ARCADIS

Market View
Spring 2022

Another new normal

Introduction

It is too early to assess the potential impact of the invasion of Ukraine on UK construction markets. Increased energy costs and disrupted supply chains are risks that could escalate quickly. However, what is increasingly clear is that the industry is facing a new normal of a permanently smaller workforce. In this Market View, we examine the evidence and weigh up the consequences of a new labour squeeze.

UK economic activity returned to pre-Covid levels in November 2021, well ahead of original recovery forecasts. Year on year growth of 1.3% in Q3 is actually a realistic measure of the strength of the economy. Recovery was also in full swing in late summer 2020, so no bounce-back flattered the numbers. The Omicron variant slightly reduced activity in December and January, but the Bank of England estimates that any lost growth will be regained before the end of Q1 2022. Following the invasion of Ukraine, future growth prospects are now much less certain.

The UK's fast recovery from Covid-19 has not been without its costs and rocketing inflation is now hogging the headlines. The highest inflation in 40 years has been driven by energy and tradable goods prices. Annual CPI inflation was 5.4% in December, well on track for a predicted peak of 7% in April 2022. However, manufacturing input and output inflation is much higher according to the ONS, with manufacturers able to increase their prices by 9.9%, whilst input costs grew by 13.6%.

High levels of inflation are coinciding with a tight labour market. Economy wide vacancy numbers are 50-60% higher than long-term average. Unemployment fell faster than expected and is forecast to fall to 3.8%in Q1 2022, an astonishing outturn given the gloomy prognosis at the height of the pandemic. High demand should drive real terms increase in wages, but there is little evidence yet. Policy makers will be monitoring wage deals carefully, as any sign of inflation-busting settlements will point to a long-term inflationary spiral. The construction sector is showing particular signs of labour inflation which are examined in further detail in the Zoom Into feature on Labour Markets.

Business sentiment remains positive, regardless of inflationary headwinds. The end to statutory Covid-19 restrictions provide a further, minor boost. Companies are looking beyond the immediate obstacles and have been encouraged by the super-deduction allowance that can be claimed until April 2023. According to the latest Deloitte CFO Survey, more than 55% of surveyed CFOs plan to increase capital expenditure. 80% planned to

focus increased investment on digital technology and productivity growth. Business sentiment in construction has remained strong too, with the February 2023 IHS Markit UK PMI showing growth for the thirteenth month in row. This is not to say that there are no risks on the horizon – businesses are still concerned with the effects of pandemic and persistent labour shortages, and now must deal with the Ukraine conflict too.

New build construction output is now in line with long-term volumes observed since 2016. Once repair and maintenance are included, overall output exceeded pre-Covid levels in November 2021. High output can be attributed to record levels of infrastructure work. ONS data shows that infrastructure volume was 40% higher in 2021 compared to the 5-year average. Private housing exceeded historic levels by 7%. However, the sectors associated with building contracting, commercial, public sector, and industrial, with commercial down almost 20% compared to the 5-year benchmark.

The concentration of new work in housing and infrastructure begs questions about the general health of construction sector and future prospects. New orders data for the whole of 2021 also indicate that levels of new work have returned to historic levels. There are of course sectorial differences, with private industrial being an absolute record breaker (new orders up 70% compared to long-term), followed by housing (up 5%) and commercial sector (3.5%). The public sector continues to lag, there is increasing visibility of long-term investment plans.

The UK's recovering economy is not short of challenges. Mounting inflationary pressures and the unpredictable consequences of war in Ukraine demand an immediate response. Construction's skill shortage is a long-term problem, and with new sources of demand such as energy transition, there is no obvious source of additional labour. Crucially, while construction works hard at making opportunities as attractive as possible, the industry must also make sure it makes best use of the skills that it already has. So far, some contractors have been able to continue sailing on rough waters, in part because of robust demand and because of their ability to pass costs downstream to clients and end users. However, some clients, particularly those in the public sector have much less room for manoeuvre. One very well-established normal, the viability challenge, is likely to become a far greater issue in 2022.

Forecast

Inflationary pressures continue, but demand does not fade away. However, the earlier than expected emergence of additional cost drivers gives way to an increase in our forecast.

Construction has returned to normal levels of activity. Both orders and output reached pre-Covid levels in late 2021. Inflationary pressures and other sources of supply chain disruption ramped up during H2 2021 led by spiralling energy prices. Encouragingly, project teams appear to be better equipped to manage these disruptions and even though the risks are severe, they are being managed more effectively. One challenge that will be difficult to manage is the labour market. A tighter supply of skills at all levels in the industry means that short and mid-term inflationary pressures continue to grow. As a result, Arcadis is increasing our forecast for 2022 and 2023.

