

Appendix A: Further evidence

A.1 In this Appendix A, we set out further evidence that supports the analysis and findings in our main report.

Estimated size of the market

A.2 Below we set out our estimate of the size of the market for public road and railway infrastructure in the UK, based on 2023/24 forecast or outturn expenditure by different public authorities. Total annual expenditure across the UK amounted to around £19 billion (excluding High Speed 2 (HS2)), with public road and railway accounting for about 54% and 46% of the share respectively. It is more difficult to gauge the respective share of project types (enhancement, renewals, and maintenance) as definitions can vary, but in the case of National Highways and Network Rail, enhancements accounted for around 55% and 27% of annual spend respectively.

Table A.1 Expenditure on public road and railway infrastructure, 2023/24

Market	Nation	Public authority	Category	£ million	Note
Road	England	National Highways†	Enhancements	1,780	Average across 2020/21 to 2024/25.
			Renewals	983	Average across 2020/21 to 2024/25.
			Maintenance	489	Average across 2020/21 to 2024/25.
		Local authorities‡	Renewals	3,000	
			Maintenance	1,800	
	Scotland	Transport Scotland§	Capital	594	
			Renewals / Maintenance	358	
			Capital	422	
		Local authorities§	Renewals / Maintenance	251	
			Enhancements / Renewals	190	Budget forecast
		Wales	Construction	35	
			Structural maintenance	95	
	Northern Ireland	Department for Infrastructure#	Enhancements	74	
			Renewals / Maintenance	120	
Total				10,191	
Railway	Great Britain	Network Rail~	Enhancements	2,264	
			Renewals	3,940	
			Maintenance	2,282	
	England	HS2*	Enhancements	1,176	Net expenditure - (1,176 Gross Expenditure).
	Wales	Welsh Government¶		150	Budget forecast
	Northern Ireland	Translink♦		89	

Source: CMA analysis

† ORR (2025), [Annual Assessment of National Highways' performance: End of the second road period April 2020 to March 2025](#), p36 and p51.

‡ Stewart, I, Benson, M and Wong, H (2025). [Research briefing: Potholes and local road maintenance funding](#), pp29-30.

§ Transport Scotland (2025), [Scottish Transport Statistics 2024](#), p3-6.

¶ Welsh Government (2021), [Infrastructure Finance Plan 2022-23 to 2024-25](#), pp22-25.

⋈ StatsWales, [Roads and transport revenue outturn expenditure, by authority \(£ thousand\)](#), accessed on 14/05/26.

[Northern Ireland Road Network and Condition Statistics 2023-24](#)

~ ORR (2024), [Annual efficiency and finance assessment of Network Rail](#), p68.

* HS2 (2024), [Annual Reports and Accounts 2023 – 2024](#), p77.

◆ Northern Ireland Railways Company Limited (2024), [Regulatory Financial Statements](#), p12.

Outcomes

- A.3 In determining whether a market is working well for customers, business, and the wider UK economy, the CMA evaluates the outcomes of the competitive process that include price, profitability, quality, and levels of innovation. If the market were working well, we would expect to see (among other things) the following market outcomes:
- (a) Competition between suppliers and procurement and contracting methods working to keep whole life costs (prices) for public road and rail infrastructure as low as possible.
 - (b) Delivery timelines being as fast and predictable as possible given the capacity and capability in the supply chain, which may be expected to adapt over time to the demands being placed on it.
 - (c) Quality standards meeting the expectations of customers.
 - (d) Innovation driving the adoption of new technology and ways of working that underpin productivity and/or quality improvements.
- A.4 Prices and profits tend to be more observable and measurable outcomes, and an analysis of these can provide insight into the extent to which the market is working well. Other indicators, such as quality and innovation, although harder to quantify, may be no less important to buyers in the market.
- A.5 We have sought to be proportionate in gathering our own evidence in this area, as we are mindful that there is a wide body of existing research on infrastructure project outcomes. In this sub-section, we set out the key findings from these previous studies.

Infrastructure costs

- A.6 A range of previous studies and research have found evidence of high unit costs in UK infrastructure projects, including in the transport sector. BCG found that the UK had higher railway and road absolute unit costs than peer countries (France,

Germany, Australia, and US), and a worse record on infrastructure projects where actual construction costs and complexity might be expected to be relatively low.¹ Analysis undertaken by the National Infrastructure Commission (now replaced by NISTA) was less conclusive, finding that the unit cost of UK infrastructure is statistically similar to that of international comparators, although rail electrification has seen higher costs than in other countries.²

- A.7 There are limitations to international benchmarking of infrastructure project costs, including data quality, small sample sizes, and project heterogeneity. The findings above indicate that infrastructure costs in the UK can be too high. However, it is also important to note that issues with cost control are not unique to the UK, and the aforementioned studies also identified that international peers face challenges in the efficient delivery of infrastructure projects.
- A.8 With respect to public road and railway, there is also evidence of an upward trend in the cost of infrastructure:
- (a) For road, the total forecast cost of National Highways' strategic road enhancement schemes increased by 43% (in nominal terms, or c.14% in real terms), on a like-for-like basis, from 2020-21 to 2024-25.³ This would be equivalent to c.3.5% average annual increase.
 - (b) For rail, Office of Road and Rail (ORR) analysis identified a 7% average annual increase in the unit cost (in real terms) of conventional track renewals since 2014-15.⁴
- A.9 Rising input costs have contributed to these observed trends. For example, UK construction material price indices rose sharply from 2020 to 2022, due to factors such as supply chain disruption and Russia's invasion of Ukraine.⁵ While the rate of increase has slowed since 2022, construction material prices remain significantly above both their historical level and consumer price inflation indices.⁶
- A.10 Weak productivity growth has contributed to infrastructure becoming relatively more expensive. ONS analysis highlights that, while civil engineering is above the whole economy in levels of productivity, growth has been broadly flat over the last 15 years.⁷ As a further example of this trend, the ORR found that Network Rail's renewals productivity, measured as effective volumes (ie linear kilometres

¹ BCG (2024), [Improving Infrastructure Delivery in the UK](#).

² NIC (2024), [Cost drivers of major infrastructure projects in the UK](#), pp8-9.

³ ORR (2025), [Annual Assessment of National Highways' performance: End of the second road period April 2020 to March 2025](#), pp36-38.

⁴ ORR (2024), [Cost benchmarking of Network Rail's maintenance and renewals expenditure: annual report 2023 to 2024](#), p6.

⁵ Construction Leadership Council (2022), [Construction Product Availability Statement](#); and ONS (2021), [Price movements in construction materials and plant hire, UK](#).

⁶ Department for Business and Trade (2025), [Construction building materials: commentary February 2025](#).

⁷ ONS (2021), [Productivity in the construction industry, UK: 2021](#).

renewed) delivered per million pounds of expenditure, declined by between 20% and 25% for most asset types considered across Control Period 6 (April 2019 to March 2024).⁸

- A.11 Cost overruns are also a common feature of public road and rail projects, and these can be driven by the inaccuracy of initial estimates and/or unanticipated factors that result in additional delivery expense. We requested information from public authorities to analyse public road and railway infrastructure costs, and this provided mixed evidence on cost overruns:
- (a) For National Highways, based on a sample of enhancement road infrastructure projects undertaken between 2015 and August 2025, the average cost outturn was 10.8% higher than the contract budget. Among the 79.3% of contracts where the final contract outturn exceeded the contract budget, the average budget overrun was 17.5%.⁹
 - (b) For Transport Scotland, based on road infrastructure projects undertaken between 2014 and August 2025, the average cost outturn was 5.4% lower than the contract budget. Among the 29% of contracts where the final contract outturn exceeded the contract budget, the average overrun was 12.2%.¹⁰
 - (c) For Welsh Government, based on road infrastructure projects undertaken between 2015 and August 2025, the average cost outturn was 10.8% higher than the contract budget. Among the 66.6% of contracts where the contract outturn exceeded the contract budget, the average budget overrun was 19.0%.¹¹
 - (d) For Department for Infrastructure (DfI), based on Northern Ireland road infrastructure projects undertaken between 2015 and August 2025, the average contract outturn was 5.9% higher than the contract budget estimate. Among the 44.0% of contracts where the contract outturn exceeded the contract budget, the average budget overrun was 13.7%.¹²
- A.12 We did not receive comparable information from rail procurers. Analysis of 25 UK rail projects by BCG indicated that 76% of those projects exceeded their budget by an average of 41%. Similar analysis by BCG of 51 road projects indicated that 69% of those projects exceeded their budget by an average of 69%. However, it notes that large-scale infrastructure projects will typically use a 'P50 schedule' when it comes to cost estimates: this means it has a 50% probability of being

⁸ ORR (2025), [Report on rail industry productivity](#), pp29-30.

⁹ CMA analysis of National Highways' response to the CMA's information request [REDACTED].

¹⁰ CMA analysis of Transport Scotland's response to the CMA's information request [REDACTED].

¹¹ CMA analysis of the Welsh Government's response to the CMA's information request [REDACTED].

¹² CMA analysis of the DfI's response to the CMA's information request [REDACTED].

exceeded. As such, it would expect around 50% of projects to run over budget. It also notes that the UK is not an outlier in having frequent and large overruns.¹³

Delivery timelines

- A.13 Time overruns are also a common issue for public road and railway projects and can in turn impact on project costs with lengthy delays, for example, resulting in cost inflation against initial budget estimates. Analysis by BCG shows that:
- (a) For road, based on a sample of 48 UK projects, 58% finished late and, when they finished late, they overran their estimate by 29% on average.¹⁴
 - (b) For railway, based on a sample of 27 UK projects, 56% finished late and, when they finished late, they overran their estimate by 27% on average.¹⁵
- A.14 When compared to projects in five other countries, BCG found the UK had the second lowest length of time overruns for rail projects when they occur (after France) and is in the middle of the pack for how often rail projects are delayed. For road, it found delays in the UK are more common than elsewhere, but the lengths of delays were in line with the overall average in its dataset.¹⁶ However, the limitations with international benchmarking noted above also apply here.

Quality

- A.15 The quality of UK road and railway infrastructure has been studied to a lesser degree than price or delivery timescales. What evidence there is provides a mixed picture. For example, DfT produce statistics on road conditions for England for local A, B and C roads, unclassified roads and the strategic road network. This identifies the proportion of different road types which should have been considered for maintenance, classified as 'red'. Data to March 2025 shows:¹⁷
- (a) Local authorities reported the percentage of local 'A' road that should have been considered for maintenance to be 5%, an increase from 4% in 2024 (the level at which it had been since 2020). Of the 149 local authorities that provided valid data for 2025, 37 local authorities reported their percentage of red 'A' road to be no more than 2%, while 16 local authorities reported a percentage of 10% or higher. Between 2015 and 2025, 52% of local authorities reported A roads to be in worse condition, 22% reported no change and 26% reported improved condition.

¹³ BCG (2024), [Improving Infrastructure Delivery in the UK](#).

¹⁴ BCG (2024), [Improving Infrastructure Delivery in the UK](#).

¹⁵ BCG (2024), [Improving Infrastructure Delivery in the UK](#).

¹⁶ BCG (2024), [Improving Infrastructure Delivery in the UK](#).

¹⁷ DfT (2026), [Road conditions in England to March 2025](#).

- (b) Local authorities reported the percentage of 'B' and 'C' road that should have been considered for maintenance to be 7%, unchanged since 2023. Prior to this, the percentage of red 'B' and 'C' roads had fallen from 10% in 2012 to 6% in 2016, where it remained until 2021. In 2025, of the 133 local authorities that provided valid data, 20 local authorities reported a percentage of red 'B' and 'C' road of 2% or less, while 31 local authorities reported a percentage of at least 10%. Looking at the percentage of 'B' and 'C' roads classified red over time, 43% of local authorities reported road to be in worse condition, 12% reported no change and 46% reported improved condition.
- (c) Local authorities reported the percentage of unclassified road that should have been considered for maintenance to be 17%, unchanged from the previous year. Data for unclassified roads is less robust than for classified roads and can show greater yearly fluctuations than other road classifications.
- (d) For the strategic road network, 4% of motorway should have been considered for maintenance, a level which has been largely unchanged since 2018. Meanwhile 6% of 'A' road should have been considered for maintenance, down from 7% between 2019 to 2024.

A.16 We have seen similar indicators for road conditions from the devolved nations. In Northern Ireland, 80% of A class roads were categorised as being in generally good condition in 2024-2025. Over the same period, 17.7% were in average condition and 2.4% were in poor condition requiring further investigation.¹⁸ Transport Scotland reported that in 2024-2025, 31% of the local authority A road network may require some kind of maintenance, following more detailed examination.¹⁹ Welsh Government reported that 7.4% of the motorway and 2.6% of the trunk road network is currently in need of close monitoring, as of the end of March 2025.²⁰

A.17 An assessment of National Highways performance found that the number of pavement (ie road surface) defects that National Highways reported in the final year of the second road period (April 2020 to March 2025) was 40% higher than in the first year.²¹

A.18 The same assessment of National Highways found that by the end of 2023, National Highways has achieved a 39% reduction of people killed or seriously injured on the strategic road network. This continues the long-term trend of

¹⁸ DfI (2025), [The Northern Ireland Road Network and Condition Statistics 2024-25 report has been published today](#).

¹⁹ Transport Scotland (2025), [Scottish Transport Statistics 2025](#), p125.

²⁰ The Welsh Government (2026), [Road lengths and conditions: April 2024 to March 2025](#).

²¹ ORR (2025), [Annual Assessment of National Highways' performance: End of the second road period April 2020 to March 2025](#), pp46-47.

decreasing deaths and serious injuries on the strategic road network.²² Transport Scotland reported that the total number of casualties on Scottish roads rose 2% between 2023 and 2024. They said that the latest figures may be influenced by an increase in traffic, and the total number of road casualties decreased by 49% over the last decade.²³

- A.19 For rail, an assessment by ORR of Network Rail's performance found asset sustainability was in line with the targets for CP7 so far.²⁴ It noted key measures of railway asset reliability (such as the overall number of service-affecting failures and ORR's composite reliability index (CRI)) remained steady across the network in Year 1 of CP7. Network Rail exceeded its own CRI targets in four regions: Network Rail Scotland, Wales & Western, Eastern, and Southern. However, North West & Central underperformed against its CRI target, impacted mainly by worsening reliability of track and electrical power assets. The report noted if renewal volumes are not sustained as outlined in the initial delivery plan for the remainder of the period, there is a risk that asset sustainability could decline beyond the forecasted trajectory, which will make delivering train performance very challenging and will lead to inefficient spend on infrastructure in the future. It noted plans for renewals across the rest of CP7 were volatile, and noted particular concern for Eastern, North West & Central and Southern regions. ORR also indicated it was concerned about Network Rail's management of its structures examinations and assessments as these are not being delivered in line with its standards. If not addressed, this could risk undetected faults, safety hazards and operational disruptions, with the potential for significant effect on passengers, members of the public and Network Rail's workforce.²⁵
- A.20 However, compared to international peers, it is not clear the UK is delivering worse outcomes. International benchmarking by the Global Infrastructure Investor Association in 2024 shows the proportion of respondents rating infrastructure in Great Britain as very or fairly good was 62% for the major road network, 44% for the local road network, and 51% for rail infrastructure. In each case, these ratings are broadly in line with the reported average for G7 countries.²⁶ Older benchmarking also indicated that the quality of UK road and railway infrastructure ranked 27th and 19th respectively, below Canada, France, Germany, Japan, and the US, but comparable statistics are no longer produced.²⁷

²² ORR (2025), [Annual Assessment of National Highways' performance: End of the second road period April 2020 to March 2025](#), p19.

²³ Transport Scotland (2025), [Scottish Transport Statistics 2025](#), p7.

²⁴ ORR (2025), [Annual assessment of Network Rail 2024 to 2025](#).

²⁵ ORR (2025), [Annual assessment of Network Rail 2024 to 2025](#).

²⁶ Ipsos (2024), [Global infrastructure Index 2024](#), pp11-13.

²⁷ World Economic Forum (2017), [The Global Competitiveness Report 2017–2018](#), p301.

Innovation

- A.21 Innovation is a key feature of a market which works well, as it can drive improvements in productivity and, by extension, infrastructure costs and delivery timelines. Competition can spur firms to improve existing services and pursue research and development, although this will depend on their ability and incentive to invest (ie they need to be able to secure additional profit for innovation to make financial sense).
- A.22 As set out later in the appendix, the evidence we have gathered indicates that:
- (a) innovation is a parameter of competition, although it may be less important than some other parameters on which firms compete;
 - (b) innovation appears to be more prevalent in road than in rail, at least partially due to the regulatory environment and culture in rail; and
 - (c) innovation takes many different forms within these markets, including investment in technologies, new processes, and reducing the carbon footprint of projects.
- A.23 In terms of road and rail, a key area of innovation is Net Zero and a reduction in the carbon emissions associated with the manufacture, transport and use of materials such as cement, steel, and asphalt. For example, National Highways is targeting a 40-50% reduction in maintenance and construction emissions by 2030 compared with 2020, with Tier 1 and Tier 2 suppliers required to have certified carbon management systems.²⁸ Network Rail is also working with suppliers to reduce upstream emissions by, for example, writing requirements into procurement activities.²⁹ While this offers scope to improve efficiency, eg by reducing waste, our engagement with suppliers highlights trade-offs insofar as low carbon alternatives require investment that can push up project costs.
- A.24 Advances in AI and other technologies offer potential for efficiency savings, but public authorities and suppliers may be slow to embrace new trends. For example, analysis from EY Parthenon estimated that for capital infrastructure projects (not focused on road and rail specifically), taking up the latest AI advances across the lifetime of the asset can reduce the overall cost by 10%.³⁰ The same report found that with respect to Building Information Modelling, a digital process for creating and managing information for a built asset, the latest available technology only has a 4% adoption rate amongst suppliers involved in design, construction, and maintenance.³¹ Industrialised construction, such as Modern Methods of

²⁸ National Highways (2021), [Net zero highways: our 2030 / 2040 / 2050 plan](#), p8.

²⁹ Network Rail (2020), [Our ambition for a low-emission railway: 2020 - 20250](#), pp11-12.

³⁰ EY Parthenon (2024), [Mind the \(investment\) gap](#), p9

³¹ EY Parthenon (2024), [Mind the \(investment\) gap](#), p9.

Construction (MMC), and methods which focus on off-site construction techniques, also offer a major opportunity to enhance project efficiency and transform the civil engineering market. However, take-up of off-site construction is lower in infrastructure than other sectors – analysis by NBS found infrastructure accounted for only 3% of offsite projects started in Q1-3 2023.³²

- A.25 In sum, the evidence suggests that there is scope for the market to deliver higher levels of innovation.

Concentration among Tier 1 firms

- A.26 We consider two forms of data in assessing concentration among Tier 1 firms: shares of supply and bidding data.

Shares of supply

- A.27 We have estimated the shares of supply for Tier 1 civil engineering firms using a dataset of road and rail infrastructure contracts sourced from Barbour ABI.³³ For Northern Ireland, we relied on data provided by Northern Ireland's Department for Infrastructure in response to our RFI, as the Barbour ABI coverage was more limited for this nation. Tables A.2-A.6 below present our supply share estimates for public road and rail contracts awarded by major public authorities across the four UK nations. We begin analysis with Network Rail and National Highways before moving on to Transport Scotland, Welsh Government, and the Department for Infrastructure. We have not assessed whether shares would be different if considering different subsets of contracts, such as those awarded for different regions or different types of work, although we have sought to remove or identify suppliers who are serving very specific niches.
- A.28 To calculate the estimated supply shares, we aggregated the total value of contracts awarded to each primary/joint venture civil engineering supplier between 2015 and 2025, using both the Barbour ABI dataset and the dataset included in Northern Ireland's Department for Infrastructure RFI response. We identified the top 10 suppliers receiving public road and railway infrastructure contracts from public authorities across the UK. To account for the irregular nature of procurement activity, we applied a three-year rolling average to each supplier's contract values. Note that the values of contracts were determined through the respective contract budgets. This average was then divided by the corresponding

³² NBS (2024), [Continued growth for MMC and off-site construction, despite setbacks in modular housing](#).

³³ The Barbour ABI data set includes contract values at the point of award for civil engineering projects in road and rail in the UK in the last ten years. It is an aggregation of data that is available in the public domain and, as such, it may not include all expenditure in the market. For example, some work that is allocated to a supplier under a framework agreement may not be captured by our analysis, and any cost overruns that exceed the initial contract value are not captured.

three-year total contract value for each authority. The results of this analysis presented in the following tables have been provided as ranged percentages.

Table A.2 Estimated shares of supply, based on initial contract values, for Network Rail civil engineering rail infrastructure contracts, 2015 - 2025

Supplier	3-year rolling average									Total 2015 - 2025
	2015 - 2017	2016 - 2018	2017 - 2019	2018 - 2020	2019 - 2021	2020 - 2022	2021 - 2023	2022 - 2024	2023 - 2025	
Murphy	[5-10%]	[5-10%]	[5-10%]	[10-20%]	[10-20%]	[10-20%]	[5-10%]	[5-10%]	[10-20%]	[5-10%]
BAM										
Nuttall	[0-5%]	[5-10%]	[5-10%]	[10-20%]	[10-20%]	[10-20%]	[5-10%]	[5-10%]	[10-20%]	[5-10%]
Story	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[10-20%]	[20-30%]	[5-10%]
Siemens†	[10-20%]	[10-20%]	[10-20%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[0-5%]	[5-10%]
Skanska	[10-20%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]
Volker										
Fitzpatrick	[0-5%]	[5-10%]	[5-10%]	[5-10%]	[10-20%]	[5-10%]	[5-10%]	[0-5%]	[0-5%]	[5-10%]
Kier	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[10-20%]	[10-20%]	[0-5%]	[5-10%]
Amco										
Giffen	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[0-5%]
EWR2										
Alliance	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[10-20%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Costain	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Other	[40-50%]	[40-50%]	[50-60%]	[60-70%]	[30-40%]	[30-40%]	[30-40%]	[30-40%]	[30-40%]	[40-50%]

Source: CMA's calculations based on Barbour ABI data.

Note: 'other' includes 87 civil engineering firms.

† Siemens tends to compete for more specialised contracts, such as those relating to electrification and signalling, although services in the latter are also offered by Tier 1 civil engineering firms.

A.29 Table A.2 indicates that there has been a large number of firms competing for Network Rail contracts, with no supplier achieving more than a 10% contract value share of supply throughout the last 10 years. The 'Other' category (containing 87 other civil engineering firms/joint ventures) remains significant throughout, accounting for roughly 40 – 50% of the total. The largest supplier in any given year also tends to vary, consistent with typical competitive dynamics in bidding markets.

A.30 We also note that Story Contracting appears to have increased its initially modest share of supply to become one of the largest suppliers in the latter years, indicating it is possible for firms to expand their presence as a supplier for Network Rail contracts.

Table A.3 Estimated shares of supply, based on initial contract values, for National Highways civil engineering public road infrastructure contracts, 2015 - 2025

Supplier	3-year rolling average									Total
	2015 - 2017	2016 - 2018	2017 - 2019	2018 - 2020	2019 - 2021	2020 - 2022	2021 - 2023	2022 - 2024	2023 - 2025	2015 - 2025
Balfour Beatty	[20-30%]	[30-40%]	[30-40%]	[20-30%]	[10-20%]	[10-20%]	[10-20%]	[5-10%]	[0-5%]	[10-20%]
Costain	[10-20%]	[10-20%]	[10-20%]	[20-30%]	[20-30%]	[10-20%]	[5-10%]	[0-5%]	[0-5%]	[10-20%]
Kier	[10-20%]	[10-20%]	[10-20%]	[10-20%]	[5-10%]	[5-10%]	[5-10%]	[10-20%]	[10-20%]	[10-20%]
Skanska	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[5-10%]	[10-20%]	[20-30%]	[30-40%]	[10-20%]
Morgan Sindall	[0-5%]	[0-5%]	[10-20%]	[5-10%]	[5-10%]	[0-5%]	[5-10%]	[10-20%]	[10-20%]	[5-10%]
Galliford	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[5-10%]	[0-5%]	[5-10%]	[5-10%]
Eurovia & Ringway	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[0-5%]
Colas	[5-10%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Graham	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]
Volker Fitzpatrick	[5-10%]	[5-10%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Other	[20-30%]	[10-20%]	[5-10%]	[10-20%]	[20-30%]	[30-40%]	[20-30%]	[30-40%]	[20-30%]	[20-30%]

Source: CMA's calculations based on Barbour ABI data.

Note: 'Other' includes 56 civil engineering firms.

- A.31 For National Highways contracts, the four largest suppliers accounted for the majority of contract value (50 – 60%) over the past 10-year period, while smaller firms usually accounted for 5% or less share of supply for any given period. However, there is some evidence to suggest that the share of the largest suppliers has trended downwards in recent years.
- A.32 National Highways told us contract values act as a financial 'envelope' and do not necessarily show the actual amount spent with the supplier. It provided data on supplier spending and suggested that the concentration of Tier 1 suppliers is lower than those presented above, indicating that the top three suppliers accounted for 30% of spend.³⁴ However, this data included suppliers operating outside the civil engineering sector. We have relied on Barbour data instead but note that it may be an overestimate of shares of supply.

³⁴ National Highways' response to the CMA's information request [34].

Table A.4 Estimated shares of supply, based on initial contract values, for Transport Scotland civil engineering public road and railway infrastructure contracts, 2015 - 2025

Supplier	3-year rolling average									Total
	2015 - 2017	2016 - 2018	2017 - 2019	2018 - 2020	2019 - 2021	2020 - 2022	2021 - 2023	2022 - 2024	2023 - 2025	2015 - 2025
Balfour Beatty	[5-10%]	[0-5%]	[10-20%]	[10-20%]	[40-50%]	[80-90%]	[90-100%]	[60-70%]	[50-60%]	[30-40%]
Wills Bros	[10-20%]	[0-5%]	[5-10%]	[5-10%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[30-40%]	[20-30%]
BAM										
Nuttall	[0-5%]	[60-70%]	[40-50%]	[50-60%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]
Amey	[50-60%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]
Farrans	[10-20%]	[10-20%]	[10-20%]	[5-10%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]
Structural Soils	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[30-40%]	[5-10%]	[0-5%]
C										
Spencer	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
American Bridge	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
BEAR										
Scotland	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
RJ										
McLeod	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Other	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]

Source: CMA's calculations based on Barbour ABI data.

Note: 'Other' includes 6 civil engineering firms.

A.33 For Transport Scotland, there is more volatility in the contract value shares of supply over the period, which in part reflects the lower volume of civil engineering contracts that are being procured compared with National Highways or Network Rail. Contracts are generally won by a mix of established national firms, with occasional large projects won by others. Balfour Beatty holds the largest estimated market share at over 30%, while three other suppliers each hold around 10 – 20% of total value over the period, but this is often the result of winning large shares in particular periods rather than sustained shares throughout. Other contract suppliers tend to have relatively low shares of supply, although there are peaks in particular periods, which may reflect the winning of a few particularly large value contracts. The makeup of the largest suppliers also differs considerably, suggesting that the strength of some suppliers' competitive offering may vary across different regions.

Table A.5 Estimated shares of supply, based on initial contract values, for Welsh Government civil engineering public road and railway infrastructure contracts, 2015 - 2025

Supplier	3-year rolling average									Total
	2015 - 2017	2016 - 2018	2017 - 2019	2018 - 2020	2019 - 2021	2020 - 2022	2021 - 2023	2022 - 2024	2023 - 2025	2015 - 2025
Future Valleys	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[60-70%]	[70-80%]	[70-80%]	[0-5%]	[0-5%]	[30-40%]
Alun Griffiths	[10-20%]	[20-30%]	[20-30%]	[30-40%]	[20-30%]	[10-20%]	[20-30%]	[0-5%]	[0-5%]	10-20%
Costain	[60-70%]	[60-70%]	[20-30%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]
Balfour Beatty	[0-5%]	[0-5%]	[40-50%]	[40-50%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Walters	[0-5%]	[5-10%]	[5-10%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
D Morgan	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[20-30%]	[0-5%]	[0-5%]
Centregreat	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Graham	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[80-90%]	[0-5%]
Amco Giffen	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
BAM Nuttall	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Other	[10-20%]	[0-5%]	[0-5%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[40-50%]	[5-10%]	[0-5%]

Source: CMA's calculations based on Barbour ABI data

- A.34 For Welsh Government, the context and pattern are both similar to that for Transport Scotland, with the Future Valleys (a consortium of civil engineering firms and financial investors) picking up major contracts in recent years. There has also been a general slowdown in procurement activity, with no major tenders over the last two years. Overall, the data indicates that major Welsh infrastructure projects have been delivered by a small number of suppliers, although the identity of these suppliers varies in different periods over the 10-year period analysed.
- A.35 For Northern Ireland, we have estimated the shares of supply of public authority civil engineering contracts for civil engineering firms using contract data submitted by Northern Ireland's Department for Infrastructure. As before, we have calculated 3-year rolling averages to more clearly identify trends in the data. We note the dataset for Northern Ireland does not include rail contract values.

Table A.6 Estimated shares of supply, based on £m initial contract values/budgets, for Northern Ireland's Department for Infrastructure civil engineering public road infrastructure contracts, 2015 – 2025

Supplier	3-year rolling average									Total
	2015 - 2017	2016 - 2018	2017 - 2019	2018 - 2020	2019 - 2021	2020 - 2022	2021 - 2023	2022 - 2024	2023 - 2025	2015 - 2025
John McQuillan	[70-80%]	[50-60%]	[50-60%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[10-20%]	[40-50%]	[30-40%]
FP McCann	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[0-5%]	[50-60%]	[40-50%]	[30-40%]	[0-5%]	[20-30%]
White-mountain Quarries	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[20-30%]	[20-30%]	[30-40%]	[30-40%]	[10-20%]
Graham	[0-5%]	[20-30%]	[20-30%]	[50-60%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]
Gibsons	[20-30%]	[10-20%]	[10-20%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[5-10%]
Patrick Keenan	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[10-20%]	[5-10%]	[0-5%]	[0-5%]
Northstone	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[5-10%]	[5-10%]	[0-5%]	[0-5%]
Charles Brand	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[0-5%]
Highway Barrier Solutions	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[20-30%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Other	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]

Source: CMA's calculations based on public authority's contract data.

Note: 'other' includes four civil engineering firms including Joint Ventures.

A.36 Northern Ireland has the traits of a distinct geographical market, with many local suppliers that are less active in other regions of the UK. Approximately four large suppliers have delivered the majority of contracts over the 10-year period analysed for Northern Ireland road projects, with reasonable year on year churn between them in line with the outcomes of tenders.

Bidding analysis

A.37 Studies suggest that procurement processes that promote competition between multiple bidders can lead to better outcomes, with on average each additional bidder for a public contract lowering the cost of that contract by 2.5%.³⁵ We have therefore sought to understand the level of bidding which occurs for different types of contract across public authorities.

A.38 We note that bidding data can only provide an indication of whether there is competition for different contracts, rather than allowing us to interrogate the strength of competition for the different contracts awarded. For example, we note that construction markets can be prone to anti-competitive behaviour, with a number of CMA cases taking action against market sharing or bid rigging over the last few years (although not all in relation to civil engineering specifically). We have not interrogated the underlying bids or firm strategies for any of the contracts

³⁵ Angeles, L. and Milne, R.G. (2015), Competitive provision of public services: cost savings over successive rounds of tendering, Applied Economic Letters, 23(9), pp627-632; Milne, R.G. and Wright, R.E. (2004), Competition and costs: evidence from competitive tendering in the Scottish National Health Service, Scottish Journal of Political Economy, 5(1), pp1-23.

awarded in the bidding data, and so we do not have evidence that there was anti-competitive behaviour in any of these awards, or conversely whether there was strong competition between the bidders. Having several bidders is a necessary but not sufficient condition for a competitive tender process, and it is this which the bidding data allows us to understand.

- A.39 Some public authorities have expressed concerns about invitations to tender attracting only a small number of bidders, ie low 'bid rates'.³⁶
- (a) National Highways told us that they often experience low bid rates, particularly for large-scale complex contracts and bundled contracts.³⁷
 - (b) Transport Scotland told us there is less competition in rail due to work being of an inherently higher risk level.³⁸
 - (c) Network Rail told us there is a limited pool of suppliers in niche product markets, such as electrification and geotechnical engineering.³⁹ It also told us less well-connected regions in Scotland and North Wales attract less bidding interest due to less flexibility and mobility in the supply chain. Network Rail incorporates work for remote areas that suppliers are less likely to bid for, (often due to higher costs and challenges getting capital into remote regions), into its broader regional frameworks. This incentivises suppliers to bid for work that may have otherwise not bid for.⁴⁰
- A.40 However, Northern Ireland's Department for Infrastructure told us that within the road market it now experiences healthy bid participation rates.⁴¹ It noted it tends to contract directly with suppliers who might be considered as Tier 2 civil engineering firms in Great Britain.⁴² Welsh Government also told us that, on a recent tender, they had a positive response from the market – receiving nine bids from a mix of local, national, and international firms.⁴³
- A.41 We requested contract information over the last 10 financial years from 2015 through to 2025 from public authorities to analyse supplier bidding activity for the UK public road and rail contracts procured by them.⁴⁴ We requested the following information:
- (a) total number of contracts put out to tender;

³⁶ Responses to the CMA's information requests [§].

³⁷ National Highways' response to the CMA's information request [§].

³⁸ Transport Scotland's response to the CMA's information request [§].

³⁹ Network Rail's response to the CMA's information request [§].

⁴⁰ Note of meeting with Network Rail [§]; Network Rail's submission to the CMA [§].

⁴¹ DfI's response to the CMA's information request [§]; Note of meeting with DfI [§].

⁴² DfI's response to the CMA's information request [§].

⁴³ Note of meeting with the Welsh Government [§].

⁴⁴ One public authority was only able to provide five years' worth of data, between 2020-2025.

- (b) type of contract, ie whether the contract was for an enhancement, a maintenance, or a renewal project;
- (c) the method used to procure the contract;
- (d) the public authority's budget for the contract;
- (e) the number of participants who bid for the contract and the name of the supplier awarded the contract; and
- (f) contract outturn data, ie the final cost of the contract. From this and the budget data, we can tell whether the project overran its budget and, if so, by how much.

A.42 Below we present a count of the different measures of data we received from public authorities to show the completeness of our dataset used for analysing supplier bidding patterns.

Table A.7 Overview of available data on contracts across national road and rail public authorities, between financial years 2015 - 2025

	<i>National Highways</i>	<i>Network Rail</i>	<i>Transport Scotland</i>	<i>The Welsh Government</i>	<i>Northern Ireland's Department for Infrastructure</i>	<i>Translink</i>
Number of contracts	68	393	20	7	92	4
Type of contract (enhancement, maintenance, renewal)	Enhancement only	No data	Complete data (20/20 contracts)	Complete data (7/7 contracts)	Complete data (92/92)	Complete data (4/4)
Method of procurement	Partial data (65/68)	No data	Complete data (20/20)	Complete data (7/7)	Complete data (92/92)	Complete data (4/4)
Public authority budget	Partial data (31/68)	No data	Complete data (20/20)	Complete data	Partial data (26/92)	Complete data (4/4)
Contract value agreed with supplier	Complete data (68/68)	Complete data (393/393)	No data	No data	No data	No data
Bidding information (including number of participants and winner)	Complete data (68/68)	Complete data (393/393)	Complete data (20/20)	Complete data (7/7)	Partial data (58/92)	Complete data (4/4)
Contract outturn (actual / forecast)	Partial data (30/68)	No data	Partial data (14/20)	Partial data (6/7)	Partial data (91/92)	No data
Contract length	No data	No data	Complete data (20/20)	Complete data (7/7)	Complete data (92/92)	Complete data (4/4)

Source: Data submitted by public authorities included in the table above.

Note:

1. 'Public authority budget' shows the planned spend for a given project by a public authority. The 'contract value agreed with supplier' is the initial value of the contract agreed between the public authority and the supplier selected for the contract. We present contract values for public authorities when no data is available on budget.

2. 'Complete data' denotes where we received full information for the data field shown in the left-hand column.

A.43 Table A.8 below shows an overview of the number of contracts, project budgets, number of bidders, and contract lengths for the contracts we analysed that were

procured by the following public authorities. We present the median budget for projects alongside the average budget to account for skew, and any outlier projects with very large budgets in the data, which can inflate the average. In comparison, we present only the averages for the number of bidders and contract lengths due to less variation in distribution. In relation to Network Rail, we note that the CMA has received only a subset of its data and the volume of smaller contracts within this subset may suppress its median contract value. It is unclear whether some of these contracts were part of a bigger multi-asset package of contracts. Data for Network Rail may therefore not be directly comparable to others.

Table A.8 Analysis of contracts across national road and rail public authorities, 2015 - 2025*

	<i>National Highways*</i>	<i>Network Rail ¶</i>	<i>Transport Scotland ‡</i>	<i>The Welsh Government</i>	<i>Northern Ireland's Department for Infrastructure §</i>	<i>Translink</i>
Number of contracts	68	393	20	7	92	4
<i>Enhancement</i>	68	-	10	6	21	3
<i>Maintenance</i>	0	-	5	0	71	0
<i>Renewal</i>	0	-	5	1	0	1
Median project budget	£82.5m	£0.5m	£37.0m	£61.0m	£2.0m	£17.9m
<i>Average project budget</i>	£136.0m	£3.6m	£199.1m	£145.0m	£14.2m	£20.9m
Average number of bidders	3.6	1.9	3.1	3.8	5.6	4.5
Average contract length	-	-	5.8 Years	2.9 Years	3.4 Years	2.0 Years

Source: CMA analysis of data submitted by public authorities.

* National Highways provided data between 2020-2025 only, and for analysis purposes we have used contract values as this provides more extensive data coverage of contract sizes than contract budgets for National Highways data.

¶ For analysis purposes, contract value figures have been used for Network Rail due to no data on budget figures being available.

Notes:

‡ For analysis purposes, one contract denoted as 'minor improvement / safety work' has been combined with Maintenance-type contracts.

§ For analysis purposes: 18 contracts denoted as 'Minor Improvement Works' have been combined with Maintenance contracts, while four contracts denoted as 'Improvement Works' (which are typically larger scale improvements) and 10 contracts denoted as 'New Works' have been combined with Enhancement contracts.

Notes:

(1) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

(2) For analysis purposes, one contract denoted as 'minor improvement / safety work' has been combined with Maintenance-type contracts.

A.44 Table A.8 suggests that out of all national public authorities (excluding Network Rail, where the data does not distinguish between contract types), National Highways procured for the highest number of enhancement contracts. We also found that the average project budget across all public authorities was higher than the median project budget. We place greater weight on the median project budget instead of average project budget as it is less affected by the presence of a small number of very high value projects and gives a more accurate estimate of the typical project budget for each public authority.

- A.45 Table A.8 shows that National Highways had a particularly high median project budget, which could reflect its data only covering enhancement contracts. These contracts are typically for large-scale projects, spanning across multiple years, and are usually of higher value compared with maintenance and renewal contracts. We present more granular analysis on each national public authority's data further in this section.
- A.46 Our analysis suggests national public authorities procuring for road contracts usually see multiple bidders. Most road contract procurement processes saw between three to five bidders on average. Translink, the main public procurer of rail projects in Northern Ireland, saw an average of 4.5 bidders across four contracts, compared with 5.6 bidders on average for Northern Ireland's road projects.
- A.47 Some Network Rail contracts had only one bidder, but due to the smaller value contracts and only a subset of contracts being submitted from Network Rail, we cannot place significant weight on this finding.
- A.48 In the tables below, we present our bidding analysis separately for each of the public authorities. Where data is available, we analysed the average number of bidders across each project type (ie enhancement, maintenance, and renewal), broken down by procurement process.

National Highways

- A.49 National Highways provided data for 68 enhancement contracts between 2020 and 2025.⁴⁵ All but three⁴⁶ contracts for major road works were procured through a framework, described as a 'Regional Delivery Partnership Framework' by National Highways. Through this process, suppliers could indicate their preference for regions, lots (by project value), and schemes (type of work) when bidding for work.
- A.50 There are two ways that work is allocated from National Highways' frameworks:
- (a) **With competition:** work packages are advertised as part of a framework and suppliers bid to get onto a framework. Once on a framework, suppliers compete amongst each other to be appointed work in their preferred regions, although eligibility to bid can depend on contract size.⁴⁷ In some cases, work appears to be allocated directly at the point of joining the framework; in others, there were subsequent competitions (described as call-offs) to allocate the work.

⁴⁵ National Highways' response to the CMA's information request [X].

⁴⁶ These were procured through other forms of procurement, eg designated funds or OJEU procurement.

⁴⁷ National Highways' response to the CMA's information request [X].

- (b) **With no competition:** suppliers already on a framework are awarded subsequent work based on their previous performance on existing schemes, without further bidding competitions.⁴⁸ We saw some contracts for safety upgrades which were awarded directly to suppliers who undertook the initial work package.⁴⁹

A.51 In Table A.9 below, we provide a breakdown of the contracts submitted by National Highways. 65 of 68 contracts were analysed for which the procurement process was clear. Of these contracts, 58% (38/65) of contracts were awarded under a competitive process on a framework (shown as 'with competition' in the table) and on average there were 6.1 bidders competing for each contract. The median budget value for such contracts was almost double the median budget for contracts that were awarded directly to suppliers on a framework (shown as 'no competition' in the table).

Table A.9 National Highways analysis of public road contracts, 2020 - 2025

	Enhancement
Number of contracts	65
Procurement process:	38
Framework – with competition†	
Median budget value (£m)	£92.2m
Average budget value (£m)	£139.9m
Average number of Bidders	6.1
Procurement process:	27
Framework – no competition‡	
Median budget value (£m)	£48.3m
Average budget value (£m)	£135.9m
Average number of Bidders	0*
Average contract length (Years)	-

Source: CMA analysis of National Highways data.

Notes:

(1) Analysis uses contract values as this provides more extensive data coverage of contract sizes than contract budgets for National Highways data.

(2) Three contracts recorded under 'Other' procurement processes have been excluded from this table of analysis, as they relate to either cancelled schemes or unclear procurement processes. Therefore, the number of contracts here totals 65 and not 68.

(3) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

* No bidders were observed as no competition was held; winners of these contracts have not been included as bidders.

† Procurement process: Framework – with competition includes contracts as part of Regional Delivery Partnership (RDP) Framework tenders, Collaborative Delivery Framework (CDF), and RDP call-off.

‡ Procurement process: Framework – no competition includes contracts as part of RDP call offs, CDF call-offs, and safety upgrades.

A.52 We note that there is some distinction between the contracts that were awarded under a competitive process in the National Highways dataset:

- (a) Regional Delivery Partnership (RDP) Framework tender: these had multiple bidders that were invited to indicate their preferred regions, lots, and schemes. These preferences were taken into account when evaluating the

⁴⁸ In these instances, some frameworks had other suppliers who were ineligible to be considered for the contract due to poor performance. Others had only one supplier on the framework.

⁴⁹ These contracts were under the Smart Motorway Alliance and were directly awarded as per the contract allocation mechanism.

bid. As part of the framework award, package contracts were issued that included a defined list of work to the successful supplier.

- (b) RDP Framework call off: these were mostly regional competitions (some were national competitions) conducted exclusively with suppliers who were allocated a certain 'band', ie could only bid for contracts that were within a certain value.
- (c) RDP framework tenders had a higher number of average bidders than those described in the dataset as RDP call-offs. One reason for the lower number of bidders on average for call-offs could be due to this process having more restrictive criteria as to which suppliers are eligible to bid.

A.53 We consider the relationship between the contract budget and the number of bidders to understand if the size of the contract impacts bidding patterns of suppliers.

Figure A.1 National Highways bidding participation analysis: contract budgets vs number of bidders



Source: CMA analysis of National Highways data.

A.54 Figure A.1 shows:

- (a) All contracts awarded under a competitive process or 'other' procurement process [60-70]% of contracts in the dataset) had two or more bidders. Of these contracts, which had two or more bidders, [50-60]% had at least six bidders.
- (b) The majority of contracts [80-90]% were valued below £300m.
- (c) The contracts with the highest number of bidders (nine) were all valued below £300m and were all procured through frameworks with competition.
- (d) Contracts valued above £300m procured through frameworks with competition had a median of two bidders, likely reflecting that there are fewer credible suppliers that qualify to bid for more complex or large-scale contracts.

Transport Scotland

A.55 Transport Scotland submitted information on 20 contracts, all of which were procured through one of two methods. For both methods, Transport Scotland uses pre-qualification questionnaires to form shortlists which reduce the number of tenders it has to evaluate. It aims to have at least a minimum of five suppliers for

each tender; however, there may be fewer suppliers on the shortlist depending on how many suppliers meet the eligibility criteria to be invited to tender:⁵⁰

- (a) **Competitive dialogue:** A competitive dialogue process is used for large, complex contracts. It allows shortlisted suppliers to engage in extended dialogue with Transport Scotland to discuss the nature of the project and develop possible solutions before submitting a bid.⁵¹ In this data set, enhancement and renewal contracts were exclusively procured through this process.
- (b) **Restricted procedure:** Used only to procure the maintenance contracts in the data set. In a restricted procedure, Transport Scotland shortlists suppliers that meet the requirements for the tender who are then invited to bid. A restricted procedure bears some similarities with a framework call-off where suppliers that successfully qualify for a framework must then bid in a secondary competition.

Table A.10 Transport Scotland analysis of public road contracts, 2014 - 2025

	Enhancement	Maintenance	Renewal	Total
Number of contracts	10	5	5	20
Procurement process: Competitive Dialogue	10	0	5	15
Median budget value (£m)	£46.5m	-	£690.0m	£80.7m
Average budget value (£m)	£107.1m	-	£570.0m	£199.1m
Average number of bidders	3.3	-	3.0	3.2
Procurement process: Restricted Procedure	-	5	-	5
Median budget value (£m)	-	£3.8m	-	£3.8m
Average budget value (£m)	-	£12.4m	-	£12.4m
Average number of Bidders	-	2.8	-	2.8
Average contract length (Years)	4.7 Years	4.0 Years	9.6 Years	5.8 Years

Source: CMA analysis of Transport Scotland data.

Notes:

(1) For analysis purposes, one contract denoted as 'minor improvement / safety work' has been combined with Maintenance-type contracts.

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

A.56 On average, tender processes for each contract type attracted around 3 bidders. Contracts procured through a restricted process had the lowest median budget while contracts procured through competitive dialogue had a higher median budget, consistent with this being reserved for larger contracts.

A.57 We further consider the relationship between contract size, project type, and number of bidders in Figure A.2 to see if the size of the contract impacts bidding patterns of suppliers. This only includes a subset of the contracts for which we received budget data.

⁵⁰ Transport Scotland's response to the CMA's information request [X].

⁵¹ As noted in the Scottish Government's [Construction Procurement Handbook](#) (2019), chapter 7, p107.

Figure A.2 Transport Scotland bidding participation analysis: contract budgets vs number of bidders



Source: CMA analysis of Transport Scotland data.

A.58 Figure A.2 shows:

- (a) [60-70]% of contracts had a budget below £100m (only [5-10]% by the sum of total contract budgets). These were mostly enhancement and maintenance contracts.
- (b) Projects under a competitive dialogue had a higher number of bidders overall. Enhancement projects usually experienced the highest number of bidders; [50-60]% attracted four bidders, while [60-70]% renewal projects had three bidders.
- (c) [80-90]% of maintenance contracts had two bidders, with only one contract attracting six bidders, raising the average number of bidders to three. The use of a restricted procedure, where suppliers are selected from an existing shortlist, reflects the generally lower number of bidders.
- (d) Contracts of longer length or greater value attracted similar numbers of bidders as contracts less than £100m, attracting between two and four bidders.

The Welsh Government

A.59 We received information on seven contracts from the Welsh Government which mostly consisted of enhancement projects.⁵² Almost all contracts were procured through a two-stage tender process. One very large enhancement contract was procured through a competitive dialogue, consistent with the usual conditions (large, complex projects) for using this process.

⁵² The Welsh Government's response to the CMA's information request [redacted].

Table A.11 Welsh Government analysis of public road contracts, 2017 - 2025

	Enhancement	Renewal	Total
Number of contracts	6	1	7
Procurement process: Two-stage tender	5	1	6
Median budget value (£m)	£35.7m	£165.0m	£48.3m
Average budget value (£m)	£52.5m	£165.0m	£71.3m
Average number of bidders	4.4	-*	4.4
Procurement process: Competitive dialogue	1	0	1
Median budget value (£m)	£590.0m	-	[£590.0m] £500.0m – £600.0m
Average budget value (£m)	£590.0m	-	£590.0m
Average number of bidders	1.0	-	1.0
Average contract length (Years)	2.9 Years	3.0 Years	2.9 Years

Source: CMA analysis of Welsh Government data.

* One contract (renewal) is due to start in 2027.

Note: Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder

A.60 The average number of bidders for enhancement projects under two-stage tender was around four. Only one bidder participated under competitive dialogue, but this could be due to only one supplier meeting requirements at the pre-qualification stage and proceeding to submit a bid. The average mean budget value across all Welsh Government contracts was £71.3m (see Table A.11), but this figure is inflated by one enhancement project that held a budget of £590m. This large contract was procured as part of a mutual investment model,⁵³ using a competitive dialogue process. Excluding the abnormally large contract, the average median, budget based on all other contracts, was £35.7m.

A.61 We consider the relationship between contract size and number of bidders in Figure A.3 to understand if the size of the contract impacts bidding patterns of suppliers for Welsh Government contracts. We present data for enhancement projects only because there is no bidder data available yet for the renewal project as it has not commenced.

Figure A.3 Welsh Government bidding participation analysis: contract budgets vs number of bidders

Source: CMA analysis of Welsh Government data.

A.62 Figure A.3 shows the outlier contract in terms of budget was also an outlier in terms of bidders, having only one bidder. This contract was procured under competitive dialogue. All other contracts were for less than £150m and had between three and five bidders.

⁵³ A partnership between the Welsh Government and the private sector to deliver infrastructure schemes. The Welsh Government (2017), [Mutual investment model for infrastructure investment](#).

The Department for Infrastructure of Northern Ireland's Executive Government

- A.63 The Department for Infrastructure provided 92 road contracts consisting of enhancement and maintenance projects.⁵⁴ It submitted that most contracts were procured through an open procedure which allows interested suppliers to submit a bid. The contract is awarded to the most economically advantageous tender.⁵⁵

Table A.12 Department for Infrastructure analysis of public road contracts, 2015 - 2025

	Enhancement	Maintenance	Total
Number of contracts	21	71	92
Procurement process: Open Procedure	17	71	88
Procurement process: Restricted Procedure*	4	0	4
Median budget value (£m)	£3.7m	£1.4m	£2.0m
Average budget value (£m)	£23.5m	£1.6m	£14.2m
Average number of bidders	6.2	5.5	5.6
Average contract length (Years)	2.7 Years	3.5 Years	3.4 Years

Source: CMA analysis of Department for Infrastructure (DfI) data.

* We note that DfI identified four enhancement contracts that were procured using a restricted procedure, however we were not able to distinguish contracts procured through open and restricted procedures in the dataset submitted. We therefore present median budget values, average budget value, and average number of bidders based on all 92 contracts submitted.

Notes:

(1) For analysis purposes: 18 contracts denoted as 'Minor Improvement Works' have been combined with Maintenance contracts, while four contracts denoted as 'Improvement Works' (which are typically larger scale improvements) and 10 contracts denoted as 'New Works' have been combined with Enhancement contracts.

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

- A.64 The average number of bidders across all contracts was 5.6, with enhancement and maintenance projects attracting a similar number of bidders. Enhancement contracts had a slightly higher budget than maintenance.
- A.65 We consider the relationship between the contract budget, project type, and the number of bidders to understand if the size and type of contract impact bidding patterns of supplier for road contracts in Northern Ireland.

Figure A.4 Northern Ireland bidding participation analysis: contract budgets vs number of bidders



Source: CMA analysis of the Department for Infrastructure Northern Ireland data.

- A.66 Figure A.4 shows that:

- (a) No contract received less than three bidders.

⁵⁴ DfI's response to the CMA's information request [REDACTED].

⁵⁵ Northern Ireland Assembly (2024), [Research and Information Service Briefing Paper: Public Sector Procurement in Northern Ireland](#).

- (b) [50-60]% enhancement projects had seven bidders. All enhancement contracts attracted four or more bidders.
- (c) Most contract budgets were around £2m or below.

Network Rail

Table A.13 Network Rail analysis of public railway contracts, 2017- 2025

	Contract Size					
	Very Small (<£5m)	Small (£5m-50m)	Medium (£50m- £150m)	Large (£150m-500m)	Very Large (£500m)	All Contracts
Number of contracts	372	17	2	1	1	393
Median value of contract (£m)	£0.4m	£7.0m	£56.3m	£170.0m	£600.0m	£0.5m
Average value of contracts (£m)	£0.9m	£12.1m	£56.3m	£170.0m	£600.0m	£3.6m
Average number of bidders	1.9	1.6	5.0	1.0	2.0	1.9
Average contract length	-	-	-	-	-	-

Source: CMA analysis of Network Rail data.

