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8th Report (Session 5)

Economy, Energy and Fair Work Committee Comataidh Eaconamaidh, Lùth is Obair Chothromach

Under Construction: Building the future of the sector in Scotland



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Economy, Energy and Fair Work Committee

Remit: To consider and report on economy and fair work matters falling within the responsibilities of the Cabinet Secretary for Finance, Economy and Fair Work; matters relating to the digital economy within the responsibilities of the Minister for Public Finance and Digital Economy, and matters relating to energy falling within the responsibilities of the Minister for Energy, Connectivity and the Islands.

(As agreed by resolution of Parliament on 6 September 2018)



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Executive summary

1. In this inquiry, the Economy, Energy and Fair Work Committee sought to understand the characteristics and challenges of Scotland's construction sector. If the sector is to realise its full potential contribution to a productive and inclusive economy, it must address these challenges and build for the future. In Scotland, the construction sector employs 147,000 people who are represented by over 120 trade bodies and professional organisations. It is a sector characterised by its diversity of industries and outputs, which has contributed to the longstanding challenges outlined in this report. This was a wide-ranging inquiry and the Committee's specific areas of focus were: economic impact, access to finance, skills, procurement, infrastructure investment, land asset management and innovation.
2. In this report, the Committee makes the following conclusions and recommendations:

Economic Impact

3. In a previous Committee inquiry into improving the quality and coverage of economic statistics, the Committee highlighted that economic statistics must be trustworthy, high quality and of public value if we are to measure the performance of our economy. The Committee noted that the credibility of Scotland's economic statistics is even more crucial given the Parliament's new fiscal powers and continuing discussion around constitutional reform. The production of high quality economic statistics must be a continuing priority for the Scottish Government.

4. The Committee considered the significant impact that the Scottish Government's recent adjustments to the methodology used to calculate construction output have made to our understanding of GDP. These revisions highlight the pertinence of the Committee's concerns around the accuracy and reliability of data. The Committee is concerned that definitions and measurement are still being developed and notes evidence that there is scope for further accuracy through greater use of VAT data. We urge the Scottish Government to work with its partners to further review the measurement methodology to understand the construction industry's impact on Scotland's economy.

Measuring Productivity

5. The Committee seeks more reliable data on construction sector productivity and asks the Scottish Government and its industry partners to work to improve the quality of statistics in this area. The Committee asks the Scottish Government what steps it is taking to work with industry to improve construction sector productivity.

6. The Committee highlights its previous recommendation in its report on Scotland's Economic Performance inquiry report:

” The Committee recommends that in addition to evaluating the growth sectors, the Scottish Government commissions research to analyse the potential economic gain that could be made from investing more resource into improving productivity in the low productivity sectors.

In response to this recommendation, the Scottish Government wrote:

” The Scottish Government will undertake work, along with the Enterprise Agencies, to evaluate the growth sectors, and will specifically focus on the potential impact on businesses excluded in other areas, including the benefits of exploring the impact of focusing on sectors that have low productivity. This work will be led by officials in the Office of the Chief Economic Adviser and completed in 2018.

The Committee seeks a progress update from the Scottish Government on this work led by officials in the Office of the Chief Economic Adviser.

7. The Committee welcomes Construction Scotland's commitment to work with industry to drive change on productivity and innovation. Construction Scotland's forthcoming Action Plan should clearly demonstrate how the strategic vision for the sector will translate into better economic outcomes and increased productivity.

Access to Finance

8. The Committee notes that SME construction firms consider access to finance to be a major barrier to their ability to upscale their business, expand their workforce, and commence more building projects. Evidence suggests that traditional routes to finance are not working; instead SMEs are having to use specialist lenders, challenger banks and private equity. The Committee asks the Cabinet Secretary to take forward construction-specific issues with the banking and economy forum and to provide the Committee with an update on how these issues can be addressed.

9. The Committee notes evidence that there are particular challenges for small builders accessing finance and asks the Scottish Government to consider what role the Scottish National Investment Bank could have in helping SMEs access finance to build houses.

10. The Committee heard mixed evidence on the usefulness of project bank accounts (PBAs) and current thresholds. The Committee asks the Scottish Government to reflect on evidence received by the Committee and evaluate

PBAs once information on users' experience of the new threshold is available for review.

11. The Committee notes that the use of retentions can be helpful in terms of project assurance, but that they can also be misused. The Committee welcomes the Scottish Government's forthcoming consultation on retentions and encourages it to engage widely with the construction sector to find an alternative form of project assurance, which provides a solution better balanced to suit the needs of both the client and contractors.

12. The Committee is disappointed by the low take up in the Growth Scheme and calls on the Scottish Government to consider how existing funding initiatives could be better promoted and leveraged to maximise benefit for the construction sector. The Committee notes that it is the Scottish Government's intention to integrate existing funding initiatives into the Scottish National Investment Bank and urges the Scottish Government to consider what lessons can be learned from current engagement with the sector to input into this proposed alignment from the outset.

Skills and Workforce Development

13. The Committee notes evidence received on productivity challenges and an associated shortage in leadership and management skills in the construction sector. The Committee requests an update on how graduate level apprenticeship frameworks will be expanded to address these skills shortages in construction.

14. The Committee welcomes the publication of the short life working group's recommendations on new and future housing construction skills. The Committee asks the Scottish Government to provide an update on how these recommendations will be turned into actions and to clarify how progress will be monitored.

15. The Committee notes the skills challenges faced by the construction sector with an ageing workforce and skills shortages. The work of SDS and the CITB is vital in addressing these issues.

16. The Committee notes steps being taken by the CITB to streamline its operations and strengthen governance in Scotland. We recommend that CITB publishes more detailed Scotland-specific regional skills information in its Annual Report to allow the Committee and Scotland's construction businesses to assess CITB's commitment to understanding Scotland's skills needs and future skills demands.

17. The Committee finds it very disappointing that women account for only 12% of the construction industry workforce; more needs to be done to raise awareness of the broad range of careers and types of work available within the industry to directly encourage and facilitate a more diverse and inclusive construction sector workforce. The Committee urges the Scottish Government to work with SDS and industry to promote best practice in the recruitment and retention of women in construction. This includes organisations like City Building who has had considerable success in increasing its proportion of female craft apprentices. Industry must be proactive in creating inclusive workplaces, which support women to pursue a career in the sector.

18. The Committee notes that SDS's Equalities Action Plan for modern apprenticeships in Scotland outlines a range of actions to reduce gender segregation in modern apprenticeship frameworks and reduce stereotyping in occupational routes chosen by young people in education. The Committee urges the Scottish Government to work with its agencies and industry partners to build momentum behind achieving these targets.

19. The Committee notes that the Scottish Government plans to establish a Skills for the Future Action Plan and National Retraining Partnership. The Committee requests an update on the Government's work in this area and how it will address concerns raised by witnesses that there is a need to invest in older people and attract older workers, including more women, to the construction industry.

20. The Committee found a mismatch between construction leaders' and many tier 1 businesses' ambitions to utilise digital technology and the general development of digital skills among the majority of the sector. It is vital that businesses at all levels of the supply chain are able and willing to use technology if productivity is to improve. The Committee recommends that SDS and the CITB consider how new technologies can be better incorporated into all levels of construction skills training.

21. Given that construction is the largest sector for the modern apprenticeship programme, the Committee believes that there is merit in considering a sector specific approach to apprenticeship frameworks in this area. The Committee urges SDS to work with industry to look at how different apprenticeship models could better support construction sector SMEs to offer training and apprenticeship opportunities.

22. The Committee was impressed by the level of personal development support on offer through City Building Ltd's apprenticeship training programme and agrees that it is important to provide a holistic training in order to prepare the apprentice

for life as a fully-qualified working adult. The Committee recommends that the Scottish Government works with SDS and industry to explore how this type of wraparound service could be expanded across all apprenticeship programmes.

23. The Committee recommends that the Scottish Government works with its agencies in partnership with industry to develop further foundation apprenticeships in construction, to broaden the range of opportunities available within the sector and strengthen the skills pipeline between schools and industry. The Committee believes that expanding foundation and graduate level apprenticeship frameworks would be beneficial to the construction sector.

24. The Committee notes some witnesses' concerns that offering shortened modern apprenticeship courses would be detrimental to the current high quality and thorough training the modern apprenticeship programme provides. The Committee therefore recommends that the Scottish Government, its agencies and industry commit to developing high quality professional qualifications in any future training frameworks.

25. The Committee highlights concerns in the construction industry about what is regarded as a 'double levy' - the apprenticeship levy and the CITB levy. It is vital that businesses benefit from this in terms of skills and training. The Committee asks the UK Government to consider how the apprenticeship levy relates to the CITB levy and to review the long-term sustainability of having two separate levies, which is unique to the construction sector.

26. Businesses are seeking greater transparency on the Scottish Government's apprenticeship levy spend and how they can benefit from it. The Committee calls on the Scottish Government to provide a detailed breakdown of how apprenticeship levy money is used in Scotland and the outcomes of that spend.

Procurement

27. The Committee is concerned by the volume of evidence it heard which described an ineffective public procurement process that fails to consider whole-life costing and quality, instead prioritising short-term cost over long-term value. Procurement manuals and guidance advocate an approach that is not always implemented in practice. We recommend that the Scottish Government considers how guidance can be better followed.

28. The Committee notes that some businesses in the construction sector lack the skills and resources to bid for public sector work, whilst the level of skills in

procuring public authorities is also mixed. We recommend that the Scottish Government ensures that SMEs are supported in their efforts to bid for public sector work through the business support system. The Scottish Government should also consider how best to ensure that procuring public authorities have access to the necessary skills to support bidders and to ensure that maximum value is secured rather than lowest cost.

29. The Committee heard that the Review of Public Sector Procurement was thorough and useful, and outlined clear recommendations for improvement. The Committee acknowledges that the Scottish Government has increased guidance, but found implementation and enforcement of the guidance lacking. The Committee is concerned that the Cabinet Secretary considers the review to have achieved significant change, when evidence suggested that the review recommendations were not implemented and considerable further work on procurement is required. The Committee recommends that the Scottish Government revisits the review to assess what further action could be taken to implement its recommendations.

30. The Committee asks that, as part of this review of recommendations, the Scottish Government further considers the arguments for the appointment of a Chief Construction Adviser. As recommended in the 2013 Review, "with direct access to Ministers, this individual will champion the reform programme, work with industry and the public sector and act as a conduit between industry and Ministers."

Infrastructure

31. The Committee notes how vital it is to businesses to be able to plan future work and manage their workforce, and welcomes the appointment of the Infrastructure Commission to advise on the strategic direction and long-term investment in Scotland's infrastructure. The co-ordination of Infrastructure Investment Plans with other sources of planning information, such as local government and housing plans should be a consideration in this strategic overview.

Land Asset Management

32. The Scottish Government has a target to deliver at least 50,000 affordable homes by 2021, yet we were told by housebuilders that access to land is a challenge for the construction sector. The availability of land impacts the supply of housing and also house prices. The Committee notes that the Scottish Government will be preparing a National Planning Framework 4 (NPF4) and asks it to consider means by which land assets can be better deployed to support the NPF4 and the need to build more homes.

Innovation

33. The Committee is concerned by evidence that suggests innovation and off-site manufacture could be stifled by planning regulations or resistance to change. We encourage local authorities to embrace innovation in procurement decisions and to allow pilot schemes to test the practicality of and public reaction to new building methods and products.

34. The Committee welcomed the opportunity to visit the Construction Scotland Innovation Centre during this inquiry and notes its progress to date in engaging with the sector and supporting innovative projects. The Committee acknowledges that given the broad-ranging nature of the sector, engagement with all industries poses challenges. However, the Committee found a lack of awareness of CSIC's activities among businesses. We believe that engagement with trade bodies and professional organisations is crucial to raising awareness and disseminating research, industry developments and new ideas.

Industry Leadership and Policy Landscape

35. Throughout the inquiry witnesses stressed the importance of strategic leadership if we are to see a more collaborative, innovative, diverse and productive construction sector in the future. The Committee found no lack of strategies or vision when it comes to the future of the construction sector – the Construction 2025 Strategy, the 'Modernise or Die' Farmer Review, the Industrial Strategy construction sector deal and the Scottish Construction Industry 2019-2022, to name but a few. However, the 'leadership' aspect of the Construction Scotland industry leadership group was not immediately obvious to the Committee.

36. Construction Scotland aims to ensure effective communication and engagement across the sector, but the Committee found a lack of awareness of the ILG among Scotland's construction businesses. In particular, Industry Leadership Groups operating in other areas (such as food and drink) are perceived to have a more proactive role in representing and engaging with industry.

37. The Committee notes that it is Construction Scotland's intention to re-establish its online presence by July 2019 and believes that this should be considered a priority. The Committee found it difficult to find any information about the ILG's role, remit, membership or activities, which it found disappointing. We urge the ILG to increase its online presence to improve its engagement with businesses as an urgent first step.

38. The Committee notes the publication of Construction Scotland's new strategy and welcomes the ILG's consultation with businesses on its implementation. The

Committee recommends that the Construction Scotland ILG strengthens its engagement with industry and extends its reach to more construction sector businesses. In turn, the Committee urges the Scottish Government to work with the ILG on its Action Plan priorities once these have been published.

39. The Committee encourages continued meaningful engagement between the UK and Scottish Governments on the Industrial Strategy and the Construction Sector Deal.

Conclusions

40. The importance of the construction sector should not be underestimated. A thriving construction sector is vital to our built environment and economy. In this inquiry, we set out to understand the characteristics and challenges that embody the construction industry in Scotland. By taking a whole-sector approach, we sought to look at how these challenges could be addressed for the sector to realise its potential contribution to a productive and inclusive economy.
41. There are longstanding challenges within the industry and these have been highlighted by the Committee. We believe it is time for industry to embed best practice and take ownership for driving change. We have heard that there is innovative work being undertaken around off-site manufacture and new skills frameworks, but industry-wide more leadership is needed on collaboration and coordination. Without such leadership, enduring challenges around procurement, access to finance, innovation and the sector's cultural image continue to act as barriers to progress.
42. The Scottish Government must continue to work together with industry to ensure that improvement is made in these key areas. Only with leadership, collaboration and cultural change, will the construction sector be able to realise its full potential contribution to Scotland's economy.

Under Construction: Building the future of the sector in Scotland

43. In every region of Scotland, you do not need to look far to see evidence of small, medium and large-scale construction projects. From hospitals and schools, to roads and new housing, construction shapes the way that we live and has a significant impact on the country's economy.
44. During the Committee's inquiry into the Performance of the Scottish Economy in 2018, we heard about a range of issues that related to the construction sector. Despite not being one of the Scottish Government's six growth sectorsⁱ, its contribution as an industry has a substantial impact on Scotland's gross domestic product figures (GDP), is a driver of economic activity and has a strong relationship with other topics of interest to the Committee, such as procurement, innovation and skills. In acknowledgement of the sector's importance, the Committee agreed to launch an inquiry looking at a range of thematic strands in relation to construction. This is the first time that the Committee has chosen to conduct a whole-sector inquiry of this nature. The remit was:
- ” *To understand the characteristics and challenges of Scotland's construction sector to ensure the sector realises its full potential in contributing to a productive and inclusive Scottish economy. Specific areas of focus will include: economic impact; access to finance; skills; procurement; infrastructure investment; land asset management and innovation.*
45. We welcomed the high response rate and engagement from the sector throughout this inquiry, receiving 60 responses to our call for views and 27 responses to our online survey. We visited CCG, the Construction Scotland Innovation Centre (CSIC) and City Building Ltd, as well as conducting 2 focus groups with SMEs working in different aspects of construction. Oral evidence sessions were held across 9 weeks on 5, 19 and 26 February, 5, 12, 19 and 26 March, and 2 and 30 April 2019. During these sessions we focused on the inquiry's 7 key themes: economic impact, access to finance, skills, procurement, infrastructure investment, land asset management and innovation.
46. We felt it was particularly important to hear the views of young people about their perceptions of construction and the future of the sector. We invited a group of apprentices training at different colleges and in different trades to come and talk to the Committee about their experiences during a Committee evidence session. We also spoke to some of the apprentices during a visit to Edinburgh College, where we had the opportunity to explore the campus and talk about skills. In addition to the online survey targeted at construction businesses, we also issued a survey specifically for apprentices. To gain a better insight into perceptions of the industry among pupils, we spoke to school groups during their class visits to the Parliament. We thank everyone who has been in touch with us during the course of this inquiry.

ⁱ Scotland's Economic Strategy identifies six sectors where it considers Scotland to have a distinct comparative advantage. These are defined as growth sectors.

Industry context

47. At the outset it is important to outline some of the key milestones and players in the construction sector as context for the rest of the Committee's report and recommendations.
48. Construction Scotland is the Industry Leadership Group (ILG). Its members are drawn from all sectors of the industry, including trade associations, manufacturers, industry bodies, professional consultancies and tier 1 and SME contracting organisations (maximum 15 members). Industry Leadership Groups exist in a number of other sectors such as oil and gas, life sciences and food and drink.
49. Construction Scotland's Scottish Construction Industry Strategy 2019-22 was launched at the end of 2018. It has six strategic priorities: procurement, skills, quality and standards, planning and building regulations, growth opportunities, and productivity and innovation. It is Construction Scotland's intention to address these priorities through an Action Plan. The Action Plan has been drafted and Construction Scotland are consulting industry representatives on its content prior to publication.
50. The Construction Scotland Innovation Centre (CSIC) was launched in October 2014 and is one of eight "industry led and demand driven" Innovation Centres. It is supported by Scottish Funding Council (SFC), Scottish Enterprise, Highlands & Islands Enterprise and 14 Scottish university partners. Although the CSIC bears the name of Construction Scotland (the industry leadership group), it is completely separate from it, in terms of management, governance and funding. CSIC has a 35,000 sq. ft innovation factory designed to support construction related businesses to collaborate and innovate. Committee members visited this facility, which has been open since 2017.
51. The broad-ranging nature of industries which fall under the construction sector is demonstrated by the 120 trade bodies and professional federations representing 'construction' businesses. There is a high level of self-employment and the majority of businesses are sole traders.

