MATERIALS PRICE INFLATION

- Market Update

Overview

Market Update – August 2021

This guide sets out latest insight and advice on the causes and implications of construction materials price inflation. It outlines the issues associated with new projects and projects where tenders are being updated to take into account recent price rises.

1. Introduction

Inflationary pressure is emerging across the UK economy. CPI is forecast to exceed 4% in the next 12 months. Some of the most extreme inflationary pressures are being seen in building materials, which is starting to spill-over into increasing tender prices too. Building materials shortages are a worldwide trend, affecting globally traded products including metals and timber. The consequences are rising prices and extended delivery times – both having a significant impact on capital projects.

As there are multiple underlying causes, the price rises are likely to be sustained at least until 2022. The main trigger for the recent bout of inflation is a shortage of raw material and productive capacity for basic products such as sawn softwood or rolled steel sections. It is not possible to rapidly increase production of these products, and as demand driven by the global recovery has spiked, prices have escalated rapidly.

Other constraints including manufacturing capacity and logistics are also contributing to extended lead-in periods and restricted allocations of some material categories. For projects on a very fast programme, the need to secure materials at short notice may create further inflationary pressures.

Materials Price Trends (2014 to 2026)

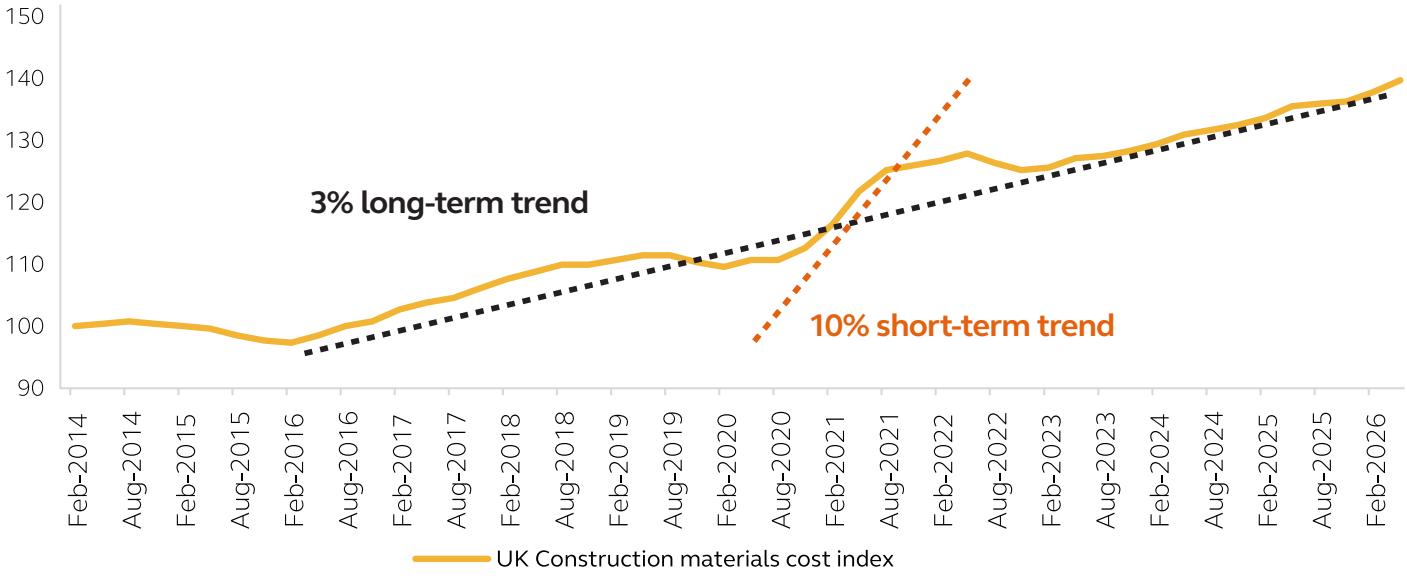

Figure 1 Material price inflation - 2014 to 2026. Source BCIS

Materials inflation has not been a significant issue for many years. Figure 1 shows that the typical long-term trend has been around 3% per annum. The recent bout of inflation – averaging 10% since 3Q 2020 will have taken contractors and clients by surprise.

