Chartered Institute of Housing Cymru

Shocks in the supply chain

Understanding issues in housing supply chains

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Introduction

In Wales, as across the UK, industry is dependent on global supply chains to provide many of the resources needed to build new homes and ensure repairs and safety standards are maintained. These supply chains have been severely tested by the COVID-19 pandemic, the conditions of subsequent lockdowns limiting access to homes, the need to engage with the furlough scheme to protect jobs and remain sustainable and the impact of staff illness/self-isolation on the capacity of services.

Combine these pressures with changes in workforces with decreasing numbers of workers from overseas and the changes in international trading relationships, and the ripple effects have been felt for consumers and organisations across Wales.

As a research and policy project based in the membership body for housing professionals, Tyfu Tai Cymru sought to know more about the increasing tensions for housing organisations who are responsible for meeting Welsh Government targets for safe and environmentally friendly homes. We recognise the most powerful voices are those directly experiencing these challenges, which are presented in the findings of our survey and the cases-studies set out in this report.

Methodology

We undertook a rapid evidence review focussing on contemporary sources of information that focussed on supply chain issues more broadly – to compliment this we also reviewed the most recent steps/announcements at a national and local level that seek to resolve some of the issues identified.

We developed a survey in collaboration with experts in the sector, inviting responses from August 13th – September 17th. We received 31 responses from professionals working for housing associations, local authorities and private developers.

The survey focussed on four key areas:

- building new homes
- day to day maintenance
- retrofit and asset management
- fire safety.

We asked a series of questions to understand the extent to which organisations are facing challenges in these areas, what the impact has been and what they see as possible solutions.

We also undertook semi-structured interviews with some respondents to delve deeper into some of the challenges impacting organisations in greater detail.

Recognition

We would like to warmly thank those individuals/teams who took the time to complete the survey and/or agree to be interviewed as a detailed case study providing in-depth information that has added real value in our analysis. In addition, to those who kindly sense-checked our recommendations, adding insight to help refine and target our asks.

Evidence Review

The impact of COVID-19

The original lockdown meant that many factories and timber mills were closed, affecting the production of building materials. Since re-opening, pandemic-related restrictions on production have resulted in many businesses struggling to catch-up, whilst global demand has peaked as the economy has re-opened.[1]

This is compounded by container shortages and port delays alongside construction demand rising sharply in the second half of 2020. Increased administration at UK ports due to the UK-EU Trade and Cooperation Agreement has come alongside sharp rises in shipping costs and temporary surcharges. The overall global demand for manufactured goods has led to shipping lanes becoming increasingly busy.[2]

An increase in domestic activity has also been an additional factor. Over the course of lockdown(s) there has been a surge of people renovating their homes, resulting in a further reduction of available materials. More time spent at home has made the functionality of a home even more important, with the need for a dedicated workspace and a desire for garden/outdoor space.[3]

As working from home has become increasingly popular a significant number of people have sought to move as they no longer need to be living near their workplaces – stimulating demand in the housing market.[4]

Brexit and delivery infrastructure

Since 80% of softwood timber is imported from the EU, Brexit poses a significant barrier to access crucial construction materials. Additionally, there is a shortage of steel, resulting in many manufacturers halting orders in fear of people panic buying. And although the cost of shipping is expected to subside by January 2022, it is predicted that global demand is likely to maintain its intensity through to autumn 2022.[5]

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[1] Cost of building work on UK homes to rise as price of materials soars | Construction industry | The Guardian {Accessed 22/9/2021).

[2] The possible impacts of materials shortages in the UK (rics.org) (Accessed 23/9/2021).

[3] Why are house prices rising when everything else in the economy is going wrong? - Wales Online (Accessed 5/10/2021).

[4] the welsh housing market has seen the housing largest market growth (Accessed 6/10/2021).

[5] Building projects hit by lack of supplies and price rises - BBC News (Accessed 24/8/2021).