High prices are no barrier to a growing sector.

Higher prices and delays have not stopped the construction sector from delivering high levels of output in 2021. Furthermore, they have done relatively little harm to the outlook. As described in the introduction, orders are back to pre-pandemic levels, although there are of course sectorial and regional variations. The biggest increases in orders in real terms were reported in the North East, Yorkshire and Humber and the East of England. London and the South West held steady, whilst Wales, Scotland and the East Midlands experienced a drop.

Private industrial boomed across all regions with large factory orders and a continuation of the logistics pipeline. Great prospects for industrial are underpinned by new opportunities such as the £1.7bn BritVolt development that has signed up Abrdn and Tritax to deliver the factory infrastructure. The residential sector will continue to be a reliable source of work as well, with private housing orders being above long-term levels in most regions. According to BNP Paribas, Build to Rent had the strongest year on record too, with an 8% increase in the number of units under construction in Q4 2021 (year-on-year). Despite the general underperformance of the commercial sector, offices have been recovering, Savills report take up in London 12% higher compared to 2019 levels.

All the above-mentioned sectors are pressing ahead despite strong inflationary headwinds. They all have one thing in common, though – the ability to absorb increased costs as rents and sales values have also continued to rise. The public sector does not have this flexibility and some projects have been delayed by cost-related issues. Forthcoming prison and hospital programmes will be made more challenging by recent market trends, particularly as there is little sign of any relaxation in upward inflationary pressure.

…but they continue to rise

Most of inflation in construction sector in 2021 was driven by increased costs of construction materials – caused initially by rocketing raw materials prices and more recently by record energy costs. The cost of the BEIS basket of construction materials continued to increase throughout 2021, although the rate of cost growth was slowing by the end of the year. By December 2021, the cost of the basket was up by 20% year-on-year. On a positive front, timber prices, one of the biggest movers in 2021, were reported to have fallen by 30%. Sadly, global prices are moving upward so this relief may be short-lived.

Increased energy costs and disruption to raw materials supply chains are a likely consequence of the Ukraine conflict. The question that cannot be answered is whether they will trigger similar record-breaking inflation as was seen in 2021.

Energy has become the swing factor in materials cost inflation. Price rises affecting many energy-intensive domestic products including cement, brick and plasterboard have come through since the new year. Events in Ukraine immediately led to a 10% hike in gas costs and highlight long-term uncertainty in energy markets. There is no present case for a return to normal conditions in energy markets and risks are likely to be elevated for an extended period. The withdrawal of Red Diesel concessions for construction plant and equipment starting from April 2022 will introduce a further energy-related cost driver.

Labour availability and wage inflation is an emerging problem that we explore in detail in Zoom In to Labour Markets. The inflationary case is that the loss of 200,000 from the workforce has created a significant inflationary risk even though productivity has improved in the construction sector. An overall 2.5% increase in National Insurance will also be inflationary. Most of the labour has been lost from the self-employed sector but there has been no corresponding increase in employed labour following the introduction of IR35 in April 2020. Self-employed earnings are determined on a project-by-project basis and can go both up and down very quickly in response to demand. The direction of travel in most English regions is up.

Living with the new normal

Amidst all the gloom of rising energy prices, labour shortages and geopolitical chaos, there are some good news stories.

The best of course is the lifting of statutory Covid-19 measures, reducing the risk of pingdemic-induced labour shortages. Pingdemic was just one of many disruptions faced by project teams during 2021, including disrupted supply chains, evidenced by extended lead-in times, chaotic conditions at ports and a fight for HGV capacity.

Our feature on semi-conductors highlights that there is little prospect of supply chains stabilising in the immediate future. However, the signs are in 2022 that contractors and clients have learned to anticipate disruption and live with these conditions. The problems haven't gone away, as highlighted by the chips problem, but better mitigation measures are in place.

