



Thanet District Council

Tenant and Leaseholder Services

Our Journey to Net Zero

2022 - 2030

Introduction

The UK government has committed to reducing greenhouse gas emissions by 78% compared to 1990 by 2035, and to becoming net zero carbon by 2050. Home energy use contributes to around 21% of the UK's total greenhouse gas emissions. Therefore as a landlord of social housing and developer of new homes, the Housing and Planning Department of Thanet District Council must take action to contribute to the achieving these ambitious targets.

Nationally, this is a huge undertaking with a likely cost of more than £100bn¹ to decarbonise England's entire social housing stock.

The accomplishment of these targets will go hand in hand with the pledge made by the Housing White Paper, which commits to a review of the Decent Homes Standard. This is likely to include a requirement for all properties to be rated Energy Performance Certificate (EPC) C.

A paper written by the National Housing Federation contextualises some statistics which show the impact of our current behaviours:

- Domestic use of fossil fuels contributes to 21% of England's carbon emissions.
- Social housing contributes to 10% of this.
- Around 74% of the UK's heating and hot water is met by natural gas.
- In England, our homes produce more carbon emissions each year than all our cars. Eliminating emissions in all social housing homes would be the same as taking 1.8 million cars off the road.
- Emissions from housing increased by 7% during the coronavirus pandemic.
- 18.4% of residents in social housing live in fuel poverty.
- 22% of the carbon reductions from home energy efficiency measures are predicted to come through changing resident behaviour.²

We have a responsibility to reduce our emissions and to contribute to a sustainable future. To achieve this we need to eliminate the carbon emissions of our social rented homes over the next 30 years.

This could be achieved by replacing carbon-emitting heat systems like gas and oil with clean heat alternatives like electric heat pumps and decarbonised heat networks. If this is all we did it would lead to higher energy costs and cold homes for many of our residents. This is because our homes are currently too poorly insulated to be heated efficiently by low carbon technologies. Therefore, our strategy must be oriented around a 'fabric first' approach.

By planning our journey correctly, we can bring about a change that will bring enormous benefits for residents, communities, the economy and the environment. This also achieves part of the

¹ Estimated by Inside Housing March 2022 edition

² Decarbonisation: a guide for housing associations - National Housing Federation

councils' Core Business Objectives in 'delivering high-quality housing, safer communities and enhancing the health and wellbeing of our residents.'³

These objectives work in tandem with the aim of reducing fuel poverty in the district by providing affordable warmth to tenants.

Foreword from the resident focus group

Strategic context

The National Strategic Setting

The Climate Change Act 2008, commits the UK to reducing greenhouse gas emissions by at least 80% by 2050. Through the Clean Growth Strategy, the UK government has set a target for social housing providers to attain the minimum rating of EPC C for rented properties by 2035 (2030 for 'fuel poor' households). This is an important milestone towards the longer term target, to make all homes 'net-zero-carbon' by 2050.

National fuel poverty targets for all housing are B and C by the end of 2030, with the supporting interim milestones of as many fuel poor homes as reasonably practicable to B and E by 2020 and D by 2025.

Local Context

TDC's Corporate Plan, Homelessness and Rough Sleepers Strategy and [Housing Strategy 2020-25](#), makes a firm commitment to genuinely affordable housing. This includes measures intended to protect the environment by minimising our impact on climate change and securing sustainable development in the future.

TDC declared a Climate Emergency in 2019, and committed to investigate possible sources of external funding and match funding to support this.

The TDC Net Zero Strategy gives more detail on this matter and the measures by which the wider Council will tackle climate change, this includes the HRA housing stock which is included in the strategy as a priority area.

Thanet District Council's Climate Change pledge:

- Reduce the greenhouse gas emissions in TDC core carbon footprint which we have direct control over and how we will aim to reach net zero by 2030.
- Reduce emissions in other areas that TDC does not have full control over e.g. emissions within our projects, procurement and social housing emissions, reaching net zero as quickly as possible.
- Support KCC to reduce emissions from housing, transport, industry and commercial sectors district wide.