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With a heavy reliance on materials from the EU (around 60% of materials in the constructions sector) demand continues to outstrip supply. The impact of this has led construction trades to significantly increase their labour costs. Despite the UK's trade deal with the EU, the impact of Brexit has resulted in the supply lines for some core suppliers from Europe being lengthened.[6]

The Office for National Statistics has projected a rise of 7-8% in material prices, with an increase for certain materials, such as timber. Whilst the BCIS Materials Cost Index provisionally forecasts a 7.2% annual increase in material costs compared to 2020.[7]

Moreover major infrastructure projects (such as HS2) and wholesale activity in the sector (such as replacing cladding) has and will put a further drain on the supply of materials.[8]

In tandem with this, delivery infrastructure has also been severely impacted. According to a survey of the Road Haulage Association, there is currently a shortage of more than 100,000 lorry drivers within the UK.[9] The knock-on effect of Brexit and COVID-19 are remaining, with the NHS Covid app "pingdemic" resulting in thousands of trades people and lorry drivers needing to self-isolate, therefore impacting the supply of construction materials.

The cost of labour is rising rapidly in some areas. According to the Office for National Statistics, employment within the construction sector has fallen from 2.3 million in 2017 to 2.1 million in the year ending 2020. This is representative of a 4% decrease of UK-born construction employees and 42% decrease in EU construction employees.[10]

A strategic approach from Welsh Government

Although 95% of harvested Welsh timber successfully meets the construction grade, only 4% of Welsh-grown timber is used for the purpose of construction. From 2020, the Welsh Government is committed to increasing woodland within Wales by a minimum of 2,000 hectares per annum.[11] Additionally in its Programme for Government (PfG), the Welsh Government have proposed to decarbonise more homes through retrofit, by delivering quality employment opportunities, training and innovation utilising local supply chains.[12]

Further to this, the PfG suggests the redesign of business models to consider how businesses will improve their supply chain resilience, whilst additionally contributing to a green recovery via circular supply chains.

This approach to increasing supply chain resilience through local procurement is also emphasised within the Welsh Government's Optimised Retrofit Programme and its strategy outlining the vision to grow the Off-Site Manufacturing industry in Wales.

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[6] Construction Materials Shortage Could Impact the Economy | Homebuilding (Accessed 1/9/2021).

[7] Ibid.

[8] Ibid.

[9] https://www.rha.uk.net/News/News-Blogs-and-Press-Releases/News-Updates/detail/a-report-on-the-driver-shortage (Accessed 1/9/2021).

[10] Ibid.

[11] Future Wales: the national plan 2040 | GOV.WALES (Accessed 21/10/2021).

[12] Manufacturing future for Wales: framework [HTML] | GOV.WALES (Accessed 22/10/2021).

Survey Findings

Key findings at a glance…

- **Almost 90%** of respondents to our survey told us that they were having moderate or significant issues in relation to accessing the materials or products needed to build new homes, carry out day to day maintenance and to retrofit existing homes
- **72% highlighted** moderate or significant issues when accessing the materials or products for fire-safety
- **Over 75%** of respondents told us that they thought issues in the supply chains had become more significant in the 6-month period leading up to August 2021
- **96% of respondents** felt the impact of challenges in the supply chain had caused considerable time delays
- **70% felt** costs had been impacted, with increases of up to **40% cited** across a range of materials including timber, steel, concrete and fencing.

"Lots of clients are chasing the same components and contractors. Supply and increased prices have been blamed on Brexit, Suez Canal obstruction etc. Contractor capacity has been affected by COVID and 'famine and feast' demand during lockdowns."

"My personal role is focussed on the building of new homes and I have been involved in this for over 30 years and I have never witnessed anything as concerning as the current situation on an already limited and stretched supply chain."

Main barriers to accessing materials/ products

Responses to questions about pressures organisations are facing in relation to accessing the materials and services to deliver on their priorities reflect that issues are a result of a combination of factors.

Developing new homes

When asked about the main pressures in building new homes **Lead-in times** was selected most frequently by respondents underpinned by strong support for a combination of other issues including **financial constraints/budgets; delays linked to planning; lack of supply chain capacity and accessing raw materials** (with the latter showing no significant variation if those materials are being sourced from the UK and within or outside of Europe).

