

# New approach Better homes Brighter future

Why we must embrace modern  
methods of construction to meet  
the social housing challenge



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# Time for radical new thinking?

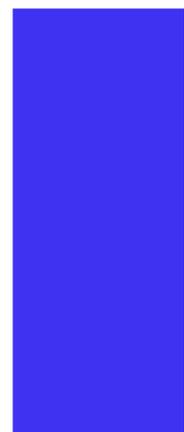
For many households the cost-of-living crisis gets more frightening by the day, leaving many low-income households with tough choices to make between paying the rent, buying food or heating their homes. This is against a backdrop of a social housing emergency, created by a chronic undersupply of new social housing. As a result, there are more than one million households now languishing on the social housing waiting lists, with no end in sight.

According to research from Shelter published January 2023, at least 271,000 people were recorded as homeless in England, which included 123,000 children. In the same report, the number of people identified as living in temporary accommodation had risen by an alarming 74% in the last ten years. Of that total, more than two-thirds had been living in temporary accommodation for more than a year.

By transitioning households from temporary accommodation into social rented homes, we estimate local authorities across England could save in excess of £1bn. This saving could then be used to offset the delivery of up to 14,000 new social and truly affordable homes each year.

I feel at this point, I must mention the elephant in the room. In many cases, local opposition to housing developments is a significant barrier to delivering the homes that society needs. While, public engagement is hugely important in any development of new homes, we must find a way to overcome NIMBYism and opposition to new social and affordable housing. This will require a strong commitment from industry and central and local government, coupled with effective consultation and community engagement. A failure to overcome this barrier will inevitably exacerbate the challenge that we face.

You may be familiar with the notion that insanity is doing the same thing over and over again, and expecting a different result. That begs the question, if we know that, why do we keep repeating the same mistake?



To beat the social housing emergency, I believe we must drive market reform and speed up planning with a presumption in favour of net zero compliant homes. If we do this, we will be able to accelerate the delivery of energy-efficient, truly affordable homes. If we continue to rely on traditional methods and approaches, I believe the housing crisis will deepen, with low-income households and the most vulnerable in our society feeling the harshest effects.

In January 2020 we launched EDAROTH (an acronym of Everybody Deserves A Roof Over Their Head), a subsidiary of Atkins created to help local authorities and the UK Government address the shortage of social housing.

We achieve this by combining end-to-end development expertise and design excellence with off-site manufacturing techniques, which enable us to produce net zero and fire compliant homes quicker and cheaper than traditional build.

By taking this approach, we are able to unlock underutilised land to deliver the additional homes that are so desperately needed.

To mark the launch and declare our intention, we published our first whitepaper, titled 'Unlocking brownfield land – A social housing first policy'. While to some this may have seemed like a lofty ambition, its aim was to uncover the valuable opportunity to finally eradicate housing waiting lists, and provide truly affordable homes where people want, and need to live. By retaining ownership of the land and housing assets, local authorities also have the opportunity to increase land and asset values, bolstering Housing Revenue Accounts (HRA).

Three years on and progress remains slow. According to the Government's most recent affordable housing statistics, there were 7,528 new social homes delivered in 2021-22.

This falls woefully short of widely-accepted estimates that we need to build at least 90,000 new social homes every year.

I believe that if we don't find a way to increase the delivery of new social homes, we will fail to address the growing housing emergency. This can only result in low-income and vulnerable households remaining trapped in unaffordable, insecure and, in some cases, unsuitable and unsafe homes.

In this whitepaper we will explore the benefits that modern methods of construction (MMC) bring to the sector, and why we must embrace them as a central part of UK social housing strategy to deliver the additional homes that are needed.