Forecast

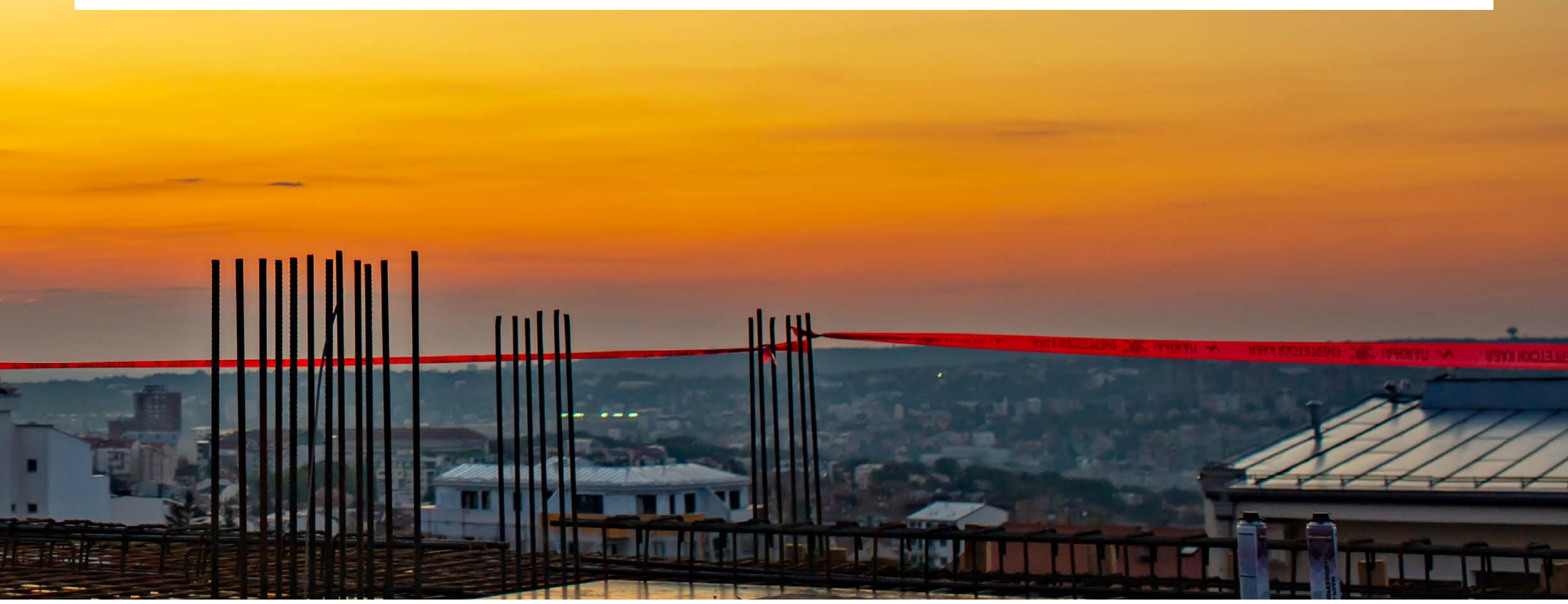
This is another new normal. Getting used to these new conditions won't necessarily reduce prices but it will help to keep risk premiums in check, providing some relief to an otherwise challenging inflationary picture. Clients and their advisors will continue to have a key role in enabling their supply chains to manage these risks during 2022, by creating float in the programme, through decisive decision making and by avoiding the whiplash impacts of unplanned change.

Sustained construction demand means that we have increased our inflation forecast for 2022. Materials price inflation should be less of a problem in 2022, but we anticipate that labour cost pressure will emerge in its place.   Buildings markets remain keen and where projects are tendered, competitive bidding will help to keep a lid on inflationary pressure.

Negotiated projects are likely to see much higher levels of price escalation. Looking beyond 2022, there is little prospect of the labour market improving and as a result, we have upgraded our forecast for 2023. One factor that we cannot account for is the consequences of Ukraine conflict. Whilst the effects are likely to be inflationary, the impact and duration are, at the moment, impossible to predict.

	Regional Building Construction TPI	London Building Construction TPI	National Infrastructure Construction TPI
2021	5% (4-5%)	6% (4-6%)	6% (5-6%)
2022	5%(3%-4%)	5% (3%-4%)	6% (4%-5%)
2023	5% (3%)	5% (3%)	6% (5%)
2024	5% (5%)	5% (5%)	5% (5%)
2025	5% (5%)	5% (5%)	5% (5%)
2026	4% (5%)	4% (5%)	5% (5%)
Total	**29% (27%)**	**30% (28%)**	**33% (31%)**

Inflationary drivers	Deflationary drivers
• Energy costs driving material price inflation	• Willingness to secure work long-term
• Increase in national insurance rates	
• Fall in the number of self-employed workers and emerging labour shortages	
• Strong order books easing pressure on the need to win new work	
• Uncertainty about the construction materials prices trajectory	
• Removal of Red Diesel rebate	
• Contractors aiming to improve margins	



Spotlight on: impact of semiconductor crisis on construction

The current semiconductors shortage is yet another consequence of Covid-19 disruption. And while it is the automotive and electronics industries that are most exposed, there are also signs of impact on the construction sector.