Notes:

(1) Contract values have been used instead of budget data due to no availability of budget data.

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

A.67 We present a sample of Network Rail contracts by value of the contract due to no data being available for project type.⁵⁶ The majority of contracts were below £5 million, with the median value across all contracts being £0.0 – £1.0m million. One Network Rail submission showing the projects undertaken as part of the Northwest and Central Capital Delivery estimates around 200-300 projects were classified small (£1m-£15m) to medium (£15m-£50m).⁵⁷ Network Rail told us renewals and maintenance tend to be small to medium sized projects which are less complex than enhancement projects.⁵⁸

A.68 In this sample of contracts, the average number of bidders per contract is 1.9. Medium contracts attracted the highest average number of bidders at 5.0. Where we observe a low number of bidders it could be for a number of reasons:

- (a) Network Rail primarily uses framework agreements to procure for its contracts (it sometimes uses open tenders with a pre-qualification stage for large multidisciplinary projects).⁵⁹ Network Rail told us it directly awards contracts to pre-approved suppliers within its frameworks for contracts under a specified threshold. Otherwise, it runs a mini competition between suppliers on a framework for work over direct award thresholds.⁶⁰ We recognise that

⁵⁶ Network Rail's response the CMA's information request [§].

⁵⁷ Network Rail's response to the CMA's information request [§].

⁵⁸ Network Rail's response the CMA's information request [§].

⁵⁹ Note of meeting with Network Rail [§].

⁶⁰ Network Rail's response to the CMA's information request [§].

tenders that are carried out using frameworks with pre-approved suppliers tend to have fewer bidders as procuring authorities use it to narrow down the number of suppliers they receive bids from.

- (b) Due to the more specialised nature of work in rail compared with public road, specialist suppliers may only bid for specialist contracts and there may be a smaller number of suppliers with the required skills qualified to bid, lowering the total number of bidders. Previous evidence from Network Rail also described limited competition in niche sectors and in remote locations, as discussed in the 'Bidding analysis' section.

A.69 With regard to the contract values, Network Rail also submitted that it has observed greater interest from large suppliers for smaller projects or for large value frameworks that consist of smaller projects than previously seen.⁶¹

A.70 In the figure below, we present the relationship between the contract value and the number of bidders for a subset of (393) contracts which have a value of £60m or less. Contracts of a greater value (only two of the 393) are presented in Table A.13 as large or very large contracts but not included in Figure A.5 below.

Figure A.5 Network Rail bidding participation analysis: contract value vs number of bidders



Source: CMA analysis of Network Rail data.

A.71 Figure A.5 shows that:

- (a) [60-70]% of contracts, accounting for [50-60]% by value, had one bidder.
- (b) [90-100]% of contracts were below £20m.

Translink, Northern Ireland Railways

A.72 Rail procurement for Northern Ireland is carried out by Translink. Translink told us it uses frameworks and tends not to use many primary competitions for a single contract on a framework, ie it tends to run two-stage 'call-off' competitions. It noted that Translink does not want too few suppliers on a framework which can lead suppliers to pick and choose which contracts they carry out if they expect a more appealing contract to come around in the near future, as part of the framework.⁶²

A.73 Translink submitted information for four contracts that were relevant to our information request. Most contracts were for enhancement projects and only one

⁶¹ Network Rail's response to the CMA's information request [REDACTED]. Participants in the CMA's market research also said larger Tier 1 firms have been pursuing and winning tenders that previously they would have viewed as too small to be worth their attention, due to the low volume and unpredictable nature of rail infrastructure work. Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p37.

⁶² Note of meeting with Translink [REDACTED].

was for a renewal project. Some contracts were procured through a two-stage negotiated process where suppliers are able to discuss the contract with the procuring authority before submitting a bid. Other contracts were allocated using a second stage framework competition ie a call-off through a framework.⁶³

Table A.14 Translink analysis of rail contracts, 2015-2025

	Enhancement	Renewal	Total
Number of contracts	3	1	4
Procurement process: Two-stage competition under negotiated procedure	1	1	2
Median budget value (£m)	£16.0m	£46.0m	£31.0m
Average budget value (£m)	£16.0m	£46.0m	£31.0m
Average number of bidders	4.0	2.0	3.0
Procurement process: Framework secondary competition (incl. call-off)	2	0	2
Median budget value (£m)	£10.9m	-	£10.9m
Average budget value (£m)	£10.9m	-	£10.9m
Average number of Bidders	6.0	-	6.0
Average contract length (Years)	2.0 Years	2.0 Years	2.0 Years

Source: CMA analysis of Translink data.

Notes:

(1) For analysis purposes: two contracts denoted as 'Construction' have been combined with Enhancement contracts.

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

A.74 Contracts procured through the negotiated procedure had an average of three bidders while contracts procured through secondary framework competition had an average of six bidders. The highest contract budget was £46m and was procured under a negotiated procedure. This is consistent with other evidence we have seen on higher value contracts being procured under processes that allow for more engagement between the supplier and the procuring authority.

Figure A.6 Translink bidding participation analysis: contract budget vs number of bidders



Source: CMA analysis of Translink data

A.75 Due to the limited number of contracts we have available to analyse, we cannot place significant weight on the findings from our analysis of Translink's data. However, Figure A.6 shows that:

- (a) All procurement processes had at least two bidders.
- (b) Contracts with smaller budgets (below £20m) had more bidders.
- (c) The contract with the highest budget attracted the fewest bidders, suggesting fewer suppliers qualified in pre-qualification stages of the tender. Consistent with other evidence we have seen, procuring authorities can use pre-qualification stages for larger tenders to reduce the number of bids they have

⁶³ Translink's response to the CMA's information request [redacted].

to evaluate, resulting in a fewer number of suppliers proceeding to submit a final bid.

Project Cost Overruns

- A.76 In this section we present evidence on the prevalence and size of overruns on road projects (no data for rail was available) using data from both the national public authorities⁶⁴ and a sample of ten Tier 1 civil engineering firms.⁶⁵
- A.77 For national public authorities, we used budget data and outturn data (ie the final cost/forecasted cost of the contract) to calculate project cost overruns. Below we present our analysis on contract overruns separately for each of the public authorities that had contract budget and outturn data available.

National Highways

- A.78 National Highways provided both contract budget (estimated at 'Full Business Case Stage') and outturn for 29 enhancement contracts.⁶⁶ Out of the contracts that had data, 23/29 of contracts had an overrun. The average cost overrun was £36m, around 18% over the initial contract budget.

Table A.15 National Highways contract overruns analysis, 2020-2025

	Enhancement contracts
Total number of contracts	68
Contracts for which we have both budget and outturn data	29
Number of contracts that overran	23
Average budget overrun value (£m)	£36.2m
Average budget overrun (%)	17.5%
Average number of bidders (for contracts that overran)	5.7
Average number of bidders (for contracts that did not overrun)	6.8
Average contract length (Years)	-

Source: CMA analysis of National Highways data.

Notes: Only includes contracts in which both contract budget and outturn data were available

Notes:

(1) For analysis purposes: two contracts denoted as 'Construction' have been combined with Enhancement contracts.

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

- A.79 The figure below shows the final outturn of all 29 (with available budget and outturn data) contracts plotted against their initial estimated budget. The only contracts that delivered under budget had a contract value of less than £200m; everything over that value experienced a cost overrun.

⁶⁴ Responses to the CMA's information requests [§].

⁶⁵ Responses to the CMA's information requests [§].

⁶⁶ National Highways' response to the CMA's information request [§].

Figure A.7 National Highways contract budget vs overrun, 2020-2025



Source: CMA analysis of National Highways data.

Transport Scotland

A.80 We analysed 14 contracts from Transport Scotland that had the necessary data for cost overruns analysis.⁶⁷ Out of these contracts, 4/14 had a cost overrun and the average contract went over the initial budget by 12.2%. No enhancement contracts for which we had data had an overrun, while all maintenance contracts analysed overran on cost.

Table A.16 Transport Scotland contract overruns analysis, 2015-2025

	Enhancement	Maintenance	Renewal	All Contract Types
Total number of contracts	10	5	5	20
Contracts that held both budget & outturn data	8	5	1	14
Number of contracts that overran	0	3	1	4
Average budget overrun value (£m)	-	£1.4m	£3.6m	£1.9m
Average budget overrun (%)	-	4.4%	35.5%	12.2%
Average number of bidders (for contracts that overran)	-	2.0	3.0	2.3
Average number of bidders (for contracts that did not overrun)	3.3	4.0	3.0	3.3
Average contract length (Years)	-	4.7 Years	4.0 Years	4.5 Years

Source: CMA analysis of Transport Scotland data.

Notes:

(1) For analysis purposes, one contract denoted as 'minor improvement / safety work' has been combined with Maintenance contracts

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

A.81 In Figure A.8 we present all the contracts for which we have data, and how they compared against their initial budget. Most of the contracts for which we have data had contract budgets of less than £40m. With two exceptions, most of the overruns in this sample were for [0-5]% from budget.

Figure A.8 Transport Scotland contract budget analysis, 2015-2025



Source: CMA analysis of Transport Scotland data.

Notes:

The Welsh Government

A.82 We analysed six contracts from the Welsh Government that had the necessary data for cost overrun analysis.⁶⁸ All contracts were for enhancement projects and

⁶⁷ Transport Scotland's response to the CMA's information request [REDACTED].

⁶⁸ The Welsh Government's response to the CMA's information request [REDACTED].

[60-70]% had a cost overrun. The average contract went over the initial budget by [10-20]%.

Table A.17 Welsh Government contract overruns analysis, 2015-2025

	Enhancement	Renewal	All Contract Types
Total number of contracts	6	1	7
Contracts that held both budget & outturn data	6	0	6
Number of contracts that overran	4	-	4
Average budget overrun value (£m)	£9.6m	-	£9.6m
Average budget overrun (%)	19.0%	-	19.0%
Average number of bidders (for contracts that overran)	4.3	-	4.3
Average number of bidders (for contracts that did not overrun)	3.0	-	3.0
Average contract length (Years)	3.0 Years	-	3.0 Years

Source: CMA analysis of Welsh Government data.

A.83 We found that the average budget overrun across all contracts with budget and outturn data was £[5-10]m. In Figure A.9 we present all six contracts plotted against their initial budget. Most of the contracts for which we have this data had contract budgets less than £100m. There is a wide spread of overrun values within this data, from [10-20]% under budget to [30-40]% over budget.

Figure A.9 Welsh Government contract budget vs overruns, 2015-2025

[✂]

Source: CMA analysis of Welsh Government data.

Northern Ireland Department for Infrastructure

A.84 We analysed 25 road contracts from Northern Ireland's Department for Infrastructure that had the necessary data for cost overrun analysis (budget and outturn data).⁶⁹ Contracts covered enhancement and maintenance projects only. 11 out of 25 had a cost overrun. For overrunning contracts, the cost exceeded the initial budget by 14% on average.

⁶⁹ DfI's response to the CMA's information request [✂].

Table A.18 Northern Ireland contract overruns analysis, 2015-2025

	Enhancement	Maintenance	All Contract Types
Total number of contracts	21	71	92
Contracts that held both budget & outturn data	14	11	25
Number of contracts that overran	8 (57.1%)	3 (27.3%)	11 (44.0%)
Average budget overrun value (£m)	£2.3m	£0.1m	£1.7m
Average budget overrun (%)	15.3%	9.7%	13.7%
Average number of bidders* (for contracts that overran)	5.7	4.5	5.2
Average number of bidders (for contracts that did not overrun)	6.0	5.5	5.6
Average contract length (years)	1.7	1.4	1.6

Source: CMA analysis of the Department for Infrastructure Northern Ireland data.

* Uses contracts where the number of bidders was available. Not all contracts that had budget and outturn data had this data.

Notes:

(1) For analysis purposes: 18 contracts denoted as 'Minor Improvement Works' have been combined with Maintenance contracts, while four contracts denoted as 'Improvement Works' (which are typically larger scale improvements) and 10 contracts denoted 'New Works' have been combined with Enhancement contracts

(2) Suppliers submitting a bid under a joint venture or partnership with multiple suppliers were counted as one bidder.

A.85 Figure A.10 presents the overrun of the 25 contracts plotted against their initial budget. Most of the contracts, for which we have data for, had budgets of less than £5m. Overruns ranged widely, from [10-20]% under-budget to [30-40]% over-budget, but most of the projects which overran did so by [10-20]%.

Figure A.10 Northern Ireland contract budget analysis, 2015-2025

Source: CMA analysis of the Department for infrastructure Northern Ireland data.

Tier 1 firms

A.86 In a separate data gathering exercise, the CMA also asked a sample of Tier 1 firms to identify up to 10 enhancement projects in both public road and rail, from over the last 10 full financial years, that had the largest financial overruns.⁷⁰ Given the nature of the data request and our focus on the subset of projects with the largest overruns, the purpose of this exercise was to understand the severity and nature of significant overruns, rather than to gauge their frequency.

A.87 The CMA received data covering a total of 105 enhancement contracts⁷¹ across nine Tier 1 suppliers, comprising 42 road and 63 rail projects. The sample spans a wide range of project sizes, with planned costs ranging from £0.1m to over £1bn, and planned durations ranging from 118 days to 6.5 years.

⁷⁰ Responses to the CMA's information requests [X].

⁷¹ The number of projects submitted by the nine Tier 1 suppliers was uneven across the sample. Some (4/9) suppliers in the sample of responses provided projects with the largest overruns for the full 10 enhancement projects for both road and rail, however most (5/9) suppliers submitted less than 10 projects for each road and rail and some (3/9) of these suppliers only submitted projects for largely one mode (either road or rail).

- A.88 The absolute and relative sizes of the cost overruns varied significantly across the sample, and most of these overrunning contracts experienced both time and cost overruns, with a positive correlation between the two.⁷²
- A.89 Comparing across sectors, overruns in this sample of contracts were, on average, higher in rail than in road, both in absolute (£m and days) and in relative (%) terms. Due to the generally wide variation in project size, and therefore project cost and times, we present medians in place of means:
- (a) For the road contracts *with the biggest overruns*, there was a median cost overrun of £12.2m (47% over planned cost) and a median time overrun of 366 days (36% over the planned duration). Cost overruns varied from as low as 8% of planned cost on one contract to more than 100% on five contracts. One contract had a cost overrun of over 700% of the planned cost.
 - (b) For the rail contracts *with the biggest overruns*, there was a median cost overrun of £12.6m (50% over planned cost) and a median time overrun of 417 days (58% over the planned duration). Cost overruns varied from as low as 4% of planned cost on one contract to more than 300% of the planned cost on six contracts.
- A.90 These Tier 1 firms were also able to identify the drivers of these overruns, in order of importance. This is discussed later in the section on the impact of public procurement on time and cost overruns.

Barriers to entry and expansion

- A.91 Barriers are factors that prevent or otherwise impair a firm's entry or expansion in a market. Such barriers can give incumbents and/or larger firms an advantage and reduce competition in a market. It is also possible that they impede the ability and incentive to innovate and thereby reduce the application of new ideas that improve efficiency or enhance quality.

Forms of barriers to entry and expansion

- A.92 In order to explore the main barriers to entry and expansion in the civil engineering market, we asked Tier 1 and Tier 2 firms to rank different factors according to whether they believe them to be a significant barrier, a moderate barrier or not a barrier at all. This process identified the following key barriers to entry and expansion:

⁷² There were eight exceptions to this where the contracts had a cost overrun but not a time overrun, two delivering on time and six delivering ahead of schedule.

- (a) Almost all (13 out of 14) cited incumbency advantages as a barrier to entry and expansion, although most (10 of 13) ranked it as a moderate rather than a significant barrier to entry.⁷³ In the procurement section of the final report, we discuss evidence of incumbency advantage and the potential impact on the market.
- (b) A majority (11 out of 14) said that the costs involved to enter and expand in the market were a barrier. There was an almost even split on the strength of the barrier, with only slightly more firms saying it was a significant rather than a moderate barrier.⁷⁴ Costs cited include accreditation, legal compliance, resources to plan bids, and investments in capital. More information on this is set out below (in the section on costs involved to enter the market).
- (c) A majority (10 out of 14) cited the nature of procurement as a barrier, although most ranked it as a moderate rather than a significant barrier.⁷⁵ We discuss these factors in the procurement section of the final report.
- (d) A majority (8 out of 13) also cited legal and regulatory processes as a barrier. Of those who said they were a barrier, all but one said they were a moderate rather than a significant barrier.⁷⁶ We discuss how these factors may act as barriers for new and smaller suppliers in the regulation section in the final report.
- (e) A majority (8 out of 13) also considered economies of scale to be a barrier, with more (5 of 8) citing this as a significant rather than a moderate barrier.⁷⁷ More information on this is set out below (in the section on economies of scale and scope).
- (f) Out of 13 civil engineering firms who responded, six considered access to inputs (such as specialist labour and raw materials) as a barrier and one considered it to be a barrier in rail only. Most of these considered it to be a moderate barrier.⁷⁸ More information on this is set out below (in the section on limited access to inputs).

A.93 It is important to note that the responses also indicated that other potential barriers are not impacting on how the market works. For example, with respect to technical

⁷³ More specifically 9 out of 10 Tier 1 and 4 out of 4 Tier 2 firms cited incumbency advantages, although only 2 Tier 1 firms and 1 Tier 2 firm ranked it as a significant barrier. Responses to the CMA's information requests [X].

⁷⁴ More specifically 8 out of 9 Tier 1 firms and 3 out of 5 Tier 2 firms cited costs to enter the market, with 5 of the Tier 1 firms and 1 Tier 2 firm ranking it as a significant barrier. Responses to the CMA's information requests [X].

⁷⁵ More specifically 7 out of 9 Tier 1 and 3 out of 5 Tier 2 firms cited the nature of procurement as a barrier, with 3 Tier 1 firms citing it as a significant barrier. Responses to the CMA's information requests [X].

⁷⁶ More specifically 7 out of 8 Tier 1 and 1 out of 5 Tier 2 firms cited legal and regulatory processes as a barrier, with 1 Tier 1 firm ranking it as a significant barrier. Responses to the CMA's information requests [X].

⁷⁷ More specifically 5 out of 8 Tier 1 and 3 out of 5 Tier 2 firms considered economies of scale a barrier, with 4 of the Tier 1s and 1 of the Tier 2s ranking it as a significant barrier. Responses to the CMA's information requests [X].

⁷⁸ More specifically 5 out of 8 Tier 1 and 1 out of 4 Tier 2 firms considered access to inputs as a barrier, although only 1 Tier 1 and 0 Tier 2 firms ranked it as a significant barrier. A thirteenth firm (Tier 1) said it was a barrier, but only in rail. Responses to the CMA's information requests [X].

advantages and intellectual property rights, most civil engineering firms that responded said this is not a barrier.⁷⁹ Skanska told us that it is not a barrier as knowledge is shared across the industry in various ways, including via customer-led knowledge sharing.⁸⁰ Another Tier 1 firm, Kier, said it is not a barrier as IP tools do not affect the overall project.⁸¹ Our findings are largely consistent with previous studies on the infrastructure sector, which reference barriers created by procurement processes, capital constraints, and economies of scale, as well as planning and regulatory processes.⁸²

- A.94 The CMA market research explored what participants from Tier 2 and Tier 3 firms considered to be barriers which limit firms' access, entry, expansion, and innovation. Many of the barriers highlighted focused on procurement and regulatory factors which affected firms' ability to compete, such as project uncertainty, insufficient access to the client, and the level of bureaucracy.⁸³
- A.95 The distribution of risk has also been identified as a barrier to entry or expansion. Amongst Tier 2 and Tier 3 firms who took part in the CMA's qualitative market research, if there was some certainty that a project was going ahead and a bid was worth considering, the transfer of risk down the contract chain was then one of the most commonly mentioned barriers to bidding. Tier 2 and Tier 3 firms perceive risk to be passed down by public authorities, consultants, and Tier 1 and Tier 2 contractors, all of whom want to reduce their own risk by transferring it to others.⁸⁴ Participants in the CMA's market research observed that fixed price contracts were often deemed too risky to pursue. They also noted instances where public authorities insert multiple clauses which push risk down the supply chain.⁸⁵ Translink told us that smaller suppliers often choose not to bid for contracts if this risk is perceived as too high.⁸⁶ The misallocation of risk onto smaller suppliers may therefore also act as a barrier to entry. If this increase in risk does not come with reward, and cannot be mitigated through insurance, it may limit growth opportunities for smaller firms, and their ability to take on work. We consider the allocation of risk down the supply chain further in the 'Allocation of risk between public authorities and suppliers' section.
- A.96 We now discuss three of the key barriers to entry and expansion that we identified through our analysis: costs to enter the market; economies of scale and scope; and limited access to inputs.

⁷⁹ Responses to the CMA's information requests [§].

⁸⁰ Skanska's response to the CMA's information request [§].

⁸¹ Kier's response to the CMA's information request [§].

⁸² See, for example, de Valence, G. (2011), chapter 6, 'Competition and barriers to entry in the construction industry', in [Modern Construction Economics: Theory and application](#), pp100-117; NIC (2024), [Cost drivers of major infrastructure projects in the UK](#), p36; NAO (2023), [Lessons learned: competition in public procurement](#), p11 and 32.

⁸³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p8.

⁸⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p7.

⁸⁵ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p69.

⁸⁶ Note of meeting with Translink [§].

Costs involved to enter the market

- A.97 Firms entering the civil engineering market for public road and rail unavoidably incur costs, including the cost of putting a production process in place. Therefore, we considered whether the nature of these costs, including the extent to which they are unrecoverable (or otherwise 'sunk'), has a strong impact on the ability of suppliers to enter this market.
- A.98 11 out of 14 Tier 1 and Tier 2 firms considered costs involved to enter the market a moderate or significant barrier.⁸⁷ Where respondents provided specific examples of activities that incurred high costs, these were accreditation, legal compliance, resources to plan bids, and investments in capital.⁸⁸ Breedon noted that it can take several years to recover the investment cost in necessary materials or equipment for a job, but the project duration may be shorter and this makes it difficult for new entrants to compete.⁸⁹ However, we have also heard evidence that the costs to enter the market are only a moderate barrier, with Network Rail's own analysis indicating that suppliers can avoid exceptional capital investment by renting machinery and equipment.⁹⁰
- A.99 Taken together, the evidence suggests that there are costs, including some sunk costs, to enter the market. Many, though not all, of these relate to costs for bidding or meeting regulatory requirements.

Economies of scale and scope

- A.100 Economies of scale arise when larger companies achieve a lower cost per unit of output, eg by spreading the fixed costs of specialist plant and equipment over a greater volume of activity. They may form a particular barrier to entry if the size of the civil engineering market for public road and rail infrastructure is small relative to the minimum efficient scale. Similar considerations apply to economies of scope, which arise where producing two (or more) products or services is less costly for a single firm than for two (or more) firms each to produce the products or services separately.
- A.101 8 out of 13 Tier 1 and Tier 2 suppliers viewed economies of scale as a moderate or significant barrier to entry.⁹¹ For example, Kier commented that in certain cases larger firms may benefit from lower unit costs and broader service offerings, which means they may be more competitive on price, capability, and social value obligations.⁹² With respect to both economies of scale and economies of scope, a

⁸⁷ Responses to the CMA's information requests [§§].

⁸⁸ Responses to the CMA's information requests [§§].

⁸⁹ Breedon's response to the CMA's information request [§].

⁹⁰ Network Rail's response to the CMA's information request [§§].

⁹¹ Responses to the CMA's information requests [§§].

⁹² Kier's response to the CMA's information request [§§].

Tier 1 supplier noted major contracts require multi-region, multi-asset delivery, and this favours larger suppliers that can deliver on a national basis.⁹³

- A.102 Others mentioned that the lack of opportunity to achieve economies of scale can act as a barrier.⁹⁴ For example, Skanska reported that it is more difficult to secure supply chain support if work volumes are low,⁹⁵ while Morgan Sindall noted that smaller, fragmented work packages, such as local authority renewals, can be unattractive to larger providers and inaccessible to smaller ones.⁹⁶ Amco Giffen, who said this was a significant barrier, reported that economies of scale do not feature heavily within the current rail market for renewal and maintenance projects because of factors including disparate procurement, schemes being deferred into the next control period (CP8), and the pause of enhancement work limiting opportunities to build economies of scale.⁹⁷
- A.103 Not all firms viewed economies of scale as a barrier. Amey told us that this is not a barrier because different types of firms (in term of size and financial standing) will deliver different sized projects, and consortiums and joint ventures also exist for smaller firms who lack the necessary financial standing to tender for projects by themselves.⁹⁸
- A.104 In sum, the evidence suggests that there are economies of scale in the market, but these do not prevent smaller firms competing for at least some types of work. However, it may be more difficult for firms to achieve the necessary scale to serve larger or more complex projects.

Limited access to inputs

- A.105 The construction and maintenance of public road and rail infrastructure by civil engineering firms requires access to key inputs, including specialist labour and raw materials (such as cement, concrete, and steel). In rail, there are some significant input-related barriers due to specialist requirements for skilled labour and machinery.⁹⁹ A Tier 1 firm told us that major enhancement programmes in the rail market can also create shortages of key resources.¹⁰⁰ Morgan Sindall said that a lack of pipeline visibility in road and rail programmes makes it more difficult to invest in and manage resource and material requirements.¹⁰¹ BAM Nuttall also said long-term visibility, clarity, and confidence in future pipeline enable Tier 1

⁹³ Response to the CMA's information request [§].

⁹⁴ Responses to the CMA's information requests [§].

⁹⁵ Skanska's response to the CMA's information request [§].

⁹⁶ Morgan Sindall's response to the CMA's information request [§].

⁹⁷ Amco Giffen's response to the CMA's information request [§].

⁹⁸ Amey's response to the CMA's information request [§].

⁹⁹ Responses to the CMA's information requests [§].

¹⁰⁰ Response to the CMA's information request [§].

¹⁰¹ Morgan Sindall response to the CMA's information request [§].

organisations to flow this information down through the supply chain ecosystem to enable better coordination of resource and material requirements.¹⁰²

- A.106 However, multiple Tier 1 and Tier 2 firms do not consider access to sources of supply as a significant barrier, particularly for public road projects.¹⁰³ Two Tier 1 firms said suppliers were widely accessible due to a well-established network of suppliers, one referring to the English market and the other to the UK market.¹⁰⁴ There was more consensus around regional variation in road and rail. Multiple Tier 1 and Tier 2 firms consider accessing suppliers as a significant barrier in less accessible regions of the UK.¹⁰⁵
- A.107 Overall, on the basis of our relatively limited evidence gathering on this issue, the evidence is mixed on whether there are challenges with access to inputs. However, it could be a greater barrier for some types of project, such as major rail projects or those taking place in less accessible parts of the UK.

Supply chain structure

- A.108 In a market that works well, we would expect individual firms to arrange their supply chain structures to optimise delivery, which will impact the extent to which they subcontract, have close collaborations with partner organisations, or self-deliver, depending on relative costs and benefits of different models for different projects or types of work. However, firms respond to signals and actions from public authorities – such as the history of stop-start public investment in the UK, which raises the perceived risk of investing in internal delivery capacity – which can make the degree of subcontracting that is optimal for firms higher than that which would be optimal from the perspective of the market as a whole.
- A.109 A factor which is cited by many observers as a driver of poor outcomes in the civil engineering market for public road and rail projects is the supply chain structure we see in the UK, in particular the degree of fragmentation. For example, the NIC has highlighted numerous challenges for the delivery of projects which arise from the current supply chain structure.¹⁰⁶
- A.110 This proposition is often put forward citing international comparisons with countries with less fragmented structures. However, we are cautious about relying on such comparisons to suggest the UK is an outlier in its fragmentation or that this is the ultimate cause of poorer outcomes. CMA analysis of ONS and Eurostat data of the UK against eight large EU economies suggests that the UK is about average when it comes to the proportion of large firms operating in the market but has an above

¹⁰² BAM Nuttall's response to the CMA's information request [§].

¹⁰³ Responses to the CMA's information requests [§].

¹⁰⁴ Responses to the CMA's information requests [§].

¹⁰⁵ Responses to the CMA's information requests [§].

¹⁰⁶ NIC (2004) [Cost drivers of major infrastructure projects in the UK](#), p36.

average proportion of micro sized firms. Moreover, previous studies have found some other countries outperform the UK in terms of some outcomes¹⁰⁷ but this is not always the case, and international peers also face challenges in the efficient delivery of infrastructure costs – which suggests less fragmentation in and of itself is unlikely to be a panacea. We therefore do not place much weight on international comparisons in indicating what the best structure for the UK market may be.

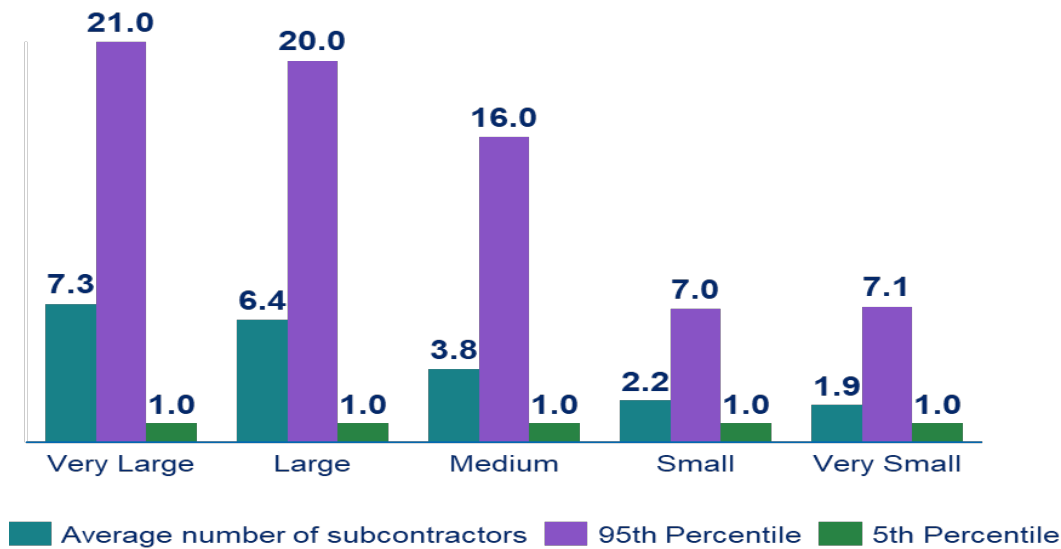
A.111 The CMA carried out analysis using the Barbour ABI dataset to review subcontracting activity for the top 10 Tier 1 firms between 2016 and 2025.¹⁰⁸ We represent this analysis in figures A.11 and A.12 for road and railway contracts respectively. The data revealed:

- (a) A strong positive correlation between project size and the number of subcontractors – projects with higher contract values had more subcontractors and projects with lower contract values had fewer. There were fewer subcontractors on rail projects compared with road projects, which the CMA believes may be due to smaller project sizes with more tightly defined scopes.
- (b) Some level of self-subcontracting (subcontracting to its own subsidiary) by all of these Tier 1 firms, indicating some vertical integration down the supply chain. These firms self-subcontracted on 14% of road projects on average and 16% of rail projects on average, but this figure was over 30% for two Tier 1s in rail and for one Tier 1 in road.
- (c) At least 75% of the top 10 Tier 1 players' subcontractors did not work with other Top 10 Tier 1 players across the period. While a portion of these subcontractors (between 2-18% per Tier 1 firm) are subsidiaries of the Tier 1 players, this evidence strongly suggests that firms have preferred subcontractors.

¹⁰⁷ NIC (2004) [Cost drivers of major infrastructure projects in the UK](#), p36; BCG (2024), [Reshaping British Infrastructure: Global lessons to improve project delivery](#).

¹⁰⁸ The results here are based on nine of the ten top Tier 1 players because one did not have any qualifying projects for the analysis.

Figure A.11: Road: Number of subcontractors by contract value size (mean average, 95th percentile, 5th percentile)



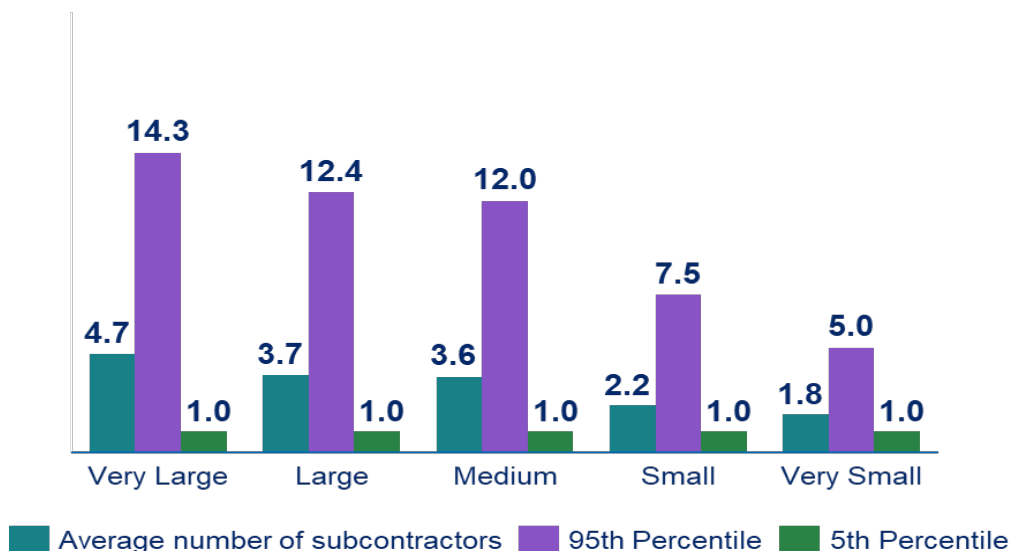
Source: CMA analysis of Barbour ABI data

Notes:

(1) Contains 1,643 road contracts where the number of subcontractors were ≥ 1 .

(2) Contract value definitions: Very Large: >GBP10 million, Large: >GBP5 million, Medium: >GBP1 million, Small: >GBP500 thousand, Very Small: <GBP500 thousand.

Figure A.12: Railway: Number of subcontractors by contract value size (mean average, 95th percentile, 5th percentile)



Source: CMA analysis of Barbour ABI data

Notes:

(1) Contains 112 railway contracts where the number of subcontractors were ≥ 1 .

(2) Contract value definitions: Very Large: >GBP10 million, Large: >GBP5 million, Medium: >GBP1 million, Small: >GBP500 thousand, Very Small: <GBP500 thousand

A.112 In this section, we have sought to understand what is driving the use of subcontracting and explored two mechanisms through which poor outcomes may be driven:

- (a) There is insufficient competition between subcontractors, or competition is not focussed on the right parameters, so there is not enough focus on innovation and quality in the supply chain.
- (b) Subcontracting in itself is driving inefficiencies by introducing a range of additional costs and risk, reducing the ability of firms to bear the costs of investment and take on risk, and dividing responsibility for cost and quality control, risk management, and other factors, which undermines the ability for suppliers to deliver effectively and efficiently.

How subcontracting affects the market

Competition between subcontractors

- A.113 The CMA has sought to understand how well competition is working amongst subcontractors in this market by gathering views from a sample of Tier 1 and Tier 2 firms. We also procured qualitative market research to gather views from additional Tier 2 and Tier 3 firms.¹⁰⁹
- A.114 The CMA asked Tier 2 firms to identify the key parameters on which they compete and the strength of competition which they face. The majority of Tier 2 firms we contacted identified price as a key parameter of competition,¹¹⁰ although several other factors were also mentioned including quality, reputation, availability of resources, and sustainability credentials.¹¹¹ All Tier 2 firms we contacted said they had at least one strong competitor in the market.¹¹²
- A.115 The CMA asked Tier 1 and Tier 2 firms about how they select subcontractors. Among firms we contacted, multiple Tier 1 firms and one Tier 2 firm outlined that they typically target at least three bids to evaluate when they subcontract for a project¹¹³, although most firms were able to identify circumstances where they had to choose from fewer suppliers. The most cited reasons for a reduced choice of suppliers were
- (a) cases where the client mandates the use of a particular subcontractor or has a preferred supply chain¹¹⁴ and

¹⁰⁹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#).

¹¹⁰ Responses to the CMA's information requests [REDACTED].

¹¹¹ Responses to the CMA's information requests [REDACTED].

¹¹² Responses to the CMA's information requests [REDACTED].

¹¹³ Responses to the CMA's information requests [REDACTED].

¹¹⁴ Responses to the CMA's information requests [REDACTED].

- (b) where there are specialist requirements, for example, in terms of skills or equipment.¹¹⁵ This latter point was cited more frequently in relation to rail than road.

- A.116 We heard different reasons for clients mandating or preferring a particular subcontractor. Two Tier 1 firms, Murphy and Amey, said a client might mandate the use of a particular subcontractor or have a preferred supply chain due to the nature of the client's product specifications.¹¹⁶ Kier told us that some of its clients have a pre-selected list of suppliers for certain types of services in accordance with Category Purchase Agreements which cover specific areas such as surfacing, ground investigation or archaeology.^{117,118}
- A.117 When we asked Tier 1 and Tier 2 firms how they selected subcontractors, most Tier 1 firms we contacted¹¹⁹ and two out of seven Tier 2 firms we contacted said they operate a two-stage selection process that consists of a pre-qualification or screening stage and a project selection stage.¹²⁰ Pre-qualification is usually determined using standard criteria including accreditations, financial stability, safety and environmental performance.¹²¹ HIVE told us that this pre-qualification process can create big overheads for SMEs before they subsequently compete for work.¹²²
- A.118 At project selection stage, most Tier 1 firms we contacted said they make use of competitive selection processes when choosing subcontractors.¹²³ This was cited as the most common or default selection option by multiple firms.¹²⁴ Multiple firms referred to cost efficiency as an advantage of competitive selection processes.¹²⁵ For more complex, high risk or high value contracts, multiple Tier 1 firms said they also use collaborative approaches or alliance arrangements¹²⁶ which Skanska said allow for early engagement and innovation, and Kier said may allow for the sharing of specialist skills.¹²⁷ We also heard from a sector panel member that these

¹¹⁵ Responses to the CMA's information requests [§].

¹¹⁶ Murphy's response to the CMA's information request [§]; Amey's response to the CMA's information request [§].

¹¹⁷ Kier's response to the CMA's information request [§].

¹¹⁸ A Category Purchase Agreement is a contract (including framework agreements and dynamic purchase systems) which is established by the client for common requirements across its asset management and wider expenditure plan under which the consultant and others may enter into contracts with Category Suppliers (suppliers appointed by a Category Purchase Agreement). They may be used for the bulk purchase of materials, works or services. See National Highways (2021), [National Highways Limited: Defined Terms, Annex 01](#); and Highways England (2015), [Collaborative Delivery Framework](#).

¹¹⁹ Responses to the CMA's information requests [§].

¹²⁰ Responses to the CMA's information requests [§].

¹²¹ Responses to the CMA's information requests [§].

¹²² Note of meeting with HIVE [§].

¹²³ Responses to the CMA's information requests [§].

¹²⁴ Responses to the CMA's information requests [§].

¹²⁵ Responses to the CMA's information requests [§].

¹²⁶ Collaborative approaches involve closer working and integration between parties on a project, including for example through ECI, and are thought to achieve greater alignment of objectives between parties compared with traditional delivery models. An alliance is a contractual arrangement where all parties agree to cooperate and share risk and reward, measured against agreed performance indicators. ICE (2024), [Explainer: Six collaborative models set to transform infrastructure delivery](#).

¹²⁷ Skanska response to the CMA's information request [§]; Kier's response to the CMA's information request [§].

collaborative arrangements help SMEs engage with larger clients and get familiar with their values, expectations and processes.¹²⁸ Amey told us that although its standard approach is to use a competitive process to appoint suppliers, it may also directly award a contract to a specific supplier in certain limited circumstances, for example, where it believes a particular organisation has a unique capability.¹²⁹ Murphy also said it may directly award a contract to a specific supplier in certain circumstances, for example, where existing knowledge and relationships with key stakeholders on the project would generate efficiency benefits given their knowledge of the project.¹³⁰

- A.119 There is some evidence that pre-existing relationships play a part in the selection process. A Tier 1 firm stated that it uses focused, long-term relationships with a smaller number of trusted delivery partners to best achieve value, safety, and programme certainty. Multiple Tier 2 firms mentioned the importance of developing relationships with their subcontractors. Breedon said it generally selects subcontractors from a trusted pool that it has worked with for several years while A E Yates noted it has trusted trading relationships with key suppliers and will select suppliers to tender, in part, based on existing trading relationships.¹³¹ This aligns with the observation from the Barbour ABI data that Tier 1 firms have preferred subcontractors they have worked with over time.
- A.120 The CMA market research with Tier 2 and Tier 3 suppliers considered several specific aspects of bidding that informed our view about competition between subcontractors:
- (a) Several firms are normally accepted onto a framework (or onto each Lot), so there is still competition for contracts awarded through the framework call-off process, except where firms are so specialist that they have little or no competition for their type of service.¹³²
 - (b) They also reported that the decision to bid is influenced by any previous experience with the public authority or contractor higher up the supply chain and the strength of the working relationship with any key individuals or team members. Additionally, they will consider whether an incumbent or regular supplier is already in place that they would need to outperform before deciding to bid.¹³³
 - (c) They reported that fewer and more uncertain contracts and increased requirements to qualify to bid can make it feel harder for smaller firms to

¹²⁸ Note of meeting with the sector panel [§].

¹²⁹ Amey's response to the CMA's information request [§].

¹³⁰ Murphy's response to the CMA's information request [§].

¹³¹ Responses to the CMA's information requests [§].

¹³² Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p52.

¹³³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p39.

compete and puts pressure on pricing.¹³⁴ We interpret this is a downward pressure, where firms are lowering their prices to increase their chances of winning the fewer available contracts.

Conclusions on competition between subcontractors

- A.121 Taken together, the evidence we have considered suggests that Tier 1 firms tend to make use of competitive selection practices when choosing subcontractors, and that this is a means by which they drive cost efficiency. Firms compete for these opportunities on price primarily, but also on a range of other competitive parameters. Those firms that commented on the number of bidders they aim for said they targeted at least three (although we note that having multiple bidders is a necessary but not sufficient condition for effective competition).
- A.122 Competition may be softened by the importance of relationships in this market, both between contractors at different levels of the supply chain, and between subcontractors and the public authority: we heard that contracting firms are sometimes directed by the public authority to subcontract to a particular firm, which reduces the scope for competitive tendering. Competition may also be reduced in instances where only a small number of suppliers have the requisite skills and equipment, which happens more frequently in rail than road procurement.

The impact of subcontracting on project outcomes

- A.123 This section reviews the evidence on the potential negative impacts of subcontracting and how these are mitigated. It also reviews evidence on the potential benefits of subcontracting.
- A.124 Drawing on our stakeholder engagement and relevant literature, we have identified the most common ways that the structure of the supply chain in this market could inhibit good market outcomes. These include:

Challenges in coordinating across subcontractors

- (a) Multiple Tier 1 firms said that subcontracting can create coordination challenges when dealing with multiple layers in the supply chain.¹³⁵ For example, Amco Giffen told us that a disadvantage of involving more subcontractors is that it increases the number of interfaces, handovers, and coordination points which can compromise communication, create delays, and heighten delivery risk.¹³⁶

¹³⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p32.

¹³⁵ Responses to the CMA's information requests [X].

¹³⁶ Amco Giffen's response to the CMA's information request [X].

- (b) Two public authorities, Network Rail and National Highways, said subcontracting can create challenges around coordination across multiple contractors.¹³⁷
- (c) Related to this, the Welsh Government told us it can make it difficult for procuring authorities to get access to Tier 2 and Tier 3 firms, for example, to discuss problem-solving or innovative solutions,¹³⁸ and Transport Scotland said the desire for a public authority to work with a single point of contact can create barriers for SMEs (including specialist firms) to compete on major contracts.¹³⁹

The application of margins by each individual firm at different tiers of the supply chain.

- (d) Multiple Tier 1 and Tier 2 firms said that subcontracting can create cost increases due to the application of margins at multiple rather than single points in the supply chain.¹⁴⁰
- (e) Multiple Tier 1 firms and one Tier 2 firm also said that subcontracting can result in cost increases due to the duplication of overheads.¹⁴¹
- (f) Network Rail told us that subcontracting creates multiple layers of overheads and profits.¹⁴²
- (g) There is some evidence to suggest that additional costs due to subcontracting could be high. An unpublished analysis of two large building projects by the Institution of Civil Engineers (ICE) found that management costs, overheads, and transaction costs could amount to 50% of the final price paid by the client. ICE considers that a significant proportion of such costs are transaction costs incurred at all levels in the supply chain.¹⁴³ It stated that these costs could be significantly reduced by streamlining design and project management and through long-term relationships with suppliers that enable them to reduce their overheads. It further stated more efficient management of programmes could reduce overall costs by as much as 20%.¹⁴⁴

¹³⁷ Responses to the CMA's information requests [§].

¹³⁸ The Welsh Government's response to the CMA's information request [§].

¹³⁹ Transport Scotland's response to the CMA's information request [§].

¹⁴⁰ Responses to the CMA's information requests [§].

¹⁴¹ Responses to the CMA's information requests [§].

¹⁴² Network Rail's response to the CMA's information request [§].

¹⁴³ Project 13 and ICE (2017), [From Transactions to Enterprises: A new approach to delivering high performing infrastructure](#), p14.

¹⁴⁴ Project 13 and ICE (2017), [From Transactions to Enterprises: A new approach to delivering high performing infrastructure](#), p12.

Difficulties in implementing uniform standards across multiple subcontractors

- (h) Multiple Tier 1 and Tier 2 firms said that subcontracting can cause the dilution or misalignment of standards.¹⁴⁵ For example, Amco Giffen said that larger supply chains can dilute safety culture, quality standards, and consistency, making it harder to drive aligned behaviours and continuous improvement.¹⁴⁶
- (i) National Highways said subcontracting can create inconsistent standards.¹⁴⁷

- A.125 Multiple firms stated a preference to self-deliver where possible, although only two Tier 1 firms, Laing O'Rourke and Murphy, said they self-deliver the majority of their work.¹⁴⁸ Murphy said that self-delivery allows it to keep full control of the programme, delivery, and costs.¹⁴⁹ Laing O'Rourke said it delivers 50-70% through its own in-house businesses to ensure programme certainty, mitigation of interface risks, and optimised value.¹⁵⁰
- A.126 Multiple Tier 1 firms went on to tell us that they have measures in place to mitigate subcontracting inefficiencies.¹⁵¹ One Tier 1 firm, Morgan Sindall, told us these include transparent tendering and benchmarking to keep overhead and profit margins within industry norms, target cost contracts with pain/gain mechanisms and detailed cost breakdown requirements.¹⁵² Amco Giffen and Laing O'Rourke told us these include careful selection processes, and Amco Giffen told us these include using repeated delivery models.¹⁵³ Another Tier 1 firm told us it includes continuous engagement on site.¹⁵⁴
- A.127 Although the majority of national public authorities, as well as Tier 1 and Tier 2 firms, that we have engaged with said the structure of the supply chain can lead to inefficiencies, multiple responses to our interim report said it did not inherently drive poor outcomes.¹⁵⁵ For example, Skanska told the CMA that supply chain fragmentation can create challenges, but it does not consider subcontracting itself to be the source and said that it is a rational and efficient adaptation to the market described in the CMA's interim report.¹⁵⁶ Similarly, CECA told the CMA that while

¹⁴⁵ Responses to the CMA's information requests [§]; [Murphy's response](#) to the CMA's invitation to comment, question 6.

¹⁴⁶ Amco Giffen's response to the CMA's information request [§].

¹⁴⁷ National Highways' response to the CMA's information request [§].

¹⁴⁸ Laing O'Rourke response to the CMA's information request [§]; Note of meeting with Murphy [§]; Responses to the CMA's information requests [§].

¹⁴⁹ Murphy's response to the CMA's information request [§].

¹⁵⁰ Laing O'Rourke's response to the CMA's information request [§].

¹⁵¹ Responses to the CMA's information requests [§].

¹⁵² Morgan Sindall's response to the CMA's information request [§].

¹⁵³ Laing O'Rourke response to the CMA's information request [§]; Amco Giffen's response to the CMA's information request [§].

¹⁵⁴ Response to the CMA's information request [§].

¹⁵⁵ [Skanska](#), [CECA](#), [M Group](#), [Amey](#), [Balfour Beatty](#), [BAM Nuttall](#), [SCAPE](#), [Kier](#) and [Mott MacDonald's](#) responses to the CMA's interim report, question 2.

¹⁵⁶ [Skanska's response](#) to the CMA's interim report, p5.

supply chain fragmentation in some circumstances can contribute to sub-optimal outcomes, it believes this is a symptom rather than a root cause.¹⁵⁷

Potential benefits to subcontracting

- A.128 We have also observed a number of benefits to subcontracting. National public authorities identified a number of advantages to subcontracting, including helping to transfer more risk away from the client and allowing access to skills and resources.¹⁵⁸ They also said it provides opportunities to SMEs and local suppliers and can increase competition amongst subcontractors.¹⁵⁹ Transport Scotland told us it can be efficient for the client to have a single Tier 1 point of contact and National Highways told us that subcontracting is essential to its delivery model.¹⁶⁰
- A.129 Most Tier 1 and Tier 2 firms we contacted told us that there are some advantages to subcontracting. The most commonly cited reasons were:
- (a) It allows access to specialist skills, local knowledge, or assets that the firm may not have had available in-house.¹⁶¹ For example, BAM Nuttall told us subcontracting certain work packages supports access to specialist skills and resource, enables greater social value through access to local supply chain ecosystems and strengthens resilience through pipeline peaks and troughs.¹⁶²
 - (b) It allows firms to more flexibly allocate resource to contracts.¹⁶³ For example, BAM Nuttall told us it allows for flexibility in delivery as it can reallocate and redistribute work packages across the supply chain.¹⁶⁴
 - (c) It supports competition amongst the subcontracting firms.¹⁶⁵ For example, Morgan Sindall said that subcontracting fosters competitive tension, encourages competitive pricing, and drives innovation and lean working practices.¹⁶⁶
- A.130 Responses to our interim report also agreed that there are advantages to subcontracting. For example, Balfour Beatty said that in many cases fragmented supply chains improve resilience and competition,¹⁶⁷ Mott MacDonald said it is

¹⁵⁷ [CECA's response](#) to the CMA's interim report, question 2, p3.

¹⁵⁸ Responses to the CMA's information requests [§].

¹⁵⁹ Responses to the CMA's information requests [§].

¹⁶⁰ Transport Scotland's response to the CMA's information request [§]; National Highways' response to the CMA's information request [§].

¹⁶¹ Note of meeting with the sector panel [§]; Responses to the CMA's information requests [§].

¹⁶² BAM Nuttall's response to the CMA's information request [§].

¹⁶³ Responses to the CMA's information requests [§]; Note of meeting with [§]; [Mott MacDonald's response](#) to the CMA's invitation to comment, question 6.

¹⁶⁴ BAM Nuttall's response to the CMA's information request [§].

¹⁶⁵ Responses to the CMA's information requests [§]; Notes of meetings with [§].

¹⁶⁶ Morgan Sindall's response to the CMA's information request [§].

¹⁶⁷ [Balfour Beatty's response](#) to the CMA's interim report, question 2.

often a deliberate and value-adding strategy,¹⁶⁸ and SCAPE told us that use of specialist suppliers can support better value for money when projects are set up correctly.¹⁶⁹

Conclusions on the costs and benefits of subcontracting

- A.131 The evidence on costs and benefits of subcontracting, considered in the round, suggests that there are a number of disadvantages to the market operating in this way, including the additional coordination challenges it creates, the accumulation of multiple margins and overheads along the supply chain potentially leading to higher overall costs, and the difficulty in ensuring a consistent culture and high standards across all project participants. We note that firms do work to mitigate these inefficiencies through contract and relationship management with subcontractors; this is also likely to be a factor behind the importance of relationships in choice of subcontractors noted earlier.
- A.132 The evidence also suggests there are many benefits to firms and public authorities of subcontracting. Firms told us that it means they access (and pay for) specialist skills and assets only when they need them, creates a competitive ecosystem down the supply chain, and affords the contracting firm additional flexibility and resilience. We note, however, that this additional flexibility is more valuable given the uncertain environment within which suppliers operate.