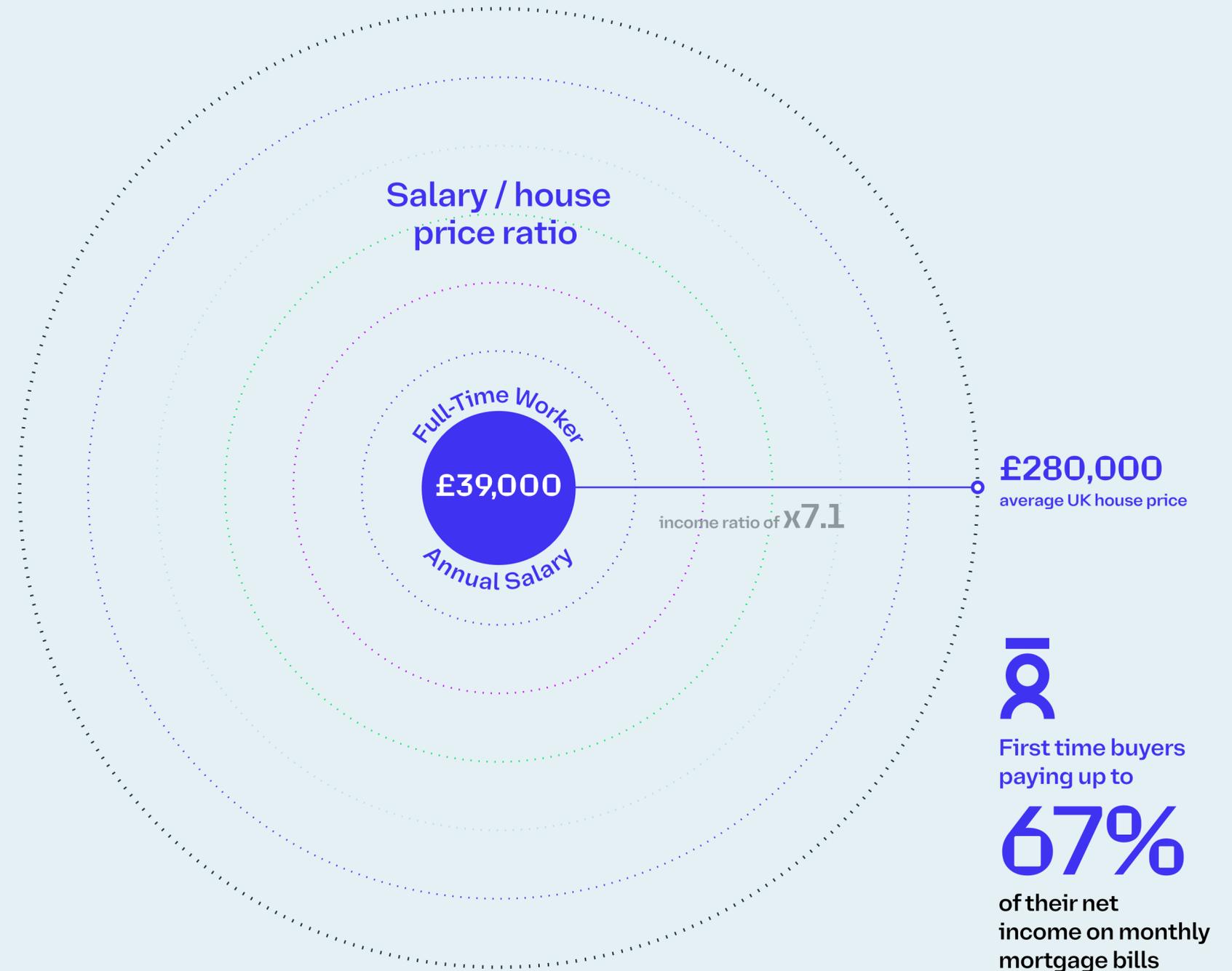
**Mark Powell**  
Managing Director  
EDAROTH



# Affordability - households under pressure

Governments of all stripes are now focused on home ownership. For many people, however, this simply is not an option. According to Uswitch.com, in the first quarter of 2022, the average UK house price was just under £280,000. This equated to an income ratio of 7.1 times the annual salary of a full-time worker at £39,000. In London it makes for much starker reading. According to Nationwide Building Society, by the end of 2022 first time buyers were paying up to 67% of their net income on monthly mortgage bills.

Data gathered during the most recent census in 2021, found that 30% of households held a mortgage on their homes. In the most recent English Housing Survey, **52,000 households with a mortgage were reported as being in arrears.** By June 2022, according to figures from Uswitch.com, that figure had risen to 83,160.



As we grapple with the rising cost of living, inflation, and high energy costs, this highlights the **growing number of households potentially being pushed into poverty, and being forced into difficult choices between bills, heating, or food. The lack of affordable homes for rent is also having a damaging effect on many households.**

According to the Joseph Roundtree Foundation's cost of living tracker during winter 2022-23, low-income households continue to 'buckle under the pressure of the cost-of-living crisis'. It highlights that 7.2 million households are going without the basics, and 4.7 million households being behind on their bills. More recently, in March 2023, Zoopla - which cover more than 85% of UK properties listed for rent - reported a sharp drop in listings for available properties. This has driven up the cost of rent for new tenants by 11%.

According to data released April 2023 by the Regulator of Social Housing (RSH) for 2022, affordable rent costs were double the equivalent social rents in some parts of England. When considering the wider picture, average affordable rent was 30% more expensive than social rent charged by housing associations across England.

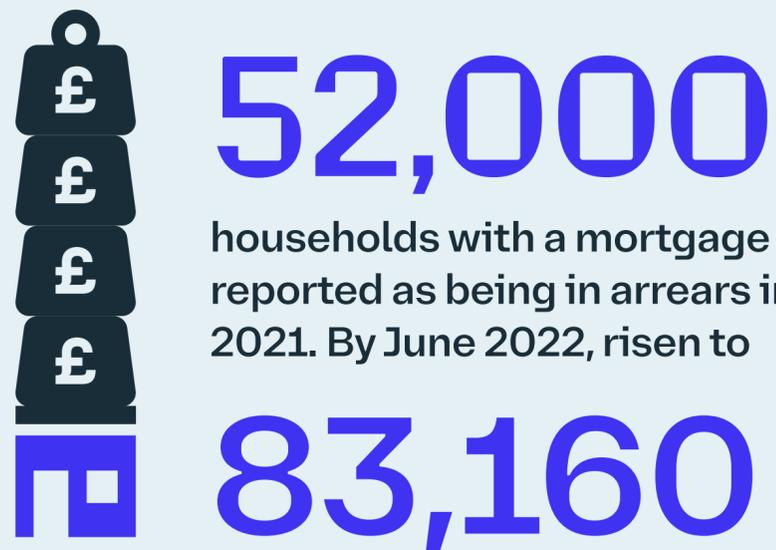
**Without intervention by the Government and the housing industry, and an increase in the number of new homes with genuinely affordable rental tenures, this will continue to be a worrying, and ultimately damaging, trend.**

Sharp drop in listings for available properties has driven up the cost of rent for new tenants by

