Review of Highways England’s supply chain management framework in readiness for RIS2

Executive Summary

24 March 2020
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Our approach to the review

The ORR commissioned CEPA and Elliott Asset Management to conduct a review of processes for affirming the readiness of Highways England’s supply chain to manage a significant increase in work during RP2.

The key questions that we were asked to consider are described below and the main body of the report follows this structure:

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<tr>
<th>Question</th>
<th>Category</th>
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<tr>
<td>Question 1</td>
<td>Procurement</td>
<td>Review whether necessary procurement processes and contracts are in place to manage the large increase in planned expenditure at the end of RP1 into RP2 and beyond.</td>
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<td>Question 2</td>
<td>Management</td>
<td>Review how Highways England is assuring itself that schemes due to start works in Q4 2019-20 and in RP2 and beyond can be managed by the supply chain.</td>
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<td>Question 3</td>
<td>Capacity</td>
<td>Review how Highways England is monitoring and determining whether the supply chain is planning to create sufficient capacity for the significant increase in expenditure planned at the end of RP1 and beginning of RP2.</td>
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<td>Question 4</td>
<td>Internal capability</td>
<td>Review how Highways England has assessed its internal capacity and capability to manage the growing investment portfolio, including looking at whether there are detailed and robust plans in place to manage the large major schemes and renewals programme.</td>
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<td>Question 5</td>
<td>Indicators</td>
<td>Review what key indicators are being used by Highways England or could be developed to understand Highways England’s readiness to deliver.</td>
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Our approach has been twofold - interviews with Highways England and independently with its supply chain.

- We conducted an internal workshop with senior managers from Highways England’s supply chain development team, as well as senior leadership representing the commercial teams embedded in the Major Projects and Operations directorates. We followed this discussion with a data request and conducted targeted telephone interviews with senior Highways England managers from supplier-facing teams.

- We also discussed emerging findings and our draft report with both ORR and HE and incorporated comments from those discussions.

- To develop an evidence base for this review, we conducted face-to-face and telephone interviews with senior representatives of 11 organisations from Highways England’s supply chain and 4 trade associations. We supplemented these interviews with an internet survey which asked respondents to answer 25 questions covering each of the key topics above.

- In total we received responses from 27 separate supply chain organisations. All “Tiers” of the supply chain are represented, although given the diverse nature of Tier 2 and 3 suppliers, their views are taken both from individual discussions and via our engagement with trade associations.
Key Findings – Procurement

Highways England has made, and continues to make, positive progress against its planned timeframes for procurement.

The Regional Delivery Partnerships (RDPs) have been in place for almost 18 months, there are live Capital Works Frameworks (CWFs) and Maintenance & Response contracts across all ‘Areas’¹, and there is a live procurement for the contract to design the dualling of the A66.

Highways England expects to award places on the Smart Motorways Alliance (SMA) in March 2020.² This represents a three month slippage from its original plan but this has been affected by factors largely outside of Highways England’s control, including the delay in the public announcement of the RIS and the smart motorway “stocktake”. Once SMA partners have been contracted Highways England will have a large majority of RIS2 capital expenditure either ‘contracted’, or in a place where later RIS schemes will be allocated to firms on existing frameworks depending on performance.

Elsewhere, the A303 and Lower Thames Crossing (LTC) schemes require three large and complex procurements. Similar procurements often take 18 - 24 months (sometimes longer) to complete from start-to-finish. Highways England advises that these procurements are progressing well against the current plan including a comprehensive market engagement exercise, but recognises that the procurement timetables are also dependent on other simultaneous aspects of scheme development. As they are particularly large schemes, they will need careful monitoring.

Highways England has been working with suppliers to create a more sustainable and diverse supply chain – this will be driven in part through new commercial models which encourage more effective client-supplier relationships.

Highways England explained to us that it is moving to a different approach to procurement that is more value based and focused on performance outcomes. This approach has developed in consultation with the supply chain through the Engagement Council and Collaboration Board, particularly in the development of the new RDP and SMA commercial models.

The new models are intended to create the right environment for suppliers to ‘grow’. For example, the RDP model will allocate future work through framework contracts that reward performance, reduce the need for secondary competitions and provide suppliers with a more stable pipeline of work, and an incentive for suppliers to grow their profit margin by innovating and reducing overall costs (i.e. a design & build approach).