The issues impacting building new homes:

1. Lead-in times
2. Financial constraints
3. Planning delays
4. Supply chain capacity
5. Access to raw materials

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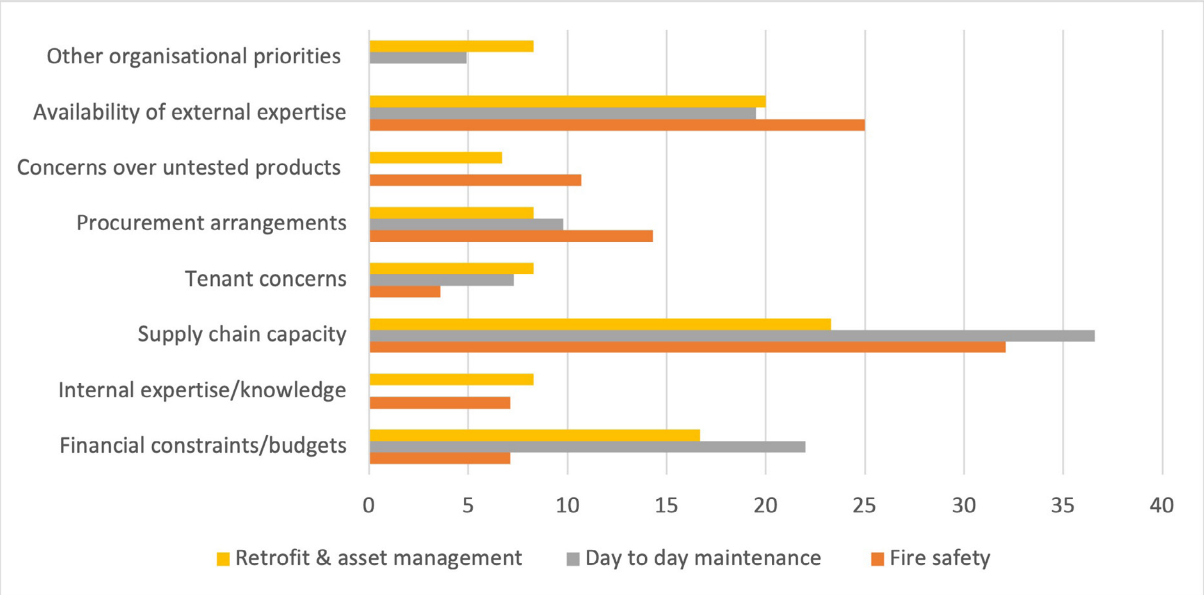
Across the remaining three areas **Supply chain capacity** features as the most prominent issue (See Figure 1). Responses reflect that it is felt more acutely for activities linked to fire safety or day to day maintenance. The availability of external expertise was also frequently selected as a leading issue across the three areas.

Figure 1. The prevalence of different issues linked to retrofit and asset management, day to day maintenance and fire safety.



There are also some variations worth noting:

Day to day maintenance

When we asked staff about what they perceive to be the main pressures with accessing the products needed for day-to-day maintenance, they highlighted financial constraints and budgets as a prominent issue. This appears to be an area where there are little/no real issues arising as a result of internal expertise/knowledge or concerns over untested products

Fire safety

Procurement arrangements and concerns over untested products are the areas of most concern for ensuring properties are safe in the event of a fire. Financial constraints/budgets seem to be less of an issue in this area (compared to the other areas of activity).