There is a risk on some projects that have been tendered in the past 12 months that contractors will be exposed to unexpected price increases and delays on delivery. This could have a knock-on effect on the wider commercial management on projects including claims. Given the sensitive timing of many price increases, it is good practice for the team to maintain complete and accurate records of procurement actions and changes.

2. Details of materials price inflation and restrictions on delivery

Materials inflation has become headline news. Clients, contractors and suppliers are all aware of the existence of the problem. During the pandemic, the shutdown of factories resulted in a serious shortage of materials. The subsequent recovery from Covid-19 has also been accompanied by materials availability problems. These first surfaced in the retail construction materials sector but have now spread more widely across the industry.

However, there is a lot of incomplete information in the marketplace, so it is important to keep informed of latest developments and to understand how they might affect your project.

2.1 How much building material price inflation is there?

According to the Building Cost Information Service (BCIS), construction material inflation is currently running at around 10% per annum. Construction materials typically account for about 30% of the cost of a project, so the overall inflationary impact on the cost of a scheme is likely to be around 2-4% depending on the materials mix of the scheme. Some increases are higher – particularly on housing and civils schemes where markets are more active.

A lot of the reporting of current inflation focuses solely on materials inflation. However, some industry sectors remain competitive, so there is limited trade-specific inflation in labour costs and there may also be some pressure on overhead and profit. When reviewing the materials problem, it is important to look across the spectrum of factors taking a balanced view on cost pressures facing the overall industry.

Arcadis tender price forecasts were updated in July 2021. At the time of the update, there was still evidence of a competitive tender market. Price pressures can continued to build during the summer. The forecasts will be revised in September 2021.

Year	Arcadis Regional Building TPI	Arcadis London Building TPI	Arcadis Infrastructure TPI	BCIS Building Cost Index	BCIS Materials Cost Index
2021	2%	1.5%	3%	5.2%	10.3%
2022	3%	3.5%	5%	3.1%	3.4%
2023	4%	4%	5%	1.8%	0.3%
2024	5%	5%	5%	3.0%	3.3%
2025	5%	5%	5%	2.9%	3.2%

Table 1. Summary of July 2021 Tender Price Forecast and BCIS Building Cost Forecast. Source BCIS and Arcadis

2.2 What material categories are affected?

The inflation issue has become more widespread during the spring and summer, but the challenges currently faced on projects in the UK do not affect all categories of materials. For example, suspended ceilings and raised floors for commercial development have all seen significant price rises since early spring as a result of increases in metal prices. By contrast, other categories including ready-mix concrete have seen very little inflation.

Some sectors are more exposed than others. Volume house building has been facing problems with the availability of sawn timber, roofing tiles and plastic pipe. Utilities businesses are also highly exposed to price movements in copper cable and PE pipe. Complex projects such as data centres should be proportionally less exposed due to the higher value-added content in mechanical and electrical plant that accounts for a high proportion of value. However, there is no sector that is immune to these inflationary pressures.

The following factors will help you to understand the inflation exposure of your project.

Raw Materials

Most of the inflation is being driven by increases in the price of raw materials. For example, there is a very close relationship between the increasing cost of iron-ore and the price hikes announced by UK steel manufacturers.

Raw materials account for a large share of the cost of some construction work, such as in-situ concrete, ductwork or HV cable, but a much smaller proportion of the cost of complex components such as Fabsec beams, curtain wall or mechanical and electrical plant.

This is illustrated in Figure 2, which is an indicative breakdown of the cost of complex steel sections, which typically cost £2,800 – 3,300 per tonne. This analysis takes into account the 100% increase in basic structural steel sections and plate recorded in the 12 months to the end of June 2021.

The cost of the basic steel now accounts for around 40% of the completed in-place sections and has contributed to a 25% increase in overall cost of erected steel. This is a very significant bout of inflation, the highest level seen since 2006 to 2008. However, it is nowhere as high as the headline 100% increase in the raw material. By contrast, the cost of rebar has increased by at least 45% since the bottom of the market in June 2020.