Highways England also intends to continue to build a better understanding of where value is created, working directly with suppliers as opposed to through historical supply chain hierarchies, and to draw in new entrants to grow the supplier base and bring in innovation from other construction sectors. Through recent procurement exercises it has removed previously essential requirements such as ‘highways experience’.

The company indicates that it has already seen early signs of success. Through the RDPs there are several suppliers with less extensive highways experience but who have been appointed to some of the lower value lots, creating an opportunity for them to grow, over time, into established ‘Tier One’ suppliers. The Asset Delivery strategy has also allowed the Company to get closer to suppliers that were previously in the extended supply chain. Across both Major Projects and Operations, there will be an extension of the ‘category management’ approach to procurement.

¹ We use the term ‘Areas’ in this context to mean the 12 operational areas which make up the network managed by Highways England.
² The contract award for the SMA had not yet been announced as at 24 March 2020.
Key Findings – Procurement

However it remains too early to fully assess the impact of these new contracting arrangements and Highways England will need to monitor the ongoing impact.

In our engagement with suppliers, we found that views on the new contracting models were mixed. Some were overall positive and suggested that early signs demonstrate good intent, whilst others raised concerns around the approach to risk transfer. This suggests that some suppliers see potential for higher tendered prices, albeit this view may depend on each supplier’s approach to and appetite for risk transfer. “Single point design responsibility” was a particular concern and on balance the feedback told us that suppliers have found it challenging over the past 18 months to get comfortable with taking cost risk on someone else’s design work without time for proper due diligence.

Highways England has a clear vision and rationale for these new commercial arrangements - it wants to incentivise suppliers to own the solution and deliver outputs that are “fit for purpose”. Whilst some suppliers are on board with this vision, others are split on whether it is sustainable. It is too early for us to draw any conclusion on this but we note a general view in the supply chain that these clauses have impacted post-award contract discussions which have taken longer, involved a higher level of legal cost, and have contributed to post-award delays in signing scheme contracts.

Highways England is an important client to all the suppliers we engaged but also a large client, given the volume of work it procure and longer-term nature of contracts.

As with many other infrastructure clients, we found that there are ups and downs in the relationship with the supply chain, but the overall impression of Highways England is one of gradual improvement. Most suppliers said that Highways England contracts generally pay on time which is part of what makes it a good client, and that the most established suppliers say they are able to use their mature relationships (particularly at a senior level) to work in collaboration to discuss and resolve contract issues.

But we caution that Highways England is not yet universally considered “easy to do business with”. Whilst it might be doing the right things generally, the Company needs to recognise that there are a wide range of potential bidders and that some find its processes and terms onerous. This feedback ‘fits’ with our experience of similar exercises in other public sector infrastructure clients, e.g. Network Rail and TfL.

Representatives of Tier 2 and 3 suppliers also reaffirmed the findings of previous reviews which concluded that direct contracting and entering onto framework agreements with Highways England can be onerous and the rewards uncertain. Highways England told us it has created a SME champion role and is helping smaller suppliers to prepare for tender opportunities e.g. by holding ‘Meet the Buyer’ events and developing supplier guides. But nonetheless, we found the knowledge of these initiatives to be low. This might inhibit Highways England’s ability to tap the innovation that these firms can bring, and the Company should consider measuring and monitoring the diversity of its supply base on an ongoing basis to encourage sustainability.

Finally, although the top tiers of the supply chain see Highways England becoming more collaborative and less transactional, with easier access to all levels of staff within directorates, it has hitherto been more difficult for new and smaller suppliers to achieve the same level of access and maturity of relationships. This applies to both suppliers who are engaging directly with Highways England, and those who are part of a more established supply chain.

Key Findings – Supply Chain Management

Given the context for this review, ORR is particularly keen to understand whether the supply chain is able to manage the number of schemes which are due to start works by the end of RIS1.

The first RIS was set to allow Highways England and the supply chain to plan their work efficiently and establish a smoother delivery profile with the aim of providing the confidence needed to invest in capacity and skills necessary to delivery the scale of planned improvements. Almost five years on, Highways England has scaled up from delivering ~£2bn in maintenance, renewals and improvement schemes in 2015/16 to ~£3.3bn this year. Of the 37 RIS1 improvement schemes with ‘open for traffic’ commitments, it opened 29 in the first four years of the RIS, with seven ‘on schedule’ and one delayed. This increase in activity has been achieved whilst improving road worker safety (both HE and supply chain accident frequency rates are down), meeting lane availability targets and holding customer satisfaction broadly stable (albeit slightly below target).

