



Monitoring Highways England's network investment

Consultation

July 2016

Contents



Executive summary	4
The investment portfolio and how we monitor it	4
A positive contribution to highways	7
Seeking stakeholder views	7
1. Introduction	8
Highways England's role	8
Why do we monitor Highways England?	8
Purpose of this document	9
Responding to this consultation	9
Freedom of Information	10
2. Capital investment – who does what?	11
What our monitoring includes	14
What our monitoring does not include	14
3. Overarching approach to monitoring network investment	16
Principles	16
Monitoring portfolio, programme and project management capability	16
Establishing and monitoring against a clear baseline	16
Highways England's internal assurance and reporting processes	17
Monitoring delivery in-the-round	17
Identifying future risks as well as monitoring past performance	18
Adopting a flexible approach to monitoring network investment	18
Reporting our assessment of network investment delivery	18
Our approach to date	19
4. Our approach to monitoring the network investment portfolio	20
What is the network investment portfolio?	20
Why we monitor the network investment portfolio	20
How we monitor the network investment portfolio	21
5. Monitoring delivery of major schemes	23
What are major schemes?	23
What should our monitoring achieve?	23
Monitoring the programme of major schemes	23

6. Monitoring maintenance and renewals	28
What are maintenance and renewals?	28
What should our monitoring achieve?	28
Monitoring the programme of maintenance and renewals	28
7. Monitoring ring-fenced investment funds	32
What are the ring-fenced investment funds?	32
What should our monitoring achieve?	33
Monitoring the ring-fenced funds	33
8. Monitoring strategic studies	36
What are the strategic studies?	36
What should our monitoring achieve?	36
Monitoring delivery of the strategic studies	36
9. The benefits of our proposed approach	38
A coherent package of monitoring	38
10. Next steps	40

Executive summary

1. The first Road Investment Strategy (RIS) sets the outcomes, outputs and capital investments that Highways England must deliver over the first road period (April 2015 to March 2020). It also commits to a five year funding package of more than £11 billion for Highways England to invest in maintaining, renewing and improving the strategic road network (the motorways and main A roads in England).
2. The Office of Rail and Road (ORR) has responsibility for monitoring Highways England's delivery of the Road Investment Strategy. This document sets out how the ORR, through its highways directorate, proposes to monitor Highways England's network investment plans and delivery of those plans.
3. Our independent monitoring and reporting of Highways England's network investment delivery is important in providing transparency about how the company is performing in maintaining, renewing and delivering improvements to the strategic road network, and about the value for money that it is delivering. We also provide advice in setting future road investment strategies – which we do not cover in depth in this document, but we will publish more details about this later in the year. We do not manage the network – that is Highways England's role – and we do not set the performance requirements and funding – which is part of Department for Transport's (DfT's) role.
4. We are setting out the detail of our network investment monitoring proposals for the first time and are therefore seeking feedback from stakeholders. Our proposals are designed to provide an appropriate balance between: sufficient scrutiny to safeguard the interests of road users, the public and funders; and the costs of our monitoring, both directly and as imposed on the company. The proposals are largely consistent with the monitoring that we have carried out to-date, but complement it with management capability assessments and in-depth reviews on a sample basis. We will be flexible in our approach to respond to emerging issues, and Highways England's capability and performance.
5. We are consulting on our proposals to seek feedback and to ensure that we are adopting the most effective monitoring approach, which reflects, as appropriate, stakeholders' expectations for our role.

The investment portfolio and how we monitor it

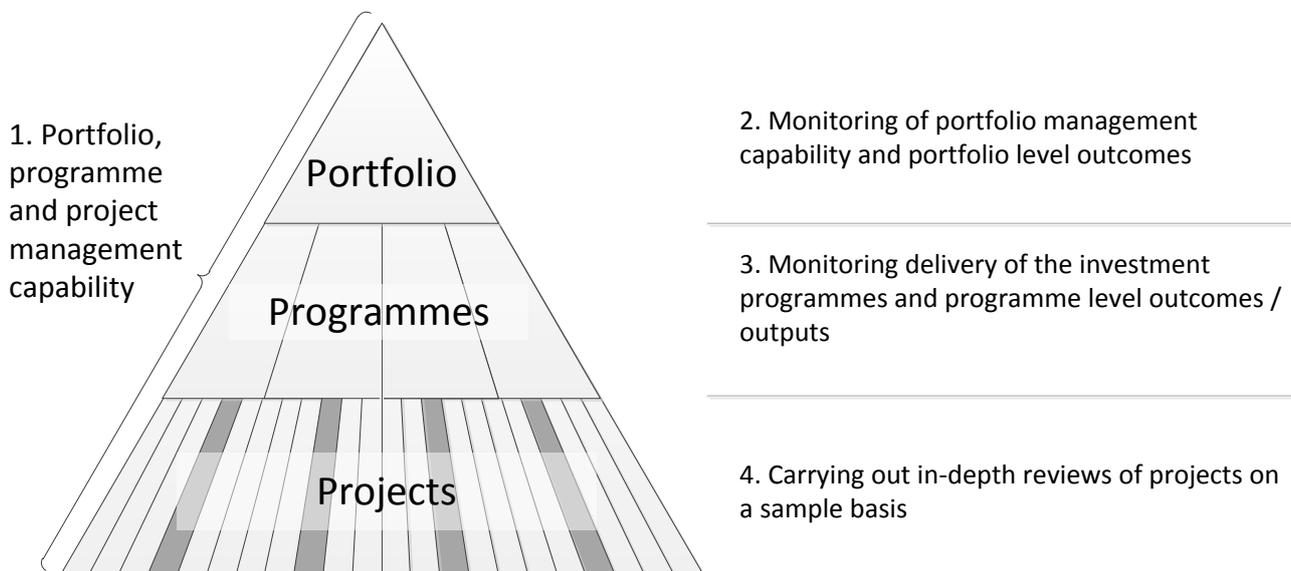
6. Highways England's investment portfolio comprises four capital investment programmes:
 - a programme of major improvement schemes, of more than £7 billion;

- a maintenance and renewals programme, of approximately £3.7 billion;
- a £675m programme of ring-fenced investment funds; and
- investment associated with strategic studies.

7. We propose to monitor at four levels illustrated in figure 1 (each of which is explained in more detail below):

1. monitoring Highways England’s portfolio, programme and project management capability;
2. monitoring portfolio management and portfolio level outcomes;
3. monitoring delivery of the four investment programmes; and
4. carrying out in-depth reviews of programmes and projects on a sample basis.

Figure 1: Our approach to monitoring network investment



8. We will work with Highways England to understand how its plans for improving its portfolio, programme and project management capability are progressing and assess its capability.

9. Our proposed monitoring of the network investment portfolio consists of:

- seeking evidence from Highways England of its capability in managing the network investment portfolio, including ensuring that potential cross-cutting risks and opportunities are identified and managed, realised or mitigated as appropriate; and
- reviewing the contribution of the network investment portfolio to delivery of all Road Investment Strategy outcomes, outputs and network investment delivery in-the-round through comprehensive reporting and monitoring of performance.