11% 

 7.2m  
households are going without the basics

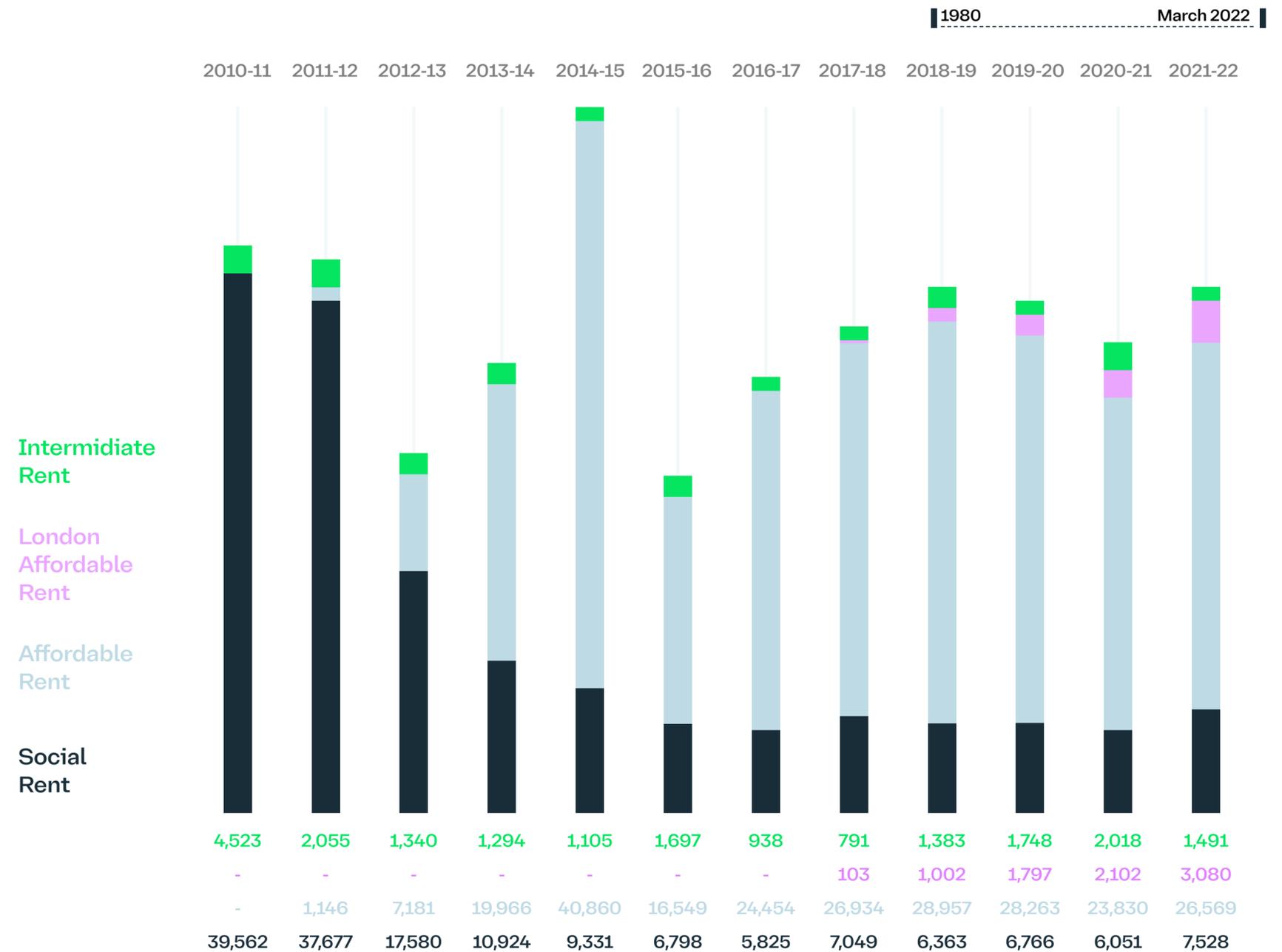
 4.7m  
households being behind on their bills



# The social housing challenge; we need a shift in focus

The Government's most recent housing supply indicators recorded a **10% increase, from 211,870 to 232,820, on net dwellings between April 2021 to March 2022**. Of that figure 25% (59,175) were delivered across all affordable tenures. While this falls some way short of the Government's 300,000 a year housing target, further analysis of social housing completions exposes a much starker outlook.

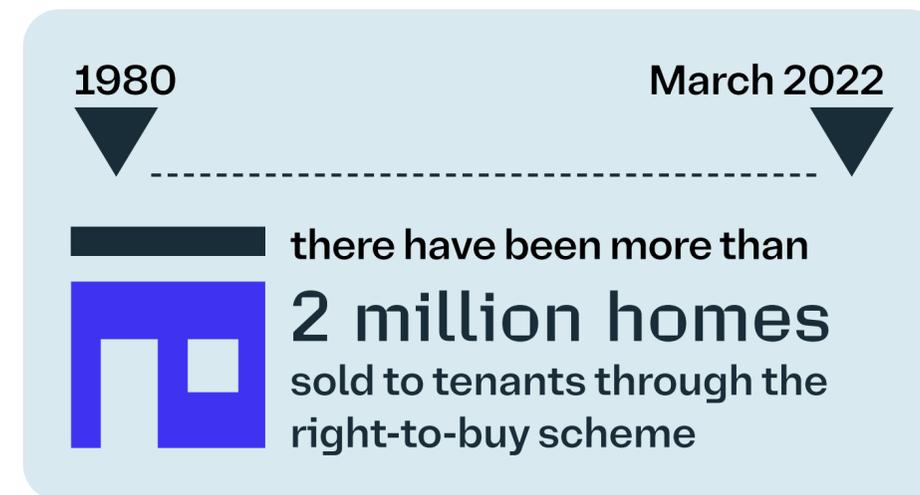
While new affordable rent completions have increased year-on-year, in the same time period from 2010 to 2022, annual social housing completions have fallen from 39,562 to 7,528 (an 81% decrease). With a national housing waiting list of more than 1 million households, again this falls some way short of current estimates by Shelter which suggest that **we need to build 90,000 quality social homes per year**. We must find a way to reverse this trend.