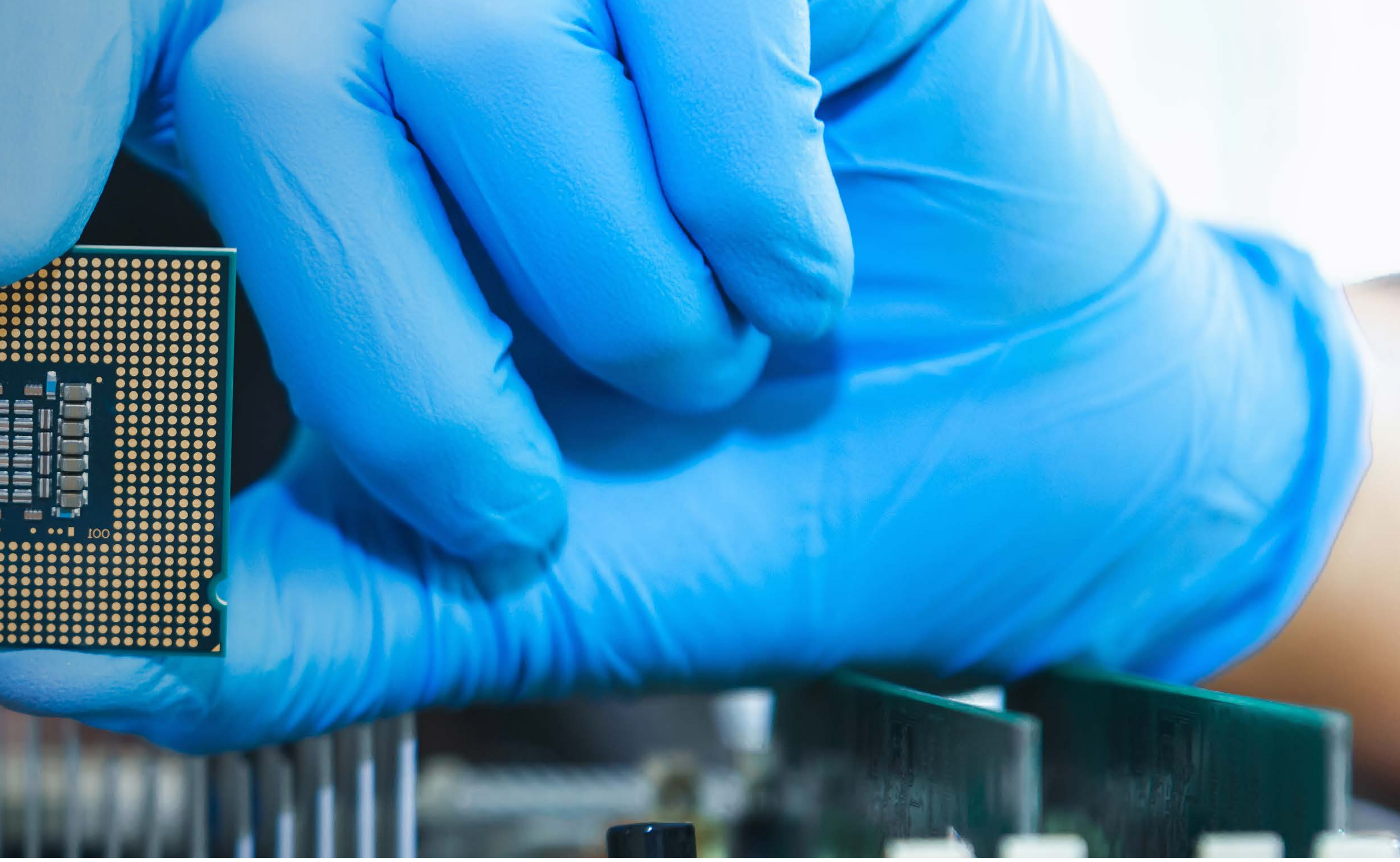
Semiconductors have been all over the news recently. A rapid increase in demand means that their supply fell dramatically. Inventories fell to five days' supply, as opposed to a standard 40 days pre-Covid. The shortage of a vital component limits output and increases the risk of delays in production for many manufacturers. Neither the construction or built environment sectors are immune, for the simple reason that chips are present in virtually every electronic component. How it all started, which projects are most exposed, and most importantly – what is being done and what can clients do to manage this situation? We provide some answers in this Spotlight.