Economic impact

52. It is generally agreed that the construction sector has significant economic impact and is an important driver of the wider economy. However, the Committee found that defining the sector and measuring its reach is more problematic.
53. In its written submission, Construction Scotland cited a 2009 L.E.K. Consulting report, which said that each £1 spent on construction generates a total of £2.84 in total economic activity, once all indirect and induced impacts such as increased household incomes are included.¹ Construction Scotland's reference to this report suggests that no recent analysis has been done to assess if this activity has increased or decreased in the last decade.
54. The scale of the sector in terms of business base and employment are more easily measured than its impact on gross domestic product (GDP). In 2017, the total employment count for the construction sector was 147,000 and 20,210 registered enterprises were involved in construction activity. Including unregistered enterprisesⁱⁱ, Scotland has around 46,000 Scottish construction enterprises. The majority are sole traders (74%) and a fifth have under 10 employees. Large enterprises provide over a fifth of employment, despite making up just 0.3% of the business base.

Varying impact of Construction on Gross Domestic Product (GDP)

55. In 2018, the Scottish Government adjusted the methodology for calculating construction output and GDP due to anomalies that appeared to be impacting Scotland's economic performance figures.
56. The reasons offered by the Scottish Government for these differences suggest that there may be some 'construction output' present in the quarterly data, particularly regarding onshore and offshore windfarms, that is not present in the annual data, possibly because it is not undertaken by Scottish firms. The statisticians state that they are still investigating these anomalies with ONS. However, in the meantime, the method for estimating the short-term growth in construction has been changed, essentially using changes in employment in Scotland and growth in GB construction activity to calculate growth for 2017 onwards.
57. According to Dr McIntyre from the Fraser of Allander Institute, revisions to the Scottish Government's methodology for measuring activity in the construction sector have had a "pretty dramatic" impact on how recent economic performance is interpreted.² Instead of falling by over 12% between the end of 2015 and the early part of 2018 as was previously thought, the Scottish Government now estimate that it has grown by nearly 4%. These adjustments to construction sector output performance have resulted in knock-on revisions to GDP.

ⁱⁱ Unregistered enterprises are sole proprietorships and partnerships that are not large enough to be VAT registered and are not PAYE registered (i.e. do not employ others)

58. Statisticians continue to investigate these anomalies with the ONS. When asked in evidence whether the current figures are a more accurate reflection of construction sector activity, Dr McIntyre said that the methodology is not perfect, but progress has been made on measurement.³ He said, "the move to using VAT data will improve GDP measurement in general, but it will also help with short-term measurement of construction output in particular."⁴
59. Value Added Tax (VAT) is a consumption tax charged on goods and services. It is an indirect tax, meaning it is collected by third parties on behalf of the Government. Ultimately the final consumer pays the VAT, but the system is designed so that businesses collect and account for the tax. VAT is collected by HMRC and it is not possible to extract Scottish VAT receipts from the current VAT collection process. All VAT returns are on a UK basis, and therefore VAT raised in Scotland will be estimated.⁵ A survey-based methodology is currently used and there is a lack of verifiable outturn data. The approach to VAT assignment is currently under review following a recommendation by the Smith Commission. Developments in this area would impact on GDP measurement.
60. In evidence, economist John McLaren of Scottish Trends said that whilst a successful construction sector is a good indicator the economy is doing well, the erratic nature of the data series meant he was unconvinced that the data was particularly reliable. He said that the Scottish Government and ONS do not always define construction in the same way, with inconsistency around counting or not counting activities related to engineering, energy and offshore or onshore wind machines. For John McLaren gross national income (GNI) figures are as important as gross domestic product (GDP) but there is no reliable data series. He said the Scottish Government is developing this, but it is "in its very early stages and is a very difficult task."⁶
61. The Cabinet Secretary for Finance, Economy and Fair Work (the Cabinet Secretary) said "it is fair to say that, as we get a deeper understanding of the statistics on GDP growth and the economy, particularly in relation to construction, there has been a requirement for further work, realignment and adjustment...the question has been about what we choose to count and what is not counted."⁷
62. In a previous Committee inquiry into improving the quality and coverage of economic statistics, the Committee highlighted that economic statistics must be trustworthy, high quality and of public value if we are to measure the performance of our economy. The Committee noted that the credibility of Scotland's economic statistics is even more crucial given the Parliament's new fiscal powers and continuing discussion around constitutional reform. The production of high quality economic statistics must be a continuing priority for the Scottish Government.⁸
63. The Committee considered the significant impact that the Scottish Government's recent adjustments to the methodology used to calculate construction output have made to our understanding of GDP. These revisions highlight the pertinence of the Committee's concerns around the accuracy and reliability of data. The Committee is concerned that definitions and measurement are still being

developed and notes evidence that there is scope for further accuracy through greater use of VAT data. We urge the Scottish Government to work with its partners to further review the measurement methodology to understand the construction industry's impact on Scotland's economy.

Measuring productivity

64. 'Productivity & innovation' is identified by Construction Scotland as one of the six key priorities for its 2019-2022 Industry Strategy. It outlines its ambition to promote the value of building information modelling (BIM), a collaborative approach to accessing development finance, and working with CSIC as three strands to this strategic priority.
65. In terms of productivity, Scotland's ranking alongside the 35 OECD countries has changed little over the past decade.⁹ This unchanging level of productivity is both a characteristic and challenge of the construction sector. In our inquiry into Scotland's Economic Performance in 2018, we found that productivity challenges exist across the Scottish economy, but some sectors are subject to particularly low productivity, with limited uptake of technology and new ideas. There is arguably more to be gained from investment and improvement in productivity levels in these sectors.¹⁰
66. McKinsey & Company research projected that UK construction worker productivity has remained flat since 1945, while manufacturing, retail and agriculture has grown 1500%. In Scotland, productivity in the construction industry has flat-lined since 1994, whilst the whole economy has improved by around 30%.¹¹ The fragmented nature of the construction industry is often cited as a reason why improving productivity can be a challenge.
67. However, in evidence to the Committee, Professor John McLaren cast doubts over this research:
 - ” Productivity is extremely important, but we do not have a good handle on it, either, so you should not believe the productivity figures that are currently published...The whole area has to be looked at with care. It is probably one of the most important areas for improvement.¹²
68. In response to witnesses' comments about the measurement of productivity, the Cabinet Secretary said that he was happy to consider what further work the Scottish Government could do and engage with the sector on what it is measuring and what its indicators are. However, he also recognised that there is a productivity problem and believed that addressing that problem should be prioritised over measurement.¹³
69. We heard evidence on the ways industry is trying to tackle the productivity challenge. In particular, off-site manufacturing was highlighted as a route to achieve significant improvements to productivity. This will be covered in more detail in the [section on innovation](#).

70. The Committee seeks more reliable data on construction sector productivity and asks the Scottish Government and its industry partners to work to improve the quality of statistics in this area. The Committee asks the Scottish Government what steps it is taking to work with industry to improve construction sector productivity.

71. The Committee highlights its previous recommendation in its report on Scotland's Economic Performance inquiry report:

” The Committee recommends that in addition to evaluating the growth sectors, the Scottish Government commissions research to analyse the potential economic gain that could be made from investing more resource into improving productivity in the low productivity sectors. ¹⁴

In response to this recommendation, the Scottish Government wrote:

” The Scottish Government will undertake work, along with the Enterprise Agencies, to evaluate the growth sectors, and will specifically focus on the potential impact on businesses excluded in other areas, including the benefits of exploring the impact of focusing on sectors that have low productivity. This work will be led by officials in the Office of the Chief Economic Adviser and completed in 2018. ¹⁵

The Committee seeks a progress update from the Scottish Government on this work led by officials in the Office of the Chief Economic Adviser.

72. The Committee welcomes Construction Scotland's commitment to work with industry to drive change on productivity and innovation. Construction Scotland's forthcoming Action Plan should clearly demonstrate how the strategic vision for the sector will translate into better economic outcomes and increased productivity.

Access to Finance

73. When speaking to Scotland's businesses, access to finance is frequently raised as an issue, regardless of the size of the company. There is a disconnect between evidence from banks and lenders, which highlights the availability and accessibility of finance, and evidence from businesses that describes a banking industry that is unsupportive and risk averse.
74. Feedback from Federation of Master Builders Scotland members indicates that projects have been stalled due to delays to loans, or loan refusals, from the banks. SME construction firms consider access to finance as a major barrier to their ability to upscale their business, expand their workforce and commence more building projects. We were told that since the financial crisis in 2008, major banks have been reluctant to lend for smaller scale residential developments.¹⁶ Evidence suggested that in recent years, access to finance has improved, but mainly through the increased appetite and prevalence of specialist lenders, challenger banks and private equity.
75. BAM Ltd believe that financial institutions have disengaged from companies operating in the construction industry. Bruce Dickson from BAM Ltd said there are "too many examples of funders pulling the plug as soon as a business in this sector, even ones with a long-term profit history, needs support." It claimed that even the largest developers cannot raise funding from institutions for speculative buildings. There must be a specific client. In this scenario BAM Ltd would describe the barrier to accessing finance, as considerable for all sizes of business.¹⁷
76. South Lanarkshire Council highlighted the noticeable decline in support provided to construction companies over the years. However, in relation to grants or loans it stated that:
- ” In terms of the support South Lanarkshire Council Economic Development offers to our local business base, it is noticeable there has been less support provided to construction companies over the years, in terms of grants or loans, relative to the size of the sector. This is not, however, due to them being precluded from business support assistance as they can access the support we offer and construction is one of the key sectors which we particularly seek to engage and support.¹⁸
77. Scottish Property Federation believes that if start-up property businesses cannot get access to finance for capital-intensive businesses such as property, then we will not see an expansion in the number of small and medium-sized enterprise (SME) housebuilders or property entrepreneurs.¹⁹
78. Ken Gillespie from the Construction Scotland ILG also highlighted the particular lack of finance for SME house builders:
- ” For house building, finance from commercial banks is not available at rates that are appropriate to allow small home builders to develop. We desperately want to encourage more small-scale home builders to develop businesses in Scotland.²⁰

79. There was an agreement among witnesses that increasing the number of small house builders would diversify the housing industry. We were told that there are fewer small builders operating in the market. Homes for Scotland said that:
- ” The regulatory process is so much harder than it was 10 years ago that it is incredibly difficult to get planning consent, and the upfront cost of getting planning consent is prohibitive for small builders, especially if they are looking for finance. The other big problem for small builders is access to development finance. We need to do a lot of work on that and, as I said, we are working with the Scottish Government to see whether the Scottish national investment bank—or, in advance of the bank’s establishment, the building Scotland fund—can help in that regard.²¹
80. We were told in evidence that the Cabinet Secretary has established a banking and economy forum with the Financial Services Advisory Board (FiSAB). The Cabinet Secretary said that he was happy to take any sector specific issues to the forum.²²

81. The Committee notes that SME construction firms consider access to finance to be a major barrier to their ability to upscale their business, expand their workforce, and commence more building projects. Evidence suggests that traditional routes to finance are not working; instead SMEs are having to use specialist lenders, challenger banks and private equity. The Committee asks the Cabinet Secretary to take forward construction-specific issues with the banking and economy forum and to provide the Committee with an update on how these issues can be addressed.

82. The Committee notes evidence that there are particular challenges for small builders accessing finance and asks the Scottish Government to consider what role the Scottish National Investment Bank could have in helping SMEs access finance to build houses.

Payment behaviours

83. Submissions to this inquiry shared the view that fair and transparent payment practices are essential for a thriving construction industry and a strong and sustainable supply chain.
84. The Specialist Engineering Contractor's Group Scotland told us that large companies in the sector are under-capitalised and this drives payment abuse and manipulation. They said that SMEs often expend vast sums of money on training, design, manufacture, assembly or installation before receiving their first payment. Unlike in many other countries advance payments or, alternatively, any form of security for payment for this up-front investment is rarely available. SMEs regularly report problems of lengthening payment periods, spurious reasons for withholding payments, late payment, and late release or non-payment of cash retentions.²³
85. Construction Scotland explained that there are two separate issues related to late payment and these can often be confused. The first is late payment or non-payment

and the second is payment that is "held back for various reasons, such as commercial or contractual disputes of defects." Construction Scotland acknowledged that it can be difficult to differentiate between the two issues. It told us that with regard to the first issue where:

” there is no dispute, no issue, no defect and no argument about the payment—it is being processed in accordance with the contract and everyone is happy with it—we went through a bad patch a few years ago, when some quite big companies were deliberately holding on to cash and delaying payments. A number of Government and industry initiatives on reporting on payment terms—the industry conducted surveys and flagged up issues; for example, Build UK has all its members report on their payment terms—have begun to turn round the purely timescale issue, if I may differentiate that from the dispute issue. The situation regarding the timescale issue is much better.”²⁴

86. All Scottish Government contracts must require payment of valid contractor/sub-contractor invoices within 30 days, throughout the supply chain. All other organisations are encouraged to comply with the 30-day example. Witnesses told us that considerable pressure is often put on the whole supply chain through the procurement process.
87. Construction law specialist Roddy Cormack stated that even with a clear legal position regarding late payment, if a business has not been paid, it may not have the funds to pursue legal dispute proceedings. This puts businesses in a very difficult position. Mr Cormack felt that there is an awareness in the industry of the prohibitive costs of taking enforcement action, and in a minority of cases, this can result in a flagrant disregard for the legal position. He did not feel that this was common, but highlighted that one bad experience could result in a business's insolvency.²⁵
88. Respondents to our online survey said that "withholding sub-contractors' payments clearly provides opportunities for contractors to enhance their cash flow" and "we often work on public contracts; but even though payment terms should be favourable, we often find that there are significant delays to payment due to multiple approval processes."²⁶ Focus group participants agreed that these issues are ongoing. It was suggested that contractors who cannot evidence that they have paid their supply chain should be penalised.²⁷
89. With regard to the second late payment issue, Construction Scotland identified strong links between procurement and disputes. Construction Scotland's experience is that the "majority of issues come from how we do business together."²⁸
90. Len Bunton, a Dispute Resolution Consultant specialising in dealing with cash flow and payment issues in Scotland's construction industry, stated that:
- ” I can safely say to the Committee that the issues I am dealing with are the worst I have experienced in 20 years. Not only is there an increasing level of Adjudication Appointments but the value of monies in dispute has increased significantly. As an example, to the Committee, I am currently dealing with payment issues to the extent of about £12 million spread over four current Adjudications.”²⁹

91. SELECT (the Electrical Contractors' Association of Scotland) has called on the Scottish Government to appoint a Chief Construction Adviser to regulate aspects of the construction industry, most urgently on the issue of late payment.³⁰

Project Bank Accounts

92. Project Bank Accounts (PBAs) were introduced into construction procurement projects from October 2016 and are designed to ring-fence payment accounts to ensure payments are made by the public sector client directly and simultaneously to the whole construction supply chain. PBAs aim to improve subcontractors' cashflow and ring-fence it from upstream insolvency. Some witnesses considered PBAs to be a useful tool in improving cash flow between main contractors and sub-contractors, but others felt that their practical impact was limited.
93. In its recent Economic Action Plan, the Scottish Government committed to increase the number of sub-contractors able to access PBAs. When PBAs were first made mandatory in Scotland they were required on building projects over £4m and civil engineering projects valued over £10m. Recent changes have halved these thresholds, which Mr Bunton commended in his written evidence to the Committee. He believed this would have a significant impact, but also regarded the new £2m threshold as too high. He urged the Scottish Government to further review this within the next 12 months.³¹
94. Construction law specialist Roddy Cormack felt that the protection provided by PBAs is limited in practice. He stated that PBAs:
- ” provide fantastic protection to major/specialist sub-contractors who have the negotiating clout to be able to force their name on to the list of PBA beneficiaries. Smaller or less specialised sub-contractors are likely to be in a very different negotiating position. They will often be in competition with a larger number of contractors and so will not be able to dictate terms such as ensuring that they are named as a beneficiary under the PBA.³²
95. Simon Rawlinson of the UK-wide Construction Leadership Council told us:
- ” A PBA might solve the problem for the immediate subcontractors, which sit under the main contractor, but it is no solution for the dozens or potentially hundreds of suppliers that sit in the third and fourth tiers...I believe that the top 10 contractors in the UK made an average profit of 0.5 per cent in 2017-18, according to the latest audited figures. In cash-flow terms, the costs of a project bank account would more than exceed that profit level, so project costs would need to rise to finance that cash flow.³³
96. Construction Scotland noted PBAs do not resolve the issue of insufficient funds in the contractor's bid. The issue is as much underpayment (often due to disputed amounts) as late or non-payment. However, Construction Scotland told us that specialist contractors do report that they are paid more quickly when PBAs are used and therefore there are benefits that should be considered.³⁴

97. The Cabinet Secretary said that "the thresholds [for PBAs] have been moved, and they could be moved further...the level feels pretty optimum right now, but if businesses further down the contract levels wish to deploy thresholds, I would see that as a positive." ³⁵

98. The Committee heard mixed evidence on the usefulness of project bank accounts (PBAs) and current thresholds. The Committee asks the Scottish Government to reflect on evidence received by the Committee and evaluate PBAs once information on users' experience of the new threshold is available for review.

Retentions

99. In the construction industry it is common practice to deduct a portion of the contract sum to cover the cost (or at least part of the cost) of defects arising during a fixed period after the works are completed. This cash is known as a retention and is withheld from the main contractor by the client and from the sub-contractors by the main contractor. It is designed to give the client assurance that the project will be completed to an appropriate quality standard.

100. Under standard contractual terms, the main contractor and sub-contractors are obliged to remedy defects arising within that fixed period at their own cost. Contractors and subcontractors will usually comply with the expectation that the retention will be released to them at the end of the fixed period.

101. Construction industry retentions are currently under review. The UK Government conducted a consultation on the use of cash retentions, which concluded in February 2018, but no results have been published to date. ³⁶ The Scottish Government has also commissioned Pye Tait to conduct research into retentions and planned to launch a consultation in Spring 2019. ³⁷ At a UK level the Construction (Retention Deposit Schemes) Bill is currently going through Parliament, which would require retentions to be ring-fenced until they were due to be released.