While we support the right to home ownership, we must also take into account the impact that the right-to-buy scheme has had on social housing stock. From 1980, until 31 March 2022, there have been more than two million homes sold to tenants through the right-to-buy scheme. In 2021-22, local authorities reported 10,878 eligible sales. In that same time period, only 5,089 replacements were funded through receipts from those eligible sales.

When considering the Government's commitment to like-for-like replacements, there is still a lot of ground to be made up. However, this does not take into account the growing emergency and existing challenges. To halt the decline of social housing stock, and meet the growing need for truly affordable homes, we need to go much further than just like-for-like replacement.

According to the Government's most recent data published in September 2022, there were almost 100,000 households living in temporary accommodation. With an annual spend of £1.6bn last year, this represents a 61% increase in spending over five years – and a 67% increase over the last 10 years.



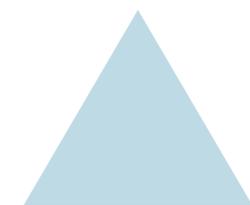
With an annual spend of

**£1.6bn**

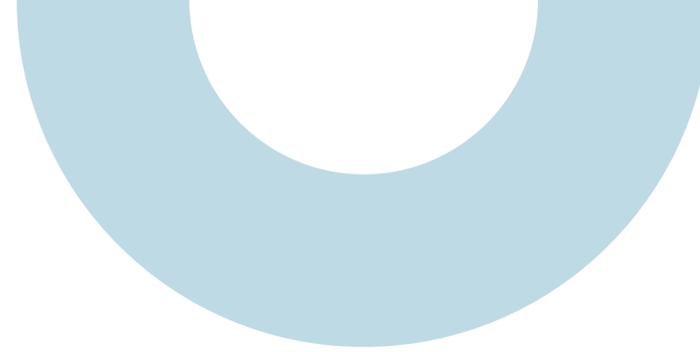
last year, this represents a



**61%**  
increase in  
spending over  
5 years and a



**67%**  
increase  
over the  
last 10 years



According to recent research from Shelter, almost half of all families placed in temporary housing are forced to place their children into new schools or spend hours travelling to take them to their current school. The study highlights how the disruption harms their academic performance and emotional wellbeing. The research also revealed that more than a third of those children missed more than a month of school after being placed in temporary accommodation.

When we consider estimates from Shelter that more than 125,000 homeless children are living in temporary accommodation, only then can we begin to comprehend the potential impact this is having on children's educational attainment, progression and life chances.

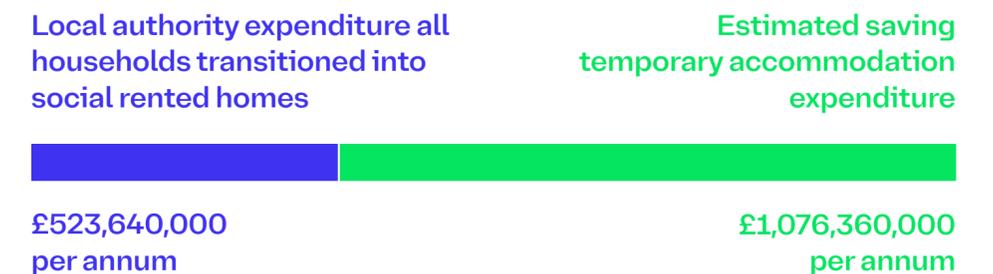
By transitioning those households into new social housing, we have the opportunity to provide them homes in the places they want and need to live. Based on the total number of households in temporary accommodation and associated expenditure 2021/22, we estimate potential savings in excess of £1bn for local authorities per annum across England. On further analysis, we estimate that redirecting this saving could deliver an additional 14,000 new social and truly affordable homes, per annum. At a time when public sector budgets are tightening, this delivers a positive impact to local authority balance sheets when it's most needed. By removing temporary accommodation as a cost burden, we can create lasting housing assets, build more homes, and redirect funding into other priority areas.

## more than a third



of those children missed more than a month of school after being placed in temporary accommodation

**£1.6bn** Temporary accommodation total expenditure



**95,000**

households being behind on their bills

**14,000**

homes per annum

Number of new social and affordable homes that can be achieved



# Build better, build greener, build faster

It has also become increasingly obvious that traditional housebuilding methods alone will not overcome the housing challenge. While MMC is seen as an alternative to traditional construction methods, it must not be seen as a replacement. To overcome the housing crisis and deliver against the Government's housing targets, we must use all methods of construction that are at our disposal. As a relatively new and emerging part of the housing sector in the UK, MMC must be seen as an additive approach which is crucial to help bridge the gap and deliver the homes people want and need.

**Beyond that, MMC also represents a step-change in housebuilding to build better, build greener, and build faster with greater cost certainty.**

Build better - To build confidence in the financing and procurement of MMC, the market now boasts quality assurance schemes such as NHBC Accepts

and the Buildoffsite Property Assurance Scheme (BOPAS). By creating robust assessment criteria covering technical standards, this provides the confidence that offsite products and processes adhere to the highest standards and are held up to the most robust scrutiny. The result is exacting design and better-quality control processes, utilising building materials and components that offer a high degree of durability and reliability. This will ultimately deliver better quality homes, and reduce lifecycle costs.

