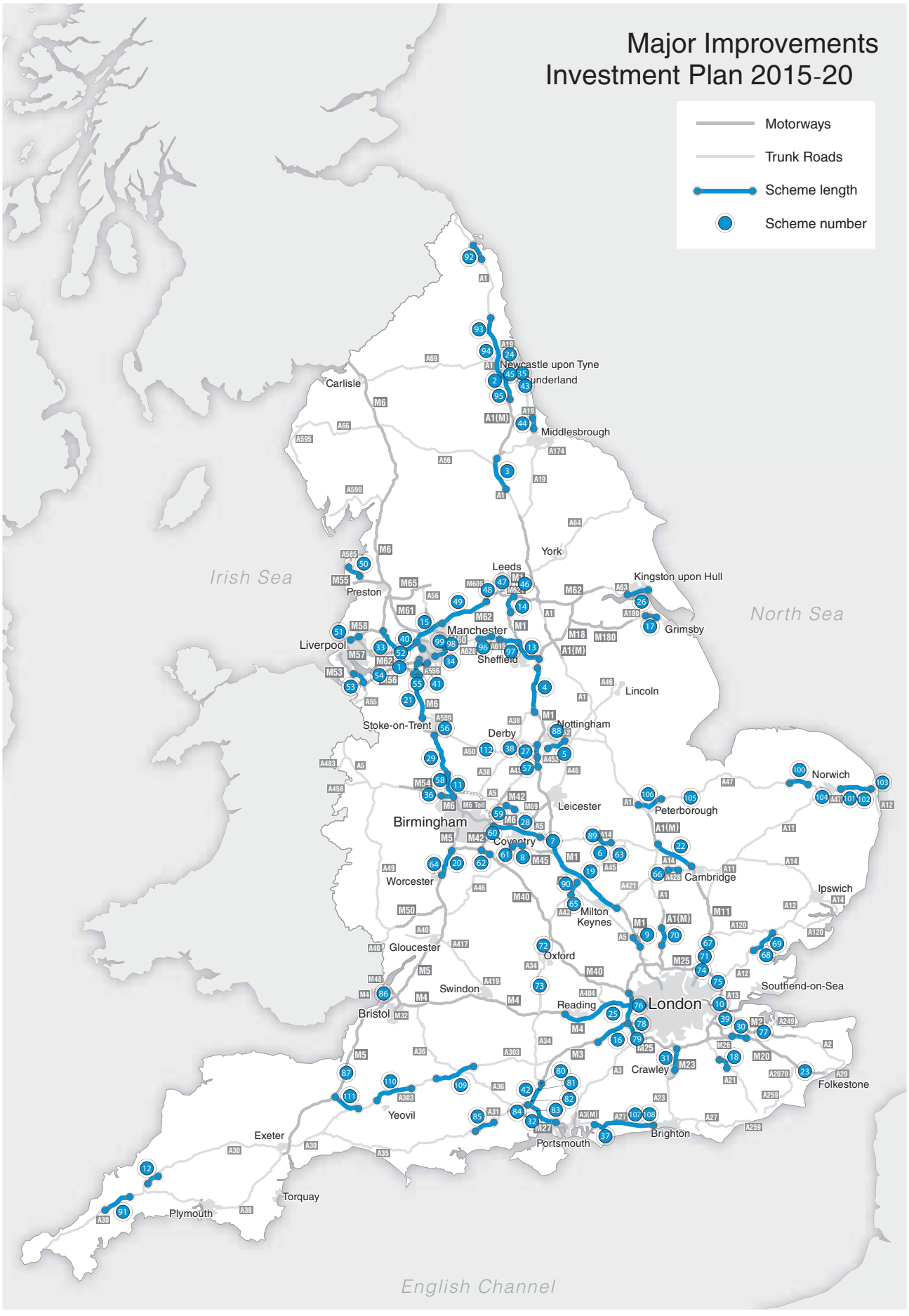
The new road-users' watchdog organisation, Transport Focus has been restructured and renamed through Section 9 of the Infrastructure Act 2015 and will come into existence on March 2015. They will represents the voice of our customers and provide advice independently of central government.
They will represent the views of users of the strategic road network based on research and our customers' concerns and feedback.

