

# Delivering low carbon homes: the county contribution



## About CCN Partners

For private, public, and community, and third-sector organisations, partnering with the County Councils Network (CCN) offers opportunities to work with council leaders, cabinet members, and chief executives from England's largest councils. This provides the opportunity to promote your organisation's objectives, brand, or service to those that play a key role in local authorities, as well as driving

industry practice forward and getting your voice heard amongst decision makers. Our Dialogues publications are a series of think pieces supported by the partners of CCN. This report is sponsored by Public Sector Plc.

For more about CCN Partners, visit <https://www.countycouncilsnetwork.org.uk/>

## About Public Sector Plc

Public Sector Plc provides strategic asset management to Councils and other public sector organisations, working exclusively with property and land assets.

We support our Partners in achieving their corporate objectives, providing strategic asset management to deliver housing, development, regeneration and socio-economic benefits. Each Council partner has its own set of corporate ambitions and through the creation of a Public Sector Plc Partnership, we help facilitate:

- Generating value uplift from public sector owned property assets
- Encouraging Partners to adopt an innovative approach to delivery
- Playing a role in delivering local authority housing targets acting as a catalyst for regeneration
- Enabling the sharing of risks with the private sector and addressing viability issues

- Increasing promoting of innovative new construction methods or new technologies
- Delivery of new residential, retail and commercial spaces, as well as the delivery of long-term regeneration

The Public Sector Plc Relational Partnering model is unique and offers our public sector partners the opportunity to realise additional value from their property assets through three capabilities; housing development, portfolio management and land promotion and regeneration.

We have established 19 partnerships with councils across the country, supporting each one to deliver their corporate plans and objectives. We are uniquely placed to offer property expertise, skills and investment to the public sector, enabling commercialisation and creating value through existing land and property assets.

[www.publicsectorplc.com](http://www.publicsectorplc.com)

# Foreword



**Cllr Sam Corcoran**  
CCN spokesperson  
for Environment and  
Communities

**C**limate change is the greatest challenge facing our generation and for too long we have failed to rise to the challenge.

We now fully recognise the need to reduce carbon emissions across the country, and as many authorities declare climate emergencies across the country, it is now time to continue in this vein.

Low carbon housing is one solution that would help us to reduce emissions in our areas, which in return provides benefits for residents such as dramatically reduced fuel bills. As many of our authorities look at innovative ways to enhance our financial resilience,

investing in low carbon housing using our own land could also help to provide an income stream whilst providing homes for rent that are of a high quality and meet a local need.

Everyone needs to play their part if we are to fully tackle the challenge of climate change. As leaders, we have a hugely important role to play – we can set the agenda and change behaviours.

There are already some excellent initiatives across the CCN membership, and we should now build on this and work together to share best practice and be seen as the authorities leading the way to tackle climate change in our areas.



**Everyone needs to play their part if we are to fully tackle the challenge of climate change. As leaders, we have a hugely important role to play – we can set the agenda and change behaviours**

**Cllr Sam Corcoran**



**Cllr Philip Atkins**  
CCN spokesperson for  
Housing, Planning &  
Infrastructure

**W**ith many CCN members having declared a climate emergency, there is no better time to start thinking about how we can be doing things differently. Doing nothing is no longer an option.

Good quality housing has to be at the centre of a civilised society, and low carbon housing could be part of both a solution to the housing affordability crisis, and the climate change emergency. Using our own land and taking control of the development could help to provide the right types homes for our residents in the right place.

As place-shapers, county authorities are doing all they can to

ensure that new communities are connected to existing ones; that infrastructure is in place to ensure residents can get to and from work quickly, can access high quality broadband and that schools, health and wellbeing facilities are in place to support our young population and the wellbeing of residents.

We are extremely thankful to Public Sector Plc for supporting CCN. This publication gives us some useful food for thought about how we can help both the environment, but how we can build sustainable communities by providing high quality housing – whilst helping to save our residents money.



# Introduction and context

**G**lobally we are facing a climate crisis. News of extreme weather incidents and street takeovers by activist groups such as Extinction Rebellion have become routine. As more and more local authorities declare climate emergencies, we must now start to act and deliver solutions that will reduce our impact on the environment.

One place to start is at home. Our housing stock is responsible for 20% of the country's greenhouse gas emissions, and the UK is legally bound to reduce greenhouse gases by 80% by 2050. However, our emissions are not currently falling at the rate required to meet this target.

In 2016, the Government's innovation agency, Innovate UK, undertook a 'Building Performance Evaluation Programme looking into the energy efficiency of homes in the UK'. In terms of energy use, there is a stark difference in the worst and best performing with the study finding that nearly ten times as much energy was used in the highest energy-consuming homes as the lowest. A key recommendation coming out of the study was that we cannot rely on Building Regulations alone to limit energy use and carbon emissions from new buildings. Rather, we must look more holistically at the products we are delivering, with sustainability and low carbon at their heart, if we are to truly build homes that will help to reduce emissions.