10. Our proposed monitoring of the major schemes programme consists of:

- ensuring that a clear baseline of schedule, scope and cost information is set out, and monitoring delivery against it - with any changes to the baseline controlled;
 - reviewing delivery of the programme through programme-level metrics; and
 - carrying out in-depth reviews of programme and project management on a sample basis.
11. Our proposed monitoring of the capital maintenance and renewals programme consists of:
- assessing Highways England's asset management capability;
 - monitoring asset condition and performance metrics;
 - reviewing delivery of the programme in-the-round, for example by reviewing volumes delivered against plan; and
 - carrying out in-depth reviews of the development and delivery of sustainable and efficient asset interventions on a sample basis.
12. Our proposed monitoring of the ring-fenced investment fund programme consists of:
- reviewing the governance of the funds, and processes for identification, prioritisation and delivery of schemes;
 - reviewing delivery of the funds as a programme, for example by reviewing metrics for scheme delivery against plans; and
 - carrying out in-depth reviews of ring-fenced investment fund schemes on a sample basis.
13. Our proposed monitoring of the strategic studies programme consists of:
- monitoring and reporting of study progress, as informed by engagement with both DfT and Highways England.
14. Our proposed approach is proportionate, seeking primarily to identify portfolio and programme-wide strategic risks, to allow Highways England to resolve systemic issues. It also recognises other stakeholders' responsibilities. It makes clear that we do not:
- make decisions on which investments are included in a road investment strategy;
 - develop, review or sign-off business cases;
 - review or sign-off estimates, or make investment decisions;
 - have a role in governance of the network investment portfolio;

- approve changes to the road investment strategies or delivery plans (although we may provide advice on changes);
- manage the delivery of the portfolio, programmes or projects;
- comment on spend against budget for individual projects, unless we identify a significant variance which is impacting at a programme level; or
- review all post-opening project evaluations (but we will monitor their findings in-the-round).

A positive contribution to highways

15. Our proposed approach is intended to contribute positively to the sector, ensuring value for money and a focus on stakeholder priorities, as set out below.

Table 1: Summary of the benefits of our monitoring approach

Benefit	How the proposed approach delivers the benefits
Providing independent scrutiny	<ul style="list-style-type: none"> • Providing proportionate scrutiny of Highways England's capital investment delivery and reporting an independent assessment of Highways England's performance
Promoting consideration of strategic risks	<ul style="list-style-type: none"> • Through review of portfolio and programme management capability and taking a forward-looking approach, seeking to identify risks to future delivery
Promoting transparency in performance reporting	<ul style="list-style-type: none"> • Requiring Highways England to publish more information about its capital investment plans, and publishing our annual report on the company's capital investment delivery
Facilitating lessons learned from other sectors	<ul style="list-style-type: none"> • Drawing on experience and lessons from rail and other sectors, and benchmarking of capability against other sectors
Promoting multi-modal thinking	<ul style="list-style-type: none"> • Assessing the consideration of other modes and cross-modal options in our review of strategic studies

Seeking stakeholder views

16. We are consulting on the following:

- Do you understand and agree with the scope of our role with respect to monitoring Highways England's network investment, as set out in this consultation?
- Does our proposed approach for monitoring Highways England's network investment fulfil our role in a way which meets your requirements as a stakeholder?
- Are there aspects of our monitoring of Highways England's network investment that you think require more or less emphasis?

1. Introduction

Highways England's role

1.1 Highways England is responsible for managing our network of motorways and main A roads (the strategic road network). This includes keeping the network in good condition and delivering improvements to it. Over road period 1 (April 2015 to March 2020) Highways England will invest more than £11 billion of public money in maintaining, renewing and improving these roads.

- More than £7.0 billion will be spent on 112 major improvement schemes which will address some of the key issues on the network – for example, by providing additional capacity.
- Approximately £3.7 billion will be spent renewing assets as they reach the end of their useful lives.
- A further £675m will be spent on smaller scale improvements to address environmental, cycling safety and integration, innovation, growth and housing, and air quality improvements.
- Highways England will also take forwards strategic studies to investigate options for addressing some of the most fundamental challenges facing the strategic road network.

1.2 The details of the network investments that Highways England must deliver are set out in the Investment Plan, which forms part of the Road Investment Strategy¹ (RIS).

Why do we monitor Highways England?

1.3 The Office of Rail and Road (ORR), through its highways directorate, monitors Highways England's performance and efficiency. Our role is set out in law in the Infrastructure Act 2015. Our monitoring is independent of government and provides a transparent assessment of how Highways England is performing. Our monitoring provides all stakeholders with an evidence-based appraisal of whether Highways England is delivering value for money by reporting on what the company has delivered and for what cost.

1.4 A key part of our monitoring is understanding Highways England's delivery of the Investment Plan, including whether it is adopting a sustainable approach to maintaining and renewing its assets.

¹ <https://www.gov.uk/government/publications/road-investment-strategy-for-the-2015-to-2020-road-period>

- 1.5 We have set out an overview of our role and the principles of how we intend to undertake it in our Monitoring Framework document, published in October 2015².

Purpose of this document

- 1.6 This document builds on the principles of our Monitoring Framework to set out how we propose to monitor Highways England's delivery of the Investment Plan in practice. Since we started our role in April 2015 we have learnt more about Highways England's management, monitoring and reporting of its capital investment plans. Our proposed approach builds on the information that the company uses to manage its delivery.
- 1.7 We are setting out our proposals for how we will monitor network investment. However, stakeholders may consider alternative approaches to be appropriate. We are therefore consulting on our proposals to seek feedback to ensure that we are adopting the most effective monitoring approach.

Responding to this consultation

- 1.8 The consultation period begins on 21 July 2016 and will run until 29 September 2016. Please ensure that your response reaches us before the closing date. If you would like further copies of this consultation document, it can be found at: <http://orr.gov.uk/consultations/open-consultations/monitoring-highways-englands-network-investment/> or you can contact us on the details below if you need alternative formats (Braille, audio CD, etc.).

- 1.9 Please send your consultation responses to:

Sara Subtil, Highways Engineer

Office of Rail and Road, Grosvenor House, Third Floor, 14 Bennetts Hill, Birmingham. B2 5RS.

Email: highwaysmonitor@orr.gsi.gov.uk

Telephone: 020 7282 2195

- 1.10 When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled.
- 1.11 You should indicate clearly if you wish all or part of your response to remain confidential to ORR. Otherwise we will publish it on our website, and may quote from it. Where you send us a response in confidence, you should attach a summary, excluding the confidential information, which can be published freely. We may also

² <http://orr.gov.uk/highways-monitor/publications>

publish the names of respondents in future documents or on our website, unless a respondent indicates that they wish their name to be withheld.