102. Pert Bruce Construction is a mid-sized contractor based in Montrose, Angus with a workforce of around 100 staff. It told us that it has a turnover in excess of £10 million and currently has a retention balance standing at £400,000 on line and completed contracts. It states that these are "monies that we could be utilising within our business." ³⁸

103. Chasing retention monies is a source of frustration for most firms, according to SEC Group Scotland. It stated that research carried out by the UK Government showed that over a 3-year period to 2016, firms in the industry were "haemorrhaging almost £1 million worth of retentions per working day due to upstream insolvencies." ³⁹

104. Shona Frame, Partner at CMS Cameron McKenna Nabarro Olswang LLP, said that in her experience a typical retention is between 3 and 5 per cent, although she has heard of projects where retentions are as high as 10 per cent. She told us that if the

project is managed and inspected properly there should not be large numbers of defects upon completion and therefore large sums should not need to be retained.

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105. Gavin Paton, Partner at Burness Paul Ltd agreed that some clients have requested a higher percentage retention as it has become more difficult for contractors at SME level to obtain a performance bond.⁴¹ Morrison Construction said that contractors often provide a performance bond, parent company guarantee and retention.⁴²

106. Shona Frame told us that retentions give rise to disputes. She said:

” Individually, retentions are relatively small amounts of project money, but, if there are a lot of projects on the subcontractor's books, they can add up to a large amount of cash. Accessing a dispute mechanism that allows that cash to be released is also not economic, because the cost of pursuing those small debts outweighs the sums involved.⁴³

107. Throughout this inquiry witnesses told us they would like to see retentions ended. Construction Scotland ILG said:

” We would all like to see retentions ended, but a little bit of pragmatism is needed because we know that some people in the industry still worry that they will not get the right quality of buildings or projects delivered if they do not hold some kind of retention...Whether we are talking about performance bonds, bank guarantees or more sophisticated digital quality assurance techniques, there are a number of ideas around that might help to give confidence. At the end of the day, it is about giving confidence to all customers, public and private, that they can dispense with the need for retentions without worrying about the performance of their contracts.⁴⁴

108. The Cabinet Secretary told the Committee that "there may still be a role for retentions going forward. However, their role must never be to improve the cash flow of the client or those who are contracting the work." He further acknowledged that he was "open minded about the future use of retentions."⁴⁵

109. The Committee notes that the use of retentions can be helpful in terms of project assurance, but that they can also be misused. The Committee welcomes the Scottish Government's forthcoming consultation on retentions and encourages it to engage widely with the construction sector to find an alternative form of project assurance, which provides a solution better balanced to suit the needs of both the client and contractors.

Building Scotland Fund (BSF) and the Scottish National Investment Bank (SNIB)

110. A range of finance sources are available to construction companies. In our online survey, we asked businesses to identify the main sources of finance that they had

sought in the last 12 months. Respondents cited overdrafts, credit cards, leasing/hire purchase and loans from financial institutions as the main means of accessing finance. However, there are also a range of Government and Local Authority grants or schemes available to help businesses access finance.

111. The Building Scotland Fund (BSF) was launched by the Scottish Government in 2018 as a precursor to the Scottish National Investment Bank (SNIB). It is also proposed that any investments that form part of the newly established Building Scotland Fund will be transferred to the SNIB once it becomes operational. Its aim was to invest £150 million over 3 years and it is open to non-public sector organisations to support:
- housing development across all tenures;
 - the development of modern industrial and commercial space;
 - business-led research and development projects with a reasonably realistic prospect of commercialisation.
112. As of May 2019, £94.4 million had been allocated to projects from the BSF. This includes £25 million to SPRUCE for regeneration projects and £26.8 million to Winchburgh Developments Ltd to unlock around 3,450 new homes, schools, transport and community facilities. ⁴⁶
113. While the Fund is operated by the Scottish Government, it is working with Scottish Enterprise, Highlands and Islands Enterprise, the Scottish Government More Homes Division, the Scottish Funding Council and the Scottish Futures Trust to bring forward a pipeline of projects worth millions of investment.
114. Glasgow City Council noted:
- ” The £500m Scottish Growth Fund is unlikely to be a vehicle through which the sector will benefit due to the types of initiatives it seeks to fund, however, the development of the £150 Building Scotland Fund should see finance flow into the sector. It remains to be seen the impact the imminent SNIB will have and whether a specific ‘mission’ for providing access to finance for the construction industry is developed. ⁴⁷
115. The Scottish Property Federation stated that it "recognises the support of the Scottish Government in making real estate investment a key component of the new Scottish National Investment Bank". It believes that this investment has the potential to filter throughout the industry and generate construction opportunities through the creation of new buildings and the redevelopment of existing sites. ⁴⁸
116. Some witnesses expressed concerns that the UK's departure from the EU would see a funding gap emerge if the European Investment Bank retreats from the Scottish market. Stephen Slessor from Morrison Construction said:
- ” The biggest challenge will be in replacing the European Investment Bank if it decides not to invest heavily in Scotland post-Brexit. Over the past 10 or 15 years, it has invested in the region of £3 billion in Scotland, which has delivered some of the largest infrastructure projects around. There is a £2 billion pot for the SNIB, which leaves a gap against what we would have hoped for. ⁴⁹

117. During evidence, the Cabinet Secretary said that European Investment Bank resources are "integral and additional. If it does not invest, we will do everything we can to stimulate infrastructure investment through the national investment bank." ⁵⁰
118. In terms of wider public sector finance, the Cabinet Secretary told us that there are financial resources that could be maximised, "the Scottish growth scheme is an example, and it is arguably underutilised by the sector." He said that "the scheme needs to be properly promoted and we need to understand what the barriers are to it being accessed in the way that it could be. More can be done with the banks and the wider economy, and even with the Government enterprise programmes. I am very happy to look at how we can further support doing that." ⁵¹
119. In relation to the Building Scotland Fund, the Cabinet Secretary was not concerned by current allocation levels. He stated that he expects the resources to be "fully used." ⁵²
120. The Committee is disappointed by the low take up in the Growth Scheme and calls on the Scottish Government to consider how existing funding initiatives could be better promoted and leveraged to maximise benefit for the construction sector. The Committee notes that it is the Scottish Government's intention to integrate existing funding initiatives into the Scottish National Investment Bank and urges the Scottish Government to consider what lessons can be learned from current engagement with the sector to input into this proposed alignment from the outset.

Skills and workforce development

121. Skills and workforce development were highlighted as key factors in the performance of the construction sector in Scotland.
122. Skills Development Scotland (SDS)'s Construction Skills Investment Plan (SIP) was published in 2015.⁵³ It identified a number of characteristics of the sector, which can cause skills challenges, including: a shortage of management, technical and computing skills, a focus on traditional apprenticeship routes not reflecting the diversity of opportunities and therefore homogenising applicants, and the large numbers of workers due to retire from the industry.
123. SIPs and Regional Skill Assessments form part of SDS's skills planning tools, which are designed to help them understand the current and future demand for skills and jobs across Scotland, by geography and by industry sector. They give a picture of the economic and labour market situation, trends in skills and qualification supply and employers' perspectives on the big skills issues affecting sector growth. SDS works on behalf of the Scottish Government, with Industry Leadership Groups and other key industry players to develop these plans.

Skills shortages and sector characteristics

124. We heard that the construction sector suffers from a skills shortage in several areas. CITB produced a detailed five-year overview of skills, demand and supply from across Scotland's construction sector in July 2018.⁵⁴ The report identified some potential gaps in areas, including: painting and decorating, plumbing and support skills.
125. The report also noted potential regional variations, with both the Highland and Islands and the South East showing potential skills shortages across a range of occupations, whereas Lanarkshire and South West showed a surplus of supply.
126. More recently the Scottish Government's independent short-life working group considered the demand for new and future housing construction skills in its report, *New Housing and Future Construction Skills - Adapting and Modernising for Growth*.⁵⁵ This report also identified particular skills pressures in Highlands and Islands and the South East. It recommended that there should be a focus on increasing the number of bricklayers, joiners and painter and decorators, concentrating initially on these geographies. It also identified a need to provide additional support and investment in training for new site managers and upskilling current site managers. An annual regional skills analysis was recommended to maintain a dialogue with the industry on current and future needs.
127. The Cabinet Secretary recognised that:
 - ” if we are to achieve our ambitions for the country...to raise the level of infrastructure spend to a more internationally competitive level, we need the people to do the work. That will require a transition in not just the quantum-the number of people- but the demography and the gender of the workforce.⁵⁶

128. The Federation of Master Builders highlighted the ageing demographic of construction workers, which must be addressed to future proof the industry. In Scotland almost 16,000 construction workers are aged 60 or over, with a further 15,000 aged 55-59. Therefore, in Scotland over the next decade, around 20% of the industry's workforce will have likely retired: nearly 31,000 people. ⁵⁷
129. Homes for Scotland estimated that after the downturn of 2008, the construction industry lost half its workforce, either to other sectors, emigration or permanent retiral. It argued that a decade later “the reduced supply of a skilled workforce is still one of the binding constrictions on increasing housing output in Scotland”. ⁵⁸
130. Skills shortages in relation to management and leadership were also seen to limit the sector's potential growth, productivity and ability to innovate. The construction industry is unusual in its composition, with 37% self-employment among construction workers in the UK, compared to the all-sector average of 13%. This can make investment in professional development and in-work training challenging for the sector. BAM Ltd told us that one way of improving management skills is the development and expansion of the graduate level apprenticeships. They welcomed steps taken so far, but feared that:
- ” the lack of a Construction Management Graduate Level Apprentice (with no plan to create one in the pipeline) leaves all future construction managers going down a civil engineering pathway which is designed for infrastructure, not building. ⁵⁹
131. In terms of addressing potential skills shortages, some witnesses were critical of the current skills planning model, led by SDS. According to Peter Haggarty, Director of the Construction and Capital Programme at the University of Glasgow, the construction industry is diverse and fragmented, so a planning model in itself will “not maximise the full potential of our industry in Scotland”. He agreed that it requires the direct intervention, leadership and strategic coordination of key government bodies, clients and industry partners, to meet the challenges of skills, technology, and gender inequality. ⁶⁰
132. In its call for views, the Committee asked about potential impacts on the sector of the UK leaving the EU. Some submissions stated there will be a reduction in the availability of skilled workers because of direct migration out of Scotland. Others highlighted the more indirect impact that the loss of EU construction workers from the South East of England may have on Scotland, as Scottish skilled workers fill the gaps left by EU workers returning home. Higher wages and better opportunities in and around London may act as a skills drain.
133. However, research by Glasgow Caledonian University, referenced by Professor William Hare and Dr Michael Tong, concluded that the idea of thousands of Scottish construction workers being drawn to London is a “myth”, and the average migration between Scotland/England was neutral. ⁶¹



Source: Members visited Edinburgh College to discuss skills

134. The Committee notes evidence received on productivity challenges and an associated shortage in leadership and management skills in the construction sector. The Committee requests an update on how graduate level apprenticeship frameworks will be expanded to address these skills shortages in construction.

135. The Committee welcomes the publication of the short life working group's recommendations on new and future housing construction skills. The Committee asks the Scottish Government to provide an update on how these recommendations will be turned into actions and to clarify how progress will be monitored.

Construction Industry Training Board (CITB)

136. The construction sector is unusual in that it has a training board whose role it is to work on behalf of industry to support skills development specifically in construction. Training boards were established by the Industrial Training Act 1964, with powers to impose levies on employers and to pay grants for training. The Construction Industry Training Board (CITB) is one of the few UK training boards still in existence and is an executive, non-departmental public body, sponsored by the UK Government's Department for Education, but almost wholly funded by its levy.

137. In addition to the UK Government's apprenticeship levy, CITB is also empowered to impose a levy on employers operating in the construction industry. The amount paid is based on the total wage bill of the business.

138. A small number of submissions were critical of the CITB's activity in Scotland with the recent transfer of 29 training jobs from the CITB base in Renfrewshire to York. Professor William Hare and Dr Michael Tong of Glasgow Caledonian University

believed CITB is "out of touch as far as Scotland is concerned" with little collaboration between CITB and SDS.⁶²

139. Ian Rogers from the Scottish Decorators Federation told the Committee that he was concerned by the changes CITB has made to its organisational structure in Scotland, believing it has become more centralised:

” It [CITB] has announced a number of redundancies and more will come, and much of the work that the CITB will do will be done south of the border. That needs to change. We need a Scotland-run CITB that looks at Scotland’s problems.⁶³

140. However, Simon Rawlinson of the Construction Leadership Council disagreed. Defending CITB, he argued that CITB reforms are "devolving the delivery of training locally":

” The identification of need is being brought into the centre, but the reform programme, which is fully supported by the Construction Leadership Council, is a three-year programme that is backed by the industry to devolve training to where it is delivered.⁶⁴

141. In response the CITB told us that its governance structure is changing, but they will be investing more in skills and training as a result. The CITB is increasing its customer-facing units in Scotland, including apprenticeships and company advisers on the ground. It has also introduced an employer led Scottish Council whose role it is to hold the CITB board to account on matters relating to Scotland.⁶⁵ While construction employers voted in 2017 to continue the construction levy, there were clear calls to streamline and modernise the CITB.⁶⁶

142. The Committee notes the skills challenges faced by the construction sector with an ageing workforce and skills shortages. The work of SDS and the CITB is vital in addressing these issues.

143. The Committee notes steps being taken by the CITB to streamline its operations and strengthen governance in Scotland. We recommend that CITB publishes more detailed Scotland-specific regional skills information in its Annual Report to allow the Committee and Scotland’s construction businesses to assess CITB’s commitment to understanding Scotland’s skills needs and future skills demands.

Diversity in the workplace

144. To address both current and future skills shortages, there is undoubtedly a need to attract workers to pursue a career in construction. With low unemployment, we were told different sectors are competing to attract the best talent.⁶⁷ Hew Edgar from the Royal Institution of Chartered Surveyors in Scotland (RICSS) told us:

” One of the weaknesses in the sector is the lack of talent coming through the pipeline, and we are concerned about the stand-off in education with regard to attempts to encourage school leavers and graduates into the built environment professions. We are also facing an impending retirement cliff edge, with many professionals aged 50 or over and who are set to retire in the next five, 10 or 15 years.⁶⁸

145. Ian Rodgers of the Scottish Decorators Federation does not believe that careers advisers in schools support the industry or encourage students towards construction. Daniel McKelvie, an apprentice at Heriot-Watt University told us that he found his apprenticeship online as advice at school had pushed him towards a traditional university route. Jessica Morris, also at Heriot-Watt University said:

” the careers advice was very poor; I received my first and only careers meeting invitation three weeks before I went on exam leave in sixth year. If a student was not interested in going to university, it was almost as though they were ignored -no information about any other route was available. That needs to be addressed.⁶⁹

146. However, experience was mixed, and other apprentices had more thorough careers guidance at schools. Douglas Morrison from the City of Glasgow College told the Committee that the onus should be on the industry as "careers advisers will be better supported by an engaged industry that is invested in connecting and developing the young workforce."⁷⁰

147. Almost all submissions to the Committee highlighted an urgent need and willingness to tackle the lack of diversity in the construction labour force. It was widely believed that attracting a more diverse workforce would help address some of the skills gaps in the sector. The most recent Annual Population Survey showed that women comprise only 12% of the total construction industry workforce in Scotland⁷¹ and despite construction being the biggest contributor to the modern apprenticeship programme in Scotland, only 1% of people undertaking construction modern apprentices are women.⁷²

148. The Association of Women in Property noted the lack of progress towards the Scottish Funding Council Gender Action Plan's target in respect of construction courses. It said that there is a range of initiatives to encourage more women into construction, by individual employers and professional bodies, but "lack of coordination between the players means that impact is limited."⁷³

Barriers and image

149. Many witnesses told us that the construction industry has an image problem, which is exacerbating the skills shortages facing the sector as a whole, but poses particular challenges when trying to diversify recruitment into construction-related industries.