Retrofit and asset management

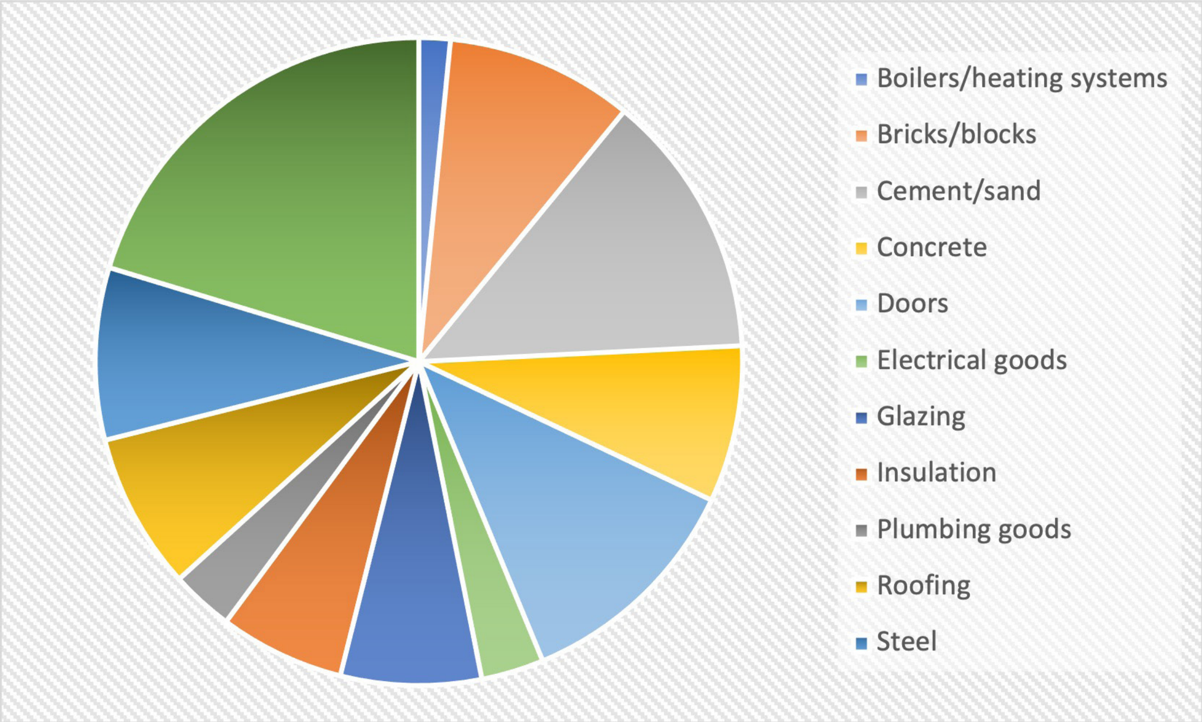
Financial constraints/budgets again feature prominently with every other remaining issue listed receiving consistent support (albeit at a lower level) – distinct from the other areas in focus.

The impact of challenges on supply chains

Access to materials

Reflecting on which materials/products were most adversely impacted by the challenges in the supply chain – **Timber was the leading (20%) material identified.**

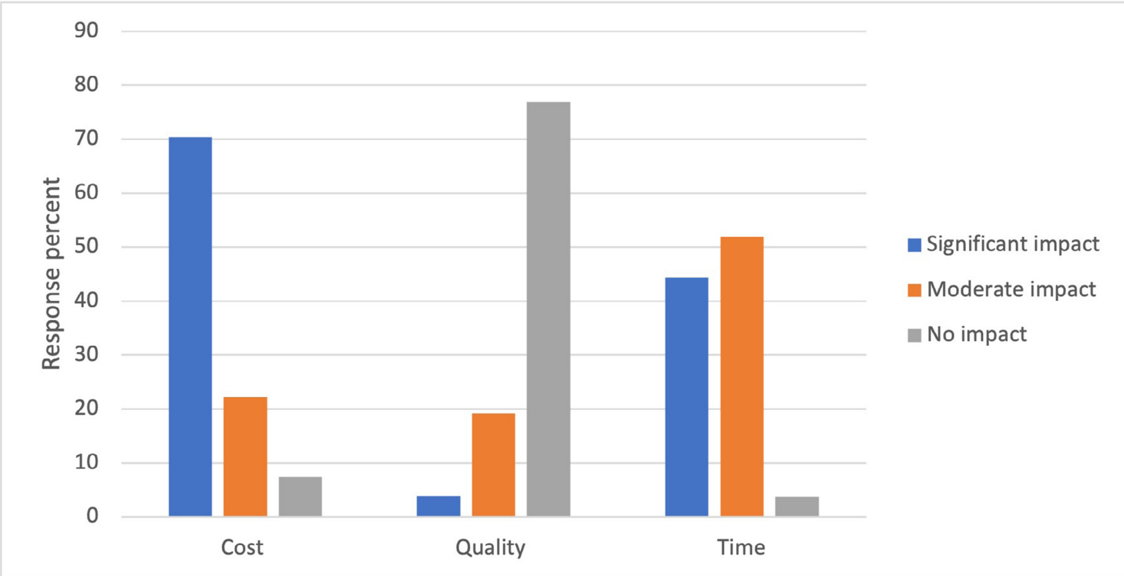
Figure 2. The extent to which the availability of different materials/services/goods are impacted