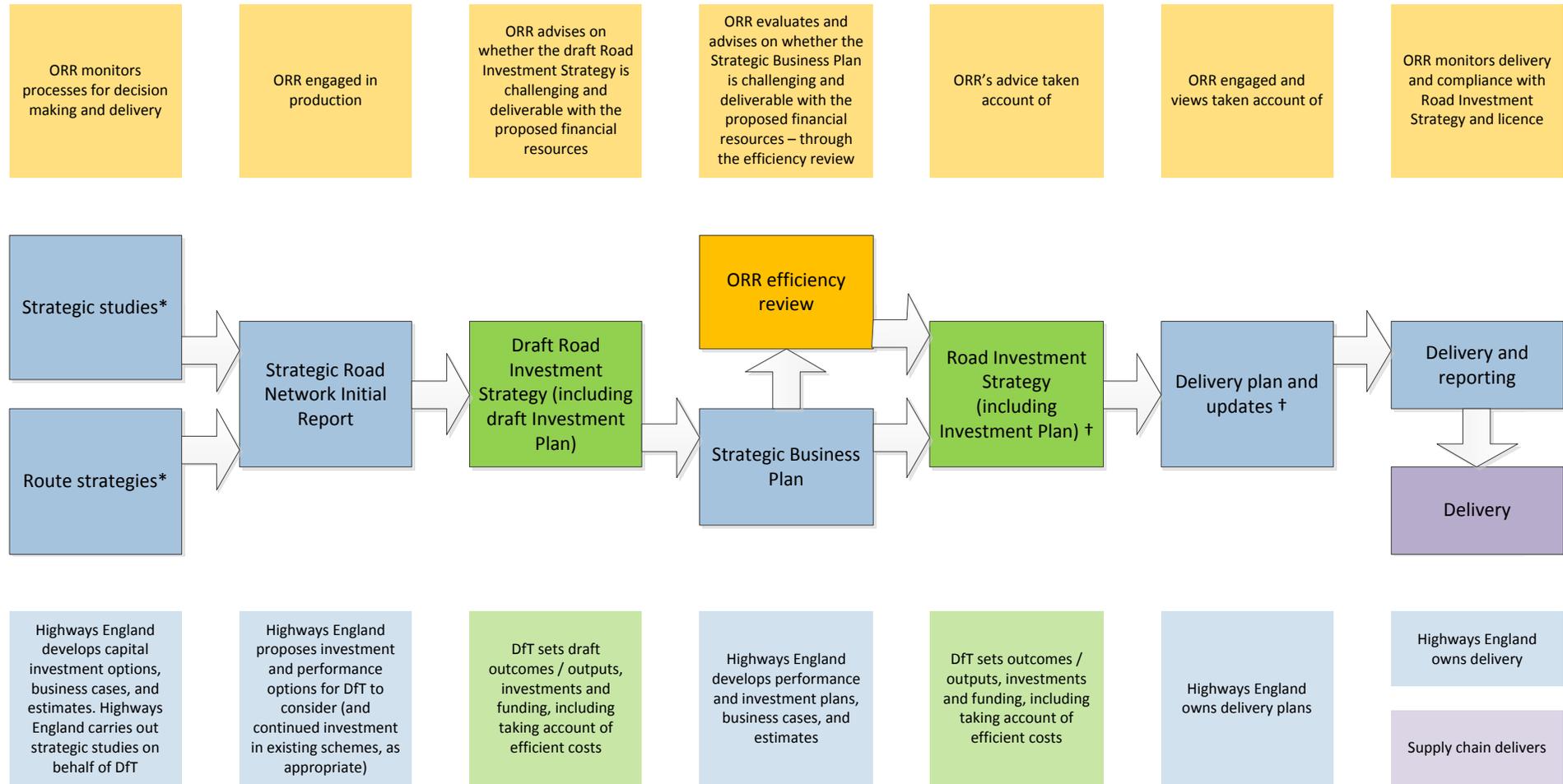
Freedom of Information

- 1.12 Information provided in response to this consultation, may be subject to publication or disclosure in accordance with the Freedom of Information Act 2000 (FOIA) or the Environmental Information Regulations 2004.
- 1.13 ORR will process your personal data in accordance with the Data Protection Act 1998 (DPA) and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

2. Capital investment – who does what?

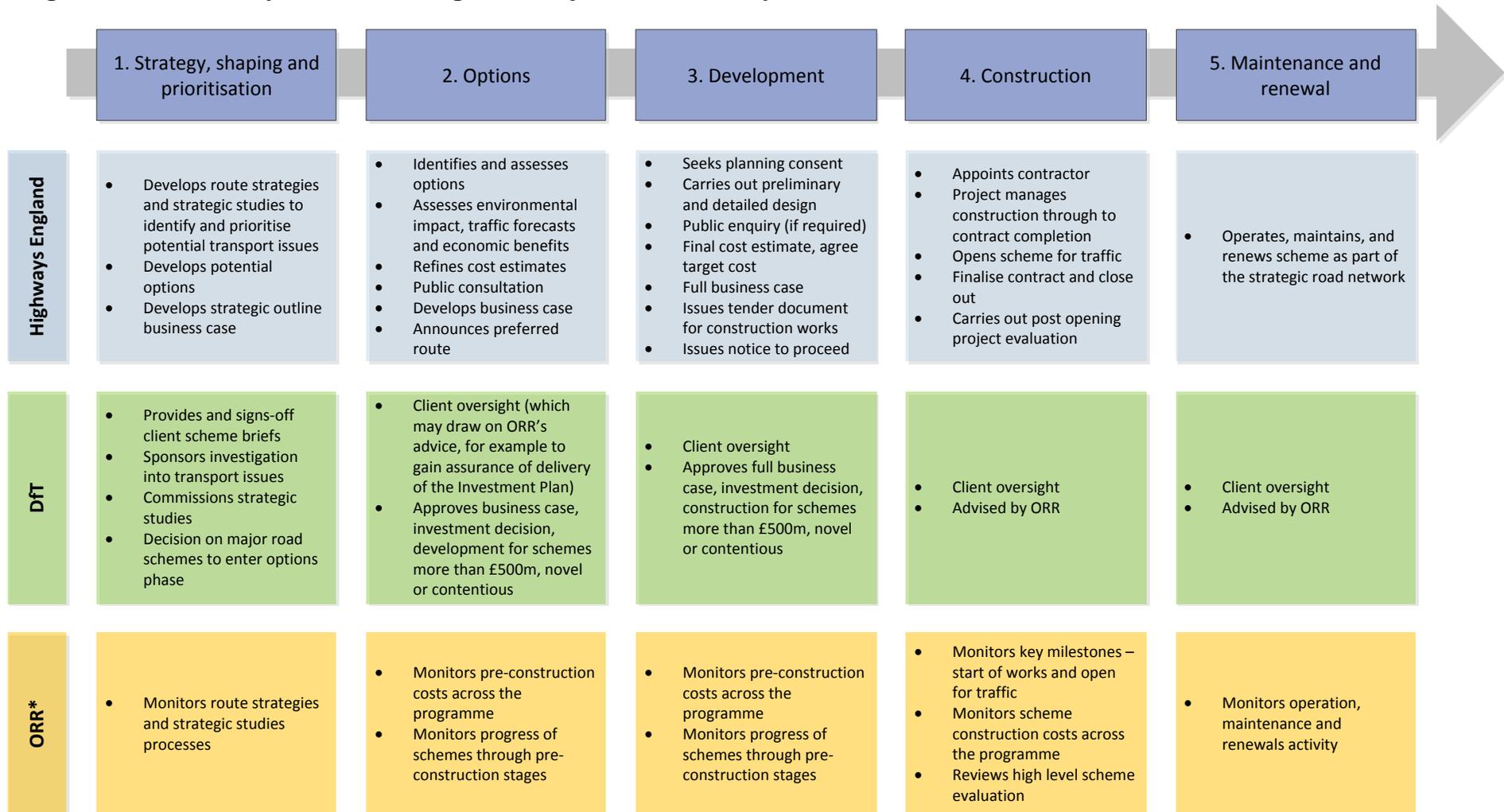
- 2.1 Following road reform, the development and delivery of Highways England's network investment portfolio is managed through a process primarily involving Highways England, DfT, ORR and Highways England's supply chain.
- 2.2 In simple terms, Highways England is responsible for proposing a portfolio of works and its associated estimated cost. DfT uses that information to inform the setting of a five year RIS – including the network investments to be delivered and the funds available for their delivery. Highways England must then deliver the RIS, largely through its supply chain, for the funding provided. ORR monitors Highways England's delivery. Any changes to the RIS are managed through a change control process, involving DfT and Highways England, and advised by ORR.
- 2.3 In practice the process is more complicated, and ORR plays a role throughout the process through engagement with Highways England and provision of advice to DfT. Diagram 2.1 summarises the roles of the key participants.
- 2.4 Below the high level process for determining and delivering the RIS, Highways England implements processes for managing its schemes throughout their lifecycle, and for managing investment decisions. Diagram 2.2 summarises how this process works.