³ *Thanet District Councils' Corporate Statement, Core Business Objectives 2019 - 2023*

- Assist the reduction of greenhouse gas emissions in Thanet through local planning policies.
- Assist residents with the right information to make low carbon choices to reduce emissions from their carbon footprints, addressing emissions from consumption.⁴

TDC's Local Plan recognises implications of climate change and is intended to create a clear framework for Thanet to contribute to meeting the UK's net zero carbon target. Our ambition, as set out in [TDC's Housing Strategy 2020-25](#), is to deliver new genuinely-affordable housing that is both highly energy efficient and low carbon.

However, Thanet was the most deprived local authority in the Index Multiple of Deprivation (IMD) for Kent in 2015 and despite significant improvement, remains Kent's most deprived local authority district in IMD 2019.

Many parts of the district suffer from deprivation. It is estimated that 1 in 7 people in the district live in a deprived area and 1 in 5 children in the district live in poverty. Good health begins at home and housing plays a pivotal role in addressing health inequalities, improving the health and well-being of the community.

District Profile - Fuel Poverty

Living in fuel poverty is defined as the following: 'being on a lower income and living in a home which cannot be kept warm at reasonable cost. National Energy Action, the lead in UK fuel poverty analysis, estimates that due to the energy price rises and the reductions in household income, there has been an increase in fuel poverty of 50% and this will increase over the next two years. For Thanet this is 19.2% of homes in Thanet are facing fuel poverty (12,300 homes Based on 2020 figures).

The energy crisis will further increase and has seen a 56% increase in 2021 and further increases for combined gas and electricity bills rising from average bill 2021 £575⁵ to a predicted £4427 in 2023⁶.

Large parts of the housing in the district were built in an era when coal was the primary source of heating, walls were of single brick construction, older, draughty, inefficient homes that cost more to heat. Government statistics (2018).

However the compounded negative impact of Covid-19 and rising wholesale energy prices have not been factored into these statistics. The impact of these factors is likely to result in a much higher rate of fuel poverty in 2020/21 as inflation rises and household debt and financial strain increases.

Living in a cold and damp home is proven to increase the risk of ill health, premature death, reduce educational attainment and is a miserable and isolating experience for those affected. Large numbers of households struggle to meet the cost of staying warm, often living in very difficult circumstances and at risk of ill health. The highest concentrations of fuel poverty are in the private

⁴ TDC net Zero Strategy <https://www.thanet.gov.uk/wp-content/uploads/2022/09/TDC-Net-Zero-Strategy-DIGITAL.pdf>

⁵ <https://commonslibrary.parliament.uk/research-briefings/cbp-9491/>

⁶ Cornwall Energy Insights

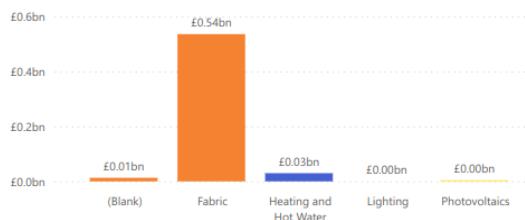
sector and are found in wards of Cliftonville West, Margate Central and East Cliff with excess cold concentrated in the Thanet Villages, Dane Valley and Central Harbour.

51,000 homes in Thanet are energy inefficient (EPC of D or less), of which 15,000 have very low energy performance of E F or G. The main heating type is gas, however 4,774 properties with low EPCs do not have gas and therefore have a costly combination of energy inefficiency and high fuel costs.

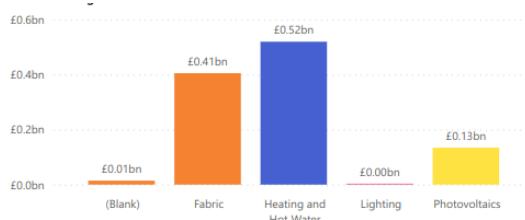
Getting all homes across the district to EPC C would be achieved mainly through fabric measures and some low carbon technology solutions that are grant funded for low income homes (less than £31,000 income). This would achieve a carbon saving of 873,827,449 (kgCO₂). The average investment per home to achieve this would be £8,500, and 28,000 homes would have to spend £5,000 or less.