Nonetheless, Highways England has a significant portfolio of major RIS1 schemes which are due to start in the last year of the Road Period (2019-20) and will carry over into RP2. The result is a heavily back-end loaded delivery schedule in RP1 and a heavily front-end loaded RP2.

It is recognised that the transition into RIS2 is deliberately ambitious but we have not seen sufficient evidence to show that the 26 schemes with Start of Works commitments are all ‘on track’.

Highways England’s performance to date does provide some confidence that schemes due to start works in Q4 2019-20 and in the early years of RP2 can be managed, but we find that there are grounds for caution and that ORR should remain vigilant in monitoring these risks. Of the 112 RIS1 improvement schemes, Highways England has started work on 44 and is expected to start construction of 26 schemes during the last year of RP1. This represents more starts than it has achieved in any year of RP1 so far, although we note that road schemes can take several years to develop from inception to construction. Of these 26 schemes, we understand that around 24 are forecast to start works in March 2020.

Both Highways England and the supply chain recognise that the transition into RIS2 is an ambitious one, but neither has said explicitly that it cannot be achieved. Highways England explained to us that Project Control Framework (PCF) “products” for these 26 schemes were complete or in progress, that this process would ensure timely progress into the construction phase, and that suppliers were incentivised to hit these key milestones. Highways England also told us that ORR are sighted on the progress of these projects, but the aforementioned products were not provided for our review. We consider that greater transparency is required to determine whether the schemes due to start works in Q4 2019-20 are ‘on track’ and we suggest that ORR follows this up as part of routine monitoring.

We find that Highways England has put in place a foundation on which it can work better and more productively with the supply chain

Highways England understands that it must build on the progress achieved in RP1 and achieve greater efficiency and productivity, in order to deliver an extra ~£10bn of investment over RP2. Some of the key actions which it is taking to assure itself that schemes due to start works in RP2 can be managed by the supply chain include:

- Reapplying lessons from the A14 improvements where project teams have integrated successfully to deliver on budget and ahead of time;

4 Highways England (July 2019) “Delivery Plan 2019-20” available online
5 According to ORR’s latest annual assessment there are 4 schemes under review, another 4 have missed Start of Works commitments, and 34 have changes to commitments approved (including 25 deferred from RP1 to RP2).
Key Findings - Supply Chain Management

A firm programme of work is a fundamental requirement of good supply chain management. RIS2 provides an opportunity to build confidence and address the legacy challenges identified by the supply chain.

Highways England needs to remain mindful that the supply chain view of its RIS1 approach is that it did not fully address the stop-start nature of contracting and that ‘over-programming’ (including more schemes in the RIS than were planned for delivery) led to schemes having to be delayed or removed from the pipeline, and that the significant number of project starts scheduled for the final year of RIS is a risk when compared with the stability of work in other sectors.

Looking ahead to RIS2, we recognise that the company is making positive progress in terms of building internal capability, improved procurement visibility, more intelligent supply chain monitoring and working actively with suppliers to develop more integrated teams. But the clear view of the supply chain is that there is a big gap between building capacity and capability, and delivering a programme of work efficiently. That requires certainty of pipeline and workflow which was missing during RIS1.

Lack of programme certainty and boom or bust workflow in RP1 has undermined supplier confidence. That lack of confidence lingers today and is the single biggest issue that the review identifies.
Key Findings – Supply Chain Capacity

Highways England recognises that RIS2 coincides with growing demands on the infrastructure supply chain and is working with suppliers to address this risk.

RIS2 coincides with an expected period of strong growth in UK infrastructure investment, with several other planned large infrastructure programmes in the South East, East and West Midlands regions in particular. But in recent years, competition between contractors has applied downwards pressure to profit margins, posing a risk to supply chain sustainability. Highways England recognises the risk this presents to successful delivery of the RIS, and has developed its approach to the monitoring and management of supply chain capacity accordingly.