From restaurant to game consoles

Covid lockdowns shifted many behaviours and increased the demand for consumer electronics. At the same time, low sales of cars prompted automotive manufacturers to cancel some of their chip orders. This gap was very quickly filled by producers of game consoles, computer monitors and other electronic equipment, who continued to benefit from the shift in demand from services to 'stuff'. Come spring 2021, the second wave of global economic recovery was in full swing, and many manufacturers found themselves at the back of the queue for their new semiconductor orders. The imbalance between demand and supply has been further worsened by a series of fires at factories producing chips substrates, and ongoing issues with logistics. The Ukraine invasion can make the situation even more complicated, with vital supplies of Palladium and Neon at risk. All this combined has resulted in a serious chip shortage that is holding back the economic recovery and driving inflation.

Chips, chips everywhere

Semiconductors are a vital component of many building and infrastructure systems. The risk to timely delivery of projects has been growing as the chip crisis has intensified. For buildings in particular, MEP installations and fit out elements are exposed. The Construction Leadership Council's Products Availability Group has recently been warning about the limited availability and long lead-in times for key elements such as boilers, white goods, and lighting systems. Critical systems including fire detection and alarms are also at risk – potentially delaying handover. With more and more smart sensors and controls being installed in buildings, the exposure to continuing disruption is only going to increase. Early stages of construction are also at risk. Volvo Construction Equipment has already cited the



chips shortage as a direct reason for a slowdown in the production of some of its construction vehicles and equipment. This will have a knock-on effect on second-hand plant costs as well as an impact on the progress of affected projects.

The biggest problem with chips is the lack of visibility of the supply chain. It is much easier to track a disruption in major categories of steel, curtain wall or MEP plant than it is to spot a chip shortage buried at the bottom of a supply chain. Increased vigilance is critical as supply chains become less and less resilient.

So, what's next?

Long-term solutions to chip supply issues have been discussed on both sides of Atlantic, with the European Union and US planning to invest a total of 96bn USD to subsidise local semiconductor manufacturing. Intel, Samsung and TSMC have also announced investments of over 80bn USD. But chip factories take time to build and depend on a capacity constrained foundry equipment supply chain. New capacity is anticipated only in 2023 and some projects are already in delay. Even though there may be a glut of chips in 2023, what can clients do now to protect the projects that are in flight?

There is no silver bullet, and in many instances, clients need to rely on the proactive approach of their sub-contractors, who will be closer to their manufacturing and distribution supply chains. More broadly, close and early engagement with supply chain is strongly recommended – to understand lead-in times and to identify areas of concern. This information can identify workarounds, such as product substitutions or the accelerated premium procurement of chips for programme critical products. At worst, better insight will help to prepare for any changes to the schedule of work. Early procurement action is recommended too, as the chip shortage will be with us until at least 2023.

Even if the waiting line is long, make sure that your suppliers secure their spots as quickly as possible. Just around the corner, there are thousands of wind turbines and solar panels needed for energy transition, waiting to get their share of chips supply…

Zoom into: Labour Markets

Construction labour markets are looking increasingly tight. What's going on and what are the implications for prices and programmes?

GDP finally reached pre-Covid levels in November 2021, and national employment levels have nearly recovered too. But the pandemic continues to throw its shadow over UK markets. Changes within sectors and across the UK highlight a dynamic and complex employment picture with particular implications for construction.

During much of 2021, construction site feedback emphasised issues of trade-specific labour shortages and growing wage pressure. Unfortunately, there is a lack of data to track the trends. 40% self-employment in the sector makes it particularly hard to monitor wage levels. One of the few data sources available, ONS's weekly earnings tracker, shows construction lagging the wider economy with year-on-year wage growth of 2.9%. With double-digit material price inflation triggered in part by a strong recovery of demand for construction work, this doesn't quite add up.

The disconnect between data and the situation on the ground has been exacerbated by the unwinding of Covid employment protections. Construction accounted for 6-8% of total CJRS take up but took up a much larger share of the self-employed income support scheme, accounting for over 30% of awards and 40% of scheme cost. One of the big unknowns has been whether workers who had been on SEISS would return to the industry. They have plenty of reason not to. Many migrant workers returned home during lockdown and may have found more attractive jobs at home or elsewhere. Older workers may have had enough of site work and could have retired early. The introduction of IR35 to the sector in April 2020, aimed at eliminating bogus self-employment was a further blow to the industry's flexible labour model.