To get all homes to net zero by 2050 would require a differing set of measures including greater low carbon technology and heating solutions.

Investment in measures to achieve EPC C by 2050 all tenures



Investment in measures to achieve net zero by 2050 all tenures



*These findings are based Parity Pathways data

TDC as a social landlord

As part of TDCs HRA Business Plan 2010-2016 and ongoing planned works programmes, energy efficiency programmes are currently focused around items such as over cladding, top-up insulation, new gas central heating, upgrading of existing central heating systems and condensing boiler replacements as ways in which to improve SAP rating.

TDC's wider Climate Change Strategy and Action Plan for 2009-2011 links housing activities to the Council's Net Zero Action Plan to 2024 assists in the delivery of the corporate sustainability objectives to reduce carbon emissions, promote best practice within the council's own operations,



promote greater awareness of the implications of climate change and provide advice and assistance on sustainable living.

However, these strategic documents require updating given the changing national strategic setting, significant funding available, and industry progression.

A more ambitious approach to energy efficiency across council stock is required, embedding decarbonisation into wider asset management strategy and practice. Due to the pervasive nature of decarbonisation, this will entail a matrix approach with support and involvement across numerous departments and teams in order to deliver on aspirational goals and align with central government targets.

'Our Journey to Net Zero' specifically addresses how we will eliminate carbon emissions from our social rented homes.

Our social housing stock

The council currently has 3,068 properties within its housing stock with 24% logged as having an EPC rated below C and 33% with no current EPC rating.

Property type	Count
Bungalow	302
Flat	1078
Maisonette	126
Detached	25
Endterrace	423
Midterrace	546
Semi-detached	568

EPC rating	percentage of homes
A	0%
B	e3.10%
C	39.11%
D	21.60%
<E	2.70%
Unknown	33%
Total	100%

Using this data, we have estimated the CO2 emissions of TDC's housing stock to be 9,215 tonnes of CO2 per year.

Current estimates show that around 57% of our existing properties will require investment to achieve our targets, with major spend being primarily required for insulation,