Drivers for the use of subcontracting

- A.133 To understand how the current market structure has evolved, we sought views from Tier 1 and Tier 2 firms through requests for information and calls on how they decide between in-house and subcontracted delivery. Reasons to subcontract were closely related to the advantages listed above, as well as reducing or sharing risk and helping to accelerate delivery.¹⁷⁰
- A.134 Multiple parties have pointed to pipeline visibility as an influence on the level of subcontracting in the market:
- (a) Morgan Sindall told us that poor pipeline visibility is part of the reason it uses subcontractors to deliver contracts for railway and public road infrastructure, as engaging the supply chain creates a more flexible and responsive workforce.¹⁷¹
 - (b) Some sector panel members said that greater certainty of work would encourage more consolidation and in-housing of labour by Tier 1 firms, while

¹⁶⁸ [Mott MacDonald's response](#) to the CMA's interim report, question 2.

¹⁶⁹ [SCAPE's response](#) to the CMA's interim report, question 2.

¹⁷⁰ Responses to the CMA's information requests [38].

¹⁷¹ Morgan Sindall's response to the CMA's information request [38].

another said it would enable a positive business case to be made for greater in-sourcing of labour by Tier 1s.¹⁷²

- (c) Another sector panel member also said that more granular pipeline visibility provides valuable time for SMEs to prepare. This is vital in disaggregated procurement to remove barriers and open up opportunities for SMEs.¹⁷³
- (d) Story Contracting said that investment in self-delivery is restricted by the lack of long-term visibility and certainty of future workload.¹⁷⁴
- (e) In response to our interim report, multiple stakeholders stated that pipeline uncertainty is a driver of fragmentation in the market.¹⁷⁵ Amey told the CMA that it does not see supply chain fragmentation as materially contributing to poor outcomes. To the extent that subcontracting may be used to excess within the market, any solution must address the lack of clear and credible long-term pipeline visibility and funding uncertainty.¹⁷⁶ ACE said that supply chain fragmentation contributes to inefficiencies, misaligned risk, and poorer outcomes and that addressing these issues requires better pipeline clarity, fair risk allocation, early engagement with suppliers and regional pooling of procurement expertise.¹⁷⁷ CECA told the CMA that its members consistently report that forward visibility of work enables firms to optimise delivery.¹⁷⁸

A.135 Commenting on infrastructure more generally, the NIC has also reported that the uncertain investment environment without a clear pipeline of contracts has contributed to the current fragmentation.¹⁷⁹ From a series of case studies on infrastructure generally, BCG identified fragmentation as one of 12 key drivers leading to poorer delivery and efficiency of projects. Their report outlines an example of good practice in developing cohesive supply chains focused on building a solid pipeline of future work to enable investment and development of skills in the supply chain with the confidence there would be future long-term work to use them. This indicates that the current supply chain structure may be a symptom of wider issues, rather than the ultimate cause.¹⁸⁰

¹⁷² Note of meeting with the sector panel [§].

¹⁷³ Note of meeting with the sector panel [§].

¹⁷⁴ Story Contracting's response to the CMA's information request [§].

¹⁷⁵ M Group, Laing O'Rourke, Balfour Beatty, Amey, Kier, RIA, Costain, ACE and Mott MacDonald's responses to the CMA's interim report, question 2.

¹⁷⁶ Amey's response to the CMA's interim report, question 2.

¹⁷⁷ ACE's response to the CMA's interim report, question 2.

¹⁷⁸ CECA's response to the CMA's interim report, question 2.

¹⁷⁹ NIC (2024), [Cost Drivers of Major Infrastructure Contracts in the UK](#), p36.

¹⁸⁰ More specifically, BCG drew on South Korea's nuclear programme, which builds 'fleets' of reactors rather than individual ones. This enables a solid supply chain, development of skills and expertise, and private construction firms to invest in capital and skills, knowing there will be long-term work available. Its proposals for improving infrastructure delivery in the UK focused less on supply chain structure in itself and more on collaboration, better client behaviours to reduce risk, and setting a bold long-term agenda to improve certainty and consistency. BCG (2024), [Improving Infrastructure Delivery in the UK](#).

A.136 Responses to our interim report identified a number of other factors which influence the level of subcontracting, but all of these factors were less frequently cited than pipeline uncertainty. Factors mentioned included inappropriate risk transfer practices, which, for example, encourage firms to subcontract to manage risk through their supply chains rather than carry in-house capability, and administrative burdens. This may be because these administrative burdens use up resource and limit ability to grow and expand the business. Responses also mentioned procurement practices which prioritise transactional over collaborative behaviour or which fail to distinguish between self-delivery and management contracting.¹⁸¹

Public authority pipelines

A.137 Table A.19 sets out a summary of the information available on different pipelines, which we consider would be important for suppliers in determining their future bidding plans and resource allocation. The table shows the availability of information on:

- (a) Procurement status: stage of procurement the project has reached
- (b) Tender process: what tender process is being used to procure the project and its current status
- (c) Budget: forecast capital, renewal and/or maintenance costs for the project
- (d) Funding: status and source of funding
- (e) Workforce demand: estimate of the future workforce demand required to deliver planned investment
- (f) Planning process: what stage of the planning process the project has reached and what approvals are still required
- (g) Process Timings: dates for project to begin and conclude
- (h) Regular pipeline refresh: whether the pipeline is updated on a regular basis
- (i) Breakdown by sector: which sector the project is in (eg transport, energy)
- (j) Breakdown by region: where in the country the work is to take place

¹⁸¹ Balfour Beatty, RIA, ACE, CECA, and Mott MacDonald's responses to the CMA's interim report, question 2.

Table A.19: Summary of information available in the main pipelines across the UK

	Procurement status	Tender process	Budget	Funding	Workforce demand	Planning process	Process Timings	Regular pipeline refresh	Breakdown by sector	Breakdown by region
NISTA Infrastructure Pipeline [UK]	✓	✗	✓	✓	✓	✗	✓	✓	✓	✓
Scottish Futures Trust Construction Pipeline Forecast [Scotland]	✗	✗	✓	✓	✗	✗	✓	✓	✓	✓
National Procurement Service Pipeline [Wales]	✗	✗	✓	✗	✗	✗	✓	✗	✓	✗
Construction and Procurement Delivery Procurement Pipeline [Northern Ireland]	✗	✗	✓	✗	✗	✗	✓	✓	✗	✗

Source: NISTA, Scottish Futures Trust, National Procurement Service Pipeline, Construction and Procurement Delivery Procurement Pipeline

Public authority capacity and coordination constraints

Capacity constraints for rail and public road

A.138 Access to the right resources and expertise is fundamental to the successful delivery of infrastructure projects. There is a growing skills shortage in construction, including civil engineering, which is well documented.¹⁸² This has been driven by a combination of factors including an ageing workforce, a lack of new graduates in the field, and increasing global competition for talent. By way of an example, research by the LGA identified recruitment and retention challenges across all civil engineering roles and grades, with these being particularly evident in key technical and specialist areas including highways, traffic and traffic signals.¹⁸³ Throughout our market study, we have been told that these resource constraints can affect both firms and public authorities.

A.139 Capacity constraints can manifest in different ways including: the availability of sufficient staff, particularly those with specific skills; and the availability of time to invest in activities which will make the end-to-end process run more efficiently and effectively. We have identified concerns over the ability of public authorities to attract and retain sufficient staff with the necessary technical skills to manage different aspects of the procurement process effectively, such as having the

¹⁸² See for example DfE (2025), [Skills England: Sector skills needs assessments, Construction](#); and New Civil Engineer (2025), [The intense pressure of skills shortages within the UK construction sector](#). According to Department of Education research, there were 5,900 skills shortage vacancies in civil engineering registered in 2024, an 84 per cent rise from 2022. DfE, [Step 6: Explore data - Create your own tables on employer skills survey](#).

¹⁸³ LCA, [Local Government Civil Engineering Workforce Strategy and Action Plan](#), accessed on 01/04/26.

relevant knowledge and technical skills to set out project requirements;¹⁸⁴ and having the necessary commercial expertise to determine the appropriate allocation of risk.¹⁸⁵

- A.140 There may be certain factors which exacerbate resource constraints in relation to public road and rail procurement. As in other professions requiring specialist expertise, restrictions on pay rates can make it difficult to recruit and retain specialists.¹⁸⁶ Public authorities may also not be able to justify retaining significant numbers of skilled staff where there are long periods during which that expertise is not being used, and so contribute to resource constraints when such expertise is needed.^{187 188}
- A.141 Time is another significant constraint. In particular, if a public authority has a short period of time to spend a budget allocation, it may not be able to dedicate sufficient time to planning and scoping the work. Multiple public authorities told us that annual capital budgets can constrain planning and procurement activities.¹⁸⁹ ADEPT noted that local authority annual capital budgets are sometimes only confirmed shortly before the funding is available for use, and must then be used within a short window, making it difficult to plan and procure effectively.¹⁹⁰
- A.142 A further capacity challenge can arise where funding is made available for schemes that are described as ‘shovel-ready’, but where the preparatory work required to reach that stage is only funded if the scheme proceeds. This can expose public authorities to the risk that preparatory work must be funded from other constrained budgets. A member of our stakeholder panel noted that providing funding for ‘shovel ready’ schemes also incentivises public authorities to claim that plans are more developed than they actually are, resulting in the early stages of the project being condensed.¹⁹¹ As noted elsewhere, investing sufficient time in upfront scoping is critical to later effective delivery of projects.
- A.143 Capacity constraints affect different authorities to different extents. Capability reviews undertaken by ORR in preparation for the third road period indicate that National Highways has sufficient commercial capability and capacity but may need to build further civil engineering capability and capacity, due to a shortage of skilled engineers and competition from other sectors for them, as well as initiatives by National Highways to bring more functions in-house and increase forecast

¹⁸⁴ Notes of meetings with [REDACTED].

¹⁸⁵ Note of meeting with the sector panel [REDACTED].

¹⁸⁶ NIC (2024), [Cost drivers of major infrastructure projects in the UK](#), p26. [REDACTED] For example, DfI and Translink noted that Northern Ireland bodies have to compete with both GB and Ireland, which both offer higher salaries. Note of meeting with DfI and Translink [REDACTED].

¹⁸⁷ For example, while NIC noted public sector pay rates as a challenge for retaining skilled staff, it also noted ‘Even where pay flexibility exists, the start stop nature of projects can mean that client expertise is lost in the hiatus between projects.’ NIC (2024), [Cost drivers of major infrastructure projects in the UK](#), p26.

¹⁸⁸ For example, [REDACTED]. Note of meeting with [REDACTED].

¹⁸⁹ Responses to the CMA’s information requests [REDACTED].

¹⁹⁰ Note of meeting with ADEPT [REDACTED].

¹⁹¹ Note of meeting with the sector panel [REDACTED].

delivery volumes.¹⁹² It also highlighted that Independent Reporter assessments had found Network Rail's capability had improved over CP6 (April 2019 to March 2024), although it acknowledged Network Rail's capability varies across the country.¹⁹³

- A.144 Sector panel members told us resource challenges can be particularly acute for smaller local authorities,¹⁹⁴ although some such organisations consider that they have the relevant procurement expertise.¹⁹⁵ AtkinsRéalis indicated skills have atrophied in local authorities, both due to austerity and doing less complex projects, which limits their procurement and strategic planning abilities.¹⁹⁶ However, even where local authorities do have the necessary expertise, there can be a view that external expertise is more credible even where it does not add material value.¹⁹⁷ Recognising these challenges, eleven Combined Authorities have formed the Combined Authorities Infrastructure Partnership (CAIP) to explore new opportunities to enhance infrastructure deliverability, including in the areas of skills, capabilities, and resourcing.
- A.145 Tier 2 and Tier 3 participants in the CMA market research also provided their views on the capacity and skills public authorities possess when assessing bids. Suppliers reported differences in procurement capability between national public authorities and local authorities:
- (a) Some suppliers reported that National Highways has higher funding that is guaranteed for a longer period of time (in comparison with local authorities). Suppliers felt this has resulted in National Highways being able to hire technically competent procurement teams, invest in their training and retain them for longer periods of time.¹⁹⁸
 - (b) During the market research, Tier 2 and Tier 3 suppliers reported that local authority-procured projects felt less collaborative in comparison with projects procured by National Highways. There was less opportunity for engagement during the procurement process and the main focus tended to be on price over other factors. The suppliers also felt local authorities might lack in-house technical expertise and on occasion had to rely on external contractors or

¹⁹² ORR's submission to the CMA [§]. A capability review of National Highways in 2023 found it had improved its commercial and procurement management, but that there was room to improve its programme management capability and initiatives to deploy digital capabilities and repeatable production approaches. Nichols (2023), [Road Investment Strategy 3: Procurement & Project Management Capability Review](#), pp27-28. A separate capability review also found that National Highways had improved its asset management capabilities. AMCL (2023), [National Highways & Office of Rail and Road: Asset Management Capability & Efficiency Review - Final Report](#).

¹⁹³ ORR's submission to the CMA [§]. ORR highlighted the ARUP (2024), [Independent Reporter - Capital Investment Capability Framework Assessment](#). This found improved levels of maturity across the major enhancement programme and the Regions since 2020, although improvements were more significant in enhancements than renewals.

¹⁹⁴ Note of meeting with the sector panel [§].

¹⁹⁵ Note of meeting with the sector panel [§]. [§].

¹⁹⁶ Note of meeting with AtkinsRéalis [§].

¹⁹⁷ Note of meeting with [§].

¹⁹⁸ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p30.

less-experienced staff to procure work, contributing to the greater use of more simple, fixed price contracts.¹⁹⁹

A.146 We note that public authorities have adopted varying approaches to managing capacity constraints, each involving their own set of trade-offs:

- (a) External consultants can be an effective means of sourcing short-term and specialist input, eg on project design. However, there can be a risk that public authorities do not retain enough continuity of expertise to critically assess and, where necessary, challenge information being provided by suppliers.²⁰⁰
- (b) Resource constraints can also influence the choice of procurement method as, for example, an open procedure can be more time consuming to run than awarding a contract via an existing framework. For example, Network Rail submitted that open, competitive procurement is more resource-intensive and slower.²⁰¹ This can create a bias towards procurement methods that save time, rather than those that generate the best outcomes.
- (c) Limited access to in-house specialists can also affect the evaluation model, with less weight given to quality and other criteria that are more difficult and resource intensive to assess. In response to our interim report, multiple stakeholders stated that better training for evaluators would enable them to evaluate bids against non-price criteria in a more meaningful way.²⁰²
- (d) If public authorities have limited time and resources, they may be more inclined to work with incumbent firms so as to reduce the need to invest in establishing new relationships and ways of working. In a similar way, public authorities may choose larger suppliers that have the means to take on a greater role in managing delivery across the supply chain. For example, one local authority told us that one of the benefits of contracting a Tier 1 supplier is that they can take on a greater role in managing risk across the supply chain.²⁰³

A.147 Throughout our market study, we have also learnt that capacity constraints on the supply side can affect outcomes. Pipeline uncertainty is a key driver, and we have previously set out how this can impinge suppliers' ability to plan and invest in their operations. Multiple responses to our interim report also referenced how 'peaks

¹⁹⁹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p36.

²⁰⁰ For example, NIC (2024) highlights the example of the Elizabeth Line, where the client, Crossrail Ltd, did not sufficiently interrogate the information received from contractors on a complex scheme. As a result, it was unaware of problems with both construction and the integration of the project with existing railway signalling systems until very late in the project, leading to significant delays in completion. NIC (2024), [Cost drivers of major infrastructure projects in the UK](#), p26. Kier also highlighted that where clients rely on third party consultants, this can cause issues with project administration, including because consultants may have differing incentives based on their pay structure. Kier response to CMA's information request [§].

²⁰¹ Network Rail response to the CMA's information request [§].

²⁰² [Balfour Beatty](#), [M Group](#), [Rail Forum](#) and [RIA's](#) responses to the CMA's interim report, question 8.

²⁰³ Note of meeting with [§].

and troughs' in the market can hinder efficient delivery.²⁰⁴ We also understand that capacity constraints on the supply side can be a particular challenge in more rural parts of the UK, as mobilising resources in such geographical locations can present practical challenges.

Coordination across public authorities

- A.148 The public sector is a strategically important buyer in the market for civil engineering, but the disaggregation of purchasing responsibilities across multiple public authorities could diminish the benefits of this scale. This may be particularly relevant in the case of public roads, where there are more than 100 highways authorities procuring infrastructure at the local level. Increased coordination across public authorities could help to harness the true scale of public procurement by:
- (a) Enabling more joined up procurement that exploits the benefits of the public sector's buying power and/or limits the risk that uncoordinated procurement results in supply chain bottlenecks and price spikes.
 - (b) Supporting more effective utilisation of public authorities' capacity including staff with skills and expertise in civil engineering, procurement, commercial, and project management disciplines.
 - (c) Affording better access to information, such as cost benchmarks or examples of best practice.
 - (d) We set out evidence on a number of initiatives and examples of public authorities sharing information in the public authority information sharing and benchmarking section. We have seen more limited evidence that public authorities are able to coordinate their procurement activities and consider where there might be scope to pool capacity and resources:
 - (e) At a national level, both National Highways and the Welsh Government told us that they do not coordinate with local authorities regarding procurement, as the scale and types of projects differ. The Welsh Government specified this was with regards to the procurement and delivery of major road schemes.²⁰⁵ However, National Highways did state that it maintains closer communication with other arm's length bodies, through a forum facilitated by DfT.²⁰⁶
 - (f) We have seen mixed evidence of coordination across local authorities. One local authority told us it works closely with neighbouring authorities and, as a

²⁰⁴ [Balfour Beatty's response](#) to the CMA's interim report, question 18, p19; [Skanska's response](#) to the CMA's interim report, p1; [M Group's response](#) to the CMA's interim report, question 15, p3.

²⁰⁵ Note of meeting with National Highways [§]; Note of meeting with the Welsh Government [§].

²⁰⁶ Note of meeting with National Highways [§].

member of ADEPT, it has insight into how other authorities get the best value from their funding.²⁰⁷ Another local authority mentioned that there is an opportunity for greater cross-learning between councils, and that this could be improved in the sector.²⁰⁸

- (g) Regarding joining up procurement, one local authority mentioned that it does not do this because it is a larger authority, and what it puts out to market is relatively large and so already benefits from economies of scale in procurement.²⁰⁹ However, other councils have explored opportunities in joint procurement, with Warwickshire, Coventry and Solihull awarding a joint highways maintenance contract worth up to £900m to Balfour Beatty.²¹⁰

A.149 We recognise there are limitations as to how far different public authorities can coordinate their procurement given differences in scale, objectives, and timelines. However, it does seem clear that there is scope for greater collaboration in public roads, particularly at the local level where public procurement is more fragmented.

A.150 There are fewer public authorities operating in rail, but this does not remove coordination challenges. Network Rail operates a regional delivery model, and most of its procurement activity is undertaken individually by each of the five regions. Throughout our market study, suppliers have told us that this can lead to a lack of coordination which creates added complexity and cost in the bidding process. For example, in response to our interim report, the Rail Forum and Railway Industry Association highlighted that there is scope for more co-ordinated procurement, standardised approaches, and better information sharing across the Network Rail regions.²¹¹

Scoping and early engagement with the market

A.151 In this section we present evidence on the current state of project scoping and the role of early contractor engagement within this. We consider evidence on how widely and how well early contractor engagement is currently being used by procuring authorities and what could be done to make better use of it. Early contractor engagement is also referred to as early contractor involvement, or ECI, by many stakeholders. We used both terms in our evidence gathering and use both here as we outline the evidence below.

²⁰⁷ Note of meeting with [REDACTED].

²⁰⁸ Note of meeting with [REDACTED].

²⁰⁹ Note of meeting with [REDACTED].

²¹⁰ New Civil Engineer, [Balfour Beatty wins £900M Midlands highways maintenance contract](#), accessed on 31/03/26.

²¹¹ [Rail Forum's response](#) to the CMA's interim report, question 4, p3; [RIA's response](#) to the CMA's interim report, questions 17-18, p9.

What the current state of scoping is and why it matters

- A.152 Scoping is a process that takes place before a project commences to fully define its remit and boundaries and help clarify what is needed for a project's success. It is important for ensuring that suppliers and procurers have clear and realistic expectations and understanding about a project and when done well it can save time and resources later as the project is rolled out. In response to our interim report, several Tier 1 firms, and two industry associations told the CMA that all types of project would benefit from greater accuracy in upfront scoping and planning.²¹² A smaller number thought that better scoping and planning would particularly benefit projects which are especially complex²¹³ or projects with multi-disciplinary interfaces^{214,215} Other project types mentioned in individual responses as areas with the greatest scope for improvement included local authority highways and utilities works²¹⁶ and smaller frameworks with short procurement cycles.²¹⁷
- A.153 In response to what would improve upfront scoping and planning, the most commonly mentioned solution in the interim report responses was some form of early contractor engagement. The second most commonly mentioned factor was sharing lessons learnt from previous projects to inform future projects or the use of benchmarking, such as using cost data to help set budgets. A number of other factors were mentioned, including better risk assessment and allocation, a commitment to invest in developing schemes to an appropriate level of design maturity early in the business case development process, adequate upfront funding for design, and clearly defined objectives or deliverables.²¹⁸
- A.154 In the following section, we set out the evidence we have gathered to understand the role of early contractor engagement in improving scoping. We discuss benchmarking, sharing lessons learnt and risk allocation later in the appendix.

What early contractor engagement involves

- A.155 The Construction Playbook²¹⁹ and its guidance²²⁰ recommends that early engagement with the market is essential to the development of clear, credible and outcome-based specifications, as this allows the procuring authorities to test whether intended outcomes are deliverable given actual market capacity,

²¹² [ACE](#), [Amey](#), [Balfour Beatty](#), [Mott MacDonald](#), [Rail Forum](#) and [SCAPE's](#) responses to the CMA's interim report, question 4.

²¹³ [Balfour Beatty](#), [BAM Nuttall](#) and [RIA's](#) responses to the CMA's interim report, question 4.

²¹⁴ These are projects which require coordinated delivery across multiple civil engineering disciplines and types of infrastructure.

²¹⁵ [M Group](#), [Amey](#) and [ACE's](#) responses to the CMA's interim report, question 4.

²¹⁶ [CECA's response](#) to the CMA's interim report, p4, question 4.

²¹⁷ [M Group's response](#) to the CMA's interim report, p2, question 4.

²¹⁸ [Rail Forum](#), [Skanska](#), [Balfour Beatty](#), [BAM Nuttall](#), [RPA](#), [Amey](#), [RIA](#), [ACE](#), [CECA](#), [ICE](#), [Mott MacDonald](#) and [SCAPE's](#) responses to the CMA's interim report, question 4.

²¹⁹ [The Construction Playbook](#), pp26-27.

²²⁰ GCF (2022), [Market, Supplier & Supply Chain Engagement in Construction: Guidance Note](#), p19.

capability and risk conditions. Without this early dialogue, requirements risk being unrealistic or misaligned with market conditions, undermining delivery certainty and value for money.²²¹

- A.156 Early engagement can take place over two stages and their form and extent can also depend on the complexity of the project.
- (a) The first stage can involve early market engagement. This refers to the pre-procurement, non-contractual engagement with the market that is undertaken before issuing a tender. The purpose is to allow the procuring authority to test their approach, inform the delivery model, the commercial strategy and the specification. It entails open and transparent engagement with potential suppliers across all tiers of the supply chain that include, SMEs and manufacturers. The activities undertaken can be market soundings, supplier days, industry briefings, questionnaires and one-to-one discussions.²²²
 - (b) The second stage that can follow early market engagement, is early supply-chain involvement (ESI). The guidance notes this should occur as early as possible in pre-construction, ideally once a defined brief is in place but before design is fixed and while project risk remains high. This phase extends the principle of early contractor involvement (ECI)²²³ by formally engaging with the Tier 1 supplier alongside Tier 2 and Tier 3 subcontractors and suppliers and involves payment for supplier insight and expertise.²²⁴
- A.157 Table A.20 shows the different project delivery approaches that public authorities can take to deliver different types of projects. The traditional project delivery approach such as the Design-Bid-Build or sequential approach tends to externalise project delivery knowledge until after the project scope is largely fixed and increases the likelihood of project redesigns and risk transfer pricing.²²⁵ Other approaches – including design and build, two-stage tendering, and models involving early supply chain involvement, adopt a concurrent structure, enabling

²²¹ The Construction Playbook is explicit that specifications should focus on outcomes rather than prescriptive inputs, and that these outcomes should be shaped with input from industry to avoid mis-specification, excessive risk pricing and downstream change. Early engagement helps authorities understand interdependencies between specialist suppliers, feasibility of innovation and MMC, and the implications of risk allocation, thereby supporting value-based procurement and whole-life value rather than lowest-cost competition. [The Construction Playbook](#), pp26-27 and pp30-34. GCF (2022), [Market, Supplier & Supply Chain Engagement in Construction: Guidance Note](#), pp19-32.

²²² The guidance notes that the engagement does not involve payment to suppliers for their feedback and it must comply with public procurement principles so that no supplier gains an unfair advantage. When undertaken effectively, early market engagement improves market confidence, bid quality and competition, and enables contracting authorities to assess feasibility, capacity, innovation opportunities and risk before formal procurement begins. GCF (2022), [Market, Supplier & Supply Chain Engagement in Construction: Guidance Note](#), pp9-16 and p21.

²²³ ECI is a form of collaborative working agreement that allows procuring authorities to utilise a supplier team's knowledge and expertise in the pre-construction phase of a project, before the detailed design phase is finalised. Ishtiaque, T.A., Wondimu, P.A., Memic, N., Andersen, B.S., Lædre, O. and Klakegg, O.J. (2025), [Ranking the benefits of early contractor involvement: a client's perspective](#), International Journal of Construction Management, p729.

²²⁴ GCF (2022), [Market, Supplier & Supply Chain Engagement in Construction: Guidance Note](#), pp19-22.

²²⁵ Tzanakakis, K. (2019), [Project Delivery Methods for the Transport Infrastructure](#), Rail How, pp6-10.

greater cross-disciplinary integration and improved buildability and delivery outcomes.

Table A.20 Summary of project delivery methods

<i>Project delivery method</i>	<i>Use</i>	<i>Design consultants involved in scoping phase *</i>	<i>Suppliers involved in project scoping phase †</i>	<i>Sequential or concurrent ‡</i>	<i>Who bears project delivery risk</i>
Design-Bid-Build: Separate suppliers are contracted for design and construction input. ²²⁶	Used on lower complexity projects and where procuring authority wants tight control of design	Yes	No	Sequential	Public authority bears design risk until supplier appointed. Supplier bears project delivery risk based on completed design and specifications.
Design & Build: A single supplier is responsible for design and construction. ²²⁷	Used on medium/large road/rail projects where contractor expertise is needed	Sometimes – the public authority may appoint advisors, but primary design responsibility is contracted to the supplier	Yes	Concurrent	Supplier bears design and construction delivery risk as single point delivery Public authority retains scope/requirement risk
Two-Stage Tender: <u>Stage 1</u> is called the pre-construction stage. ²²⁸ This involves a supplier and their team working with the public authority and the design team to help develop the project scope and design. <u>Stage 2</u> is called the construction phase. ²²⁹ This phase can involve the same supplier and their team at stage 1, or a different supplier is appointed to take forward the stage 1 design at the agreed price towards construction.	Used for complex schemes where early contractor input on buildability/cost is needed and public authority wants competition	Yes – design team works in collaboration with supplier and their team during Stage 1	Yes – appointed at Stage 1 to provide pre-construction advice on design, specification and price	Concurrent	Risk initially shared at Stage 1 Supplier bears delivery risk once Stage 2 supplier appointed and price/contract agreed – dependent on contract
Early Supply-chain Involvement (ESI): ESI extends ECI principle by formally engaging Tier 1 suppliers alongside Tier 2 and Tier 3 subcontractors and suppliers during the pre-construction phase with chosen project delivery approach. Different contracting options can be used to engage with	Used for complex high-risk projects (major road schemes) – benefits from early supplier input on buildability, sequencing risk mitigation and cost	Yes – public authority's design team engage and works iteratively with supplier and supply chain	Yes –specialist supply chain engaged explicitly during scoping/feasibility	Concurrent	Shared in Stage 1 Supplier bears final delivery once Stage 2 contract is entered – but risk allocation negotiated during ESI

²²⁶ Tzanakakis, K. (2019), [Project Delivery Methods for the Transport Infrastructure](#), Rail How, p6.

²²⁷ This can take various form: (a) joint venture of a supplier and a design consultant; (b) a supplier with a design consultant as a sub-consultant; (c) a design consultant-led team with a supplier as a sub-contracted entity or (d) a single supplier capable of performing both design and construction. Tzanakakis, K. (2019), [Project Delivery Methods for the Transport Infrastructure](#), Rail How, p12.

²²⁸ The guidance defines this as the phase of a project or programme of work before the client authorises commencement of all works and related activities on and off site. King's College London (2014), [Project Procurement and Delivery Guidance: Using Two Stage Open Book and Supply Chain Collaboration](#), p52.

²²⁹ The guidance defines this as the phase of the project or programme of work after the client authorises commencement of all work related activities on and off site. King's College London (2014), [Project Procurement and Delivery Guidance: Using Two Stage Open Book and Supply Chain Collaboration](#), p52.

Tier 2 and Tier 3 supply chain²³⁰. (a) Tier 2/Tier 3 suppliers engaged directly through main Tier 1 supplier (no contractual arrangement with procuring authority). (b) Joining agreement as part of a sub-alliance of suppliers at the project level.²³¹ (c) Procuring authority directly contracts with Tier 2/Tier 3 suppliers.					
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Source: CMA analysis from desk research

* The procuring authority can use specialists within their organisation or appoint design consultants to develop the project requirements / scope before construction is procured.

† The supplier can be a Tier 1 supplier and their team or a Tier 2 supplier and their team. The supplier and their team provides their expert input on buildability. The supplier is commonly engaged before the main construction contract is fixed.

‡ Indicates whether design consultants and suppliers work separately or collaboratively. Sequential = design consultant followed by supplier. Or Concurrent = design consultant and supplier are appointed together/work together in collaboration. Role of early contractor engagement in scoping

A.158 The benefits of ESI are set out in government guidance,²³² published industry reports,²³³ and academic literature. These recognise that ESI not only helps to improve collaboration and reduces the need for late design changes, it also improves planning, design quality,²³⁴ risk management,²³⁵ buildability,²³⁶ and enables successful project delivery.²³⁷ In addition, a structured approach to ESI can help to encourage and shape supplier-led innovation.²³⁸

A.159 Some of the responses to our interim report also explained why some form of early contractor engagement is so important for effective scoping and planning. Skanska told the CMA that early contractor engagement, used appropriately, improves clarity on design, risk and cost,²³⁹ while the CECA said that it promotes realistic programming, risk allocation, and better on-the-ground investigation and data collection.²⁴⁰ Balfour Beatty said that mandating early contractor and supplier

²³⁰ GCF (2022), [Market, Supplier & Supply Chain Engagement in Construction: Guidance Note](#), pp20-21.

²³¹ For example, the guidance notes sub-alliances of suppliers can be created at project-level within a framework of portfolio using a FAC-1 contract. They allow the alliances to collaboratively develop standard designs, master programmes and budgets across with opportunities for all alliance members to secure work at the end. GCF (2022), [Market, Supplier & Supply Chain Engagement in Construction: Guidance Note](#), p20.

²³² The Construction Playbook recommends early supply chain involvement and links early engagement with innovation and sustainability improvements. [The Construction Playbook](#), p27.

²³³ For example, the [Gold Standard Report](#), p7; World Bank's Public-Private Infrastructure Advisory Facility, [HS2 Phase One UK](#), accessed on 07/05/26 and Global Infrastructure Hub (2021), [Improving Delivery Models](#), pp19-20.

²³⁴ Ishtiaque, T.A., Wondimu, P.A., Memic, N., Andersen, B.S., Lædre, O. and Klakegg, O.J (2025), [Ranking the benefits of early contractor involvement: a client's perspective](#), International Journal of Construction Management, pp729-730.

²³⁵ Project 13, [About Project 13](#), accessed on 19/02/26.

²³⁶ [The Construction Playbook](#), p26.

²³⁷ Planning, Building & Construction Today, [Industry leaders and government unite behind landmark Early Contractor Involvement research](#), accessed on 19/02/26.

²³⁸ Laing O'Rourke Centre for Construction Engineering and Technology (2024), [Procurement models: is early contractor involvement beneficial to the UK construction sector?](#), p1; and Ishtiaque, T.A., Wondimu, P.A., Memic, N., Andersen, B.S., Lædre, O. and Klakegg, O.J. (2025), [Ranking the benefits of early contractor involvement: a client's perspective](#), International Journal of Construction Management, p730.

²³⁹ [Skanska's response](#) to the CMA's interim report, p3.

²⁴⁰ [CECA's response](#) to the CMA's interim report, p4, question 4.

engagement enables early identification of constructability challenges, ground and utility risks, logistical constraints, and interdependency issues.²⁴¹

- A.160 The CMA market research with Tier 2 and Tier 3 suppliers found that projects which were seen to be working 'at their best' often had an early engagement phase and some suppliers felt it would be beneficial to make some form of early engagement a standard practice. Some of the Tier 2 and Tier 3 suppliers said they view early engagement as best practice and something which enables them to price more fairly and assess risk more accurately. They also reported that it enables lower tier suppliers to feed into the design and provide ideas for new techniques or products that could be used. Some participants in the research singled out projects which involve digging into the ground as ones which should be based on designs that have benefitted from ECI. This, they said, would allow Tier 2 and Tier 3 suppliers involved to have advance sight of the ground conditions, thereby reducing the risk of fixed price NEC Option A contracts and allowing them to price more accurately.²⁴²
- A.161 Mott MacDonald submitted that, given that designers often possess strong construction knowledge, the incremental value of ECI is not always clear.²⁴³ However, participants in our market research highlighted that unclear or insufficiently detailed project designs are common, and allege one of the factors which may be driving this is insufficient knowledge and understanding of delivery on the ground among consultants and Tier 1 firms and insufficient input from appropriate specialists.²⁴⁴ Early contractor engagement is likely to be more valuable where those involved in design have less knowledge of the practicalities of construction.

How well early contractor engagement is used by public authorities currently

- A.162 Evidence the CMA has gathered suggests that there is some inconsistency in the degree to which ECI is employed by public authorities. In the case of national public authorities:
- (a) Transport Scotland told the CMA it does not currently use ECI but is actively assessing the potential benefits.²⁴⁵ While it encourages pre-procurement market consultation and recognises the value of some form of early market engagement it practises caution in this area to avoid potentially disadvantaging certain suppliers.²⁴⁶

²⁴¹ [Balfour Beatty's response](#) to the CMA's interim report, question 4.

²⁴² Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p13 and 70.

²⁴³ [Mott MacDonald's response](#) to the CMA's interim report, question 5.

²⁴⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p49.

²⁴⁵ Transport Scotland's response to the CMA's information request [38].

²⁴⁶ Transport Scotland's response to the CMA's information request [38].

- (b) The Welsh Government reported that it has been a keen adopter of ECI contracts for the past 20 years and experienced the benefits from this.²⁴⁷
- (c) National Highways said it actively runs market engagement on all of its procurements. However, National Highways also told the CMA that its ability to plan and carry out this engagement is impacted by the timing of government Spending Reviews, which determine its funding allocations and priorities, as well as uncertainty in budget availability. They also identified legal and regulatory risk as a limiting factor.²⁴⁸
- (d) Department for Infrastructure told the CMA that it is sometimes limited in its ability to do early engagement because the one-year budgets in Northern Ireland limit its ability to develop a realistic programme of work and thereby reduce options to bring contractors in early, even when it would be beneficial to do so.²⁴⁹
- (e) For Network Rail, several regions use some form of early contractor involvement to help develop the project scope and design for enhancements,²⁵⁰ although the approach is more mixed for renewals work.²⁵¹ Network Rail told the CMA that pre-procurement market consultation is invaluable for shaping robust and innovative projects, but it introduces perceived legal risks that must be proactively managed.²⁵²

A.163 The CMA engaged with some local authorities to gather their views on ECI. One local authority said it does try to use ECI and recognises that it is beneficial to have contractors on board earlier, but it gets mixed results.²⁵³ Another local authority also said its experience with ECI has been mixed. The local authority said it needs to be done well if it is done but also raised concerns that it could distort competition.²⁵⁴ A further local authority also outlined mixed results with ECI and said that it needs to be structured, with a clear scope and end deliverable.²⁵⁵ A fourth local authority said it does not tend to use ECI and uses local contractors who have local knowledge. This local authority added that it has ambitions to use

²⁴⁷ The Welsh Government's response to the CMA's information request [§].

²⁴⁸ National Highways response to the CMA's information request [§].

²⁴⁹ DfI's response to the CMA's information request [§].

²⁵⁰ Network Rail Southern's submission to the CMA [§]; Network Rail North West and Central submission to the CMA [§]. Network Rail Scotland's submission to the CMA [§].

²⁵¹ Network Rail Southern Region told us they rarely engage with suppliers early for their renewals work-bank due to the repetitive nature and the need for like-for-like replacements for most works. But Network Rail Scotland told us that for their renewals work they aim to work in partnership with key framework suppliers to deliver early contractor engagement and to consider value engineering opportunities, and take a 'delivery to cost' approach where appropriate. Network Rail Southern submission to the CMA [§]; Network Rail Scotland submission to the CMA [§].

²⁵² Network Rail's response to the CMA's information request [§].

²⁵³ Note of meeting with [§].

²⁵⁴ Note of meeting with [§].

²⁵⁵ Note of meeting with [§].

more ECI as it recognises benefits to ECI, such as reducing the chance of overruns.²⁵⁶

- A.164 Tier 2 and Tier 3 participants in the CMA's market research reported that early engagement tends to be a feature of projects on behalf of National Highways, but there is less opportunity for early engagement on local authority work.²⁵⁷
- A.165 The CMA is also aware that even where procurement authorities do use ECI, they often do not use it as effectively as they could. Most Tier 1 firms that we have engaged with said that supplier engagement as it is currently done is inadequate to appropriately inform the project approach on design specifications, risk assessments and costs.²⁵⁸ In response to our interim report several stakeholders agreed that ECI could be used more effectively.²⁵⁹

Stakeholder suggestions to improve the use of early contractor engagement

- A.166 Also in response to our interim report, one of the most commonly mentioned suggestions for how more effective use of ECI could be achieved was to follow Construction Playbook Guidance more closely.²⁶⁰ Some stakeholders have said that best practices from the Construction Playbook are not applied consistently, including when it comes to early contractor engagement.²⁶¹ Two stakeholders told the CMA that mandating the use of the Construction Playbook would enable framework providers, clients, and managers to challenge advisors and colleagues on the inherent problems with a single-stage approach.²⁶²
- A.167 Other suggestions we received for improving the use of ECI include the following:
- (a) Multiple industry stakeholders highlighted the importance of early inclusion of experienced engineers.²⁶³
 - (b) Multiple industry stakeholders highlighted having an output-focused approach,²⁶⁴ such as aligning with Project 13 principles which take a holistic collaborative approach.²⁶⁵

²⁵⁶ Note of meeting with [REDACTED].

²⁵⁷ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p34 and 35.

²⁵⁸ Responses to CMA's information requests [REDACTED].

²⁵⁹ [ACE](#), [Amey](#), [BAM Nuttall](#), [Costain](#), [Kier](#) and [M Group's](#) responses to the CMA's interim report, question 5.

²⁶⁰ [BAM Nuttall](#), [Balfour Beatty](#), [ICE](#), [The Combined Response](#) and [M Group's](#) responses to the CMA's interim report, question 5.

²⁶¹ [Skanska's](#) response to the CMA's interim report, p3; [M Group's](#) and [Balfour Beatty's](#) response to the CMA's interim report, question 5.

²⁶² [The Combined Response](#) to the CMA's interim report, question 5; and [ICE's response](#) to the CMA's interim report, question 5.

²⁶³ [ACE](#), [BAM Nuttall](#) and [Kier's](#) responses to the CMA's interim report, question 5.

²⁶⁴ [Rail Forum](#), [Balfour Beatty](#) and [Mott MacDonald's](#) responses to the CMA's interim report, question 5.

²⁶⁵ [Balfour Beatty](#) and [Mott MacDonald's](#) responses to the CMA's interim report, question 5. Project 13 is an initiative that was launched by ICG in 2018 to improve infrastructure delivery and management. It follows a set of core principles designed to improve infrastructure delivery through collaborative processes. Under it, project owners, partners, advisers, and suppliers all work together more closely and develop long-term relationships.

- (c) Two stakeholders highlighted ensuring sufficient funding available from procuring authorities for ECI. Costain said making funding available for ECI at the appropriate stage can facilitate savings at the later stages for projects.²⁶⁶ BAM Nuttall said more effective ECI can be facilitated through funded feasibility and development phases with clearer separation between concept development – where ECI enables experienced suppliers, specialist consultants, and the procuring authority to work together to specify a project scope and improve project constructability during the pre-construction phase – and price commitment where suppliers submit bids for projects during the procurement phase.²⁶⁷
- (d) Balfour Beatty said having multi-supplier clinics to explore design and delivery challenges collaboratively can help the procuring authority and the supply chain understand the value of ECI.²⁶⁸
- (e) ACE said early engagement should also include consultants in a strengthened role, recognising the importance of professional engineering and construction input to get design right from the outset.²⁶⁹

A.168 Mott MacDonald also said while ECI can provide advantages, it may reduce competitive tension and there is currently limited evidence that ECI delivers superior results compared with traditional procurement methods. It told the CMA that gathering more comparative data on the outcomes of different procurement models would allow for a more informed assessment of ECI's effectiveness, and until then, it should be adopted selectively, weighing its potential benefits against its constraints.²⁷⁰

A.169 Respondents to the interim report also highlighted having more involvement of suppliers who are further down the supply chain as a way to achieve more effective early engagement.²⁷¹ The Combined Response and ICE told the CMA that resistance to ESI from Tier 1 suppliers often centres on Tier 1 suppliers suggesting the lower tiers of the supply chain not being 'ready' or 'sufficiently mature' to participate in ESI.²⁷² However, the Gold Standard Report provides evidence to the contrary, with case study evidence of the wider supply chain showing readiness and successfully contributing to scoping.²⁷³

²⁶⁶ [Costain's response](#) to the CMA's interim report, pp3-4.

²⁶⁷ [BAM Nuttall's response](#) to the CMA's interim report, p5 and 8.

²⁶⁸ [Balfour Beatty's response](#) to the CMA's interim report, p7.

²⁶⁹ [ACE response](#) to the CMA's interim report, p6.

²⁷⁰ [Mott MacDonald's response](#) to the CMA's interim report, question 5, p6.

²⁷¹ [The Combined Response](#), [ACE](#), [Balfour Beatty](#), [Kier](#) and [ICE's](#) responses to the CMA's interim report, question 5.

²⁷² [The Combined Response](#) to the CMA's interim report, question 5, p5.

²⁷³ The Gold Standard Report provides examples of road evidence from case studies 3 and 9. [Gold Standard Report](#), pp120-123.

- A.170 The CMA also asked national public authorities to identify aspects of the ECI/ESI process which are necessary to ensure it works well.
- (a) The Department for Infrastructure and the Welsh Government said that open communication and good collaboration are required.²⁷⁴
 - (b) Department for Infrastructure and Network Rail said that it is important to have clearly defined objectives.²⁷⁵
 - (c) Department for Infrastructure said that contractors must be involved early enough to influence design decisions.²⁷⁶
 - (d) Department for Infrastructure also said that there must be clearly defined roles and boundaries as well as structured outputs.²⁷⁷
 - (e) The Welsh Government said there needs to be clear and fair allocation of risk as well as fair contract terms and conditions. It said an 'intelligent client' is needed to understand and manage the ECI process.²⁷⁸
 - (f) Network Rail also mentioned strong governance and transparency, aligned commercial incentives focused on whole-life value, and integration with procurement strategy.²⁷⁹
 - (g) National Highways told us there is no 'one size fits all' approach for ECI and that the extent and duration of the process varies depending on the project. It noted involving Tier 2/3 contractors can be important for bringing in expertise and innovation, but as they can be highly specialised, their input needs to be integrated effectively into wider design decisions to ensure the right solutions are chosen. This interface is best done through Tier 1 firms.²⁸⁰

Impact of public procurement on time and cost overruns

Drivers of time and cost overruns

- A.171 Analysis of the prevalence of time and cost overruns is set out in the outcomes section above. This found that time overruns are a common issue for public road and railway projects, and this can in turn impact on project costs with lengthy delays, thereby resulting in cost inflation against initial budget estimates. It also

²⁷⁴ DfI's to the CMA's information request [REDACTED]; The Welsh Government's response to the CMA's information request [REDACTED].

²⁷⁵ DfI's response to the CMA's information request [REDACTED]; and Network Rail's response to the CMA's request for information [REDACTED].

²⁷⁶ DfI's response to the CMA's information request [REDACTED].

²⁷⁷ DfI's response to the CMA's information request [REDACTED].

²⁷⁸ The Welsh Government's response to the CMA's information request [REDACTED].

²⁷⁹ Network Rail's response to the CMA's information request [REDACTED].

²⁸⁰ Note of meeting with National Highways [REDACTED].

delays when communities can start benefitting from the improved transport infrastructure.

- A.172 The CMA gathered evidence from a number of stakeholders on the drivers of these overruns. We asked a number of Tier 1 and Tier 2 suppliers to identify the main causes of cost and time overruns compared with initial budgets and delivery timescales, for each typical project activity. The causes outlined were many and varied and reasons were identified at each stage of the project lifecycle. The most cited reasons were (in broad order of how often they were mentioned):
- (a) Inadequate budgets or optimism bias due to a number of factors including pressure to set budgets too early in the planning process, setting budgets prior to early contractor engagement, setting budgets too far ahead of project delivery (meaning they become outdated by the time the project starts), or basing estimates on historical project costs which are outdated.²⁸¹
 - (b) Inappropriate allocation of risk and/or amendments to contracts to reallocate the risk to parties who are not best placed to manage it.²⁸²
 - (c) Poorly defined or incomplete project scope at the planning and preparation stage, such that, for example, construction begins without clearly defined objectives or a thorough exploration of risks, leading to scope changes and/or costly redesigns later in the project.²⁸³
 - (d) Changes to scope, design, or specification at the contract implementation stage due to scope growth and late-stage additions, like accessibility upgrades, while the project is underway.²⁸⁴
 - (e) Inadequate, insufficient or no early contractor involvement at the planning and preparation stage meaning that those most able to understand the complexities and costs involved do not have the opportunity to input appropriately. Some responses noted that where early contractor involvement is insufficient or inadequate, this could be due to inadequate ECI budget or engaging supply chain expertise too late.²⁸⁵
 - (f) Difficulties in coordinating across the supply chain.²⁸⁶

- A.173 A number of other factors were also identified, each by smaller numbers of suppliers, including pressure to start the building phase, poor contract

²⁸¹ Responses to the CMA's information requests [X].

²⁸² Responses to the CMA's information requests [X].

²⁸³ Responses to the CMA's information requests [X].

²⁸⁴ Responses to the CMA's information requests [X].

²⁸⁵ Responses to the CMA's information requests [X].

²⁸⁶ Responses to the CMA's information requests [X].

management, and a number of external factors such as inflation, weather, or environmental conditions.²⁸⁷

- A.174 Only some of the Tier 1 and Tier 2 suppliers' responses on drivers of overruns discussed the differences in these drivers across road and rail, by region, by project type, or project complexity, and they had a range of views. For example, Costain told the CMA that the factors driving overruns were the same across road and rail, all four nations, and different project types and size.²⁸⁸ BAM Nuttall told the CMA that there was little difference in the general drivers for road and rail projects, but there were different factors which benefit or compromise each sector. For example, rail requires more technical assurance and safety evaluation but road is more vulnerable to political change.²⁸⁹ Murphy only identified differences between road and rail at the planning and preparation stage where regulation and safety controls made the process slightly more complex for rail.²⁹⁰ Within road, while one Tier 2 supplier said that enhancement projects were most affected by cost overruns,²⁹¹ another Tier 2 supplier said that it does not consider there to be any notable difference in the drivers of cost or time overruns based on the type or scale/complexity of the project.²⁹² Farrans also told the CMA that the drivers would be the same across projects in all of the four UK nations,²⁹³ while BAM Nuttall said that timescales can vary across UK nations due to variations in planning and environmental consents.²⁹⁴
- A.175 The CMA market research with Tier 2 and Tier 3 suppliers also identified poor project design as a key source of delay. Poor design was cited by these suppliers as leading to extended contract negotiations to refine the scope and as being commonly linked to issues being uncovered on the ground, stoppages, late changes, or multiple contract variations during delivery, all of which can add cost and delays. They reported that early project designs are commonly unclear or not prepared to a sufficient level of detail due to insufficient knowledge and understanding of delivery among consultants and Tier 1 firms, insufficient in-house skills in public authorities to scrutinise and challenge the designs prepared by consultants or Tier 1 firms, insufficient input from specialists, and insufficient site surveying or understanding. Design, they said, is sometimes progressed to the level that enables funding to be secured or contractors to be brought in but can need more work later. They said that the involvement of Tier 2 and Tier 3 firms

²⁸⁷ Responses to the CMA's information requests [§].

²⁸⁸ Costain's response to the CMA's information request [§].

²⁸⁹ BAM Nuttall's response to the CMA's information request [§].

²⁹⁰ Murphy's response to the CMA's information request [§].

²⁹¹ Response to the CMA's information request [§].

²⁹² Response to the CMA's information request [§].

²⁹³ Farrans' response to the CMA's information request [§]. At time of the response to the CMA's information request Farrans belonged to CRH Group.

²⁹⁴ BAM Nuttall response to the CMA's information request [§].

with early design as well as delivery allows greater precision in terms of approach and costing at the bidding stage.²⁹⁵

- A.176 Some of the local authorities who the CMA engaged with also shared their views on the reasons for overruns. Some local authorities cited external factors such as unforeseen ground conditions,²⁹⁶ utility impacts where utilities affected by the project may need remedial work to allow the project to proceed (for example, moving a gas pipe),²⁹⁷ waiting on utility companies or other third parties,²⁹⁸ service strikes,²⁹⁹ weather,³⁰⁰ and inflation.³⁰¹ One local authority also cited contractor issues, specifically where contractors take a contractual rather than a collaborative approach. The latter facilitates greater alignment of incentives between the client and the supplier and they gave the example of using NEC contract Option C to achieve this by sharing the pain on overspend.³⁰² Another local authority mentioned forced scope changes or forced redesigns after contract award as a result of unforeseen site conditions, other external factors impacting the work and changing strategic demands,³⁰³ and one other local authority said design failures, particularly external designs that do not reflect local conditions, were also a cause of overruns.³⁰⁴

The largest financial overruns on road and railway enhancement projects over the last five years provided by a sample of public authorities for road and railway

- A.177 The CMA asked national public authorities to identify up to 10 enhancement projects from the last five financial years that experienced the largest financial overruns, and to provide the reasons for these overruns. One national public authority submitted information relating to two road projects,³⁰⁵ and another submitted information relating to one road project.³⁰⁶ Reasons given for the overruns in question were:

- (a) External inflationary pressures due to factors such as Covid-19, the war in Ukraine, or EU Exit (for all three project overruns).³⁰⁷

²⁹⁵ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), paragraph 3.4.2.

²⁹⁶ Notes of meetings with [REDACTED].

²⁹⁷ Notes of meetings with [REDACTED].

²⁹⁸ Note of meeting with [REDACTED].

²⁹⁹ Note of meeting with [REDACTED].

³⁰⁰ Notes of meetings with [REDACTED].

³⁰¹ Notes of meetings with [REDACTED].

³⁰² Note of meeting with [REDACTED].

³⁰³ Note of meeting with [REDACTED].

³⁰⁴ Note of meeting with [REDACTED].

³⁰⁵ Response to the CMA's information request [REDACTED].

³⁰⁶ Response to the CMA's information request [REDACTED].

³⁰⁷ Responses to the CMA's information requests [REDACTED].

(b) Poorer than expected contractor productivity or performance (for two project overruns).³⁰⁸

- A.178 Network Rail provided data for three railway infrastructure projects within the relevant five-year window, which were at varying stages of completion. The data indicated that cost overruns had occurred in some projects and were likely to occur in other projects.³⁰⁹ Without identifying the reasons for why these specific projects overran, Network Rail also responded to say that the principal drivers of cost overruns are well understood and typically interrelated. It identified multiple different drivers including incomplete or outdated ground and asset information; early scope definition based on incomplete information; delays associated with land, consents, and third parties, including utility diversions and planning permissions and scarcity of specialist labour and lack of supply chain capability.³¹⁰
- A.179 While no data submission was received from National Highways, we heard that most major enhancement schemes meet key delivery milestones. It told us cost and time overruns can occur when some projects begin before the scope is fully defined, resulting in scope changes during delivery. It also highlighted a number of other drivers of overruns including delays in receiving planning approvals, contractor performance and construction-related risks, unforeseen conditions on site, utilities and external factors such as weather and Covid-19. National Highways noted that target costs set at the beginning of projects are expected to be different to final outturn costs as further costs will arise during the delivery of the project.³¹¹
- A.180 Related to delays associated with land, consents, and planning permissions, we heard from the ORR that Network Rail identified an imbalance between road and rail regulation regarding access to adjacent land. They note this is a known issue in rail projects affecting both enhancements and renewals. It noted that major programmes are increasingly using the Transport and Works Act for compulsory purchase powers to overcome issues with access.³¹² The Transport and Works Act Order process can take over 6 months when a public enquiry is held, and involves several stages, as well as Secretary of State approval from the Department of Transport.³¹³

³⁰⁸ Response to the CMA's information request [redacted].