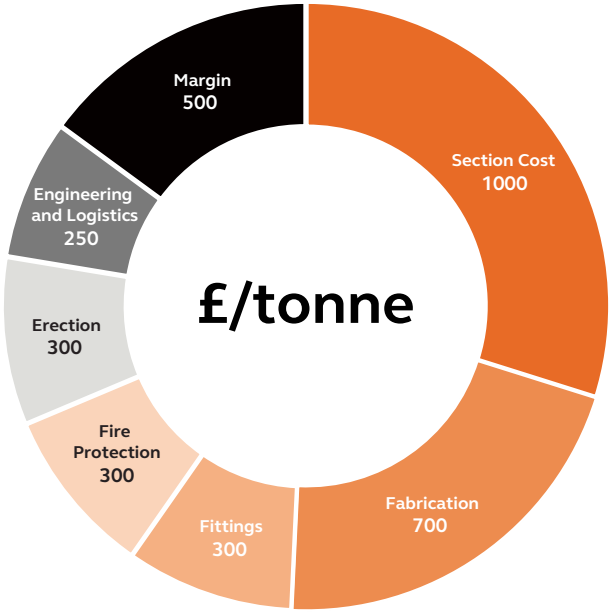

Figure 2 Indicative cost of complex steel section. July 2021 prices

Local vs. global content

As already highlighted, the inflationary trend is global, and it affects mostly globally sourced products. About 70% of construction materials are sourced on the domestic market and many of these will not be subject to the same inflationary pressures.

For imported products/raw materials, there are three trends that are affecting availability and cost:

- High levels of international demand. This mostly explains the price increases for sawn timber, plywood and timber sheet, roof tiles and white products. For some segments, particularly timber products, the global boom in DIY sparked by Covid-19 lockdowns has had a significant impact on demand and prices.
- Disrupted raw material supply lines. These products include iron ore, copper and plastics feedstocks, where a combination of natural disasters, lost production due to Covid-19 and logistics constraints have put a physical cap on production levels. These long-running issues will take time to resolve.
- Increased logistics costs. Container shipping has been heavily disrupted by Covid-19 as a result of a big increase in shipping volumes and a shortage of shipping containers in the right locations. Average shipping costs have increased by 450% since summer 2020 and have doubled since April 2021. Shipping costs are a relatively small fraction of the cost of imported materials, but the hikes highlight the volatility in global markets.

This difference can be seen in a comparison of price movements for plywood, sawn timber, brick, rebar and ready-mix concrete set out in Figure 3.

These are all common construction materials with the crucial difference that bricks and concrete are sourced from the UK domestic market.

Typically, construction projects will feature a blend of materials exposed to varying levels of inflation and the key to understanding the impact is the relative share of spend.

Unfortunately, there are signs that brick costs will increase in the Autumn, with Ibstock announcing a 10% price rise in October. This reflects their increased energy and haulage costs.

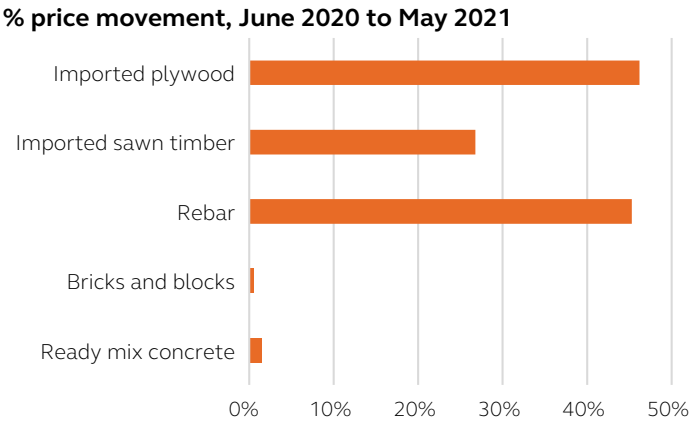

Figure 3 Material price movements in the past 12 months. Source: BEIS.