As it is a new relationship, we will start by understanding how they work and how they intend to develop their new role. We will then work together to establish the needs and experiences of our customers, through their targeted research and feedback from focus groups and interviews with a range of our customers. By the end of 2017 we will work together to help shape the new independent customer satisfaction measure, it will develop to replace the National Road Users' Satisfaction Survey. This will help us understand our effectiveness in dealing with customer enquiries and improve our understanding of customer needs, their priorities and perceptions about the service we provide.

11.2.3 Customer Panel

A third new relationship for Highways England is with the Customer Panel, a group of customers who are available to clarify customer needs quickly through a variety of research methods, including focus groups and online surveys.
The panel was recently established and is made up of more than 1,000 people; representing our full range of customers and stakeholders who are directly affected by our network. It is also fully representative in terms of region, demographics, user type and network usage.

Annex A – Enhancement Projects



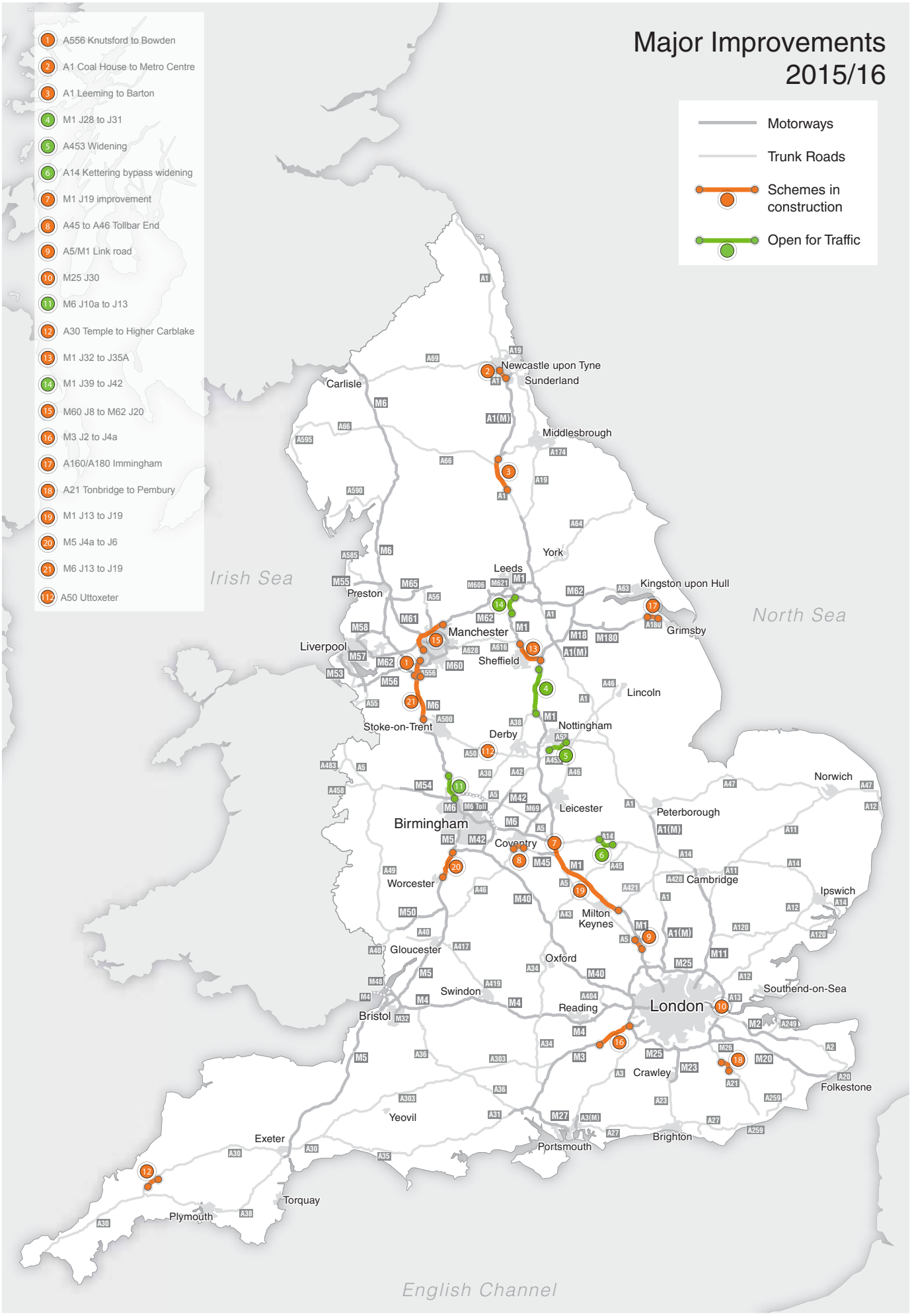
Major Improvements Investment Plan

Scheme Schedule 2015-20

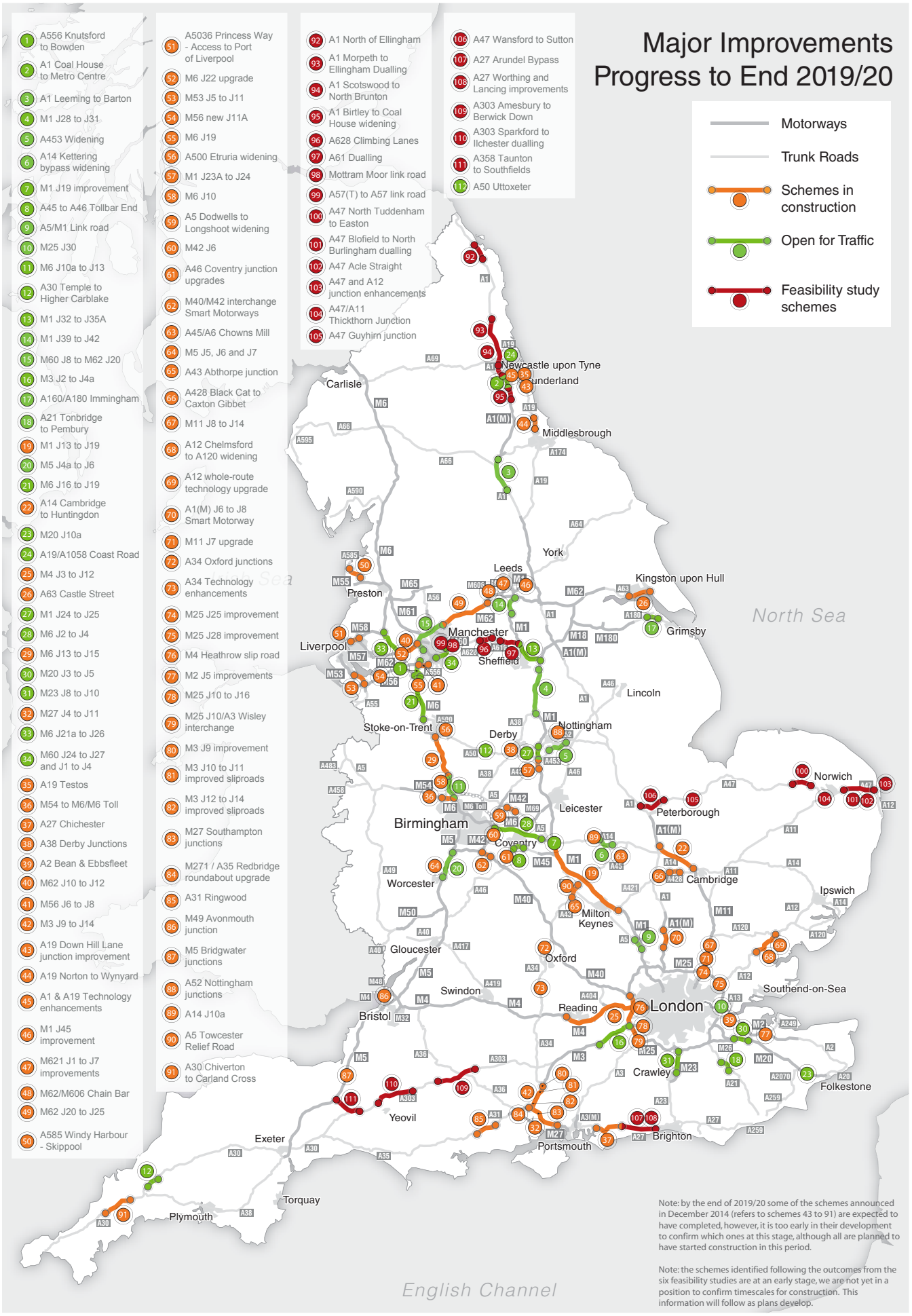
Number on Map	Schemes already in construction
1	A556 Knutsford to Bowdon
2	A1 Coal House to Metro Centre
3	A1 Leeming to Barton
4	M1 Junctions 28-31
5	A453 Widening
6	A14 Kettering bypass widening
7	M1 Junction 19 improvement
8	A45-A46 Tollbar End
9	A5/M1 J11a Link