³⁰⁸ Response to the CMA's information request [redacted].

³⁰⁹ Network Rail's response to the CMA's information request [redacted].

³¹⁰ Network Rail's response to the CMA's information request [redacted].

³¹¹ Note of meeting with National Highways [redacted].

³¹² ORR's submission to the CMA [redacted].

³¹³ DfT (2026), [Transport and Works Act orders: a brief guide](#).

The largest financial overruns on road and railway enhancement projects over the last ten years provided by a sample of Tier 1 civil engineering firms

- A.181 The CMA also asked a group of Tier 1 firms to identify up to 10 enhancement projects that they had participated in delivering within the last 10 full financial years, that had the largest financial overruns, and to provide the reasons for these overruns.³¹⁴
- A.182 The CMA received data covering a total of 105 enhancement contracts across nine Tier 1 suppliers, comprising 42 road and 63 rail projects. The sample spans a wide range of project sizes, with planned costs ranging from £0.1m to over £1bn, and planned durations ranging from 118 days to 6.5 years (see further details in the section on project cost overruns above).
- A.183 Tier 1 firms were able to identify and rank the reasons for these overruns. For most contracts, they identified two causes of overruns, although in some cases up to six causes were given. In total, 12 distinct causes were identified for road contracts and 14 for rail contracts, which are presented in Table A.21 below, grouped into five broad categories. The table details how often each driver was mentioned across the sample of contracts and how frequently the drivers were listed as the primary cause of the overrun on a project.

Table A.21 Drivers of overruns for Tier 1 enhancement contracts with the largest financial overruns since April 2015, by frequency

Causes of Overruns:	Road		Rail	
	<i>Identified in X% of contracts as a driver of overruns</i>	<i>Ranked as the primary driver in X% of these contracts</i>	<i>Identified in X% of contracts as a driver of overruns</i>	<i>Ranked as the primary driver in X% of these contracts</i>
Early Design and Planning Related Factors:				
Scope Change	88% - (37/42)	84% - (32/37)	94% - (59/63)	68% - (40/59)
Unexpected Site and Ground Conditions †	10% - (4/42)	25% - (1/4)	10% - (6/63)	17% - (1/6)
Incomplete/Inaccurate Design	2% - (1/42)	0% - (0/1)	33% - (21/63)	38% - (8/21)
Access Delay/Restrictions	-	-	19% - (12/63)	33% - (4/12)
Planning Consent	10% - (4/42)	25% - (1/4)	13% - (8/63)	13% (1/8)
Third-Party Delivery and Performance Factors:				
Third Party Interfaces	7% (3/42)	33% (1/3)	16% - (10/63)	50% - (5/10)
Utility Diversion/Provision	5% (2/42)	50% (1/2)	5% - (3/63)	33% - (1/3)
Other Supplier and Subcontractor Performance	5% (2/42)	0% (0/2)	2% - (1/63)	0% - (0/1)
Inherited Programme Delay	-	-	8% - (5/63)	20% - (1/5)
Ecology and Environment	10% - (4/42)	0% - (0/4)	-	-
External and Exogenous Factors:				
COVID-19	21% - (9/42)	11% - (1/9)	6% - (4/63)	0% - (0/4)

³¹⁴ Responses to the CMA's information requests [X].

<i>Weather</i>	19% - (8/42)	0% - (0/8)	2% - (1/63)	0% - (0/1)
<i>Inflation</i>	5% - (2/42)	100% - (2/2)	2% - (1/63)	0% - (0/1)
Funding Delay and Contractual Factors:				
<i>Funding Delay</i>	10% - (4/42)	75% - (3/4)	5% - (3/63)	0% - (0/3)
<i>Z Clauses</i>	-	-	3% - (2/63)	100% - (2/2)
*Other Project-Specific Factors:	7% - (3/42)	33% - (1/3)	6% - (3/63)	0% - (0/3)

Source: CMA analysis of Tier 1 overrun determinant data.

* Includes material delivery and defects, problems relating to historical buildings (eg Grade II listed structures), internal spending reviews and stat diversion.

† This cause groups together a number of different causes detailed as: 'Unforeseen ground conditions', 'Archaeological', 'Ground water', 'Ground conditions', 'Underground obstructions' and 'Site conditions'.

- A.184 In both road and rail, scope change was by far the most mentioned driver of overruns across these contracts, listed in 88% of the road contracts and 94% of the rail contracts (or in a total of 96 out of 105 contracts), and for most of these cases it was cited as the primary driver of the overrun (72 out of 96). The responses did not indicate to what extent these scope changes were forced due to poor scoping and/or lack of ECI at the outset of the project, or deliberate changes in the scope of the project over the duration of the contract, and so could refer to either.
- A.185 Of the 14 other specific overrun drivers listed, incomplete or inaccurate design was the second most common driver of overruns for rail contracts (21 out of 63), while this was rarely a problem for road. Covid-19 was the second most common driver of overruns for the road contracts in this period (9 out of 42).

Conclusions on drivers of time and cost overruns

- A.186 The evidence set out above indicates that many different types of stakeholder identify several common aspects of the procurement process that are contributing to time and cost overruns. The quality of the initial scoping, design and budgeting, and subsequent changes to a scope once work is underway, look to be key drivers of overruns, evident in both stakeholder responses and the data on projects that experienced significant overruns. Risk being borne by the 'wrong' parties (ie those not best placed to manage it) is another factor, as is insufficient engagement with suppliers in the early stages. Issues with contractor performance and third party and regulatory approvals were also highlighted, particularly by public authorities.
- A.187 While external factors such as cost inflation, weather, or unforeseen ground conditions can also lead to higher than anticipated costs, the evidence suggests these are less important than issues with the procurement process – and also less controllable.

How procurement approaches and supplier behaviour impact on time and cost overruns

A.188 In this section we will consider how scoping and ECI, bid evaluation, contract management, and post-project evaluation are impacting on overruns and what improvements can be made in this regard.

Scoping, ECI and benchmarking

Scoping and ECI

A.189 We set out above in the section on scoping and ECI that scoping is an important stage of the project for ensuring both suppliers and procurers have clear and realistic expectations and understanding of the project, and that this helps to reduce the need for later design changes which can lead to increasing costs and delays. Here we further set out the role of ECI in informing scoping, specifically in relation to cost overruns.

A.190 We asked national public authorities about how they have mitigated the drivers of their most significant overruns when it came to future schemes. Three authorities identified ECI as a means to mitigate the risk of these overruns in the future:

- (a) The Welsh Government said that many of the challenges which arose on the scheme in question may not have materialised if an ECI approach had been adopted. It also outlined how successful ECI on another similar scheme ensured that the scheme in question was completed on programme and only with budgetary revisions that related to challenges of delivering through the Covid-19 pandemic.³¹⁵
- (b) Department for Infrastructure said it prioritises early engagement with the contractor to identify the underlying issues and implement appropriate mitigation measures to reduce the risk of overruns.³¹⁶
- (c) Without referencing specific project overruns, National Highways told us that early contractor involvement forms part of the structured project lifecycle approach that they use to mitigate overruns.³¹⁷

A.191 The CMA also asked Tier 1s about how they have prevented or reduced the risk of factors which are known to have caused their most significant enhancement project overruns when it came to other projects. Several suppliers told us that

³¹⁵ The Welsh Government's response to the CMA's information request [REDACTED].

³¹⁶ DfI's response to the CMA's information request [REDACTED].

³¹⁷ Note of meeting with National Highways [REDACTED].

some form of early engagement helped them to mitigate overruns attributable to those same reasons on other projects.³¹⁸

Early engagement with the client

- A.192 Multiple Tier 1 firms said that they have made greater use of early engagement with the client to prevent or reduce cost and schedule overruns.
- (a) Balfour Beatty said that ECI has proven highly effective in mitigating client change, improving design maturity prior to contract award, and reducing the risk of unforeseen conditions during delivery.³¹⁹
 - (b) BAM Nuttall told the CMA that as part of a two-stage procurement, it has proactively engaged in ECI with the client on a project to shape the solution before committing to the construction. It said that early design development, supported by open-book costing and collaborative risk management, helped the team to avoid late-stage design changes, find early supply chain solutions, pre-empt planning and environmental constraints, and to deliver on time.³²⁰
 - (c) Murphy told the CMA that it has used structured ECI both upstream and downstream of design completion to challenge assumptions and confirm constructability in order to prevent scope change.³²¹
- A.193 Ensuring that designs are sufficiently mature before decisions such as budgets are locked in has also been highlighted as important by other stakeholders. Mott MacDonald stated that allowing projects to progress further in their technical development before financial commitments are locked in would significantly improve the accuracy of upfront scoping and planning, ultimately supporting more reliable delivery on time and on budget.³²² It stated ECI can be more effective when aligned with a mature early design stage and clearly integrated with the project's scope. However, it also noted other models, such as progressive design and build or holistic collaboration models such as Project 13, should also be considered, and that more evidence is needed to establish whether ECI delivers superior results.³²³

³¹⁸ Responses to the CMA's information requests [§].

³¹⁹ Balfour Beatty's response to the CMA's information request [§].

³²⁰ BAM Nuttall's response to the CMA's information request [§].

³²¹ Murphy's response to the CMA's information request [§].

³²² [Mott MacDonald's response](#) to the CMA's interim report, question 4.

³²³ [Mott MacDonald's response](#) to the CMA's interim report, question 5.

Early engagement with Tier 2 and Tier 3:

- A.194 Multiple Tier 1 firms told the CMA that they have made greater use of early engagement with their supply chain partners to prevent or reduce cost and schedule overruns.
- (a) Balfour Beatty said that ESI is adopted to provide clear definition of scope, reduce the likelihood of late client change and to de-risk delivery.³²⁴
 - (b) BAM Nuttall said they prioritise this type of early engagement with their suppliers and cited one project where they said it led to measurable efficiencies including consolidated access planning, repeatable solutions, and reduced change during delivery.³²⁵
- A.195 The CMA engaged with three Tier 1 firms to understand the extent to which they engage their supply chain partners in the ECI/ESI process more generally. BAM Nuttall said they seek to be involved in projects from the earliest point and aim to identify the types of supplier who can add influence and provide expert support early.³²⁶ Balfour Beatty said they always try to draw on subcontractor expertise during this stage³²⁷ and Amey said that depending on the opportunity they will often identify two or three key Tier 2s who they will work with on an opportunity but it is unusual to include Tier 3.³²⁸
- A.196 The CMA asked national public authorities about what might prevent the inclusion of Tier 2 and Tier 3 firms in ECI/ESI where it would be beneficial. We received the following responses:
- (a) Network Rail identified three barriers: contractual and confidentiality constraints; financial risk to the supplier associated with unpaid early engagement; concerns about perceived preferential treatment.³²⁹
 - (b) Network Rail also suggested mitigations to these barriers: structured and transparent engagement mechanisms; including compensated specialist workshops; framework-based ECI and market engagement activity that preserves competition.³³⁰
 - (c) The Welsh Government said there should be no factors which prevent lower tier firms from adding value to ECI schemes. They said that Tier 1 firms usually engage with lower tier firms to add value but acknowledged there

³²⁴ Balfour Beatty's response to the CMA's information request [REDACTED].

³²⁵ BAM Nuttall's response to the CMA's information request [REDACTED].

³²⁶ Note of meeting with BAM Nuttall [REDACTED].

³²⁷ Note of meeting with Balfour Beatty [REDACTED].

³²⁸ Note of meeting with Amey [REDACTED].

³²⁹ Network Rail's response to the CMA's information request [REDACTED].

³³⁰ Network Rail's response to the CMA's information request [REDACTED].

could be benefits to them engaging more closely with Tier 2 and Tier 3 contractors themselves during scheme development and delivery.³³¹

- (d) National Highways told us it must follow procurement guidelines on managing risk and value-for-money set out by the Cabinet Office which makes it challenging to directly contract with Tier 2 suppliers. It told us Tier 2 suppliers tend to be specialist firms, often focusing on one area, and a more balanced, better value-for-money solution would be to integrate their expertise through Tier 1 firms. In some cases, National Highways may stipulate that the Tier 1 supplier use a Tier 2 supplier in the contract.³³²
- (e) National Highways also told us Tier 2 suppliers can be reluctant to share ideas (often with other suppliers) during ECI stage if they must compete again for the delivery of contracts. To address this, National Highways brings in Tier 2 suppliers in early project delivery stages through mini competitions within frameworks.³³³

Early engagement with third parties, such as utility providers and land agents:

A.197 Murphy and Skanska told the CMA that in response to past overruns, they make greater use of early engagement with third-party statutory undertakers.

- (a) Murphy said in response to experiencing significant delay risk related to statutory approvals, they use ECI workshops with utility providers and land agents to develop buildable diversion solutions prior to design freeze. It told us this engagement means that diversions can be agreed prior to design completion and allow advance works to commence under early access agreements.³³⁴
- (b) Skanska said that it uses ECI to identify required diversions early, start early dialogue with the third parties, and complete statutory undertakings prior to the start of the construction phase.³³⁵

A.198 National Highways also told us early engagement with utilities providers could improve design feasibility and reduce the likelihood of downstream project delivery issues.³³⁶

A.199 Also, in the context of mitigating overruns, Balfour Beatty noted that ECI allows parties to test constructability and said that advance surveys including utilities and

³³¹ The Welsh Government's response to the CMA's information request [§].

³³² Note of meeting with National Highways [§].

³³³ Note of meeting with National Highways [§].

³³⁴ Murphy's response to the CMA's information request [§].

³³⁵ Skanska's response to the CMA's information request [§].

³³⁶ Note of meeting with National Highways [§].

services investigations might be undertaken as part of the ECI process to allow early enabling work and a better understanding of risk and removal of constraints where possible ahead of starting the main contract.³³⁷

Scoping, lessons learned and benchmarking

- A.200 Interim report responses highlighted benchmarking and sharing of lessons learnt from previous projects as being important for scoping. Some of these responses also went on to explain why. For example, Balfour Beatty said that shared cost data and lessons learnt help calibrate budgets, adjust optimism bias, and enable more informed decision-making.³³⁸ ICE said that approaches like Reference Class Forecasting (RCF) which estimate time and cost based on data from comparable past projects aims to correct for optimism and political biases, providing more realistic estimates and a higher likelihood of project success.³³⁹
- A.201 Learning from past experience has also been highlighted as a factor which can help prevent project overruns:
- (a) Network Rail said that one way it mitigates the risk of overruns is by systematic capture and application of lessons learnt, and ensuring experience from complex schemes is actively shared and applied across the portfolio.³⁴⁰
 - (b) Kier told us it utilises knowledge and experience shared from previous projects of a similar nature to manage the risk of any overruns.³⁴¹

Evaluation and lessons learnt

- A.202 In this section we lay out the evidence on how procuring authorities evaluate and learn from past procurement approaches and project delivery.
- A.203 The CMA asked national procurement authorities about their processes for assessing, reviewing, and feeding back on procurement processes and project delivery. Four national public authorities responded:
- (a) Network Rail told the CMA that it has a Lessons Learnt system and has annual audits on areas where it is succeeding and requiring improvement. It also said it conducts lessons learnt on procurement events to check that everything has gone to plan.³⁴² However, an ORR report from 2022, looking specifically at technology adoption at Network Rail reported on repeated

³³⁷ Balfour Beatty's response to the CMA's information request [🔗].

³³⁸ [Balfour Beatty's response](#) to the CMA's interim report, question 4, p7.

³³⁹ [ICE's response](#) to the CMA's interim report, question 4, p4.

³⁴⁰ Network Rail's response to the CMA's information request [🔗].

³⁴¹ Kier's response to the CMA's information request [🔗].

³⁴² Network Rail's response to the CMA's information request [🔗].

examples of failure to learn from past experiences. It found that while most Network Rail teams had a system for recording and storing lessons learnt reports, future projects were unlikely to read these reports and the ORR went on to suggest that Network Rail develops mechanisms to encourage its teams to learn transferable lessons from technology projects, with particular focus on how and when teams read the lessons recorded by other teams.³⁴³

- (b) Transport Scotland said it regularly reviews and assesses procurement, planning, and delivery through structured governance and lessons learnt processes and has a central database to record lessons learnt which are shared across the organisation on a quarterly basis. It gave the example of the transition into using the NEC4 suite of contracts for their major works programmes as a significant benefit it has realised through lessons learnt on a previous procurement project.³⁴⁴ Transport Scotland told the CMA that for strategic/ high risk procurements, it seeks independent verification through a Gateway Review Process. This, it said, is a short, focused review of a programme or project carried out before key decision points by an independent team of experienced practitioners.³⁴⁵
- (c) National Highways told us that it uses the Contract Control Framework as their procurement operating model to help deliver high quality and consistent service to the wider business. It said it has a dedicated Operating Model Forum composed of senior subject experts who lead and manage change on a project and, as part of this, integrate lessons learnt.³⁴⁶
- (d) Department for Infrastructure told us that each road and rail project is planned and procured by specialist Centres for Procurement Expertises (CoPEs). As part of the Northern Ireland Public Procurement Policy Statement, all NI CoPEs have regular cross-CoPE meetings which allow for sharing of lessons learnt. It said this also enables CoPEs to implement recommendations from the Public Accounts Committee, a group within the Northern Ireland Executive who are tasked with scrutinising public spending to ensure accountability, efficiency and value for money.³⁴⁷

A.204 As part of the CMA's engagement with local authorities, we identified some limited examples to understand the extent to which they undertake reviews and lessons learnt processes once projects are complete. One local authority told the CMA that it has a lessons learnt process and template for every single sort of project.³⁴⁸ Another local authority said that it does some internal benchmarking, particularly

³⁴³ ORR (2022), [Technology Adoption Case Studies: Targeted Assurance Review](#).

³⁴⁴ Transport Scotland's response to the CMA's information request [§].

³⁴⁵ Transport Scotland's response to the CMA's information request [§].

³⁴⁶ National Highways' response to the CMA's information request [§].

³⁴⁷ DfI's response to the CMA's information request [§].

³⁴⁸ Note of meeting with [§].

related to pricing.³⁴⁹ While another said it has a wash-up process for every scheme or a combined one for smaller schemes.³⁵⁰

- A.205 The CMA also engaged with three Tier 1 suppliers to understand the level of engagement between Tier 1s and contracting authorities around evaluation, and lessons learnt. Tier 1 suppliers reported having an evaluation and lessons learnt process in-house that they will complete for each project,³⁵¹ but the extent to which the process is undertaken jointly or shared with the client is variable:
- (a) Amey said that it is hit and miss where it does feedback sessions jointly with its clients and it depends on the relationship. Where it has a strong alliance or partnership with the client, it said it works well but it is difficult to have an open, lessons learnt conversation on more adversarial contracts.³⁵²
 - (b) Balfour Beatty also said that the level of willingness to engage in lessons learnt conversations varies across procurers.³⁵³
 - (c) BAM Nuttall told the CMA that it has a lessons learnt process on every project and will seek to include strategic suppliers, supply chain partners, designers, and the client. It noted that it works closely with a number of key public sector clients with collaborative processes which helps this work well.³⁵⁴

Public authority information sharing and benchmarking

- A.206 The CMA has received mixed evidence from national public authorities on the extent to which they share benchmarking data and lessons learnt with each other.
- (a) The Welsh Government told us that, in the case of road schemes, it communicates with local authorities, either for benchmarking costs with them or consulting them as a key stakeholder when schemes are developed. However, it stopped short of saying it coordinates with other procurement authorities, since the scale and types of project differ in important ways, which is something we have heard from other sources.³⁵⁵

³⁴⁹ Note of meeting with [REDACTED].

³⁵⁰ Note of meeting with [REDACTED].

³⁵¹ We have also seen examples of documents from other Tier 1 suppliers which indicate they have such processes in place. An Amco Giffen year review document states: 'Our enhanced lessons learnt system has improved Amco Giffen's approach to knowledge management, facilitating better collection and sharing of innovations across the business to maximise value from each region's expertise and experience'. Amco Giffen's [REDACTED]. A BAM Nuttall 'Legacy & Learning' document sets out various examples of BAM Nuttall learning lessons from its experiences, including what it would do the same and what it could do different in future. BAM Nuttall's response to CMA's information request [REDACTED].

³⁵² Note of meeting with Amey [REDACTED].

³⁵³ Note of meeting with Balfour Beatty [REDACTED].

³⁵⁴ Note of meeting with BAM Nuttall [REDACTED].

³⁵⁵ Note of meeting with the Welsh Government [REDACTED].

- (b) National Highways mentioned that it communicates with other arm's length bodies, through a forum facilitated by DfT for specific purposes. National Highways also said that it communicated with local authorities, but as is the case for the Welsh Government, this does not extend to coordination on projects.³⁵⁶

A.207 With regard to enhancement projects, Network Rail told the CMA it shares information across the different Network Rail regional heads of cost estimation. It uses the Rail Method of Measurement, a standardised framework for measuring, valuing, and analysing railway infrastructure projects to ensure consistency, cost control and benchmarking across the industry, and this is based on data collated from across all of the Network Rail regions. It uses benchmarking on every project, beginning early, even where the project is not fully scoped and refines estimates with unit rate benchmarking as the scope gets locked down. Network Rail said it also uses benchmarking for renewals projects, working closely with Finance and Asset Managers to look at volumes of work and rates for delivery.³⁵⁷

A.208 With regard to local authorities, ORR's response to our interim report highlighted that there are a number of initiatives to benchmark cost efficiency and service delivery quality across local authorities, eg through the National Highways and Transport Network.³⁵⁸ We have also heard some limited evidence from a small number of local authorities about the level of communication between them:

- (a) One local authority told us it works closely with neighbouring authorities, and that as a member of ADEPT, it has insight into how other authorities get the best value from their funding.^{359,360}
- (b) A Welsh local authority told us that it benchmarks costs against other local authorities in Wales and other highway authorities across the UK.³⁶¹
- (c) A local authority in central England told the CMA that it learnt a lot from working with and talking to counterparts in two other local authorities on recent projects. Beyond this, it said there was some information sharing through the Midlands Highway Alliance and this needs to be structured, with a clear scope and outcomes.³⁶²

³⁵⁶ Note of meeting with National Highways [REDACTED].

³⁵⁷ Note of meeting with Network Rail [REDACTED].

³⁵⁸ ORR's response to the CMA's interim report, p4.

³⁵⁹ Note of meeting with [REDACTED].

³⁶⁰ The Association of Directors of Environment, Economy, Planning & Transport (ADEPT) is a membership based, voluntary organisation which brings together local authority place directors and their teams. Its remit covers a number of areas, including local roads and highways.

³⁶¹ Note of meeting with [REDACTED].

³⁶² Note of meeting with [REDACTED].

- (d) A local authority in Scotland said it had experience of councils reaching out to learn from its experiences and said it was aware of some information sharing forums for procurers across councils.³⁶³
- (e) Another local authority said it shares high-level information with other authorities but needs to be really careful due to commercial sensitivity.³⁶⁴

Conclusions on scoping, ECI and benchmarking as ways to reduce overruns

A.209 Taken together, the evidence suggests the following:

- (a) Both public authorities and Tier 1 suppliers report that ECI is an important way to reduce the risk of costs overrunning. Both sides have found such engagement to have benefits for projects – in particular, it improves the quality of initial designs before budgeting decisions are made.
- (b) Tier 1 firms also aim to engage early with their supply chains, and noted the benefits of such engagement. Public authorities told us that there are barriers to such engagement for them, notably the costs to the suppliers of engaging, and confidentiality constraints, but said that these can be overcome. Tier 1 firms also reported there being benefits to engaging more widely with third parties, such as utilities companies.
- (c) Both public authorities and suppliers have told us about the value of capturing lessons learned on projects and feeding those into future budgeting, as a way of improving the accuracy of ex ante budgeting and reducing overruns.
- (d) Several national public authorities, and some local authorities, have their own processes to capture lessons learned. These tend to be separate processes to the ex post reviews undertaken by the Tier 1 firms, although some firms noted that they seek to engage procurers in their processes.
- (e) Although public authorities report learning from each other when they share information and benchmark costs, but they only undertake this information sharing to a limited extent, and they do not tend to go as far as to coordinate their projects.

Lowballing and bid evaluation

A.210 We have heard from stakeholders, including both local and national authorities and Tier 1 suppliers, that some suppliers may put in abnormally low bids when

³⁶³ Note of meeting with [REDACTED].

³⁶⁴ Note of meeting with [REDACTED].

competing for contracts. Bids that are priced significantly below the average of other bids or far lower than what the procuring authority expects can be considered as lowball bids. One local authority told us bids that are more than 20% below the average are considered abnormally low.³⁶⁵ If procuring authorities select bids that turn out to be priced unrealistically low, there may be an increased chance of cost and time overruns – although it depends on the bidder’s motivation for submitting a low bid, as discussed below.

- A.211 Some procuring authorities have mechanisms in place to identify unfeasibly low bids.³⁶⁶ Transport Scotland told us it uses a graduated pricing mechanism, where bids are scored based on their proximity to the lowest bid and the median price for all bids received.³⁶⁷ This encourages tenders to be appropriately priced and avoid ‘race to the bottom’ pricing where contractors submit unfeasibly low bids to win work.³⁶⁸ One local authority told us it goes back to the supplier to confirm their pricing complies with the scope of the project when lowball bids are identified.³⁶⁹
- A.212 National Highways told us it rarely experienced abnormally low bids and that it mitigated the likelihood of this occurring by using framework agreements. These frameworks established fee rates in advance to limit suppliers from submitting abnormally low bids during initial tender and then renegotiating further along the project.³⁷⁰
- A.213 We considered the incentives behind why some suppliers might under-price their bids or submit lowball bids. It is important to note that lowball bidding does not necessarily imply an ex-post upward revision to the contract; it depends on the bidder’s motivation for submitting a low bid, and whether they plan to (and can) deliver the project at the price specified.

(a) Tier 2 and Tier 3 participants in the CMA market research told us:

- (i) Suppliers in need of greater cashflow were sometimes more likely to price keenly to increase their chances of a successful bid.³⁷¹
- (ii) Suppliers can intentionally under-price to generate experience in a new sector or keep staff working in slower periods, sometimes with the aim of renegotiating variations at a later stage.³⁷²

³⁶⁵ Note of meeting with [REDACTED].

³⁶⁶ Notes of meetings with [REDACTED].

³⁶⁷ The Scottish Government (2024), [Public Procurement and Property: Graduated pricing mechanism guidance: CPN 3/2024](#).

³⁶⁸ Note of meeting with Transport Scotland [REDACTED].

³⁶⁹ Note of meeting with [REDACTED].

³⁷⁰ Note of meeting with National Highways [REDACTED].

³⁷¹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p40.

³⁷² Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p58.

(iii) Unintentional under-pricing can also occur due to error, inexperienced bidding teams, and a failure to understand risks. This leads to renegotiations, disputes, or even a failure to deliver.³⁷³

(iv) Suppliers may be able to under-price their bids by using lower quality materials or less experienced staff to cut costs, delivering lower quality work overall.³⁷⁴

(b) One local authority told us suppliers may put in significantly lower bids, especially during periods of reduced activity, and increase prices later through compensation events to recover profit.³⁷⁵

(c) Some suppliers mentioned price is still a big component of the bid evaluation process and while procuring authorities are mostly placing less weight on price criteria in bid evaluations, it is still a cost-driven sector.³⁷⁶

A.214 Submitting an under-priced bid is more likely to be a successful strategy where procuring authorities are highly focused on price in their assessments. We have seen evidence that suggests procurers may prioritise cheaper bids and place greater weight on price, especially when budgets are limited. Across Tier 1 and Tier 2, some suppliers told us that price is usually the main deciding factor in contract award decisions,³⁷⁷ which some suppliers indicated was due to budgetary and funding constraints.³⁷⁸ A weighting that overly favours price in evaluation criteria can incentivise firms to under-price risk or strip out innovation.^{379,380} For example, a panel member noted evaluation models can be output-focused rather than outcomes-focused and this may not achieve best value for public money. In particular, an evaluation which focuses on lowest price may not sufficiently weight the benefits of keeping established teams together, meaning learning is lost between projects.³⁸¹ We set out further evidence on how public authority assessment of tender criteria can impact innovation in the 'Assessment of tender criteria' section. Some participants in the CMA market research mentioned that it was common for procurers to focus on finding the cheapest bidder, but many public authority procurers now put more value on quality. They noted budgets for some projects can be tight, especially in rail, and focus on minimum upkeep

³⁷³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p58.

³⁷⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p59.

³⁷⁵ Note of meeting with [REDACTED].

³⁷⁶ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p59. Note of meeting with [REDACTED]; Response to the CMA's information request [REDACTED].

³⁷⁷ Responses to the CMA's information requests [REDACTED].

³⁷⁸ Responses to the CMA's information requests [REDACTED].

³⁷⁹ For example, Balfour Beatty submitted that tender valuations with a narrow focus on cost can discourage the adoption of new technologies and Modern Methods of Construction, which may require higher upfront investment but deliver long-term savings, productivity gains, and sustainability benefits. [Balfour Beatty's response](#) to the CMA's invitation to comment, p8. Kier told us that certain public sector clients have prioritised cost certainty over innovation and that the procurement process can therefore present significant barriers to implementing innovations. Kier's response to the CMA's information request [REDACTED].

³⁸⁰ Responses to the CMA's information requests [REDACTED].

³⁸¹ Note of meeting with the sector panel [REDACTED].

instead of fixing issues for the long-term.³⁸² This could lead to a greater emphasis on price when evaluating bids.

- A.215 The capacity and capability of the procuring authority evaluating bids is also relevant for how likely it is that an unrealistically low bid may be successful. Where those evaluating bids do not have the time or commercial insight to recognise and challenge underpriced bids, there may be more likelihood that such an approach would be selected. In addition, if procurers do not have sufficient capability to effectively differentiate the quality aspects of different proposals, they may be more likely to use price as the deciding factors and so again default to weighting price disproportionately.³⁸³ We consider the evidence we have received on public authorities' capacity and capabilities in the 'Public authority capacity and coordination constraints' section.
- A.216 We considered how better bid evaluation by public authorities can shift focus away from the price component and deter suppliers from submitting intentionally under-priced bids to win work. We gathered views on what would help suppliers to improve the non-price aspects of their bids and how to mitigate the risk of public authorities over-relying on price when assessing contracts.
- (a) Many stakeholders, including Tier 1 suppliers who responded to our interim report, suggested that greater focus on a project's whole life value when evaluating bid submissions would recognise non-price aspects of a bid (such as quality, social value, and safety).³⁸⁴ Most suppliers called for greater transparency on how non-price aspects will be scored and weighted during the bid evaluation process.³⁸⁵ This could support suppliers to submit improved bids, including more accurate pricing that reflects the whole life value of a project instead of creating a 'race to the bottom' competition on price.
 - (b) Suppliers commonly suggested ensuring evaluators have the necessary training when assessing non-price factors, especially for more technical projects.³⁸⁶ The RIA submitted that in rail, evaluators need stronger commercial and technical capability to assess non-price factors credibly. Price dominates by default otherwise.³⁸⁷ Using a pool of centralised assessors and/or external experts would also enable procurers to improve bid assessment.³⁸⁸

³⁸² Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p52.

³⁸³ One stakeholder suggested that limited client technical capacity can make it harder to differentiate bids on quality, potentially making price the deciding factor. Note of meeting with [X].

³⁸⁴ [Rail Forum](#), [RIA](#), [M Group](#), [CECA](#), [Costain](#) and [BAM Nuttall's](#) responses to the CMA's interim report, question 8.

³⁸⁵ [Laing O'Rourke](#), [Amey](#), [Balfour Beatty](#), [Rail Forum](#) and [M Group's](#) responses to the CMA's interim report, question 8.

³⁸⁶ For example, [M Group](#), [Rail Forum](#), [Balfour Beatty](#), and [RIA's](#) responses to the CMA's interim report, question 8.

³⁸⁷ [RIA's response](#) to the CMA's interim report, question 8.

³⁸⁸ [Balfour Beatty's response](#) to the CMA's interim report, question 8.

- (c) Other suggestions included greater engagement with the procuring authority both during the assessment process to allow suppliers to gain a fuller understanding of the brief, and feedback after.³⁸⁹ This would lead to bids being in greater compliance with the scope and reduce reliance on price as the differentiator. One supplier suggested post-award verification of commitments can also reduce the risk of ‘promise inflation’ during bidding (ie the price quoted is too low to carry out the work agreed).³⁹⁰

Conclusions on lowballing and bid evaluation

- A.217 We have heard that lowballing is something that happens, although we do not have evidence as to how widespread this is. We have also heard that public authorities have ways of identifying lowball bids, and encouraging bidders to price realistically.
- A.218 Suppliers gave us a range of what we might consider ‘good’ reasons for lowball bidding, including a desire to keep resources utilised and maintain cashflow. We have seen evidence that suggests public authorities may prioritise price over other factors when budgets are constrained, meaning such a strategy is more likely to be successful in these circumstances.
- A.219 Suppliers suggested to us that improved evaluation of the non-price aspects of bids was one way to deter suppliers from submitting lowball bids. Suppliers suggested that raising the capability of evaluators was one way to achieve this, as was greater engagement during assessment to ensure suppliers fully understand the brief and can submit realistic bids.

Contract management

- A.220 Good contract management is essential for on time and on budget delivery, as it creates the right incentives and circumstances for all parties to perform at their best as a contract is rolled out. This relates to performance at all tiers of the supply chain and covers a range of issues including supply chain coordination, financial management, and risk management.
- A.221 The CMA heard from multiple Tier 1 and Tier 2 firms, as well as one national public authority, that poor contract management can be a cause of cost and time overruns on projects.³⁹¹ For example, Amey said that poor contract management and ineffective project controls (on both the client and contractor side) are a cause of cost and time overruns at the project implementation stage.³⁹²

³⁸⁹ Mott MacDonald, RIA, Amey and BAM Nuttall's responses to the CMA's interim report, question 8.

³⁹⁰ Balfour Beatty's response to the CMA's interim report, question 8.

³⁹¹ Responses to the CMA's information requests [38].

³⁹² Amey's response to the CMA's information request [38].

- A.222 We heard from two national public authorities that poor contractor performance was a contributing factor in one of their largest enhancement project overruns in the previous five years, highlighting the importance of good contract management.³⁹³ To avoid these overruns, one national public authority said that it seeks to carefully manage poor contractor performance in accordance with the appropriate contractual mechanisms and consider the project holistically – particularly any risk associated with delivery.³⁹⁴
- A.223 National Highways told the CMA it uses the Contract Control Framework (CCF) to manage contracts, and this has guidance and templates for contract management. The CMA has seen its guidance documents which support the management of contract change, performance and risk during project delivery.³⁹⁵ ACE also highlighted the role of consultants in acting as the interface between investors, clients and contractors to facilitate delivery certainty and effective project outcomes, and manage risks.³⁹⁶

Supply chain management

- A.224 Supply chain management is also an essential part of contract management, particularly on large projects, where there can be over 20 subcontractors on a project. We heard from some lower tier firms that poor contract management by Tier 1s can cause project delays:
- (a) Holcim identified poor subcontractor management by Tier 1 firms as a cause of project overruns. It told the CMA that many Tier 1s act as programme managers, relying on a network of subcontractors to perform specific tasks and it is their responsibility to manage and coordinate these different parties. Where a subcontractor is late or performs poorly, it can create delays for the entire project.³⁹⁷
 - (b) The CMA's market research captured some reports of multiple consultants and Tier 1 managers on site who are not involved in delivery, making liaison inefficient for Tier 2s. Tier 2 and Tier 3 firms also reported that some managers and consultants seemed less incentivised to stick to timetable and avoid delays when the result could be ongoing management fees for them.³⁹⁸
- A.225 Amey told the CMA that in response to past overruns, it has improved its subcontract management and early intervention processes, and this has helped to prevent or reduce subsequent overruns. Practices it has adopted include early intervention triggers when subcontractors fall behind and enforced NEC

³⁹³ Responses to the CMA's information requests [§].

³⁹⁴ Response to the CMA's information request [§].

³⁹⁵ National Highways' response to the CMA's information request [§].

³⁹⁶ ACE's response to interim report, p1 and 8.

³⁹⁷ Holcim's response to the CMA's information request [§].

³⁹⁸ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), pp66-67.

processes, including strict monitoring of change including Early Warning Notices and Compensation Event submissions.³⁹⁹ On one road project, Kier said it used rigorous subcontract management to mitigate overruns.⁴⁰⁰

- A.226 Balfour Beatty said that active supply chain management, supported by ongoing risk management, can be utilised to plan for and manage potential forms of disruption, such as those concerning site-co-ordination, access permits and stakeholder constraints.⁴⁰¹

Financial management

- A.227 The management of payment terms and adherence to those terms were also found to impact outcomes at the contract implementation stage:

- (a) BAM Nuttall said that ineffective or poor contract management, as well as the absence of prompt payment, are a cause of cost and time overruns.⁴⁰²
- (b) The CMA's market research found that a few participants reported extended payment terms or lack of adherence to agreed terms (which can just be poor management) affecting cashflow.⁴⁰³

- A.228 While Project Bank Accounts are considered a way to ensure certainty of payment for lower tier firms, the CMA's market research also found that a few lower tier firms with experience of Project Bank Accounts said they were a good idea in principle but could create yet more administrative work and be inconsistently applied. They felt there was still room for the principal contractor to dispute or delay payments, and one firm cited an example of one Project Bank Account being 'empty' when there was an issue.⁴⁰⁴

Dealing with inappropriate contract terms or contract change

- A.229 Some issues which arise during contract management are the result of decisions or actions taken earlier in the procurement process, such as incomplete scoping or misallocation of risk.

- (a) Regarding risk, Costain told the CMA that sub-optimal risk allocation can result in significant problems down the line, with insolvencies or project termination in a worst case scenario,⁴⁰⁵ while Kier said that amending the

³⁹⁹ Amey's response to the CMA's information request [§].

⁴⁰⁰ Kier's response to the CMA's information request [§].

⁴⁰¹ Balfour Beatty's response to the CMA's information request [§].

⁴⁰² BAM Nuttall's response to the CMA's information request [§].

⁴⁰³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), pp66-67.

⁴⁰⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), pp66-67.

⁴⁰⁵ Costain's response to the CMA's information request [§].

standard forms of contracts in order to reallocate risk can create perverse incentives, potentially leading to disputes and delays.⁴⁰⁶

- (b) Regarding scope change, Skanska told the CMA that where scope documents are incomplete or based upon inaccurate assumptions, post-contract change will be required and this is very difficult to manage efficiently.⁴⁰⁷

A.230 The CMA has also heard how good contract management can help to minimise or avoid the disruption created as these issues play out during contract implementation stage:

- (a) Balfour Beatty told the CMA that it mitigates the inherent delivery risk of supplier insolvency through active supply chain management supported by ongoing risk management.⁴⁰⁸
- (b) Kier said it increases robust risk management to limit the impact when overruns are experienced.⁴⁰⁹
- (c) Murphy told the CMA that it has been able to reduce time and cost overruns caused by scope change using NEC early warning processes and collaborative risk management.⁴¹⁰
- (d) Morgan Sindall said that it mitigates delays due to scope change by holding prompt collaborative planning meetings with its supply chain partners to re-phase the programme.⁴¹¹
- (e) Murphy said it uses designer KPI frameworks which incentivise deliverability rather than theoretical compliance in order to avoid overruns due to late design maturity.⁴¹²

Collaborative approaches to contract management

A.231 A collaborative approach was also singled out by other stakeholders as an essential part of contract management. A collaborative approach involves close working and integration between the parties, usually allowing for better alignment of incentives across all parties.

⁴⁰⁶ Kier's response to the CMA's information request [§].

⁴⁰⁷ Skanska's response to the CMA's information request [§].

⁴⁰⁸ Balfour Beatty's response to the CMA's information request [§].

⁴⁰⁹ Kier's response to the CMA's information request [§].

⁴¹⁰ Murphy's response to the CMA's information request [§].

⁴¹¹ Morgan Sindall's response to the CMA's information request [§].

⁴¹² Murphy's response to the CMA's information request [§].

- (a) Costain has told the CMA that collaboration between all parties at the contract implementation stage is vital.⁴¹³
- (b) Story Contracting said that mature relationships that encourage healthy challenge and open dialogue is the best way to get a programme right from the start, and it cited a lack of collaboration at the contract management stage as a cause of overruns. It also noted a tendency that clients' representatives are not (or do not feel) empowered to proactively manage change which results in reactive rather than proactive change management, causing a greater impact.⁴¹⁴
- (c) Kier said that when overruns arise, it increases integrated and collaborative planning across the overrunning disciplines and contractors and increases interface management.⁴¹⁵
- (d) Skanska said that it uses better coordination and collaboration between technical teams to mitigate the impact of scope change.⁴¹⁶

A.232 During the market research, Tier 2 and Tier 3 firms made fewer mentions of issues in general with contract management day-to-day by public authorities or contractors higher up the supply chain, but did express frustrations that lay more with the original policymaking, contracting, and terms.⁴¹⁷ Nonetheless, the evidence suggests that good contract management can play a role in alleviating negative impacts associated with any errors in the original policymaking and contracting, as well as ensuring smooth delivery of a well-planned project, and that a collaborative approach is likely to be important in achieving this.

Conclusions on the role of contract management in reducing overruns

- A.233 Taken together, the evidence we have considered suggests that poor contract management can contribute to overruns, and that public authorities have various methods in place to manage contractor performance.
- A.234 Poor management of subcontractors on the part of Tier 1 contracting firms can also drive overruns, and the Tier 1s we heard from have subcontract management processes in place to ensure subcontractors are managed effectively. At the same time, however, we heard from subcontractors that the original contracting arrangements can create issues for them.

⁴¹³ Costain's response to the CMA's information request [§].

⁴¹⁴ Story Contracting's response to the CMA's information request [§].

⁴¹⁵ Kier's response to the CMA's information request [§].

⁴¹⁶ Skanska's response to the CMA's information request [§].

⁴¹⁷ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p66.

A.235 Good contract management can help to reduce the disruption (and therefore overruns) generated by issues as they arise. Close collaboration between all parties can also improve the way issues are managed.

Procurement approaches – procurement frameworks and open competition

A.236 Public authorities have a number of different procurement approaches available to them, the most common of which are:

- (a) Open competition (sometimes also referred to as competitive tendering) – a tendering procedure without a restriction on who can submit tenders.⁴¹⁸ Open competition allows for the widest possible set of suppliers to compete, but as a result tends to be slower and more costly as procurers must have procedures to consistently evaluate a potentially wide range of bids.
- (b) Use of a framework – a contract between a contracting authority and one or more suppliers that provides for the future award of contracts by a contracting authority to the supplier or suppliers.⁴¹⁹ Frameworks allow upfront competition between suppliers as to who will be allowed onto the framework, and there may be some subsequent competition for work allocated via the framework, but this will be restricted to those who were successful in being added to the framework. This more limited competitive stage allows for the work to be allocated more quickly.
- (c) Direct award – where a public contract is awarded without a competitive tendering procedure and the public contract is placed directly with the supplier of the contracting authority's choosing.⁴²⁰ Direct awards allow work to be allocated quickly, but involve no competition, and so are only possible in certain circumstances.

A.237 The procurement approach chosen influences the level and nature of competition between suppliers for work, both directly (through determining who is eligible to bid or be awarded work) and indirectly (through factors such as the cost of submitting bids, and the attractiveness of the work to be allocated, for example in how it is packaged up).

A.238 In this section we set out:

⁴¹⁸ Cabinet Office (2026), [Guidance: Frameworks](#).

⁴¹⁹ [Procurement Act 2023](#), section 20.

⁴²⁰ Cabinet Office (2026), [Guidance: Direct Award](#).

- (a) Background on the use of procurement frameworks, including how they are currently used, recent developments in best practice in their use and design and how far this best practice is followed.
- (b) Evidence on bidding costs for open competition and the scope for these to be reduced.
- (c) Evidence on bidding costs for procurement frameworks, and scope for these to be reduced.
- (d) Evidence on how frameworks can influence supplier incentives through mechanisms to evaluate suppliers and reward good behaviours.

Current use of procurement frameworks

A.239 Frameworks have a number of features, which vary across public authorities. Features include the projects or works covered, the duration of the framework, the number of suppliers, and how work is allocated within the framework.

- (a) Frameworks are used for a range of projects. Maintenance and renewal work is often procured through frameworks,⁴²¹ which Network Rail's eastern region told us is suited for frameworks to avoid repeat procurement activities for similar requirements.⁴²² For larger enhancement works, there are some central frameworks available for use by a number of contracting authorities. These include the Scottish Government's Civil Engineering Framework⁴²³ for works up to £100 million, the Major Civil Engineering Works Framework⁴²⁴ in Northern Ireland, and NEPO's Civil Engineering and Infrastructure Works for programmes of work including local road remodelling schemes.⁴²⁵ The Crown Commercial Service has launched bidding for a £120 billion framework, to start in 2027.⁴²⁶
- (b) The maximum duration set for frameworks by the Procurement Act 2023 and Public Contracts (Scotland) Regulation is four years.⁴²⁷ However, this does not apply where the contracting authority considers the nature of the goods, services, or works to be supplied under the call-off contracts⁴²⁸ to be

⁴²¹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p24. For example, one local authority uses a framework that primarily delivers road maintenance. National Highways delivers most renewals works under two frameworks, the Scheme Delivery Framework and the Pavement Delivery Framework, and another local authority has framework arrangements for more specialist skills, like resurfacing and minor works. Notes of meetings with [§]; National Highways' response to the CMA's information request [§].

⁴²² Note of meeting with Network Rail [§].

⁴²³ The Scottish Government (2024), [Procurement - civil engineering framework: guidance](#).

⁴²⁴ DfI (2025), [Department for Infrastructure: Major Civil Engineering Works Framework - Procurement Enhancement Programme Phase 2](#).

⁴²⁵ NEPO, [Civil Engineering & Infrastructure Works](#), accessed on 18/03/26.

⁴²⁶ [Construction Works and Associated Services 3 including ProCure24 - Find a Tender](#), accessed on 07/04/26.

⁴²⁷ [The Public Contracts \(Scotland\) Regulations 2015](#), regulation 34.

⁴²⁸ A call-off contract is a contract between a buyer and a framework supplier that has been placed through a framework. CCS (2024), [What is a 'call-off' and how to get the process right](#).

awarded under the framework means that a longer term is required.⁴²⁹ In practice, frameworks can therefore be longer than four years. National Highways and Network Rail's key frameworks span five to eight years,⁴³⁰ and in some local authorities longer term frameworks (seven plus years) are common, often with the option for extension.⁴³¹

- (c) The number of suppliers on frameworks and how work is allocated are linked. With more suppliers, there is greater scope to run subsequent competitions between them to award work. Some frameworks operate with single suppliers, which we have seen across a number of local authorities⁴³² and Network Rail's Wales and Western region,⁴³³ with call-off contracts going directly to the supplier. Other frameworks operate with multiple suppliers, assigning works through Lots and mini competitions.⁴³⁴

A.240 A public authority's decision to use a framework is often made based on its internal guidance. This guidance generally requires assessing the most suitable procurement option (route to market) at the outset,⁴³⁵ which may be to use frameworks as a first option if one already exists and suits the needs of the project.⁴³⁶

A.241 Variation in approach has resulted in both good and bad practice. In 2021, an independent review of public sector construction frameworks was commissioned by Cabinet Office.⁴³⁷ The report from this review (the Gold Standard Report) sets

⁴²⁹ Cabinet Office (2026), [Guidance: Frameworks](#).

⁴³⁰ National Highways' response to the CMA's information request [§]; Network Rail's response to the CMA's information request [§].

⁴³¹ Note of meeting with [§]; Note of meeting with [§].

⁴³² Notes of meetings with [§].

⁴³³ Note of meeting with Network Rail [§].

⁴³⁴ For example, National Highways' Scheme Delivery Framework is made up of 12 specialist lots, with 20-30 suppliers operating in each Region/Area. The Scottish Government's Procurement framework is made up of three lots with up to six suppliers on each, and Northern Ireland's Major Civil Engineering Works frameworks covers five Lots, with a range of 6-10 suppliers. National Highways' response to the CMA's information request [§]; The Scottish Government (2024), [Procurement - civil engineering framework: guidance](#); DfI (2025), [Department for Infrastructure: Major Civil Engineering Works Framework - Procurement Enhancement Programme Phase 2](#).

⁴³⁵ National Highways' procurement guidance covers identification of procurement methods, including internal frameworks and suitable enabled external frameworks, and an assessment of the options available are presented in a commercial and procurement strategy paper. Transport Scotland consider the use of framework agreements (such as the Scottish Government's Civils Framework) at the procurement strategy stage. Department for Infrastructure said that a Senior Responsible Owner is appointed to work with the CoPE to identify the most appropriate route to market for all major projects. National Highways' response to the CMA's information request [§]; Transport Scotland's response to the CMA's information request [§]; DfI's response to the CMA's information request [§].

⁴³⁶ Network Rail's Commercial & Procurement policy states that the use of frameworks should be considered a primary option, where larger enhancement projects would be subject to a sourcing strategy approval, so if there is a suitable framework in place, that is used. Enhancement projects are procured openly, as they are big and multidisciplinary, and for renewals, there can be thousands of projects per annum, so constant open tender would be unsustainable. Some local authorities have also told us that they use frameworks as their first option. One local Authority outlined that if the framework can meet the needs of the project, then it is used as first protocol, because contractors have been pre-approved. Another local authority mainly uses their PFI to deliver its projects, so there is an internal discussion on whether to deliver a project through the PFI or use another existing framework (eg CSS), following internal calculations on cost. Note of meeting with Network Rail [§]; Notes of meetings with [§].

⁴³⁷ The review examined framework procurement documents, contracts, guidance and case studies shared by 20 clients and framework providers who serve central government departments, arm's length bodies, local authorities and the wider public sector. It also received contributions from over 100 clients, suppliers, and advisers. The review looked at

out 24 recommendations that establish a ‘gold standard’ for the assessment of new frameworks, enabling contracting authorities to identify frameworks that meet best practices, and embody the policies set out in the Construction Playbook.⁴³⁸ The evidence we have seen suggests that the recommendations outlined in the report represents best practice for procurement frameworks. These recommendations have therefore been taken into account in our assessment of the current use of procurement frameworks.

- A.242 Participants in the review of public sector construction frameworks that led to the Gold Standard Report were concerned by the large number of public sector construction frameworks it revealed. There were over 2,000 active frameworks in 2021,⁴³⁹ and we have not seen evidence of a significant consolidation since then.⁴⁴⁰ We have heard evidence to suggest that among this large number there is considerable variation between frameworks, for example, the number of suppliers on them,⁴⁴¹ and in the extent to which they are underpinned by committed schemes.⁴⁴²
- A.243 Since it was published, the Gold Standard report has been taken forward in several ways. It was endorsed in the 2022 update of the Construction Playbook,⁴⁴³ and Constructing Excellence has established a Gold Standard Task Group to assess compliance with the report.⁴⁴⁴ It launched a ‘Constructing the Gold Standard’ verification scheme in November 2023, designed to verify claims made by framework providers, and provide a measure of quality for clients who use frameworks and suppliers who bid for frameworks.⁴⁴⁵
- A.244 In England, Northern Ireland, and Wales⁴⁴⁶, the Procurement Act 2023 introduced the concepts of open frameworks⁴⁴⁷ and dynamic markets.⁴⁴⁸ These reflect the recommendations of best practice outlined by the Gold Standard Report by

frameworks designed for work in England, Wales, Scotland and Northern Ireland. Questionnaires were designed for participants to share views and experiences as to how current frameworks operate. [Gold Standard Report](#), p13 and 94.

⁴³⁸ [Gold Standard Report](#), p3.

⁴³⁹ [Gold Standard Report](#), p14.

⁴⁴⁰ NAO (2023) [Lessons learned: competition in public procurement](#), p10.

⁴⁴¹ Note of meeting with the sector panel [§].

⁴⁴² Note of meeting with [§].

⁴⁴³ Constructing Excellence, [Constructing the Gold Standard Verification Scheme](#), accessed on 19/03/26.

⁴⁴⁴ The task group is led by Constructing Excellence and supported by government. Constructing Excellence is a membership organisation that provides independent verification, training and knowledge-sharing. [The Combined Response](#) to the CMA's interim report, p1.

⁴⁴⁵ Constructing Excellence, [Constructing the Gold Standard Verification Scheme](#), accessed on 19/03/26.

⁴⁴⁶ The Procurement Act 2023 does not apply to a devolved Scottish authority in most circumstances, so the provisions on frameworks will not generally be applied to devolved authorities in Scotland, except where a devolved Scottish authority carries out procurement falling within section 115A of the Procurement Act 2023.

