

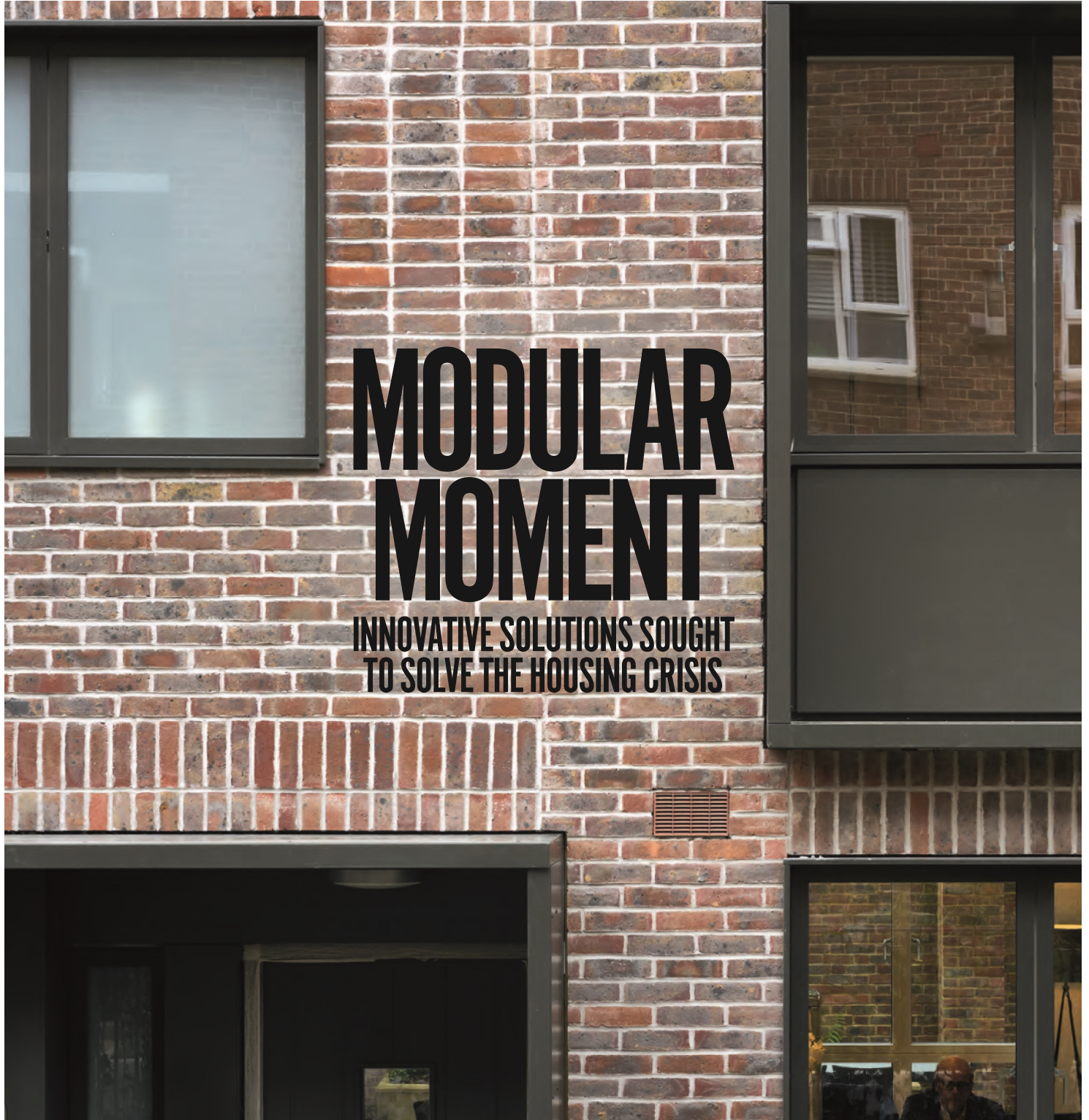


Coronavirus closes down sites p11

Tackling the climate knowledge shortfall p16

New Civil Engineer

MAY 2020



MODULAR MOMENT

INNOVATIVE SOLUTIONS SOUGHT
TO SOLVE THE HOUSING CRISIS



Future of Housing

Civil engineers are seeking innovative solutions to tackle the housing crisis - in the UK and in Europe - using modular techniques and developments to deliver new homes on a large scale with an alternative approach to funding.