10	M25 Junction 30
11	M6 Junctions 10a-13
12	A30 Temple to Carblake[1]
13	M1 Junctions 32-35A
14	M1 Junctions 39-42
15	M60 Junction 8 to M62 Junction 20: Smart Motorway
16	M3 Junctions 2-4A
Number on Map	**Schemes announced in June 2013 and due to start construction by end 2019/20**
17	A160/A180 Immingham
18	A21 Tonbridge to Pembury
19	M1 Junctions 13-19
20	M5 Junctions 4A-6
21	M6 Junctions 16-19
22	A14 Cambridge to Huntingdon
23	M20 Junction 10a
24	A19/A1058 Coast Road
25	M4 Junctions 3-12
26	A63 Castle Street
27	M1 Junctions 24-25
28	M6 Junctions 2-4
29	M6 Junctions 13-15
30	M20 Junctions 3-5
31	M23 Junctions 8-10
32	M27 Junctions 4-11
33	M6 Junctions 21A-26
34	M60 Junctions 24-27 & J1-4
35	A19 Testos
36	M54 to M6 / M6 toll
37	A27 Chichester Bypass
38	A38 Derby Junctions
39	A2 Bean & Ebbsfleet
40	M62 Junctions 10-12
41	M56 Junctions 6-8
42	M3 Junctions 9-14
Number on Map	**Schemes announced in December 2014 and due to start construction by end 2019/20**
43	A19 Down Hill Lane junction improvement
44	A19 Norton to Wynyard
45	A1 & A19 Technology enhancements
46	M1 Junction 45 Improvement
47	M621 Junctions 1-7 improvements
48	M62/M606 Chain Bar
49	M62 Junctions 20-25
50	A585 Windy Harbour - Skippool
51	A5036 Princess Way - Access to Port of Liverpool
52	M6 Junction 22 upgrade
53	M53 Junctions 5-11
54	M56 new Junction 11A
55	M6 Junction 19 Improvements
56	A500 Etruria widening
57	M1 Junctions 23A-24
58	M6 Junction 10 improvement
59	A5 Dodwells to Longshoot widening
60	M42 Junction 6
61	A46 Coventry junction upgrades
62	M40/M42 interchange Smart Motorways
63	A45/A6 Chowns Mill junction improvement
64	M5 Junctions 5, 6 & 7 junction upgrades