⁴⁴⁷ Open frameworks are reopened for new suppliers to be approved to join the framework at different points during the time the framework is operational. They must be reopened *at least* once during (i) the period of three years beginning with the day of the award of the first framework in the scheme, and (ii) each period of five years beginning with the day of the award of the second framework in the scheme. There are special provisions for single supplier open frameworks. Cabinet Office (2026), [Guidance: Frameworks](#).

⁴⁴⁸ Dynamic markets are lists of pre-approved qualified suppliers (those who have met the ‘conditions for membership’) that remain open to new members throughout their lifespan who are eligible to participate in future procurements. A dynamic market is not a public contract; it is more akin to a pool of suppliers. Cabinet Office (2026), [Guidance: Dynamic Markets](#).

allowing for ongoing supplier engagement and ensuring a diverse range of suppliers (including SMEs) can contribute to public contracts.⁴⁴⁹ Open frameworks grant greater flexibility to buyers and suppliers, as suppliers can be appointed onto a framework throughout its lifetime.⁴⁵⁰ The 'dynamic' part of dynamic markets refers to the fact that they must remain open to new suppliers to join at any time, enabling entrants to join an existing pool of suppliers that is able to participate in certain procurements.⁴⁵¹

- A.245 There is scope for a wider endorsement of the Gold Standard Report across the devolved nations. The Welsh Government noted that several Construction Playbook principles align with existing the Welsh Government practice, and wider adoption of the Gold Standard framework would be beneficial.⁴⁵² While Scotland's approach to procurement aligns broadly with the Construction Playbook,⁴⁵³ it also follows specific regional guidance such as the Scottish Construction Procurement Handbook. Northern Ireland similarly follows the Procurement Act 2023, as well as regional guidance set out in the Northern Ireland Public Procurement Policy. We note that these regional guidance documents have not explicitly endorsed the Gold Standard Report.⁴⁵⁴ Department for Infrastructure said that procurement is devolved and it is therefore not required to follow Cabinet Office procurement policy notes. However, NI Procurement Policy Notes (PPNs) and best practice construction and sourcing toolkits are used.⁴⁵⁵
- A.246 Some public authorities are adhering to the recommendations set out in the Gold Standard Report. There are eight Gold Standard Verified Organisations, including contracting authorities that procure civil engineering works, like the Government Commercial Agency who offer the largest number of construction commercial agreements in the UK,⁴⁵⁶ and SCAPE, a not-for-profit organisation providing procurement frameworks established by six local authorities.⁴⁵⁷ While there is low coverage for verification (particularly amongst local authorities), public authorities may still be adhering to the recommendations set out in the report. National Highways told us that it is compliant with all aspects of the Gold Standard Report, where it is used as a checklist when procuring to ensure National Highways is guided by principles outlined in the report.⁴⁵⁸ We note that there may be ongoing frameworks that do not align with best practice as they were procured before the

⁴⁴⁹ Trowers & Hamlin, [Procurement Act 2023 – Frameworks and Gold Standard](#), accessed on 12/02/26.

⁴⁵⁰ Cabinet Office (2026), [Guidance: Frameworks](#).

⁴⁵¹ [FSB's response](#) to the CMA's interim report, question 6.

⁴⁵² Note of meeting with the Welsh Government [redacted].

⁴⁵³ Transport Scotland's response to the CMA's information request [redacted].

⁴⁵⁴ The Scottish Government (2019), [Construction Procurement Handbook](#); and Northern Ireland Executive (2025), [Public Procurement Policy Statement](#).

⁴⁵⁵ Note of meeting with DfI [redacted].

⁴⁵⁶ CCS (2024), [CCS becomes the first public sector construction framework provider to achieve Gold Standard status on new government verification scheme](#).

⁴⁵⁷ SCAPE, [Who we are](#), accessed on 19/03/26.

⁴⁵⁸ Note of meeting with National Highways [redacted].

Gold Standard Report was published in 2021, or endorsed in the 2022 Construction Playbook update.

- A.247 There may be some barriers to verification on the Gold Standard scheme. National Highways cited time and resource capacity as constraints to being formally verified, noting there are existing levels of assurance already in place. These include overlay and assurance from Cabinet Office and committees within DfT, and internal audits. It further noted that the scheme is not mandatory, and it recently spent effort and resource going through verification on another scheme, obtaining CIPS Platinum.⁴⁵⁹
- A.248 However, the design of some frameworks, where public authorities decide on features of the framework and how it is run, is still falling short of what is outlined in the Gold Standard Report. The CMA's findings in a number of respects are consistent with issues identified in the report, namely onerous bidding processes, poor feedback, and ambiguous scopes of work:
- (a) The Gold Standard Report outlined the cost and waste of creating and responding to onerous and inconsistent selection questionnaires when bidding for frameworks as an issue.⁴⁶⁰ We have seen evidence to suggest that this is still present, where Tier 1 firms told us that bidding for frameworks can be costly⁴⁶¹ and repetitive,⁴⁶² and inconsistency (between frameworks) requires suppliers to tailor a different commercial and delivery approach from scratch, increasing bid cost and inefficiency across the market.⁴⁶³
 - (b) The Gold Standard Report also outlined poor communication including the lack of feedback by framework managers⁴⁶⁴ as an issue. We have heard that a lack of, or limited, actionable feedback following unsuccessful bids may demotivate suppliers and miss opportunities to support stronger bids and competition in future.⁴⁶⁵
 - (c) The Gold Standard Report further outlined the lack of clarity as to the pipelines of work that are planned or committed to be procured under specific frameworks as an issue.⁴⁶⁶ We have heard that there is still a lack of pipeline,

⁴⁵⁹ 'CIPS Procurement Excellence Programme is the only independent, comprehensive, procurement specific assessment of its kind, that measures your procurement function against our world class standards' CIPS, [Procurement Excellence Programme](#), accessed on 12/03/26; Note of meeting with National Highways [§].

⁴⁶⁰ [The Combined Response](#) to the CMA's interim report, question 6.

⁴⁶¹ Laing O'Rourke's response to the CMA's information request [§].

⁴⁶² Morgan Sindall's response to the CMA's information request [§].

⁴⁶³ [Skanska's response](#) to the CMA's interim report, p3.

⁴⁶⁴ [The Combined Response](#) to the CMA's interim report, question 6.

⁴⁶⁵ Note of a meeting with [§]. Some participants in the CMA's market research mentioned that they received feedback on failed bids, but information can feel limited and come via procurement teams or non-specialists. Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p52.

⁴⁶⁶ [The Combined Response](#) to the CMA's interim report, question 6.

where being accepted on a framework did not guarantee future projects.⁴⁶⁷ The CMA's market research found that project uncertainty can be a barrier to firms' ability to compete, where the flow of work through a framework was seen as variable with lulls at the start and end of planning cycles or 'Control Periods' that are difficult for smaller firms to ride out.⁴⁶⁸

A.249 Overall, the guidance available detailing best practice for frameworks has been acknowledged and taken up by public authorities in a number of ways. However, the evidence we have seen indicates the design of some frameworks is still falling short of what is outlined in the Gold Standard Report. The following sections assess the scope to influence framework design to adhere to best practice. However, we first consider the scope to improve the use of open competition by making it less costly.

Bidding costs of open competition

A.250 Open competition will generally be used where a framework would not be suitable. This may be because:

- (a) The requirements of a project may not suit a framework, for example, due to its value. One local authority submitted that it goes out to open tender for larger capital delivery works,⁴⁶⁹ and another said it may go through open tender because the value of the project exceeds that of their existing framework.⁴⁷⁰ This may also be the case more generally: for example, NEPO told us that open competition is still undertaken for civil schemes, when its framework does not fit requirements for a specific reason.⁴⁷¹
- (b) There is an insufficient pipeline to warrant a framework. The Welsh Government told us that all major projects are done through open tenders, as there is no certainty on the pipeline to put a framework in place.⁴⁷² National Highways said that it was not going to renew its enhancement framework as it was not going to have many enhancements, and it was not right to put a framework in place at a cost to the supply chain, just for the supply chain to not get many schemes.⁴⁷³

⁴⁶⁷ This is in the case with zero or reduced value frameworks, where firms reported experiencing abortive procurement costs, where they successfully entered frameworks which were later cancelled, or where the advertised volumes of work do not fully materialise. Responses to the CMA's information requests [§]; [RIA's response](#) to the CMA's invitation to comment, question 7.

⁴⁶⁸ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p42.

⁴⁶⁹ Note of meeting with [§].

⁴⁷⁰ Note of meeting with [§].

⁴⁷¹ [NEPO's response](#) to the CMA's interim report, question 7.

⁴⁷² Note of meeting with Welsh Government [§].

⁴⁷³ Note of meeting with National Highways [§].

- A.251 While it is a suitable procurement method in some circumstances, open competition remains costly⁴⁷⁴ for both public authorities and suppliers.
- (a) For suppliers, the pre-qualification process (which potential suppliers must go through in order to be eligible to participate in a competitive tender process) can be resource-intensive⁴⁷⁵ due to numerous pre-qualification exercises and multiple submissions of their company information.⁴⁷⁶ The Rail Forum told us that this process adds significant administrative burden, sometimes with no real value added.⁴⁷⁷ A resource burden can also arise from unclear or incomplete tender documentation issued to unrealistic timescales.⁴⁷⁸
 - (b) For some public authorities, they do not have the time, resources, or expertise to procure via open competition and doing so can create further risk of poor procurement practices. For example, one local authority told us it does not tend to procure through the open competition process because of the logistics and the time it takes,⁴⁷⁹ and Network Rail submitted that open, competitive procurement is more resource-intensive and slower.⁴⁸⁰ NEPO said that the procurement process is always going to be resource-intensive as authorities need to ensure they follow all regulations and appoint the right contractor, hence the use of frameworks.⁴⁸¹
- A.252 Generally, there are costs associated with the bidding process for both frameworks and open competition. Costain told us the cost of bidding is a significant drain on the entire industry,⁴⁸² and the RIA said that bid cost inflation is frequently driven by avoidable client behaviours like unrealistic timescales, and multiple large ITTs.⁴⁸³ National Highways said there can be abortive costs associated with bidding for its contracts as it is important for procurement processes to be robust to assure funding is invested with confidence.⁴⁸⁴ The costs associated with bidding for frameworks is further outlined in the 'Bidding costs of procurement frameworks' section.
- A.253 There is scope to reduce the cost of open competition to public authorities and suppliers, and in so doing, make it more attractive relative to procuring through a framework and/or make it easier for a wider set of suppliers to bid, increasing

⁴⁷⁴ M Group told us that they do not believe open competition offers value for money or delivers project outcomes, often rewarding lowest price competition. It stated the design must be fully finalised for open competition to be run, precluding effective ECI, resulting in poor buildability, restricted specification, and constrained programmes. [M Group's response](#) to the CMA's interim report, question 7. We note that these issues do not appear to be inherent to open competition generally but might the case if the competition is not designed well.

⁴⁷⁵ [Amey's response](#) to the CMA's interim report, question 7.

⁴⁷⁶ [Rail Forum's response](#) to the CMA's interim report, question 7.

⁴⁷⁷ [Rail Forum's response](#) to the CMA's interim report, question 7.

⁴⁷⁸ [SCAPE's response](#) to the CMA's interim report, question 7.

⁴⁷⁹ Note of meeting with [REDACTED].

⁴⁸⁰ Network Rail's response to the CMA's information request [REDACTED].

⁴⁸¹ [NEPO's response](#) to the CMA's interim report, question 7.

⁴⁸² [Costain's response](#) to the CMA's interim report, question 7.

⁴⁸³ [RIA's response](#) to the CMA's interim report, question 6.

⁴⁸⁴ National Highways' response to the CMA's information request [REDACTED].

competitive tension. Reducing costs where possible would also support improved efficiency in the sector. We have heard from stakeholders that there are potential ways to reduce the cost of bidding:

- (a) Greater standardisation of procurement across public authorities can be a key opportunity to reduce resource intensity,⁴⁸⁵ and materially reduce bid costs.⁴⁸⁶ CECA suggested that pre-qualification questionnaires and accreditations can be standardised,⁴⁸⁷ and we have heard further suggestions that this could be done through standard templates,⁴⁸⁸ and predefined response formats.⁴⁸⁹
- (b) Greater digitalisation is another way in which the cost of bidding could be reduced, through common data environments, and “once-only” supplier data submissions. Balfour Beatty submitted that this was the intention behind the launch of the new Central Digital Platform in connection with the Procurement Act,⁴⁹⁰ but it has not seen the expected simplification or standardisation of pre-qualification submissions expected. Balfour Beatty added that this can be further complemented by phased procurement gateways, with slim initial submissions supported by evidence libraries.^{491 492}
- (c) Ensuring that the information requested is proportionate could also reduce the resource burden for some, particularly smaller, projects. Balfour Beatty submitted that this means being tightly aligned to the needs of the project,⁴⁹³ and CECA supports proportionate information requirements, including limited requests for tender from a select number of qualified suppliers. It said that procurement should test capability and delivery rather than bid-writing capacity.⁴⁹⁴

Bidding costs of procurement frameworks

A.254 We have considered the costs of participating in procurement frameworks, and whether there could be scope to reduce these by standardising and simplifying framework requirements.

⁴⁸⁵ [M Group's response](#) to the CMA's interim report, question 7.

⁴⁸⁶ [Balfour Beatty's response](#) to the CMA's interim report, question 7.

⁴⁸⁷ [The Combined Response](#) to the CMA's interim report, question 7.

⁴⁸⁸ [Balfour Beatty](#) and [ACE's response](#) to the CMA's interim report, question 7.

⁴⁸⁹ [Mott MacDonald's response](#) to the CMA's interim report, question 7.

⁴⁹⁰ The Procurement Act 2023 legislated for provision of a central digital platform, where all suppliers can input their commonly used information. GCF (2026), [Central Digital Platform - factsheet](#).

⁴⁹¹ [Balfour Beatty's response](#) to the CMA's interim report, question 7.

⁴⁹² In a similar vein, a suggestion for improvement made by participants in the CMA's market research was to remove the need for repetitive submission of the same information in order to bid for tenders. Firms wondered why it was not possible to submit this once to a central portal so that each bid submission only focused on the specific bid in question. Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p71.

⁴⁹³ [Balfour Beatty's response](#) to the CMA's interim report, question 7.

⁴⁹⁴ [CECA's response](#) to the CMA's interim report, question 7.

- A.255 There is a cost associated with bidding for framework opportunities, which can present a barrier for suppliers. Participants in the review of public sector construction frameworks that led to the Gold Standard Report stated that the average bid cost for each major framework was over £247,000 for contractors and over £130,000 for consultants, with a maximum of up to £1 million in each case.⁴⁹⁵ We have not seen evidence for the average bid cost for open competition. Bidding costs for frameworks can also present as a barrier for SMEs: a report by the Federation of Small Businesses (FSB) claimed that the tender process required for a framework is often nearly as difficult as a standard high-value contract, demanding significant time and resource investment.⁴⁹⁶ However, we have heard from Balfour Beatty that frameworks can help mitigate the resource and costs involved with tendering for individual contracts, providing that the work allocation process under the associated framework is efficient.⁴⁹⁷ Participants in the CMA market research said frameworks help by avoiding an excessive number of bidders and low win rates, as experienced on open tenders.⁴⁹⁸
- A.256 The structure of the bidding process may create costs for suppliers when bidding to join frameworks.⁴⁹⁹ The FSB told us that application requirements can be unreasonably onerous, particularly when bidders are repeatedly asked for the same information multiple times,⁵⁰⁰ and CECA said that costs are driven by extensive written submissions.⁵⁰¹ Another challenge we have heard is in relation to inconsistency. The ICE said that there is a cost and waste associated with creating and responding to inconsistent selection questionnaires and bespoke framework contracts,⁵⁰² and Skanska said that inconsistent frameworks design can result in differences between offers prepared under frameworks, where suppliers are required to tailor a different approach from scratch for each framework, increasing bid cost and inefficiency across the market.⁵⁰³
- A.257 Once on a framework, there can be further costs associated with bidding for call-off contracts to win work, a process referred to as mini competitions. We have heard from suppliers that these mini competitions can be inefficient,⁵⁰⁴ and bureaucracy was cited by participants in the CMA market research as a barrier to bidding where the same information is requested multiple times in different formats, even from suppliers already on frameworks.⁵⁰⁵ The Gold Standard Report outlined that over 60% of contractor participants in the review of public sector construction frameworks expressed concerns that the resources required to

⁴⁹⁵ [Gold Standard Report](#), p3.

⁴⁹⁶ FSB's submission to the CMA [§].

⁴⁹⁷ Balfour Beatty's response to the CMA's information request [§].

⁴⁹⁸ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p52.

⁴⁹⁹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p44.

⁵⁰⁰ [FSB's response](#) to the CMA's interim report, question 1.

⁵⁰¹ [CECA's response](#) to the CMA's interim report, question 6.

⁵⁰² [ICE's response](#) to the CMA's interim report, question 6.

⁵⁰³ [Skanska's response](#) to the CMA's interim report, p3.

⁵⁰⁴ Responses to the CMA's information [§].

⁵⁰⁵ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p44-45.

compete for individual framework projects can be wasteful and can fragment the value of frameworks as effective long-term contracts.⁵⁰⁶

- A.258 The extent to which mini competitions are inefficient depends on the level of additional cost placed on suppliers (and procurers) from running the mini competition compared with the benefit from ensuring the particular piece of work is undertaken by the most suitable supplier on the framework. They may be necessary for some projects; for example, one local authority told us that mini competitions are undertaken to demonstrate value for money against other contractors. It also told us that suppliers can be slightly more flexible with the bill of quantities they put forward on a mini competition, versus at the start of a framework.⁵⁰⁷
- A.259 Whether the cost of bidding on a framework is proportionate also depends on the likelihood of winning work once on that framework. The Gold Standard Report found that there is a 20-25% chance of a supplier winning a framework project once on a framework if the average success rate in framework bids is combined with the average success rate in call-off bids.⁵⁰⁸
- A.260 The lack of a firm pipeline of work to be delivered through a framework has a direct bearing on the proportionality of the costs of bidding to join it, as outlined in the 'Current use of procurement frameworks' section. Kier told us that firms can invest considerable time and effort into securing a place on frameworks for work to not be delivered through it,⁵⁰⁹ and CECA said that a non-guaranteed pipeline of projects is a common framework failing.⁵¹⁰ The FSB reported that the process for getting onto a framework presents a barrier for SMEs, given high resource investment and no guarantee of winning work even if accepted onto the framework.⁵¹¹
- A.261 The CMA collected procurement bidding cost data from eight Tier 1 firms on road civil engineering projects, and nine firms on rail civil engineering projects. In the last five complete financial years, the firms told us they spent a total of £65.3 million bidding on road civil engineering opportunities across both frameworks and open competition, and £107.5 million on rail.
- A.262 The firms spent £33.6 million bidding on open competitions for road civil engineering projects, and £33 million bidding on open competitions for rail. The same firms participated in a total of 171 and 158 open competitions in road and rail, respectively.

⁵⁰⁶ Gold Standard Report, p44.

⁵⁰⁷ Note of meeting with [REDACTED].

⁵⁰⁸ Gold Standard report, p15.

⁵⁰⁹ Kier's submission to the CMA [REDACTED].

⁵¹⁰ CECA's response to the CMA's interim report, question 6.

⁵¹¹ FSB's submission to the CMA [REDACTED].

- A.263 For road frameworks, the firms spent a total of £18.5 million on bidding to get on to frameworks over the five-year period. Over the time period, they were appointed to 36 frameworks and were unsuccessful in getting on to 18, indicating a ‘win’ rate (noting that at this stage no work has yet been awarded) of 67%. The firms spent a further £13.1 million bidding for mini competitions on frameworks (not necessarily just the frameworks joined over the period), spending a total of £31.7 million to win projects on a framework. This accounts for 48.5% of the total road bidding spend by the firms over the time period. The total value of works won on frameworks over this period was £3.7 billion, overall suggesting that the cost of bidding for frameworks may not be disproportionate.
- A.264 For rail frameworks, the firms spent £51 million on bidding to get onto frameworks. They were appointed to 88 rail frameworks, while being unsuccessful in getting on to 107 rail frameworks, indicating a ‘win’ rate (although, again, no work has yet been won) of 45%. The firms spent a further £23.5 million over the same period bidding for mini competitions, spending a total of £74.5 million to win projects on frameworks, considering both bids to join frameworks, and bids to win work within frameworks. This accounts for 69.3% of the total rail bidding spend by the firms. The total value of works won on frameworks over this period was £4 billion.
- A.265 This data suggests that bidding costs are not necessarily disproportionate, when considering the value of work won. We note, however, that the data represents a small portion of the market, and our evidence review indicates that there may still be scope to reduce bidding costs through standardising and simplifying frameworks.
- A.266 One way in which the cost and challenges associated with bidding for frameworks could be addressed is by simplifying frameworks through standardising some elements of the design. For procurement in general, the RIA told us that there is scope to increase standardisation across public authorities and reduce complexity – complexity is often procedural rather than regulatory arising from unclear contract points,⁵¹² and we consider that this principle applies to frameworks.
- A.267 Tier 1 suppliers suggested to us a number of ways in which there could be greater standardisation. Amey said that a more standardised approach to the design and contractual terms could improve frameworks.⁵¹³ Costain told us that standardisation of pre-qualification information like health and safety, cyber security, and insurances can help reduce bid activity and cost. We heard further suggestions for standardisation of the procurement process in general, to standardise accreditations⁵¹⁴ and data packs.⁵¹⁵ There may also be scope for

⁵¹² [RIA's response](#) to the CMA's interim report, question 6.

⁵¹³ [Amey's response](#) to the CMA's interim report, question 6.

⁵¹⁴ [Costain's response](#) to the CMA's interim report, question 7.

⁵¹⁵ [Balfour Beatty's response](#) to the CMA's interim report, question 6.

further digitalisation to simplify frameworks, where the FSB told us that all opportunities should be listed on a single UK-wide, online portal.⁵¹⁶

- A.268 However, there may be limitations to the extent to which it is feasible to simplify frameworks through collaboration, consolidation, and standardisation. Transport Scotland told us that fundamental differences between authorities can limit the scope for collaboration,⁵¹⁷ and National Highways said that standardisation may not work if generalised to a breadth of sectors and industries.⁵¹⁸
- A.269 In order to further avoid unnecessary costs, stakeholders have argued mini competitions should be used proportionately, in accordance with the value of the call-off project. CECA said that frameworks based on best practice limit unnecessary secondary competition,⁵¹⁹ and Balfour Beatty supports clear principles on proportionality including limits on mini competition requirements relative to call-off value.⁵²⁰ The Gold Standard Report recommends that framework providers should establish the potential benefits of awarding long-term project contracts or additional project contracts without additional mini competitions.⁵²¹
- A.270 Increasing the use of shared frameworks can also address the cost and challenges associated with bidding for frameworks, which we have already seen in practice by a number of public authorities:
- (a) The most notable instance of this is the Government Commercial Agency, the UK's largest public procurement agency,⁵²² which offers frameworks that all public sector organisations can use. For example, its Construction Professional Services framework allows public sector organisations and their arm's length bodies to access all types of construction professional services throughout the lifecycle of construction projects.⁵²³
 - (b) There are multiple instances of shared frameworks between local authorities. These tend to be regional and run by procurement organisations comprised of member local authorities,⁵²⁴ although we have seen an example of a framework established through direct local authority collaboration, run by a

⁵¹⁶ [FSB's response](#) to the CMA's interim report, question 6.

⁵¹⁷ Note of call with Transport Scotland [§].

⁵¹⁸ Note of call with National Highways [§].

⁵¹⁹ [CECA's response](#) to the CMA's interim report, question 6.

⁵²⁰ [Balfour Beatty's response](#) to the CMA's interim report, question 6.

⁵²¹ [Gold Standard Report](#), p46.

⁵²² [Government Commercial Agency](#).

⁵²³ CCS, [Construction Professional Services](#), accessed on 08/04/26.

⁵²⁴ Frameworks have been developed by organisations like the North Eastern Procurement Organisation (NEPO), the Midlands Highways Alliance (MHA) and SCAPE. NEPO is governed by 12 local authorities in the North East, and the MHA similarly has a membership of 35 highway authorities, local to the Midlands region. SCAPE is governed by six local authority shareholders. NEPO, [About NEPO](#); Midlands Highway Alliance Plus, [About Us](#); SCAPE, [Civil Engineering framework](#); and Sell2Wales, [SWWRCF - South West Wales Regional Contractors Framework](#), accessed on 08/04/26.

lead authority.⁵²⁵ Participants in the CMA market research noted that in some cases, local authorities group together to issue frameworks, but this did not seem to be common practice.⁵²⁶

- (c) The Wales collaborative procurement hub is an approach to central procurement in Wales, providing access to frameworks.⁵²⁷ The Scottish Government told us that collaborative procurement does take place to some extent, for example, it recently procured a new construction framework with support from Transport Scotland.⁵²⁸ Scotland Excel further offers framework contracts for professional services including the design of capital infrastructure, serving Scotland's 32 local authorities.⁵²⁹

A.271 There may also be scope for further consolidation of frameworks to reduce bid costs and improve framework design.⁵³⁰ We have heard from Laing O'Rourke that this could be done through consolidating around high-quality robust frameworks,⁵³¹ and Balfour Beatty similarly supports fewer, better-scope frameworks.⁵³²

A.272 Such approaches to simplifying frameworks are in line with recommendations outlined in the Construction Playbook and the Gold Standard Report. The Construction Playbook recommends that 'Contracting authorities should collaborate to find opportunities not only for their own platform solutions but also for ways in which cross-sector platform solutions can be applied'. It states that 'Future procurements and frameworks should support this with the development of a market that can develop and deliver designs based on these platform approaches, manufacture and supply components, and innovate to improve and develop these over time'.⁵³³ The Gold Standard Report outlines that in practice, framework strategy should consider how value and outcomes could be improved by multiple clients procuring the framework together across portfolios of public works and by the development of cross-sector platform solutions.⁵³⁴

Frameworks and supplier incentives

A.273 There are several points at which supplier incentives can be influenced over the lifespan of the framework.

⁵²⁵ The South West Wales Regional Contractors framework which is a collaborative arrangement led and managed by Carmarthenshire County Council on behalf of the South West Wales regional local authorities. Sell2Wales, [SWWRCF - South West Wales Regional Contractors Framework](#); and SCAPE, [Civil Engineering framework](#), accessed on 08/04/26.

⁵²⁶ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p35.

⁵²⁷ Sell2Wales, [Wales Collaborative Procurement Hub](#), accessed on 09/04/26.

⁵²⁸ Note of meeting with Transport Scotland [redacted].

⁵²⁹ Scotland Excel, [About Us](#), accessed on 09/04/26; Note of meeting with [redacted].

⁵³⁰ [RIA's response](#) to the CMA's interim report, question 6.

⁵³¹ [Laing O'Rourke's response](#) to the CMA's interim report, question 6.

⁵³² [Balfour Beatty's response](#) to the CMA's interim report, question 6.

⁵³³ [Construction Playbook](#), p22.

⁵³⁴ [Gold Standard Report](#), p50.

- (a) The initial evaluation criteria to join a framework sets expectations on price and quality outcomes, shaping supplier incentives to compete effectively as they are evaluated against other suppliers.
- (b) The methods used to allocate work on the framework provide incentives for suppliers to maintain strong performance in order to win future opportunities. This could either be through secondary competition for specific pieces of work, or awarding work partially based on previous performance.
- (c) Further ongoing performance management, such as the use of KPIs and feedback to measure and communicate performance against expectations, can provide ongoing incentives to perform well, particularly where these come with real consequences.

A.274 We consider each of these points below.

A.275 In order to shape supplier incentives effectively, it is important for public authorities to evaluate proposals for frameworks and call-offs effectively. This is outlined in the Construction Playbook, requiring that evaluation must be based on a clear understanding of value and desired outcomes.⁵³⁵ The Gold Standard Report recommends carrying this out with “balanced evaluation criteria that examine all relevant aspects of value, that enable differentiation between qualitative bids, that reflect expected client outcomes and that incentivise improved value objectives”.⁵³⁶ The evaluation criteria used to assess bids to get on to a framework are similar to contract award criteria for open competition, which is outlined in the ‘Conclusions on lowballing and bid evaluation’ section. Public authorities typically consider past experience,⁵³⁷ and a weighting of price and non-price criteria that differs depending on the framework and public authority.⁵³⁸

A.276 Following the initial competitive process to gain access to the framework, effective allocation of work on a framework can then depend on the project level needs. Mini competitions can provide further opportunity to shape supplier incentives but may not always be necessary, depending on the initial competitive process to get on to a framework and the nature of the work to be awarded.

A.277 The Gold Standard report recommends that framework strategy should consider work allocation procedures that incentivise performance by the prospective

⁵³⁵ [Construction Playbook](#), p62.

⁵³⁶ [Gold Standard Report](#), p85.

⁵³⁷ One local authority told us that there is a degree of pre-qualification for suppliers on Public Contracts Scotland frameworks, where they have to submit details of past experience. Note of meeting with [REDACTED]. Another local authority said it looks at previous experience and quality from other schemes. Note of meeting with [REDACTED].

⁵³⁸ Network Rail told us it considers the Most Advantageous Tender when running its frameworks, and its eastern region told us that when assessing quality, bespoke technical questions are developed to align specifically with the project’s requirements. Note of meeting with Network Rail [REDACTED]; Network Rail’s submission to the CMA [REDACTED]. National Highways applies a 50/40/10 quality/price/social value weighting for both the pavement delivery framework and the legacy concrete roads framework. National Highways’ response to the CMA’s information request [REDACTED].

suppliers of their framework level and project level commitments.⁵³⁹ Network Rail said the award of work on a framework may be done through direct award if it is below a certain threshold,⁵⁴⁰ which may be appropriate for less complex schemes, or where evaluation has already taken place to get onto the framework. For example, National Highways told us that this is a favoured option for low complexity schemes where costs can be baselined easily, where there is a schedule of rates, and the cost is known.⁵⁴¹ Some local authorities direct award where criteria can be met,⁵⁴² and one said its resurfacing work is awarded on the cheapest available basis in the first two years of its regional contractor framework, before a mini competition is run in the third year to ensure prices do not escalate. It told us that it mainly considers prices because quality would have been assessed at the initial bid to access the framework.⁵⁴³ Another told us that it makes direct awards in circumstances where there is a tight deadline on spend.⁵⁴⁴

A.278 For larger, more complex schemes, the award of work may be determined by mini competitions.⁵⁴⁵ Although awarding work through mini competitions can create additional evaluation costs for public authorities, it can provide suppliers another opportunity to compete,⁵⁴⁶ ensuring that the work is undertaken by the most suitable supplier on the framework as outlined in the 'Bidding costs of procurement frameworks' section. Generally, the evaluation of mini competition bids aligns with the recommendation of best practice as it tends to be a similar process to the evaluation of framework bids. A local authority told us that this is the case because the award criteria need to mirror what is outlined at framework stage.⁵⁴⁷ Price and quality are typically assessed, with a weighting that depends on the public authority and project,⁵⁴⁸ and past performance may be evaluated.⁵⁴⁹

A.279 Once on the framework, the continual evaluation and feedback of supplier performance is important in providing incentives for suppliers to maintain strong performance and ensuring that frameworks remain running effectively. Public

⁵³⁹ Gold Standard Report, p85.

⁵⁴⁰ Network Rail's response to the CMA's information request [§].

⁵⁴¹ Note of meeting with National Highways [§].

⁵⁴² One local authority said that within its framework lots, there is the option to direct award if needed, and another said it direct awards in certain circumstances where the criteria can be met. Notes of meetings of meetings with [§].

⁵⁴³ Note of meeting with [§].

⁵⁴⁴ For example, where they receive short-term grants on schemes, or a mid-year release on highways improvement funding. Note of meeting with [§].

⁵⁴⁵ National Highways told us this is done where it is not sure of the actual cost, or a design and build option is required. Note of meeting with National Highways [§]. One local authority said that mini competitions are undertaken a majority of the time, to demonstrate value for money against the contractors on the Lot. Note of meeting with [§].

⁵⁴⁶ A local authority told us that mini-competitions allow suppliers to be flexible where they do not have to put their price forward. For example, when conducting a mini-competition it would get market value at that point in time, or a price that suits the supplier depending on their current workforce. Note of meeting with [§].

⁵⁴⁷ Note of meeting with [§].

⁵⁴⁸ Network Rail typically uses a price/technical weighting of 40-80% price and 20-60% technical, one local authority told us it considers a 60/40 quality/price basis when tendering. Another local authority said it assesses 60/40 ratio of price and quality, but this varies by framework. Network Rail's response to the CMA's information request [§]; Notes of meetings with [§].

⁵⁴⁹ National Highways runs performance-based frameworks, where performance informs future procurement opportunities, ensures the subcontracting model is effective. National Highways' response to the CMA's information request [§].

authorities currently assess supplier performance through KPIs, or supplier monitoring.⁵⁵⁰ Network Rail told us they monitor frameworks under a number of KPIs, including performance, and had removed a supplier from a framework based on cost and delivery performance where the supplier was not meeting KPI obligations.⁵⁵¹ National Highways told us it operates frameworks with a minimum threshold, where should suppliers fall below a certain level, they are not eligible to receive future work.⁵⁵² Translink told us it is introducing framework-level KPIs for rewards and penalties, and that it has promotion and relegation mechanisms to discourage or penalise suppliers on frameworks from engaging in inefficient practices like selective bidding.⁵⁵³

A.280 There may be further scope to improve framework design so that it encourages effective feedback.⁵⁵⁴ The RIA told us that KPIs should be co-developed to better align objectives on productivity, SME engagement, and innovation.⁵⁵⁵ ACE similarly recommended that frameworks should reward long-term value and that building firm and long-term sector growth incentives are built into KPIs.⁵⁵⁶ We heard from the RIA that feedback should be high quality and consistent in order to improve future bids and strengthen non-price competition over time.⁵⁵⁷ Balfour Beatty told us that frameworks should be designed to encourage feedback and incentivisation to perform well collectively across the framework.⁵⁵⁸

A.281 If best practice in supplier evaluation is followed, the rigidity of closed frameworks where suppliers cannot be added or removed post-evaluation may still limit how effectively supplier incentives can be influenced.⁵⁵⁹ There is scope for this to be improved by a greater uptake of open frameworks and dynamic markets as introduced in the Procurement Act 2023, by allowing increased flexibilities, dynamic entry points,⁵⁶⁰ and an opportunity to reinforce value-based outcomes.⁵⁶¹ However, given the Act is relatively new and the typical length of existing frameworks, we have seen limited evidence of its uptake.⁵⁶²

⁵⁵⁰ For example, Network Rail uses SPI/CPI Earned Value, which evaluates project progress against planned budget and schedule. Network Rail's response to the CMA's information request [redacted]. One local authority conducts performance monitoring against the contractors that are on the framework. Note of meeting with [redacted].

⁵⁵¹ Note of meeting with Network Rail [redacted].

⁵⁵² Note of meeting with National Highways [redacted].

⁵⁵³ Note of meeting with Translink [redacted].

⁵⁵⁴ Balfour Beatty told us that frameworks can be improved by encouraging framework design that encourages feedback, continuous improvement, partnership and collaboration, and incentivisation to perform well. [Balfour Beatty's response](#) to the CMA's interim report, question 6.

⁵⁵⁵ [RIA's response](#) to the CMA's interim report, question 6.

⁵⁵⁶ [ACE's response](#) to the CMA's interim report, question 6.

⁵⁵⁷ [RIA's response](#) to the CMA's interim report, question 6.

⁵⁵⁸ [Balfour Beatty's response](#) to the CMA's interim report, question 6.

⁵⁵⁹ The CMA's market research found that framework rigidity can be a barrier, where there is lack of access for those outside the framework and a lack of engagement between clients and potential suppliers. Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p44.

⁵⁶⁰ [Laing O'Rourke's response](#) to the CMA's interim report, question 6.

⁵⁶¹ [SCAPE's response](#) to the CMA's interim report, question 6.

⁵⁶² For example, a local authority said that its current framework was procured before the Procurement Act 2023 introduced open frameworks, but when the framework is up for renewal it will consider the pros and cons of moving to an open framework. Note of meeting with [redacted].

Conclusions on procurement approaches

- A.282 Taken together, the evidence indicates the guidance available detailing best practice for frameworks has been acknowledged and taken up by public authorities in a number of ways. However, the evidence we have seen indicates the design of some frameworks is still falling short of what is outlined in the Gold Standard Report. Frameworks tend to be less costly than open competition, but stakeholders have highlighted a number of ways to further reduce bidding costs and deliver the intended value, many of which are in line with the Gold Standard Report. We see examples where procurers are sharing frameworks and otherwise following this best practice, but it does not appear these opportunities are consistently taken up.
- A.283 The evidence further indicates that procurement through open competition is often resource intensive for both procurers and suppliers. Stakeholders have suggested there is scope to reduce the cost of this through means such as greater standardisation and following best practice as outlined in the Construction Playbook, enabling public authorities to strike a balance between limiting bid costs and ensuring that there is still sufficient competition.
- A.284 Procurers have several means to evaluate suppliers once on a framework, in particular, through mini-competitions before awarding individual pieces of work and through the use of KPIs. We have heard that a number of public authorities use KPIs to manage underperformance by suppliers, although suppliers have argued that feedback could be made more effective to support how they work with the procurers.

The impact of regulation on effectiveness and efficiency in civil engineering for rail and public road

- A.285 Regulations and accompanying standards are of vital importance to ensure the safety and quality of both construction works and the operation of public roads and railways. Ensuring the regulatory system works well is crucial to encourage predictability, innovation and growth in the civil engineering sector. Our initial evidence highlighted that some complex and slow regulatory processes add to the burden on public authorities and firms in the market. Following our interim report, we collected additional evidence on ways in which the regulatory landscape can better support more efficient outcomes in the civil engineering sector.
- A.286 The well-known challenges the UK faces in delivering effective and efficient civil engineering infrastructure are not unique. For example, the BCG's research places the UK in the 52nd percentile when benchmarking its performance across several key metrics including unit cost, time to delivery, time overruns and cost overruns. This means that the UK is roughly average in terms of its performance, however,

the research notes that the UK's has high unit costs for infrastructure and long timelines.⁵⁶³

- A.287 While experimental, the OECD's Infrastructure Toolkit and Infrastructure Governance Indicators place the UK slightly above the OECD average on regulatory frameworks, permitting and licensing, and governance of economic regulators, factors which all impact general infrastructure investment and delivery.⁵⁶⁴
- A.288 However, the OECD told us that across the construction industry, infrastructure permitting is one of the most critical bottlenecks to timely and cost-effective infrastructure delivery in OECD countries.⁵⁶⁵
- A.289 This aligns with our evidence base. As we highlighted in the interim report, the majority of Tier 1 firms we sought evidence from told us that statutory consultees represent the greatest issue in the planning system. The process around consultation of statutory consultees adds material complexity to, and often leads to delays in, obtaining planning consents and it is often difficult to know which statutory consultees must be consulted for a particular project. A Tier 1 firm, Laing O'Rourke, told us that the positions of such statutory bodies can be contradictory which provides the contractor or public authority with a challenging exercise in finding a mutually acceptable route through the consultation process.⁵⁶⁶
- A.290 As well as statutory consultees, another aspect of the planning and environmental approval landscape that was cited as a key barrier to effective infrastructure delivery and contributing to severe delivery delays was Development Consent Orders:
- (a) AtkinsRéalis told us that the development consent order (DCO) process for nationally significant infrastructure projects (NSIPs) contributes to the most severe delays.⁵⁶⁷
 - (b) A consultancy firm told us that the development consent order (DCO) process for nationally significant infrastructure projects (NSIPs) often contributes to delays.⁵⁶⁸
- A.291 This is consistent with the evidence; on average the timespan for a major infrastructure DCO decision has increased by 65% since 2012, from 2.6 years to over 4 years alongside a spike in the number of judicial reviews of decisions.⁵⁶⁹

⁵⁶³ BCG (2024), [Improving Infrastructure Delivery in the UK](#).

⁵⁶⁴ OECD, [Promote a coherent, predictable and efficient regulatory framework](#), accessed on 01/04/26.

⁵⁶⁵ Note of meeting with OECD [§].

⁵⁶⁶ Laing O'Rourke's response to the CMA information request [§].

⁵⁶⁷ Note of meeting with AtkinsRéalis [§].

⁵⁶⁸ Note of meeting with [§].

⁵⁶⁹ Department for Levelling Up, Housing & Communities (2023), [Nationally Significant Infrastructure: action plan for reforms to the planning process](#).

Across these approval processes, stakeholders emphasised delay and uncertainty as the primary constraint, rather than the substantive requirements themselves.

A.292 The UK Government is undertaking a number of reforms across the current environmental and planning process. These changes underpin a number of further policy changes that are designed to unlock additional housing supply and facilitate growth-supporting commercial development. Although we are not making formal recommendations in these areas due to ongoing reforms, we consider these proposed changes will help to drive more effective and efficient market outcomes, by speeding up the development and delivery of infrastructure projects in the civil engineering sector through the approvals process. We have summarised these areas below:

- (a) The Planning and Infrastructure Bill, which will support delivery of the government's Plan for Change milestones of building 1.5 million safe and decent homes in England and fast-track 150 planning decisions on major economic infrastructure projects.⁵⁷⁰
- (b) The UK Government's proposed changes to the National Policy Planning Framework.⁵⁷¹ The proposed reforms seek to address many of the concerns related to the planning process, for example, introducing changes to the environmental permitting system to allow certain activities to be excluded from requiring planning permits.⁵⁷² In addition, changes to the DCO process for NSIPs aim to make compulsory purchases more efficient, streamline notice processes, and reduce compensation complexity. The changes will also mean that applicants engage with multiple consenting bodies at the same time rather than sequentially, which reinforces the principle that the DCO process should be a one-stop shop.⁵⁷³
- (c) The ORR is currently also reviewing the Railways and Other Guided Transport Systems (Safety) Regulations (ROGS) which contain requirements for assessments and evaluations of health and safety that some businesses working on the railway are required to comply with. The ORR is due to publish the findings of this review in June 2026.⁵⁷⁴
- (d) The UK Government is also undertaking considerable work on fast-track reforms to rules governing apprenticeship. This will allow government to move faster to fill skills shortages where demand is highest, supporting

⁵⁷⁰ MHCLG (2025), [Guide to the Planning and Infrastructure Bill](#).

⁵⁷¹ MHCLG (2026), [National Planning Policy Framework: proposed reforms and other changes to the planning system](#).

⁵⁷² DEFRA, Environment Agency and Emma Hardy MP (2025), [New common-sense approach to environmental regulation to support new homes drive](#).

⁵⁷³ Building, [A practical approach to reform: Labour's sensible way forward for development consent orders](#), accessed on 01/04/26.

⁵⁷⁴ [ORR's response](#) to the CMA's interim report, pp4-5.

sectors critical to growth, productivity, and national infrastructure such as civil engineering.⁵⁷⁵

- A.293 In addition, ongoing reforms to the statutory consultee process in the planning system will remove statutory consultee status from certain bodies and review the scope of what statutory consultees advise on. These reforms will affect National Highways, Natural England, and the Environment Agency, which we consider will help to streamline the planning process and facilitate confident timelier decision-making relevant to civil engineering infrastructure development.⁵⁷⁶
- A.294 The CMA supports these proposals listed above which the UK Government estimates will reduce around 1/3 of unnecessary referrals and significantly address some of the complexity we heard is a barrier to efficient delivery of infrastructure projects. Government efforts to standardise the process rather than relying on bespoke case-by-case advice will increase the timeliness and predictability of advice.
- A.295 Within our recommendations in Appendix B, we have set out that government may wish to consider alongside ongoing reforms, the merits of a central register of planning and environmental approvals.
- A.296 In light of government reform, we have focused our analysis on exploring opportunities for the streamlining of regulation and technical standards in areas other than planning. In addition to formal statutory regulations, under this topic we have also considered technical standards or accreditations such as company standards and codes of practice which act as mandatory requirements, as these may in some cases act as quasi-regulation.
- A.297 Two stakeholders also noted differences between regulations across the devolved nations:
- (a) A Tier 1 firm told us that in its experience in Scotland and Wales, there is greater variability in interpretation and implementation of regulations than in England. It notes that from its perspective, England generally provides the most stable and consistent regulatory environment for innovation. It told us that both Network Rail and National Highways tend to operate with relatively standardised Safety, Health, Environmental and Quality processes across their English regional teams, offering a more predictable basis for project planning. That said, it told us that a generally risk-averse culture still persists, and even in this more consistent context, navigating approvals can be a challenge.⁵⁷⁷

⁵⁷⁵ DWP (2026), [Britain's growth sectors to get major skills boost from new 'fast track' apprenticeships reforms](#).

⁵⁷⁶ MHCLG (2025), [Reforms to the statutory consultee system](#).

⁵⁷⁷ Response to the CMA's information request [X].

- (b) Transport Scotland noted how railways in Scotland are required to follow National Technical Specification Notices (NTSNs), for new or upgraded infrastructure and rolling stock.⁵⁷⁸
- (c) They also noted that for works in Scotland, authorities must comply with the Procurement Reform (Scotland) Act 2014, Public Contracts (Scotland) Regulations 2015 and Procurement (Scotland) Regulations 2016 whilst England and Wales now operate under Procurement Act 2023.⁵⁷⁹

A.298 Transport for Wales also publish associated procedure and guidance documents which apply to Wales and UK highway standards. In Northern Ireland, The Windsor Framework commits the UK government to implementing Directive (EU) 2016/797 in Northern Ireland.

A.299 Despite operating under different legislation, we have considered how our recommendations apply in each of the devolved nations within our recommendations.

A.300 Multiple stakeholders highlighted that regulation is significantly more complex in rail than road.⁵⁸⁰ Many differences in road and rail regulations are critical for safety, however stakeholders raised concerns that the way both road and rail regulations are applied and can create additional barriers to entry, scaling and innovation.

A.301 Stakeholders raised concerns that the scale and evolution of technical standards, particularly in rail, can increase complexity and inhibit innovation, even where new standards are not being introduced. The graphic below summarises this relationship between standards and regulation.

⁵⁷⁸ Transport Scotland's response to the CMA's information request [X].

⁵⁷⁹ Transport Scotland's response to the CMA's information request [X].

⁵⁸⁰ Responses to the CMA's information requests [X].



A.302 The RIA told us that Network Rail maintains in excess of 10,000 standards. It told us it sees internal processes as a big factor in stifling innovation.⁵⁸¹ However, Network Rail told us that the current number of active standards it administers is around 1,025. This is a 210% increase since 2016, which it notes reflects a 2017/18 reclassification exercise undertaken by the standards team, during which a number of standards previously categorised as "non-mandatory" were reclassified as "mandatory", rather than the publication of a significant volume of new standards.⁵⁸² Transport Scotland told us that the number of standards it administers has fallen from 480 in 2016 to around 289 to date. They told us the reduction in numbers between 2016 and 2026 represents a consolidation of documents, and it should not be assumed that this means there are fewer or less definitive requirements⁵⁸³

A.303 The OECD's infrastructure toolkit provides some insight into how complexity in civil engineering compares with international counterparts. However, in our call with the OECD, it explained that due to the lack of standardised international benchmarking in civil engineering, it is difficult to compare (on an apples-to-apples basis) project outcomes, specifically the cost per physical unit within a country of internationally with any measure of confidence standards internationally.⁵⁸⁴ National Highways was also unable to provide data on the active number of standards for us to be able to compare this across road and rail.

⁵⁸¹ [RIA's response](#) to the CMA's interim report, p4.

⁵⁸² Network Rail's response to the CMA's information request [X].

⁵⁸³ Transport Scotland response to the CMA's information request [X].

⁵⁸⁴ Note of meeting with OECD [X].

- A.304 Stakeholders explained that multiple layers of statutory, pseudo-regulatory and contractual standards can accumulate over time, increasing complexity and compliance burdens for firms.
- A.305 TICS told us about the different types of standards in road and rail and how technical standards can accumulate alongside statutory regulation set out a number of mandatory or non-mandatory standards, such as pseudo-regulatory standards (eg wiring regulations). These may work alongside company standards mandated through contracts, as well as codes of practice or guidance that work alongside these standards. A series of technical specifications also applies to products. TICS explained that some unnecessary differences in standards may occur (for example, between procuring authorities which we discuss in detail below).⁵⁸⁵
- A.306 Within our evidence, we have heard that alongside mandatory standards, additional standards imposed through contracts can sometimes create unnecessary burdens on firms. Stakeholders suggested that greater alignment of technical requirements across clients could reduce inefficiencies and lower costs without compromising safety or quality. For example, one consultancy firm told us that this ‘preferential engineering’ can create additional cost when certain methods are prioritised. It highlighted that this varies considerably between different procuring authorities or clients.⁵⁸⁶ Preferential engineering refers to design or engineering changes requested by a client or owner that go beyond the original project scope, which reflect personal or strategic preferences rather than technical necessity.⁵⁸⁷ TICS explained that if any unnecessary differences in technical requirements [standards] were aligned where possible under TICS, it would reduce inefficiencies and be easier for clients to assess any gaps in capability.⁵⁸⁸
- A.307 For example, Local Partnerships told us they used one example that within a single Mayoral Combined Authority, all local authorities within it had distinct formulations for pothole filler, reflecting individual preferences across authorities.⁵⁸⁹ One local authority in England said they also recognise this as a challenge, noting that they have observed examples of preferential engineering in link projects that cut across different local authorities.⁵⁹⁰
- A.308 In relation to mandatory standards which would require a derogation to deviate from, Amey told us that some clients are more receptive to firms challenging standards which impact efficient delivery of civil engineering projects. It explained it would support efforts to make this process easier to navigate due to the

⁵⁸⁵ [TICS response](#) to the CMA’s interim report, question 10, p1.

⁵⁸⁶ Note of meeting with [REDACTED].

⁵⁸⁷ Howick, S., Ackermann, F., Eden, C., Williams, T. (2009), [Delay and Disruption in Complex Projects](#). In: Meyers, R. (eds) Encyclopedia of Complexity and Systems Science, p7.

⁵⁸⁸ [TICS response](#) to the CMA’s interim report, question 10, p3

⁵⁸⁹ Note of meeting with Local Partnerships [REDACTED].

⁵⁹⁰ Note of meeting with [REDACTED].

significant cost involved in doing this. It notes that in the past for one project in particular, which was a rail system transformation project that included civil engineering work, after being encouraged to apply for derogations where standards were acting as a blocker, it was granted around 380 derogations.⁵⁹¹ This evidence indicates that the cost and complexity of navigating derogations can itself also act as a barrier to more efficient delivery and innovation, and as such a simpler process could help reduce some of this burden.

Regulatory barriers to entry, growth and scaling

- A.309 Regulatory barriers to entry are any aspects of regulation that hinder or prevent a firm's entry into the market. This particularly affects smaller firms or start-ups and can therefore give larger firms and/or incumbents an advantage and reduce competition.
- A.310 As we highlighted in the interim report, regulatory requirements in safety critical sectors must therefore be carefully balanced against other policy objectives. Designed well, regulatory requirements provide certainty around investment to drive forward economic growth. It is therefore important to ensure regulations or technical standards do not unduly inhibit or prevent companies (particularly start-ups and firms challenging larger incumbents) from entering and viably competing in the market, thus impacting the number of suppliers, levels of investment, innovation, market diversity, and growth.
- A.311 Our initial evidence collected for the interim report suggested that costly compliance with regulation and standards may be acting as a barrier for new firms to enter the market. In order to understand more specific examples of where this is the case, we collected information through both desk and market research, RFIs, stakeholder engagement, and from responses to our interim report. We asked stakeholders to identify which areas of regulation are preventing opportunities for innovation and effective competition.
- A.312 We asked T1 firms about their FTE numbers and cost of regulatory, legal, and procurement obligations and compliance over the last ten years, as well as their spend on both road and rail external resource, professional advisors, or similar for regulatory, legal, and procurement obligations.⁵⁹² For most of the firms, the FTE cost of regulation increased significantly over the 10 years, with an average increase of 78.5%. This seems to be partly but not completely driven by an increase in FTE numbers, which also increased for many firms but not by as much, with an average increase of 12% over the last 10 years. This evidence

⁵⁹¹ Note of meeting with Amey [REDACTED].

⁵⁹² Responses to the CMA's information requests [REDACTED].

indicates a material and sustained increase in the cost of regulatory compliance for larger firms over time.