150. Pert Bruce Construction said that society undervalues trades, which means that construction has a problem in attracting "the right calibre of individual to the industry." They said that schools treat trades as a "last resort" rather than a career of choice.⁷⁴

151. During class visits to the Scottish Parliament, we asked high school pupils if they would consider a career in construction; 23% said that they would. Among the reasons that pupils would not be interested in working in construction, was that it was male-dominated, not knowing much about it and not wanting a manual job. Among the respondents who said that they would consider a career in construction, reasons included a desire to do something creative, to have something to show for their work and a desire to help build communities. ⁷⁵
152. Jessica Morris, a graduate apprentice at Heriot-Watt University told us:
- ” It tended to be the naughty kids who went on construction-type apprenticeships, which were often perceived to be the easy route out, and that is not right at all. Until about two years ago, I had no knowledge of the construction industry, I thought of men out on the work site covered in mud. There was not a good enough image of the industry or of how many different roles there are in it. ⁷⁶
153. Pert Bruce Construction told us of the need to break down the "macho male" ⁷⁷ view that persists within the industry; the Association of Women in Property agreed:
- ” It is our experience that some employers, while keen to attract and retain women, do not pay sufficient attention to their working culture. There is widespread unconscious bias against women working in the sector, which can result in women not progressing as fast as male colleagues, undervaluing of their contribution and, in some cases, bullying and inappropriate sexual behaviour...We would welcome an initiative to publicise the importance of overcoming unconscious bias and bringing about an inclusive working culture, and to provide examples of the positive business impact of addressing these issues. ⁷⁸
154. Problems with the workplace culture in construction businesses was cited by Steven Dillon from Unite the Union as an issue. He highlighted problems with poor building site conditions, inadequate pension schemes and childcare provision, and told us:
- ” The industry is a poor place for women to work; there is no doubt about it. I have six sisters and I would not want them to work in the industry. ⁷⁹
155. Steven Dillon said that overcoming image problems could broaden recruitment, but for effective retention of a diverse workforce, conditions on site must be better. He told us that Unite the Union are campaigning to improve toilet conditions for all construction workers, but particularly for women. Facilities are currently inadequate and no sanitary products are offered. Businesses have a responsibility to offer suitable facilities for all staff. ⁸⁰
156. Maureen Douglas from the Forster Group said:
- ” A seismic cultural shift needs to happen, this is entirely the responsibility of industry as it is they who make the employment decisions about who works in their businesses. ⁸¹
157. Construction Scotland highlighted challenges in retraining women in trade skills:

- ” as evidence suggests most move on to office based roles, move out of the industry or move on to gain higher technical/professional qualifications. This may reflect poor standards of welfare on sites or a lack of career paths within the trades.⁸²
158. Witnesses said that the language used by the industry was influential in changing people's perceptions of construction and in turn, attracting a more diverse workforce. A focus group participant said that whilst 'construction' has negative connotations, phrases like 'design of places and interiors', the 'built environment' and 'the spaces we all use' spark interest and imagination among women.⁸³ Ian Hughes from the CITB agreed:
- ” My 18-year old daughter went through the careers conversations recently. She was given brochures for construction and the built environment. The construction brochure went over the shoulder, but she thought that the built environment looked interesting. That was because the image and opportunities were pitched in a different way.⁸⁴
159. Ian Rogers of the Scottish Decorators Federation suggested that research was required to identify the barriers to women entering the construction industry.⁸⁵
160. During a visit to City Building Ltd we heard that proactive recruitment policies and advertising can result in apprenticeship applications from a more diverse cross-section of the population. They told us that they train 4% of all craft apprentices in Scotland, but 20% of all the female craft apprentices in Scotland.⁸⁶
161. City Building Ltd uses apprentice ambassadors to visit primary and secondary schools. Case studies and role models are used to encourage diversity among candidates.⁸⁷ Charlie-Jade Combe, a painting and decorating apprentice at Edinburgh College said that it was important to see more female role models:
- ” There are no photos of female painters or women doing any trade - it is always men - so there needs to be more information about females.⁸⁸
162. Where they have successfully increased the number of female applicants, efforts to increase the number of BME apprentice applications has been less successful. 6% of City Building's craft apprentices are BME, which has remained relatively unchanged despite sponsorship of events like the Glasgow Mela and Young Asian Awards, and construction taster events with local community organisations. They also have targets for training care leavers and people from Wheatley Group homes.⁸⁹
163. The ILG emphasised the importance of working together to attract a diverse construction workforce and said that the Inspiring Construction Programme was attempting to coordinate the various interventions being made by public and private bodies. The ILG said:

” The industry, its clients and the Government have a combined responsibility to find a way to make the money that we are spending on the skills sector much more beneficial to the delivery of the diverse workforce that we want in the future. There are a lot of things going on, but we think that they are not very connected at the moment. ⁹⁰

164. The Cabinet Secretary said that "as well as having action plans, the skills agencies put an expectation on training providers to make progress on representing the diversity of our nation in our trades...there is a gender action plan and a diversity drive, but there is absolutely more to do." ⁹¹

165. The Committee finds it very disappointing that women account for only 12% of the construction industry workforce; more needs to be done to raise awareness of the broad range of careers and types of work available within the industry to directly encourage and facilitate a more diverse and inclusive construction sector workforce. The Committee urges the Scottish Government to work with SDS and industry to promote best practice in the recruitment and retention of women in construction. This includes organisations like City Building who has had considerable success in increasing its proportion of female craft apprentices. Industry must be proactive in creating inclusive workplaces, which support women to pursue a career in the sector.

166. The Committee notes that SDS's Equalities Action Plan for Modern Apprenticeships in Scotland outlines a range of actions to reduce gender segregation in modern apprenticeship frameworks and reduce stereotyping in occupational routes chosen by young people in education. The Committee urges the Scottish Government to work with its agencies and industry partners to build momentum behind achieving these targets.

Apprenticeships

167. During this inquiry, we wanted to hear direct from apprentices about their experiences of training in construction-related qualifications. We discussed a range of issues with apprentices from Edinburgh College, New College Lanarkshire and Heriot Watt University during an evidence session in the Parliament on 5 March. It was very useful for us to talk to both modern apprentices and graduate apprentices and we appreciate their engagement with the Committee's work during this inquiry. We also launched a survey targeted at apprentices and visited Edinburgh College.



Source: Apprentices from Edinburgh College, New College Lanarkshire and Heriot Watt University met with Members before giving evidence during a Committee meeting.

168. Construction was the biggest contributor to the modern apprenticeship programme, with 6,104 starts in 2016/17; apprenticeships are therefore key to addressing current and future skills shortages in the construction sector.
169. Witnesses were generally positive about Scotland's apprentice system and the Scottish Decorators Federation described Scotland's training of apprentices as "gold standard" and "among the best in Europe."⁹²
170. However, despite there being positivity around the apprenticeship programme in Scotland, witnesses also highlighted areas for improvement. In their Modern Apprenticeship Equality Action Plan (2015), SDS set out a range of actions to promote more diversity in the successful uptake of modern apprenticeship frameworks. However, the August 2018 update on progress against objectives showed that the gender imbalance had increased.⁹³

Age diversity

171. A number of submissions suggested apprenticeships should be made available for older workers or those returning to the labour force after a break. In theory, modern apprenticeships are available to people of all ages; however, SDS contributions towards the costs of training an apprentice are often higher for younger workers, reflecting the Scottish Government's policy focus on young people. This is an issue the Committee has been keen to explore during a number of previous inquiries.
172. The need to invest in the older workforce was highlighted by Ian Hughes from the CITB:
 - ” Scotland has by far the largest unqualified workforce, among older workers in particular, in Great Britain. Future priority areas that we would like to have a closer look at include investment in the older workforce.⁹⁴

173. The CITB also acknowledged that the funding structure could act as a barrier for older learners:

” The reality is that it is not attractive for, say, a 25-year-old to enter construction on an apprenticeship wage rate, and we are keen to explore what more can be done to make that an attractive proposition for older individuals. ⁹⁵

174. Elliot Ruthven, an adult apprentice studying plastering at Edinburgh College acknowledged that balancing outgoings with the apprenticeship wage was sometimes challenging:

” I have to pay my rent, my council tax and my bills, pay for my car, and still have to pay for the normal amenities, so if I do not get a little bonus every week or two weeks, covering my bills can be a bit of a stretch, given that I am on what is, basically, the minimum wage. ⁹⁶

175. With regard to training and retraining older workers, SDS said that improvements were already being made:

” It is current Government policy to give young people the best possible start in their careers, but I point out that a third of those in the modern apprenticeship programme are 25 years and over. As I have mentioned, many of those individuals are involved in leadership and management; they are progressing their careers, and employers are using the apprenticeship for workforce development. For example, many of the people doing level 4 in construction site management have come from other industries and are taking the opportunity to retrain. ⁹⁷

176. City Building told us that increasing the number of adult apprentices would also encourage more women to apply. It felt that women, in particular, are keen to learn trades later in life once they have had a chance to consider their career as "many would not have considered becoming a plumber for example, at 16." ⁹⁸

177. The Cabinet Secretary highlighted the importance of considering the age profile of workers. He said "there is a perception that some of our schemes are age restricted, when in fact they are not." However, the Cabinet Secretary also felt that the retraining partnership would tackle the issue. ⁹⁹

178. The Committee notes that the Scottish Government plans to establish a Skills for the Future Action Plan and National Retraining Partnership. The Committee requests an update on the Government's work in this area and how it will address concerns raised by witnesses that there is a need to invest in older people and attract older workers, including more women, to the construction industry.

Digital skills and technology

179. The Scottish Contractors Group highlighted the many positive aspects of the apprenticeship scheme, but raised concerns about the degree to which college-based learning reflects modern working practices and modern technology. They

argued that the industry needs apprenticeships to adapt and develop in parallel with innovation in the industry. ¹⁰⁰

180. The Civil Engineering Contractors Association echoed these concerns that the current construction skills qualification system, based as it is on the apprenticeship model, is too inflexible to meet the rapidly changing technological nature of the construction sector. ¹⁰¹

181. The modern apprentices we spoke to were confident about their future job security and were doubtful that technology would have an impact on traditional craft skills:

” We are still learning skills that our lecturers were taught 20 or 30 years ago. There is not much digital technology to improve how we learn; it is still very traditional. ¹⁰²



Source: Committee member, Jackie Baillie MSP, visited City Building Ltd to hear about their apprenticeship programmes

182. However, when we spoke to representatives from education, Scott Warden from Edinburgh College said he felt the apprentices had "undersold" their digital skills, but acknowledged that "a lot of work is still to be done on whether we introduce robotics or automation into mainstream education." He said that there are not a lot of new technologies in the current modern apprenticeship programme, but that this could be incorporated more easily into school qualifications rather than college ones. ¹⁰³

183. There was greater awareness of digital innovation among the graduate apprentices that we spoke to. Asher Humphrey-Martin told us that even since he has started his apprenticeship there have been new programmes and developments in three-dimensional visualisation in his architectural technology course at Edinburgh College. ¹⁰⁴

184. The Scottish Government's short life working group on new housing and future construction skills published its report in May 2019 and recommended that:

- ” Future skills needs are required within the sector to support the enablement in digital processes, BIM current and next stages, sensors, LEV installations, VIR/VS systems, design for manufacture and others. ¹⁰⁵

185. The Committee found a mismatch between construction leaders' and many tier 1 businesses' ambitions to utilise digital technology and the general development of digital skills among the majority of the sector. It is vital that businesses at all levels of the supply chain are able and willing to use technology if productivity is to improve. The Committee recommends that SDS and the CITB consider how new technologies can be better incorporated into all levels of construction skills training.

Working with SMEs

186. In their submission, the Scottish Traditional Building Forum described a sector which is very reliant on SME businesses employing apprentices. With over two-thirds of construction craft apprentices trained and recruited by SME employers:

- ” A model should be developed which allows small companies to engage with apprentices throughout their training programme. It could also assist in ensuring that apprentices get the breadth of onsite evidence required for their apprenticeship programme which sometimes is not possible through one employer. ¹⁰⁶

187. When we spoke to apprentices, they told us that it was difficult to gain the breadth of experience needed for their qualification as businesses tend to do work in specific areas. David Watson who studies joinery at New College Lanarkshire, told us:

- ” On my course, people struggle, but the lecturers have been brilliant at helping us to get the evidence. Guys like me, who cannot get evidence of specific joinery work, could perhaps have a week's trial with another company that does that specific work. ¹⁰⁷

188. Maureen Douglas, Human Resources Director for the Forster Group told the Committee that there may be scope for shared apprenticeship models:

- ” We should protect what is great and good, but we should also develop other sector-specific qualifications and shared apprenticeship models, perhaps in rural areas, such as the Highlands and Islands. That is where the opportunities to generate greater capacity in the sector lie. We have the tools at our disposal, but we are very narrow and rigid in what we offer. ¹⁰⁸

189. Given that construction is the largest sector for the modern apprenticeship programme, the Committee believes that there is merit in considering a sector specific approach to apprenticeship frameworks in this area. The Committee

urges SDS to work with industry to look at how different apprenticeship models could better support construction sector SMEs to offer training and apprenticeship opportunities.

Holistic education

190. Apprentices have a number of routes by which they can report any problems or concerns during their apprenticeship and the Committee was keen to explore how well supported apprentices felt during their 4-year qualification.
191. When we spoke to apprentices, they reported mixed levels of support from the CITB. Some had received useful advice and regular check-ins with their apprenticeship officers, but others had struggled to find information they needed. The apprentices we spoke to had varied levels of pastoral support from employers, lecturers, mentors and apprenticeship officers. The support received seemed to be largely dependent on the individuals, but the majority felt that they would be able to speak to someone if they had any problems or concerns.
192. We visited City Building Ltd as part of this inquiry; they are the largest employer of construction apprentices in Scotland. City Building Ltd offers its apprentices additional support to help them progress through their training and development. This includes services such as physiotherapy and youth guidance counsellors. We were told that 90-95% of apprentices complete their apprenticeship with City Building compared to a national average of around 75%. They believe that this improved retention is due to the wrap-around support offered to apprentices and the whole apprenticeship package that is offered.¹⁰⁹

193. The Committee was impressed by the level of personal development support on offer through City Building Ltd's apprenticeship training programme and agrees that it is important to provide a holistic training in order to prepare the apprentice for life as a fully-qualified working adult. The Committee recommends that the Scottish Government works with SDS and industry to explore how this type of wraparound service could be expanded across all apprenticeship programmes.

Apprenticeship frameworks

194. Modern apprenticeships, foundation apprenticeships and graduate apprenticeships are the three levels of apprenticeship funded by SDS, and all are used to varying degrees in the construction sector.
195. Foundation apprenticeships were first introduced in the 2014/15 academic year and provide work-based learning opportunities for secondary school pupils alongside their other studies. Within construction, foundation apprenticeships are only currently available in civil engineering, but the merits of extending foundation apprenticeships and shortened courses into traditional trades were debated in this inquiry, with some witnesses advocating lower level qualifications to increase the

number of young people entering the sector. Others were concerned that this would reduce the quality of the qualification.

196. Scott Warden from Edinburgh College told us that the construction industry "has perhaps missed a trick" by not having foundation apprenticeships in any area other than civil engineering. He said:

” if we take anything away from today, it should be that a foundation apprenticeship would be ideal for the construction industry. It is a good way of supporting microbusinesses to reduce the risk of taking on an apprentice, because employers worry about taking on a four-year commitment and the associated financial commitment. ¹¹⁰

197. BSE Skills Ltd explained that there can be limitations around health and safety when working with foundation apprentices:

” Foundation apprenticeships are difficult for us in the context of health and safety, but we run our own pre-apprenticeship programmes. We have a national progression award that covers all three sectors, but it is not funded, so it is difficult to encourage young people and their families—or employers, for that matter—to become involved. ¹¹¹

198. In recent years, there has been considerable feedback from employers particularly in the house building sector, that they cannot source certain tradespeople such as bricklayers and joiners. A recent survey of Scottish Building Federation members showed that almost 80% of respondents found it difficult or very difficult to recruit suitable skilled workers to meet the needs of their business. ¹¹² One of our focus group participants said that the skills shortage in house building was increasingly difficult with building sites advertising for bricklayers rather than trying to sell houses. ¹¹³

199. Housebuilders in particular have been seeking a specific qualification for bricklaying for house building to fill current gaps. Professor Smith of Napier University said:

” It would not be about watering down or providing MAs by the back door. The sector is listening to young people who are saying that they want to be at work slightly quicker and are interested in doing various things. There is a need and a demand, so employers are asking whether some of the apprenticeships could be adapted. ¹¹⁴

200. However, Gordon Nelson from the Federation of Master Builders said:

” There is pressure in England to move towards three-year or two-year apprenticeships. People there are saying that Scotland should not try to emulate what is happening there and that we should stick to the four-year apprenticeship, with its quality and all-round skills transferability. ¹¹⁵

201. Other witnesses echoed concerns that trade apprenticeships may be diluted or somehow downgraded in the future. For example, Pert Bruce Construction stated:

” The Scottish Building Apprenticeship & Training Council (SBATC) provides a very strong and highly regarded training for our trades and in future we shouldn't be looking at diluting the SVQ level 3 although consideration to lesser levels of qualification to meet changing building practices may be suitable they cannot be perceived as equal to the level 3 scheme and shouldn't be seen as an acceptable substitute to a fully trained traditional craft operative. ¹¹⁶

202. City Building Ltd were critical of large businesses who are very vocal about skills shortages, but who do not commit to investing and training apprentices. They acknowledged that some small businesses struggle to find the balance between short-term priorities securing work and longer-term strategic priorities such as innovation and training. However, they see the long-term benefit of investing in a skilled workforce and told us that the construction industry needs to take some responsibility for training the future workforce. ¹¹⁷

203. The Committee recommends that the Scottish Government works with its agencies in partnership with industry to develop further foundation apprenticeships in construction, to broaden the range of opportunities available within the sector and strengthen the skills pipeline between schools and industry. The Committee believes that expanding foundation and graduate level apprenticeship frameworks would be beneficial to the construction sector.

204. The Committee notes some witnesses' concerns that offering shortened modern apprenticeship courses would be detrimental to the current high quality and thorough training the modern apprenticeship programme provides. The Committee therefore recommends that the Scottish Government, its agencies and industry commit to developing high quality professional qualifications in any future training frameworks.

Apprenticeship levy

205. In relation to the apprenticeship levy, witnesses expressed concerns about companies being double levied, the transparency of the Scottish Government's use of the levy, and how users' needs can best be met through the levy.
206. The apprenticeship levy was introduced by the UK Government in 2017 and applies to all UK employers (public, private and third sector) with annual salary bills of more than £3 million. The UK Government then passes a share of the levy to the Scottish Government. As skills policy is devolved, the way that the Scottish Government chooses to spend the levy differs from elsewhere in the UK.
207. In the construction sector the CITB is also empowered to impose a levy on employers 'engaged wholly or mainly in construction industry activities.' ¹¹⁸ The amount paid is based on the total wage bill of the business.

208. The CITB explained the problem with the double apprenticeship levy paid by some construction companies:

” We are under pressure from our tier 1 customers asking us why they have to pay a construction levy managed by the CITB as well as the Westminster levy. Given that the money comes off their profit and loss, they have every right to ask that question, and there is work to be done particularly with the Westminster Government to try to rebalance the impact on the sector. ¹¹⁹

209. We also heard concerns about the levels of transparency around how the Scottish Government uses the apprenticeship levy in Scotland. Professor Sean Smith, Director of Sustainable Construction at Napier University told us that:

” There is a general feeling from the larger companies that there is more transparency in England in relation to how the apprenticeship levy is spent and what they see as a result, and the Scottish Government might have a role in creating greater transparency of how the levy is spent in Scotland by the sectors...Several voices have made the point that they would like greater transparency, given that, in England, they can see where the money is going and how it is being spent. ¹²⁰

210. There were concerns that the training courses on offer, via levy funding, do not necessarily meet the needs of industry. Cara Hilton from the Civil Engineering Contractors Association Scotland said:

” we are concerned that the funding is difficult to access. For example, in relation to the flexible workforce development fund, we have had a lot of feedback that the college courses on offer do not necessarily meet the needs of our members, and we would like the fund to be extended so that it can also be accessed by training groups. ¹²¹

211. The Committee highlights concerns in the construction industry about what is regarded as a 'double levy' - the apprenticeship levy and the CITB levy. It is vital that businesses benefit from this in terms of skills and training. The Committee asks the UK Government to consider how the apprenticeship levy relates to the CITB levy and to review the long-term sustainability of having two separate levies, which is unique to the construction sector.ⁱⁱⁱ

212. Businesses are seeking greater transparency on the Scottish Government's apprenticeship levy spend and how they can benefit from it. The Committee calls on the Scottish Government to provide a detailed breakdown of how apprenticeship levy money is used in Scotland and the outcomes of that spend.