65	A43 Abthorpe Junction
66	A428 Black Cat to Caxton Gibbet
67	M11 Junctions 8 to 14 - technology upgrade
68	A12 Chelmsford to A120 widening
69	A12 whole-route technology upgrade
70	A1(M) Junctions 6-8 Smart Motorway
71	M11 Junction 7 junction upgrade
72	A34 Oxford Junctions
73	A34 Technology enhancements
74	M25 Junction 25 improvement
75	M25 Junction 28 improvement
76	M4 Heathrow slip road
77	M2 Junction 5 improvements
78	M25 Junctions 10-16
79	M25 Junction 10/A3 Wisley interchange
80	M3 Junction 9 improvement
81	M3 Junction 10-11 improved sliproads
82	M3 Junctions 12-14 improved sliproads
83	M27 Southampton Junctions
84	M271 / A35 Redbridge roundabout upgrade
85	A31 Ringwood
86	M49 Avonmouth Junction
87	M5 Bridgwater Junctions
88	A52 Nottingham junctions
89	A14 Junction 10a
90	A5 Towcester Relief Road
91	A30 Chiverton to Carland Cross
Number on Map	**Schemes identified following the outcomes from the six feasibility studies**
92	A1 North of Ellingham
93	A1 Morpeth to Ellingham dualling
94	A1 Scotswood to North Brunton
95	A1 Birtley to Coal House widening
96	A628 Climbing Lanes
97	A61 Dualling
98	Mottram Moor link road
99	A57(T) to A57 Link Road
100	A47 North Tuddenham to Easton
101	A47 Blofield to North Burlingham dualling
102	A47 Acle Straight
103	A47 & A12 junction enhancements
104	A47/A11 Thickthorn Junction
105	A47 Guyhirn Junction
106	A47 Wansford to Sutton
107	A27 Arundel Bypass
108	A27 Worthing and Lancing improvements
109	A303 Amesbury to Berwick Down
110	A303 Sparkford - Ilchester dualling
111	A358 Taunton to Southfields
Number on Map	**Schemes contributing to investment with local authorities**
112	A50 Uttoxeter