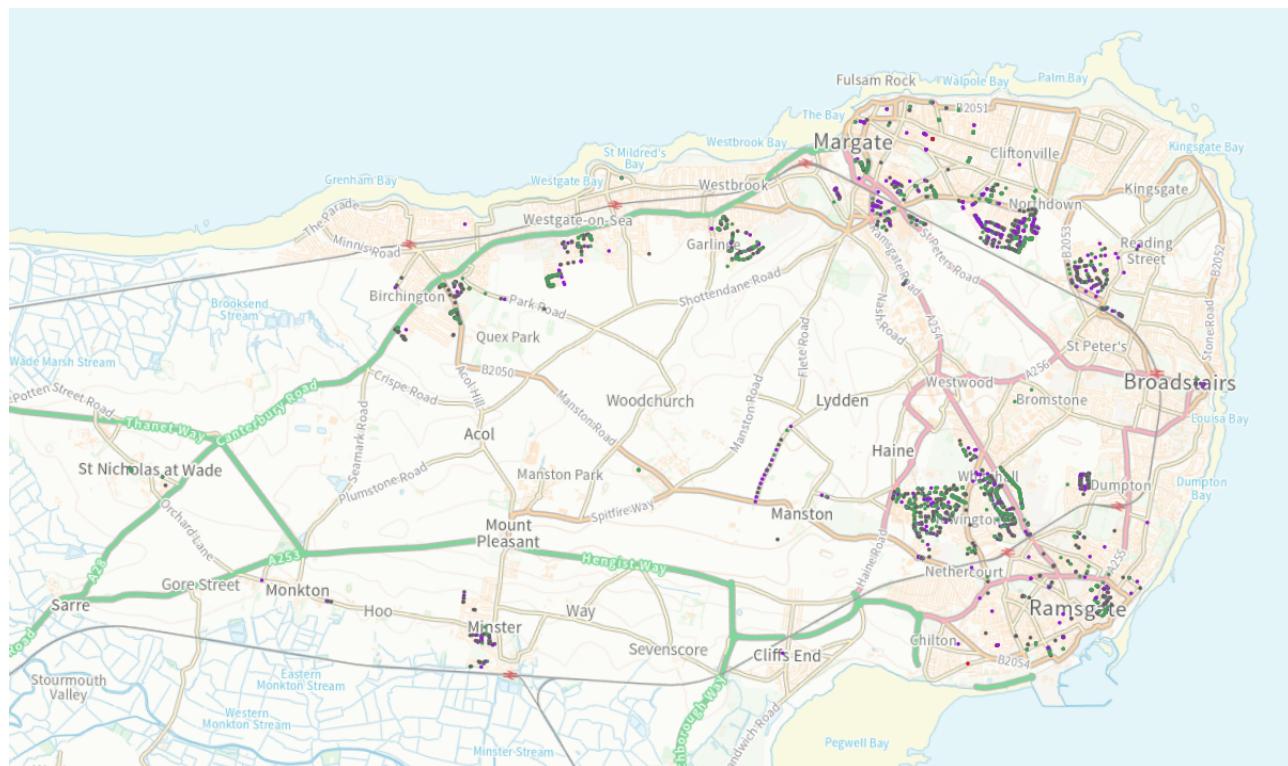
Of our newly built properties completed between 2019 - 2021, 98.8% were rated as EPC B, and 1.2% at EPC C. Our intention is that all newly developed units will be rated as EPC B or above in future years.

79.4% of our properties have gas central heating

The map below shows the location of our properties and the EPC rating.

Key:

- EPC B&C
- EPC D and below
- EPC Unknown



We must:

- Improve our data to ensure confidence in our reporting
- Improve the energy efficiency of council housing stock
- Work with residents to ensure they understand the impacts their own behaviours have on the level of emissions in the borough.
- Ensure our capital programme investments support our ambition to have all properties at EPC C by 2030

We have a budget of £60,900 that will assist in obtaining EPCs for those currently without one during 2022/23.

We recognise there may be challenges in reaching this target for some homes, especially those in conservation areas and listed buildings.

Objectives

The government has set a legally binding target for the UK to reduce carbon emissions to net zero by 2050.

We must tackle emissions we can control, these are:

- Direct emissions from our housing stock.

Carbon emissions produced by burning of carbon-emitting fuels in homes to heat space and water, e.g. the residents behaviour and use of their gas boiler to maintain the desired heat in their home.

- Regulated emissions in our housing stock.

These are produced by the residents' use of the energy consuming items over which a landlord has control. Examples include space and water heating mechanisms and mains lighting.