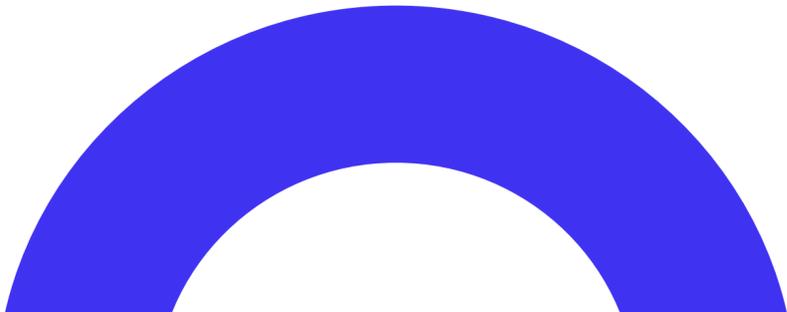
Build greener - The UK's housebuilding industry, like many others, will have a pivotal role to play in the drive to the UK reaching its Net Zero CO2 obligations by 2050. MMC and offsite manufacturing drastically reduces the carbon impact and content of construction. This is down to a combination of exacting design, reduced waste and controlled

factory processes, resulting in fewer transport loads travelling to site. Through a combination of improved building fabric performance, airtightness and use of air source heat pumps and renewable technologies, MMC homes are able to deliver net zero homes in a more cost-effective way, when compared with traditional construction. For the residents on low-to-median incomes, this will provide high-performance energy efficient homes that reduce household bills and deliver better health and wellbeing outcomes.



**MMC and offsite manufacturing drastically reduces the carbon impact and content of construction**

Build faster with cost certainty - Through offsite manufacturing processes, MMC companies are able to remove the delays often associated with traditional onsite construction. The shorter construction time frame lowers financial costs by improving cash flow and reducing the rate of net borrowing. The overall result is improved project predictability, and greater time and cost certainty.





# MMC homes - Levelling-up people and communities

A report published on behalf of the Local Government Association (LGA), National Federation of ALMOS and Association of Retained Council Housing (ARCH) September 2021 titled 'Building Post Pandemic Prosperity' - estimated that **building 100,000 new social homes each year could contribute £15bn to the UK's economy.** By targeting spend on the construction of new homes on a local level, the report also highlighted the benefit these homes can bring to communities which need both homes, and jobs.

As well as delivering quality energy efficient homes, **MMC is a potential game-changer in the drive to close the productivity gap in other parts of the UK. As a construction method it can create social and economic value both during the construction phase and in supply chain interactions.**

By locating factories and elements of the offsite construction process in deprived areas, we can provide sustainable jobs, and bolster local supply chain companies. This contributes to communities and the UK Government's levelling-up agenda.

By working with existing manufacturers, **MMC can also bring forward opportunities for companies to diversify, enter new markets, and safeguard jobs.** An example of this from an EDAROTH perspective is our work with Cardinal Ltd in Bradford. By combining Atkins' and EDAROTH's design, development and engineering expertise with Cardinal's experience in manufacturing, we have been able to unlock new opportunities to innovate within the housing sector.



**Building 100,000 new social homes each year could contribute**

**£15bn**  
to the UK's economy

**Increasing workforce to deliver 25% of new homes using MMC could create**

**8** **40,000**  
new jobs working in offsite manufacturing



In April 2019 the CITB published analysis focusing on the impact that MMC can have on skills requirements for housing. While we realise that this does not take into account recent events, it still makes for interesting reading. **Based on the Government's ambition to build 300,000 new homes per year, if we increased the workforce to deliver 25% of new homes using MMC, according to the analysis this could create up to 40,000 new jobs working in offsite manufacturing. At 40%, this increases to 81,000.**

To bridge the gap, MMC can, and must, influence a future workforce, which mitigates the need for many onsite trades. By moving the majority of the build process into controlled factory settings, we can vastly reduce the time that workers spend on site.

This will lead to improved safety standards and remove the negative impact of weather conditions on building sites, which often cause delays.

Most people's interpretation of the construction industry is that it is dirty, noisy, dangerous and inaccessible. By providing a fixed working environment within a safe factory setting, we will be able to attract those who would normally disregard construction as a career. This will not only lead to a wider, inclusive and more diverse pool of talent, it will also help to bridge the skills gap that exists within the industry.