[1]Scheme is being delivered by Cornwall County Council and is partly funded by Highways England.

Major Improvements 2015/16



Major Improvements Progress to End 2019/20



Note: by the end of 2019/20 some of the schemes announced in December 2014 (refers to schemes 43 to 91) are expected to have completed, however, it is too early in their development to confirm which ones at this stage, although all are planned to have started construction in this period.

Note: the schemes identified following the outcomes from the six feasibility studies are at an early stage, we are not yet in a position to confirm timescales for construction. This information will follow as plans develop.

Annex B – KPI's and PI's

Performance Specification				Delivery Plan		
Topic		Measure	KPI target	Highways England Output	Delivery Date	Section number
Making the network safer	KPI	The number of KSIs on the SRN	Ongoing reduction of at least 40% by end of 2020 against 2005-09 average baseline	Annual report of the number of KSIs, to fall to no more than 1,393 by December 2020	End of December 2020	4.1.0
	PI	Incident numbers and contradictory factors for motorways	N/A	Annual report	Annually	4.1.1
	PI	Casualty numbers and contradictory factors for APTRs	N/A	Annual report	Annually	4.1.1
	PI	IRAP based road safety investigators, developed in conjunction with the Department, to feed into subsequent Route Strategies	N/A	Develop and test	Developed by March 2018	4.1.1
Improving user satisfaction	KPI	The % of NRUSS respondents who are Very or Fairly Satisfied	90% by end March 2017 and then maintain or improve it	Annual report	90% by end March 2018	2.3.0
	PI	Suite of indicators to provide additional information about the performance of factors that influence user satisfaction	N/A	% of respondents who are Very or Fairly Satisfied with Journey Times information & signs, Management of Roadworks, Feeling Safe, Upkeep	Ongoing reporting	2.3.0
	Requirement	Demonstrate what activities have been undertaken, and how effective they have been, to maintain and improve user satisfaction	N/A	Develop measures, such as new performance measure that drives the right behaviours to minimise the impact of incident realated congestion	Develop during 2015	5.1.5
	Requirement	Support Transport focus as it develops replacements for the NRUSS	N/A	Provide support to Transport Focus	Ongoing throughout 2015	5.1.5
Supporting the smooth flow of traffic	KPI	Network Availability: % of the SRN available to traffic	Maximise lane availability so it does not fall below 97% in any one year	Achieve at least 97% lane availability	Each year of RP1	5.1.0
	KPI	Incident Management: % of motorway incidents cleared within 1 hour	At least 85% of all motorway incidents cleared within 1 hour	Achieve at least 85% clearance within 1 hour	Achieve in 2015/16 and maintain throughout RP1	5.1.2
	PI	Suite of PIs to illustrate the impact of the activities undertaken by the company and the influence of other external factors, on traffic flow. This should include, at a minimum, reliability of journey times	N/A	Develop a 'Delay in Roadworks' indicator	Develop during 2015	3.0
	Requirement	Report annually on how the Company has minimised inconvenience to road users through roadworks over the previous year	N/A	Develop a new performance measure that drives the right behaviours in order to minimise the impact of incident related congestion	Develop during 2015	5.1.3
	Requirement	Demonstrate that it is working effectively with its partners to imorove incident response	N/A	Develop a new performance measure that drives the right behaviours in order to minimise the impact of of incident related congestion	Develop during 2015	5.1.2