ⁱⁱⁱ Two industry training boards (*Construction Industry Training Board (CITB) and the Engineering Construction Industry Training Board (ECITB)*) collect training levies from some construction businesses. The introduction of the apprenticeship levy meant some construction employers pay two separate training levies.

Procurement

213. Challenges around Scottish construction procurement were one of the most dominant themes across this inquiry. As over half of all the construction spend in Scotland comes from the public sector, the Cabinet Secretary acknowledged the importance of getting procurement right. He said:
- ” the power of procurement is shown by the fact that £11 billion is spent by the Scottish public sector.¹²²
214. Whilst a high proportion of public spending provides an element of stability to the construction sector, this needs to be levelled to bring consistency. The Scottish Decorators Federation told us:
- ” It is true that there is a lot of reliance on the public sector. That spending in the public sector must be maintained, so that it levels and there are not peaks and troughs. That will ensure that the people flowing into the industry remain employed and that there is not the on-off effect - it is not attractive for young people to enter the stop-go economy of the construction industry.¹²³
215. The majority of respondents to our online survey expressed their dissatisfaction with the procurement process, with 69% saying they were very dissatisfied and 25% dissatisfied. One respondent said:
- ” Before 75% of our work was publicly funded now this is 2%. Twice we have been chosen to represent the best of Scottish/British architecture globally, yet we are unable to win work through public procurement. We have 100% track record of completing on time and on budget over 26 years.¹²⁴

Review of Scottish Public Sector Procurement in Construction

216. This sense of frustration among construction businesses trying to tender for public contracts is not a new issue. In 2013, Robin Crawford and Ken Lewandowski undertook a review of public sector procurement in construction to evaluate the challenges and make recommendations for change. At that time, the Chair of the review, Robin Crawford, spoke of his vision of:
- ” an approach to public sector construction procurement which achieves better collaboration in design led procurement, which achieves value for money for the public sector but which also recognises that the construction sector is a vitally important part of the Scottish economy.¹²⁵
217. The Scottish Government welcomed the report and agreed it would implement 66 of the 67 recommendations.^{iv} The one recommendation which was not to be implemented, was the appointment of a Chief Construction Adviser. The Scottish Government worked with the Scottish Futures Trust (SFT) and the Construction Scotland Industry Leadership Group to deliver the recommendations.

iv One recommendation was split into two parts, creating a total of 68 recommendations

218. However, six years later Robin Crawford, who led the 2013 review expressed his disappointment in progress:

” It is slightly depressing that every single one of those issues was raised in the 'Review of Scottish Public Sector Procurement in Construction' report. Six years on, it is disappointing that so little progress has been made in tackling many of them. ¹²⁶

219. We were told repeatedly by witnesses that the review was an accurate reflection of the problems relating to procurement in construction, but that little had changed. There was also a strong sentiment that lessons had not been learned as a result of construction firms like Carillion going into administration. Ian Rodgers from the Scottish Decorators Federation noted:

” Has the construction industry learned anything from any of the companies going into administration? No—absolutely not. We still tender under the same principles, and we still have a hugely low profit margin. Some companies work to a profit margin of 1 or 2 per cent, which is not sustainable. There need not be a very long pause in their next contract before there is no money left and they are laying people off or going bust. ¹²⁷

220. Bruce Dickson from BAM Ltd agreed there has been a lack of change or learning:

” We have learned absolutely nothing from Carillion. It is interesting that you mentioned the procurement review, because I sat on the consultation committee from 2013. I then chaired the implementation group for industry, working with the Scottish Government and Scottish Futures Trust for another two years, and nothing changed. In relation to Carillion, I have spent probably the past 10 years waiting for a major UK contractor to go bust, to prove that the model is broken. ¹²⁸

221. Across submissions and oral evidence there was a strong sentiment that public sector bodies could be doing more in terms of following procurement best practice. Efforts have been made to create best practice guidance but this is not implemented. Robin Crawford suggested:

” On frameworks generally, guidance on the Scottish Government's website now sets out the importance of operating frameworks in a way that gives SMEs proper access to the frameworks—there is guidance on splitting the contracts into bite-size chunks that SMEs are capable of bidding for, and a lot more besides—but the problem to which we return is whether that is being applied in practice. ¹²⁹

222. Robin Crawford referred to the lack of enforcement of legislation by the Scottish Government:

” There are pieces of legislation in place that are being mandated. For example, the Procurement Reform (Scotland) Act 2014 places an obligation on public sector bodies, including local authorities, to check whether payment terms are being pushed down the procurement chain to tier 2s and tier 3s. A research paper that I have in front of me suggests that only 25 per cent of public bodies are taking any action on chasing those payments. Where there is legislation in place, we should ensure that it is policed. The introduction of a procurement or construction regulator would go some way towards that. ¹³⁰

223. The Cabinet Secretary indicated that 54 of the 68 review recommendations have been completed, with 8 ongoing actions, 5 that need to be implemented by industry, and one that was not progressed. The Committee's evidence suggests that there has been a lack of progress given that work on 54 recommendations is considered to be complete. ¹³¹
224. The majority of recommendations were actioned by creating guidance. This guidance has now been created, and therefore the recommendation is considered by the Scottish Government to be complete, but there are no further actions around embedding change or measuring use of the guidance. Other outputs state that bodies, such as the Infrastructure Commission, will address the recommendation. Therefore, from the Cabinet Secretary's perspective this action is complete, but change is not yet evident among businesses.

Public sector procurement in construction: review outputs

Rec. number	Review paragraph reference	Description of the recommendation	Outputs	Status
1	4.2.3	The construction procurement policy function within the Scottish Government should be strengthened.	No published output. The SG policy function has been increased.	Complete
2	4.3.5	As a matter of priority, the strengthened construction procurement policy function within the Scottish Government should, in collaboration with other bodies key to the implementation of our recommendations, determine lead responsibility for delivering each recommendation.	No published output. A Scottish Government/SFT core team was created to deliver the recommendations.	Complete
3	4.4.3	A Chief Construction Adviser (CCA) should be appointed by the Scottish Government.	This recommendation was not adopted by the Scottish Ministers.	Not progressed

Source: This table shows an extract from the Public sector procurement in construction: review outputs. The full table is available at <https://www.gov.scot/publications/public-sector-procurement-construction-review-outputs/>

225. The one action that was not progressed was the appointment of a construction adviser. In evidence the Cabinet Secretary said:

” having a regulator would present difficulties, because there are already a number of ways into the disputes that people can have in the construction sector, including adjudication processes and legal processes...However, my mind is not closed to having a construction adviser, which might help in relation to what the recommendations are, how they are being implemented, how they are being taken forward and who the go-to person is, other than the responsible ministers. ¹³²

226. Alan Wilson of SECG said:

” Where there is legislation in place, we should ensure that it is policed. The introduction of a procurement or construction regulator would go some way towards that ¹³³

Cost versus quality

227. Despite the 2013 Review, the award of contracts based on lowest cost was a dominant theme during this inquiry. The majority of businesses told us that the prioritisation of cost over value was having a detrimental impact on the construction sector and had consequent effects on cash flow and a business's ability to access finance and innovate.

228. All of the participants in the Committee's focus groups shared these concerns. The weighting towards cost rather than quality in the current procurement model was described as a "race to the bottom." ¹³⁴ Gordon Nelson from the Federation of Master Builders Scotland described the current procurement model as a "straitjacket" ¹³⁵ and Bruce Dickson from BAM Ltd said "lowest-cost procurement is regarded universally as the biggest challenge that faces our industry." ¹³⁶

229. BAM Ltd described a system, which has created "suicide bidding" when with no forthcoming work, contractors bid below cost to win contracts:

” You then have two options. The first is that you basically fight a war against your client in claims and disputes. The second is that you try to buy at rock-bottom prices from your supply chain. Either of those is damaging to the industry because you are not looking at innovating; you are looking at survival. ¹³⁷

230. BAM Ltd also highlighted the impact this had on quality and future maintenance:

” I cannot deny to the Committee that there are big quality issues with historic and not-so-historic buildings in the construction industry. However, that does not suit anybody, because the best way to deliver a profitable project is to get it right first time. The industry probably spends more on going back to fix defective construction than it makes in profit. ¹³⁸

231. The Scottish Council for Development and Industry (SCDI) noted that the current emphasis in public procurement is often on the upfront cost of infrastructure, rather than the overall lifetime cost. They believe that there is a need to move away from

- this short-term approach to holistically consider long-term fiscal, strategic and environmental impacts to deliver optimum value for the public pound. ¹³⁹
232. Both the Stone Federation and the Scottish Traditional Building Forum were of the opinion that rather than focus on cost, greater consideration should be given to the full carbon footprint of producing and transporting products to site and the full lifecycle costing (both financial and carbon footprint) "to maximise the positive economic impact that publicly funded projects can make to the Scottish economy." ¹⁴⁰
233. Robin Crawford highlighted the lack of whole life costing by public authorities despite the development of a costing tool by SFT. He told the Committee that the SFT's documents are very good, but the tool "has not been taken up sufficiently by public authorities." ¹⁴¹
234. The Committee wrote to public sector organisations to ask how the 2013 Review of Scottish Public Sector Procurement in Construction and subsequent Procurement Reform Act had changed how public contracting authorities tender large-scale construction projects. Perth and Kinross Council cited early engagement, use of collaborative hubCo frameworks, consideration of community benefits, fair work, and quality as some of the changes made. ¹⁴²
235. Transport Scotland also told us that it has undertaken a number of initiatives, including the publication of a Procurement Strategy and Annual Procurement Report. This report monitors Transport Scotland's progress against the procurement commitments made in the strategy. They said "this has resulted in the inclusion of clauses in tender documents to increase opportunities for SMEs, promote community benefits, encourage Fair Work Practices and implement project bank accounts on all Transport Scotland construction contracts of a value greater than £10m (reduced to £5m in March 2019)." ¹⁴³
236. While the Scottish Prison Service said that lowest price is not the only consideration, it also acknowledged that in reality tenders are weighted more towards cost than quality for a number of reasons. ¹⁴⁴
237. To overcome issues of lowest cost procurement, Galliford Try suggested:
- ” the government should have a sensible benchmark value before going to market. Points should be awarded to bidders based on how close to the budget their proposal is, which points deducted for too high and too low. ¹⁴⁵
238. Robin Crawford, who led the Procurement Review in 2013, noted:
- ” We believe that it is essential that there be wider scoring, such that quality scoring would be given greater prominence and the decision would not come down to the lowest price. Sadly, it remains the case that the lowest price very often wins. ¹⁴⁶
239. Despite the wealth of evidence presented to the Committee, the Cabinet Secretary did not think that there is a predisposition towards lowest cost in public sector procurement. He told the Committee that he was confident that people working in procurement appreciate the importance of maximum value rather than lowest cost:

” we should not look only at cost. I cannot be any clearer than that. ¹⁴⁷

SME resource and skills

240. Scottish Building Federation (SBF) members described construction procurement as bureaucratic, burdensome, restrictive, unfair, and complex. Members felt the procurement process should do more to incentivise the direct employment of apprentices. They said that smaller contractors generally view procurement processes as excluding them, while others deliberately avoid tendering for work due to negative past experience. ¹⁴⁸
241. The Committee heard from SMEs that they do not have enough time, resource or the suitable skills to bid for public sector work. The process is seen as bureaucratic and time consuming with no guarantee of bids being successful. South Lanarkshire and Glasgow Councils both noted the complexity and inaccessibility of the procurement system:
- ” Anecdotally, private sector tenderers can get frustrated with the (perceived) arduous nature of these practices and procedures. ¹⁴⁹
242. In response to our online survey, one respondent told us:
- ” there is a lot of wasted time and resources. On average it takes 1 person a week to do a bid. ¹⁵⁰
243. We also found a lack of awareness among SMEs on how to learn about the bidding process. One participant in our focus groups suggested that a "wikipedia for construction" was needed with free, consistent and accurate information. It was felt that some information given was inaccurate. ¹⁵¹
244. Support does exist for SMEs trying to bid for contracts. The Supplier Development Programme's (SDP) aim is to help SMEs improve their performance in winning contracts in the public sector and currently has 12,000 SME registered businesses. They offer information, support and training programmes to help businesses navigate the complex tendering process. It told us:
- ” SDP regularly supports SMEs that do not have, and cannot afford, bid writing teams and procurement specialists, to enable them to understand the public sector procurement processes and equip them with the skills they require to bid better with the hope that they will be successful in being awarded contracts. ¹⁵²
245. Focus group participants told us that SMEs in the sector do not feel valued and supported by the public sector. ¹⁵³ We feel that this must be addressed.

Public sector procurement skills

246. As well as the skill set needed within businesses to complete the tendering process, witnesses raised concerns that the experience and skills of people awarding public sector contracts are mixed. Galliford Try expressed concerns about the levels of procurement expertise in the public sector:
- ” Public procurement practice and expertise is sporadic, whilst in some areas partnering ethos is key in certain current contracts public sector behaviours are the worst that we have ever seen. ¹⁵⁴
247. Jeanette MacIntyre from Indeglas Ltd offered her business perspective and told us that the emphasis must be on whole-life costing of buildings, but said that "expertise is lacking in most public procurement processes." She said:
- ” An essential step forward would be the engagement of appropriately experienced chartered construction specialists in the procurement process. ¹⁵⁵
248. The University of Glasgow noted that the skill set across procuring bodies is variable and fragmented; however some bodies are leading their sectors:
- ” NHS Health Facilities Scotland has developed considerable knowledge and expertise in construction, which could also be applicable across the wider public sector. There is no central source of expertise, with the Scottish Government also failing to implement the recommendation for a Chief Construction Adviser from their 2013 report. It is essential that the procurement and management of Construction must be led by Chartered Construction Professionals, RICS and CIOB. ¹⁵⁶
249. We were told that lessons should be learned from existing best practice. Alan Wilson from the Specialist Engineering Contractors Group Scotland (SEC Group Scotland) highlighted the Commonwealth Games as a project that worked well:
- ” The Commonwealth games construction is a good example of early engagement that meant that things worked—buildings were built on time and within budget and were properly constructed. The Government should certainly be taking the lead, showing leadership and using that project [Commonwealth Village Glasgow] as an example for all the projects that it directly funds. ¹⁵⁷
250. BAM Ltd highlighted the Northern Ireland model as one that addresses many of the issues raised with regard to procurement. We were told that in Northern Ireland staff working in procurement are better trained and construction procurement is centralised to ensure best practice. Median cost scoring is also used for tender costs and there is collaborative early engagement with the supply chain. ¹⁵⁸
251. Robin Crawford highlighted the role of the public sector in achieving reform but felt some organisations were under-resourced for procurement and lacked relevant experience. He described a situation where people "muddle through":

” Many of the large authorities already embrace best practice and have skilled people in procurement, so a large number of major infrastructure procurements are done competently and well...The difficulty is in rolling good practice out across all the public sector bodies. The problems occur when an authority that is responsible for a major procurement does not follow the guidance or the best practice that we have recommended. The authority's procurement capacity might be under resourced. ¹⁵⁹

Hub Procurement Model

252. The Scottish Futures Trust leads the 'hub initiative', which is aimed at developing a national approach to the procurement and delivery of community infrastructure projects including schools and health facilities. The hub initiative brings together public sector partners, including local authorities and health boards, with a private sector development partner to form a 'hubCo'. There are five regional hubCos covering Scotland, which are jointly owned by the public sector participants, the SFT and the private sector.
253. The idea behind hubCos is that having a delivery framework in place creates some efficiencies in smaller scale projects. HubCos also undertake refurbishment projects and asset management services for existing infrastructure. At September 2018, hubCos were responsible for ongoing construction projects valued at £485m across Scotland. They have also been responsible for completed projects valued at £1.8bn and have a further £490m of projects under development.
254. The hub programme was launched in 2006 and SFT told us that the strengths and successes of the programme have been referenced internationally as good practice. The programme has delivered circa £1.9 billion of community infrastructure with a further £0.5 billion in construction. The programme incorporates key objectives around social and community improvement and employment and economic wellbeing. Investment through the programme has created over 1,300 new apprenticeships, over 200 graduate places, and over 5,000 work placements. It has also introduced over 96,000 students to the construction industry through site visits and engagement of construction professionals with schools and colleges. ¹⁶⁰
255. Some witnesses raised concerns that hubCos and framework agreements are beneficial to a small number of large companies, but do not help smaller businesses grow or access work. The Federation of Master Builders Scotland told us:
- ” The hub programme does not seem to be generating work for SME construction firms. Some member firms (be they SMEs) whose business model is as a main contractor, struggle to adapt in order to win work through the hubCo system as sub-contractors. The hub system favours larger firms, who are not necessarily based in the region that the specific hub is operating in. The Public Contracts Scotland portal does provide visibility of public sector opportunities but some construction SMEs report that they struggle to use the site effectively. ¹⁶¹
256. Similarly, the Scottish Decorators Federation said:

” Our federation has not found that hubs have had any success in cascading work down to smaller companies. The hubs have their preferred suppliers and contractors; they are used to working with them and they know how to work with them, and they are not interested in cascading work down. ¹⁶²

257. Construction law specialist Roddy Cormack and Pert Bruce Construction raised similar concerns about the lack of competition and marginalisation of SMEs. The Civil Engineering Contractors Association Scotland (CECAS) told us:

” In recent years, procurement practice has drifted towards a consolidation of construction projects into increasingly huge frameworks, where only the largest contractors can bid. The result is that this has marginalised many SMEs and forced them into a subcontractor role. ¹⁶³

258. The hubCos themselves highlighted the positive impact they have on SME employment. More than 80% of the contract value of completed jobs has been delivered by SMEs. We were told that "a great deal of work is carried out to ensure local SMEs can engage with Hub projects," including:

- Organising project specific and Business Unit ‘Meet the Buyer’ events, where the Local, SME supply chain and Social Enterprises are encouraged to attend, promoting the use of engagement with Tier 1 and Tier 2 contractor suppliers within projects
- Local advertising and direct contact with SMEs
- Providing free leadership, safety and up-skilling training through construction training programmes
- Attending supply chain conferences
- Sharing frequent pipeline updates with the supply chain to advise them of upcoming projects
- Breaking down work into small ‘work packages’ to make it more appropriate in size and accessible and more manageable for SMEs ¹⁶⁴

259. The hubCos also told us that:

” SMEs are very much able to access the Hub programme supply chain, as evidenced with the percentage of contract value on completed jobs which have been delivered across the country. Across Scotland, more than 80% have been delivered by Scottish SMEs since 2010. ¹⁶⁵

260. However, BAM Ltd described one of the advantages of hubCos as the drive to use the local supply chain where possible. ¹⁶⁶ Galliford Try had a more mixed view on the merits of frameworks:

- ” Historically reasonably effective however recent Tier 1 insolvencies and commercially disastrous outturn positions on last 3 (AWPR, M8 and Queensferry Crossing) large government procured infrastructure projects would suggest appetite from supply chain going forward would be somewhat diminished - particularly with a large infrastructure pipeline in England where clients are more willing to share risk. ¹⁶⁷

261. Bruce Dickson of BAM Ltd said:

- ” All frameworks are like Marmite: if you are on them they are great and if you are not, they are not so good. ¹⁶⁸

262. The hubCos highlighted:

- ” Central to the Hub philosophy is the principle that local people and businesses should benefit to the greatest extent possible from investments being made in their areas...the performance metrics demonstrate that the programme has been hugely successful. ¹⁶⁹

Procurement conclusions

263. The Cabinet Secretary told the Committee that it is his intention to develop construction related procurement frameworks or other commercial arrangements that will promote better working practices in the industry as well as better working practices by public sector organisations. ¹⁷⁰ In evidence he said:

- ” On the issue of how we encourage best behaviour, if we create a framework that can be accessed only through best practice and compliance, that would be a good way to drive behaviour. ¹⁷¹

264. The Committee understands that the Cabinet Secretary is developing what these frameworks may look like and encourages him to consider the Committee's recommendations in his consideration.