HOUSING DEVELOPMENTS TO BENEFIT ALL / PAGE 26

GARDEN COMMUNITIES GET UNDERWAY / PAGE 30

MAKING THE MOST OF MODULAR / PAGE 34

MODERN MATTERS

With the government promising increased investment in affordable homes, how should the industry embrace innovative and sustainable solutions to help close the UK's housing gap? **Nadine Buddoo** reports.

Future of Housing

Chancellor Rishi Sunak made some encouraging promises in his Budget announcement in March. The priority is to “make sure people have affordable and safe housing” by extending the Affordable Homes programme with a new multi-year settlement of £12bn.

To support local authorities' investment in their communities, Sunak announced cuts to interest rates on lending for social housing. This would free up more than £1bn for investment in local infrastructure.

An additional £1.1bn from the Housing Infrastructure Fund was also promised to help drive delivery of nearly 70,000 homes in areas of high demand across the country.

“We promised to get Britain building,” chanted Sunak in his Budget speech. “This Budget is getting it done.”

But, as this issue of *NCE* went to press, the government's attention is

KEY FACT

£12bn
Value of
government's
Affordable
Homes
programme

firmly locked on responding to the coronavirus pandemic.

The full impact of Covid-19 remains unclear, raising concerns about what the economic fallout in areas such as housing will be.

Despite this uncertainty, the initial response to the Budget announcement from the housing industry was upbeat, particularly regarding social housing.

“[The Budget] includes positive announcements for social housing – it delivers more certainty and new investment into housing for people most in need,” said a statement from National Housing Federation chief executive Kate Henderson.

Arcadis chief executive for Birmingham Simon Marks was also encouraged by the Budget

“There is cross party agreement around the urgent need for more housing”



announcement.

“The stated objective of government is to increase housing supply,” Marks says. “Whatever your political party, everyone agrees that we need more housing. There is cross party agreement around the urgent need for more housing.”

Marks also praises the publication of a Planning White Paper which will initiate a government review of the current planning system to ensure it is fit for purpose and supports the delivery of desperately needed homes.

“I was encouraged by the White



Paper, the Budget and the general direction of travel – the government’s narrative appears to recognise the need to rebalance, the need for more investment and the need to deliver more housing,” says Marks.

But government support and investment is just part of the puzzle. Ensuring new homes are part of a wider approach to successful placemaking is critical to delivering places where people actually want to live, admits Marks.

“People want to live in beautiful places,” he says. “Everybody wants

to feel proud of the place they live in. Everybody wants to live in a place that works for them, that works for the community.”

COMMUNITY FIRST

In January, consultant Arcadis launched its *Liveable Places* report which called for a longer term, more joined up approach to placemaking.

According to Marks, placemaking – a multifaceted approach to the planning, design and management of public spaces – should always start with the community. “It’s important

“ People want to live in beautiful places. Everybody wants to feel proud of the place they live in

to put community at the heart and at the start of the process. Traditionally, as an industry we tend to focus on the place or site first.

“But we need to start with the citizen, with the community. Before we put pen to paper, before we put a foot on the ground and look at the physical aspects of a project, we need to get under the skin of the community.

“What are their day-to-day issues? What are the things that are troubling them? What can we do differently that will make a real impact on their lives?”

MODULAR SOLUTIONS

If tackling the housing crisis requires a fresh approach to the way homes are delivered, modern methods of construction offer a potential solution.

“The opportunity with modular construction is obviously speed, but there’s a significant health and safety benefit there too,” Marks says.

“But there’s also opportunities to build more sustainably, with more sustainable materials in a factory environment so the quality of the product is higher than what is typically produced on site. Plus, there’s still the potential to use local labour and local resources.”