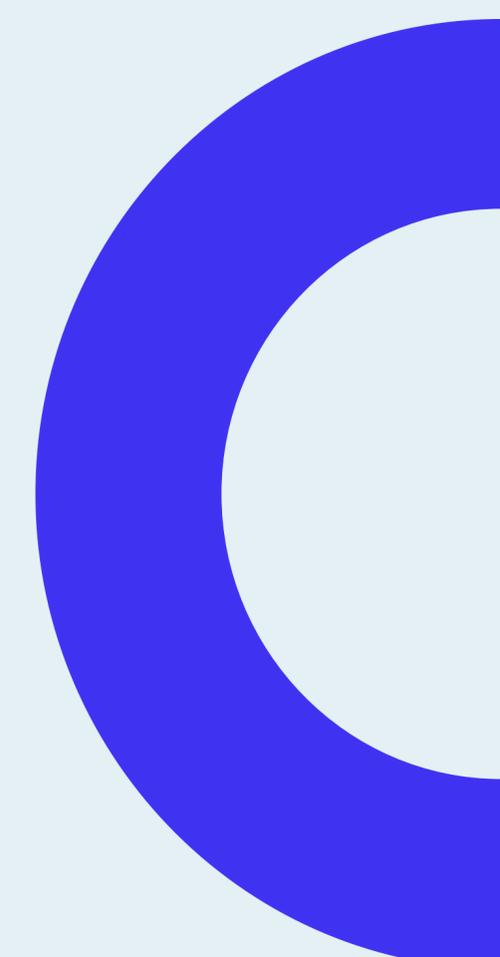


# Unlocking the value of brownfield land; why it's important to build homes where people want to live

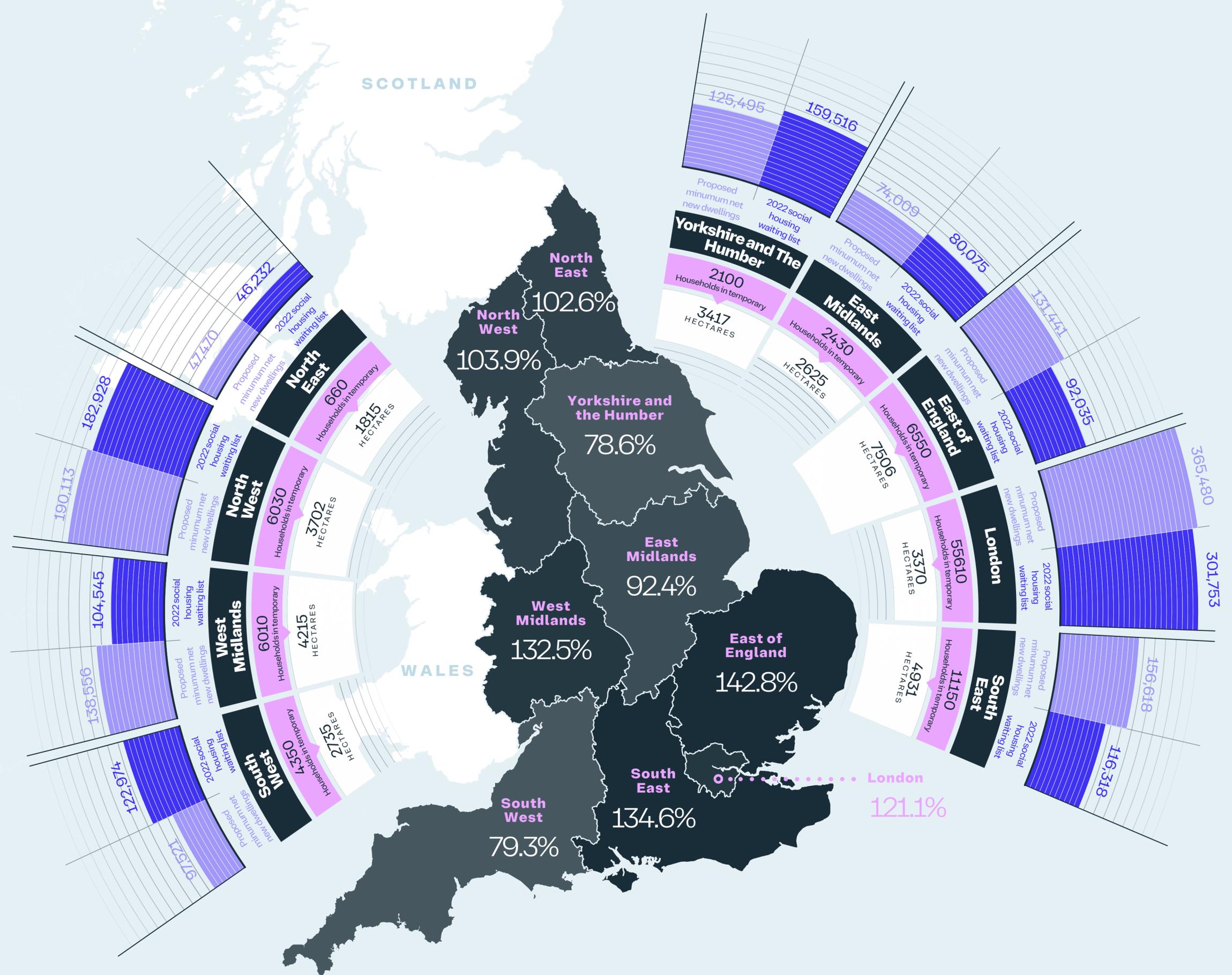
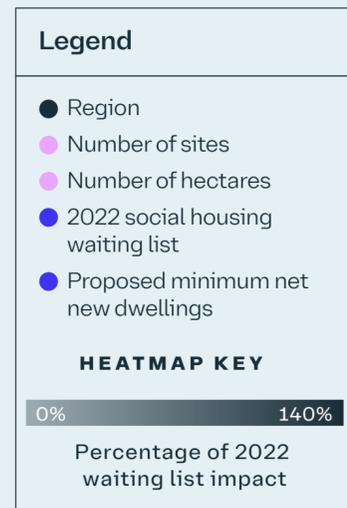
Brownfield and underutilised land is often located within existing communities where low-to-median income households struggle to find truly affordable homes. By developing these parcels of land, we are able to remove blights and discourage antisocial behaviour, and create assets that have a positive impact on the social and economic geography of local areas.

This land often includes **better than average connectivity through existing infrastructure, with easy access to education, healthcare and economic centres.** This further reinforces improved social value that is associated with positive health and wellbeing outcomes.