265. The Committee is concerned by the volume of evidence it heard which described an ineffective public procurement process that fails to consider whole-life costing and quality, instead prioritising short-term cost over long-term value. Procurement manuals and guidance advocate an approach that is not always implemented in practice. We recommend that the Scottish Government considers how guidance can be better followed.

266. The Committee notes that some businesses in the construction sector lack the skills and resources to bid for public sector work, whilst the level of skills in procuring public authorities is also mixed. We recommend that the Scottish Government ensures that SMEs are supported in their efforts to bid for public sector work through the business support system. The Scottish Government

should also consider how best to ensure that procuring public authorities have access to the necessary skills to support bidders and to ensure that maximum value is secured rather than lowest cost.

267. The Committee heard that the Review of Public Sector Procurement was thorough and useful, and outlined clear recommendations for improvement. The Committee acknowledges that the Scottish Government has increased guidance, but found implementation and enforcement of the guidance lacking. The Committee is concerned that the Cabinet Secretary considers the review to have achieved significant change, when evidence suggested that the review recommendations were not implemented and considerable further work on procurement is required. The Committee recommends that the Scottish Government revisits the review to assess what further action could be taken to implement its recommendations.
268. The Committee asks that, as part of this review of recommendations, the Scottish Government further considers the arguments for the appointment of a Chief Construction Adviser. As recommended in the 2013 Review, "with direct access to Ministers, this individual will champion the reform programme, work with industry and the public sector and act as a conduit between industry and Ministers." ¹⁷²

Infrastructure

269. The Committee held an evidence session focusing on how infrastructure investment and planning impacts on the construction sector. Businesses told us that a visible pipeline of future work and projects was important to their ability to forward plan and manage their workforce. The Scottish Government has a role in identifying infrastructure needs, planning a pipeline of large-scale construction projects, creating and maintaining a regulatory environment, and funding and procuring infrastructure projects. The Scottish Government sets out plans for infrastructure investment in its Infrastructure Investment Plans (published in 2008, 2011 and 2015).
270. Regular information is published on the 'pipeline' of infrastructure projects, but this only relates to projects where the Scottish Government has a lead role in procurement or funding. It does not include local authority-led projects or other significant investment areas where the Scottish Government is not the lead partner, such as housing, expansion of early learning and childcare, and City Region Deals. There is also additional private sector led investment in areas such as digital infrastructure.
271. We heard from Peter Reekie at the SFT:
- ” high-level plans are published by Government and different bodies publish their plans, but I agree with your premise that there is no single place to look for all investment across everybody that procures infrastructure in the public sector across Scotland. ¹⁷³
272. Some businesses said that they found the Scottish Government's pipeline of investment valuable. However, others thought it would be more useful if it included greater detail.
273. CoST also made a recommendation in its case study of Scotland, which suggested the Scottish Government should systematically publish data firstly on projects above £5 million (the definition applied by Audit Scotland to major projects), and secondly on projects above £2 million (the threshold for advertising works contracts under the Procurement Reform (Scotland) Act 2014). ¹⁷⁴ Several others expressed a similar view, including the SEC Group (Scotland), SELECT and BSE Skills, who all suggested that the pipeline could be used to highlight supply chain opportunities.
274. Infrastructure investment and the pipeline of projects closely links with the sector's workforce capacity and the availability of skills. CITB told us that a more consistent level of infrastructure investment would create certainty for the sector and allow CITB to "support the pipeline of talent required to deliver the projects." ¹⁷⁵ Hew Edgar at the Royal Institute of Chartered Surveyors in Scotland said:
- ” we do not have a megaproject to look forward to. The talent and the labour force that were attracted to Scotland to work on the project have now left to seek employment elsewhere—that is what people do. It would be prudent for the Scottish Government to ensure that there is a pipeline of megaprojects or large-scale projects that will entice talent to come to Scotland to work, and also to remain because there is a project for people to move on to. ¹⁷⁶

275. However, Construction Scotland told us how megaprojects can cause resource and capacity issues, resulting in leakage of benefits outside of Scotland:

” There is a challenge in respect of the scale and type of investments that are coming forward. Because of the size of Scotland and the industry’s capacity, when a project such as the Aberdeen bypass is brought to the market, we end up having to import a substantial amount of resource in order to deliver the project in a short time. That does not provide a stable situation for the industry, because it has to pull in a lot of resources to do something very quickly, but those resources then dissipate. We really want to think about how we invest, so that we can deliver projects at the right scale against the right timeline, in order to maximise product factories’ employment in Scotland and make it more sustainable in the longer term. ¹⁷⁷

276. The lack of joined-up thinking and coordination was highlighted by Craig McLaren at the Royal Town Planning Institute:

” There is an issue with co-ordination. The national planning framework does not really talk to the infrastructure investment plan, to city region deals or to the regional transport partnerships. There is a disconnect, so we need to better join up how we plan our infrastructure, because we could use it in a creative way. If we did that, we could open up sites for housing that are viable and attractive to people...We need to think about whether the Scottish Government could take a stronger and much more proactive role, and how it could do so, or whether we could use other mechanisms to ensure that we build that resource. ¹⁷⁸

277. When asked about the disconnect between different areas of infrastructure planning, the Cabinet Secretary told us that he thought these areas would be more aligned in future as he has been bringing together ministers with an interest in the economy to share common aims. The Cabinet Secretary also said that there is a role for the Infrastructure Commission for Scotland to provide advice to the Government on the country's infrastructure needs.

278. The Committee notes how vital it is to businesses to be able to plan future work and manage their workforce, and welcomes the appointment of the Infrastructure Commission to advise on the strategic direction and long-term investment in Scotland's infrastructure. The co-ordination of Infrastructure Investment Plans with other sources of planning information, such as local government and housing plans should be a consideration in this strategic overview.

Land Asset Management

279. During the inquiry we were told that house building is a distinct subset of the construction industry, with its own challenges in terms of skills, supply and demand, and land asset management. We held a focused session to look at housing land supply, the housing land market and land banking.
280. The Scottish Government has a target to deliver at least 50,000 affordable homes by 2021, which is backed by over £3 billion of investment.¹⁷⁹ Meeting the new homes target relies on a number of factors, including the availability of land and sufficient workers.

Housing Land Audits (HLAs)

281. Local authorities are required to conduct an annual survey of the housing land supply, 'the Housing Land Audit', to monitor housing completions and update forecasts on future house building. They assess the adequacy of the housing land supply against policy requirements and inform planning, market and infrastructure decision-making. The two key functions of HLAs are to demonstrate that a 5-year effective land requirement is continuously met, and to provide a snapshot of available land at any point in time.
282. In January 2019, the Scottish Government published an assessment of housing land audits (HLAs) which found that the majority of current HLAs provide basic facts around a site's location, size, capacity, planning status, LDP reference, owner/developer and the historic/projected completions. However, there are inconsistencies in the inclusion of detail such as whether land is brownfield (previously developed) or greenfield, the proposed tenure of housing, not specifying types of housing, uncertain treatment of small sites and the availability of mapping. The research found:

” HLA inconsistency creates uncertainty in the planning and development system and the (unacceptable) possibility that applying the HLA methods used by one authority to another area would lead to different planning outcomes. Consistent, reliable housing land and development information is required by the planning system, developers, landowners, infrastructure providers, service providers and communities. This consistency could also assist in reducing delays in producing HLAs and resources expended on disputes.¹⁸⁰

283. The Committee asked the Minister for Local Government, Housing and Planning what work is being done to resolve the weaknesses identified in the 2019 assessment of Housing Land Audits. In response, the Minister told us:

” Following the Planning Bill we will take forward a review of national planning policy and prepare National Planning Framework 4. This, together with our work on digital transformation of the planning system, will provide an excellent opportunity to build on the research findings as we move to a new approach to planning for housing. In the meantime, the research has played a useful role by highlighting the importance of the HLA in the planning process and creating a better collective awareness of current practice.¹⁸¹

Housing land supply

284. The Committee heard differing views on the availability of land for house building. In 2016, Nathaniel Lichfield and Partners (NLP) noted a growing problem with the ability of allocated effective housing land to deliver on the identified housing needs of Scotland's seven cities. It said this would constrain economic growth, raise house prices and impact on the sustainability of Scotland's communities. NLP concluded that the current system is not working for a number of reasons:
- Not enough land is being identified;
 - Legacy sites that have not been delivered are simply being rolled forward from one HLA to the next without deliverability being properly examined;
 - A significant number of small sites are being relied upon, including in poorer market locations, and are less likely to be of interest to private developers;
 - Many cities are overly reliant on sites in areas with poorer market strength. ¹⁸²
285. For Craig McLaren at the Royal Town Planning Institute some important changes could be made to make HLAs more effective:
- ” HLAs are useful tools, but they could be even more useful. Three issues with HLAs have already been mentioned. One is about achieving consistency around Scotland in how we do them, so that we can measure across different areas. The second issue is that HLAs are a bit static...Another key issue is the need to be more transparent in how HLAs are applied by both sides—if I can use the term “sides”. It is about trying to ensure that rigour is brought in, so that the buildability—if that is a word—of sites can be seen. We need an honest discussion about that, so that we know where we stand. ¹⁸³
286. The Scottish Vacant and Derelict Land Survey (SVDLS) is a data collection undertaken to establish the extent and state of vacant and derelict land in Scotland. The survey has been operating since 1988, and is managed by the Scottish Government Communities Analysis Division. The data is sourced from local authorities and the Loch Lomond and Trossachs National Park Authority. Most authorities submit data annually with a Survey base date of 31st March. ¹⁸⁴
287. Scottish planning policy states that the re-use or re-development of brownfield land should be considered first before new development takes place on greenfield sites. The 2018 Survey showed that the total amount of derelict and urban vacant land in Scotland had decreased by 716 hectares (6%) in the latest year, from 11,753 hectares in 2017 to 11,037 hectares in 2018. ¹⁸⁵
288. Homes for Scotland told us that the vacant and derelict land register is a useful tool with which to start analysing why brownfield sites are not coming forward for development. Nicola Barclay said:

” We need to look at the register over a number of years to see whether sites are sitting on there for ever or are coming on to it and then going off again...A lot of sites on the register are rural and have all sorts of issues—for example, old opencast mines... It is great that a vacant and derelict land task force has been set up, but let us use that task force to analyse down to the granular level and work out why sites are not coming forward. ¹⁸⁶

289. A Task Force has been set-up by the Scottish Land Commission and comprises of senior decision-makers from relevant regulatory agencies, private companies and third sector organisations. Underpinning the work of the task-force is a programme of research and analysis to help better understand the nature of the challenge, identify potential changes to policy and practice, share experience of successful projects and launch a vacant and derelict land tool kit. ¹⁸⁷

290. Shona Glenn of the Scottish Land Commission told us:

” We have focused a lot on sticks, but we need to think about the carrots. We need to change the attitude towards vacant brownfield land, so that it is seen as more of an opportunity and people want to develop on it. House builders are in the industry to make money, so they will not go to places where they cannot make money. However, if the public sector were to take a more interventionist, public interest-led approach to development by making such propositions attractive to the development industry, that might change the way in which we look at brownfield sites. Such development is a big opportunity for Scotland, but that opportunity needs to be grasped at the top level of Government. ¹⁸⁸

291. After the Committee had concluded its evidence-taking for this inquiry, the Scottish Land Commission published a report advising Scottish Ministers on options for land value uplift capture. ¹⁸⁹ This advice made 18 recommendations based on the Scottish Land Commission and Scottish Futures Trust's joint report on enabling infrastructure. ¹⁹⁰ The advice recommends initial steps towards improving the way in which development land value is reinvested to support viable high-quality places. It also said a more collaborative approach to development, in which the public and private sectors share risks and reward, should be a long-term aim.

Land Banking

292. The UK Government commissioned Letwin Review looked at the issue of land banking and explored the gap between planning permissions granted and housing completions. The review did not find that house developers were guilty of land banking, but did find that:

” the homogeneity of the types and tenures of the homes on offer on these sites, and the limits on the rate at which the market will absorb such homogenous products, are the fundamental drivers of the slow rate of build out. ¹⁹¹

293. There is no explicit research in relation to land banking in Scotland. The Scottish Land Commission highlighted that some modelling work was done in England to look at the volume of planning permissions needed to maintain a development pipeline. This research found that there was a shortfall in planning permissions and the Scottish Land Commission is in the process of conducting similar research in

Scotland, although said that they would be surprised if their "work were to find anything terribly different." Scottish Land Commission also said that the research conducted in England showed that 55 per cent of all planning permissions were not held by developers. They have also commissioned research in this area as:

” We are hearing anecdotes from local authorities...stories about all the potential land for housing development being held by one developer. We hear those stories, but we need to understand why that is happening, who is holding the land and what can be done to help to bring that land into use more quickly. Until we have answers to those questions and we understand the issue, it will be very difficult to reach solutions. ¹⁹²

294. Ian Rodgers of Scottish Decorators Federation said:

” Most house developers—we call them house builders, but they are actually developers who rely on the supply chain to build the houses—have land banks, and they wait for them to increase in value before they build houses. ¹⁹³

295. In relation to land banking, Hew Edgar from RICS Scotland commented:

” There is a fine line between land banking and a land supply pipeline. Ultimately, developers have to know what their next project is going to be—where and what they are going to build next—and one person's land banking could be another person's pipeline. We need to be careful about that. It might be prudent to look at planning permissions, investigating where they are and seeing what is in development plans and what is being held up and why. ¹⁹⁴

296. Land banking was also discussed during our focus groups with businesses. One participant told us that they had no doubt that some businesses are guilty of land banking. They felt it was the only way for small housing companies to be able to grow. However, others did not think that land banking was an issue in the housebuilding industry. There was also discussion around the need for restrictions on the volume of land held at any one time or the timescale for seeking planning permission. Five years was mentioned as a possible timescale. Others felt that the problem was with the timescales for obtaining building consent, not with speculative land purchase.

Housing supply

297. Homes for Scotland told us that, in terms of house building, Scotland has not recovered to pre-recession levels of construction. In Nicola Barclay's opinion, Scottish planning policy is prohibiting housing supply. The market in England has recovered quicker due to the national planning performance framework (NPF) introduced in 2012. ¹⁹⁵ Homes for Scotland believe that the NPF clearly sets out how councils must allocate sufficient developable and deliverable sites for homes rather than simply having a plan. Nicola Woodward at Lichfields UK agreed that deliverability and viability tests are much stronger in England. ¹⁹⁶ Both witnesses agreed that the main difference is planning policy, not legislation and many issues could be dealt with under the current legislation. Similar scrutiny of HLAs in Scotland would ensure that sites could come forward.

298. Witnesses also noted friction between local levels and central government, in terms of meeting housing targets. Nicola Barclay from Homes for Scotland told us:

” The message from the Scottish Government that it wants to deliver these 50,000 affordable homes is not always filtering down to those local planning committees. There is still resistance at a local level to any housing, regardless of the tenure, so if we do not reach the 50,000 target, it will not be for lack of trying. I definitely think that there is a really strong push from the wider industry to get them built. ¹⁹⁷

299. Nicola Barclay from Homes for Scotland told us that Homes England have played an active role in "invigorating and supporting homebuilding for SMEs and large-scale builders across the board" but that role is, in her opinion, missing in Scotland. ¹⁹⁸ She questioned whether there would be merit in having a similar agency in Scotland:

” We could look at what Homes England is doing. It is a fairly recent reincarnation, but it is seeing huge success. It is acting in various ways, such as financing small and medium-sized builders and developing for itself: procuring land, assembling it and master planning it. It is partnering with the private sector and acting as a facilitator. It is the go-to body and we do not have an equivalent in Scotland. ¹⁹⁹

300. The Scottish Government has a target to deliver at least 50,000 affordable homes by 2021, yet we were told by housebuilders that access to land is a challenge for the construction sector. The availability of land impacts the supply of housing and also house prices. The Committee notes that the Scottish Government will be preparing a National Planning Framework 4 (NPF4) and asks it to consider means by which land assets can be better deployed to support the NPF4 and the need to build more homes.