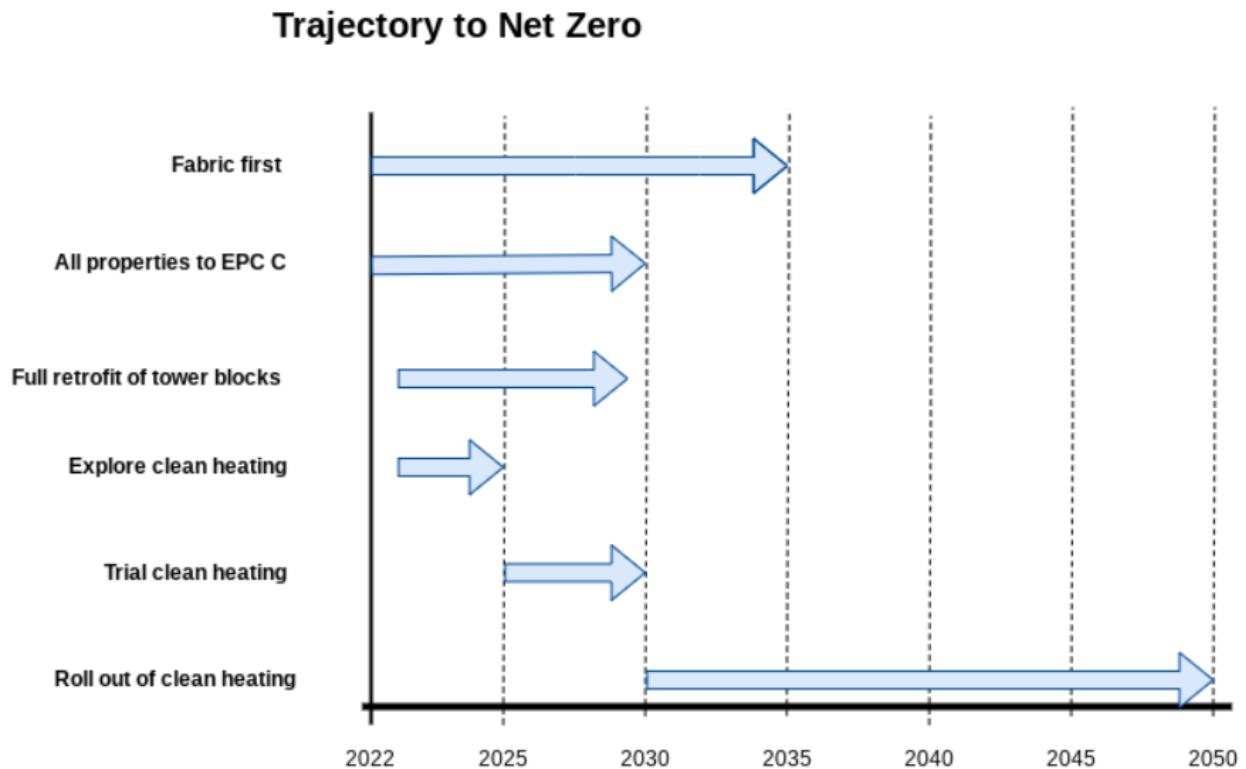
Significant changes are required on how we heat our homes for us to achieve decarbonisation of space heating. This requires national infrastructure decisions and investment, to stimulate and enable private sector investment and innovation.

We will start our journey by delivering on one of the key elements in decarbonisation of heat:

- Reduce heat loss and waste heat with energy efficiency improvements to all TDC homes.

It is for these reasons we propose the following trajectory to achieve the national targets of all properties at EPC C by 2035, and to become net zero carbon by 2050.

Trajectory to Net Zero



We will achieve this plan with the following 3 key objectives:

- All properties to be EPC C by 2030.
- Reduce energy consumption for residents.
- Offset carbon emissions.

Our objectives are underpinned by 3 principals:

- Worst first.
- Fabric first, no regrets.
- Meaningful resident involvement.

Objective 1 - EPC C by 2030

We will retrofit our current homes to EPC C by 2030. We recognise that there will be homes where this will not be as easy because they are of a certain build or material, a listed building or are in a conservation area. These are referred to as 'hard to decarbonise homes'.

Objective 2 - Reduce energy consumption for residents

In our decarbonised future, electricity will heat the majority of our homes via heat pumps. At the moment, electricity is much more expensive than gas so heat pumps can cost more to run than gas boilers – even though heat pumps are more efficient.

Our residents do not have the luxury of affording higher bills that may yield lower carbon emissions and therefore, we must consider fuel poverty and reduce energy consumption for our residents.

This can be achieved in 2 ways:

- Retrofitting to reduce carbon emissions.
- Education.

Objective 3 - Offset carbon emissions

Offsetting plays an important part in our national journey to net zero, although it does not affect the decarbonisation of our homes.

We will achieve this objective with initiatives that support nature to draw down carbon, for example, by planting additional trees and seeking ways to generate our own clean energy to power our homes.