- A.313 Although this trend points to increasing cost of regulation across larger firms, if this were replicated in smaller firms, increasing compliance costs in particular are likely to be more difficult for new entrants to absorb, particularly where they are passed down the supply chain.
- A.314 For firms that provided data on external resource and professional advisory spend for their regulatory, legal, and procurement obligations, there was an average increase in both spend for road and rail, with rail showing an average larger increase in external resource spend across all firms over the last ten years.⁵⁹³ 5 out of 8 firms that provided data on rail external resource spend noted an increase of more than 200% since the base year, with the highest noting a 700% increase over the last four years. For some firms, as well as increasing external resource spend on regulatory compliance, there was also an increase in internal FTE numbers who work on regulatory compliance.⁵⁹⁴ The scale of these increases, particularly in rail, suggests that regulatory compliance is becoming increasingly resource-intensive.
- A.315 Stakeholders distinguished between regulation itself and the way regulatory requirements are duplicated or applied, which they identified as the primary barrier to entry. Multiple stakeholders agreed that there is scope to improve how the regulatory regime works in their feedback on the interim report.⁵⁹⁵ However, two stakeholders highlighted that regulation itself wasn't necessarily a problem, but rather the duplication of it or the way in which it is applied (ie the flows of regulation) that acts as a barrier to entry.⁵⁹⁶
- A.316 TICS highlighted in their interim report response that differentiation in technical standards across organisations is in most cases is to preserve safety. However, it noted that there are some examples of unnecessary differences in technical standards and Works Information that make it harder for a small supplier to demonstrate competence when seeking to work for another client for the first time. They consider in these cases that if requirements were aligned, it would be easier for clients to assess any gaps in capability.⁵⁹⁷
- A.317 The RIA said that for SMEs, the binding constraints are rarely a single 'regulatory' barrier and more often the interaction of compliance costs, commercial practice,

⁵⁹³ The average % change on external advisors spend since the base year of 2016 across 7 firms that provided data on rail was 272%, and the average % change on external advisors spend since the base year of 2016 across 6 firms that provided data on road was 103%.

⁵⁹⁴ Responses to the CMA's information requests [8].

⁵⁹⁵ NEPO, Skanska, Rail Forum, CECA, ORR, Balfour Beatty, BAM Nuttall, SCAPE, RIA, TICS, ACE's responses to the CMA's interim report, question 10.

⁵⁹⁶ BAM Nuttall's response to the CMA's interim report, question 10, p11; RIA's response to the CMA's interim report, question 10, p5.

⁵⁹⁷ TICS' response to the CMA's interim report, question 10, p1.

duplications in pre-qualification requirements, inconsistent client requirements, high bid costs, long payment chains, and added assurance layers.⁵⁹⁸ Similarly, BAM Nuttall explained that opportunities for innovation and effective competition are most constrained by the cumulative impact of regulatory processes rather than the intent of regulation itself. In particular, it noted overly prescriptive standards, fragmented approval regimes, and inconsistent interpretation of regulatory requirements across projects inhibit the adoption of innovative solutions.⁵⁹⁹

- A.318 Stakeholders identified both overlapping and unnecessary gold-plating of road and rail supplier accreditations across public authorities and devolved nations for similar work, as a barrier to entry for smaller/medium firms and start-ups. Firms highlighted that this can also act as barrier to innovation and scaling. Network Rail told us that the certification requirements for the rail industry act as a constraint to suppliers entering the rail market. It highlights how these are in place predominately for safety, competency, and legal reasons but restrict competition to those who have invested, and additional support from smaller firms to enter the market would be beneficial.⁶⁰⁰
- A.319 Participants in our qualitative market research with Tier 2 and Tier 3 firms mentioned multiple accreditation and competency schemes and noted that different accreditations or competency standards are required by different contractors, sometimes overlapping. One example given involved a firm being registered on 15 or more accreditation platforms in order to bid for work across the UK.⁶⁰¹
- A.320 As well as overlapping accreditations, SCAPE, in its response to our interim report, highlighted that the introduction of additional or unnecessary requirements beyond legislative intent (ie gold-plating) can increase compliance costs and deter innovation.⁶⁰² Across the supply chain amongst Tier 1, 2 and 3 firms, overlapping accreditations inSSIP schemes in particular were mentioned by multiple firms, as well as between RISQS and Achilles accreditation schemes.⁶⁰³
- A.321 Balfour Beatty also told us that RISQS and CAS providers assess many of the same organisational competencies. However, because the schemes are not aligned or mutually recognised, suppliers are required to complete separate assessments and pay to maintain multiple accreditations.⁶⁰⁴ Another industry expert has highlighted this in a blog, arguing the construction and surveying industries are becoming increasingly complex, with clients demanding different

⁵⁹⁸ [RIA's response](#) to the CMA's interim report, question 10, p1.

⁵⁹⁹ [BAM Nuttall's response](#) to the CMA's interim report, question 10, p11

⁶⁰⁰ Network Rail's response to the CMA's information request [🔗].

⁶⁰¹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p63.

⁶⁰² [SCAPE's response](#) to the CMA's interim report, question 3, p3.

⁶⁰³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p59 and 65; [Laing O'Rourke](#) p5, [BAM Nuttall](#) p21, [Rail Forum](#) p4 and [Balfour Beatty's](#) pp22-23 responses to the CMA's interim report, question 22.

⁶⁰⁴ Balfour Beatty's submission to the CMA [🔗].

certifications based on their unique preferences or risk management protocols. They explain that industry leaders are beginning to call for more standardisation.⁶⁰⁵

- A.322 In addition to this lack of mutual recognition, which is creating duplication, Balfour Beatty observed that procuring authorities sometimes require suppliers to complete their own supplementary questionnaires covering topics already assessed within these accreditation schemes. These questions are often not project-specific technical queries but instead repeat corporate-level compliance and governance information that has already been independently verified through the accreditation process.⁶⁰⁶ This will increase compliance costs and mean the same company information may be required each time a firm bids for new work.
- A.323 This demonstrates how strict contract requirements from procuring authorities as well as duplicative pre-qualification questionnaires are also adding to the cost and compliance burden. This can lead to circumstances in which firms are required to hold multiple accreditations as a 'tick box' exercise. These costs are better absorbed by larger firms, meaning the cost of certification particularly disadvantages SMEs.
- A.324 This suggests that there is scope to streamline the current system of supplier accreditations and reduce any overlap and unnecessary compliance burdens and costs and improve conditions for more firms to be able to enter the market and compete effectively.
- A.325 We asked industry stakeholders about the number of accreditations they require and ask suppliers across the supply chain to hold. Not all firms were able to provide data on the years in which the accreditations were required for their suppliers as well as the Tier 1 firms themselves. For all firms that provided data on this, there was the biggest increase in the number of accreditations after the years 2000-2010, with over 20 new accreditations being mandated during this period.⁶⁰⁷ Stakeholders mentioned over 50 different types of accreditations needed for road and rail projects. Some of the accreditations listed can be used on both road and rail projects, such as the Common Assessment Standard and ISO accreditations, but as we note above, stakeholders noted that many of these accreditations overlap and address similar competencies.
- A.326 In the same way that areas of regulation or standards can affect barriers to entry, they may also unduly affect the ability and motivation of firms to grow and scale

⁶⁰⁵ Baypoint Surveys, [Navigating the Maze of Business Accreditations in the Construction Industry](#), accessed on 15/03/26.

⁶⁰⁶ Balfour Beatty's submission to the CMA [§].

⁶⁰⁷ Responses to the CMA's information requests [§].

sufficiently to compete effectively and be in a position to challenge incumbents, introduce innovation, and drive broader economic growth.

- A.327 This problem of outdated and overlapping standards is not new. In response to HMT's Infrastructure Cost Review, the Industry Standards Group's 2012 enquiry into successful standards and specifications noted that companies were overlaying their own standards, some of which had evolved over decades, and which may not always have kept pace with innovations in the market, organisational priorities, or government policy.⁶⁰⁸ The UK government's 2017 transport infrastructure strategy also noted that the complexity of some standards often makes them difficult to challenge, leading to disproportionate cost and burden being justified in the search for compliance. The strategy commented that this was compounded by a tendency for project teams and contractors to not challenge standards because the process for managing derogations may be too complex, time-consuming, and potentially disruptive to project delivery.⁶⁰⁹
- A.328 Through both our market research and additional desk research conducted following the interim report, we have found further evidence that the costs associated with overlapping and unnecessary gold-plating of road and rail supplier accreditations across public authorities and devolved authorities for similar work are also affecting the ability of sector players to scale and grow. The evidence we collected suggests that this affects firms' decisions to financially justify, prioritise, or be able to take on certain work.
- A.329 For example, participants in the qualitative market research reported that the rail sector is characterised by higher (often technical) barriers to entry and thus scale, which makes it a hard sector to operate in for Tier 2 and Tier 3 firms who otherwise could offer competitive pressure. They also highlight that this is exacerbated by Tier 1 firms bidding for work previously seen as too small for them, due to the overall lack of projects in the sector.⁶¹⁰ One Tier 2 company mentioned that particularly for rail, the cost of risk certifications means they simply did not prioritise rail work.⁶¹¹ This suggests that there are challenger firms who are willing to engage with and compete for contracts but for whom such barriers are too great – likely leading to lower competition.
- A.330 There are other barriers to entry and expansion alongside regulatory barriers, as discussed in the barriers to entry and expansion section. For example many firms across the supply chain in response to our interim report, also noted that other factors such as pipeline uncertainty and short-term funding also affected a firm's ability to effectively scale and grow given the long-term horizon over which capital investment is planned and undertaken and the need for stable forward

⁶⁰⁸ Industry Standards Group (2012), [Specifying successful standards](#), p39.

⁶⁰⁹ DfT (2017) [Transport infrastructure efficiency strategy](#), pp55-57.

⁶¹⁰ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p7.

⁶¹¹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p59.

contracts.⁶¹² This suggests that addressing our other recommendation areas such as longer term funding, procurement authority capacity constraints, as well as any areas of regulation and technical standards will also likely improve conditions for smaller businesses to grow and effectively compete into the market.

Regulatory barriers to new technologies, methods and models

- A.331 We discussed innovation levels as an outcome in the outcomes section. In this section, we discuss our evidence on the impact of regulatory barriers on innovation. We consider other factors affecting levels of innovation more broadly in the innovation section.
- A.332 We noted in our interim report that the evidence we had reviewed so far suggested that the way the regulatory and approvals system is designed and implemented may make it harder than necessary for suppliers to test and adopt innovative solutions.
- A.333 Firms noted that prescriptive or burdensome regulation or standards are hindering or creating barriers to developing, investing in, and delivering novel or existing innovative technologies/methods and business models. Particularly as AI solutions embed into the sector, such innovations could improve quality and efficiency, as well as aligning with strategic sector shifts and evolutions in societal needs.
- A.334 We asked six public authorities across England and the Devolved Nations responsible for product and design approvals for the numbers of applications, acceptances, and approvals over the last 10 years.⁶¹³ Only Transport Scotland and the Department for Infrastructure were able to provide accurate data.⁶¹⁴ Transport Scotland told us that on average it approves around 80% of all product approval applications. 50% of these approvals are decided within 30 days, and 90% are approved within 90 days.⁶¹⁵ The Department for Infrastructure was only able to provide data for one high-value project. The CMA's analysis of the data shows that in Northern Ireland, the percentage of accepted product approvals for that project is generally much lower than that of Transport Scotland's average, with the acceptance rates being anywhere between a minimum of 3% and a maximum of 63% over the last 10 years. In the years that it recorded data on the time taken to approve products, the Department for Infrastructure tended to all

⁶¹² ACE, RPA, RIA, Mott MacDonald, TICS, ICE, SCAPE, Balfour Beatty and CECA's responses to the CMA's interim report.

⁶¹³ Responses to the CMA's information requests [redacted].

⁶¹⁴ DfI's response to the CMA's information request [redacted]; Transport Scotland's response to the CMA's information request [redacted].

⁶¹⁵ Transport Scotland's response to the CMA's information request [redacted].

applications within 30 days, but the number of applications in most years was less than half of those received by Transport Scotland.⁶¹⁶

- A.335 On design approvals, only the Department for Infrastructure was able to provide data, noting that the processes for reviewing and accepting design changes has changed within the department in this time. The CMA's analysis of the percentage of accepted approvals has gone down around 93% since the base year of 2016.⁶¹⁷
- A.336 Our evidence from the CMA's market research and responses to requests for information highlights that in particular there are opportunities to streamline and improve the process for product approvals in both the road and rail sectors that will encourage the development and rollout of new innovations across the supply chain. Firms noted inefficiencies through slow approvals holding back new methodologies, approaches/products, and innovation.
- A.337 In the CMA's market research, it was noted that a firm often loses money for multiple years on an innovation before it is able to scale it to be used across the industry.⁶¹⁸ In rail in particular, one participant explained that Network Rail's product approval processes to demonstrate that equipment meets the relevant standards for the railway industry means the equipment cannot be used as a standard product until it has a PADS number that the industry can use. They note that due to the length of time and cost of this process, it remains a barrier to entry for firms hoping to work in the rail industry.⁶¹⁹
- A.338 Morgan Sindall also told us that for rail, in many cases the innovation approval journey is so prolonged that by the time acceptance is granted, the proposed solution risks becoming outdated.⁶²⁰ The RIA also pointed out that even once innovations are approved, they frequently stall without commercial pull-through – clear adoption pathways, funded rollout plans, and consistent standards and assurance that allow solutions to scale.⁶²¹ This highlights how streamlining the approvals process for products must also encourage the scaled adoption of innovation through procurement practices and clear plans for rollout.
- A.339 The approval process in rail was noted as more complex than in road in both the CMA's market research and interim report responses. Murphy told us that the Network Rail Technical Authority's cautious approach to product approvals poses significant challenges when attempting to introduce innovative solutions at project level. It notes that the absence of historic performance data, proven design life, or

⁶¹⁶ DfI's response to the CMA's information request [38]. In 5 out of 7 years had a higher than 97% application decision within 30 days.

⁶¹⁷ DfI's response to the CMA's information request [38]. Since 2018, the % accepted approvals has shown a gradual decrease from a 72% approval rate in 2018, and a 26 and 21% approval rate in 2024 and 2025 respectively.

⁶¹⁸ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p53.

⁶¹⁹ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p65.

⁶²⁰ Morgan Sindall's response to the CMA's information request [38].

⁶²¹ [RIA's response](#) to the CMA's interim report, question 21, p5.

formal accreditation often disqualifies potentially valuable advancements from consideration. In contrast, it explains that safety standards for road projects typically follow frameworks established under the Highways Act and Design Manual for Roads and Bridges (DMRB), often managed at a local authority level. As such, it told us that there is greater flexibility to trial innovations, especially within maintenance regimes (such as automated traffic management systems, smart cones, and rapid pothole repair technologies).⁶²²

- A.340 In the CMA's market research, some Tier 2 and Tier 3 firms also felt that innovation is hindered by procurers favouring tried-and-tested approaches and having slow approval methods, as they may not have the expertise, resource, or appetite for trying newer products or methods, especially in the rail sector. By contrast, they note that product innovations are encouraged in national road-commissioning bodies' innovation sessions but felt that public authorities or Tier 1s do not necessarily follow these up with adequate co-funding.⁶²³
- A.341 Multiple respondents told us that more consistent standards and their application across England and the devolved nations would enhance innovation through faster product approvals due to efficiencies.⁶²⁴ TICS told us that where standards can be aligned under TICS, this should reduce barriers to "cross-acceptance" of products, techniques, and technologies. It also noted that the tendency towards reducing the level of prescription within standards and focusing on outcomes vs outputs will help with streamlining approvals processes for new technologies.⁶²⁵
- A.342 Multiple stakeholders told us that they would support the fast-tracking of the approvals process across road and rail.⁶²⁶ However, multiple stakeholders also told us that clearer and more established routes to rollout of technologies was needed for adoption in both the road and rail industry.⁶²⁷
- A.343 The RIA told us that regulatory streamlining alone will not deliver change unless procuring authorities can actually buy and scale what gets approved. It explained that procuring authorities need mechanisms that allow them to adopt innovations once proven, rather than repeatedly commissioning bespoke pilots that never translate into wider rollout.⁶²⁸ Similarly in roads, the Local Council Roads Innovation Group (LCRIG) has commented that more consistency in innovation trials would ensure better adoption. In its research with its membership, some respondents highlighted inconsistent evaluation, potential bias, and a lack of standardisation as preventing rollout of innovations.⁶²⁹ LCRIG told us that in their

⁶²² Murphy's response to the CMA's request for information [30].

⁶²³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), pp72-73.

⁶²⁴ [CECA](#), [Balfour Beatty](#), [BAM Nuttall](#), [RIA](#) and [ACE's](#) responses to the CMA's interim report, questions 10 and 21.

⁶²⁵ [TICS' response](#) to the CMA's interim report, question 21, p5.

⁶²⁶ [Balfour Beatty](#) p22, [SCAPE](#) p7, [CECA](#) p6, [RIA](#) p11, [GIRI](#) p2 and [ACE's](#) p10 responses to the CMA's interim report.

⁶²⁷ [Balfour Beatty](#), [BAM Nuttall](#), [RIA](#) and [GIRI's](#) responses to the CMA's interim report, question 21.

⁶²⁸ [RIA's response](#) to the CMA's interim report, p5.

⁶²⁹ LCRIG's Innovation Report 2025. In September 2024, the LCRIG invited responses to questionnaires about innovation challenges in the highways sector. [30]. [Access to the full report is available to LCRIG members](#).

experience there is sometimes a nervousness from local authorities in England around adopting innovation. They suggested that the UK Government could support with standards around data and technology to assist authorities and make them more comfortable pursuing innovation in technology.⁶³⁰

- A.344 It is essential that alongside the process for procuring innovations can be leveraged alongside faster approvals, to allow industry-wide rollout of successful innovations. ACE told us in response to our interim report that greater guidance on Procurement Act flexibilities would support innovation adoption across road and rail.⁶³¹
- A.345 It is crucial, however, to ensure the risk of trialling or piloting new approaches is not simply allocated further down the supply chain, which as discussed above is a key area of concern for Tier 2 and Tier 3 firms. It is clear that appropriately targeted spreading and sharing of risk is key to effective incentives and implementation of innovative methods. In their response to our interim report, Laing O'Rourke suggested that controlled pilot trials on public projects with managed risk would help encourage innovation whilst reducing risks.⁶³² As mentioned below in the chapter on the overuse of Z clauses by public authorities and primary contractors, and in the qualitative market research, firms suggested that fewer Z clauses as well as building in incentives into contracts could help encourage innovation from Tier 2 and Tier 3 firms.⁶³³

Innovation in civil engineering for rail and public road

What is innovation and why is it desirable?

- A.346 Innovation is a broad concept about creating and implementing new products or processes.⁶³⁴ Promoting innovation is a key driver of productivity and economic growth,⁶³⁵ and the UK government has identified promoting innovation, along with investment and the adoption of technology, as key steps to kickstarting economic growth.⁶³⁶ The CMA sees an opportunity to improve market outcomes by unlocking unrealised potential for innovation in public road and rail. We have primarily focused on understanding the potential for innovations which bring down cost and/or delivery timescales, or that achieve broader societal benefits, such as supporting carbon reduction targets.

⁶³⁰ Note of meeting with LCRIG [§].

⁶³¹ [ACE's response](#) to the CMA's interim report, question 21, p10.

⁶³² [Laing O'Rourke's response](#) to the CMA's interim report, p5, question 21.

⁶³³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p13.

⁶³⁴ Innovation is defined by the OECD as 'a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes'. OECD (2018), [Oslo Manual 2018, Guidelines for Collecting, Reporting and Using Data on Innovation](#), 4th Edition, p20.

⁶³⁵ OECD (2018), [Oslo Manual 2018, Guidelines for Collecting, Reporting and Using Data on Innovation](#), 4th Edition, section 2.4; and G20 (2016), [G20 Blueprint on Innovative Growth](#), p2.

⁶³⁶ Prime Minister's Office, [Kickstarting Economic Growth](#), accessed on 26/02/26.

Current state of innovation in rail and road

A.347 While there are positive examples of innovation in public road and rail, we consider that there remains room for further investment in and adoption of innovation in these sectors to deliver efficiencies or wider project improvements. The evidence set out in this section indicates that:

- (a) innovation is a parameter of competition, although it may be less important than other parameters on which firms compete;
- (b) innovation appears to be more prevalent in road than in rail, at least partially due to the regulatory environment and culture in rail; and
- (c) innovation takes many different forms within these markets, including investment in technologies, new processes, and reducing the carbon footprint of projects.

A.348 Across the UK, different national public authorities adopt different approaches to promote innovation. National Highways and Network Rail both provide specific areas of focus for innovation, although National Highways appears to be more targeted at a smaller range of strategic outcomes and challenges, and has more clearly designated funds to support these. For the devolved governments, the innovation initiatives appear to sit within broader policy frameworks rather than being specific to rail or road, such as broader transport strategies or cross-sector innovation initiatives. We set out more information on these initiatives in the 'Initiatives to drive specific innovation or investments across projects' section.

- (a) National Highways encourages innovation through open competitions and challenge-led statements⁶³⁷ to invite solutions that address defined business priority challenges.⁶³⁸ Innovation challenges are also linked to strategic outcomes.⁶³⁹ Its innovation and research strategy has designated funds^{640, 641} whilst also stimulating cross-sector industry partnerships⁶⁴² and academic collaboration with the University of Cambridge through the Roads Research Alliance (RRA).⁶⁴³

⁶³⁷ National Highways, [Challenge-led approach](#), accessed on 27/02/26.

⁶³⁸ National Highways, [Innovation and Research Designated Fund - 2025 open call challenges](#), accessed on 04/03/26.

⁶³⁹ National Highways' innovation and research strategy aims to achieve net zero carbon on the roads by 2050; the Road to zero harm aims to no-one killed or seriously injured on the strategic road network and achieving cheaper and faster construction by 2030; achieving connected journeys by 2035. National Highways, [Innovation and research strategy](#), accessed on 04/03/26.

⁶⁴⁰ National Highways, [Innovation and research strategy](#), accessed on 04/03/26.

⁶⁴¹ National Highways, [Designated Funds](#), accessed on 05/03/26.

⁶⁴² National Highways, [Digital Lab](#), accessed on 04/03/26.

⁶⁴³ National Highways, [Roads Research Alliance \(RRA\)](#), accessed on 03/04/26.

- (b) Network Rail's innovation activity is coordinated through its research and development portfolio that is aligned with the Rail Technical Strategy.^{644,645} The portfolio has collaborative partnerships between the rail industry, universities, SMEs, and infrastructure owners through the UK Rail Research and Innovation Network (UKRRIN), and international collaborations through Shift2Rail.⁶⁴⁶ Network Rail also has partnerships with Connected Places Catapult.⁶⁴⁷ Network Rail encourages innovation by publishing challenge statements that signal priority business problems that require solutions.⁶⁴⁸
- (c) Transport Scotland does not have a standalone innovation strategy, but commits to using beneficial innovation in the National Transport Strategy 2 (NTS2)⁶⁴⁹ and has a broader National Innovation Strategy 2023 to 2033.⁶⁵⁰ Transport Scotland works in partnership with the Scottish Road Research Board alongside the Society of Chief Officers of Transportation Scotland (SCOTS) and the Scottish Road Works Commissioner (SRWC) to commission research and development work annually. The aim is to deliver improvements in safety, construction, operation and maintenance of the Scottish road network.⁶⁵¹
- (d) For the Welsh Government, innovation sits within two broad policy frameworks:
 - (i) The National Innovation Strategy 2023⁶⁵² sets out a cross-government vision to nurture an innovation culture and coordinate people, organisations and funding sources across sectors in Wales. Wider initiatives on innovation include the Whole Systems Research and Innovation for Decarbonisation (WSRID) Programme⁶⁵³ aligned with wider strategic priorities on decarbonisation and Innovation Strategy Wales.⁶⁵⁴

⁶⁴⁴ Rail Technical Strategy, [Home](#), accessed on 02/03/26.

⁶⁴⁵ Elec Training, [Strategic Engineering Planning and the Future of the UK Rail Workforce: Lessons From the Rail Technical Strategy](#), accessed on 02/03/26.

⁶⁴⁶ Network Rail is a founding partner of Shift2Rail which is a European technology, research and development collaboration programme that is funded jointly by its members and Horizon 2020 (a European Commission research fund). Network Rail, [Shift2Rail](#), accessed on 02/03/26.

⁶⁴⁷ ITS UK, [Network Rail selects Connected Places Catapult for five year innovation collaboration](#), accessed on 02/03/26.

⁶⁴⁸ Network Rail, [Challenge statements](#), accessed on 02/03/26.

⁶⁴⁹ Transport Scotland, [National Transport Strategy](#), accessed on 02/03/26.

⁶⁵⁰ The Scottish Government (2023), [National innovation strategy 2023 to 2033: Executive Summary](#).

⁶⁵¹ Transport Scotland, [Scottish Road Research Board](#), accessed on 17/02/26.

⁶⁵² The Welsh Government (2023), [Wales innovates: creating a stronger, fairer, greener Wales](#).

⁶⁵³ The Welsh Government (2024), [Whole Systems Research and Innovation for Decarbonisation \(WSRID\) Programme: Challenge competition](#).

⁶⁵⁴ Innovation Strategy Wales, [Grants and schemes 2](#), accessed on 17/02/26. One initiative is the Small Business Research Initiative (SBRI), which provides an established process to connect public sector challenges with innovative ideas from industry that does support SMEs and provides a route to market.

- (ii) The Roads Review⁶⁵⁵ and the National Transport Delivery Plan 2023 to 2027⁶⁵⁶ aim to reshape how road investment will be undertaken and delivered.
- (e) In Northern Ireland, the DfI has a broad set of collaborative policy initiatives that encourage research & development and innovation across NI, including in road.⁶⁵⁷ For the rail sector, Translink enables innovation through:
 - (i) Using procurement to be an enabler for transformation⁶⁵⁸ using capital grants that Translink receives from the DfI;⁶⁵⁹
 - (ii) broader collaborative government policy initiatives that encourage research & development and innovation across NI;⁶⁶⁰ and
 - (iii) the 'All Island Strategic Rail Review' (2024) which sets out the long-term vision for transforming the island's rail system.⁶⁶¹

A.349 To understand the current state of innovation in the market, we asked Tier 1 contractors to provide examples of public road and rail case studies which, among other factors, resulted in good outcomes regarding innovation. Some forms of innovation appear to be more prevalent than others in these examples:

- (a) Adoption of new technologies was the most frequently referenced form of innovation.⁶⁶² Examples of case studies where technological innovation has been applied include use of New Track Construction (NTC) machinery to automate track laying,⁶⁶³ [REDACTED],⁶⁶⁴ and adopting spray applied concrete to coat surfaces (a technology common in rail but not previously roads).⁶⁶⁵
- (b) New or innovative processes were mentioned by several Tier 1 firms, such as an increased use of practices including Building Information Modelling

⁶⁵⁵ The Roads Review presents a shift away from traditional road building towards carbon, climate-resilience, and multimodal transport. The Welsh Government (2021), [Roads review](#).

⁶⁵⁶ The National Transport Delivery Plan sets out what programmes, policies and investments are needed to meet the Welsh government's goals for sustainable low-carbon, accessible and sustainable transport system. The Welsh Government (2023), [National Transport Delivery Plan 2022 to 2027](#).

⁶⁵⁷ The collaborative innovation plan is jointly produced with Innovate UK and Invest Northern Ireland. The plan emphasises the role of infrastructure investment and cross government alignment in supporting innovation that includes transport and low-carbon systems. Department for the Economy (2025), [Collaborative Innovation Plan for Northern Ireland](#), pp48-49.

⁶⁵⁸ Article highlights how Translink is using procurement as a strategic enabler to transform public transport in NI. Translink (2026), [Harnessing Procurement as a Strategic Enabler](#).

⁶⁵⁹ DfI, [Railway transport funding](#), accessed on 17/02/26.

⁶⁶⁰ Department for the Economy (2025), [Collaborative Innovation Plan for Northern Ireland](#), pp48-49.

⁶⁶¹ The Review was commissioned jointly by the Irish Government's Department of Transport and Northern Ireland's Department for Infrastructure to establish a strategic, long-term vision for how the rail should develop across the entire island. DfI (2024), [All-Island Strategic Rail Review](#); and DfI (2025), [Rail Project Prioritisation Strategy 2025](#).

⁶⁶² In total, the CMA identified that 11 of the 14 case studies which explicitly discussed innovation mentioned the adoption of new technologies.

⁶⁶³ Balfour Beatty's work on the Central Rail Systems Alliance (CRSA). Balfour Beatty's response to the CMA's information request [REDACTED].

⁶⁶⁴ [REDACTED]. Response to the CMA's information request [REDACTED].

⁶⁶⁵ Kier's work on the A585 Windy Harbour to Skippool improvements. Kier's response to the CMA's information request [REDACTED].

(BIM), Product Lifecycle Management (PLM), and Product Information Management (PIM) aimed at better integrating design, construction, and asset management. Several contractors provided the CMA with examples of these processes being applied,⁶⁶⁶ but one Tier 1 firm's internal document on 'Engineering Focus Areas and Priorities' from 2023 stated that 'BIM/[Digital] processes are good but not generally used/embedded'.⁶⁶⁷ Other examples of innovative processes include better partnerships between public authorities and contractors, including through effective use of Early Contractor Involvement including the use of open data sharing⁶⁶⁸ or public authorities adopting output-based specifications and a "one system" approach enabling significant innovation.⁶⁶⁹

- (c) Some Tier 1 contractors also mentioned innovations that aim to reduce the environmental impact of civil engineering works. Examples include the use of more environmentally friendly equipment such as hydrogen-powered vehicles,⁶⁷⁰ and a number of waste-reduction approaches in the construction of HS2.⁶⁷¹ Laing O'Rourke said that sustainable construction materials, such as lower-carbon concrete mixes and recycled aggregates for earthworks, have become routinely embedded within its business over recent years.⁶⁷² Carbon reduction also appeared to be a particular focus of local authorities when asked about innovation.^{673 674}

A.350 Evidence from contracting firms' internal documents indicates that they consider innovation as a parameter of competition. In particular, we have seen: documents which indicate that innovation is part of contractors' strategy;⁶⁷⁵ competitive assessment documents that identify innovation as a parameter of competition by

⁶⁶⁶ Balfour Beatty's work on the A14 Cambridge to Huntingdon; Kier's work on the M23 Junction 8-10 Smart Motorways; and Skanska's work on HS2 main works. [§], and [§]. Responses to the CMA's information requests [§].

⁶⁶⁷ Response to the CMA's information request [§].

⁶⁶⁸ Balfour Beatty's work on Craidd Alliance – Core Valley Lines Upgrade; and Murphy's work on A14 Cambridge to Huntingdon. Balfour Beatty's response to the CMA's information request [§]; Murphy's response to the CMA's information request [§].

⁶⁶⁹ Amey's work on the Core Valley Lines Transformation. Amey's response to the CMA's information request [§].

⁶⁷⁰ Kier's work on the M23 Junction 8-10 Smart Motorways. Kier's response to the CMA's information request [§].

⁶⁷¹ Skanska both adopted zero trim piling and made use of retired wind turbine blades in concrete during the construction of HS2. Skanska's response to the CMA's information request [§]; Skanska, [Zero trim – an innovation that could transform the construction industry](#), accessed on 26/02/26; and Skanska, [Steel swapped for wind turbines blades in a pioneering HS2 pilot](#), accessed on 26/02/26.

⁶⁷² Laing O'Rourke's response to the CMA's information request [§].

⁶⁷³ When asked about the extent to which they consider innovation in their civil engineering works, several local authorities described carbon reduction initiatives that have been actioned by their local authority. Notes of meetings with [§].

⁶⁷⁴ However, the Welsh Government stated that the civil engineering decarbonisation agenda has not been as successful as it could have been: 'if you take something like the decarbonisation agenda, etcetera true innovation in that space probably hasn't taken off as much as people would like'. Note of meeting with the Welsh Government [§].

⁶⁷⁵ An Amey document covering its strategic plan for 2024-28 discusses an objective of investing in innovation to support differentiated projects across its consulting portfolio to improve market profile and technical products, it also presents that innovation is part of Amey's consulting business plan. Amey's response to the CMA's information request [§]. A Breedon surfacing solutions strategy document shows innovative intent as part of its intent to expand [§]. Breedon's response to the CMA's information request [§]. A Kier document on its supplier development strategy sets out that innovation is one of its 'six core focus areas' for developing and aligning with its supply chain. Kier's response to the CMA's information request [§].

which rivals are assessed;⁶⁷⁶ and documents identifying that public authorities consider the level of innovation as a part of their assessment of tender bids, or that contractors are responding to clients' calls for innovation through altering their approach.⁶⁷⁷ However, while innovation is covered in each of these documents, it is generally not covered in great depth or described as one of the more important strategic or competitive parameters.

A.351 While stakeholders have provided positive examples of innovation when asked, it is unclear how widespread these examples are. We have also seen evidence that the cultural barriers to innovation are higher in rail than in public roads, and this is explored further below.

A.352 Regarding roads, we have seen evidence that there is some good practice regarding innovation in relation to national roads, but that innovation may be more limited in relation to local roads.

(a) National Highways actively engages in activities to encourage innovation, such as operating a designated fund for innovation and modernisation of the road network⁶⁷⁸ as well as, at least on some projects, assessing innovation as part of its tender requirements.⁶⁷⁹ Additionally, in 2025 National Highways published an open call for innovations to tackle key challenges in improving safety and customer experience.⁶⁸⁰ Amey told us that innovation is being driven by, among other things, health and safety standards being improved with the increasing demands on the road network.⁶⁸¹ We have also heard positive feedback about the National Highways Development Centre, a

⁶⁷⁶ Several Balfour Beatty documents set out the key competitors in the landscape respectively for highways, rail and major projects, with 'innovation & technology' as one of the factors by which competitors are assessed. Balfour Beatty's response to the CMA's information request [§]. Skanska provided competitor assessment documents (based on publicly available information) for several competitors which cover their respective investments and strengths regarding innovation. Skanska's response to the CMA's information request [§].

⁶⁷⁷ An Amey Transport Infrastructure Operational review describes working with a local authority to target innovation and net zero opportunities. Amey's response to the CMA's information request [§]. A Balfour Beatty gate paper on the [§] indicates that efficiency and innovation are covered during workshops with Network Rail during the advanced ITT stage. Balfour Beatty's response to the CMA's information request [§]. A Kier document setting out the Highways Service Term contract with [§] discusses that the client is keen on innovation and new ways of doing things. Kier is responding through [§]. Kier's response to the CMA's information request [§]. A Morgan Sindall bid approval document for an Eastern Highways Alliance framework shows that innovation is assessed as one of the four questions at PQQ stage (alongside supply chain, ECI, collaboration). Morgan Sindall's response to CMA's information request [§]. An approval tender document for a Scottish government framework provided by Morgan Sindall shows that 10% of tender requirement is assessment of innovation. Morgan Sindall's response to CMA's information request [§]. A Network Rail framework contract for the Northwest & Central region CP7 includes an innovation criterion as requirement 9.7, setting out that 'Suppliers will identify and bring forward alternate products with lower environmental impacts / footprints or improved health and safety benefits in conjunction with Network Rail [...]'. Murphy's response to the CMA's information request [§]. In a Holcim Market Intelligence document on its annual outputs of 2023, Holcim sets out that it is working with Skanska and National Highways to develop and evaluate a carbon-negative aggregate in asphalt, which aims to create net-zero carbon emissions in roads. This project is part of the National Highways Accelerating Low Carbon Innovation Programme. Holcim's response to the CMA's information request [§].

⁶⁷⁸ Highways England (2020), [Delivery Plan 2020-2025](#), p45.

⁶⁷⁹ For example, the National Highways' Category Management Pavement Delivery Framework sets out how the National Highways commercial model aims to encourage suppliers to innovate and sets out that the evaluation model includes questions framed to understand how the bidder will drive innovation. National Highways' response to the CMA's information request [§].

⁶⁸⁰ National Highways, [Innovation and Research Designated Fund - 2025 open call challenges](#), accessed on 26/02/26.

⁶⁸¹ Note of meeting with Amey [§].

realistic road, roadside and off-road environment that supports innovation by facilitating testing and training by all those developing solutions that would not be possible on a live highway.⁶⁸²

- (b) The CMA market research also highlights that projects procured by National Highways are more likely to lead to innovation due to more space and flexibility in its contracts, which are more commonly NEC Option C or Option E. Participants in the research said that these contracts lend themselves to experimenting with new ways of working and that National Highways ‘sets the tone’ for a more collaborative environment which allowed for innovation if relevant.⁶⁸³
- (c) Regarding local roads, while we have heard some examples of local authorities attempting to innovate or encouraging innovation,⁶⁸⁴ funding and resource constraints as well as a lack of scale can limit innovation in this area.⁶⁸⁵ LCRIG’s research found that while most local authority members who completed the questionnaire viewed themselves as innovative,⁶⁸⁶ responses from supplier members strongly suggest that local authorities are not always encouraging creativity and innovation effectively.⁶⁸⁷

A.353 The CMA spoke to four local authorities to understand how they incentivise innovation. We found each local authority takes a different approach.

- (a) A local authority in Wales told us innovation stems from wider government policy, eg decarbonisation is a key policy with local authority aiming to be carbon neutral by 2030 and the city by 2050. It said there are many different funding pots that are available to fund specific green initiatives that cannot be used as part of wider green initiatives.⁶⁸⁸
- (b) A local authority in London told us that innovation is incentivised through contracts. As part of its PFI contract, the collective relationship between the

⁶⁸² Note of meeting with [REDACTED].

⁶⁸³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p35.

⁶⁸⁴ When asked to what extent they innovate, several local authorities responded that they introduce innovations to reduce the carbon footprint of their civil engineering works. One local authority described that it is one of the few remaining local authorities with its own material laboratory which it uses to test materials, pavement design and new ways of building tarmac products. It also has an informal information sharing agreement with some other councils which provides it with further ability to innovate. Notes of meetings with [REDACTED].

⁶⁸⁵ For example, one local authority described that innovations can lead to increased costs and project delays; Note of meeting with [REDACTED]; another local authority described that budget implications can make it hard to innovate; Note of meeting with [REDACTED]; a further local authority described that time and resources are the biggest barriers to innovating; Note of meeting with [REDACTED].

⁶⁸⁶ [LCRIG Innovation Report 2025](#), p13. Local authorities most often described themselves as a ‘pioneer’ or ‘experimenter’ regarding innovation, and none said they were risk averse.

⁶⁸⁷ [LCRIG Innovation Report 2025](#), p23. In each case, a large proportion of suppliers rated creativity and innovation encouragement in local authorities as poor or moderate, local authority funding for innovation as poor or inadequate, and risk aversion as significantly or moderately affecting innovation delivery.

⁶⁸⁸ The local authority said money that may be allocated to plant trees can only be used to plant trees rather than on other schemes that may contribute towards decarbonisation. More could be achieved if funding could be used on wider schemes that aim to achieve decarbonisation. Note of meeting with [REDACTED].

council and the suppliers enables innovations and efficiencies to be achieved.⁶⁸⁹

- (c) A local authority in the East Midlands told us innovation will be incentivised through East Midlands County Combined Authority projects on highways and transport.⁶⁹⁰
- (d) Another local authority in the East Midlands told us it incentivises innovation through a practical approach by having its own in-house materials laboratory.⁶⁹¹

A.354 Regarding rail, Amey told us innovation is constrained by the existing infrastructure, the geography, and geology. On this latter point, in continental Europe, there is more scope for innovation because their projects tend to involve newer infrastructure which can be designed, built, and maintained with the latest methods and products with optimised alignments. By contrast in the UK, with few exceptions (eg HS1, HS2 etc), enhancement and renewal projects are subject to the constraints of an ageing, existing infrastructure such as challenges with location and access, system availability and the need to avoid major disruptions, system compatibility and obsolescence, and ease of maintenance.⁶⁹² We have seen evidence to suggest that there are greater challenges to achieving innovation in rail than in road due to both (a) challenges in the regulatory process and (b) issues related to culture and information-sharing.

- (a) Regarding the regulatory process, the CMA market research reported that slow approval processes and high regulatory costs are viewed by Tier 2 and Tier 3 contractors as holding back innovation, and that this is a particular issue in rail (which is also viewed by Tier 2 and Tier 3 contractors as the sector that could most benefit from innovation).⁶⁹³ Evidence set out in the regulatory barriers section also highlights that regulatory barriers to innovation are a particular issue in the rail industry, with stakeholders highlighting that certain barriers are more pronounced in rail than in road. Multiple Tier 1 contractors said that the need for strict regulation to ensure railway safety makes innovation particularly challenging.⁶⁹⁴
- (b) Regarding culture and collaboration, the CMA market research highlighted that working in rail is seen as less collaborative by Tier 2 and Tier 3

⁶⁸⁹ The local authority told us that it allowed some of the suppliers to test the impact of their green fleet of construction vehicles on the local roads. The council benefits from having a green fleet of construction vehicles and the suppliers can test new technologies from their wider businesses. Note of meeting with [REDACTED].

⁶⁹⁰ The local authority told us there is an aspiration through leveraging regional investment power of circa £2 billion, covering the period of 2026 to 2032, to influence the market through frameworks and procurement practices. Note of meeting with [REDACTED].

⁶⁹¹ The local authority told us they can develop and test their own materials on site. They also have an agreement with other laboratories to share knowledge. Note of meeting with [REDACTED].

⁶⁹² Note of meeting with [REDACTED].

⁶⁹³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), pp72-73.

⁶⁹⁴ Responses to the CMA's information requests [REDACTED].

contractors, with Tier 1s viewed as the ‘gatekeepers’ for accessing Network Rail and creating a culture seen as stifling innovation.⁶⁹⁵ This is in contrast with other sectors where it was felt that national bodies’ collaborative approach trickled down through similarly collaborative Tier 1s to the rest of the sector. Our market research also found that Tier 2 and Tier 3 suppliers considered that the rail sector may not have the ‘expertise, resource, or appetite for trying newer products or methods’.⁶⁹⁶ The ORR’s review of technology adoption by Network Rail found that while ‘there were reasonable processes, competent people and a motivation to improve and become more efficient’, technologies are not being implemented as widely as they could.⁶⁹⁷ The report stated that the ORR, Network Rail, and its supply chain have all recognised that the rate of adoption of new technology is too slow and found there are recurring issues causing this, including: ineffective communication between teams; team cultures that evolved freely rather than being led by the organisation; and a failure to learn from past examples.⁶⁹⁸ The report found that this is ‘systematically reducing the likelihood of new technologies being adopted’.⁶⁹⁹ Murphy also told us that individual Network Rail regions can be reluctant to take the risk of being the first to take on an innovation without it being implemented elsewhere on the network.⁷⁰⁰

- A.355 There is wider recognition of the need to improve the environment for innovation in rail. The Rail Sector Innovation Charter has been developed by the Rail Supply Group (RSG) to transform how the rail sector approaches innovation by addressing the long-standing structural and cultural barriers that prevent innovation in the sector.⁷⁰¹ This is a collaborative initiative between the rail industry, Network Rail and the UK government. The charter has set out eight commitments that reflect the core enablers of innovation, which were published as part of the first phase of the charter in May 2025. They aim to change the environment, and mindsets of procurers and suppliers in the sector based on the following themes: how the sector collaborates, procures, trials new innovations, manages data and intellectual property, and develops an innovation enabling culture.⁷⁰² Furthermore, Network Rail told us that it is making increasing use of output based requirements where appropriate and reducing its reliance on single suppliers, with the aim of improving innovation. Network Rail also told us that

⁶⁹⁵ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p37.

⁶⁹⁶ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p72.

⁶⁹⁷ ORR (2022), [Technology Adoption Case Studies - Targeted Assurance Review](#), p5.

⁶⁹⁸ ORR (2022), [Technology Adoption Case Studies - Targeted Assurance Review](#), p5.

⁶⁹⁹ ORR (2022), [Technology Adoption Case Studies - Targeted Assurance Review](#), p5.

⁷⁰⁰ Note of meeting with Murphy [§].

⁷⁰¹ Rail Supply Group, [Rail Sector Innovation Charter](#), accessed on 19/03/26.

⁷⁰² Rail Supply Group (2025), [The Rail Sector Innovation Charter: Stage 1 Summary Report](#), p9. The charter convened four working groups composed of around 60 industry and government leaders from all parts of the rail sector to look at the charter’s commitments in September 2024. Rail Supply Group (2025), [The Rail Sector Innovation Charter: Stage 1 Summary Report](#), pp4-5.

certain suppliers have been more responsive in suggesting innovative solutions to output based requirements than others.⁷⁰³

A.356 The next phase will focus on the mobilisation of the charter across the rail sector and increasing industry adoption. It is therefore too early to evaluate its success in driving change. As further milestones become more visible as the charter progresses, this will provide more data to assess if the innovation charter is having the desired impact to kick start innovation in the rail sector by breaking down the structural and cultural barriers.

Barriers to innovation

A.357 To explore the main barriers to innovation, we gathered evidence from various stakeholders, including asking Tier 1 and Tier 2 firms to rank different potential barriers to innovation according to whether they believe them to be a significant barrier, a moderate barrier, or not a barrier at all. We considered the ranking of these main barriers alongside analysis of evidence from other stakeholders to identify the most significant barriers to innovation in road and rail.⁷⁰⁴

- (a) Almost all (15 out of 16) Tier 1 and Tier 2 firms considered the costs involved in innovation to be a moderate or significant barrier to innovation, with half (8 out of 16) saying it was a significant barrier.⁷⁰⁵ Given that upfront costs can be substantial, a number of firms linked this to the need for long-term certainty in order to assess whether costs would be recoverable.⁷⁰⁶ This is discussed further in the section on providing funding certainty.
- (b) Almost all (15 out of 16) Tier 1 and Tier 2 firms considered 'barriers in the procurement process' to be a moderate or significant barrier to innovation.⁷⁰⁷ Such procurement barriers include: too much focus on price or cost certainty in the tender evaluation,⁷⁰⁸ limited incentives to innovate in contracts due to a lack of reward for proposing new approaches,⁷⁰⁹ and overly prescriptive briefs with a preference for established solutions over innovative ones.⁷¹⁰

⁷⁰³ Note of meeting with Network Rail [§].

⁷⁰⁴ While some respondents said that some of these barriers are more pronounced in rail than in road through their qualitative responses, we have not split out responses between road and rail in this section.

⁷⁰⁵ Responses to the CMA's information requests [§]. Eight out of 16 firms stated it is a significant barrier, six out of 16 firms stated it is a moderate barrier and one firm stated it is a moderate-to-significant barrier.

⁷⁰⁶ Responses to the CMA's information requests [§].

⁷⁰⁷ Responses to the CMA's information requests [§]. Five out of 16 firms stated it is a significant barrier, nine out of 16 firms stated it is a moderate barrier and one firm stated it is a moderate-to-significant barrier.

⁷⁰⁸ Responses to the CMA's information requests [§].

⁷⁰⁹ For example, Morgan Sindall stated 'There is limited incentive unless frameworks and clients reward innovation or require continuous improvement through KPIs' and 'Unproven' innovations rarely win competitive tenders'. Morgan Sindall's response to CMA's information request [§]. Amco Giffen stated 'procurement frameworks [...] systematically compromise innovation investment. Current processes reward the lowest initial price, creating an incentive where a few companies bear the cost and risk of developing an innovation, enabling other companies to simply provide a competitive price at a later date, once solutions are proven and the risk of failure is no longer there'. Amco Giffen's response to the CMA's information request [§].

⁷¹⁰ Responses to the CMA's information requests [§].

Public authorities' views about encouraging innovation through the procurement process were mixed.⁷¹¹ Some evidence from Tier 1 firms and public authorities highlighted examples of explicitly encouraging innovation where relevant and proper assessment of novel approaches at the procurement stage in the section 'Assessment of tender criteria'. This is discussed further in the section 'Public authorities' ability and motivation to assess and encourage innovation effectively'.

- (c) Most (11 out of 16) Tier 1 and Tier 2 firms considered 'legal or regulatory barriers' to be a moderate or significant barrier to innovation.⁷¹² While the requirement for robust regulatory standards in a safety critical environment was acknowledged, firms stated that regulatory standards can be costly, time-consuming, or difficult to navigate,⁷¹³ with some saying that these barriers are particularly significant in the rail sector.⁷¹⁴ Some public authorities also acknowledged that regulation could act as a barrier to innovation.⁷¹⁵ This is discussed further in the 'How regulation can hinder or support innovation' section.
- (d) Factors related to public authority capacity, risk appetite or culture were identified without prompting by over a third (6 out of 16) of Tier 1 and Tier 2 firms.⁷¹⁶ Firms highlighted that public authorities generally adopt legacy behaviours,⁷¹⁷ that there is a perception of increased risk or effort to innovate,⁷¹⁸ and that, in some instances, limitations in public authority capacity means they can struggle to appropriately assess novel approaches.⁷¹⁹ This is discussed further in the section 'Public authorities' ability and motivation to assess and encourage innovation effectively'.
- (e) Most (11 out of 16) Tier 1 and Tier 2 firms identified 'economies of scale and/or scope' to be a moderate or significant barrier to innovation (for smaller firms), although only four indicated this barrier is 'significant'.⁷²⁰ Some firms

⁷¹¹ For example, while Transport Scotland takes steps to allow for innovation, it also stated that barriers to innovation exist, such as favouring established procurement and construction methods over innovation as the perceived risk is smaller. However, some Network Rail regions said they do have measures in their procurement process to encourage innovation through the tender process or tailored KPIs. Transport Scotland's response to the CMA's information request [REDACTED]; Network Rail North West and Central's submission to the CMA [REDACTED]; Network Rail Scotland's submission to the CMA [REDACTED]; and Network Rail Eastern's submission to the CMA [REDACTED].

⁷¹² Responses to the CMA's information requests [REDACTED]. Six out of 16 firms stated it is a significant barrier and five out of 16 firms stated it is a moderate barrier.

⁷¹³ Responses to the CMA's information requests [REDACTED].

⁷¹⁴ Responses to the CMA's information requests [REDACTED].

⁷¹⁵ Transport Scotland's response to the CMA's information request [REDACTED]; Network Rail's response to the CMA's information request [REDACTED].

⁷¹⁶ Responses to the CMA's information requests [REDACTED]. The CMA did not include factors related to capacity and risk appetite as a factor to score, but firms listed them under the 'other' category without prompting. We consider that, while the total number of firms identifying these factors as a barrier is lower, the fact they were listed spontaneously means they may carry more weight.

⁷¹⁷ Kier's response to the CMA's information request [REDACTED].

⁷¹⁸ Morgan Sindall's response to CMA's information request [REDACTED].

⁷¹⁹ Kier's response to the CMA's information request [REDACTED].

⁷²⁰ Responses to the CMA's information requests [REDACTED]. Seven out of 16 firms stated it is a significant barrier and four out of 16 firms stated it is a moderate barrier.

described that scale or funding can be required to bring innovations to the market.⁷²¹

- (f) Over half (9 out of 16) of Tier 1 and Tier 2 firms identified 'access to sources of supply' as a moderate or significant barrier to innovation, although only four indicated this barrier is 'significant'.⁷²² Two firms said that limited access to subcontractors or skilled people can restrict innovation,⁷²³ for example, due to lack of adoption of new technologies,⁷²⁴ or general lack of resource.⁷²⁵ Network Rail Scotland also said that there are limited pools of suppliers in specialist areas,⁷²⁶ which might harm innovation. However, several Tier 1 and Tier 2 firms said that the supply chain is mature, instigates innovation, or invests in R&D and therefore the supply chain is not a barrier to innovation.⁷²⁷
- (g) Over half (9 out of 16) of Tier 1 and Tier 2 firms identified 'technical advantages or intellectual property rights'⁷²⁸ as a moderate or significant barrier to innovation.⁷²⁹ One firm mentioned that where clients 'insist' on taking ownership of project IP, this can disincentivise the development of innovative solutions,⁷³⁰ presumably because this might limit the extent to which the firm can apply that IP on projects for different customers, limiting return on investment and reducing the incentive to invest in future. The Rail Forum also referred to 'lack of respect by the client for suppliers' intellectual property' as a barrier to innovation.⁷³¹ Most Tier 1 and Tier 2 firms indicated that 'technical advantages or intellectual property rights' is either a moderate or not a barrier (13 out of 16 firms),⁷³² for example, because many relevant innovations do not require significant technical advantages or IP.⁷³³
- (h) Over a third of Tier 1 and Tier 2 firms (6 out of 16) identified 'incumbency advantages' as a moderate or significant barrier to innovation.⁷³⁴ D Morgan

⁷²¹ Responses to the CMA's information requests [§].

⁷²² Responses to the CMA's information requests [§]. Four out of 16 firms stated it is a significant barrier and five out of 16 firms stated it is a moderate barrier.

⁷²³ Responses to the CMA's information requests [§].

⁷²⁴ Response to the CMA's information request [§].

⁷²⁵ Response to the CMA's information [§].

⁷²⁶ Network Rail's response to the CMA's information request.

⁷²⁷ Responses to the CMA's information requests [§].

⁷²⁸ We considered that 'technical advantages or intellectual property rights' could act as a barrier to innovation if some firms had access to technologies that others did not, or if IP barriers were either slowing the uptake of innovations or preventing firms from investing.