KPI PI Requirement

This table set out Highways England's planned activities in response to the KPIs, PIs and requirements as specified by the Government in the Road Investment Strategy, and references their section location.

Performance Specification				Delivery Plan		
Topic		Measure	KPI target	Highways England Output	Delivery Date	Section number
Encouraging economic growth	KPI	Average Delay (time lost per vehicle)	No target	Annual report from a new baseline calculated in 2015 (using a HATRIS based reference network)	Ongoing reporting	3.0
	PI	Suite of PIs to help demonstrate and evaluate what activities have been taken to support the economy. These should, at a minimum include metrics on: Being an active and responsive part of the planning system	N/A	99% of formal planning applications responded by Highways England within 21 days	Each year during RP1	3.2
	PI	Suite of PIs to help demonstrate and evaluate what activities have been taken to support the economy. These should, at a minimum include metrics on: Supporting the business, and freight and logistics sectors	N/A	Report average delay(time lost per vehicle per mile) on Gateway Routes to represent service experience for importers and exporters and international travellers. Baseline will be revised in 2015 (using a HATRIS based reference network)	Annual report	3.2
	PI	Suite of PIs to help demonstrate and evaluate what activities have been taken to support the economy. These should, at a minimum include metrics on: Helping the government support small and medium sized enterprises	N/A	Meet government 25% SME spend target through the supply chain	Annual report	3.2/11.1.3
	Requirement	Report on average delay	N/A	Annual report from a new baseline calcaulated in 2015 (using a HATRIS based reference network)	Ongoing reporting	3.0
	Requirement	Actively support the Construction 2025 goals	N/A	Report support on an annual basis	Report in Q4 of each year	3.0
	Requirement	Deliver the Roads Academy programme across the industry	N/A	Report numbers of cohorts each year and rate of graduate success	Annual Report	10.1.0
	Requirement	Develop an approach to innovation, technology, and research and agree an implementation plan by 31 March 2016	N/A	Produce innovation, technology and research strategy	By 31st March	3.1.6,8.3,11.1.5
	Requirement	Through Route Strategies identify constraints to economic growth that the performance of teh SRN could help to alleviate and identify how futire delivery and investment plans might address them	N/A	Route Strategies	Drafts complete and submitted to DfT by 31 Marchg	3.2