When TDC declared a climate emergency on Thursday 11 July 2019, part of the declaration said that we want to 'Devise a Tree and Biodiversity strategy for Thanet to increase tree cover and to create a functional and beautiful biodiversity network throughout the district.'

As the TLS manage the council's HRA land, we are in a position to support this strategy by identifying concrete or derelict areas that can be grassed, plant trees or a wildflower meadow. This will improve the visual landscape and support biodiversity.

We will work by the following principles to achieve our objectives:

Principles 1 - Worst first

We will improve our EPC data so we can identify our worst performing homes. We will prioritise our worst performing homes for retrofitting to increase their energy performance to EPC C.

Principal 2 - Fabric first, no regrets

A 'fabric first' approach means that we will improve the energy efficiency of a home by investing in its insulation, thus reducing the demand for space heating. This is a vital precursor to clean heat installation, and will lower energy consumption and emissions immediately.

We know that technologies like heat pumps operate at lower temperatures than gas boilers and they are at their most efficient in a well insulated home. We are also expecting technology and best practice for retrofit and clean heat to improve and change at an exponential rate.

The second part of this principle is 'no regrets'. This means that our approach to retrofitting should minimise the potential that the measures we install will need to be replaced in the future. To address this, where possible we will take a 'whole property solution' approach. Meaning we will consider the entire property for a deep retrofit project rather than addressing individual elements of the asset.

Principal 3 - Resident involvement

The council's housing stock are its assets and we need to ensure they are fit for purpose for the next 40 years. We also have a responsibility to ensure our properties are safe, secure and warm. But, these Council assets are also someone's home and our residents must be at the heart of this work.

While our residents will benefit from warmer, more affordable, healthier and smarter homes, they will also face the disruption of retrofit and installation of new heating technologies. People don't want things done to them, they want to be involved in the decision making.

Our residents' willingness to learn about, adopt and champion new low carbon technology will be crucial to our success.

For example: windows - ease of use, visual appearance, thermal efficiency

The TLS Resident Involvement Strategy 2022 - 2025 addresses all requirements for involving residents in the decarbonisation of their homes.

Data

The council currently has 3,068 properties within its housing stock with 24% logged as having an EPC rated below C and 33% with no current EPC rating. We must improve our data to ensure confidence in our reporting and to model appropriate solutions for our stock.

Poor data holds us back in the following ways:

- Inability to identify our worst performing properties
- Unable to model the best solution
- Unable to submit bids for funding

We have secured a budget this year to carry out EPCs where we don't currently have them.

EPCs are primarily an assessment of how affordable a property's energy running costs are, rather than an assessment of its carbon footprint. As a result, the interventions they incentivise are often not aligned with decarbonisation. Government's has an intention to overhaul the SAP/ EPC methodology to support decarbonisation.

Where we are planning programmes of work and to submit a funding bid we will commission archetype retrofit assessments through 3rd party consultancy.

To assist with holding and modelling our data, we have procured a purpose built software. Our Data Asset Officer will lead on maintaining this database, which will provide model programmes of works that support funding bids, map our route to EPC C and Net Zero and provide associated costs.

We will have a much clearer understanding of costs and statistics once we have implemented the software.

Budget/Funding

The Department for Business, Energy and Industrial Strategy has acknowledged that "the built environment will need to be almost completely decarbonised by 2050, and that achieving this must be through a mix of energy efficiency and a transition to low carbon heat". Estimates of the investment needed to bring all homes up to EPC C vary. BEIS's preliminary estimate is that it will require mobilising between £35 and £65 billion across the UK by 2035.

Acknowledging the significant amount of government funding required to achieve the above targets, the Conservative manifesto in 2019 pledged £9.2 billion towards energy efficiency measures in homes, schools and hospitals.

A large part of national investment to date, the funding pipelines and support mechanisms proposed over the next decade focus on retrofit programmes across the existing housing stock. The Government has committed to a £3.8 billion Social Housing Decarbonisation Fund (SHDF) over a 10-year period to improve the energy performance of social rented homes, on the pathway to Net Zero 2050.