⁷²⁹ Responses to the CMA's information requests [§]. Six out of 16 firms stated it is a significant barrier, three out of 16 firms stated it is a moderate barrier and one firm stated it is a moderate-to-significant barrier.

⁷³⁰ Amey's response to the CMA's information request [§]. However, Amey stated that it considered this to be more of a contractual issue than an IP issue and rated 'technical advantages or intellectual property rights' as not a barrier to innovation.

⁷³¹ Rail Forum's response to the CMA's interim report, question 3.

⁷³² Just three firms indicated this was a significant barrier. Three responses to the CMA's information requests indicated that this is not a barrier. Responses to the CMA's information requests [§].

⁷³³ Kier's response to the CMA's information request [§]; and Morgan Sindall's response to CMA's information request [§].

⁷³⁴ Responses to the CMA's information requests [§].

described that incumbency advantages can create obstacles for non-incumbent firms to win opportunities and can also prevent the public authority from engaging with the market through the ECI process.⁷³⁵ These non-incumbent firms may have new or innovative ideas. However, multiple firms described that building established relationships with the client and knowledge of the asset can actually benefit innovation.⁷³⁶

Conclusion on barriers to innovation

- A.358 Taking the evidence in the round, several barriers have been highlighted as limiting the amount of innovation and investment in public road and rail civil engineering works: the cost of innovation when set against an uncertain pipeline of future work; barriers in procurement processes; public authority capacity and risk appetite; and regulatory barriers. Other factors such as economies of scale and scope, access to sources of supply, technical barriers, and incumbency advantages also represent a barrier to innovation to some extent, although these appear to be less significant.
- A.359 In the following sections we consider how procurement approaches and supplier behaviour impact incentives and uptake of innovation and investment, with a view to assessing how innovation can be encouraged more effectively.

How procurement approaches and supplier behaviour impact incentives and uptake of innovation

- A.360 In the following section, we examine the most significant barriers identified above in further detail, as well as considering other behaviours by public authorities or firms which can support innovation. We start by considering cross-cutting factors which can promote innovation across different projects, in particular:
- (a) the role of funding certainty in supporting innovation, and relatedly, the role of portfolio and long-term contracting in providing suppliers with a secure funding base from which to innovate.
 - (b) initiatives put in place by different stakeholders, including public authorities and government departments, to drive different forms of innovation.
 - (c) the extent to which public authorities are able and motivated to assess and encourage innovation in how they assess proposals.
 - (d) how regulation can support – or hinder – innovation.

⁷³⁵ D Morgan's response to the CMA's information request [X].

⁷³⁶ Responses to the CMA's information requests [X].

A.361 We then consider how individual projects can be set up to drive innovation, considering the role of scoping and ECI, risk sharing and supply chain management, and evaluation and lessons learnt at the end of projects.

Providing funding certainty

A.362 The evidence gathered indicates that uncertainty in the future project pipeline and the funding uncertainty attached to the projects over the long-term weakens incentives to invest in new technologies and processes.

A.363 Multiple stakeholders, including participants in the CMA market research, have said that innovation opportunities come from the lower tiers of the supply chain, but these suppliers can also be most vulnerable to cash flow issues.⁷³⁷ This can hinder their desire to undertake investment into innovation with uncertain returns; therefore, suppliers want a reliable pipeline with predictable future work to undertake and recover their investment. Multiple stakeholders told us about the effects of an uncertain pipeline on investment in innovation:

- (a) National Highways said pipeline certainty is needed to support innovation. Suppliers are less willing to try new processes if the market landscape is risky or there is little long-term encouragement from National Highways to support development and growth.⁷³⁸
- (b) Most Tier 1 suppliers said that it is important to have sight of a project pipeline to enable innovation.
 - (i) BAM Nuttall told us that having a general sight of the pipeline is good to be able to drive innovation, but the pipeline simply presents a business opportunity with no spend commitment attached. Where funding underpins a pipeline and suppliers have secured orders, this allows suppliers to think about investment into innovation, people, training, and other opportunities.⁷³⁹
 - (ii) Balfour Beatty told us the foundation for bringing forward innovation requires sufficient certainty of the future pipeline alongside having a programmatic approach to deliver work.⁷⁴⁰
 - (iii) Amey told us that initiatives work well if there are long-term contracts in place and the procuring authority works jointly with the suppliers. With a 5-year programme, there is a limit on new technology and innovation

⁷³⁷ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), paragraph 3.5.5; Notes of meetings with [REDACTED]; Responses to the CMA's information requests [REDACTED].

⁷³⁸ National Highways response to the CMA's information request [REDACTED].

⁷³⁹ Note of meeting with BAM Nuttall [REDACTED].

⁷⁴⁰ Balfour Beatty told us that the central rail systems alliance with Network Rail has worked well because this is a 10-year contracting model that has enabled Balfour Beatty to bring in multiple new ways of working as the time frame has allowed for that with the regulated authority. Note of meeting with Balfour Beatty [REDACTED].

that can be undertaken in that window. In the past, PFI contracts have enabled innovation.⁷⁴¹

- (iv) Kier said without long-term certainty, the upfront investment in digital tools, training, or offsite facilities may not be recoverable. It also noted SMEs often lack the level of upfront funds required to make investments into innovation.⁷⁴²
- (c) Two sector panellists said that having a long-term pipeline programme with funding certainty would support investment in innovation by suppliers.⁷⁴³ Another sector panellist said innovation is unique because it involves different processes and other types of cost and it should have ring-fenced funding that is separate from the procurement process. This allows innovation to take its course through research and development.⁷⁴⁴
- (d) The CMA's market research found that smaller specialist firms are well-placed to develop new products or ways of working. However, they are also most vulnerable to cashflow issues, late payments, and risk being pushed down the supply chain, which means innovation is deprioritised in favour of more existential factors.⁷⁴⁵
- (e) Local authority and supply chain organisations who completed LCRIG's questionnaires agreed that funding constraints were a key barrier to innovation.
 - (i) Amongst the local authority respondents, funding pressure was most frequently mentioned as a key future threat to innovation.⁷⁴⁶ The research also indicated that local authorities' innovation-related investment strategies leaned towards near-term (rather than medium- or long-term) planning, with most respondents favouring incremental (rather than disruptive or radical) innovation.⁷⁴⁷
 - (ii) Amongst the supplier respondents, most viewed local authority funding as 'poor' or 'moderate'. They frequently cited central funding limitations and a tendency among local authorities to 'retreat to comfort zones', favouring traditional solutions over newer, possibly higher-cost innovations even when long-term benefits are evident.⁷⁴⁸

⁷⁴¹ Note of meeting with Amey [§].

⁷⁴² Kier's response to the CMA's information request [§].

⁷⁴³ Note of meeting with the sector panel [§].

⁷⁴⁴ Note of meeting with the sector panel [§].

⁷⁴⁵ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), paragraph 3.5.5.

⁷⁴⁶ LCRIG Innovation Report 2025, p17.

⁷⁴⁷ LCRIG Innovation Report 2025, p29.

⁷⁴⁸ LCRIG Innovation Report 2025, p22.

Impact of portfolio contracting and programmatic procurement

- A.364 The scale on which public authorities procure road and rail infrastructure also influences the incentives of suppliers. This section examines the differences between procuring and contracting for projects, programmes and portfolios.
- A.365 When public authorities tender for work as one-off projects, these projects can prohibit long-term partnerships with the procuring public authorities.⁷⁴⁹ According to ICE's Project 13⁷⁵⁰ report, a transactional approach to procurement incentivises the lowest price as a proxy for value for money but it fails to deliver the best value outcomes.⁷⁵¹ The focus on minimising upfront costs led to low margins for contractors engaged in construction work leaving little surplus of funds and an unsustainable business model. The report notes the poor performance lies with the resulting disintegration (separating design from construction) and disaggregation (breaking projects down into hundreds of sub-contracts) that impedes the flow of knowledge from the supply chain⁷⁵² or having the technical capacity required to keep pace with emerging ideas, technologies and innovative practices.⁷⁵³ As a result, the industry can underinvest over a sustained period.
- A.366 Balfour Beatty told us when a programmatic approach is not taken to deliver projects, this hinders skills retention in the sector as skill sets are built up to deliver a single project. The learning and performance phases that a project goes through are lost because the expertise disbands as there are no similar projects that teams can move on to. This results in skill sets and knowledge being lost to other sectors.⁷⁵⁴ It also said it requires significant time to develop and test new methods of construction and new products for a live operational railway. Typically, the lifespan of such testing is greater than any single project and so a programmatic approach to innovation is a significant enabler.⁷⁵⁵
- A.367 Portfolio contracting and programmatic procurement represents a shift away from how infrastructure has traditionally been delivered. These two mechanisms are similar in that they group projects together in different ways to overcome the barriers to innovation.
- (a) Programmatic procurement is an approach which involves managing a suite of works that are coordinated at the programme level rather than treating projects as standalone schemes. It involves combining multiple projects into

⁷⁴⁹ GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), pp4-5.

⁷⁵⁰ Project 13 is an industry-led initiative from ICE that represents a shift from the transactional model for delivering major projects and programmes to an Enterprise Model. Project 13, [About Project 13](#), accessed on 26/02/26.

⁷⁵¹ Project 13 and ICE (2017), [From Transactions to Enterprises: A new approach to delivering high performing infrastructure](#), p3 and pp11-12.

⁷⁵² Project 13 and ICE (2017), [From Transactions to Enterprises: A new approach to delivering high performing infrastructure](#), p7 and pp11-13.

⁷⁵³ Project 13 and ICE (2017), [From Transactions to Enterprises: A new approach to delivering high performing infrastructure](#), p11.

⁷⁵⁴ Note of meeting with Balfour Beatty [REDACTED].

⁷⁵⁵ Note of meeting with Balfour Beatty [REDACTED].

a single procurement to improve delivery efficiency, enhance cost predictability, support effective supply chain management and enable innovation through consistency and scale. For example, the Ministry of Justice's New Prisons Project delivered four prisons as a single programme rather than as four separate procurements. This approach reduced market strain, strengthened collaboration, improved cost certainty and incentivised innovation.⁷⁵⁶

- (b) Portfolio contracting refers to bringing multiple related projects together under a common commercial and management approach rather than as individual contracts that are let project by project. It can involve the procuring authority awarding a single contract, or a framework of contracts to a supplier or consortium to deliver a defined portfolio of works over several years.⁷⁵⁷ By aggregating demand and managing delivery across the portfolio, this approach supports standardisation, creates the conditions for innovation and provides a platform for improved performance management.⁷⁵⁸ For example, the Department for Education applied portfolio contracting through its school building frameworks, under which large numbers of similar school projects were procured and delivered as a coordinated portfolio, reducing procurement duplication, improved cost predictability and supported portfolio-level performance management.⁷⁵⁹

A.368 The guidance provided by the UK government and from industry frameworks support the view that these mechanisms can be used to shift procurement away from 'transactional' project-by-project buying (often the lowest price) towards 'strategic' buying that uses purchasing power to de-risk innovation.⁷⁶⁰ The literature notes these mechanisms can be used to influence and create markets.⁷⁶¹ These approaches have as their aim to increase investment in innovation by addressing two main barriers: demand uncertainty (suppliers will not invest if they do not know if anyone will buy) and risk aversion (buyers will not buy if the solution is unproven).⁷⁶² Table [A.21] provides a summary of these approaches.

⁷⁵⁶ GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), pp17-27.

⁷⁵⁷ The long-term contract can be for an entire region or asset type over multiple years.

⁷⁵⁸ [Gold Standard Report](#), pp44-45.

⁷⁵⁹ GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), pp14-17.

⁷⁶⁰ [The Construction Playbook](#), p2, pp12-14, pp16-18 and pp44-51; GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), pp3-5 and pp7-10; [Gold Standard Report](#), p44 and pp119-120; Project 13 and ICE (2017), [From Transactions to Enterprises: A new approach to delivering high performing infrastructure](#), pp2-3, pp11-13 and p16; Designing Buildings, [NEC4 contract creates a procurement alliance arrangement for all stakeholders](#), accessed on 15/04/26; King's College London (2025), [How can the NEC acquisition of FAC-1 improve strategic procurement?](#); Fenwick Elliott (2018), [Alliancing: What does the new NEC4 Alliance Contract have to offer?](#).

⁷⁶¹ Edler, J. (2026), [Demand, Public Procurement and Transformation](#), in *The New Role of the State for Transformative Innovation*, pp322-323 and p325; Selviaridis, K. (2016), [Public procurement and innovation: A review of evidence on the alignment between policy and practice](#), p1.

⁷⁶² Uyarra, E. & Flanagan, K. (2010), [Understanding the Innovation Impacts of Public Procurements](#), European Planning Studies, p130; OECD (2011), [Demand-side Innovation Policies](#), p37.

A.369 Together, both mechanisms establish long-term, multi-project portfolios that allow innovation to be developed, tested, and scaled across many projects. The literature notes the following benefits:

- (a) They provide a *pipeline effect* which creates certainty. Both mechanisms provide a visible pipeline of work, where the procuring authorities provide a signal to suppliers about the certainty of future work that justifies undertaking investments into innovation.⁷⁶³ Anglican Water's @one Alliance Model is an example of a portfolio approach that has supported the sharing of knowledge and innovation.⁷⁶⁴
- (b) They provide a *learning curve effect*. A portfolio creates a structured learning environment. Cross-project learnings enable knowledge and lessons learnt to be used rather than be lost when project teams disband.⁷⁶⁵
- (c) They create *collaboration and risk sharing*. Portfolio models often use collaborative contracts (eg alliancing, NEC, enterprise models) with shared risk/reward mechanisms. They incentivise firms to propose and adopt innovation.⁷⁶⁶
- (d) They enable *standardisation*. A programmatic approach to projects encourages standard modular designs and components through a 'platform' approach.⁷⁶⁷ Once a standard platform exists, it can become easier and cost-effective to experiment with improvements and complementary innovations.⁷⁶⁸
- (e) They allow for the *collection of data, feedback loops and better performance management*. A portfolio of projects can create a comparative performance environment by requiring similar projects to be evaluated using common metrics.⁷⁶⁹ This allows for systematic benchmarking and identification of the

⁷⁶³ NESTA (2007), [Driving innovation through public procurement](#). The Construction Playbook recommends visible long-term pipelines and long-term contracting to drive investment in new technologies. [The Construction Playbook](#), pp12-13.

⁷⁶⁴ This has also allowed for an £11 billion investment plan from its Final Determination from Ofwat for AMP8. This will allow the alliance to deliver capital infrastructure projects worth £2.6 billion. New Civil Engineer (2025), [How @one Alliance's model and lessons learned could improve delivery of its £2.6bn AMP8 portfolio](#).

⁷⁶⁵ Brady, T. and Davis, A. (2016), [Explicating the dynamics of project capabilities](#), International Journal of Project Management, p315 and pp318-319; Vosman, L., Volker, L. and Boes, J. (2020), [From project to programme: drivers to a programmatic procurement approach in the Dutch construction industry](#), University of Twente, p2; Pelton, J., Brown, M., Reddaway, W., Gilmour, M., Phoon, S., Wolstenholme, A. and Gann, D. (2017), [Crossrail project: the evolution of an innovative ecosystem](#), pp4-5.

⁷⁶⁶ Koppenjan, J., Klijn, E. H., Verweij, S., Duijn, M., van Meerkerk, I., Metselaar, S. and Warsen, R. (2022), [The Performance of Public-Private Partnerships: An Evaluation of 15 Years DBFM in Dutch Infrastructure Governance](#), Public Performance & Management Review, pp1003–1004.

⁷⁶⁷ For example, the Construction Playbook notes that aggregating and standardising demand can promote the development and use of Modern Methods of Construction. [The Construction Playbook](#), pp20-24.

⁷⁶⁸ Construction Innovation Hub (2026), [The Product Platform Rulebook](#), p10.

⁷⁶⁹ Archer, N.P. and Ghasemzadeh, F. (1999), [An integrated framework for project portfolio selection](#), International Journal of Project Management, pp208-211.

best practices.⁷⁷⁰ As part of Crossrail's learning legacy, their innovation initiatives provide useful processes and lessons learnt to other sectors.⁷⁷¹

- (f) They provide a *forward commitment* for a product that does not exist.⁷⁷² A programme of work fosters certainty within firms to undertake the investment into innovative activities. This can translate into further benefits for the local and domestic markets.⁷⁷³

Table A.22 Summary of mechanisms

<i>Mechanisms</i>	<i>Primary Goal</i>	<i>How it increases investment</i>
Portfolio Contracting	Risk Management	<u>For Buyers:</u> Reduces the risk of failure <u>For Suppliers:</u> Encourages smaller suppliers to enter the market via pilot testing
Programmatic Procurement	Stability and Scale	Provides a long-term pipeline (eg 5-10 years) that justifies heavy private sector R&D investment
Forward Commitment	Market Creation	Creates a 'guaranteed market' for a product that does not exist and unlocks further R&D funding

Source: CMA analysis from desk research

A.370 Whilst a programmatic approach to procurement and portfolio contracting can bring many benefits, the literature highlights some of the following risk factors that must be taken into consideration with these approaches:

- (a) They can *introduce complex governance*. Multi-party decision making and increased coordination requirements that raise transaction and management costs as portfolios scale.⁷⁷⁴
- (b) Shared risk and reward type mechanisms can *dilute suppliers' ability to appropriate returns from proprietary innovations* which can weaken incentives to invest in new innovations. Suppliers can respond by prioritising incremental improvements that support shared programme outcomes rather than step-change innovations.⁷⁷⁵
- (c) Long-running programmes can often *default towards standardisation and proven solutions* as procuring authorities prioritise delivery certainty and performance assurance. This can reduce suppliers' incentives to invest in novel technologies.⁷⁷⁶

⁷⁷⁰ RICS (2020), [Benchmarking in the infrastructure sector](#), pp6-10.

⁷⁷¹ Vernet, A. (2016) [Crossrail Innovation Programme – Innovation Evaluation Report](#), pp2-4.

⁷⁷² BIS (n.d.), [A suppliers guide to Forward Commitment Procurement \(FCP\)](#), p1.

⁷⁷³ Uyarra, E. & Flanagan, K. (2010), [Understanding the Innovation Impacts of Public Procurements](#), European Planning Studies, p130; OECD (2011), [Demand-side Innovation Policies](#), p37.

⁷⁷⁴ Si, H., Kavadias, S. & Loch, C. (2022), [Managing innovation portfolios: From project selection to portfolio design](#), [Production and Operations Management](#), Production and Operations Management, pp4574-4577. Wagner, M. & Zidorn, W. (2017), [Effects of extent and diversity of alliancing on innovation: the moderating role of firm newness](#), Small Business Economics, p919, pp928-929.

⁷⁷⁵ Vosman, L., Volker, L. and Boes, J. (2020), [From project to programme: drivers to a programmatic procurement approach in the Dutch construction industry](#), University of Twente, p12.

⁷⁷⁶ Sergeeva, N. (2019), [Towards more flexible approach to governance to allow innovation: the case of UK infrastructure](#), International Journal of Managing Projects in Business, pp11-14.

- (d) They can *favour incumbent suppliers and restrict access for SMEs and new entrants* because these approaches involve high bidding, mobilisation and assurance costs.⁷⁷⁷
- (e) And they can *risk creating path dependency and strategic lock-ins*.⁷⁷⁸ Long-term programmes can embed legacy standards⁷⁷⁹, digital systems⁷⁸⁰ and organisational routines that can limit a system's ability and willingness to absorb breakthrough innovations at later stages.⁷⁸¹

A.371 As noted above, innovation opportunities also come from the lower tiers of the supply chain, and some stakeholders have said better support for SMEs along with high levels of project disaggregation can encourage innovation.

- (a) FSB told the CMA that a well-functioning market should involve high levels of project disaggregation by the procurer to provide better access to small businesses who drive innovation through specialist expertise and local understanding with more innovation.⁷⁸²
- (b) ACE told the CMA that encouraging innovation requires SME support.⁷⁸³ This is a view that is supported by Tier 2 and Tier 3 participants in the CMA's qualitative market research as noted previously.⁷⁸⁴

A.372 Taken together, the literature indicates that although a programmatic approach to procurement and portfolio contracting can involve higher initial investments and strategic planning alongside balancing some of the other costs⁷⁸⁵, they can offer increased value for money, better success rates and better supplier relationships.⁷⁸⁶ Programmatic and portfolio approaches to procurement, where used appropriately, could also assist in changing incentives for innovation: for example, moving market participants away from being incentivised to focus on individual project delivery, which comes at the expense of innovation that can deliver benefits across a wider portfolio of projects in the market, but may not be

⁷⁷⁷ Flynn, A. (2026), [Research on SME involvement in public procurement: A review, critique and conceptual framework](#), Journal of Purchasing and Supply Management, pp6-7.

⁷⁷⁸ Sydow, J., Schreyögg, G., & Koch, J. (2009), [Organizational Path Dependence: Opening the Black Box](#), Academy of Management Review, pp704-705.

⁷⁷⁹ Blind, K. (2013), [The impact of standardization and standards on innovation](#), p20. Blind, K., Petersen, S.S. and Riillo, C.A.F. (2017), [The impact of standards and regulation on innovation in uncertain markets](#), Research Policy, p258.

⁷⁸⁰ Irani, Z., Abril, R.M., Weerakkody, V., Omar, A. and Sivarajah, U. (2023), [The impact of legacy systems on digital transformation in European public administration: Lesson learned from a multi case analysis](#), Government Information Quarterly, pp1-4.

⁷⁸¹ Guerrero, J. & Engström, S. (2022), [Client as drivers of innovation in the infrastructure: implications of hard and soft project management approaches](#), Construction Innovation, pp248-253.

⁷⁸² [FSB's response](#) to the CMA's interim report, pp2-3.

⁷⁸³ [ACE's response](#) to the CMA's interim report, p5.

⁷⁸⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), paragraph 3.5.5.

⁷⁸⁵ GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), pp7-9. Erickson, P.E., Volker, L., Kadefors, A., Lingegård, S., Larsson, J., and Rosander, L. (2019), [Collaborative procurement strategies for infrastructure projects: a multiple-case study](#), Management, Procurement and Law, pp203-204.

⁷⁸⁶ GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), pp11-13 and p27.

financially viable for a single project. However, this needs to be balanced with providing opportunities for SMEs, and so will not be a 'one-size-fits-all' solution.

Long-term contracting – current practices

- A.373 Long-term contracting refers to the contract duration.⁷⁸⁷ This is a mechanism that complements the programmatic approach to procurement and portfolio contracting to provide funding certainty. Each national public authority takes a different approach to longer-term contracting. We asked each national public authority to provide information on the contract lengths, the number of contracts, and the total contract value⁷⁸⁸ undertaken for enhancement, renewal, and maintenance projects for the last three years.⁷⁸⁹
- (a) Across all renewal, maintenance, and enhancement projects over the last three years, Network Rail has had more than 3,000 signed contracts in place where 75 per cent of these signed contracts are up to one year in length, and only 2 per cent are more than 5 years in length.⁷⁹⁰
 - (b) For Transport Scotland, for the last two years all awarded contract values for long-term civil engineering works in that period is accounted for by two enhancement projects, where each contract was between 5 and 10 years long.⁷⁹¹
 - (c) The Welsh Government did not provide data on contract lengths but said it does not currently undertake longer-term contracting methods.⁷⁹²
 - (d) For DfI TRAM in Northern Ireland, across the last three calendar years for enhancement, renewal, and maintenance projects, there have been no contracts put in place with a length of more than 5 years. The majority of contract lengths over this period were between 3 and 5 years.⁷⁹³

⁷⁸⁷ For example, government guidance describes longer-term contracts as those spanning more than 3 years. GCF (2022), [Longer Term Contracting Programmes, Projects and Portfolios in Construction: Guidance Note](#), p2.

⁷⁸⁸ The total contract value includes the value of those projects that were not procured through a longer-term contracting model.

⁷⁸⁹ We did not receive data from National Highways and Translink in Northern Ireland which allowed us to calculate contract length.

⁷⁹⁰ Fifteen per cent of the signed contracts have a contract length of more than one year and up to 3 years. 8 per cent of the signed contracts have a contract length of more than 3 years and up to 5 years. Network Rail's response to the CMA's information request [§].

⁷⁹¹ Transport Scotland's response to CMA's information request [§].

⁷⁹² The Welsh Government's response to the CMA's information request [§].

⁷⁹³ For renewal and maintenance projects, they have had a total of 58 contracts in place, where 62 per cent of these contracts have a length of more than 3 years and up to 5 years, 26 per cent of these contracts have a length of more than 1 year and up to 3 years and 12 per cent of the contracts have a length of up to one year. For enhancement projects, they have had a total of 22 contracts in place, where 73 per cent of these contracts have a length of more than 3 years and up to 5 years, 9 per cent of contracts have a length of more than 1 year and up to 3 years, and 18 per cent of contracts have a length of up to one year. DfI's response to the CMA's information request [§].

A.374 For the devolved governments, the common reason given for shorter-term contracts is that each devolved government has an annual budget which makes it difficult to plan a programme of work.

- (a) While Transport Scotland has used longer-term contracts, Transport Scotland said planning for a pipeline of projects is difficult due to the constraints placed by annual budget dependencies alongside the need to comply with the necessary procurement regulations. It also said accounting for Scotland's geography and population density were other factors that can affect the ability to predict accurate pipelines.⁷⁹⁴
- (b) The Welsh Government said it does not currently undertake portfolio contracting/programmatic contracting due to having a relatively limited budget for highways enhancement projects, which are normally allocated on an annual basis. This creates challenges for long-term planning without the certainty of budgets that allow projects to be grouped into a procurement programme.⁷⁹⁵
- (c) DfI TRAM told us that the use of longer-term contracting models is limited in Northern Ireland for two reasons:
 - (i) First, with Northern Ireland's supplier base being predominately made up of SMEs, the use of long-term aggregated contracts risks disadvantaging smaller firms as the longer-term contracting approaches may restrict SME access to public contracts.
 - (ii) Second, the lack of multi-year funding certainty in Northern Ireland creates challenges as budgets are allocated on a one-year basis, there are difficulties with long-term planning and this in turn affects the ability to structure frameworks and plan project delivery appropriately.^{796,797}

A.375 Network Rail told us:

- (a) The main barriers to expanding portfolio and longer-term contracting is funding certainty alongside in-period funding volatility, exposure to macroeconomic shocks, annual delegated budget limits, value-for-money

⁷⁹⁴ Transport Scotland's response to CMA's information request [REDACTED].

⁷⁹⁵ The Welsh Government's response to the CMA's information request [REDACTED].

⁷⁹⁶ The Department of Finance in Northern Ireland has indicated plans to move to a three-year budgeting model. DfI's response to the CMA's information request [REDACTED].

⁷⁹⁷ DfI's response to the CMA's information request [REDACTED].

risks. These factors can incentivise cautious work release rather than full portfolio commitments,^{798,799} regulation, and governance.⁸⁰⁰

- (b) Longer term contracts require greater planning and available budgets. Whilst substantial sums of money are being committed to new frameworks, there is a reluctance from asset managers to guarantee a percentage of what they perceive to be the contract value over the life of a framework. They are committing to budgets within a control period but not beyond that and committing to contracts on an annual work bank basis. This means there are no long-term contracts that incentivise the supply chain to make investment decisions.⁸⁰¹

A.376 Taken together, the evidence indicates that the main impediment on the use of longer-term contracts by public authorities is limitations on being able to forward plan projects due to budget uncertainties (although in some cases this seems to be exacerbated by internal restrictions), although there are also factors more specific to the context in which different public authorities operate.

Initiatives to drive specific innovation or investments across projects

A.377 Some stakeholders have indicated it is useful to provide a steer on specific areas of focus for innovation and make funding available for innovations to be developed outside of live projects.

- (a) Network Rail told us industry needs to set out specific problems and areas that require innovation, along with the risks and barriers to implementation (such as access/build/speed) that would need to be worked around in order to understand the benefits.⁸⁰²
- (b) One member of the sector panel stated that having a clarity and focus on what is important helps to unlock innovation, giving the example of the focus on carbon reduction for the Lower Thames Crossing.⁸⁰³
- (c) Another sector panel member said that ringfencing innovation outside of standard procurement approaches enables innovation to run its course without impacting upon delivery schedules and budgets. They indicated this

⁷⁹⁸ Network Rail said if funding must be diverted from a committed work banks under long-term contracts, there can be penalties or sunk costs. Network Rail's response to CMA information request [§].

⁷⁹⁹ Network Rail said it does not include break clauses in contracts as these seen as potentially costly and therefore riskier. Note of meeting with Network Rail [§].

⁸⁰⁰ Note of meeting with Network Rail [§].

⁸⁰¹ Note of meeting with Network Rail [§].

⁸⁰² Note of meeting with Network Rail [§].

⁸⁰³ Note of meeting with the sector panel [§].

requires budget flexibility to support that innovation, rather than needing to demonstrate delivery against a particular project.⁸⁰⁴

- (d) BAM Nuttall told us that having ring-fenced funding is positive for enabling innovation because civil engineering contractors work off small margins that make it difficult for suppliers to invest as part of projects.⁸⁰⁵
- (e) Balfour Beatty told us that in the last 2 to 3 years, National Highways has run innovation competitions linked to improving road user satisfaction with road works and decarbonisation. These have been the catalyst that have allowed SMEs to partner with Balfour Beatty and other Tier 1 suppliers to provide support. It provided seed funding to a few SMEs that allowed innovations to be trialled on parts of the live road network.⁸⁰⁶
- (f) Some participants in our market research acknowledged that national road-commissioning bodies do convene innovation sessions, but the feeling was that public authorities or Tier 1s do not necessarily follow these up with adequate co-funding in order to get some of the ideas off the ground.⁸⁰⁷

A.378 As is set out in the ‘Current state of innovation in rail and road’ section, across the UK different national public authorities adopt different approaches to promote innovation. Table A.23 provides some details on the mechanisms public authorities use to incentivise innovation, the types of innovation being incentivised and the different approaches they take to encourage SME participation. On SME initiatives, National Highways and Network Rail have specific initiatives that encourage SME participation. The Welsh Government, Transport Scotland, DfI and Translink encourage participation through cross-sector government initiatives.

Table A.23 Types of innovation undertaken by Public Authorities

Authority	Innovation Mechanisms	Type of Innovation*	SME Initiatives
National Highways 808 809 810	Challenge-led initiative ⁸¹¹ with Innovation & Research Designated Funds ⁸¹²	<u>Product Innovation:</u>	Broad participation encouraged ⁸²⁴ with schemes

⁸⁰⁴ Note of meeting with the sector panel [§].

⁸⁰⁵ Note of meeting with BAM Nuttall [§].

⁸⁰⁶ Note of meeting with Balfour Beatty [§].

⁸⁰⁷ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p73.

⁸⁰⁸ National Highways, [Innovation and research strategy](#), accessed on 16/02/26.

⁸⁰⁹ Page provides further details about National Highways’ innovation and research approaches. National Highways, [Innovation and research](#), accessed on 16/02/26.

⁸¹⁰ Page provides guidance details for National Highways innovation and research for designated funding for 2025. National Highways, [Innovation and Research Designated Fund - Guidance 2025](#), accessed on 16/02/26.

⁸¹¹ Provides details on National Highways challenge-led approach. National Highways, [Challenge-led approach](#), accessed on 27/02/26.

⁸¹² Provides detail about National Highways’ designated funds. National Highways, [Designated Funds](#), accessed on 27/02/26.

⁸²⁴ National Highways partnered with Connected Places Catapult to undertake a series of challenge led approaches to address challenges in safety, innovation and environmental sustainability. Through a series of accelerator programmes, this partnership has fostered collaboration between National Highways, SMEs and major tier 1 suppliers. Connected Places Catapult (2025), [Driving innovation with National Highways](#).

	Open calls for ideas to solve priority problems ^{813, 814, 815} Collaboration with academia ⁸¹⁶ , businesses ⁸¹⁷ , and other organisations ⁸¹⁸	Low-carbon materials and construction products. ^{819, 820} <u>Business Process Innovation:</u> Using digital designs in construction ⁸²¹ to enable safer production, reduce network disruption, increase productivity and smoother journeys for customers. ⁸²² Sharing valuable data on road and lane closures, digital variable message signs (VMS), speed managed areas and road limit features via digital tools to better connect the country ⁸²³	encouraging SME participation ^{825, 826}
Network Rail ⁸²⁷	R&D portfolio ⁸²⁸ with challenge statements ^{829, 830} Partnership with leading rail research universities – part of UK Rail Research and Innovation Network (UKRRIN) ⁸³¹ Internation collaboration with Shift2Rail ⁸³²	<u>Product Innovation:</u> Seeking innovations that use different self-maintaining materials to aid maintenance of wide variety of aging buildings and structures. ^{833, 834} <u>Business Process Innovation:</u> Use data-driven asset management approaches to obtain a big picture of the railway and fix faults when necessary. ⁸³⁵ The Digital Railway programme aims to modernise signalling and train control technology to increase capacity, reduce delays enhance safety and drive down costs. ⁸³⁶	SME strategy for CP7 ⁸³⁷ alongside wider initiatives with UKRRIN ⁸³⁸ and Connected Places Catapult ⁸³⁹ to support SMEs

⁸¹³ Highways News (2025), [National Highways launches call for innovators to help shape the future of England's roads](#).

⁸¹⁴ Highways Industry (2025), [National Highways launches call for innovators to help shape the future of England's roads](#).

⁸¹⁵ National Highways, [Innovation and Research Designated Fund - 2025 open call challenges](#), accessed on 04/03/26.

⁸¹⁶ National Highways, [Roads Research Alliance](#), accessed on 04/03/26.

⁸¹⁷ National Highways, [Innovation and research strategy](#), accessed on 04/03/26.

⁸¹⁸ National Highways, [Digital Lab](#), accessed on 04/03/26.

⁸¹⁹ National Highways say they want to achieve net zero carbon by 2050 through innovations that will impact direct operations to become carbon neutral and future net zero for maintenance and construction. National Highways, [Innovation and research strategy](#), accessed on 04/03/26.

⁸²⁰ Connected Places Catapult (2024), [National Highways: the need for innovation has never been greater](#).

⁸²¹ Under the 'Cheaper, faster construction by 2030' tab, National Highways say as part of money they invest in innovation, every pound invested must bring value – they aim to achieve this with the use of digital design and construction by 2030. National Highways, [Innovation and research strategy](#), accessed on 04/03/26.

⁸²² Highways England (2021), [Digital Delivery: Enabling outcomes with digital data and technology](#), p10.

⁸²³ National Highways, [Digital Lab](#), accessed on 04/03/26.

⁸²⁵ National Highways say they support the development of new solutions from small businesses and start-ups through seed funding, advice, idea validation and access to early concept proving grounds. National Highways, [Innovation and research strategy](#), accessed on 04/03/26.

⁸²⁶ Article provides details of funding grants totalling £110,000 to help National Highways' net zero bid. This accelerator low carbon innovation programme involves two phases which provides funding to SMEs. Highways Industry (2023), [Funding grants totalling £110,000 to help National Highways' net zero bid](#).

⁸²⁷ Network Rail, [Research, development and innovation](#), accessed on 16/02/26.

⁸²⁸ Network Rail, [Research and development portfolio](#), accessed on 05/03/26.

⁸²⁹ Network Rail, [Our strategy and challenges for research, development and innovation](#), accessed on 17/02/26.

⁸³⁰ Network Rail, [Challenge statements](#), accessed on 05/03/26.

⁸³¹ Network Rail, [Research and development portfolio](#), accessed on 16/02/26; UKRRIN, accessed on 10/03/26.

⁸³² Network Rail, [Shift2Rail](#), accessed on 02/03/26.

⁸³³ Network Rail (2019), [Buildings and Architecture - Self-maintaining Materials](#).

⁸³⁴ See details under the various tabs listed. Network Rail, [Challenge statements](#), accessed on 05/03/26.

⁸³⁵ Network Rail, [insight – using AI to run a reliable railway](#), accessed on 02/03/26.

⁸³⁶ Network Rail, [Digital Railway](#), accessed on 16/02/26.

⁸³⁷ Network Rail (2024), [New figures highlight Network Rail's commitment to small and medium businesses as it sets out five-year strategy](#).

⁸³⁸ See details under 'Coordinating Hub' tab. UK Rail Research and Innovation Network, [About UKRRIN](#), accessed on 10/03/26.

⁸³⁹ ITS UK (2024), [Network Rail selects Connected Places Catapult for five year innovation collaboration](#).

Transport Scotland	No standalone strategy but aligned with NTS2⁸⁴⁰ and the Scottish Government's National Innovation Strategy 2023 to 2033⁸⁴¹ Wider research partnerships with the Scottish Road Research Board (SRRB) alongside the Society of Chief Officers of Transportation in Scotland (SCOTS) and the Scottish Road Works Commissioner (SRWC) to commission annual research and development to deliver improvements in safety, construction, operation and maintenance on the Scottish road network.⁸⁴²	<u>Product Innovation:</u> Transport Scotland instructed AtkinsRéalis to review the noise reduction performance of TS2010, a type of Stone Mastic Asphalt (SMA) road surface.⁸⁴³ <u>Business Process Innovation:</u> Building Information Modelling (BIM) used on the M34 Raith Interchange to help design, build, maintain and manage construction projects.⁸⁴⁴ Investment for Scottish Government Mobility as a Service (MaaS)⁸⁴⁵	No specific SME policy but actively promoted through wider government policy ⁸⁴⁶
The Welsh Government ⁸⁴⁷	Part of the broader National Innovation Strategy (2023)⁸⁴⁸ Challenge-based "Contracts for Innovation" style programmes (WSRID) where public bodies define place-based challenges and then run supplier competitions.⁸⁴⁹ The Welsh Government innovation support landscape includes Small Business Research Initiative (SBRI).⁸⁵⁰	<u>Product Innovation:</u> Part of a wider policy to decarbonise.⁸⁵¹ <u>Business Process Innovation:</u> Broader policy to support digital innovations that improve asset management and maintenance.⁸⁵²	Does encourage SME participation from cross-sector initiatives through the Small Business Research Initiative (SBRI). ⁸⁵³
Northern Ireland Executive <u>Road:</u> Department for Infrastructure NI (DfI)	No formal strategy but part of broader collaborative policy initiatives to encourage R&D and innovation across NI⁸⁵⁴ Collaboration with the Strategic Investment Board's (SIB) SBRI⁸⁵⁵ to work on	<u>Product Innovation:</u> No details found <u>Business Process Innovation:</u> Plan to use HD imaging and roadscape modelling technology to deliver a digital twin⁸⁵⁷	Supplier base is comprised predominantly of SMEs ^{858, 859} with PEP implemented to encourage SME participation. ⁸⁶⁰

⁸⁴⁰ Transport Scotland, [National Transport Strategy](#), accessed on 02/03/26.

⁸⁴¹ The Scottish Government (2023), [National innovation strategy 2023 to 2033: Executive Summary](#).

⁸⁴² Transport Scotland, [Scottish Road Research Board](#), accessed on 17/02/26.

⁸⁴³ Transport Scotland (2023), [TS2010 Noise Reduction Performance Review - Initial Assessment](#).

⁸⁴⁴ Transport Scotland (2016), [New M74 Raith Interchange Pioneers Digitised Approach to Road Construction in Scotland](#).

⁸⁴⁵ Transport Scotland (2021), [More investment in digital transport solutions](#).

⁸⁴⁶ The Scottish Government (2022), [Procurement Reform \(Scotland\) Act 2014: Sustainable procurement duty](#), and the Scottish Government, [Sustainable Procurement](#), accessed on 13/03/26.

⁸⁴⁷ Innovation Strategy Wales, [Government Grants and Schemes](#), accessed on 17/02/26.

⁸⁴⁸ The Welsh Government (2023), [Wales innovates: creating a stronger, fairer, greener Wales](#).

⁸⁴⁹ The Welsh Government (2024), [Whole Systems Research and Innovation for Decarbonisation \(WSRID\) Programme: Challenge competition](#).

⁸⁵⁰ Innovation Strategy Wales, [Grants and schemes 2](#), accessed on 17/02/26.

⁸⁵¹ The Welsh Government (2024), [Whole Systems Research and Innovation for Decarbonisation \(WSRID\) Programme: Challenge competition](#).

⁸⁵² The Welsh Government (2023), [National Transport Delivery Plan 2022 to 2027](#), pp34-35.

⁸⁵³ Innovation Strategy Wales, [Grants and schemes 2](#), accessed on 17/02/26.

⁸⁵⁴ Department for the Economy (2025), [Collaborative Innovation Plan for Northern Ireland](#), pp48-49.

⁸⁵⁵ The Strategic Investment Board's (SIB) Small Business Research Initiative (SBRI) unit helps public sector organisations across Northern Ireland solve complex challenges through innovation and challenge-focused procurement. The Strategic Investment Board, [SBRI](#), accessed on 12/03/26.

⁸⁵⁷ UK Authority, [Northern Ireland Department for Infrastructure plans detailed digital twin all roads](#), accessed on 09/03/26.

⁸⁵⁸ DfI's response to the CMA's information request [38].

⁸⁵⁹ Department for the Economy (2025), [Collaborative Innovation Plan for Northern Ireland](#), p21.

⁸⁶⁰ The Procurement Enhancement Programme (PEP) is designed to make road maintenance and civil engineering contracts more accessible to the SME supply base. As part of PEP phase 2 with Major Civil Engineering Works Framework, DfI has structured contracts into multi-lot, multi-supplier framework with different values and workshare limits

	challenge-based procurements. ⁸⁵⁶		
Northern Ireland Executive Rail: Translink ⁸⁶¹	No formal R&D portfolio but enabled through procurement as an enabler for transformation ⁸⁶² , through capital grants from DfI. ⁸⁶³ And participation in a broader ecosystem of collaborative policy initiatives to encourage R&D and innovation across NI ⁸⁶⁴ All Island Strategic Rail Review (2024) sets out a long-term vision for transforming the island's rail system. ^{865 866}	<u>Product Innovation</u> : Undertaken through wider modernisation strategies and frameworks. ⁸⁶⁷ <u>Business Process Innovation</u> : Adopted and pioneered the BIM-first digital strategy to manage five contracts in parallel. ⁸⁶⁸	Make use of dynamic purchasing systems (as part of their procurement strategy) to onboard innovative small firms ⁸⁶⁹

Source: CMA desk research.

* Two broad types of innovation categories: Product Innovation – Defined by the OECD (2018) as ‘a new improved good or service that differs from the firm’s previous goods or services and that has been introduced on the market’.⁸⁷⁰ This can relate to technological or engineering innovation that focus on new processes for tangible physical assets, reducing carbon footprints and speeding up delivery. Business Process Innovation – Defined by the OCED (2018) as ‘a new or improved business process for one or more business functions that differs significantly from the firm’s previous business processes and that has been brought into use by the firm’.⁸⁷¹ This can relate to two distinct areas. First area: a traditional focus on functional engineering relating to human capital, institutions and regulations required to maintain the sector. Second area: the use of digital tools, new business models and service layers that sit on top of the product innovations.

A.379 Central government also provides support and funding for innovation at different levels of maturity. The following box highlights a limited selection of other initiatives that are available to procure innovation by the Department for Transport (DfT).

to promote a balanced and agile supply. The Major Civil Engineering Works Framework allows DfI to implement a procurement strategy for delivering roads and civil engineering projects valued between £5mn and £450mn. DfI (2025), [Department for Infrastructure: Major Civil Engineering Works Framework - Procurement Enhancement Programme Phase 2](#).

⁸⁵⁶ The SBRI have worked with the DfI to use emerging technology to deliver a predictive analysis tool for highway maintenance. Department for the Economy (2020), [£2.5million announced for Small Business Research Initiative projects](#).

⁸⁶¹ Article notes that Translink is an arm’s length body for the Department of Infrastructure in Northern Ireland. It is Northern Ireland’s fully integrated public transport provider where it operates 43 trains and four cross-border trains as part of the Enterprise Service brand service as well as other modes of transport such as busses, coaches and rapid transport gliders. Translink (2025), [Harnessing Procurement as a Strategic Enabler](#).

⁸⁶² Article highlights how Translink is using procurement as a strategic enabler to transform public transport in NI. Translink (2025), [Harnessing Procurement as a Strategic Enabler](#).

⁸⁶³ DfI, [Railway transport funding](#), accessed on 17/02/26.

⁸⁶⁴ Department for the Economy (2025), [Collaborative Innovation Plan for Northern Ireland](#), pp48-49.

⁸⁶⁵ The Review was commissioned jointly by the Irish Government’s Department of Transport and Northern Ireland’s Department for Infrastructure to establish a strategic, long-term vision for how the rail should develop across the entire island. DfT and DfI (2024), [All-Island Strategic Rail Review - Final Report](#).

⁸⁶⁶ DfI (2025), [Rail Project Prioritisation Strategy 2025](#).

⁸⁶⁷ Financial News (2024), [Translink’s £150M Railway Framework in Northern Ireland](#).

⁸⁶⁸ The BIM-first strategy is an outcome focused digital approach used to manage five parallel major contracts covering enabling works, bridge construction, rail infrastructure, utilities and Belfast’s Grand Central Station. Construction UK Magazine (2025), [Judges Hail Translink’s Belfast Grand Central as ‘Exemplar’ in Digital Infrastructure](#).

⁸⁶⁹ Article highlights how the procurement landscape is being reshaped by the emergence of new suppliers and technologies where smaller companies can struggle to break into public procurement contracting opportunities due to widespread use of established long-term frameworks or agreements. Translink aim to overcome this barrier by using dynamic purchasing systems to onboard innovative suppliers more quickly and to integrate them onto its agile supply chain. Translink (2025), [Harnessing Procurement as a Strategic Enabler](#).

⁸⁷⁰ OECD (2018), [Oslo Manual 2018, Guidelines for Collecting, Reporting and Using Data on Innovation](#), pp20-21.

⁸⁷¹ OECD (2018), [Oslo Manual 2018, Guidelines for Collecting, Reporting and Using Data on Innovation](#), pp20-21.

Examples of innovation initiatives supported by DfT

First-of-a-Kind

First-of-a-Kind (FOAK) is an initiative funded by the DfT and is delivered in partnership with Innovate UK to collaborate with the rail industry to accelerate the adoption of new technologies in the railway sector.^{872,873} FOAK is a series of yearly innovation competitions that are structured around challenge themes.⁸⁷⁴ These themes are aligned with wider government policy aims on 'Plan for Change'.^{875,876}

FOAK provides competitive grant funding for real world testing and demonstration of innovations that are close to market readiness but need support to overcome barriers to entry to showcase the innovations to the wider industry.⁸⁷⁷ As part of FOAK 2025/2026, the competition targets innovative ideas from organisations of any size that can work alone or as part of consortium.⁸⁷⁸

Live Labs 2

Live Labs 2 is a 3-year, UK-wide programme funded by the DfT and organised by ADEPT.^{879,880} Live Labs 2 is a challenge-led programme with designated funding which supports local authorities working alongside commercial and academic partners. The programme is designed to ensure the innovations are shared across the UK and the successful local authorities are encouraged to create partnerships across the public and private sectors and academia.⁸⁸¹

⁸⁷² Innovation Funding Service, [Contracts for Innovation: FOAK 2025 – Platform Train Interface](#), accessed on 03/03/26.

⁸⁷³ Innovate UK Business Connect, [Rail](#), accessed on 03/03/26.

⁸⁷⁴ For FOAK 2025 competition the aim was to develop innovative solutions which addressed platform train interfaces. Other themes of interest are personal safety, bridge strikes and AI for complex processes. Innovation Funding Service, [Contracts for Innovation: FOAK 2025 – Platform Train Interface](#), accessed on 17/03/26.

⁸⁷⁵ Prime Minister's Office, [Plan for Change](#), accessed on 17/03/26.

⁸⁷⁶ As part of 'Plan for Change' the wider aims are to drive innovation and investment that translates to commercial success that is needed for a modern economy to thrive. Prime Minister's Office, [Kickstarting Economic Growth](#), accessed on 17/03/26.

⁸⁷⁷ DfT and Lord Hendy of Richmond Hill CBE (2025), [£5 million of government funding for 26 innovative rail projects to boost passenger experience](#).

⁸⁷⁸ Innovation Funding Service, [Contracts for Innovation: FOAK 2025 – Platform Train Interface](#), accessed on 18/03/26.

⁸⁷⁹ The three-year programme runs until March 2026, with a 5-year subsequent, extended monitoring and evaluation period. ADEPT, [Live Labs 2](#), accessed on 03/03/26.

⁸⁸⁰ Live Labs 1 was the first iteration of the initiative which focused on SMART Places Research Programme Live Labs 1 focused on the challenges facing the adoption of digital technology across the local highways network. ADEPT, [Live Labs - Transforming Local Places](#), accessed on 03/03/26.

⁸⁸¹ DfT and The Rt Hon Richard Holden MP (2023), [£30 million government funding for innovative projects to decarbonise UK highways](#).

The core theme of Live Labs 2 is to decarbonise local highways infrastructure and assets.^{882,883} To support the transition to net zero local roads, Live Labs 2 has funded seven regional projects to develop, test, pilot, and roll out new technologies.^{884,885}

Transport, research and innovation grants (TRIG)

The TRIG programme is delivered in partnership with Connected Places Catapult to support early stage, high-risk innovative research and development projects for transport. The programme is challenge-led⁸⁸⁶ with a cross-cutting focus on critical technologies.⁸⁸⁷

TRIG is open to public, private, and third sector organisations of any size, but typically micro, SME or academia and research organisations,⁸⁸⁸ to support proof-of-concept projects that could lead to the successful development of new transport products.⁸⁸⁹ Since 2014, around £17 million has been awarded to 474 projects.^{890,891,892}

- A.380 Successful innovations developed by these initiatives then need to be adopted into business-as-usual practices to fully unlock their benefits. BAM Nuttall described two areas that could improve how innovations are taken forward. Firstly, ensuring the different infrastructure teams within the procuring authorities have aligned incentives, for example in rail the capital delivery teams are incentivised to innovate, but asset owners are not.⁸⁹³ Secondly, ensuring there is a safe place to test and pilot new innovations, as it is difficult to implement an untested solution on a public asset.⁸⁹⁴
- A.381 ORR has considered how innovation is implemented by Network Rail, which indicated it is less good at getting these ideas implemented and creating

⁸⁸² ADEPT, [Live Labs 2](#), accessed on 03/03/26.

⁸⁸³ Decarbonisation of local highways infrastructure and assets relate to four interconnected themes: creating a UK centre of excellence for materials to provide a centralised hub for research and innovation for carbonisation of local roads; a suite of corridor and place-based decarbonisation interventions; examining the role that non-highways 'green' assets can play in providing a source of materials and fuel; and a systems-based examination of the future of lighting for local roads. ADEPT, [Live Labs 2 - themes and projects](#), accessed on 18/03/26.

⁸⁸⁴ DfT and The Rt Hon Richard Holden MP (2023), [£30 million government funding for innovative projects to decarbonise UK highways](#).

⁸⁸⁵ Amey (2024), [First live trials for Live Labs 2 Centre of Excellence for Decarbonising Roads](#).

⁸⁸⁶ For TRIG 2025, the three challenge led themes are maritime decarbonisation, freight innovation and open call. Connected Places Catapult, [Transport Research and Innovation Grants 2025](#), accessed on 18/03/26.

⁸⁸⁷ The cross-cutting theme on critical technologies includes AI, digital twins, position and navigation technologies, robotics, Quantum technologies, drone technology, connectivity on the move, smart vehicles connectivity and smart infrastructure technologies. Innovate UK Business Connect, [Transport Research and Innovation Grants 2025](#), accessed on 18/03/26.

⁸⁸⁸ Innovate UK Business Connect, [Transport Research and Innovation Grants 2025](#), accessed on 18/03/26.

⁸⁸⁹ DfT (2026), [DfT small and medium-sized enterprise \(SME\) action plan: 2025 to 2028](#).

⁸⁹⁰ Connected Places Catapult, [Transport Research and Innovation Grants](#), accessed on 19/03/26.

⁸⁹¹ Global Railway Review (2025), [DfT and Catapult offer £1.8m in grants to boost UK transport sector innovation](#).

⁸⁹² Government communication published in January 2023 noted since 2014, a total of 294 projects have been funded with 169 grants awarded to SMEs. DfT (2026), [DfT small and medium-sized enterprise \(SME\) action plan: 2025 to 2028](#).

⁸⁹³ Note of meeting with BAM Nuttall [36].

⁸⁹⁴ Note of meeting with BAM Nuttall [36].

meaningful change.⁸⁹⁵ ORR is currently reviewing National Highways' use of its innovation fund.⁸⁹⁶

A.382 We note that there are examples where lessons are learnt and taken forward as a result of ideas tested through these initiatives.⁸⁹⁷ However, it is less clear how consistently this is achieved.⁸⁹⁸ We also note that there are instances where public authorities and government have provided cohesive signals through both standalone initiatives and procurement priorities to drive particular types of innovation, such as in relation to carbon reduction and green initiatives (see box below).