Innovation

301. In 2016, a UK wide construction industry report was published, which concluded that the construction sector must 'modernise or die'. The Farmer Review of the UK Construction Labour Model suggested that the UK's construction industry faces 'inexorable decline' unless long-standing problems are addressed. In particular, the review highlighted:
- the sector's dysfunctional training model;
 - its lack of innovation and collaboration and
 - its non-existent research and development (R&D) culture.²⁰⁰
302. We were told during evidence that there is a good awareness of these long-standing challenges within the sector. Professor Hairstans at Napier University told us that:
- ” we have had the Latham report, the Egan report, the Barker report and the construction strategy-there is a whole back catalogue of work and research that has consistently made it clear that the construction sector is not performing and it must think more innovatively about the approach that it takes.²⁰¹
303. The construction industry as a whole is a slow adopter of new techniques, materials and technologies; in addition traditional building methodologies rely upon traditional skilled and unskilled trades people. Furthermore, the 'subcontractor' body is very disparate and people are, at the trade level, largely self-employed and therefore difficult to quickly change and scale at a speed that has a real impact. It is therefore a slow process of cultural adaptation.
304. Commonly referenced drivers for innovation include leadership and management, strategic vision, collaboration and an innovation culture that embraces change. In this inquiry we were told that innovation closely links to other areas of discussion such as access to finance, skills and procurement.
305. Several witnesses highlighted close links between problems with procurement and a lack of innovation. CSIC Chief Executive Stephen Good emphasised the important role of the client. If a client procures in a way that focuses on low cost it is unlikely to encourage innovation.²⁰²
306. Construction Scotland noted that the industry has a poor record in supporting national or international innovation initiatives or research. They believe that this is further compounded by the inadequate margins that contractors and consultants make on the risky projects which provide little scope for R&D spending. This means that innovation in product can generally only be initiated by original equipment manufacturers or volume house or accommodation builders, who have control over their product from concept to sale.²⁰³
307. We were told that there can be a reluctance in the industry to share ideas and collaborate, which is needed for the sector to progress. Alan Caldwell from the Robertson Group said:

” The idea that we need to get over is that, by collaborating, we are not giving away our crown jewels but are getting a competitive advantage, because we are in a very competitive industry. ²⁰⁴

308. From an academic standpoint, we were told that publishing findings is the aim; however this does not always align with commercial sensitivities or industry priorities. Professor Hairstans said:

” There is certainly scope to improve on that, and for the industry to understand the value in our doing so. ²⁰⁵

309. The majority of respondents (75%) to our online survey believed that Scotland's construction sector was not doing enough to take advantage of ongoing technological advances. All respondents to the survey were asked to identify the main barriers to innovation activity in the construction sector, with availability of finance, excessive perceived economic risk, and lack of qualified personnel cited as the top three barriers to construction innovation. ²⁰⁶

310. The CSIC stressed the importance of the client in seeking innovative solutions. For Stephen Good, innovation must be built into tenders with the client and industry working together to drive innovation. This must also involve much earlier contractor involvement and engagement with the whole supply chain. ²⁰⁷

311. There is a clear and recognised link between management quality and levels of innovation. The adoption of new technologies and innovative ways of working are key functions of any sector's managers. During a Committee visit, off-site manufacturers CCG told us that stability and ambition of the company's leadership was significant to the business ethos. This has helped the business embrace change and innovation. ²⁰⁸

312. Innovation was highlighted as one of the key ways to tackle the construction sector's historical productivity challenge. BuildSafe, a digital platform company working in the industry, stated that construction is one of the least digitised industries in the world, "while the vast majority of industries have benefited from improvements using technology, the construction industry has remained in the stone age." ²⁰⁹

313. The Committee found evidence of innovation in areas such as digital scanning, drones, VR and modular construction, but this was not typical of the whole sector. Indeed, when we spoke to apprentices they were generally of the view that the impact of technology and innovation in construction industries is minimal.

Disruption

314. Stephen Good said that it is the CSIC's job "to help the industry to disrupt itself before it gets disrupted by others." He said that the future was positive for businesses who embraced change, but noted that organisations such as Facebook, Google and Airbnb are investing in pre-fabricated manufacturing companies, so it is important to be proactive. ²¹⁰

315. Galliford Try Plc stated:

- ” We don't see a great deal of change within the next 2 years. However, we are predicting a step change with the next 5-6 years, where higher risk and the more repetitive construction techniques will be dominated by mechanical as opposed to people related methods. ²¹¹

Off-site construction

316. Off-site construction is a catch-all phrase used to describe a range of construction activities that involve bringing together construction processes, components, elements or modules in a factory before installation into their final location. Benefits include faster, more reliable delivery, reduced costs, improved workplace safety, and reduced environmental damage. ²¹² Working in a controlled factory environment means that work is less impacted by weather conditions, and there are overall benefits to productivity. Professor Hairstans at Napier University said that "Scotland is exceptionally well positioned to capitalise" on off-site industrialised construction. ²¹³
317. Committee members visited CCG's 130,000 ft² off-site facility, with a manufacturing capability of 3,000 buildings per annum. This production hub offers flexible timber frame engineering solutions produced in a controlled factory environment. CCG told us that productivity gains in the factory deliver on average 20% overall programme benefits. ²¹⁴



Source: Committee Members visited CCG and CSIC

318. CCG Group told us that external factors can act as a barrier to innovation and modular construction. As an industry leader in off-site manufacture, CCG highlighted that building standards currently vary across Scotland with the Edinburgh standard differing from the Glasgow standard, for example. The Committee was told that standardisation of specification and components at a

national level would improve innovation and productivity. CCG felt that local authorities could do more to facilitate, rather than constrain, innovation.²¹⁵

319. CCG also noted some resistance among local authorities to new ideas and materials. It has developed lightweight acrylic brick cladding that can be applied to the Kit System in the factory. However, it has seen limited permissible use by local authorities, who prefer the traditional clay brick aesthetic which must be constructed on site. Focus group participants agreed that there would be distrust of new technologies, until their longevity was proven. They said planners were conservative in their approach to innovation.²¹⁶

CCG are developing lightweight acrylic brick cladding that looks like traditional clay bricks



Source: Committee members visited CCG's off-site manufacturing facility

320. Simon Rawlinson of the CLC suggested a way of encouraging the use of off-site manufacturing:

” In the 2017 UK budget, there was an announcement about a presumption in favour of the use of off-site manufacture by five Government departments, including the ministries of justice, transport, health and defence. The Scottish Government could follow up with a similar presumption on a similar way of delivering.²¹⁷

321. The Committee is concerned by evidence that suggests innovation and off-site manufacture could be stifled by planning regulations or resistance to change. We encourage local authorities to embrace innovation in procurement decisions and to allow pilot schemes to test the practicality of and public reaction to new building methods and products.

Construction Scotland Innovation Centre

322. The Construction Scotland Innovation Centre (CSIC) was launched in October 2014 and is one of eight “industry led and demand driven” Innovation Centres. It is supported by Scottish Funding Council (SFC), Scottish Enterprise, Highlands & Islands Enterprise and 14 Scottish university partners, and is one of the key interventions that the Scottish Government has made to increase innovation in the sector.
323. CSIC, hosted by Edinburgh Napier University, was awarded £7.5m from SFC in Phase 1 covering the period 2013-18. It was also awarded capital funding of £1.8m to equip its new Innovation Factory making the SFC total contribution £9.3m. CSIC has now entered its second phase of funding.
324. CSIC recently completed a multi-partner appraisal process in order to secure partner support for its Phase 2 business plan. The Scottish Funding Council stated ‘owing to the success of Phase 1 and the scale of opportunity in Phase 2, partners have agreed to fund Phase 2 to a total value of £10.98 million, comprising £7.98 million from SFC, £2.5 million from SE and £0.5 million from HIE’.
325. There seems to be varying levels of awareness of CSIC with respondents to our survey generally showing greater awareness of the CSIC and its role, than among witnesses who appeared before the Committee. When we raised this varied awareness during the Committee's visit to the innovation centre, we were told that CSIC had worked with over 1,000 businesses, but with over 450,000 businesses working in the sector, the CSIC's reach remained relatively small and therefore the lack of awareness was unsurprising.²¹⁸
326. Stephen Good, Chief Executive of the CSIC told us that it engages regularly with its 6,500 database contacts, but acknowledged that with a limited budget of £1.5 million a year, it could be challenging to engage more broadly. He felt there was a role for trade bodies and professional organisations in cascading information to businesses:
- ” Perhaps the Committee will not mind my taking this opportunity to make a call to the trade and professional federations in Scotland that should, if they do not already, know about us. We would welcome the opportunity to engage with those bodies, because by going to them we can reach their members much more easily.²¹⁹



Source: Members visited the Construction Scotland Innovation Centre

327. The Scottish Building Federation welcomed the existence of the CSIC but would like to see better alignment with the needs and priorities of the industry.
328. The Cabinet Secretary told the Committee that:
- ” the key difference that the creation of the centre has made is that we are collaborating more and bringing people in the sector together more, instead of allowing them to invent things in isolation. They are now sharing these things. 220
329. However, evidence to the Committee suggested that there are examples of collaboration, but this is not necessarily the norm, even within CSIC.
330. Construction Scotland expressed disappointment that there is no mechanism to bring existing construction related research to the attention of the wider industry - for example, via a portal or through regular bulletins. They felt that this has been compounded by the commercial nature of the projects undertaken by CSIC for individual companies and consortia, which prevents the dissemination of new ideas to the industry at large. Construction Scotland told us that the CSIC should focus on the "transformational" research needs of the overall industry. 221
331. In fact, this was just one area where there seemed to be friction between Construction Scotland and the CSIC. Confusingly, despite their shared name (and until recently) shared online presence, the two organisations are quite separate. We were told that initially the Innovation Centre was designed to work "hand in glove" with the industry leadership group. Stephen Good, Chief Executive of the CSIC said the industry leadership group would have the "incredibly tough job" of uniting a disparate industry and would be interlinked with the innovation centre under a "united brand, with a single web platform. The "work would be driven by the leadership group and the innovation work would be plugged into the academic base." 222

332. However, it seemed to the Committee that this relationship, which was described at the outset, had not materialised in practice. We were told that the relationship between Construction Scotland and the CSIC had "potential to grow into something really powerful,"²²³ but got the impression that this has yet to be achieved.

333. The Committee welcomed the opportunity to visit the Construction Scotland Innovation Centre during this inquiry and notes its progress to date in engaging with the sector and supporting innovative projects. The Committee acknowledges that given the broad-ranging nature of the sector, engagement with all industries poses challenges. However, the Committee found a lack of awareness of CSIC's activities among businesses. We believe that engagement with trade bodies and professional organisations is crucial to raising awareness and disseminating research, industry developments and new ideas.

Industry leadership and policy landscape

334. The Committee also took evidence from the Construction Scotland Industry Leadership Group (ILG) on its role, remit, strategic direction and relationship with the Construction Scotland Innovation Centre.

335. Construction Scotland stated that they are recognised by the Scottish Government as the voice of the industry in Scotland:

” allowing Construction Scotland to communicate and engage with the Scottish Government Ministers, Departments and public sector bodies in responding to and articulating the priorities and needs of the industry as a whole; and enabling the growth of a sustainable, profitable and innovative industry at the heart of Scotland’s economy.²²⁴

336. However, the Committee found a lack of tangible outcomes from Construction Scotland's 2013-17 strategy. When this was raised during evidence, the industry leadership group acknowledged that, "it would be fair to say that we have spent a lot of time driving the structure and the need to get consensus"²²⁵. The most significant outcome from the previous 5 years was the establishment of the innovation centre, although the industry leadership group cited a number of other areas where they had been "extremely active in providing industry views on the best way forward."²²⁶

337. Construction Scotland's new Scottish Construction Industry Strategy 2019-22 was launched in November 2018 and has six strategic priorities: procurement, skills, quality & standards, planning & building regulations, growth opportunities, and productivity & innovation. The priorities outlined in the Strategy are due to be addressed by an Action Plan, which is still in draft form. It is also therefore difficult to assess whether the new Strategy will have any more impact than the previous one.

338. In evidence to the Committee, Ian Rogers of the Scottish Decorators Federation highlighted a lack of awareness around Construction Scotland from within the industry:

” As far as the industry is concerned, Construction Scotland is an anonymous body. If you went and asked any of my members who Construction Scotland is, they would have difficulty in telling you. ²²⁷

339. We were unsurprised to hear that there is a lack of awareness within the industry given that during the course of the inquiry, Construction Scotland had no online presence. Web searches failed to return any information on the role, remit, structures or membership of the ILG and the Committee wrote to the ILG to seek clarity on its role and structure. In response we were told that the webpages were switched off in September 2018. Construction Scotland wrote:

” to avoid confusion, we need to separate out the Construction Scotland webpages from those of the Innovation Centre and we are currently working on plans to launch a new website that will allow us to improve our key messaging and to have a flexible structure for content such as bios of our ILG members, strategies and governance documents, minutes of our meetings, action plan updates and links to useful third party content. We expect to have the new site up and running by no later than the 30th July. ²²⁸

340. The Cabinet Secretary acknowledged that a closer relationship with Construction Scotland, where Construction Scotland cascaded information in support streams to the whole sector, and then reported back to Government, would be helpful. ²²⁹

341. Throughout the inquiry witnesses stressed the importance of strategic leadership if we are to see a more collaborative, innovative, diverse and productive construction sector in the future. The Committee found no lack of strategies or vision when it comes to the future of the construction sector – the Construction 2025 Strategy, the ‘Modernise or Die’ Farmer Review, the Industrial Strategy construction sector deal and the Scottish Construction Industry 2019-2022, to name but a few. However, the ‘leadership’ aspect of the Construction Scotland industry leadership group was not immediately obvious to the Committee.

342. Construction Scotland aims to ensure effective communication and engagement across the sector, but the Committee found a lack of awareness of the ILG among Scotland's construction businesses. In particular, Industry Leadership Groups operating in other areas (such as food and drink) are perceived to have a more proactive role in representing and engaging with industry.

343. The Committee notes that it is Construction Scotland's intention to re-establish its online presence by July 2019 and believes that this should be considered a priority. The Committee found it difficult to find any information about the ILG's role, remit, membership or activities, which it found disappointing. We urge the

ILG to increase its online presence to improve its engagement with businesses as an urgent first step.

344. The Committee notes the publication of Construction Scotland's new strategy and welcomes the ILG's consultation with businesses on its implementation. The Committee recommends that the Construction Scotland ILG strengthens its engagement with industry and extends its reach to more construction sector businesses. In turn, the Committee urges the Scottish Government to work with the ILG on its Action Plan priorities once these have been published.

Construction Sector Deal

345. The UK Government announced its UK wide Construction Sector Deal at the end of last year as part of its Industrial Strategy white paper. The Sector Deal will see £170m of government investment over three years to help prepare the UK construction sector for the future, helping companies build better performing buildings and infrastructure at a greater speed and reduced cost, through better adoption of digital and manufacturing technologies. Around £60m of this investment will be allocated under the Transforming Construction Challenge Fund, through a competitive process.
346. The Construction Plant Hire Association believe that the Construction Sector Deal and the Industrial Strategy Challenge Fund are welcome initiatives to address issues in skills, exports and innovation, but state that it is important the measures and steps are implemented. They believe that the emphasis of the Construction Sector Deal is on industry, as much as it is on government, in coming up with the solutions needed to drive construction ahead.²³⁰
347. We heard from the Construction Leadership Council's Simon Rawlinson:
- ” I will make some observations from the perspective of the Construction Leadership Council and the sector deal that was published in July 2018, which applies UK-wide. There are certain clues in that sector deal. If the Scottish Government could follow those in setting its policy, that would create some momentum around common themes. There are three important themes to pick up on, most of which rely on collaboration. First, there is a collaborative innovation group called i3P—the infrastructure industry innovation platform—which brings together clients, contractors and designers to co-fund innovation. At the moment, it is working on understanding what those common opportunities might be. Potentially, that could bring together research and development funding that could amount to many tens of millions of pounds.²³¹
348. The Cabinet Secretary felt that devolved administrations were often considered as an afterthought in sector deals and expressed his disappointment in that, but welcomed the content of the strategy.

349. The Committee encourages continued meaningful engagement between the UK and Scottish Governments on the Industrial Strategy and the Construction Sector Deal.

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350. The importance of the construction sector should not be underestimated. A thriving construction sector is vital to our built environment and economy. In this inquiry, we set out to understand the characteristics and challenges that embody the construction industry in Scotland. By taking a whole-sector approach, we sought to look at how these challenges could be addressed for the sector to realise its potential contribution to a productive and inclusive economy.
351. There are longstanding challenges within the industry and these have been highlighted by the Committee. We believe it is time for industry to embed best practice and take ownership for driving change. We have heard that there is innovative work being undertaken around off-site manufacture and new skills frameworks, but industry-wide more leadership is needed on collaboration and coordination. Without such leadership, enduring challenges around procurement, access to finance, innovation and the sector's cultural image continue to act as barriers to progress.
352. The Scottish Government must continue to work together with industry to ensure that improvement is made in these key areas. Only with leadership, collaboration and cultural change, will the construction sector be able to realise its full potential contribution to Scotland's economy.

Annexe A - Minutes of Meeting

1st Meeting, 2019, Tuesday 8 January 2019

Construction and Scotland's Economy (in private): The Committee considered its approach to engagement for the inquiry.

5th Meeting, 2019, Tuesday 5 February 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- Simon Rawlinson, Partner, Arcadis representing the Construction Leadership Council;
- Hew Edgar, Interim Head of UK Policy, RICS in Scotland;
- Ian Rogers, Chief Executive, Scottish Decorators Federation;
- Steven Dillon, Regional Coordinating Officer - Unite Construction Allied Trades and Technicians, Unite the Union;
- Dr Stuart McIntyre, Fraser of Allander Institute;
- John McLaren, Scottish Trends.

3. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

6th Meeting, 2019, Tuesday 19 February 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- Nicola Barclay, Chief Executive, Homes for Scotland;
- Shona Glenn, Head of Policy & Research – land, Scottish Land Commission;
- Craig McLaren, Director of Scotland and Ireland, Royal Town Planning Institute (RTPI);
- Nicola Woodward, Senior Director, Lichfields UK.

4. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

7th Meeting, 2019, Tuesday 26 February 2019

4. Construction and Scotland's Economy: The Committee took evidence from—

- Robin Crawford, Chair of the Review of Scottish Public Sector Procurement in Construction;
- Gillian Cameron, Programme Manager, Supplier Development Programme;
- Alan Wilson, National Executive Officer, SEC Group Scotland;

- Jeanette MacIntyre, Managing Director, Indeglas Ltd.

7. Construction and Scotland's Economy: The Committee took evidence from—

- Fiona Harper, Director, BSE Skills Ltd;
- Ian Hughes, Partnerships Director – Scotland, Construction Industry Training Board;
- Fiona Stewart, Head of National Training Programmes, Skills Development Scotland;
- Professor Sean Smith, Director of Sustainable Construction, Napier University;
- Maureen Douglas, HR Director, Forster Group.

9. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

8th Meeting, Tuesday 5 March 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- David Watson, Carpentry and Joinery, Liam Clark, Carpentry and Joinery, and Johnathon Scott, Carpentry and Joinery, New College Lanarkshire;
- Jessica Morris, Construction and the Built Environment, and Daniel McKelvie, Construction and the Built Environment, Heriot Watt University;
- Asher Humphrey-Martin, Architectural Technology, Charlie-Jade Combe, Painting and Decorating, Ryan Patterson, Plastering, and Elliot Ruthven, Plastering, Edinburgh College;
- Douglas Morrison, Associate Director of Innovation and STEM, City of Glasgow College;
- Lorna Hamilton, Member of the Scotland Board, Association of Women in Property;
- Scott Warden, Head of Faculty for Engineering and Built Environment, Edinburgh College.

6. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

9th Meeting, Tuesday 12 March 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- Alan Caldwell, Strategic Director, Robertson Group;
- Professor Robert Hairstans, Head of the Centre for Offsite Construction and Innovative Structures (COCIS), Napier University;
- Stephen Good, Chief Executive, Construction Scotland Innovation Centre.

3. Construction and Scotland's Economy (in private): The Committee agreed to defer consideration of this agenda item to a future meeting.

10th Meeting, Tuesday 19 March 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- Gordon Nelson, Director, Federation of Master Builders Scotland;
- Bruce Dickson, Regional Director, BAM Construct UK;
- Cara Hilton, Policy and Public Affairs Manager, Civil Engineering Contractors Association - Scotland;
- Jim Young, Chair, Institute of Civil Engineers Scotland.

Tom Mason declared that he was a member of the Chartered Institute of Civil Engineers.

4. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

11th Meeting, Tuesday 26 March 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- Soren Kirk Jensen, Senior Policy and Research Advisor, CoST – the Infrastructure Transparency Initiative;
- Peter Reekie, Chief Executive, Scottish Futures Trust;
- Mark Dickson, Director of Capital Investment, Scottish Water;
- David Stewart, Policy Lead, Scottish Federation of Housing Associations;
- Graeme Dodds, Director of Operations, Jacobs;
- Shona Frame, Partner, CMS Cameron McKenna Nabarro Olswang LLP;
- Gavin Paton, Partner, Burness Paull LLP;
- Stephen Slessor, Operations Director, Infrastructure Scotland, Morrison Construction.

4. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

12th Meeting, Tuesday 2 April 2019

2. Construction and Scotland's Economy: The Committee took evidence from—

- Ken Gillespie, Chair, Ann Allen MBE, Member, and Ron Fraser, Executive Director, Construction Scotland Industry Leadership Group.

3. Construction and Scotland's Economy (in private): The Committee considered the evidence heard at today's meeting.

14th Meeting, Tuesday 30 April 2019

4. Construction and Scotland's Economy: The Committee took evidence

from—

- Derek Mackay, Cabinet Secretary for Finance, Economy and Fair Work, and Scott Bell, Head of Procurement Development and Construction Review Division, Scottish Government.

7. Construction and Scotland's Economy (in private):

The Committee consider the evidence heard at today's meeting.

19th Meeting, 2019, Tuesday 4 June 2019

Construction and Scotland's Economy (in private): The Committee considered a draft report, various changes were agreed to, and the Committee agreed to consider a revised draft in private at a future meeting

20th Meeting, 2019, Tuesday 11 June 2019

Construction and Scotland's Economy (in private): The Committee considered a draft report, various changes were agreed to, and the Committee agreed to consider a revised draft in private at a future meeting.

21st Meeting, 2019, Tuesday 18 June 2019

Construction and Scotland's Economy (in private): The Committee considered and agreed a revised draft report.

Annexe B - Written Evidence

Written Submissions to the [Call for Views](#)

- [Roddy Cormack](#)
- [IndiNature](#)
- [Construction Leadership Council](#)
- [BuildSafe](#)
- [Stone Federation GB](#)
- [Scottish Traditional Building Forum](#)
- [Whole Life Consultants Ltd and University of Dundee](#)
- [4-consulting](#)
- [Unite the Union](#)
- [Sandy Hutcheson](#)
- [NFRS Scotland](#)
- [David Christie](#)
- [Scottish Decorators' Federation](#)
- [Scottish Environment LINK](#)
- [CECA Scotland](#)
- [Federation of Master Builders](#)
- [Shetland Islands Council](#)
- [Glasgow City Council](#)
- [Aberdeenshire Council](#)
- [Supplier Development Programme](#)
- [Robertson Group](#)
- [Scottish Funding Council](#)
- [Scottish Council for Development and Industry](#)
- [Construction Scotland Innovation Centre](#)
- [Interface](#)
- [Scottish Contractors Group](#)

- [BAM Construction Ltd](#)
- [Scottish Federation of Housing Associations](#)
- [Cross-Party Group on Construction](#)
- [Pert-Bruce Construction Ltd](#)
- [Glasgow Caledonian University](#)
- [Scottish Natural Heritage](#)
- [Construction Scotland](#)
- [Health and Safety Executive Scotland](#)
- [Scottish and Northern Ireland Plumbing Employers Federation](#)
- [Historic Environment Scotland](#)
- [Construction Industry Training Board](#)
- [ESP Scotland](#)
- [Construction Plant-hire Association](#)
- [Galliford Try](#)
- [Scottish Building Federation](#)
- [South Lanarkshire Council](#)
- [Specialist Engineering Contractors' Group \(Scotland\)](#)
- [Homes for Scotland](#)
- [Highlands and Islands Enterprise \(HIE\)](#)
- [Association of Women in Property Scotland Board](#)
- [Skills Development Scotland](#)
- [Scottish Property Federation](#)
- [Royal Town Planning Institute Scotland](#)
- [SELECT](#)
- [BSE Skills](#)
- [Institution of Structural Engineers](#)
- [University of Glasgow](#)
- [Royal Institution of Chartered Surveyors](#)
- [Dallman Johnstone](#)

- [Institution of Civil Engineers](#)
- [BAM Nuttall Ltd](#)

Supplementary Evidence

- [Scottish Decorators' Federation](#)
- [Scottish Decorators' Federation - Diversity in Construction](#)
- [Unite Scotland](#)
- [ICE Scotland](#)
- [Len Bunton](#)
- [Construction Scotland](#)
- [Construction Scotland](#)

Additional Submissions

- [Len Bunton](#)
- [Scottish Building Federation](#)
- [Royal Incorporation of Architects in Scotland \(RIAS\)](#)
- [CCG \(Scotland\) Ltd](#)
- [5 Scottish Hub companies](#)

The UK Collaborative Centre for Housing Evidence submitted their report:

- [How does the land supply system affect the business of UK speculative housebuilding?](#)

The Infrastructure Transparency Initiative (CoST) submitted their report on Infrastructure Governance:

- [Infrastructure Governance in Scotland](#)

GenAnalytics submitted their report on Diversity in the Construction Supply Chain:

- [Diversity in the Construction Supply Chain](#)

On 3 April the Committee wrote to stakeholders to seek their views on how the Procurement Reform Act has influenced the procurement of recent projects.

- [Letter to stakeholders](#)
- [Moray Council](#)
- [Perth and Kinross Council](#)
- [Scotland Excel](#)

- [Scottish Prison Service](#)
- [Transport Scotland](#)
- [NHS Forth Valley](#)
- [NHS Greater Glasgow and Clyde](#)

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Annexe C - Visits and Events

On 18 February 2019, Committee members met with CCG and the Construction Scotland Innovation Centre (CSIC) and visited CCG's off-site manufacturing facility and CSIC's innovation factory.

- [Note of meeting with CCG](#)
- [CCG presentation slides](#)
- [Note of meeting with Construction Scotland Innovation Centre \(CSIC\)](#)
- [CSIC presentation slides](#)

The Committee also held 2 focus groups with small and medium-sized construction businesses.

- [Focus Group note](#)

As part of National Apprenticeship Week, Committee Members visited Edinburgh College on 4 March 2019 to talk to apprentices and staff about the construction opportunities for young people:

- [Note of Edinburgh College meeting](#)

On 12 March 2019 we visited City Building Ltd:

- [Note of meeting with City Building](#)

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- 1 Construction Scotland, written submission
- 2 Fraser of Allander Institute blog, Today's GDP revisions - significant upward revision to Scotland's growth(15 August 2018)
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- 5 Scottish Government, <https://www.gov.scot/policies/taxes/vat/> [accessed 4 June 2019]
- 6 EEFW Committee, Official Report, 5 February 2019, col 31-33
- 7 EEFW Committee, Official Report, 30 April 2019, col 7
- 8 3rd Report 2018 (Session 5): How to Make Data Count: Improving the quality and coverage of our economic statistics
- 9 5th Report 2018 (Session 5): Scotland's Economic Performance, p17
- 10 5th Report 2018 (Session 5): Scotland's Economic Performance, p51-52
- 11 McKinsey Global Institute, Reinventing Construction: a route to higher productivity (February 2017)
- 12 EEFW Committee, Official Report, 5 February 2019, col 34
- 13 EEFW Committee, Official Report, 30 April 2019, col 12
- 14 5th Report 2018 (Session 5): Scotland's Economic Performance, p52
- 15 Scottish Government response to the Economy, Jobs and Fair Work Committee's report, Scotland's Economic Performance
- 16 Federation of Master Builders, written evidence
- 17 EEFW Committee, Official Report, 19 March 2019, col 27
- 18 South Lanarkshire, written evidence
- 19 Scottish Property Federation, written evidence
- 20 EEFW Committee, Official Report, 2 April 2019, col 17
- 21 EEFW Committee, Official Report, 19 February 2019, col 17
- 22 EEFW Committee, Official Report, 30 April 2019, col 9
- 23 Specialist Engineering Contractor's Group Scotland (SECGS), written evidence
- 24 EEFW Committee, Official Report, 2 April 2019, col 19
- 25 Roddy Cormack, written evidence
- 26 online survey response

- 27 Focus group note
- 28 EEFW Committee, Official Report, 2 April 2019, col 19-20
- 29 Len Bunton, written evidence
- 30 Scottish Construction Now, <https://www.scottishconstructionnow.com/article/scottish-government-urged-to-appoint-construction-regulator-to-protect-smes-on-late-payment> [accessed June 2019]
- 31 Len Bunton, written evidence
- 32 Roddy Cormack, written evidence
- 33 EEFW Committee, Official Report, 5 February 2019, col 10-11
- 34 Construction Scotland, written evidence
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- 36 UK Government closed consultation: Retention payments in the construction industry: <https://www.gov.uk/government/consultations/retention-payments-in-the-construction-industry> [accessed 22 May 2019]
- 37 Scottish Government blog (18 December 2018): Improving Construction Industry Payments: <https://blogs.gov.scot/scotlands-economy/2018/12/18/improving-construction-industry-payments/>
- 38 Pert Bruce Construction, written evidence
- 39 SEC Group Scotland, written evidence
- 40 EEFW Committee, Official Report, 26 March 2019, col 28
- 41 EEFW Committee, Official Report, 26 March 2019, col 29
- 42 EEFW Committee, Official Report, 26 March 2019, col 30
- 43 EEFW Committee, Official Report, 26 March 2019, col 30
- 44 EEFW Committee, Official Report, 2 April 2019, col 17-18
- 45 EEFW Committee, Official Report, 30 April 2019, col 7-8
- 46 Scottish Government, supplementary evidence
- 47 Glasgow City Council, written evidence
- 48 Scottish Property Federation, written evidence
- 49 EEFW Committee, Official Report, 26 March 2019, col 27
- 50 EEFW Committee, Official Report, 30 April 2019, col 11
- 51 EEFW Committee, Official Report, 30 April 2019, col 9-10

- 52 EEFW Committee, Official Report, 30 April 2019, col 10
- 53 Skills Development Scotland, Skills Investment Plan: For Scotland's construction sector, https://www.skillsdevelopmentscotland.co.uk/media/35688/sds_construction_sip_digital.pdf [accessed May 2019]
- 54 CITB, Local Construction Skills Needs for Scotland (June 2018)
- 55 Short life working group, New housing and future construction skills: report (May 2019) <https://www.gov.scot/publications/new-housing-future-construction-skills-adapting-modernising-growth/pages/16/> [accessed May 2019]
- 56 EEFW Committee, Official Report, 30 April 2019, col 16
- 57 Federation of Master Builders, written evidence
- 58 Homes for Scotland, written evidence
- 59 BAM Ltd, written evidence
- 60 University of Glasgow, written evidence
- 61 Professor William Hare and Dr Michael Tong, Glasgow Caledonian University, written evidence
- 62 Professor William Hare and Dr Michael Tong, Glasgow Caledonian University, written evidence
- 63 EEFW Committee, Official Report, 5 February 2019, col 8
- 64 EEFW Committee, Official Report, 5 February 2019, col 9
- 65 CITB, supplementary written evidence
- 66 CITB, supplementary written evidence
- 67 EEFW Committee, Official Report, 5 March 2019, col 30
- 68 EEFW Committee, Official Report, 5 February 2019, col 3
- 69 EEFW Committee, Official Report, 5 March 2019, col 4
- 70 EEFW Committee, Official Report, 5 March 2019, col 36
- 71 Office for National Statistics, Official Labour Market Statistics, <https://www.nomisweb.co.uk/> [accessed May 2019]
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- 73 Association of Women in Property, written evidence
- 74 Pert Bruce Construction, written evidence
- 75 Scottish Parliament Outreach Department, note on high school poll

- 76 EEFW Committee, Official Report, 5 March 2019, col 14
- 77 Pert Bruce Construction, written evidence
- 78 Association of Women in Property, written evidence
- 79 EEFW Committee, Official Report, 5 February 2019, col 6
- 80 EEFW Committee, Official Report, 5 February 2019, col 6-7
- 81 Forster Group, supplementary written evidence
- 82 Construction Scotland, written evidence
- 83 Focus group note
- 84 EEFW Committee, Official Report, 26 February 2019, col 41
- 85 EEFW Committee, Official Report, 5 February 2019, col 6
- 86 City Building note
- 87 City Building note
- 88 EEFW Committee, Official Report, 5 March 2019, col 16
- 89 City Building note
- 90 EEFW Committee, Official Report, 2 April 2019, col 26-28
- 91 EEFW Committee, Official Report, 30 April 2019, col 13
- 92 EEFW Committee, Official Report, 5 February 2019, col 4
- 93 Skills Development Scotland, Apprenticeship Equality Action Plan: Annual Report 2018
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- 96 EEFW Committee, Official Report, 5 March 2019, col 10
- 97 EEFW Committee, Official Report, 26 February 2019, col 56
- 98 City Building note
- 99 EEFW Committee, Official Report, 30 April 2019, col 13
- 100 Scottish Contractors Group, written evidence
- 101 Civil Engineering Contractors Association, written evidence
- 102 EEFW Committee, Official Report, 5 March 2019, col 19
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- 108 EEFW Committee, Official Report, 26 February 2019, col 48
- 109 City Building visit note
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- 111 EEFW Committee, Official Report, 26 February 2019, col 37
- 112 Scottish Building Federation, written evidence
- 113 Focus group note
- 114 EEFW Committee, Official Report, 26 February 2019, col 47
- 115 EEFW Committee, Official Report, 19 March 2019, col 8
- 116 Pert Bruce Construction, written evidence
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- 118 CITB website: <https://www.citb.co.uk/levy-grants-and-funding/citb-levy/about-the-citb-levy/> [accessed May 2019]
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- 125 Robin Crawford and Ken Lewandowski, Review of Scottish public sector procurement in construction (22 October 2013)
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- 130 EEFW Committee, Official Report, 26 February 2019, col 25
- 131 Scottish Government, supplementary evidence
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- 134 Civil Engineering Contractors Association (Scotland), written evidence
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- 136 EEFW Committee, Official Report, 19 March 2019, col 4
- 137 EEFW Committee, Official Report, 19 March 2019, col 6
- 138 EEFW Committee, Official Report, 19 March 2019, col 15
- 139 SCDI, written evidence
- 140 Scottish Traditional Building Forum, written evidence
- 141 EEFW Committee, Official Report, 26 February 2019, col 5
- 142 Letter from Perth and Kinross Council
- 143 Letter from Transport Scotland
- 144 Letter from Scottish Prison Services
- 145 Galliford Try, written evidence
- 146 EEFW Committee, Official Report, 26 February 2019, col 5
- 147 EEFW Committee, Official Report, 30 April 2019, col 24
- 148 Scottish Building Federation, written evidence
- 149 Glasgow City Council, written evidence
- 150 online survey
- 151 Focus group note
- 152 Supplier Development Programme, written evidence
- 153 Focus group note
- 154 Galliford Try Plc, written evidence
- 155 EEFW Committee, Official Report, 26 February 2019, col 4
- 156 University of Glasgow, written evidence
- 157 EEFW Committee, Official Report, 26 February 2019, col 8-9
- 158 BAM Ltd, written evidence

- 159 EEFW Committee, Official Report, 26 February 2019, col 7-8
- 160 SFT, supplementary written evidence
- 161 Federation of Master Builders, written evidence
- 162 EEFW Committee, Official Report, 5 February 2019, col 16
- 163 Civil Engineering Contractors Association (Scotland), written evidence
- 164 HubCo, supplementary written evidence
- 165 HubCo, supplementary written evidence
- 166 EEFW Committee, Official Report, 19 March 2019, col 25
- 167 Galliford Try Plc, written evidence
- 168 EEFW Committee, Official Report, 19 March 2019, col 25
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- 170 Scottish Government, supplementary evidence
- 171 EEFW Committee, Official Report, 30 April 2019, col 27
- 172 Review of Scottish Public-Sector Procurement in Construction (2013)
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- 180 Scottish Government, Research Project: Housing Land Audits (January 2019)
- 181 Scottish Government, supplementary written evidence
- 182 Nathaniel Lichfield and Partners, Supporting Scotland's Growth: Effective Housing Land in Scotland's Cities (December 2016) <https://lichfields.uk/media/2042/supporting-scotland-s-growth-effective-housing-land-in-scotland-s-cities.pdf> [accessed May 2019]
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