The Government is putting policies in place to decarbonise new buildings and support the upscaling of low carbon technologies. Most recently, a consultation has been launched on a 'Future Homes Standard' which would introduce a new standard for housing, future-proofing homes with low-carbon



heating and 'world-leading' levels of energy efficiency. Government has also set a target, through the Clean Growth Challenge Mission in the Industrial Strategy, to halve energy use in all new builds by 2030. Government – both national and local, developers and society all need to take responsibility if we are to make changes that make a real difference.

This short publication sets out what low carbon housing is, the benefits that it can bring, and how CCN members can help to deliver more. The results of a survey sent to CCN members about their position on low carbon homes is included on the page opposite.

**“**  
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# What is low carbon housing, and what are the benefits?

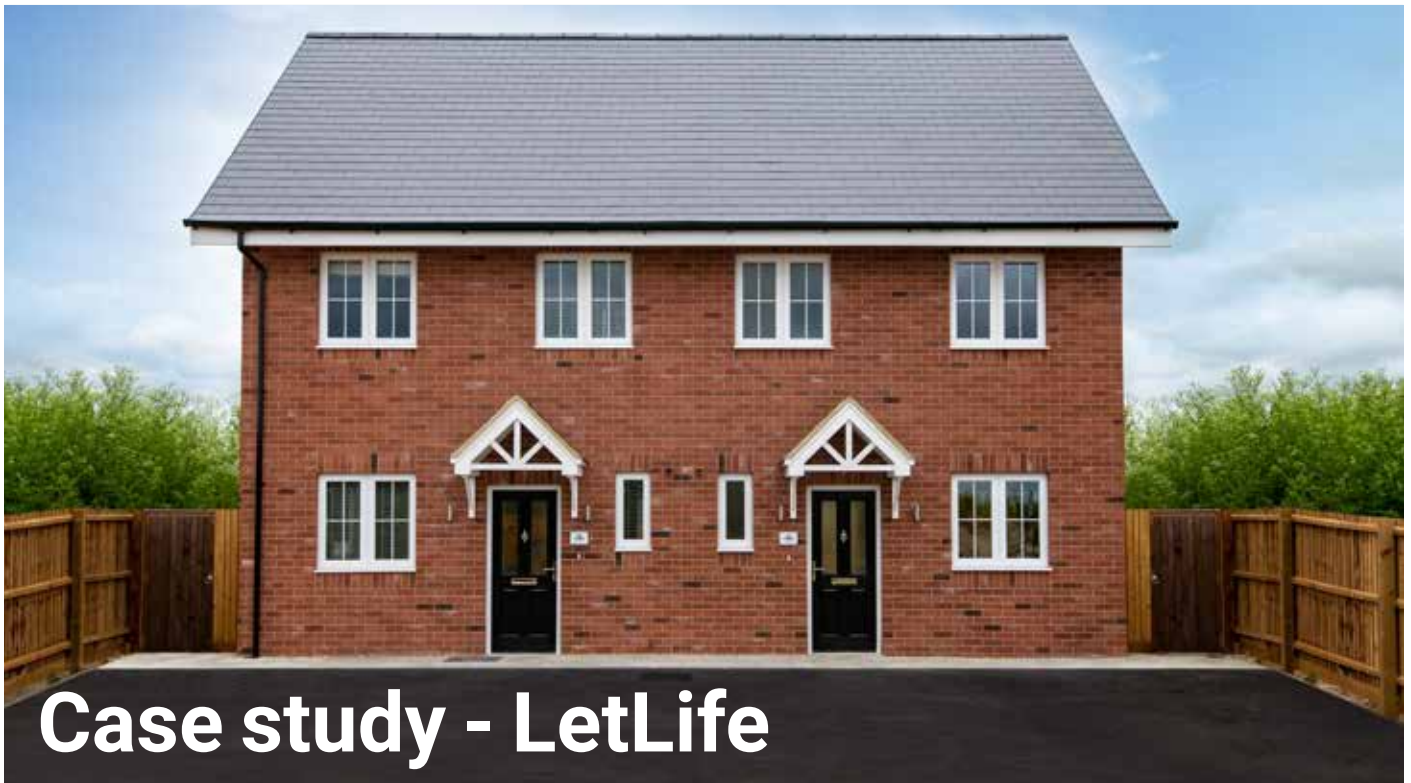
**L**ow carbon housing is not a new concept – other terms include zero-carbon homes or the Passivhaus standard – but all have advocated the reduction of household emissions. Low, or zero carbon, homes are those that have a net-zero, or neutral, impact on greenhouse gas emissions and could help to dramatically reduce our collective carbon emissions as a country. Visually, they can be designed to look no different to other modern homes, but always make use of energy efficient features such as thick air-tight walls, high levels of insulation, low-flow taps and LED lighting.