First, Highways England is placing greater responsibility on suppliers to ensure they have the labour capacity to meet Highways England’s demands, but is also introducing the commercial incentives for suppliers to respond. For example, the new RDPs will facilitate investment in skills through the longer term nature of the work packages and less secondary competition. In addition, the procurement process required bidders to show how they will manage “people continuity and resilience” by developing regional workforce planning data and creating a regional Employment and Skills Plan.

Second, the Company has carried out a broad “supply chain mapping” exercise across both Major Projects and Operations, covering some 127 schemes, over 1,100 suppliers and £11.3bn of contractual spend. The Company estimates that this represents about 90% of spend. The maps provide Highways England with better visibility of the supply chain beneath Tiers 1 and 2, are a source of internal intelligence on risks which might inhibit Highways England’s ability to deliver (e.g. supply chain “pinch-points”), and are now being used to inform future decision-making around supply chain development, e.g. through its ongoing Supplier Relationship Management (see below).

Third, the Company has extended its Supplier Relationship Management (SRM) procedures to over 30 suppliers (up from 15) which account for the majority of supply chain expenditure. Each supplier on the SRM programme has a dedicated Highways England account manager, and there is a joint business strategy planning exercise to provide forward view of whether, how and where suppliers are intending to grow capacity over the next 3-5 years and to feedback any concerns before they become a risk to operational delivery.

These developments are viewed positively but it will take time to determine their effectiveness – in the meantime suppliers suggest that a smoother delivery profile and more stable pipelines of work would help address the capacity challenge and improve efficiency.

Suppliers are overall positive about how Highways England is helping them to grow capacity and close capability gaps, but most recognise that it is early days for these new models and initiatives to have made much of a difference in supply chain confidence. Looking back over the last five years, most noted that Highways England has not yet made best use of the RIS funding settlement to address the stop-start nature of contracting and budget annualization, particularly in maintenance and renewals, that inhibits investment in innovation and productivity. Several suppliers interviewed stressed that certainty of workflow and stability of pipeline was critical to building capacity, and that in the past they had had to dismantle skilled delivery teams when schemes had been reprofiled or deferred at relatively short notice.

The rationale behind the development of Highways England’s new commercial models indicates that the Company understands and is attempting to manage these risks, and overall there is a view that most suppliers are seeing gradual, albeit slow, improvement in client decisions. Overall, the supply chain believes there will be capacity to deliver RIS2 if programmed appropriately. We suggest that ORR monitors the stability of the work programme with a view to establishing an “early warning system” for capacity risks in the later years of RP2.
Key Findings – Internal Capacity

Highways England is implementing its plan to develop the capacity, skills and capabilities needed to deliver RIS2

Highways England has been and continues to grow organisational capacity to meet the increased demands placed on it. It is now an organisation of around 6,000 staff and considers itself at or close to the “right size” to deal with the funds available for RIS2 and its ongoing in-sourcing of maintenance and renewals activity through Asset Delivery.

At the same time, the Company recognises that there are capability gaps that it will need to fill during RIS2. Specifically, as the Major Projects portfolio transitions from development to construction, and the in-sourcing of network maintenance and renewals progresses, it acknowledges that it will need to develop further capabilities in commercial and project management.

The Company is already trying to address these capability challenges through its workforce planning procedures (e.g. use of remuneration framework flexibilities, and talent management and succession planning), and by working closer with the supply chain in more integrated project teams. It is challenging both its own organisation and the wider supply chain to ‘continually improve’ through both the Operational Excellence and Major Projects Transformation workstreams.

Highways England is viewed as more progressive than other clients at senior levels, but this needs to be pushed down through the organisation more consistently

We found that many suppliers, particularly those that have a longer and more established relationship with Highways England, spoke positively about the direction in which the organisation is headed, and recognised that the change in client capability was being led from the top. Some suppliers said that at a senior level Highways England understood the value of focusing more on longer-term value and relationships, and less on historic cost-driven behaviours. However, there is a widespread perception that this progress needs to be maintained and embedded more consistently across the lower levels of Highways England’s organisation.

More specifically, both the supply chain and Highways England recognised the growing competition for talent from other infrastructure programmes where there is a perception that pay is more competitive, including HS2 and the wider energy sector. Highways England will need to consider whether, at least at the margin, it has sufficient freedom on remuneration to recruit the right people to important roles.