Despite the myriad opportunities offered by modern construction methods, projects in the UK are still overwhelmingly reliant on traditional techniques.

“We’re miles behind other countries,” admits Atkins development director Mark Powell, who is also managing director of the firm’s subsidiary Edaroth (*see case study*). “The UK is somewhat unique in continuing to deliver in more traditional forms.”

Powell believes this is a consequence of a very refined model that has survived through various economic booms and busts, and employs a significant amount of people right the way through the supply chain.

“Preserving the character of a place is really important. You wouldn’t want to see the same cookie cutter sort of place across the UK

“As a result, the industry has become slightly inert in the sense that it’s focused on very fine margins to deliver projects, therefore the appetite for new thinking or adopting new ways of working is limited.”

But it’s clear a new approach is needed to help tackle the growing housing crisis impacting communities across the UK.

While the government has pledged to deliver an average of 300,000 new homes a year, there is a need for around half of that to be social or affordable housing.

“And that’s where the big gap is,” insists Powell. “There is a significant shortfall in delivery of social and affordable housing, and the position gets worse as the right to buy continues to deplete housing stock.”

Powell acknowledges there has been some encouraging progress to tackle the issue. But he believes more local authorities must be forward thinking and proactive if they are to put a meaningful dent in the social and affordable housing shortfall.

Adopting more innovative and sustainable solutions is vital, but it’s important that this is not at the expense of individuality in housing design.

“Preserving the character of a place is really important,” warns Marks. “You wouldn’t want to see the same cookie cutter sort of place across the UK. How is that responding to specific communities and specific aesthetics and needs?”

Whatever the method of production, the industry must ensure it allows flair, creativity and beauty in design and that it creates successful places that serve local communities. **N**

SUSTAINABLE SOCIAL HOUSING



Edaroth deliberately picked a challenging site because it was so confident it could deliver what was needed

Edaroth, a subsidiary of consultant Atkins, was launched to deliver a new approach to social housing. The name alone is almost a mission statement for the business: Everybody Deserves a Roof Over Their Head (Edaroth).

By unlocking under-utilised land and off-site manufactured housing, the business aims to provide a new route to tackling the country’s housing challenge. But more than simply closing the gap between supply and demand, the goal is to create truly affordable housing at the heart of sustainable and inclusive communities.

Edaroth’s vision involves the client, usually a local authority, retaining land ownership as well as owning the housing assets on completion, boosting their permanent housing stock and delivering a positive social and economic impact for the local community.

“Our objective is not to become another private sector developer. It’s about helping local authorities restock themselves with affordable and social housing. That’s where our focus remains and where it will stay for the foreseeable future,” says Edaroth managing director Mark Powell.

Hillside Gardens, in London, is the first project to be delivered as part of the scheme. Four new family homes have been completed in close collaboration with the local authority in Lambeth.

Powell praises the local authority for being bold enough to think differently and for being willing to try a fresh approach to the delivery of new homes.

“They’re under a lot of pressure not to make any mistakes. It’s a very nuanced environment that can make it difficult for local authorities to be progressive in any way,” he says.

“During initial discussions with the local authority, they asked what kind of site we were keen to work on. We wanted to take on their most challenging site – that’s how confident we are in our vision.”

The location selected for development was certainly that. For years, a series of disused garages had dominated the site which had long been considered unsuitable for development because of its scale and inaccessibility.

Using off-site-manufactured panels and steel frames, with assembly on site, was key to successful delivery of the project. These modern methods of construction allowed the team to work faster than traditional approaches would permit.

During assembly on site, the team aimed for “48 hours to watertight” – meaning the inner housing shell could be protected from the elements and the rest of the structure could be delivered within tight time frames, without being subject to the weather. Plus, just-in-time delivery helped to improve efficiencies and meant large components were not stored on site, where they could be at risk from poor weather, vandalism or theft.

This construction process helped to improve overall efficiency and health and safety on site, as well being less disruptive to the surrounding community and road infrastructure.