Diagram 2.1: Summary of roles through the development and implementation of the Road Investment Strategy



* Informed by government's aims and objectives as well as outputs from the previous RIS. Transport Focus also informs the process by representing the views of road users
 † Changes to the Road Investment Strategy, the Delivery Plan and its updates are managed through a formal change control process

Diagram 2.2: Summary of roles through the major scheme lifecycle



* ORR holds Highways England to account across all stages, including assessing performance and efficiency and carrying out benchmarking analysis

- ORR activity
- Highways England activity
- DfT activity

What our monitoring includes

- 2.5 As shown in the above diagrams, our monitoring role includes providing advice to DfT throughout the process of setting a RIS. Later this year we will publish details of our role in the development of the next road investment strategy.
- 2.6 Our role includes monitoring Highways England's compliance with the statutory directions and guidance issued to it by the Secretary of State in the form of its licence³ and with the Investment Plan (as part of the RIS). This includes:
- the requirement for Highways England to prepare and publish route strategies as set out in the licence; and
 - the requirement for Highways England to deliver strategic studies on behalf of DfT as set out in the Investment Plan.
- 2.7 It includes engaging with Highways England in the production of its Strategic Road Network Initial Report and advising DfT on whether the Draft RIS and Highways England's Strategic Business Plan is challenging and deliverable within the funds made available – including providing specific advice on efficiency. We are involved in the development of the final RIS and Highways England's Delivery Plan.
- 2.8 Once the RIS has been finalised we have a key role in monitoring its delivery and providing transparent advice on the company's performance⁴. We have set out the scope of our monitoring role in our Monitoring Framework document, and this consultation provides more detail of our proposed approach to monitoring network investment.

What our monitoring does not include

- 2.9 For clarity, it is also important to note what our role does not include.
- 2.10 Whilst we provide advice to inform road investment strategies⁵, we do not set the road investment strategies, the required network investments, or the funds available. We do not approve changes to the road investment strategies or delivery plans (although we may provide advice on changes). DfT carries out these roles.
- 2.11 We do not play any direct role in managing the strategic road network - that is Highways England's role. Therefore, we do not:

³ Highways England's licence:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/431389/strategic-highways-licence.pdf

⁴ Note that we also have an enforcement role, as set out in the Infrastructure Act 2015 and as described in our Enforcement Policy for Highways England: <http://orr.gov.uk/highways-monitor/publications>

⁵ We did not provide formal advice to inform the first Road Investment Strategy as our highways monitoring role had not been established through the Infrastructure Act 2015 at the time it was produced

- model or forecast network investment needs;
- develop or propose network investment options;
- have a role in the governance of the network investment portfolio;
- manage the delivery of the portfolio, programmes or projects;
- develop, review or sign-off business cases; or
- review or sign-off estimates, or make investment decisions.

2.12 Rather than playing a role in managing the strategic road network, we remain independent, and provide proportionate and targeted scrutiny of how Highways England is performing.

3. Overarching approach to monitoring network investment

3.1 We propose to adopt a common overarching approach to monitoring all aspects of network investment and we set it out in this chapter. In subsequent chapters we explain in detail how we apply this approach to monitoring the network investment portfolio, major schemes, ring-fenced investment funds, maintenance and renewals, and strategic studies.

Principles

3.2 In our monitoring we adopt certain best-practice principles, as set out in our Monitoring Framework document, aiming to be: transparent, accountable, proportionate, consistent, targeted, and independent. These principles are all relevant to our monitoring of network investment delivery.

3.3 The proposals set out in this document are designed to provide an appropriate balance between:

- sufficient scrutiny to safeguard the interests of road users, the public and funders; and
- the costs of our monitoring, both directly and as imposed on the company.

Monitoring portfolio, programme and project management capability

3.4 As the manager of vital national infrastructure it is important that Highways England has the right skills and capability to manage the planning and delivery of its capital investment works effectively. The company recognises that it can improve in this area and is implementing plans to do so.

3.5 We will work with Highways England to understand how its plans for improving its portfolio, programme and project management capability are progressing, and will seek to work collaboratively to assess its capability. This will include understanding how the company's portfolio, programme and project management compares to best practice, and its plans to deliver improvement.

Establishing and monitoring against a clear baseline

3.6 Highways England has agreed to deliver a clear set of performance outputs and network investments, using a five year funding package. It is important that the

company owns the plans to deliver these outcomes and outputs, and is sufficiently transparent about those plans. Highways England published its Delivery Plan in March 2015 and will update it on a yearly basis⁶. The Delivery Plan and its updates set out **how** Highways England will deliver over the five year period. We use Highways England's plans for the costs and timescales for delivery as a baseline against which to assess its performance.

- 3.7 We set out our assessment of the robustness of Highways England's current baseline information, and comment on the further work required to improve it, in our report "Annual Assessment of Highways England's Performance, April 2015 - March 2016"⁷.

Highways England's internal assurance and reporting processes

- 3.8 As a well-managed company Highways England should be carrying out its own monitoring and reporting activities to assure that it is delivering. We propose that our monitoring should mainly focus on testing Highways England's own assurance processes rather than carrying out parallel, additional audits and assurance activities. For example, we will test whether the company has robust processes in place for monitoring risks to delivery, and is applying them consistently. We will carry out in-depth reviews on a sample basis to understand how processes are being applied and to identify any potential concerns.

Monitoring delivery in-the-round

- 3.9 In monitoring Highways England's delivery we propose primarily to monitor whether the portfolio and programmes of network investment works are being delivered in-the-round. We do not propose to monitor delivery of each individual scheme in detail because to do so would not be proportionate, and we do not have the resources to do this. We explain how we will carry out monitoring at a programme level in the subsequent chapters of this document.
- 3.10 Monitoring at a portfolio and programme level means that we take a more holistic view of Highways England's delivery and focus on any systemic issues rather than individual or specific issues. For example, it should be expected that within any programme of work some schemes will outturn at higher cost than original estimates, and some will outturn at lower cost. Our monitoring will focus on identifying trends to scheme costs overall.

⁶ Highways England published its first update to the Delivery Plan in July 2016: <https://www.gov.uk/government/publications/highways-england-delivery-plan-2016-to-2017>

⁷ ORR's Annual Assessment of Highways England's Performance: <http://orr.gov.uk/publications/reports/highways-monitor-annual-assessment-of-highways-englands-performance>

3.11 To complement our portfolio and programme-based monitoring we propose to carry out in-depth reviews on a sample basis, or where specific issues are identified.

Identifying future risks as well as monitoring past performance

3.12 We monitor Highways England's past performance, but we also aim to monitor the company's identification and management of risk. This includes risks to future delivery of the network investment portfolio and its programmes. We therefore propose that our monitoring is both:

- backwards looking – understanding how network investment has been delivered and emerging trends; and
- forwards looking – seeking to identify risks to delivery of the network investment portfolio in the future.

3.13 This means that we collect information about plans, forecasts and identification and management of risk. We assess whether Highways England's internal assurance processes are fit for purpose, and whether potential risks are being identified and mitigated, where possible, before they affect performance or incur costs.

3.14 This approach is intended to make a positive difference by seeking to identify strategic risks early so that Highways England can respond to, and manage them.

Adopting a flexible approach to monitoring network investment

3.15 Our monitoring needs to retain some flexibility so that it can respond to specific issues and identified risks. It also needs to respond to Highways England's capability and performance in delivering network investment. For example, we may choose to flex (either up or down) the number and frequency of in-depth reviews based on our assessment of investment delivery.