Many basic building materials such as cement/sand, bricks/blocks, concrete and steel were also highlighted in addition to products such as doors, roofing and glazing. Whilst responses suggest a greater impact on certain materials/products over others, our survey demonstrates that the impact on a range of materials/products that are needed throughout the construction process from breaking ground, right through to preparing for occupation is being experienced.

Cost, quality and time

Figure 3. The extent of the impact issues identified are having on cost, quality and time



When we asked people about the impact of the pressures on supply chains, the principle area of concern related to marked increase in prices for materials. Confirming some of the previously highlighted barriers, **70% of respondents felt cost had been impacted significantly**. Respondents told us that when they were able to access resources, they were having to pay more compared to six months previously. **Increased prices of 30%-40% were identified across a range of materials including timber, steel, concrete and fencing**.

"It has been more difficult to source materials and their price has increased which has had a knock on effect to budgets and completion of repairs on time."

"Prices are noticeably higher and contractors position is changing in terms of claims and attitude to tendering"

"Fixed price contracts are being challenged by contractors where they can justify increases in cost or can't absorb additional costs. Limited budgets available to account for these costs due to expectation of fixed prices."

At the time of our survey just over three quarters of respondents felt there was no impact on quality – although almost 20% felt there had been a moderate impact.

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Respondents were almost unanimous in their view that time had been impacted, to either significant, or a moderate extent (96% of respondents). Several respondents told us that the delays were having an impact throughout their developments with contractors who were unhappy and wanted to adjust contracts.

"The main issues stem from the perfect storm of Covid impacting on the closure of plants/factory's and then reopening with restrictions, which has affected lead in times. unprecedented increase costs, demand from USA (timber) and Brexit slowing materials coming into the country"

"Overall costs have increased by 10 to 20% making schemes unviable when previously they were"

"Component price increases evidenced in some cases timber up 30% steel up 20%.

Addressing the challenges

Sector response

We asked respondents to consider how the approaches of their teams/organisations had changed in the last 12 months in relation to the four areas under focus in the survey. **Across those areas a common thread has been no significant change yet in the approaches taken by their organisation**.

Despite this, many respondents have been taking proactive steps to overcome issues in the supply chain. For some they had found opportunities to work with suppliers to understand issues and solutions, including **changing plans** and **building more time into planning activity**. Organisations were also looking to **access different materials with better lead-in times and availability**.

Further practical measures have been identified including:

- Increasing technical expertise among internal staff to carry out tasks previously outsourced
- Factoring in more time to deliver projects/services, ensuring these are realistic for any contracts/suppliers
- Purchasing and storing large volumes of key materials/products to offset dips in supply
- Delaying some major programmes of work until later years to increase the potential of being able to demonstrate value for money (as a result of current price increases)
- Identifying risks with fluctuating material/product costs and factoring these into contracts with supplier
- Others highlighted action to source more local stock and increase storage capacity for their materials.

Some respondents who had not identified issues with their supply chains put this down to having access to decent stock-storage.

"Securing future deliveries from local suppliers, carrying a large level of stock."

"We are in contract with a national supplier and therefore have access to a wide range of materials which are stocked in our dedicated store"

"Informing clients of the situation and lowering expectation in regards to timescales"

"We are working closely to understand the position with supply chain partners and have introduced a range of measures to assist including additional payments, shorter valuation periods etc".

"In constant dialogue with our supply chain to understand the issues and support them where we can. Cash flow is an issue which will probably lead to good companies failing without some form of financial assistance."