Progress achieved to date and future plans appear positive, but progress should continue to be monitored

Overall we see several examples of progress achieved during RIS1 - on the building of internal programme management capability and systems in particular - and positive intent for RIS2, including plans for further transformation and better engagement with the supply chain on the development of the investment programme. Combined with the growth in delivery capability achieved during RIS1, this provides some confidence that Highways England starts RIS2 in a more prepared state than when it began the first RIS five years ago.

However, we caution that RIS2 is a much larger and more ambitious programme of work than RIS1, including two infrastructure projects of a scale and complexity which Highways England has not delivered in recent years. Given the overall feedback from the supply chain, but particularly the widespread concerns about stability of pipeline, we suggest that ORR monitors whether these initiatives to build internal capability prove effective over time.
Key Findings – Key Indicators

Highways England has processes in place which allow it to monitor readiness at a scheme and programme level.

At an individual scheme level, Highways England operates the PCF to ensure that each project has a defined lifecycle structured around key milestones, and that approval to proceed from one stage into the next must be assessed at a Stage Gate Assessment Review which focuses on the successful completion of PCF products (e.g. business case, project management plan etc). This framework would allow Highways England to assess how well individual schemes have progressed relative to the Company’s delivery plan, whether the supply chain is ready to deliver, and ultimately to whether or not the scheme Start of Works milestone is achievable.

Highways England has also strengthened its programme management capabilities during RP1 such that it has been externally assessed as having Level 3 capability on the APM’s P3M3 (Portfolio, Programme and Project Management Maturity Model) - i.e. it has its own centrally controlled programme processes which can be flexed to suit the needs of particular programmes. However, to achieve Level 4 (“managed process”) Highways England will need to exhibit “processes that are quantitatively managed - i.e. controlled using metrics and quantitative techniques - and the measurement data collected will [...] be imperative in analysing the portfolio and ascertaining the current capacity and capability constraints”. The Company is working towards this by, for example, installing new project management systems and processes which should reduce the need for manual operation, and reliance on reconciling internal and supplier datasets, to create a single “source of truth” on key project management indicators.

But a broader range of metrics, which could be used to assess readiness at an earlier stage, are not yet apparent. There is good practice in this area which could be drawn from other infrastructure programmes.

Whilst we find that procurement activity for RIS2 is largely complete or on schedule, and that supply chain confidence in the RIS2 programme and visibility thereof is likely to be boosted by the recent announcement of the RIS and subsequent iterations of the Procurement Plan6, there is likely to be substantial benefit in Highways England developing some form of readiness assessment for its programme of work which goes beyond targeting a Start of Works date.

There is best practice available that Highways England should consider, which might address some of the historic concerns around the stability of work in RP1, and would complement the way in which Highways England has put RIS2 together (e.g. the RDP ‘Lots’ which create “swimming lanes” for particular suppliers). For example, ORR has been considering similar work-bank stability issues with Network Rail in response to the problems encountered during the delivery of CP5. Elsewhere, the IPA suggests use of standardised and independently assessed confidence indicators to track progress and control schedule risk at a portfolio level.

We suggest that this readiness assessment should include developing a range of metrics to measure ‘readiness’ in the round, and should not be limited to procurement activity. It could for example, take a broader snapshot of progress of work programmes through the PCF lifecycles, as compared with Highways England’s baseline plan. This sort of objective monitoring of key metrics would have the advantage of bringing additional confidence to the supply chain that Highways England will procure as per the pipeline and may help suppliers make investment decisions of their own e.g. in relation to gearing up and innovation.

6 See the latest version: Highways England (January 2020) “Procurement Plan - version 13” available online
### Summary of recommendations