Reporting our assessment of network investment delivery

3.16 Another way in which we seek to make a positive contribution to the sector is by improving transparency – making more information publicly available. We report our assessment of Highways England's performance through an annual published report, the "Annual Assessment of Highways England's Performance" and may report more frequently than this (for example six-monthly, if appropriate). Our assessment of network investment delivery is an important part of our reporting.

- 3.17 During the first year of the road period we carried out a six month review of Highways England performance from April to September 2015, and published a report in December 2015⁸.
- 3.18 In addition to the regular reporting outlined above, we undertake and report on ad-hoc investigations as required to address emerging issues and concerns. For example, in early 2016 we carried out a review of Highways England's supply chain's capability⁹.

Our approach to date

- 3.19 Although we are consulting on the detail of our approach now, we have been carrying out activities to monitor delivery of Highways England's network investment plans since April 2015, and will continue to do so during the consultation period.
- 3.20 Our monitoring currently focuses on portfolio and programme level outcomes / outputs and covers the four programmes outlined in this document and we will continue with this approach. We now propose to complement this monitoring with management capability reviews (the same reviews which we have separately agreed with Highways England should form a key building block of our efficiency assessment) and with sample based in-depth reviews.

⁸ Six month review of Highways England's performance: <http://orr.gov.uk/highways-monitor/publications/highways-monitor-six-month-review-of-highways-englands-performance>

⁹ Review of Highways England's supply chain's capability: <http://orr.gov.uk/highways-monitor/publications/highways-englands-supply-chain-capability>

4. Our approach to monitoring the network investment portfolio

4.1 This chapter sets out our overarching approach to monitoring the investment plan at portfolio level.

What is the network investment portfolio?

4.2 Highways England's network investment portfolio comprises all investment programmes and includes:

- major improvement schemes;
- capital maintenance and renewals;
- schemes delivered through ring-fenced investment funds; and
- investment associated with strategic studies.

Why we monitor the network investment portfolio

4.3 Highways England is required to deliver the Investment Plan as a package. Planning, delivering and monitoring the delivery of the individual programmes is important, but if the interactions between the programmes are not understood then there is the potential that cross-cutting risks and opportunities are not identified, managed, realised and mitigated. For example, Highways England needs to manage the portfolio to:

- identify where renewals activity and improvement works can be carried out together, to procure and deliver work more efficiently;
- identify where smaller scale improvements funded through ring-fenced investment funds can be delivered as part of major schemes to provide additional benefit, beyond business-as-usual;
- prioritise interventions and expenditure (where it is not ring-fenced) across programmes;
- understand how the portfolio of capital investment works is contributing to the delivery of performance outcomes and outputs – such as maintaining availability or mitigating noise important areas; and
- identify cross-cutting risks such as commodity price rises, or insufficient supply of skilled labour to meet the portfolio demand.

4.4 We aim to monitor Highways England to ensure that it is considering opportunities and risks across its portfolio.

How we monitor the network investment portfolio

4.5 The ways in which we monitor the capital investment portfolio are set out below.

Seeking evidence from Highways England of its portfolio management capability

4.6 Highways England owns the management of its network investment portfolio and should have robust processes for demonstrating how it is identifying risks and opportunities across programmes. It should also have robust reporting to understand whether the portfolio of investment is being delivered efficiently.

4.7 Our approach is to require evidence from Highways England that it is:

- developing the right capabilities throughout the organisation to manage the portfolio of investment works;
- assessing deliverability through ongoing monitoring of the portfolio, the supply chain and through regular review of potential delivery and affordability risks and constraints;
- applying a robust process to identify and manage opportunities (such as efficiencies) and risks (such as resource constraints) that cut across its investment programmes;
- applying a robust process to manage changes to plans which have implications across the portfolio; and
- assessing and managing the impact of its investment portfolio on its Performance Specification and Investment Plan outcomes and outputs.

4.8 We will work with Highways England to understand how its plans for improving its portfolio management capability are progressing, and will seek to work collaboratively to assess its capability.

Monitoring portfolio delivery in-the-round

4.9 We will complement the evidence gathered about Highways England's portfolio management with portfolio-level review of whether Highways England is delivering the outcomes, outputs and investments specified in the RIS efficiently, and managing delivery within the constraints of its available funding. This means taking a holistic view of:

- performance against the requirements of the RIS Performance Specification;
- delivery of the Investment Plan;

- efficiency of delivery; and
- licence compliance.

4.10 In the delivery of any large portfolio of investment work some risks are likely to be realised and it is likely that some reprogramming of work or reprioritisation may be required. We will therefore seek to identify whether the company has delivered in-the-round. We will monitor the portfolio to identify systemic risks and how they are being managed. We will also consider how financial reserves for risk and contingency are managed.

Reporting our assessment of portfolio management

4.11 Our annual assessment of Highways England's performance will include reporting of:

- Highways England's portfolio management capability;
- the sufficiency of evidence provided that portfolio level risks and opportunities are being managed; and
- Highways England's delivery of the portfolio of investment in-the-round.

5. Monitoring delivery of major schemes

- 5.1 Highways England has an agreed programme of major improvements to be taken forward over the first road period (April 2015 to March 2020) that totals around £7.0 billion of capital expenditure and comprises 112 major improvement schemes to address some of the key performance issues and constraints on the network. The programme of major improvements includes schemes at varying stages of development – from those which are newly identified through feasibility studies to those already in construction.

What are major schemes?

- 5.2 Major schemes are large-scale improvement projects with an estimated cost of more than £10 million. They upgrade the strategic road network to provide more capacity and better connections, whilst maintaining the safety and performance of the network.
- 5.3 There are a number of solutions for major enhancement schemes that can be adopted when seeking to address the key issues on the network. These include junction improvements, widening certain sections of the road network and upgrading poorer quality single carriageway trunk roads to dual carriageway standard. Other schemes may be adopted to increase motorway capacity and reduce congestion, by implementing active traffic management techniques such as variable speed limits and hard shoulder running.

What should our monitoring achieve?

- 5.4 Our monitoring should provide an independent and transparent assessment of Highways England's delivery of its major scheme programme so that stakeholders understand whether the company is delivering the major improvements to the network within committed timescales and the funding available. It should seek to highlight good and poor practice to drive improved outcomes for road users and the public.

Monitoring the programme of major schemes

- 5.5 Our proposed monitoring of the major schemes programme consists of:
- monitoring delivery against a clear baseline of schedule, scope and cost information, with any changes to the baseline controlled;
 - reviewing delivery of the programme in-the-round;

- carrying out in-depth reviews of programme and project management on a sample basis.

The major scheme baseline

- 5.6 Highways England sets out how it will meet its Investment Plan major scheme commitments in its Delivery Plan and its updates to the plan. We have worked with the company to make sure that it improves the transparency and detail of its baseline information for major schemes. This baseline information includes:
- dates for the key delivery milestones, to include, as a minimum, when schemes will start works and when schemes will open for traffic within the road period;
 - the high level profile of expenditure for delivering the key capital investment programmes; and
 - clarity around any changes to the scope of the scheme specified in the Investment Plan, and as agreed through the change control process.
- 5.7 Highways England has published updated information about its major scheme baseline in its Delivery Plan update for 2016-17.
- 5.8 We complement this baseline by monitoring against more disaggregated cost and schedule assumptions, to understand performance and future risk. These include:
- estimated outturn costs for each major scheme, both over the lifetime of the scheme and split by year for the road period; and
 - three pre-construction milestones: start of pre-options, start of options and start of development.
- 5.9 Monitoring Highways England against its baseline plan and disaggregated cost and schedule assumptions allows us to identify where costs and schedule are outturning differently to Highways England's plans. Where there are large deviations from plan we will carry out more detailed reviews (see below) to understand the causes, Highways England's actions, and potential lessons. We are also able to identify potential future issues by understanding pre-construction progress and monitoring Highways England's latest forecasts for milestone delivery and cost.
- 5.10 In addition to progress against the milestones committed in the Delivery Plan and capital expenditure profile, we also monitor the scope of schemes, including some high level volumes of new infrastructure delivered by the major schemes, for example, number of lane kilometres delivered. This will provide transparency of what Highways England is delivering.
- 5.11 Any updates to the Delivery Plan or milestones are separately agreed between DfT and Highways England, with advice from ORR, through the formal change control process.