Potential role of the Welsh Government

Answers to our survey told us that there is not a straightforward answer to this, for some respondents they felt the issue was not within the remit of the Welsh Government. Several respondents also acknowledged that they were already in discussions with Welsh Government and welcomed this dialogue. At CIH Cymru's TAI 2021 Housing Conference, the Climate Change Minister Julie James MS outlined a potential intervention to "buy up building materials in short supply to help the social housing sector to keep developing"[12].

Looking deeper into such an intervention, several responses suggested the need to invest in creating a more sustainable supply chains within Wales, so goods and technologies are developed and sourced locally.

Recommendations were made to develop the industries and infrastructure that would broaden supply chains with Welsh timber being a priority for many, although respondents acknowledged this was a long-term rather than a short-term solution. Linked to this several respondents highlighted the role of the Welsh Government in supporting SMEs and increasing apprenticeships to facilitate the flow of new skilled workers into the sector.

Several respondents also felt that grant conditions could be more flexible to reflect the turbulent nature of the operating environment alongside longer-term commitments to funding that would help mitigate against surges in demands the likes of which some organisations are experiencing.

The role of local government was also highlighted as critical as being able to manage the expected delays and uplifts in costs. Planning was mentioned with a request that there be more understanding of the problems facing house builders built into the process, although a number of respondents also recognised capacity issues for planning departments being an additional barrier.

"Keep talking to the sector about the problems we are facing across multiple service areas and support us with consistent decision making across all housing providers as to how we handle, cost and time delays. Be flexible with grant awards that are usually bound to each financial year, there may be timing impacts this year that will mean slippage into next"

[12] https://www.insidehousing.co.uk/news/news/welsh-government-could-buy-up-building-materials-to-tackle-shortages-says-minister-71183

Case-studies

Case-study one – Housing Association perspective

"We are aware that we are running a backlog of repairs which has built up over the last 18 months, during the strictest lockdowns the message was we would only do urgent repairs, and we used the furlough scheme for some of our maintenance staff.

We now don't have enough staff to address the backlog in general repairs which is leading to tenant dissatisfaction.

Added to this we are facing pressures in our supply chains – it seems hard to get hold of timber, steel and plumbing supplies in particular. Even though things have calmed down we are still affected by staff having to isolate because they have COVID or are a close contact of someone with COVID.

It doesn't take much for supply chain issues to have a dramatic effect on our work programme.

Our parts budget for this financial year was over £300,000, we were £150,000 overspent after 7 months and that's not even been a full service – that's how much prices have increased.

Significant planned programmes have been delayed, especially supported housing – seen as too risky until things settle down.

Would like to see a consortium of housing organisations working together to address issues in supply chains and reaching decarbonisation goals."

Case-study two - Local Authority perspective

"Our council may not have been impacted by the supply chain issues as badly as others as we have a dedicated Supply Partner, a Welsh SME on a 10-year contract. This means we do not need to go through frameworks etc. when we need to re-stock supplies. Thankfully our supplier had been stocking up ahead of Brexit as they had foreseen coming out of Europe might cause problems with supply chains, so when COVID hit they were in a relatively good position.

There hasn't been anyone who hasn't been hit by Brexit, Covid, fuel crisis and lack of HGV drivers, and relatively few unaffected by the increase in prices. Early days of the pandemic when the cost of PPE (in particular) increased significantly, and we found we were paying extortionate prices just to keep our workforce safe – from coveralls to gloves and masks. We also fitted all our vehicles with internal screens to maintain distance whilst travelling. All of this has had a financial impact.

More current concern relates to glass, with lead times extended from 5 days to 3 weeks, and

18 months on from the start of the pandemic, though the situation is not to a point where there are no materials available, our supplier is starting to be impacted (as their initial stock runs down), which has a knock-on effect for us.

We are also now seeing issues in relation to accessing our agreed specifications, more recently components for things like extractor fans – we use a certain model to make repairs and replacement easier but we are struggling to access those now.

We have always tried to follow the Just-In-Time model, but not sure that works anymore with the current situation we are in. E.G products such as latches for windows, which we used to be able to get the next day, are now on extended lead times and we are unlikely to see until January – this has resulted in both us and our Supply Partner having to take as much stock as we can find so we have enough for a few months supply – throwing JIT principles out through the window!