Further, £500 million in funding is being allocated to local authorities through the Local Authority Delivery (LAD) scheme, to improve the energy efficiency of homes of low-income households, helping reduce fuel poverty, phasing out high carbon fossil fuel heating, and delivering progress towards the UK's commitment to Net Zero by 2050.

Through the Energy Company Obligation (ECO4) utility suppliers can enable the delivery of energy efficiency measures in homes between 1 April 2022 to 31 March 2026 with £1 billion per annum. This scale of funding available combined with the government momentum, and aided by the gravitas of COP26, create an opportune moment for TDC to enable and facilitate wide retrofit programmes across TDC HRA stock.

It is predicted that it will cost £40 million to achieve the Net Zero target.
£4 million for professional fees - including capitalised cost for our surveyor.

Funding Streams:

- Energy Company Obligation (ECO) Utility funding.
- SHDF.

Our own budget

To support the zero carbon agenda the council already has a budget within the HRA capital programme for these elements over the next 4 years:

SCHEME	2023-24	2024-25	2025-26	2026-27
	£'000	£'000	£'000	£'000
Re-roofing	290	300	310	320
Window & door replacements	175	175	175	175
Heating	382	390	397	404
Thermal Insulation	30	30	30	30
Total to support Net Zero	877	895	912	929

The total value of these programmes over the next 30 years, allowing for a modest inflationary increase, is likely to be around £41.8 million.

In addition there is currently £12.3 million earmarked for tower block works from 2022/23. These works will include EWI replacement, window and door replacement and a new heating solution.

Hard to decarbonise homes

There are a range of factors that might make it more difficult to decarbonise. For example, technical characteristics, space constraints or planning regulations. These factors can make the measures required to decarbonise uneconomic, logically or technically more difficult or could negatively impact the tenant.

Within our stock, we have xx% of homes that are listed or in a conservation area and therefore subject to more stringent planning rules.

This means that the works that we are proposing may not be technically possible or financially viable for these homes. We also want to avoid the need to lose social homes as a result of pursuing climate goals.

Historic England supports urgent climate action, to limit the impact of climate change while conserving our heritage for future generations. Their strategy includes developing guidance and training on how to retrofit historic buildings by 2024.

To enable the required works to be carried out on these properties we need to monitor the national policy environment around planning, funding and regulations.

New Builds

Thanet District Council's HRA Capital Programme is committed to delivering 20-30 new-build affordable housing units per annum.

TDC's Affordable Homes Programme Phase 4 shall deliver 47no. new build council units between 2022-25. As a minimum, units shall align with the following standards/policies:

- **Thanet District Council's Local Plan, adopted 2020: Policy QD01 - Sustainable Design**

All new buildings and conversions of existing buildings must be designed to reduce emissions of greenhouse gases and have resilience to function in a changing climate. All developments will be required to:

- 1) Achieve a high standard of energy efficiency to the equivalent of Level 4 of the Code for Sustainable Homes (subject to HE05 where applicable). Where viability is an issue, it will be incumbent on an applicant to demonstrate to the satisfaction of the Council why this standard cannot be achieved.
- 2) Make the best use of solar energy passive heating and cooling, natural light, natural ventilation and landscaping.
- 3) Provide safe and attractive cycling and walking opportunities to reduce the need to travel by car.



- Building Regulations Part L revisions June 2022.

The changes to Part L of the Building Regulations are part of the Government's step towards their target to deliver Zero Carbon Ready Homes by 2025, as part of the Future Homes Standard. From 15th June 2022, all new homes must produce 31% less CO₂ emissions than what is currently acceptable in the present Part L regulations.