Monitoring major scheme delivery in-the-round

5.12 Whilst we monitor some metrics for individual major schemes we do not propose to primarily hold Highways England to account for delivery on a scheme-by-scheme basis. This is because in any large portfolio of capital investment it should be expected that:

- some schemes will cost more than originally estimated and some will cost less; and
- some schemes will be delivered earlier than planned and some will be delivered later.

5.13 A proportionate approach is therefore to focus on systemic issues by monitoring trends in the delivery of the major scheme programme of work. However, we recognise that the major schemes have the potential to have a material impact on road user experience and that there should be scrutiny of significant cost or schedule changes.

5.14 We therefore propose to review with Highways England and report publicly on:

- reasons for major scheme programme costs outturning differently to the baseline and any systemic issues – including monitoring the Cost Performance Indicator which is the relationship between target and actual cost for work completed;
- the trends in milestone delivery for the major scheme programme and any systemic issues – including monitoring the Schedule Performance Indicator which is the relationship between work planned and actually completed;
- the reasons for costs for an individual scheme outturning significantly more than published estimates;
- the reasons for an individual scheme missing its published start of works or open for traffic milestone; and
- post-opening project evaluation findings in-the-round.

5.15 For all of the above we will review with Highways England the lessons learned and management actions taken.

In-depth reviews of major schemes

5.16 To complement our monitoring of the major scheme programme we propose to carry out in-depth reviews on a sample basis, or where specific issues are identified, for example through Highways England's exception reporting. These reviews will assess Highways England's own process for monitoring and reporting risks to delivery, and

identify any potential concerns. The selection of schemes will consider an appropriate mix of scheme types and stages of delivery.

The major scheme data we collect

5.17 Highways England submits high level summaries of capital expenditure and baseline milestones on a monthly basis. We use this to identify any significant emerging risks.

5.18 The company submits summaries of its internal reporting of major scheme progress to us on a quarterly basis. This includes reporting on:

- the latest understanding of value-for-money for each scheme (measured by the Benefit Cost Ratio);
- the latest actual and / or forecast milestone delivery dates;
- the latest actual and / or forecast scheme costs; and
- the reasons for variances from baselines.

5.19 We have separately agreed the more formal annual data submissions that Highways England will provide. This is set out in our Monitoring Reporting Templates and Guidelines¹⁰. This reporting includes:

- actual progress against baseline milestones;
- actual major scheme expenditure by scheme;
- explanations of variances to baselines;
- Cost Performance Indicator and Schedule Performance Indicator; and
- reporting of major scheme efficiencies.

5.20 We have regular engagement with Highways England to understand the data that we receive, including formally meeting to discuss capital delivery reporting on a quarterly basis.

Our reporting on major scheme delivery

5.21 Our annual assessment of Highways England's performance includes reporting of:

- delivery of the major scheme programme to date, including actual costs against plan and trends / systemic issues in schedule delivery;
- major scheme progress against key milestones in the road period to date, including the reasons for an individual scheme missing its published start of works or open for traffic milestone;

¹⁰ Monitoring reporting guidelines and templates: <http://orr.gov.uk/publications/guidance/monitoring-reporting-guidelines-for-highways-england>

- the reasons for actual costs for an individual scheme being significantly above or below published estimates;
- any impact on targets set out in the performance specification and associated performance metrics;
- risks to delivery of the major schemes programme in the remainder of the road period; and
- the findings of our in-depth reviews¹¹.

¹¹ We will report on in-depth reviews of major schemes from 2016-17 onwards

6. Monitoring maintenance and renewals

6.1 The strategic road network is vital national infrastructure. Highways England must carry out maintenance and renewal works to make sure that the network delivers the required levels of safety and performance. Highways England has been allowed funding of £3.7 billion to deliver its programme of capital maintenance and asset renewals, over the first road period. “Keeping the network in good condition” is one of the eight outcomes required by the RIS Performance Specification.

What are maintenance and renewals?

6.2 Maintenance and renewals works are carried out to maintain the condition of network assets, or replace those assets which have reached the end of their useful lives with a modern equivalent. Strategic road network assets fall into five main categories: pavement (for example the road surface), structures (such as bridges and tunnels), geotechnical assets (including embankments), drainage (for example drains and gullies), and technology (including variable message signs). The programme of maintenance and renewals should be prioritised based on the needs of the assets to ensure the network is maintained in a safe and serviceable condition, whilst minimising costs over the life of the assets.

What should our monitoring achieve?

6.3 Our monitoring should provide transparency about Highways England’s delivery of its capital maintenance and renewals programme so that stakeholders understand whether the company is keeping the network in a safe and serviceable condition. It should seek to highlight good and poor practice in order to drive improved outcomes for road users and the public, including more efficient delivery.

Monitoring the programme of maintenance and renewals

6.4 We propose to monitor Highways England’s maintenance and renewals programme using four approaches, each of which is described below:

- assessing Highways England’s asset management capability;
- monitoring asset condition and performance metrics;
- carrying out in-depth reviews of the development and delivery of sustainable and efficient asset interventions on a sample basis; and
- reviewing delivery of the programme in-the-round, for example by reviewing volumes delivered against plan.

6.5 The combination of these approaches should give broad evidence about whether Highways England is managing its assets effectively.

Assessing asset management capability

6.6 Highways England is currently implementing plans to improve its asset management capability. We propose to work collaboratively with the company to understand its current asset management capability and its plans for improvement. We expect that this will involve reaching a shared understanding of the company's compliance and consistency with international asset management standards.

Monitoring asset condition and performance metrics

6.7 Monitoring asset condition and performance metrics is a useful way of understanding whether Highways England is doing enough to maintain the condition of the network. The Performance Specification has set a measure of pavement condition as a key performance indicator with a target of 95%, and has established measures of condition for other asset groups as performance indicators¹².

6.8 We will monitor the condition of pavement assets against the Performance Specification target of 95%, and the outturn of the other asset condition metrics, seeking to understand trends and the outputs of the maintenance and renewals programme.

6.9 Highways England should be seeking to understand risks to the future condition and serviceability of the network. We will seek evidence from the company about how it is doing this, including:

- whether it understands the current condition of its assets and their likely degradation; and
- whether it understands the impact of its proposed interventions on future condition and wider performance.

6.10 Whilst asset condition and performance metrics are useful, they can be slow to respond to actual asset management interventions. We therefore also propose to monitor asset management processes and delivery as set out below.

Reviewing delivery of the programme in-the-round

6.11 Highways England set out its high level plans for the volumes and costs of maintenance and renewals work in its Delivery Plan and will update this on a yearly basis.