Latest ONS data for 4th quarter 2021, published in February gives a first view of the post-Covid labour market and is a cause for concern:

- Total sector employment, at 2.15 million, has fallen by 6% compared to levels seen in 1Q 2020.
- Self-employment has fallen by nearly 13% over the same period to 800,000.
- Direct employment hasn't grown over the period, despite the introduction of IR35

There are a number of plausible reasons for such a drop, one of the more likely being a shift of some of the self-employed workforce into the less well-regulated repair and maintenance sector. Booming over-the-counter sales at the UK's Builders' Merchants, still over 30% higher than pre-pandemic confirm that the domestic sector continues to perform strongly. But the diversion of workers away from the formal side of the industry points to further inflation in the critical contracting sector.

Encouragingly, construction productivity data, which is up by 12% in real terms compared to pre-Covid levels, points to the continuation of an improvement in labour performance. By contrast, Civil Engineering productivity has improved by only 3%. Improved productivity will be a critical safety value in the absence of access to migrant labour sources. However, is this measured improvement genuine or is it a statistical blip? More importantly, can the improvement offset wage pressures in an increasingly inflationary construction labour market?

Formal and informal market data is suggesting that the labour market is picking up, but that the picture is far from consistent:

- Unions representing 500,000 directly employed operatives have submitted a 10% wage claim to the Construction Industry Joint Council. Other recent wage awards have been below inflation. The Joint Industry Board (JIB) and National Engineering Council have both recently agreed two-year, 2.5% per annum awards with the directly employed M&E workforce.
- Self-employed workers. Average regional earnings data sourced from the construction labour specialist Hudson's Contracts highlights substantial movement in self-employed labour earnings in some regions over a 12-month period. However, movement is far from consistent. Labour markets in the North of England appear to be weaker than the Midlands and the South. Further analysis into individual trades highlights an even greater level of variation within regions. Anecdotal evidence also points to increased competition between sites to secure scarce labour, triggering a local wage spiral and increasing the risk exposure of subcontractors.

Region	% Increase Dec 2020 to Dec 2021	Region	% Increase Dec 2020 to Dec 2021
South-West	12	West Midlands	9
South-East	5	Wales	9
Greater London	14	North West	0
East	5	Yorkshire and Humberside	4
East Midlands	11	North East	-10

Source: Hudsons Contracts

These data points suggest that wage inflation is much more of a problem than evidenced by ONS. Consequently, productivity gains may not pick up all the slack. Given that the supply of new industry entrants is quite low, and labour requirements are growing by 2% per annum (CITB), what options do contractors, and their clients have to mitigate this inflation risk?

New sources of labour are unlikely to be accessed quickly. The industry has a well thought through skills plan, but it is addressing well-established barriers to recruitment. Poor take-up of the UK's recent emergency recruitment schemes has highlighted that labour shortages are a Europe-wide problem. Targeted recruitment of a skilled overseas workforce could act as a long-term shock absorber, but the evidence is that the construction supply chain is not engaging with the new Points-Based Migration System.

As a result, short-term solutions to labour challenges are in the hands of clients, designers and contractors. Scarce assets need to be used with care. None of the following opportunities are new, but the fact that the industry needs to be reminded to apply them in part explains the scale of the problem.

- Design for buildability. Scarce labour resources mean that it is even more important to design for ease of installation. The devil is in the detail, so simplify some of the detail.
- Eliminate rework. According to Get It Right Initiative (GIRI) research published in 2015, 10 to 25% of project cost is related to errors and unrecorded process waste. A lot of the errors result from gaps in knowledge and attitudes that can be changed. With a shrinking labour market, now is the obvious time to take action to eliminate sources of avoidable waste.
- Manage overcrowding on site. With the end of Covid restrictions, many construction sites may consider the relaxation of the Site Operating Procedures (SOP) that managed social distancing during the pandemic. One of the gains from the SOP has been that site overcrowding reduced, resulting in improved productivity. Changes should be considered carefully, because neither contractors or clients can afford to allow those hard-won productivity gains to go to waste.

Construction's skill shortage is a long-term problem. New sources of demand including energy transition and the need to retrofit millions of homes are coming and there is no obvious source of additional labour. Even whilst construction works hard on making its opportunities as attractive as possible, the industry must also make sure it makes best use of the skills that it already has.

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