KPI PI Requirement

Performance Specification				Delivery Plan		
Topic		Measure	KPI target	Highways England Output	Delivery Date	Section number
Delivery better environmental outcomes	KPI	Noise: Number of Noise Important Areas mitigated	At least 1,150 Noise Important Areas over RP1	1,150 Noise Important Areas mitigated	By 31st March 2020	6.1.1
	KPI	Biodiversity: Delivery of improved biodiversity, as set out in the Company's Biodiversity Action Plan	Publish Biodiversity Action Plan by 30 June 2015 & report annually against the Plan to reduce net biodiversity loss on ongoing annual basis	Biodiversity Action Plan (BAP) to include method for demonstrating impact on biodiversity, and subsequent reporting progress against this plan	Publish BAP by 30 June 2015, report progress annually	6.1.4
	PI	Suite of PIs to provide additional information about environmental performance. These should, at a minimum, include: - Air Quality;	N/A	Undertake 10 Air Quality Pilot Studies to test the feasibility of 'Air Quality Intervention Measures'	Complete all 10 studies by 31 March 2018	6.1.2
	PI	Suite of PIs to provide additional information about environmental performance.'- Carbon dioxide, and other greenhouse gas emissions for the Company and its supply chain that occur as they carry out work on the SRN.	N/A	Monitor carbon dioxide equivalents in tonnes associated with the company's activities, and separately activities associated with the supply chain	Report annually	6.13
	Requirement	Demonstrate what activities have been undertaken, and how effective they have been, to improve environmental outcomes	N/A	Produce a programme and monitor progress against it	Programme by 31 March 2016, then annually report progress	6.0
	Requirement	Develop metrics covering broader environmental performance. These should include: - a new or improved biodiversity metric	N/A	Produce a programme, collect data to develop biodiversity baseline and monitor against it; by the end of RP1, develop and a biodiversity metric.	Programme by 31 March 2016, annual progress reports, new 'env capital' metric by 31 March 2020	6.1.4
	Requirement	Develop metrics covering broader environmental performance. These should include: - carbon dioxide, and other greenhouse gas emissions arising from the use of the network.	N/A	Produce a programme, collect data to develop baseline and monitor against it; by the end of RP1, develop a network carbon metric.	Programme by 31 March 2016, annual progress reports, new network carbon metric by 31 March 2020	6.1.3
Helping Cyclists, walkers, and other vulnerable users	KPI	The number of new and upgraded crossings	No target set	Annual report	Ongoing	7.0
	PI	Suite of PIs to demonstrate the safety of the SRN for cyclists, walkers, and other vulnerable users	N/A	Monitor number of casualties for cyclists, pedestrians, motorcyclists and equestrians	Report annually	7.2
	Requirement	Report annually on the number of new and upgraded crossings	N/A	Annual report	Ongoing	7.2
	Requirement	Develop new indicators which demonstrate improved facilities for cyclists, walkers, and other vulnerable users	N/A	Each year define the Annual Cycling Programme to include improved cycling facilities	Annual report	7.2
	Requirement	Report on how it is delivering against the Public Sector Equality Duty	N/A	Annual report		10.1.4

KPI PI Requirement

Performance Specification				Delivery Plan		
Topic		Measure	KPI target	Highways England Output	Delivery Date	Section number
Achieving real efficiency	KPI	Cost savings: savings on capital expenditure	At least £1.212 billion over RP1	Savings monitored regularly throughout RP1	Ongoing	8.0
	KPI	Delivery Plan progress: progress of work, relative to forecasts set out in the Delivery Plan, and annual updates to the Plan, and expectations at the start of RP1	Meet or exceed expectations	Annual updates of Delivery Plan	Ongoing	2.6
	PI	Suite of PIs to demonstrate that the portfolio is being developed and the Investment Plan delivered in a timely and efficient manner. These should include the progress of major schemes and programmes in construction through reporting CPI and SPI for schemes at Project Control Framework Stage 5 and beyond	N/A	Reporting CPI and SPI and progress of the major improvements programme	Ongoing	3.1
	Requirement	Demonstrate on an annual basis how efficiencies have been achieved	N/A	Annual report of capital efficiencies achieved	Ongoing	8.0
Keeping the Network in good condition	KPI	% of pavement asset that does not require further investigation for possible maintenance	To be maintained at 95% or above	Measure reports at least 95% each year of RP1	Ongoing	4.2.1
	PI	Suite of PIs to provide additional information on the asset condition of the SRN as a whole	N/A	Develop new condition indicators	Pavements and Structures - agreed by 31 March 2017 and validated by 31 March 2019; Technology, Drainage and Geotechnical Works - agreed by 31 March 2018 and validated by 31 March 2020	4.2.2
	Requirement	Produce an implementation plan, by 31 March 2016, to show how the Company will improve asset information quality over RP1.	N/A	Produce implementation Plan	By 31 March 2016	4.2.2
	Requirement	Develop new condition indicators for: • Pavements and Structures for agreement by 31 March 2017 and complete validation for these by 31 March 2019. • Technology, Drainage and Geotechnical Works for agreement by 31 March 2018 and complete validation for these by 31 March 2020.	N/A	Develop new condition indicators	Pavements and Structures - agreed by 31 March 2017 and validated by 31 March 2019; Technology, Drainage and Geotechnical Works - agreed by 31 March 2018 and validated by 31 March 2020	4.2.2