Case study: supporting environmental sustainability

Government-led initiatives can play an important role in driving innovation and change. Environmental sustainability initiatives provide a clear example, where policies set at the national level have been adopted by transport authorities and ultimately prompted contractors to respond in their commercial strategies.

Central government initiatives

The UK government has set out major environmental sustainability initiatives to be achieved through various policy levers, notably the UK has a legally binding target to reach net-zero greenhouse gas emissions by 2050⁸⁹⁹ and in 2021 issued its 'Net Zero Strategy' setting out the action to reduce emissions across multiple areas of the economy, including transport.⁹⁰⁰ Alongside this, DfT published its plan for decarbonising transport, including for road and rail.⁹⁰¹ The current UK government continues and has built upon the commitment to reaching net zero by 2050.⁹⁰²

Public authority initiatives

National Highways has actioned national steers through its own initiatives.⁹⁰³ National Highways has acted upon its stated ambitions through delivering 1,210 schemes to

⁸⁹⁵ ORR (2022), [Technology Adoption Case Studies: Targeted Assurance Review](#), pp24-27.

⁸⁹⁶ Note of meeting with ORR [8].

⁸⁹⁷ For example, see case studies of projects delivered using National Highways innovation and research fund National Highways, [Innovation and research](#), accessed on 30/03/26.

⁸⁹⁸ For example, Live Labs 1 (the precursor to Live Labs 2 mentioned above) was overall judged to be a success in the final programme review. However, it noted that "The Live Labs were required to build business cases that could be used with confidence by other authorities and organisations wishing to deploy similar technologies. There is still much work needed for this activity to be completed well." ADEPT (2022), [Live Labs Final Programme Review & Final Project Evaluations](#), p12. An article written by the Technical and Innovation Director of RIA noted that there is good practice in R&D occurring in universities and other organisations, but "It is getting that research into the system and actually used, deployed and adopted that is the challenge." RailBusinessDaily (2025), [Overcoming the barriers to innovation in UK rail](#), accessed on 26/03/26.

⁸⁹⁹ BEIS and The Rt Hon Chris Skidmore (2019), [UK becomes first major economy to pass net zero emissions law](#).

⁹⁰⁰ HM Government (2021), [Net Zero Strategy: Build Back Greener](#).

⁹⁰¹ DfT (2021), [Decarbonising Transport: A Better, Greener Britain](#).

⁹⁰² House of Commons Library (2026), [The UK's plans and progress to reach net zero by 2050](#).

⁹⁰³ For example, 'Delivering better environmental outcomes' is one of the stated outcomes of its 2020-2025 strategic business plan: Highways England (2020), [Strategic Business Plan 2020-2025](#). 'Net zero carbon by 2050' is one of the

support environmental benefits in RIS2 (2020-2025).⁹⁰⁴ For example, the A64 resurfacing is the lowest carbon road resurfacing ever attempted by National Highways, reducing the carbon footprint of that project by around 70%.⁹⁰⁵ National Highways' standards on environmental assessment requires it to consider how new roads will impact on the wider landscape and neighbouring land.⁹⁰⁶

Contractor response and impact

The CMA has seen an active response to the environmental initiatives of government and public authorities by contractors. Several Tier 1 firms now include environmental objectives as a part of their core public strategies.⁹⁰⁷ The CMA has also seen Tier 1 contractors actively discussing sustainability objectives in internal documents, including documents which show contractors directly responding on environmental initiatives set out by the UK government and National Highways on carbon reduction.⁹⁰⁸ While firms may naturally hold values that support sustainability outcomes, the emphasis placed on sustainability by the UK government and National Highways creates strong commercial incentives for firms to respond to these priorities in their offerings to customers.

A.383 To sum up, public authorities and central government departments have a number of initiatives designed to specifically support innovation. These are generally seen as positive by industry, although stakeholders have identified a number of ways they could be more effective, particularly regarding ensuring the innovations generated are dispersed and used in practice.

A.384 Part of the value of initiatives to drive innovation is showing an openness by public authorities to new ideas. A number of Tier 1 suppliers indicated that public authorities play an important role in incentivising and supporting innovation.^{909,910,}

ambitions in its innovation and research strategy: National Highways, [Innovation and research strategy](#), accessed on 31/03/26.

⁹⁰⁴ National Highways, [Environment](#), accessed on 31/03/26.

⁹⁰⁵ National Highways, [Near net zero road resurfacing project announced](#), accessed on 31/03/26.

⁹⁰⁶ National Highways (2023), [Environmental Sustainability Strategy](#).

⁹⁰⁷ Murphy's 'Never harm' value includes an environmental protection aim: Murphy, [Our Culture and Values](#), accessed on 31/03/26. Part of Costain's vision is 'Creating a sustainable future'; Costain, [Our Strategy](#), accessed on 31/03/26. 'Sustainability' is one of Balfour Beatty's five values; Balfour Beatty, [Our build to last strategy](#), accessed on 31/03/26. As part of Amey's strategy it has set out a full document on environmental, social and governance: Amey, [ESG](#), accessed on 31/03/26.

⁹⁰⁸ [REDACTED]. Responses to the CMA's information requests [REDACTED].

⁹⁰⁹ A Tier 1 supplier told us innovation opportunities flow down from the procuring authorities. Incentivising the wider ecosystem to innovate at risk is challenging within the constraints of current contracts. Note of meeting with [REDACTED]. It also told us their view was that most suppliers want to speak about their and ideas, while protecting their commercial advantage, and have an opportunity to safely pilot their ideas. Note of meeting with [REDACTED].

⁹¹⁰ A Tier 1 supplier told us that all parties have a role when it comes to innovation: public authorities in encouraging/facilitating innovation by for example, ensuring firms have the right incentives and environment to put forward new ideas; Tier 1 suppliers in using innovation to enhance their offerings and improve productivity / cost efficiency; and the supply chain in being the engine room of ideas, using their specialist knowledge. It also told us it has a supply chain excellence programme with a charter for the rail and road sectors that enables its top 20 suppliers to bring forward new ideas. Note of meeting with [REDACTED].

⁹¹¹ In the next section, we consider how public authorities can ensure they are willing and able to assess and encourage innovation.

Public authorities' ability and motivation to assess and encourage innovation effectively

- A.385 We consider in this section how public authority capacity and risk appetite impact innovation.
- A.386 Challenges regarding public procurement capacity are not unique to UK public road and rail, with the OECD finding the most common challenges in procurement of innovation across its members as being risk aversion, management, and capacity.⁹¹² As discussed further in the 'Public authority capacity and coordination constraints' section, we have heard particular concerns over the ability of some public authorities to attract and retain sufficient staff with the necessary technical skills to manage different aspects of the procurement process effectively, such as: having the relevant knowledge and technical skills to set out project requirements;⁹¹³ and having sufficient technical resource and time to effectively assess non-price criteria.⁹¹⁴ These concerns can be especially challenging for smaller authorities, typically some local authorities.⁹¹⁵
- A.387 Evidence from stakeholders also indicates that the risk appetite of public authorities can act as a barrier to innovation. Several factors can contribute to this, including; risk aversion inherently embedded in government policies;⁹¹⁶ safety and regulatory compliance requirements;⁹¹⁷ and political sensitivities.⁹¹⁸ However, there are understandable reasons for the risk appetite within public authorities, for example, public authorities may attract media scrutiny, face strong expectations regarding transparency and accountability, and be vulnerable to reputational risks – all of which can further reinforce low risk tolerance. In recent years, inflation, skill shortages, and shifting policy priorities have added market volatility, increasing uncertainty which may further lower risk appetite.

⁹¹¹ A tier 1 supplier told us that innovation is likely to be most effective when supported by public authorities, ensuring firms have the right incentives and the right environment to put forwards ideas as well as there being time for an innovative solution to be tested, accepted and operationalised. It also told us that a procuring authority may instigate innovation because it may help to achieve policy targets that relate to carbon emissions and social value. Innovation initiatives can help to address these policy targets. Note of meeting with [REDACTED].

⁹¹² OCED (2017), [Public Procurement for Innovation](#), p41, Figure 2.7.

⁹¹³ Notes of meetings with [REDACTED].

⁹¹⁴ Cabinet Office (2021), [Bid Evaluation Guidance Note](#).

⁹¹⁵ Note or meeting with the sector panel [REDACTED]; Note of meeting with [REDACTED]. For example, one organisation stated, 'Sometimes, those procuring at the highest level (especially in the local government space) have limited expertise and / or resource and we feel that many can struggle to balance risk fairly between supply chain and client'. [ACE's response](#) to the CMA's invitation to comment, p6.

⁹¹⁶ Response to the CMA's information request [REDACTED].

⁹¹⁷ Responses to the CMA's information requests [REDACTED].

⁹¹⁸ Responses to the CMA's information requests: [REDACTED]; Note of meeting with [REDACTED]; Torugsa, N.A. and Arundel, A. (2017), [Rethinking the effect of risk aversion on the benefits of service innovations in public administration agencies](#), Research Policy, 46(5), pp900–910; ICE (2025), [Why do major projects cost so much and take so long? And what can be done about it?](#), p4.

A.388 As regards the specific adverse effect of capacity constraints and risk appetite on creating the right incentives for innovation, we specifically identified the following concerns:

- (a) The assessment of tender criteria reducing the incentive to innovate through overly prescriptive briefs, a lack of reward for novel approaches, and overweighting price in comparison with other factors, such as quality and innovation.
- (b) Public authorities not properly considering the positive spillover effects from innovation to the broader economy. This is not discussed further in this appendix, as we have not received specific evidence on this point.

Assessment of tender criteria

A.389 We have heard some positive examples where assessment of innovative approaches as part of tender criteria has contributed to innovation. For example, Kier stated that its road maintenance contract with a local authority ‘was won partly due to our proposals for carbon reduction and innovation in maintenance delivery’; it stated that ‘such innovation is only possible where clients explicitly value it in procurement eg through setting innovation targets or minimum requirements’.⁹¹⁹ Several local authorities also provided examples where they innovated following engagement with contractors.⁹²⁰

A.390 At least some national public authorities have measures in their procurement process to explicitly encourage or assess innovation, such as Network Rail’s regional bodies⁹²¹ and National Highways.⁹²² For example, Network Rail Eastern stated that innovation that cut costs and/or improves quality are ‘actively encouraged during competitive tendering through the inclusion of targeted questions. Their adoption is further reinforced within our contractual arrangements by incorporating tailored KPIs and incentivisation mechanisms designed to drive desired behaviours and outcomes’.⁹²³

A.391 However, we also received evidence from several stakeholders indicating that the way public authorities set out tender criteria and assess bids can reduce the

⁹¹⁹ Kier’s response to the CMA’s information request [§].

⁹²⁰ For example, one local authority approached contractors to adopt a carbon neutral approach as it received funding from a local environmental scheme and another local authority includes innovation within its PFI contract. Notes of meetings with [§].

⁹²¹ Network Rail regions indicated that they either directly assess innovation or otherwise incentivise it as part of their tender process on at least some projects. Network Rail Eastern stated that it incorporates tailored KPIs and incentive mechanisms which encourage innovation: Network Rail Eastern’s submission to the CMA [§]; Network Rail North West & Central’s submission to the CMA [§]; and Network Rail Scotland’s submission to the CMA [§].

⁹²² For example, National Highways’ Category Management Pavement Delivery Framework sets out how the National Highways commercial model aims to encourage suppliers to innovate and p52 sets out that the evaluation model includes questions framed to understand how the tenderer will drive innovation. National Highways response to CMA’s information request [§].

⁹²³ Network Rail Eastern’s submission to the CMA [§].

incentives to propose innovative solutions and invest in R&D. Specifically, we identified the following challenges as being potentially stifling for innovation.

A.392 First, project briefs can be overly prescriptive, which limits the scope for providing innovative solutions.

- (a) Morgan Sindall stated that '[p]roject briefs are often overly prescriptive, making it hard to challenge standard methods or propose/submit alternative bids'.⁹²⁴
- (b) Amey stated that the tight mandatory standards in road and rail, with added complications from devolved authorities, can 'slow innovation deployment'. Amey further stated that rail and maintenance works are understandably stricter, with more freedom to innovate in road and enhancements, although these still require extensive justification.^{925,926}
- (c) In addition, the Welsh Government stated that one of the reasons that true innovation has not been achieved in decarbonisation is because of the high regulatory standards.⁹²⁷
- (d) Overly prescriptive specifications or requirements were also mentioned as a barrier to innovation by various stakeholders in response to the CMA's interim report.⁹²⁸ Prescriptive specifications prevent contractors from being rewarded for new or innovative solutions outside of these standards. Several stakeholders indicated that a less restrictive outcome-based approach would instead encourage innovation and investment.⁹²⁹

A.393 Second, there can be a lack of reward for proposing innovative or novel approaches in a tender bid, ultimately leading to a lack of incentives (or even a disincentive where competitors do not have the same investment costs) for suppliers to invest in R&D and propose innovative solutions.⁹³⁰

- (a) Balfour Beatty stated '[f]rameworks and bid scoring rarely reward novel approaches, and the cost of bidding deters risk-taking'.⁹³¹ A Balfour Beatty internal document on emerging technologies also states that, 'In a sector with tight margins, many companies will wait until others have proven the value before investing themselves'.⁹³²

⁹²⁴ Morgan Sindall's response to CMA's information request [§].

⁹²⁵ Amey's response to the CMA's information request [§].

⁹²⁶ Skanska also said the procurement process in road and rail can be quite stringent. Skanska's response to the CMA's information request [§].

⁹²⁷ Note of meeting with the Welsh Government [§].

⁹²⁸ CECA, SCAPE, RIA and ACE's responses to the CMA's interim report, question 3.

⁹²⁹ CECA, BAM Nuttall and Rail Forum's responses to the CMA's interim report, question 3.

⁹³⁰ Responses to the CMA's information requests [§].

⁹³¹ Balfour Beatty's response to the CMA's information request [§].

⁹³² Balfour Beatty's response to the CMA's information request [§].

- (b) Morgan Sindall stated '[u]nproven innovations rarely win competitive tenders, resulting in a chicken-and-egg scenario. It can also run the risk of submitting non-compliant bids which then inflate in-built risk sums making proposals less competitive'.⁹³³
- (c) Some evidence indicates that risk appetite or capacity to assess novel approaches can dampen innovation as it is not always rewarded, particularly in local authorities. Balfour Beatty noted that the approach to innovation within local authorities really depends on the individuals, but that the default is generally a risk-averse approach rather than embracing innovation.⁹³⁴ A local authority said that while there is innovation in the sector, time and resources are the biggest barriers for local authorities to innovate.⁹³⁵ A Local authority told us that 'innovation does scare some people' as it can 'add increased cost' and cause delays in delivery.⁹³⁶
- (d) The procurement evaluation process not properly rewarding innovation was also mentioned by another Tier 1 firm and SCAPE in response to the CMA's interim report.⁹³⁷

A.394 Third – but relatedly – price, or otherwise achieving cost certainty, can be disproportionately weighted in tender assessments compared with more qualitative criteria, which can both disincentivise innovation and create a 'race to the bottom'. Several sources have highlighted this issue:

- (a) Several Tier 1 firms described issues with criteria weighting,⁹³⁸ for example, Amco Giffen stated 'many individually tendered projects are weighted towards commercial assessment, incentivising poor behaviours and encouraging a race to the bottom rather than innovative solutions'.⁹³⁹ Balfour Beatty similarly stated, '[p]rocurement models often prioritise lowest cost and compliance over innovation'.⁹⁴⁰
- (b) Evidence from LCRIG indicates that innovation is often deprioritised in local authority assessment criteria, with price remaining the dominant factor.⁹⁴¹ A local authority said that it would like to do more to include innovation criteria into its contracts, but this can be challenging due to the economic assessment criteria.⁹⁴²

⁹³³ Morgan Sindall's response to CMA's information request [§].

⁹³⁴ Note of meeting with Balfour Beatty [§].

⁹³⁵ Note of meeting with [§].

⁹³⁶ Note of meeting with [§].

⁹³⁷ Balfour Beatty, SCAPE and Costain's responses to the CMA's interim report, question 3.

⁹³⁸ Responses to the CMA's information requests [§].

⁹³⁹ Amco Giffen's response to the CMA's information request [§].

⁹⁴⁰ Balfour Beatty's response to the CMA's information request [§].

⁹⁴¹ Note of meeting with LCRIG [§].

⁹⁴² Note of meeting with [§].

- (c) Too much focus on price over whole life cost by public authorities was also mentioned by Tier 1 firms and industry bodies in response to the CMA's interim report.⁹⁴³ For example, SCAPE stated that 'risk averse behaviours or an over-reliance on lowest-price making [...] can discourage innovation'.⁹⁴⁴

A.395 We recognise that while price is an important criterion, thorough investigation of qualitative factors may be more important in reducing the whole life cost of a project, including the ability to assess non-conventional or innovative approaches even if this may be more challenging to assess than price-based criteria.⁹⁴⁵

A.396 Taken together, the evidence indicates that public authorities are conscious of considering quality and innovation in their assessment and there are some examples of good practice. We also recognise robust assessment and reward of innovative approaches can be challenging, particularly due to the safety-critical nature of projects and challenges in evaluating novel propositions. On balance, the evidence indicates public authorities often use overly prescriptive briefs rather than taking a more outcome-based approach to procurement, and we have heard that public authorities are still placing too much weight on purchase price rather than harder to assess criteria such as quality and whole life cost, despite guidance in the Construction Playbook.⁹⁴⁶

How regulation can hinder or support innovation

A.397 As is set out in the section on barriers to innovation, most Tier 1 and Tier 2 firms considered legal or regulatory barriers to be a moderate or significant barrier to innovation. We also set out in the 'Regulatory barriers to new technologies, methods and models' section that there are areas in which overly prescriptive or burdensome regulations or standards are hindering or creating barriers to developing, investing in, and delivering novel or existing innovative technologies/methods and business models.

A.398 We identified two ways through which regulation is restricting innovation in the public rail and road civil engineering market. Firstly, lengthy approval processes can slow firms from implementing new technologies and add additional cost to doing so. Secondly, overly prescriptive design specifications make it difficult for firms to depart from strict standards and adopt potentially innovative solutions.

- (a) Regarding the time and cost associated with adhering to regulatory requirements, several Tier 1 firms described that the time taken to adhere to regulatory requirements, or slow approval processes, can act as a barrier to

⁹⁴³ CECA, Rail Forum, Laing O'Rourke, ACE, Balfour Beatty, BAM Nuttall, and SCAPE's responses to the CMA's interim report, question 3.

⁹⁴⁴ SCAPE's response to the CMA's interim report, question 3.

⁹⁴⁵ The Construction Playbook describes the importance of 'value-based procurement', stating that authorities should focus on the whole life cost rather than just the purchase price. [The Construction Playbook](#), p62.

⁹⁴⁶ [The Construction Playbook](#), p62.

innovation.⁹⁴⁷ For example, Balfour Beatty described that achieving the necessary product approvals for new innovations requires extensive prototype development and testing, as well as verification and validation.⁹⁴⁸ The 'Regulatory barriers to new technologies, methods and models' section sets out that firms can lose money for multiple years before an innovation is scaled across an industry and that the approval process can take so long that the proposed solution can become outdated.

- (b) Regarding prescriptive specifications, several Tier 1 firms also described that standards are often very prescriptive.⁹⁴⁹ For example, Kier described that product specifications often mandate the materials and methods to be used on a project. Departing from these standards, for example, to use higher quality or more eco-friendly materials, can be challenging.⁹⁵⁰ The 'Regulatory barriers to new technologies, methods and models' section also sets out that the standards for equipment can be very prescriptive with potentially complex product approval processes needed to implement new technologies, while tried and tested solutions can be favoured.

A.399 Several Tier 1 firms described that regulation is a more significant barrier to innovation in rail than in road, due to stricter safety/operational regulations and Network Rail's standards.⁹⁵¹ Network Rail itself also acknowledged that regulation, approvals processes and the high cost of meeting railway standards can act as a barrier for firms to innovate.⁹⁵² However, we consider that this is largely due to managing differing safety risks across rail and road projects.

Impact of project setup on innovation

A.400 Many different aspects of how individual projects are set up can impact how successfully innovation can be encouraged and executed. We consider three areas related to how projects are set up that are impacting innovation and where better practice could improve the level of innovation in public road and rail:

- (a) Effective scoping and early engagement with the supply chain, including with lower tier suppliers, can enable investment and facilitate collaboration on scope which encourages innovation.
- (b) Appropriate allocation of risk, including the potential for more standardisation of risk sharing may enable the supply chain to invest in new technologies and adopt new approaches where appropriate.

⁹⁴⁷ Responses to the CMA's information requests [REDACTED].

⁹⁴⁸ Balfour Beatty's response to the CMA's information request [REDACTED].

⁹⁴⁹ Responses to the CMA's information requests [REDACTED].

⁹⁵⁰ Kier's response to the CMA's information request [REDACTED].

⁹⁵¹ Responses to the CMA's information requests [REDACTED].

⁹⁵² Network Rail's response to the CMA's information request [REDACTED].

- (c) Conducting and sharing proper lessons learnt processes allows public authorities and firms to learn from previous experiences, including where a new approach or technology has been successful, which can speed up the implementation on future projects.

Scoping and ECI

- A.401 We have set out at in the section on scoping and ECI that effective scoping is very important for effective project delivery. We further set out the role of ECI for the scoping process. A structured approach to ECI can also help to encourage and shape supplier-led innovation.⁹⁵³ Multiple stakeholders, including participants in the CMA's market research,⁹⁵⁴ have said that innovation opportunities come from the lower tiers of the supply chain, and so how far these suppliers are included in ECI may also affect the degree to which innovation is encouraged.
- A.402 Multiple stakeholders told the CMA that having as standard an early supply chain involvement phase can help to encourage innovation.
- (a) CECA told the CMA that models that support the continuity of ECI from planning to delivery completion can lead to better outcomes and enables innovation through leveraging industry expertise.⁹⁵⁵
 - (b) Balfour Beatty told the CMA that earlier and more consistent use of earlier supplier involvement would allow innovation to shape scope, design, and delivery strategies rather than being introduced late and at risk.⁹⁵⁶
 - (c) Tier 2 and Tier 3 participants in the CMA's market research felt clear improvements to encourage investment would be to have, as standard, an ECI phase for every publicly procured infrastructure project. This would allow for the risks to be better assessed where Tier 2 and Tier 3 suppliers are involved.⁹⁵⁷
- A.403 With regard to scoping more broadly, public authorities need to determine whether they seek a bespoke approach or use more standardised designs. We note that there can be a trade-off between standardisation and innovation: a member of the sector panel noted that by its nature, innovation involves developing something new which introduces variability, which runs counter to standardisation.⁹⁵⁸

⁹⁵³ Laing O'Rourke Centre for Construction Engineering and Technology (2024), [Procurement models: is early contractor involvement beneficial to the UK construction sector?](#), p1; and Ishtiaque, T.A., Wondimu, P.A., Memic, N., Andersen, B.S., Lædre, O. and Klakegg, O.J. (2025), [Ranking the benefits of early contractor involvement: a client's perspective](#), International Journal of Construction Management, p730.

⁹⁵⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), paragraph 3.5.5; Notes of meetings with [X]; Responses to the CMA's information requests [X].

⁹⁵⁵ [CECA's response](#) to the CMA's interim report, p4.

⁹⁵⁶ [Balfour Beatty's response](#) to the CMA's interim report, p6.

⁹⁵⁷ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), paragraph 3.5.3.

⁹⁵⁸ Note of meeting with the sector panel [X].

However, some forms of innovation may benefit from standardisation. For example, bespoke designs can undermine opportunities for larger scale production and factory build like MMC.⁹⁵⁹ One way to manage this trade-off could be through a greater focus on outcome-based scoping, where procurers specify the outcome they want to achieve and allow suppliers to come up with the specifics for how to deliver this. As noted in discussing assessment of tender criteria, a number of stakeholders have expressed support for using outcome-based approaches to encourage innovation and investment.⁹⁶⁰

- A.404 Taken together, the evidence indicates that a structured approach to early engagement with suppliers, including those further down the supply chain, may assist in encouraging innovative solutions to be brought forward. Scoping designs also needs to balance different ways of encouraging innovation, and there is potential for outcome-based approaches to assist with this.

Risk sharing and supply chain management

- A.405 The allocation of risk within a project can have a significant impact on the incentives for parties to innovate. In general, while the contractor bearing more of the risk for cost overruns may provide an incentive to deliver on time and budget in many contexts (see section on risk allocation), it may also reduce a contractor's incentive to innovate. This is because adopting a new method or approach which may result in efficiencies or cut costs in the medium term may also carry associated risks which can cause short-term costs or delay.⁹⁶¹ This can be particularly true when delays from innovation may be outside the control of the contractor or be caused by costs related to product approvals or regulatory compliance (see section on regulatory barriers).
- A.406 We received mixed evidence from Tier 1 and Tier 2 firms on the extent to which public authorities inappropriately allocate risk to contractors.⁹⁶² While there appears to be some inconsistency in how risk is allocated, we have also seen evidence that there has been some rebalancing in how risk is shared by public

⁹⁵⁹ ICE highlighted that standardisation is needed to benefit from off-site manufacture, but that "a compromise is needed from what might traditionally have been considered an 'optimised design'." ICE (2018), [Standard design key to offsite manufacture](#).

⁹⁶⁰ CECA, BAM Nuttall and Rail Forum's responses to the CMA's interim report, question 3.

⁹⁶¹ For example: teething issues associated with implementing new technologies or processes for the first time before they are fully established; upfront costs of installing technologies which leads to later costs savings; and risk of failure when implementing a new technology or process.

⁹⁶² Many Tier 1 and Tier 2 firms considered that risk is generally allocated appropriately. For example, BAM Nuttall stated that the 'road and rail market is in many ways ahead of other sectors in terms of fair risk allocation across different parties' although it also stated, 'there are still improvements that can be made'. [BAM Nuttall's response](#) to the CMA's invitation to comment, question 5d, p11. [Amey's response](#) to the CMA's invitation to comment, p3; [BAM Nuttall's response](#) to the CMA's invitation to comment, question 5d, p11; [Ringway Infrastructure's response](#) to the CMA's invitation to comment, p4; Responses to the CMA's information requests [38]. Several firms expressed concerns that too much risk is often placed on contractors. [Atkins Realis's response](#) to the CMA's invitation to comment, p3; [Balfour Beatty's response](#) to the CMA's invitation to comment, p9; [BAM Nuttall's response](#) to the CMA's invitation to comment, p12; [Murphy's response](#) to the CMA's invitation to comment, p2; Response to the CMA's information request [38].

authorities in more recent years.⁹⁶³ Despite this, in response to the CMA's interim report, several stakeholders indicated that more appropriate risk-sharing could lead to better outcomes specifically regarding innovation.⁹⁶⁴ For example, BAM Nuttall stated that 'shared risk models and appropriate insurance support would enable clients and suppliers to pursue innovation with confidence'.⁹⁶⁵

- A.407 We have also considered how innovation incentives are affected by how risk is distributed through the wider supply chain. Disproportionate risk being placed on Tier 2 and Tier 3 subcontractors can be particularly detrimental for innovation because, as already noted, those delivering the works are often well-placed to innovate⁹⁶⁶ but can be more vulnerable to cash flow issues. As such, these smaller firms can be more sensitive to inappropriate risk as they are not well-equipped to handle cases where significant unanticipated overruns occur. This can lead to SMEs deprioritising adoption of new technologies or ways of doing things that may carry greater risk.⁹⁶⁷
- A.408 In addition, in the CMA's market research, Tier 2 and Tier 3 firms indicated there was a lack of incentive to innovate in contracts. The research found that while NEC Option C provides an incentive to deliver under budget, contracts generally include no specific mechanism to encourage innovation.⁹⁶⁸ Risk-sharing mechanisms that allow subcontractors to benefit from some of the upsides of innovation or provide some further incentive to innovate could help to foster innovative behaviours.
- A.409 Overall, the evidence indicates that appropriate risk sharing and contractual terms to reward innovation, including for suppliers further down the supply chain, could help to encourage greater innovation.

Evaluating innovation and lessons learned

- A.410 Evaluation of project performance and learning lessons can improve how future projects are procured and delivered. It also plays a critical role in supporting innovation, enabling public authorities to identify where new technologies or

⁹⁶³ For example, prior to the Coronavirus (COVID-19) pandemic, the Welsh Government would pass the risk of inflation and diversion programmes onto the contracting firm but now gives due consideration to handling those risks itself. (Note of meeting with the Welsh Government [§]). Transport Scotland historically used bespoke construction contracts which placed much of the risk onto the contracting firm but now adopts a more collaborative approach. Note of meeting with Transport Scotland [§]. Network Rail Eastern region stated that 'generally over time, Network Rail originally did mostly lump sum, then we moved to target cost and now we're in the space of the teams decide which is most appropriate for the work they're trying to deliver. Note of meeting with Network Rail Eastern [§].

⁹⁶⁴ BAM Nuttall, Kier and ACE's responses to the CMA's interim report, question 3.

⁹⁶⁵ BAM Nuttall's response to the CMA's interim report, question 3.

⁹⁶⁶ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p72; [FSB's response](#) to the CMA's interim report, question 3. Amey said that it works with its supply chain to innovate and that it is often the supply chain which comes forward with 'fresh ideas'. Note of meeting with [§].

⁹⁶⁷ For example, participants in the qualitative market research highlighted that specialist SMEs are well-placed to develop new products or ways of working but were vulnerable to risk being pushed down the chain, meaning innovation is deprioritised. Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p76.

⁹⁶⁸ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p72.

approaches could be applied to future projects. Where initiatives are unsuccessful, evaluation helps to understand the reasons why, reducing the risk of repeating the same issues. While evaluation itself has inherent value, the greatest benefits come from ensuring the lessons are applied to future projects and shared both within an organisation and between organisations as relevant.

- A.411 We discuss lessons learned and evaluation more broadly in the evaluation and lessons learnt section. Failure to share lessons learnt both within authorities and among different authorities can reduce the uptake of new technologies or processes. For example, we have seen examples of a technology being adopted on one project but not disseminated throughout an organisation.⁹⁶⁹ We have also seen examples where a technology or material has been well-established in one sector but not adopted in another.⁹⁷⁰ Ensuring better dissemination of lessons learnt information would help to spread the use of new effective technologies and processes across the delivery of public road and rail projects.

The allocation of risk between public authorities and suppliers

- A.412 Over the course of our market study and stakeholder engagement, multiple stakeholders, including public authorities, Tier 1, Tier 2, and Tier 3 contractors agreed that inappropriate allocation of risk leads to negative market outcomes including (but not limited to): distorted supplier incentives, discouraging innovation, driving higher total system costs, excluding capable suppliers (especially SMEs), adversarial behaviours, and delivery failures.⁹⁷¹ For example, BAM Nuttall noted that it is reluctant to bid for work where the risk allocation is deemed to be disproportionately shifted from the contracting authority onto the primary contractor: 'We actually turn down bids that are what we would term single stage design and build where all the risk is put onto the contractor'.⁹⁷²

⁹⁶⁹ For example, in the ORR's review on technology adoption within Network Rail, it identified case studies where lessons learnt reviews had taken place but were not shared throughout the organisation. One example is the 'Structures consolidated database tool' (p47) where a lessons learnt report was produced by external suppliers but deemed commercially sensitive, so these lessons could not be shared. Another example is the 'Mobile Flash Butt Welder' (p39) where a new technology was successfully deployed but explanation of the business case for adoption change was not explained sufficiently to users, which in part led to poor uptake. ORR (2022), [Technology Adoption Case Studies - Targeted Assurance Review](#).

⁹⁷⁰ For example, on A585 Windy Harbour to Skippool improvements, Kier adopted a spray applied concrete to coat the surface of a secant piled wall – a technology common in the rail industry but that was not in the design manual for roads and bridges. As a result, Kier needed to secure a departure from standard solutions which was described as being a difficult process requiring additional requirements. Kier's response to the CMA's information [§].

⁹⁷¹ For example, Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p8: 'The transfer of risk down the contract chain was one of the most commonly mentioned barriers to bidding.' Murphy's response to invitation to comment, p1; [Balfour Beatty's response](#) to the CMA's interim report, p9: '[The misallocation of risk] lead to inflated pricing, underpricing followed by disputes, supply chain instability, or suppliers opting not to bid.' [SCAPE's response](#) to the CMA's interim report, p4: 'More balanced and proportionate risk allocation would support better value for money, improve delivery confidence and reduce adversarial behaviours across the supply chain.' [CECA's response](#) to the CMA's interim report, p5: 'Risk misallocation is a structural problem in UK infrastructure'

⁹⁷² Note of meeting with Bam Nuttall [§].

A.413 We have observed the typical approach to risk allocation and associated challenges to be as follows:

- (a) Public authorities are typically responsible for allocating risk to the primary (typically Tier 1) contractor at the point of procurement. Many of the Tier 1 and Tier 2 firms we have engaged with considered that risk is generally allocated appropriately.⁹⁷³ This may reflect relatively recent improvements in this area, with some Tier 1 firms noting that they were seeing a more balanced approach to risk allocation from public authorities and increasing use of the NEC in the road and rail sector.⁹⁷⁴ However, multiple Tier 1 contractors also considered that risk allocation by public authorities is inconsistent and not always aligned with best practice,⁹⁷⁵ or expressed concerns that too much risk is often placed on contractors.⁹⁷⁶ Costain noted that 'there is no consistent understanding of how the supply chain considers and prices risk.'⁹⁷⁷ BAM Nuttall said that 'risk misallocation most commonly arises where procuring bodies seek budget certainty at an early stage by transferring poorly defined or unmitigated risks down the supply chain'.⁹⁷⁸
- (b) Following the initial allocation of risk from the public authority to the Tier 1 contractor, Tier 1 contractors allocate certain portions of this risk to Tier 2 or Tier 3 subcontractors who will be working on specific portions of the project. The ways in which risks are allocated here are often not standardised, with some risks borne by subcontractors as opposed to the Tier 1 contractor to which they were initially allocated.
 - (i) Multiple Tier 1 firms noted that they appropriately allocate risk to subcontractors, often based on the specific scope of work undertaken by a subcontractor, as well as their ability to manage certain risks.⁹⁷⁹ For example, Laing O'Rourke noted that 'We allocate risk to subcontractors based on the principle that each party should bear the risks they are best able to manage.'⁹⁸⁰ Echoing a similar sentiment, Murphy noted that 'risk is apportioned according to the subcontractor's scope.'⁹⁸¹

⁹⁷³ Amey p3, BAM Nuttall p11 and Ringway Infrastructure's p4 responses to the CMA's invitation to comment; Responses to the CMA's information requests [38]. For example, BAM Nuttall stated that the 'road and rail market is in many ways ahead of other sectors in terms of fair risk allocation across different parties' although it also stated 'there are still improvements that can be made': BAM Nuttall's response to the CMA's invitation to comment, question 5d, p11.

⁹⁷⁴ For example, in Balfour Beatty's response to the CMA's interim report, p11, it noted that some of its clients are developing 'a more mature approach to risk allocation'. Amey's response to the CMA's invitation to comment, p3; BAM Nuttall's response to the CMA's invitation to comment, question 5d, p11.

⁹⁷⁵ Balfour Beatty, BAM Nuttall and Skanska's responses to CMA's interim report, question 9.

⁹⁷⁶ AtkinsRéalis' p3, Balfour Beatty p9, BAM Nuttall p12 and Murphy's p2 responses to the CMA's invitation to comment; Response to the CMA's information request [38].

⁹⁷⁷ Costain's response to the CMA's interim report, p5, question 9,

⁹⁷⁸ BAM Nuttall's response to the CMA's interim report, p10, question 9.

⁹⁷⁹ Responses to the CMA's information requests [38].

⁹⁸⁰ Laing O'Rourke's response to the CMA's request for information [38].

⁹⁸¹ Murphy's response to the CMA's request for information [38].

- (ii) However, some parties have described Tier 1 firms passing down disproportionate or inappropriate levels of risk.⁹⁸² For example, participants in the CMA's market research noted that risks such as ground risks or consequential loss were often out of T2 and T3 subcontractors' control but allocated to them by Tier 1 firms.⁹⁸³ One local authority noted that whilst they outsource contract/risk management to the primary contractor, Tier 1 firms often try to offload risks allocated to them, to minimise the level of risk that they bear.⁹⁸⁴ This leads to inappropriate allocation of risk to subcontractors, with public authorities having limited measures to mitigate against this occurring.

A.414 Public authorities may not always be able to observe how risk is cascaded through the supply chain, which may limit their ability to understand how well those risks are being managed. Several public authorities have told us that they have limited visibility over how risk allocation occurs further down the supply chain, specifically between Tier 1 contractors and subcontractors (Tier 2 and Tier 3 firms).⁹⁸⁵

A.415 One local authority noted that it has no oversight of onward risk allocation, whilst noting that it is of interest to them to maintain some level of oversight over this.⁹⁸⁶ National Highways noted that it outsources risk allocation as part of project management to the primary contractor, but continually monitors supply chain risk through a dedicated team to inform preventative measures or appropriate resilience actions.⁹⁸⁷

A.416 Below we examine two mechanisms that contribute to inappropriate allocation of risk: overuse of Z clauses and disproportionate public indemnity insurance requirements.

Overuse of Z clauses by public authorities and primary contractors

A.417 Multiple stakeholders have told us that one of the ways in which risk is allocated is through the use of Z clauses to amend standard NEC contract templates.⁹⁸⁸ Z clauses may be used for several reasons, for example where there has been

⁹⁸² AE Yates, which acts as both Tier 1 and Tier 2, stated that the public sector has moved to a position where commercial assessments and payment terms are fair and reasonable, but it does not see the same when working with Tier 1 firms on publicly funded contracts, and instead sees Tier 1 firms seeking to pass down disproportionate levels of risk. A E Yates' response to the CMA's information request [§]. One of the sector panel indicated that it sees risks being passed down to their firm by Tier 1 firms which it is not well placed to manage, such as planning risks. Note of meeting with the sector panel [§].

⁹⁸³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p8.

⁹⁸⁴ Note of meeting with [§].

⁹⁸⁵ Notes of meetings with [§].

⁹⁸⁶ Note of meeting with [§].

⁹⁸⁷ Note of meeting with National Highways [§].

⁹⁸⁸ [BAM Nuttall's response](#) to the CMA's interim report, pp11-12, 'NEC is widely used ... however, it is invariably amended and/or includes more Z clauses than the original standard form'; Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p10: 'There was often extensive use of subclauses (in particular Z clauses) that increased complexity and liability for Tier 2 and Tier 3 contractors.'

experience of a standard clause being interpreted in an unintended way, or to reference to other agreements or external processes that need to be complied with, particularly on larger projects.⁹⁸⁹

A.418 The CMA has analysed data received from six Tier 1 firms, outlining the average number of Z clause amendments made to contracts between UK public authorities and Tier 1 suppliers.⁹⁹⁰ The data revealed that:

- (a) The most common type of contract between public authorities and Tier 1 suppliers for road contracts in this dataset is Option C followed by Option A, with relatively few instances of Option B, E and Other contracts. We received data on fewer contracts in rail, and there was a relatively even split in the type of contract between public authorities and Tier 1 suppliers for this sector between Option E and A, and a reasonable proportion of Option C and a mix of Other contracts.
- (b) The most common type of contract between Tier 1 suppliers and subcontractors for road contracts in this dataset is Option B by some margin, with a reasonable number of Option A and a range of Other contract types. We received data on fewer contracts in rail, and for this sector the most common type of contract between Tier 1 suppliers and subcontractors was Option A, with a range of Other contract types used and relatively few Option B, C or E contracts in the dataset.
- (c) Public authorities commonly use Z clauses to amend the standard NEC contract templates, with the largest average number of amendments appearing on NEC Option B contracts for road contracts,⁹⁹¹ and NEC Option E for rail contracts.
- (d) Tier 1 firms also commonly use Z clauses to alter standard NEC contract templates when subcontracting work to Tier 2 and Tier 3 firms. On road contracts, this was commonplace, and most prevalent on NEC Option A contracts.
- (e) One Tier 1 contractor noted that public authorities often explicitly require key clauses from the main contract to be included in contracts with subcontractors, without amendment.⁹⁹²
- (f) It is important to note that not all Z clauses used are for the purpose of risk allocation, and we are aware that public authorities and Tier 1 firms are at times required to introduce additional Z clauses to standard NEC contracts to

⁹⁸⁹ NEC (2025), [NEC4 option Z for additional contract conditions: clarity or curse?](#).

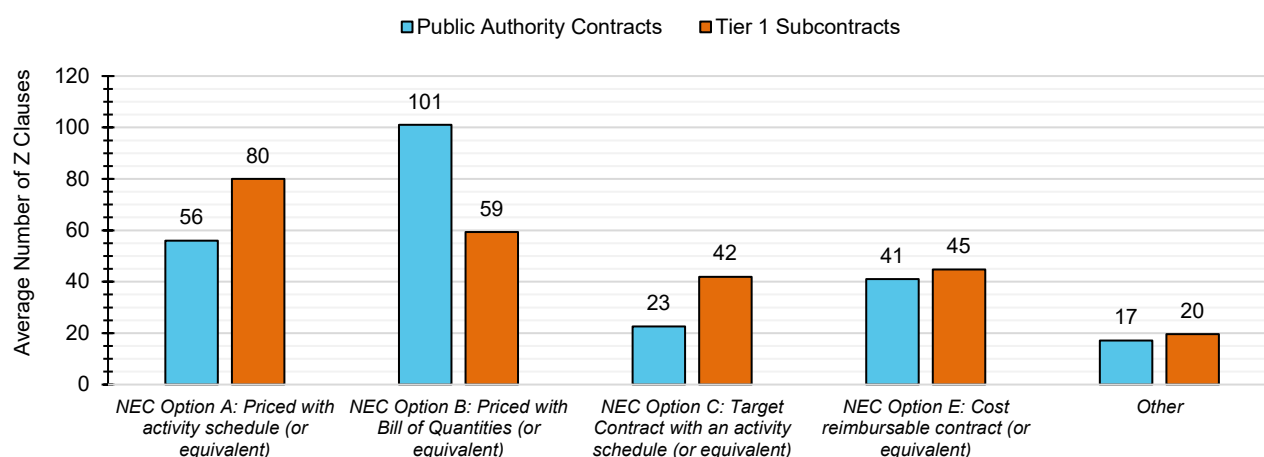
⁹⁹⁰ Responses to the CMA's information requests [38].

⁹⁹¹ Although we note Option B contracts make up only a small proportion of road contracts in this dataset.

⁹⁹² Response to the CMA's request for information [38].

account for project-specific requirements and ensure contracts comply with the law.⁹⁹³

Figure A.13 Average number of Z clauses in road contracts between UK public authorities and Tier 1 civil engineering suppliers & subcontracts between Tier 1 civil engineering suppliers and subcontractors, 2024-2025



Source: CMA analysis of responses to the CMA's request for information.

Notes:

(1) Number of contracts included in sample: 201 public authority road contracts and 933 Tier 1 road subcontracts, provided by six Tier 1 firms.

(2) Some contracts do not contain any 'Z Clauses' but are often modified with 'additional clauses'.

Table A.24 Total number of road contracts by NEC option contracts between UK public authorities and Tier 1 civil engineering suppliers & subcontracts between Tier 1 civil engineering suppliers and subcontractors, 2024-2025

	NEC Option A: Priced with activity schedule (or equivalent)	NEC Option B: Priced with Bill of Quantities (or equivalent)	NEC Option C: Target Contract with an activity schedule (or equivalent)	NEC Option E: Cost reimbursable contract (or equivalent)	Other*
Total Number of Public Authority Contracts	54 (26.8%)	3 (1.5%)	127 (63.2%)	11 (5.5%)	6 (3.0%)
Total Number of Tier 1 Subcontracts	169 (18.1%)	508 (54.5%)	43 (4.6%)	71 (7.6%)	142 (15.2%)

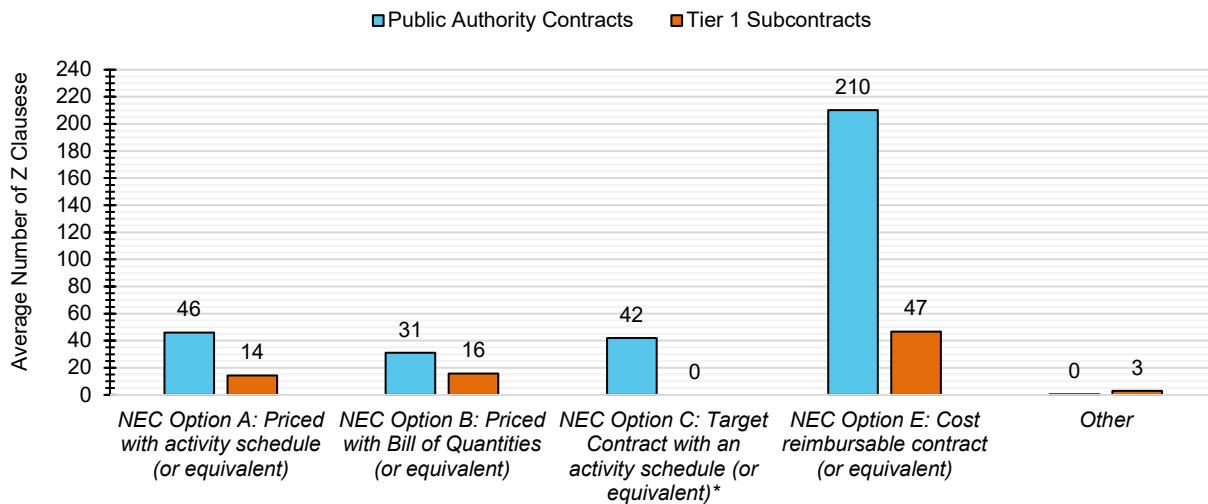
Source: CMA analysis of responses to the CMA's request for information.

* 'Other' includes contracts such as for public authority contracts: 2 NEC Option C: Call off contracts, 1 NEC Option E: Call off contracts, and 3 Bespoke Alliance Agreement contracts; and for Tier 1 Subcontracts: 80 NEC Professional Service contracts, 58 NEC Short contracts, and 4 NEC Term Service contracts.

Note: Number of contracts included in sample: 201 public authority road contracts and 933 Tier 1 road subcontracts, provided by six Tier 1 firms.

⁹⁹³ For example, BAM Nuttall noted that 'Some amendments improve clarity, incorporate project-specific requirements, or reflect statutory obligations; others have a more material impact on risk allocation.' BAM Nuttall's response to the CMA's request for information [38].

Figure A.14: Average number of Z clauses in railway contracts between UK public authorities and Tier 1 civil engineering suppliers & subcontracts between Tier 1 civil engineering suppliers and subcontractors, 2024-2025



Source: CMA analysis of responses to the CMA's request for information.

* There were two NEC Option C Tier 1 subcontracts provided by BAM Nuttall. While these contracts did not hold any Z clauses, the contracts came with a note: 'No Z Clauses as standard; amendments were embedded within the standard subcontract'.

Notes:

(1) Number of contracts included in sample: 101 public authority railway contracts and 331 Tier 1 railway subcontracts, provided by six Tier 1 firms.

(2) Some contracts do not contain any 'Z Clauses' but are often modified with 'additional clauses'.

Table A.25 Total number of rail contracts by NEC option contracts between UK public authorities and Tier 1 civil engineering suppliers & subcontracts between Tier 1 civil engineering suppliers and subcontractors, 2024-2025

	NEC Option A: Priced with activity schedule (or equivalent)	NEC Option B: Priced with Bill of Quantities (or equivalent)	NEC Option C: Target Contract with an activity schedule (or equivalent)	NEC Option E: Cost reimbursable contract (or equivalent)	Other*
Total Number of Public Authority Contracts	26 (25.7%)	2 (2.0%)	19 (18.8%)	28 (27.7%)	26 (25.7%)
Total Number of Tier 1 Subcontracts	185 (55.9%)	23 (6.9%)	2 (0.6%)	11 (3.3%)	110 (33.2%)

Source: CMA analysis of responses to the CMA's request for information.

* 'Other' includes contracts such as for Public Authority contracts: 6 Bespoke Alliance Agreement contracts, 2 Bespoke Consultancy Agreement Cost Reimbursable contracts, 16 NEC Professional Service Contracts, and 4 Network Rail NR04(MT) Cost Reimbursable contracts; and for Tier 1 subcontracts NEC Professional Service contracts, 2 NEC Supply contracts, 2 Network Rail SCO contracts, 82 Schedule of Rates contracts, 1 SCAPE Framework contract, 3 Balfour Beatty Rail High Value contracts, 4 Balfour Beatty Rail Labour Framework contracts.

Note: Number of contracts included in sample: 101 public authority railway contracts and 331 Tier 1 railway subcontracts, provided by six Tier 1 firms.

A.419 In our stakeholder engagement, multiple industry participants discussed the effects of additional Z clauses on the market:

- (a) Tier 1 firms noted the negative impacts of Z clauses on contractors. BAM Nuttall's view was that their use was often to the detriment of the contractor,

who was typically forced to bear risks that were out of their control.⁹⁹⁴ Balfour Beatty also noted that the overuse of Z clauses to shift risk to the supply chain in circumstances where they are not best place to manage or price it adds unnecessary complexity and cost.⁹⁹⁵ Costain noted that wider adoption of the Construction Playbook and using a form of the NEC contract with less Z clause amendments would also help to optimise risk allocation.⁹⁹⁶

- (b) Participants in the CMA's market research working for Tier 2 and Tier 3 firms reported that Z clauses are a consistent factor influencing the misallocation of risk, noting that the exact nature of the clauses and risk being passed down the contract chain varied by public authority and project.⁹⁹⁷
- (c) Public authorities discussed Z clauses less frequently in our engagements, but one local authority noted that Z clauses were typically added due to its high level of risk aversion, noting that 'We're very risk averse as a local authority, so it's a belts and braces approach every time. If something can be said, say it, and put it in a Z clause.'⁹⁹⁸ Another public authority, however, noted that it was aware of the issues presented by additional Z clauses, and tried to avoid using them as much as possible.⁹⁹⁹ National Highways noted that they have their own set of standardised Z clauses, with any additional Z clauses being added to contracts for project-specific requirements.¹⁰⁰⁰ However, National Highways and the Welsh Government have told us that Z clauses are necessary to address the bespoke requirements of each project.¹⁰⁰¹

Use of disproportionate public indemnity insurance requirements

A.420 Another way in which risk is allocated by public authorities is through the use of public indemnity insurance requirements. For example, the Rail Forum said that these requirements can be disproportionate to the value of the contract or subcontract that firms are bidding on, noting that it was aware of a rail contract which set liability requirements at a 1,000x multiple of the project value.¹⁰⁰²

⁹⁹⁴ [BAM Nuttall's response](#) to the CMA's invitation to comment, pp11-12.

⁹⁹⁵ [Balfour Beatty's response](#) to the CMA's interim report, p12.

⁹⁹⁶ [Costain's response](#) to the CMA's interim report, p5.

⁹⁹⁷ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p38.

⁹⁹⁸ Note of meeting with [REDACTED].

⁹⁹⁹ Note from meeting with [REDACTED].

¹⁰⁰⁰ Note of meeting with [REDACTED].

¹⁰⁰¹ National Highways stated that 'There is no such thing as an unamended NEC contract', stating that NEC contracts are 'written in such a way as that they're universally applicable...but in their universality then they are not applicable because [...] each individual project or contract has its own peculiarities or bespoke requirements'. Note meeting with National Highways [REDACTED]; and the Welsh Government indicated that it includes Z clauses around inflation, statutory undertakers, design ownership and ground conditions. Note of meeting with the Welsh Government [REDACTED].

¹⁰⁰² [Rail Forum's response](#) to the CMA's interim report, p4. See also [ACE's response](#) to the CMA's interim report, p1: 'Consideration should be given to ending mutual liability where possible, introducing proportionate insurance based on defined roles and responsibilities, and linking insurance caps to client responsibilities for the care of their assets.'

A.421 The CMA's market research also found that Tier 2 and 3 firms consider high public indemnity insurance requirements to be a key barrier, with one Tier 3 firm noting that, 'We are getting sometimes asked for levels of PI insurance which aren't readily available.'¹⁰⁰³ Our market research found that these requirements were typically higher for rail projects than for road projects.¹⁰⁰⁴

Conclusion on allocation of risk

A.422 Taken together, the evidence does not point to a systematic misallocation of risk, either between procurers and contracting firms, or between the tiers of the supply chain, although there are likely to be instances where this does occur. In particular, we have seen consistent evidence that there is currently overuse of Z clauses to reallocate risk or excessive public indemnity requirements may disproportionately push risk down the supply chain.

¹⁰⁰³ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p57.

¹⁰⁰⁴ Jigsaw Research (2026), [Qualitative Research with Civil Engineers](#), p36.