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<td>R1</td>
<td>Procurement risks, Programme stability</td>
<td>One</td>
<td>Now that the outcome of the smart motorway stocktake is known, ORR and Highways England should work together to establish the impact on the SMA procurement, and on the Company’s readiness to deliver the SMP programme from “day one”.</td>
</tr>
<tr>
<td>R2</td>
<td>Procurement risks</td>
<td>One</td>
<td>ORR should maintain scrutiny on Highways England’s preparations for the A303 and Lower Thames Crossing, with a near-term focus on how well the procurements are progressing against the current plan and monitoring the impact of any changes on the forecast Start of Works / Open for Traffic milestones.</td>
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<tr>
<td>R3</td>
<td>Procurement risks, Supply chain capacity</td>
<td>One</td>
<td>ORR and Highways England should proactively review planned capability and capacity of Highways England and the supply chain if and when new schemes are added to RIS2.</td>
</tr>
<tr>
<td>R4</td>
<td>Direct engagement with lower tiers</td>
<td>One</td>
<td>In order to maximise the benefits that SMEs and new entrants can bring, Highways England should use its ‘SME Champion’ role and engagement programme feedback to review whether it has enough resource for direct engagement with lower tiers of supplier.</td>
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<tr>
<td>R5</td>
<td>Procurement risks, Direct engagement with lower tiers</td>
<td>One</td>
<td>Highways England should continue its work to expand SME engagement activities in order to manage the needs and expectations of Tier 2 and 3 suppliers regarding changes to their procurement programmes and pipeline expectations.</td>
</tr>
<tr>
<td>R6</td>
<td>Procurement risks</td>
<td>One</td>
<td>Highways England needs to monitor the effects of its new contractual models and commercial terms on the wider supply chain to ensure it remains an attractive and fair client to work for, and to assess to what extent they are inhibiting the mobilisation and efficiency of delivery teams post contract award.</td>
</tr>
<tr>
<td>R7</td>
<td>Schedule risks, Key indicators</td>
<td>Two</td>
<td>ORR should pay close attention to the latest PCF products and tracking indicators of the schemes which have Start of Works milestones in March 2020 and in the first year of RP2.</td>
</tr>
<tr>
<td>R8</td>
<td>Programme stability, HE internal capacity</td>
<td>Two</td>
<td>Once the final content of RIS2 is confirmed, Highways England should review the near term deliverability of the programme over the first two years of RIS2, to ensure it is confident that it can stick to the programme. Highways England should then use the outcome to publish an update to the Procurement Plan and jointly plan continuous workload with the supply chain, lock-in capacity and build confidence in pipeline visibility and stability.</td>
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<td>R9</td>
<td>Pipeline visibility &amp; stability</td>
<td>Three</td>
<td>Highways England should continue to collaboratively monitor and mitigate the impacts of future changes to its RIS2 programme and the visibility and stability of its pipeline with all supply chain tiers, in particular during the first two years of RP2.</td>
</tr>
<tr>
<td>R10</td>
<td>Pipeline visibility &amp; stability</td>
<td>Three</td>
<td>Highways England should continue to engage collaboratively with the supply chain through the refreshed Engagement Council and Collaboration Board and monitor the effectiveness of this approach in creating a two-way vehicle for communication.</td>
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<tr>
<td>R11</td>
<td>Supply chain monitoring</td>
<td>Three</td>
<td>Highways England should continue to develop its mapping of supply chain capability and capacity to mitigate the impacts on supplier resources from competing infrastructure programmes.</td>
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<tr>
<td>R12</td>
<td>Supply chain monitoring</td>
<td>Three</td>
<td>Highways England should continue working with other infrastructure managers to manage competition for the same skills, notably from HS2 (project management and design, tunnelling and earthworks, drainage and structures), and any preparatory works for e.g. HEP and CRL2.</td>
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<tr>
<td>R13</td>
<td>Direct engagement with lower tiers</td>
<td>Three</td>
<td>Highways England should continue with its current supply chain engagement, mapping and relationships programmes with an increased emphasis on communication with the extended supply chain, including those who work through Tier 1s, to help these suppliers better understand Highways England’s needs and potential constraints across programmes.</td>
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<tr>
<td>R14</td>
<td>HE portfolio management</td>
<td>Four</td>
<td>Highways England should continue to strengthen its portfolio and programme management capability through its ongoing transformation programme to increase assurance.</td>
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<tr>
<td>R15</td>
<td>HE portfolio management</td>
<td>Four</td>
<td>ORR should consider whether Highways England has adequate internal assurance arrangements in place to monitor the implementation of its internal plans for portfolio and programme management capability.</td>
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<td>R16</td>
<td>Key indicators</td>
<td>Five</td>
<td>Highways England should develop a broader set of readiness metrics for the RIS portfolio to monitor supply chain capability and confidence, considering best practice and lessons learned from the delivery of other transport programmes.</td>
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