KPI PI Requirement

Annex C – Funding table

£m	2015/16	2016/17	2017/18	2018/19	2019/20	Period 1
Capital						
Modernise/Enhance						
SR10 & SR13 Schemes	1,012	892	1,088	1,174	1,226	5,392
RIS Schemes	14	80	177	322	578	1,171
Feasibility Studies	3	12	48	67	191	321
Major Projects Pipeline Schemes	10	15	29	36	44	134
Air Quality	0	10	15	25	25	75
Cycling, Safety & Integration	18	32	40	42	43	175
Environment	6	40	60	61	58	225
Innovation Fund	1	10	32	37	40	120
Supporting Growth Schemes	0	10	20	25	25	80
Sub Total	**1,064**	**1,101**	**1,509**	**1,789**	**2,230**	**7,693**
Maintain/Renew						
Renewals	718	726	732	738	744	3,658
Total Capital	**1,782**	**1,827**	**2,241**	**2,527**	**2,974**	**11,351**
Resource/Operational						
Operate the Network						
Operations	229					
PFI Contracts	413					
Maintenance & Renewals	261	262	263	271	268	1,325
Sub Total	**903**					
Support	130					
Protocols	39					
Total Resource/Operational	**1,072**					

Operational expenditure

The resource budget for 2015/16 was set in the 2013 Spending Round. As an exception the Government also agreed future budgets for resource maintenance and renewals spending up to 2020/21, reflecting the importance of taking sound maintenance decisions in line with good asset management principles. The remaining resource funding from 2016/17 will be agreed in the usual way at the next Spending Review.

Annex D – Glossary

AONB	Area of Outstanding Natural Beauty
Category Management	The strategic management and procurement of product groups.
CHARM	Common Highways Agency Rijkswaterstaat Model
CLEAR	Collision, Lead, Evaluate, Act, Re-open
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
EPA 90	Environmental Protection Act 1990
EuroRAP 3	European Road Assessment Programme
HGV	Heavy Goods Vehicle
HS2	High Speed 2
IAMIS	Integrated Asset Management Information System
ICF	Investment Control Framework
ISO55000	International Standards for Asset Management
JESIP	Joint Emergency Services Interoperability Programme
Key Performance Indicator (KPI)	A key metric used to define and measure progress toward organisational objectives.
KSI	Killed or seriously injured
LED	Light Emitting Diode
LGV	Large Goods Vehicle
NIA	Nature Improvement Areas
ORR	Office of Rail Regulation (also known as the Highways Monitor)
Pavement	Road Surface
PCF	Project Control Framework
PFI	Private Finance Initiative
Performance Indicator (PI)	A metric used to define and measure progress toward organisational objectives.
RIS	Road Investment Strategy
RP	Road Period
RP1	Road Period 1
RP2	Road Period 2
RPB	Regional Programme Boards
SR10	Spending Review 10
SR13	Spending Round 13
SSSI	Sites of Special Scientific Interest
Tier 2 and Tier 3 Suppliers	Subcontracted Suppliers
Transport Focus	A 'Watchdog' responsible for gathering the views of Strategic Road Network users and using them to shape policy and decision-making.
TSS	Traffic Systems and Signing
ULEV	Ultra-Low Emission Vehicles

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