We must caveat much of the national and regional data when considering the geography and location of brownfield land in proximity to localised waiting lists. However, this infographic provides an illustration of the scale of the opportunity and the potential impact that the development of brownfield land could have on social housing waiting lists across the country.



When making a comparison with data captured in our first whitepaper, 'Unlocking brownfield land - A social housing first policy' published in 2020, the overall national percentage impact that brownfield land could have on housing waiting lists shifted from 92.48% to 109.9%.



# The scale of the opportunity

On further analysis of key local authorities within each region, the scale of the opportunity is more evident. In each case, **the opportunity exists to eradicate housing waiting lists and transition households from temporary accommodation into new homes.**

As an example, when we consider the brownfield land in Manchester and its capacity to deliver new homes, there is the potential to go beyond its local authority boundaries. Taken purely on a statistical basis, Manchester has the capacity to deliver 109.6% of the combined 2022 waiting lists (68,947) of all ten GMCA local authorities.

**It is now time to work with local authorities to help them overcome barriers to unlocking the value of their brownfield land assets, and accelerate the delivery of social housing.**

Total combined 2022 waiting list  
**68,947**

Manchester capacity  
**109.6%**

**Legend**

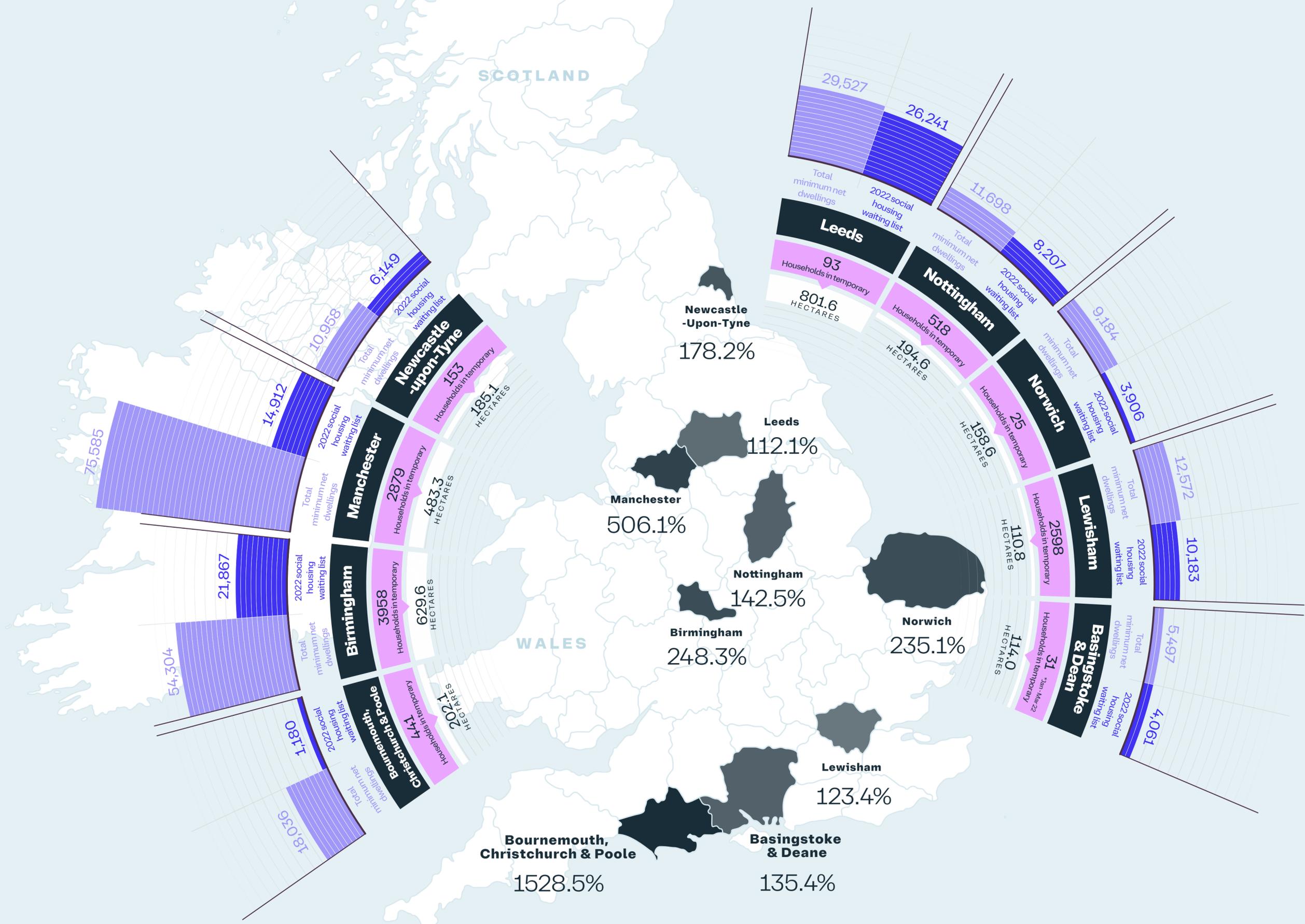
- Local Authority
- Households in temporary accommodation April - June 22
- Available number of hectares
- 2022 social housing waiting list
- Available brownfield land - total minimum net dwellings

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**HEATMAP KEY**

0% 1150%

Percentage of 2022 waiting list impact



# What we need

## Increased incentives

We have witnessed an increase in dynamic purchasing systems (DPS) along with MMC frameworks launched by organisations such as LHC and PAGABO, which allow for mini competitions and direct awards. However, while some housing associations are gaining confidence and working with MMC companies, local authorities and the wider public sector remain sluggish in adopting at scale. For that reason, **we would like to see increased incentives for local authorities, public sector bodies, and housing associations, to vastly increase the supply of social housing at scale, utilising MMC.** This will drive efficiencies and cost savings, while delivering net zero-compliant homes.