However, as part of the Council's ongoing commitment to combat climate change and in line with the Council's declaration of a climate emergency in 2019, **all new build council housing shall, where reasonably practicable, be nearly zero carbon**. This represents a significant commitment from the Council and shall in turn encourage private house builders and other registered providers to go above and beyond the current standard, in anticipation of the Future Homes Standard in 2025 and overarching alignment with Central Government's Clean Growth Strategy - Net zero Carbon 2050 target.

Council new builds shall aim to meet the ambitious specification outlined in [TDC New Zero Carbon Toolkit](#). A summary of key energy targets and performance indicators are as follows:

- **Ultra low energy homes: 15 kWh/m²/yr**

An ultra low energy home is one which has a very low space heating demand. This requires a fabric efficiency and airtightness equivalent to that of a new Passivhaus home.

- **Energy use and efficiency heating: energy use Intensity 35 kWh/m²/yr**

Heat pumps are considered the most efficient low carbon heat source. keeping energy use to a minimum, while not using fossil fuels on site. Gas or oil boilers must not be used anymore.

- **Renewable energy: electricity generation intensity 120 kWh/m²/yr**

Net Zero carbon in operation can only be achieved by increasing renewable electricity generation. Solar PVs represent a mature and easy to use technology.

- **Embodied carbon: benchmark 500kgCO₂e/m²/yr**

Limit the embodied carbon or emissions associated with the manufacture, transport, construction, repair, maintenance, replacement and deconstruction of building elements. This can be achieved by making informed design decisions based on quantified carbon reductions.

The above targets shall ensure all Council new builds are EPC A.

The above targets are subject to rigorous cost benefit analysis as the new build schemes progress. TDC shall endeavour to deliver units as close to zero carbon as possible within budget parameters. Additional capital spend to deliver high quality sustainable affordable housing is required to future proof new builds units, align with national policy and alleviate the risk of fuel poverty among the tenant customer base. In line with **TDCs Housing, Homelessness and Rough Sleeper Strategy 2020-25, Priority 12** - TDC shall raise the standard of design for new homes and communities:

The council's approach to climate change aims to achieve zero carbon status by 2030 and stresses the importance of new developments being designed to both respond to and mitigate against climate change.

Phase 4 of TDC's New Build Affordable Homes Programme 2022-25 shall feed into the following milestone targets of TDC's Trajectory to Net Zero Timescales:

- 1) Explore Clean Heating Technologies - 2022-25
- 2) Trial Clean Heating Technologies - 2025-30

Phase 4 provides the ideal platform to explore and trial innovative clean heating solutions in a controlled environment. Sustainability and MEPV consultants shall be appointed during the design stage throughout 2022-23 to lead on clean heating options appraisals and design integration. Further, extensive data analysis and monitoring during the ‘soft-landing’ and ‘in-use’ stage 2024-25, will help shape an informed approach to TDC’s Clean Heating Strategy, putting tenant-customer feedback at the centre of the decision making process.

A robust ‘lessons learned’ approach shall be fostered during the ‘in-use’ stages of TDCs Phase 4 Affordable Homes Programme. Best practice shall inform the delivery of TDC’s future new build programmes 2025 onwards, ensuring alignment with evolving national standards and policy developments.

Next Steps

Action	Description	Person responsible	Status/ target completion
Publish resident involvement strategy	Resident involvement strategy 2022-25 has been approved for adoption by Cabinet	Michelle Thomas	Complete
Bid for SHDF wave 2.1	Appointed 2 x delivery partners for bid and delivery for 4 x tower blocks	Sally O’Sullivan	Mid Nov 2022
ECO4 funding	Appointed delivery partner for ECO4 funding. Modelling of stock complete, progression to eligible stock and application for funding	Sally O’Sullivan	In progress

Research and insight used to develop this strategy:

Environment Act 2021

<https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

https://www.kent.gov.uk/_data/assets/pdf_file/0011/102152/Fuel-poverty-statistics.pdf

<https://historicengland.org.uk/advice/your-home/saving-energy/>

<https://historicengland.org.uk/whats-new/features/climate-change/>

[hard to decarbonise homes link](#)

[Adrien's paper](#)