Project complexity

Building on the earlier point about raw material content, project complexity is also a useful indicator of exposure to materials price inflation. There are two elements of complexity that will influence the extent of the impact of materials inflation:

- Organisational complexity. Complex projects with an extensive supply chain will often have on-costs (design, management, preliminaries, overhead, profit and risk) that add up to 40 to 50% of project cost. Whilst there will be some overhead and profit pass through, the rest should not be affected.
- Technical complexity of the work. Relatively simple projects like distribution sheds will be more affected by inflation. This is partly because the on-cost share is lower, but also because of the simple content of components, which will be more affected by raw materials inflation.

Programme constraint

Tight programmes also appear to be contributing to much higher levels of inflation. We have recently heard of a large industrial project where the contractor requested an increase in price of over 15% in connection with steel and cladding. In another case study, where steel needed to be procured to a fast, fixed programme to meet a critical delivery date, the quoted steel material cost was 75% higher than the increased, standard price.

These very high levels of price increase appear to be driven by programme constraints as well as background inflation. Many materials are on extended lead-in, for example, sheet cladding for distribution sheds is mostly on a 12-month lead-in. For projects with faster programmes, contractors have to go onto the secondary market for materials available at short notice. These are priced at a premium. The data on these additional costs is inevitably difficult to obtain, but this is an important trend that is likely to persist into 2022.

3. What options do clients have to mitigate inflation risk premiums?

One of the biggest problems with fixed-priced contracts in an inflationary market is the cost of the risk premium that a contractor has to add to their bid to protect themselves from further inflation on sub-contracts where prices cannot be fixed. This is particularly a problem in a busy market, where contractors can be more selective in their approach to pursuing opportunities. The problem with the risk premium is that the client pays it whether the risk materialises or not.

By accepting some of the risk, a client can reduce the need for contractors to include a full risk premium. This makes a contract more attractive to the contractors. It should also result in a lower 'cost of entry'.

Our forthcoming Summer Market View publication will include sections on procurement competition strategy and risk transfer in the contract that offer opportunities for the client to shift their exposure from a risk premium to a share of the actual inflation impact.

Whether this switch is worthwhile will depend mainly on whether bidders are likely to adjust their prices to account for the change in risk exposure.

4. Updating existing tender returns

The updating of tenders on projects that have been delayed by Covid-19 and other factors is particularly difficult in the current market.

Prices that were submitted earlier in the year are unlikely to be deliverable – mainly because the main contractor will not be able to hold their supply chain to the original prices. This means that project costs will increase. The increases are likely to be higher than the published Arcadis tender price index, because the level of competitive pressure will be lower at the point when the revised price is agreed. The following options are available:

Complete re-bid. This will be time consuming and will add abortive bidding costs to all of the supply chain. There is also some potential for reputational risk for the client with respect to their relationships with their contractors. **Arcadis does not recommend this option in anything other than exceptional circumstances.**

Rebid of some selected sub-contracts. In this option, the client works with the preferred contractor to rebid a select number of sub-contracts that have been affected by inflation. This will give the sub-contractors the opportunity to price for inflation etc in competition. It is likely that the programme may also need to be adjusted for extended lead-in times. This option has the advantage of allowing critical sub-contracts to fully price for inflation. The disadvantage is the time taken in the competition and the risk that lead-in times will be extended. **This option is worth considering and discussing with the preferred main contractor.**

Adjustment of the original bid using fluctuating indices. This option supports a negotiation with the preferred contractor with no rebidding. Inflation allowances are calculated using indices. The selection of indices and allocation of the original bid will need to be agreed. The calculated inflation allowances may be higher or lower than the inflation incurred on individual packages. The advantage of this approach is that it is quick and transparent. The disadvantage is that the inflation addition is likely to be higher than will have been calculated using a tender price index.

Furthermore, the main contractor will still need to agree revised prices with their supply chain, which might result in the complexity of two sets of prices – fluctuating main contract prices and updated firm sub-contract prices.

As part of the adjustment, it is important to agree how future inflation risks will be managed. If fluctuations are not being applied post-contract, then a lump-sum inflation risk may need to be added to the contract sum.

The adjustment of previously-submitted bids using fluctuations is a good idea as the use of data from 3rd party sources 'neutralises' the inflation debate.

Negotiation. A negotiation that is not backed by data is likely to favour the supply chain and could take time to finalise. **This option is less attractive in the current buoyant market conditions.**

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