Low carbon homes can also offer considerable benefits

to residents too. 4.5 million households in the UK are in ‘fuel-poverty’ and spend more than 10% of their income on keeping their homes warm. Whilst there are three factors affecting this (energy efficiency of the home, energy costs and household income), 96% of fuel-poor homes are poorly insulated – energy efficiency is clearly an area that can make a big difference.

With low carbon homes, improved insulation reduces energy demand dramatically reducing energy bills. This helps to reduce fuel poverty in turn allowing residents to keep more of their hard-earned money in their pockets.





# Case study - LetLife

In 2018, Public Sector Plc collaborated with UK based off-site manufacturer NetZero Buildings to design and build a carbon neutral family home. Developed specifically for Public Sector Plc's new private rented sector (PRS) housing delivery model LetLife.

Using off-site manufacturing for the construction of new homes, construction takes just 20 days per house, with 5 construction workers.

The LetLife PRS housing model not only allows Public Sector Plc council partners to quickly bring forward much-needed rental family housing, Councils retain ownership of land assets and supply demand in the market where family homes for rent are not being delivered, or where the existing rental stock is under pressure or of a poor quality.

With local authorities using their own land to deliver LetLife



PRS family homes, this can bring many benefits including:

- Secure more robust delivery of housing in shorter time frames;
- Generate a revenue stream to the council through rental income;
- Help regenerate areas;
- Support long-term housing supply and provide broader socio-economic benefits;
- Improve the rental experience of customers.

Prototype homes have been completed at a factory in Newmarket, with

house designs complete for multiple house types. The product specification includes all electric appliances, BIPV solar roof, thermally efficient airtight envelope, costless cooling, rainwater harvesting, air source heat pumps and EV charging. All of this brilliant energy efficient technology means monthly energy bills can be as low as £10 a month.

## The benefits of low carbon housing – the LetLife model

Source: PSP.

<p>Four weeks to build</p>	<p>£10 a month energy bills</p>	<p>Manufactured off-site</p>
<p>Super energy efficiency technology</p>	<p>Smart Electric Homes</p>	<p>Designed for families</p>



# How can counties enable the delivery of more low carbon homes

**A** report prepared in 2018 for CCN by the Town & Country Planning

Association contained the results of a survey that asked CCN members about their aspirations around housing delivery. It showed that around 60% had considered setting up a housing company. The main motivations behind setting up such a company, for 76% of survey respondents, was generating revenue. The report also noted that partnerships and joint ventures can be an effective way of sharing skills and capacity, borrowing power and ultimately risk and rewards.

There is therefore clearly appetite for county authorities to get involved in house building and, although not housing or planning authorities, there are things that county councils can do to assist the delivery of more low carbon homes. These include:

- Releasing council-owned land for the delivery of homes, including low-carbon homes.
- Work with district council partners to prepare local plan policies that require the delivery of low carbon homes.
- Work with district council partners to identify sites, including council-owned land,



that could be allocated in local plans dedicated to the delivery of low carbon homes.

County unitary authorities have more powers to utilise and can use their planning powers, including plan-making, to deliver low carbon homes.

Whilst many authorities have considered releasing land to build homes, many believe that cost of delivery of low carbon homes is a barrier. Whilst there may be a higher upfront cost, authorities who retain ownership of the land and homes are able to claw back costs through rental income. Some respondents also cited that a lack of knowledge and skills in the development process is also a barrier to delivery.



High cost of delivery and lack of knowledge

of what low carbon housing is were seen as the biggest barriers to delivering low carbon homes.



**It is clear now is the time for action, and as communities place higher expectations on their local authorities to take action, the delivery of low carbon homes could provide one solution to start reducing carbon emissions”**

## Reflections and conclusions

It is clear now is the time for action, and as communities place higher expectations on their local authorities to take action, the delivery of low carbon homes could provide one solution to starting to reduce carbon emissions. Our experience to date has shown that resident satisfaction in our homes is extremely high. In the case of LetLife, as more of these types of home are

built and rented through the brand, the more the management costs will be reduced thereby becoming more cost effective for authorities and residents.

Partnering with a house-building organisation through a joint venture could provide the solution to delivering more of these homes and could provide the expertise to guide you through the

development process, from site selection, delivery and asset management.

Using council-owned land to provide low carbon homes could help to better utilise public land, provide much needed homes for residents and an income stream, all whilst helping to reduce carbon emissions.



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This report is sponsored by Public Sector Plc. Content was agreed in partnership with CCN.

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