¹² Highways England's Operational Metrics Manual defines the key performance indicators and performance indicators: <https://www.gov.uk/government/publications/highways-england-operational-metrics-manual>

6.12 We will monitor the company's delivery of actual volumes and its outturn expenditure to understand whether it is delivering its plans. In particular, we will review the reasons for variances from the plan to understand:

- whether Highways England's maintenance and renewals planning is robust;
- whether, and why, Highways England is deferring or bringing forwards works;
- whether it is delivering more or less efficiently compared to previous years, and compared to its plans; and
- whether it is updating its plans as new and / or better information about the state of its assets as this information becomes available.

Carrying out in-depth reviews of asset management practice

6.13 Highways England should be implementing a robust process for developing and delivering asset maintenance and renewals plans. We propose to carry out in-depth reviews of Highways England's asset management processes on a sample basis to understand:

- the quality of Highways England's asset management information;
- its asset management strategies, policies and standards, and the extent to which they are seeking to minimise costs over the life of the assets (delivering minimum whole life cost);
- how the strategies, policies and standards are developed into robust, prioritised asset management plans;
- how the asset management plans are delivered and their impact reviewed; and
- how asset management plans are coordinated with other capital programmes.

The maintenance and renewals data we collect

6.14 Highways England provides, on a monthly basis, a high level report of maintenance and renewals delivery, including a summary of expenditure against budget, renewals volumes and asset inventory and condition metrics. This information enables identification of emerging risks.

6.15 As set out in our Monitoring Reporting Guidelines, Highways England submits formal annual data and reporting including:

- actual progress against planned output;
- actual expenditure profile per year;

- explanations of variances in terms of outputs and expenditure;
- reporting of maintenance and renewals efficiencies; and
- asset inventory and condition metrics.

6.16 This reporting is complemented by ongoing engagement with Highways England to discuss risks to delivery of maintenance and renewals programme and associated mitigation actions.

Our reporting of maintenance and renewals delivery

6.17 In our annual assessment of Highways England's performance we will report on:

- Highways England's asset management capability;
- the robustness of Highways England's planning of its maintenance and renewals programme;
- the delivery of the maintenance and renewals programme to date, including actual volumes and outturn expenditure against plans;
- identification of trends / systemic issues in schedule delivery;
- reasons for deferring or bringing forward works and impact on efficiencies;
- the impact on targets set out in the performance specification and associated performance metrics;
- performance against asset condition metrics; and
- the findings from our in-depth reviews¹³.

¹³ We will report on our in-depth reviews of asset management practice from 2016-17 onwards

7. Monitoring ring-fenced investment funds

7.1 Highways England has been provided with ring-fenced funding to address a range of specific issues over and above the traditional focus of road investment. The ring-fenced investment funds total £675m for the first road period and cover five areas: environment; air quality; cycling, safety and integration; innovation; and growth and housing.

What are the ring-fenced investment funds?

7.2 The ring-fenced funds as set out in the Investment Plan will allow Highways England to carry out improvement works beyond their business-as-usual activities. These will include 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. Table 7.1 provides further details of the ring-fenced investment funds.

Table 7.1: Summary description of ring-fenced investment funds

Fund Name	Fund Budget (RP1)	Description
Environment	£225m	Improve environmental performance across carbon, noise, water, biodiversity, landscape and cultural heritage. The funding aims to deliver additional environmental benefits for new schemes, and will also allow for measures to retrofit the existing network to tackle current problems.
Air quality	£75m	Target improvements in air quality, making real reductions in air pollution. Highways England will be developing in a range of projects to reduce pollution and ensure the air around the network is clean and healthy for our customers and neighbours.
Cycling, safety, and integration	£175m	Improve safety, increase provision for cyclists on and near the strategic road network, and enhance access for a variety of users, including pedestrians, horse riders and the disabled. This will involve both bespoke interventions and enhancements to new and existing schemes.
Innovation	£120m	Fund created to allow the company to place a greater emphasis on the future technologies that will positively impact users and the network. It will involve a range of research, development, demonstration, and deployment activities.
Growth and housing	£80m	Fund established to ensure that the company is sufficiently equipped and flexible to respond to future development opportunities, including those relating to new housing and enterprise zones. This fund will be used to match-fund infrastructure to enable new developments.

What should our monitoring achieve?

7.3 Our monitoring should provide stakeholders with transparency about how Highways England is prioritising use of these funds and the benefits being delivered. It should assess whether the company is delivering value for money from the funds.

Monitoring the ring-fenced funds

7.4 We propose to monitor Highways England's ring-fenced investment fund delivery using three approaches:

- reviewing the governance of the funds;
- reviewing delivery of the programme in-the-round, for example reviewing delivery against committed plans; and
- carrying out in-depth reviews of a sample of schemes.

Reviewing the governance of the funds

7.5 Highways England has been given ring-fenced investment funding to deliver targeted improvements and has discretion about what improvements are delivered and how they are prioritised. It is therefore important that the company has robust processes in place to develop programmes of work which deliver stakeholder priorities. It should be implementing a robust process for selecting, developing and delivering projects that meet the strategic objectives of each designated fund. Our monitoring will assess:

- the governance structure and processes in place;
- the robustness of the scheme selection and prioritisation process, for example how value for money is assessed;
- the robustness of programme management and investment controls in place, including the processes for risk identification and mitigation; and
- the processes for engaging stakeholders.

Reviewing delivery of the ring-fenced funds in-the-round

7.6 Highways England sets out its high-level expenditure plans for each ring-fenced fund in its Delivery Plan and its updates. It also, to varying degrees, sets out plans for specific deliverables (for example named schemes being progressed) through these plans. We monitor the programme and high-level indicators of its delivery, including:

- clarity and robustness of plans;
- expenditure against plans;
- delivery against commitments in plans (such as named schemes); and

- number of schemes in development, delivered and reviewed.

Carrying out in-depth reviews of ring-fenced funds

7.7 We propose to carry out in-depth reviews of the management of the ring-fenced investment funds on a sample basis. This will include reviewing specific funds in greater detail where the review of governance and processes highlights concerns.

7.8 It will also include reviewing sample schemes within programmes to understand:

- the process for taking the schemes from inception to completion;
- how they have been identified and prioritised;
- their costs and benefits;
- how they have been project managed;
- whether the output is aligned with the fund objectives and the initial scope; and
- how fund schemes have been aligned with other capital programmes.

The data we collect on ring-fenced funds

7.9 Highways England submits high-level summaries of ring-fenced fund expenditure and delivery to us on a monthly basis. It also submits more detailed summary reports of its internal reporting of funds on a quarterly basis. This includes reporting of:

- actual expenditure; and
- actual progress of fund scheme delivery, through the number of schemes that have been developed, delivered and reviewed.

7.10 As set out in our Monitoring Reporting Templates and Guidelines, Highways England formally submits data and reports on an annual basis, including:

- actual progress of fund scheme delivery for the year (as above, through the number of schemes that have been developed, delivered and reviewed);
- annual actual expenditure; and
- written explanations of the progress of fund delivery in the year.

7.11 This reporting is complemented by ongoing engagement with Highways England to discuss progress, risks to delivery and associated mitigation actions.

Our ring-fenced investment funds reporting

7.12 Our annual assessment of Highways England's performance will include reporting of:

- delivery against committed fund plans and their strategic objectives, including actual annual expenditure;

- scheme progress against schedule (number of schemes in development, delivered and reviewed) including reasons for variances from the committed plans;
- the impact on targets set out in the performance specification and associated performance metrics;
- the robustness of Highways England's management of each fund; and
- the findings of our in-depth reviews.

8. Monitoring strategic studies

8.1 The RIS Investment Plan requires Highways England to deliver a set of strategic studies to investigate measures to address some of the biggest challenges on the strategic road network.