We continue to try and maintain our high level KPIs, which are set in for housing, and although we should still achieve them this year, the supply chain problems are going to make this harder.

The March 2020 lockdown put a stop on all our non-urgent repairs. Then as things eased we were able to start work on our void properties, but this was slower than normal because of having to socially distance between staff.

Since the easing of lockdown, we now have a backlog of non-urgent repairs to deal with, plus new ones coming in, and although this was caused by lockdowns and restrictions, not necessarily by supply chains, the ongoing supply chain issues are now exacerbating this.

Unfortunately, all of these issues are causing frustration on the ground, contractors and workforce just want to get on with their work and can't always understand why they cannot get what they want, when they want it and what exactly is causing the delays. and our tenants have had to be very patient, not only having to deal with the continuous lockdowns, but also due to the longer lead-times are having to wait longer for repairs and works to be undertaken in their properties.

Further delays and issues with the supply chain will likely have serious consequences for our suppliers and contractors and ultimately us – with price increases but also sadly businesses having to close. As a lot of our contractors are local this would have a massive impact on our local communities.

We have always looked to our supply and contractor base to support us in achieving community benefits and to help us fulfil our obligations (set by Welsh Government), but are they in a position to continue to do this, and are they getting sufficient support?

Conclusion

The current situation seems stark with challenges in supply chains causing delays across housing development and maintenance, including key priority areas such as fire safety and decarbonisation.

The building of new social homes across Wales is a priority, demonstrated by the newly elected Welsh Government setting out its ambitions through the 20,000 low-carbon social housing target in addition to implementing a new building safety regime and continuing at pace with the decarbonisation of existing homes.

Our survey showed us that the impact of supply chain issues has been widespread with ramifications for cost and time-delays. It is reassuring to see that housing organisations continue to be confident in the quality of their homes/services but clear that they are concerned about meeting their targets for housebuilding, maintaining safety measures and ongoing maintenance.

This was further emphasised by some respondents having concerns about the long-term impact of decisions that were being made now in response to challenges; that they were delaying the start of major developments until they could be more confident of a stable supply chain. This then has a potential effect on cash-flow for smaller contractors and sub-contractors who may struggle to stay viable without financial assistance.

Our report outlines that while housing organisations across Wales have been able to deliver short term solutions there are longer term issues which need to be addressed to avoid further destabilisation caused by unanticipated events. These include a reliance on international trading suppliers which has proven fragile when faced with an imbalance between demand and supply.

As the economy and country looks to recover from the COVID-19 pandemic and the issue of climate change moves up the political priority list there is an opportunity to look for new and dynamic solutions to some of the challenges facing the housing sector in Wales.

Recommendations

Welsh Government:

1. To lead and convene a **Supply chain action group** to have an ongoing dialogue with the sector, gather evidence and identify knowledge/intelligence gaps, horizon scan and consider ongoing impact of issues on sector targets/areas of priority.
2. Produce and **lead a Supply Chain resilience plan** capturing the approach to growing and diversifying current supply chains to ensure their impact on the climate decreases in-line with government targets and reflect the foundational economy approach.
3. Introduce greater **flexibility in the grant model** used to distribute government funding to build social housing by:

- Review funding rates, on a temporary basis, for developments at final account stage to ensure the grant intervention rate remains fit for purpose
- Continue to monitor and amend Acceptable Cost Guidance to take account of cost inflation

4. Develop **longer-term crisis cash-flow support for SMEs** to ensure contractors working with the sector have additional support to remain viable in the face of increasing costs
5. Develop **a workforce strategy for the social and affordable housing sector** to underpin the skills needed to service and maintain supply chain activity

The sector:

1. Housing providers to **establish homes and housing services procurement coalitions** to increase economies of scale, based on the principles of the foundational economy
2. **Engage tenants at an early stage** to provide clear and honest communication about the impact that delays have on tenant-facing services. Offering the opportunity for tenants to engage and evaluate how services respond to tenants on an ongoing basis to refine and improve responses
3. Review and **refresh approaches to individual role/team skills development** to identify additional skills/expertise that could be developed within their internal workforce

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