## Prioritising brownfield land

**We believe there is a strong argument for the urgent prioritisation of Government and local authority-owned brownfield land** – supported by existing infrastructure - to deliver new homes which demonstrate clear societal and economic value.

This should include increased central government funding and assistance to reduce the cost of land remediation, with an emphasis on some of the poorer parts of the UK, where the added cost of construction can be prohibitive.

## A renewed Commitment

Procurement in the public sector has remained a constant challenge for MMC companies.

This is particularly challenging where innovation meets process and there is a lack of like-for-like comparison in the competitive landscape. Homes England has sought to address this through their strategic partnership grant programme, with all partners expected to deliver a minimum of 25% of new homes using MMC. This is of enormous importance to the future of MMC in the UK.

Homes England must maintain and enforce this as a key policy if the MMC industry is to survive and grow. The increased certainty will drive greater levels of investment and much needed innovation within the housing sector.

## An accelerated approach

While we recognise the UK Government's aspiration to extend the 'right-to-buy' scheme, **it will be imperative that we go further than the current approach of one-for-one replacements of homes sold if we are to meet social housing demand, reduce waiting lists, and take households out of temporary accommodation.**

 **25%** of new homes must be delivered using MMC

The Government will need to incentivise housing associations, local authorities, and the wider public sector to accelerate and expand, in order to deliver the increased number of housing completions that are needed.

### Retention of land and asset

We cannot continue to expect private sector developers to deliver the social housing that is needed under current agreements. **If we are to meet demand, central and local government must build new social homes where they retain the land and asset.** This will boost housing revenue accounts (HRAs) and provide income through an increase in gross domestic value (GDV) and subsequent rental incomes.

### Partnership and collaboration

Collaboration and partnership will need to be at the heart of scaling-up MMC across the UK. Through the Homes England strategic partnership grant programme, which requires

that **25% of new homes must be delivered using MMC, collaboration and joint ventures are increasing** between housing associations and MMC providers. But, more can and must be done to further incentivise local authorities and public sector landowners in a similar capacity.

### Delivery at scale

Modern methods of construction are rooted in the principles of manufacturing, where efficiencies and cost savings are only achieved when delivering at scale. In a housing market with fragmented demand for offsite manufactured homes, the lack of demand drives up the unit costs, reducing competitiveness. As an industry, **we need to see a vast increase in the construction pipeline.** This will, in turn, drive investment into growing capacity, and further drive efficiencies, while considerably reducing unit costs below that of traditional construction.

### Speed up the planning process

**The UK housing industry must play its part in the drive for the UK to reach net zero,** while delivering high quality homes. By introducing the presumption that net zero and fire compliant MMC homes can demonstrate that they align with local design standards, we have the opportunity to **speed up planning permissions by up to 6 months.** This will further incentivise MMC companies to increase production and deliver the quality homes that are needed at increased pace.

## Conclusion



**To truly unlock the potential of MMC in the housing sector, we must create the right market conditions for the industry to flourish and grow.**

This represents a very real opportunity to provide the energy efficient net zero homes that people want and need, located in the communities where they want to live.

**We are a new and emerging part of the housing sector, and we are ready to build the homes of the future that families across the UK so badly need.** Homes that provide sustainable jobs, and that boost local economies. Homes that reduce inequalities, and help to rebalance the economy - in lockstep with the Government's levelling-up and net zero agendas.

But we must not underestimate the challenge ahead. It will take collaboration, commitment and surety if MMC companies are to grow to meet the demand for new homes.

**So, work with us, and let's get Britain building.**

# Research & Data Sources

- › Brownfield Land  
[Brownfield land Dataset | Planning Data](#)
- › Housing Supply  
[Housing Supply Net Additional Dwellings, England 2021 to 2022](#)
- › Social housing waiting list  
[LT600.ods \(live.com\)](#)
- › Temporary Accommodation  
[Live tables on homelessness - GOV.UK \(www.gov.uk\) Detailed\\_LA\\_202206.ods \(live.com\)](#)
- › Right to Buy  
[Right to Buy Sales & Replacements](#)
- › ARCH, LGA & National Federation of ALMOS Report 2021  
[Building Post Pandemic Prosperity](#)
- › CITB Analysis  
[Impact of MMC on Skills Requirements for Housing](#)
- › EDAROTH Whitepaper  
['Unlocking brownfield land - A social housing first policy'](#)
- › English Housing Survey  
[English Housing Survey 2021 to 2022: headline report - GOV.UK \(www.gov.uk\)](#)
- › Uswitch.com mortgage statistics  
[UK Mortgage Statistics 2023 - Mortgage Facts and Stats Report \(uswitch.com\)](#)
- › Zoopla figures shared with the BBC  
[https://www.bbc.co.uk/news/business-65090846](#)
- › England Shelter  
[https://england.shelter.org.uk/media/press\\_release/at\\_least\\_271000\\_people\\_are\\_homeless\\_in\\_england\\_today](#)
- › Commons Library Research Briefings  
[https://commonslibrary.parliament.uk/research-briefings/sn02110/](#)
- › Crisis response on temporary accommodation  
[https://www.crisis.org.uk/about-us/media-centre/crisis-responds-to-new-data-showing-local-authorities-spending-nearly-16bn-on-temporary-accommodation-in-a-year/#](#)





     
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