What are the strategic studies?

8.2 The strategic studies are required to investigate options on six key sections of the network:

- Northern Trans-Pennine routes;
- Trans-Pennine Tunnel;
- Manchester North-West Quadrant;
- A1 East of England;
- Oxford to Cambridge Expressway; and
- M25 South-West Quadrant.

What should our monitoring achieve?

8.3 Our monitoring should provide transparency about how the strategic studies are being progressed, how their outcomes are influencing the second road investment strategy and whether other transport modes are being adequately considered.

Monitoring delivery of the strategic studies

8.4 The six strategic studies named above are being taken forward through a collaborative arrangement between DfT and Highways England. The studies have been commissioned by DfT and are subject to programme and project oversight by the department. Highways England has appointed, and is project managing, consultants to deliver the studies.

8.5 Because DfT has significant oversight of these studies we propose that our role focuses on high level monitoring and reporting of study progress, as informed by engagement with both DfT and Highways England

Reporting delivery of the strategic studies

8.6 Our reporting of the delivery of the strategic studies will include:

- reporting on governance and management of the studies;
- reporting on high-level progress and milestone delivery;
- reporting on whether there has been appropriate consideration of other modes and cross-modal options; and
- reporting on emerging findings and outcomes.

9. The benefits of our proposed approach

9.1 Our proposed approach is intended to contribute positively to the sector, ensuring value for money and a focus on stakeholder priorities, as set out below.

Table 9.1: How our monitoring positively contributes to the highways sector

Benefit	How our monitoring approach delivers the benefits
Providing independent scrutiny	<ul style="list-style-type: none"> • Our approach provides proportionate scrutiny of Highways England's capital investment delivery • Our reporting provides, for the first time, an independent assessment of Highways England's performance
Encouraging Highways England to consider risk at a strategic level	<ul style="list-style-type: none"> • Our approach reviews portfolio management, including management of risks and opportunities that cut across programmes of work • We take a forward-looking approach – seeking to identify risks to future delivery of the capital portfolio and its programmes
Promoting transparency in performance reporting	<ul style="list-style-type: none"> • Our approach requires Highways England to publish more information about its capital investment plans – including clearer scheme baseline information • We make clear that we will publish an annual report on Highways England's capital investment delivery
Facilitating lessons learned from other sectors	<ul style="list-style-type: none"> • Our approach is based on our experience in monitoring rail capital investment and approaches adopted in other sectors. But it also seeks to learn lessons – for example from the rail Bowe Review¹⁴ • Our approach includes benchmarking of capability to identify maturity compared to other sectors
Promoting multi-modal policy thinking	<ul style="list-style-type: none"> • Multi-modal thinking has the potential to improve future capital investment programmes. We assess whether there has been appropriate consideration of other modes and cross-modal options in our review of strategic studies

9.2 We also expect our approach to incentivise better value for money by applying greater scrutiny and transparency to efficient delivery.

A coherent package of monitoring

9.3 The monitoring approach set out in this consultation document has linkages to other workstreams, which we do not cover in detail here. For example:

¹⁴ Dame Colette Bowe's review of the planning of Network Rail's enhancements programme: <https://www.gov.uk/government/publications/bowe-review-into-the-planning-of-network-rails-enhancements-programme-2014-to-2019>

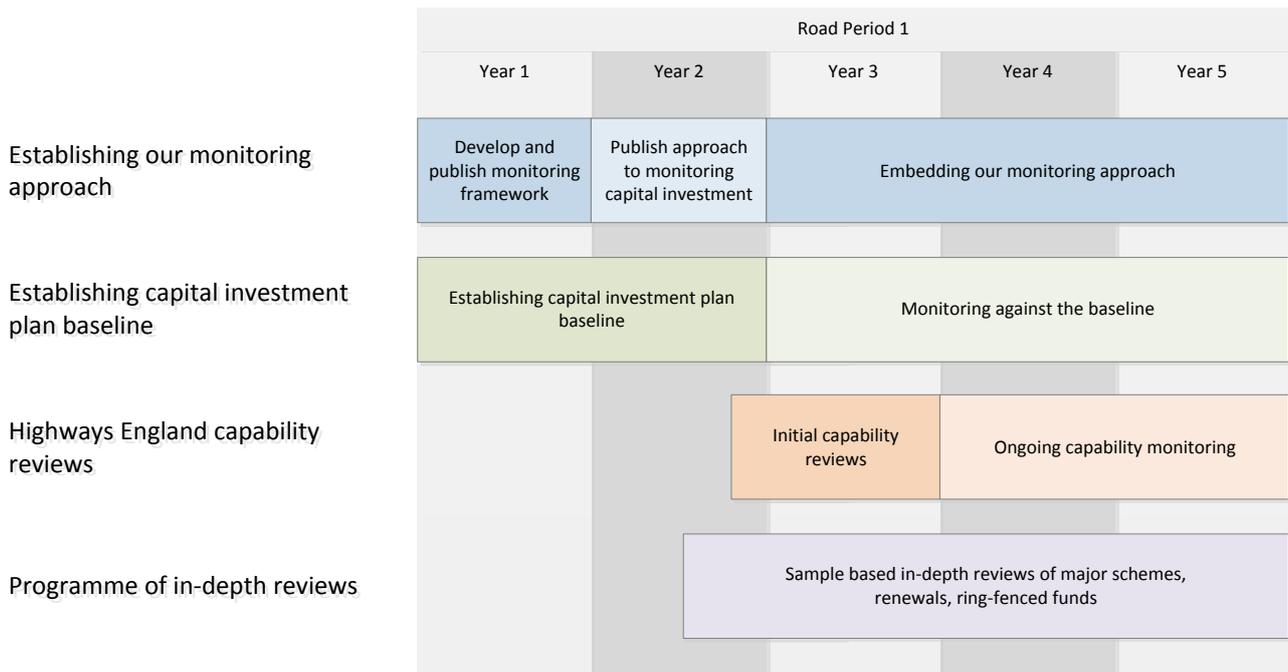
- the portfolio of investment works contributes to the delivery of performance outcomes and outputs – such as maintaining availability or mitigating noise important areas;
- benchmarking of investment works (e.g. unit costs) will inform our understanding of efficiency, both in this road period and opportunities for the future;
- our approach to the efficiency review for RIS2 focuses on capability reviews, including: portfolio, programme and project management capability; asset management capability; supply chain management / procurement capability. These reviews will inform both current capability and potential for future improvements; and
- our approach to monitoring network investment will help to inform our work on RIS2 – including identifying opportunities for more robust specification and baselining of investment requirements.

9.4 Our approach to network investment monitoring forms an important part of our wider, coherent package of monitoring activity.

10.Next steps

10.1 A high-level summary of how our monitoring will progress during the road period is provided in figure 10.1.

Figure 10.1: Summary of our monitoring timeline in the first road period



10.2 We are consulting on the proposals set out in this document for a period of ten weeks and are seeking responses to the consultation questions below by 29 September 2016.

- Do you understand and agree with the scope of our role with respect to monitoring Highways England’s network investment, as set out in this consultation?
- Does our proposed approach for monitoring Highways England’s network investment fulfil our role in a way which meets your requirements as a stakeholder?
- Are there aspects of our monitoring of Highways England’s network investment that you think require more or less emphasis?

10.3 We will review all responses received and consider how we reflect these in our final approach during summer 2016. We will finalise our approach and publish it by the end of the year.

10.4 Following publication we will adapt our monitoring to reflect the finalised approach to monitoring Highways England's network investment delivery.



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