

**Tower  
Hamlets  
Homes**

# Residents' Panel **Retrofitting Energy Efficiency Solutions**



# Contents

Chair's foreword	3
Summary of recommendations	4
<b>1</b> Introduction	<b>5</b>
<b>2</b> National and regional context	<b>6</b>
<b>3</b> Reducing emissions in Tower Hamlets	<b>8</b>
<b>4</b> Retrofitting THH stock	<b>10</b>
<b>5</b> Improving efficiency through district heating systems	<b>12</b>
<b>6</b> Resident led retrofitting	<b>13</b>
Scrutiny Review Action Plan 2019-20	14

---

## Chair's foreword



The energy efficiency of the Tower Hamlets Homes housing stock is an important aspect of residents' wellbeing and the borough's carbon reduction ambitions.

Both the health and financial wellbeing of residents is affected by the energy efficiency of their property. Living in a home with poor energy efficiency means residents have to spend more on their heating bills to keep warm, potentially pushing them into fuel poverty. If they choose to turn off their heating to save money, or are unable to heat it properly due to an inadequate heating system, living in a cold home can cause physical and mental health problems. These include worsening respiratory conditions and increasing the risk of circulatory conditions and mental health issues such as anxiety and depression. As well as affecting residents, these issues also have an impact on other public services, including putting increased pressure on the NHS.

According to the latest figures from 2017, residential properties were responsible for around 240,910 tonnes of carbon emissions in Tower Hamlets. With the Mayor of London and national government committed to becoming zero carbon by 2050, significant improvements in energy efficiency will have to be made to achieve this, whilst at the same time avoiding significantly increasing energy costs and pushing more residents into fuel poverty.

During our review we looked at the plans Tower Hamlets Homes has in place for improving the energy efficiency of its stock, and spoke to representatives from the Council and the GLA about the funds and programmes available. Although upgrades in energy efficiency have been achieved in several estates through the major works programme, and across the borough through a boiler replacement scheme, there is still a significant amount of work to do. Unfortunately at present there is little funding available from central or regional government. We have recommended that THH develops an Energy Efficiency Strategy to guide its future work in this area, and continues to collaborate with the GLA to explore how retrofit can be best achieved.

A handwritten signature in black ink, appearing to read 'James Wilson'. The signature is fluid and cursive.

**James Wilson**

---

# Summary of recommendations

## ✓ Recommendation 1

The Council to procure energy for THH from sustainable sources.

## ✓ Recommendation 2

THH to develop a strategic approach to underpin investment planning and responsive repairs.

## ✓ Recommendation 3

THH to work with the refreshed RE:NEW programme to explore the potential for delivering further retrofit schemes.

## ✓ Recommendation 4

THH to explore opportunities to transition Gas Boilers in existing properties to alternative technologies at the end of life (in line with government regulations for boilers serving communal heating systems in new builds post 2025).



---

# Introduction

- 1.1 In 2018, the Residents' Panel carried out a review exploring the use and maintenance of energy efficiency solutions in new build council properties. The review looked at how current national and local standards were considered in the design and delivery of new homes in the borough, and the support provided to new tenants to understand and make the most of the energy efficiency features within their homes.
- 1.2 As part of its recommendations, the Panel recognised the importance of exploring the opportunities available to THH to extend energy efficiency solutions to its existing stock through retrofitting schemes. This new review would seek to understand the relationship between improving energy efficiency and THH's investment priorities, the nature and scale of energy efficiency work carried out in the past, and the challenges it faces in rolling out wider investment in this area.
- 1.3 The review also explored the support on offer through the Greater London Authority (GLA) as part the London Mayor's commitment towards reducing carbon emissions, and the opportunities to draw on funding streams, such as the Carbon Offset Fund, through the Council.
- 1.4 The review took place in June 2019 and supported by Panel members James Wilson (Chair), Simon Hart, Daniele Lamarche, Saleha Jafrin and Shahaveer Hussain. Officers in attendance included:

---

**Abdul Khan**  
Service Manager – Energy and Sustainability  
London Borough of Tower Hamlets (LBTH)

---

**Ben Coombes**  
Programme Manager – Energy and Environment  
Greater London Authority (GLA)

---

**Peter David**  
Investment Planning Team Manager  
Tower Hamlets Homes (THH)

---

**Ian Dalglish**  
Investment Planning Officer  
Tower Hamlets Homes (THH)

---

**Gulam Hussain**  
Scrutiny and Resident Feedback Manager  
Tower Hamlets Homes (THH)

---

**Nojmul Hussain**  
Resident Feedback Officer  
Tower Hamlets Homes (THH)

---

**Mas Momin**  
Resident Feedback Officer  
Tower Hamlets Homes (THH)

---

**Gregory Torrance**  
Business Information Officer  
Tower Hamlets Homes (THH)

---

## National and regional context

- 2.1 The Climate Change Act (2008) sets out the legal framework for the UK to address and respond to climate change. The Act required local authorities to reduce its emissions of carbon dioxide and other greenhouse gases by 100% of the 1990 levels, by 2050. The Act includes a framework for achieving this target in the form of the 'carbon budgets' which legally restrict the amount of greenhouse gas the UK can legally emit in a five year period. Since the introduction of the Act the Government has made a commitment for moving towards achieving zero carbon homes for all new builds, from 2016, and in implementing its 2006 'Building a Greener Future' policy statement to address concerns over the impact of climate change.
- 2.2 Data from the Buildings Performance Institute Europe suggests the UK has amongst the oldest homes in Europe with over half built before 1960. Figures published by the EU in 2013 suggested UK homes were some of the most expensive to heat in Europe due to poor insulation and poor maintenance.<sup>1</sup> Poorly insulated homes have been linked to various health problems and an increased risk of mortality. In 2018 National Energy Action<sup>2</sup> published a study suggesting the UK had the second worst rate of excess winter deaths, caused in part by fuel poverty.
- 2.3 Although the 2006 'Building a Greener Future' policy statement and the Climate Change Act (2008) aims to deliver the Government's vision for a low carbon future, its measures have largely focused on new developments. Successive revisions to regulations in a bid to encourage development have also resulted in policies supporting low carbon measures to be weakened, or entirely withdrawn. In 2018, only 1% of new homes in England met the requirements to be certified as Energy Performance Certificate Band A.<sup>3</sup> In light of this development, the Committee on Climate Change (CCC), an independent non-departmental public body established under the Climate Change Act 2008, published a report in February 2019 arguing for the need for immediate Government action to support retrofitting across existing housing stock, for it to be included as a national infrastructure priority, and supported through measures from HM Treasury.
- 2.4 In line with the national picture, almost half of all homes in London were built before 1960.<sup>4</sup> Older buildings in the capital are believed to contribute between 70 - 80% of London's CO<sub>2</sub> emissions, with housing alone responsible for nearly 36%<sup>5</sup> of all emissions. Estimates from the Mayor of London's Infrastructure Plan adopted in 2014 indicates around 80% of these buildings are expected to be still standing by 2050.
- 2.5 In light of London's ageing housing stock and the significant contribution on emission levels within the capital, the Mayor of London's 2010 Housing Strategy and subsequently the Mayor's Climate Change Mitigation and Energy, and the Climate Change Adaptation Strategies introduced measures aimed at encouraging retrofitting to reduce levels of energy and water consumption. The package of support included initiatives such as RE:NEW, designed to encourage

<sup>1</sup>Carrington, D., 29th November 2013, 'Britain's damp, leaky homes among Europe's most costly to heat', The Guardian.

<sup>2</sup>Cold Homes and Excess Winter Deaths, A preventable Public Health Epidemic that can no longer be tolerated - Pedro Guertler and Peter Smith.

<sup>3</sup>Committee on Climate Change, February 2019, UK-housing-Fit-for-the-future.

<sup>4</sup>Housing in London 2018, GLA.

<sup>5</sup>CUTTING CARBON IN LONDON 2015 Update.

the retrofitting of homes by providing local authorities and housing associations access to expert advice and frameworks of suppliers to assist the delivery process. Since its inception, the scheme has helped improve over 130,205 homes across London. Other support measures included the RE:FIT scheme designed to support retrofitting in public buildings, and the London Community Energy Fund offering a total of £400,000 in grant funding to community organisations for projects up to a maximum value of £15,000 per scheme.

2.6 In 2016, the GLA introduced carbon offset measures; requiring local authorities to collect payments from developments where carbon offset targets are not met. The revenue generated from offset funds is ring fenced specifically for carbon reduction projects within local boroughs. Whilst the main objective is for reducing energy demand in existing buildings through

energy efficiency measures, other priorities include:

- generating renewable energy and renewable or very low carbon and low emission heat e.g. solar thermal, heat pumps or fuel cells, using solar PV, replacing higher carbon systems that contribute to poor air quality such as gas-engine Combined Heat & Power networks (CHP)
- supporting low carbon heat networks
- undertaking whole building retrofit to improve energy and water efficiency

2.7 Retrofitting may sometimes provide overall better value for money as opposed to demolishing old buildings and replacing them with newer ones. Responding to climate change, meeting national targets as well as mitigating health risks can be addressed through improving insulation, replacing windows with air tight frames, double or triple glazing panes and improving electrical and heating appliances.



## Reducing emissions in Tower Hamlets

- 3.1 The Department for Business, Energy & Industrial Strategy publishes data on borough wide emissions and published two years in arrears each June. Figures from 2017 show Tower Hamlets to have produced 1,238,000 tonnes of CO<sub>2</sub>. Despite this representing a 39% reduction compared to 2005 levels, the borough ranks as the third highest contributor to CO<sub>2</sub> emissions in London.
- 3.2 The Tower Hamlets Carbon Management Plan, developed in 2009 and refreshed and updated in 2016, commits the Council to a 60 per cent reduction in CO<sub>2</sub> emissions by 2020 (on 2007 levels) and becoming a zero carbon borough by 2030. To deliver its commitment, the Council has initiated a number of key carbon reduction projects which include:
- reducing energy costs and carbon emissions in council offices, community centres and libraries by 20 per cent through the Mayor of London's RE:FIT scheme
  - a phased programme to replace all of the street lighting in Tower Hamlets with high efficiency LED lighting, which could save the Council £2.7million by 2020
  - engagement with primary and secondary schools in the borough to save a possible £1.5million in fuel costs annually, which can instead be directed into frontline educational services.
- 3.3 As part of its strategy to improve energy efficiency and tackle fuel poverty, the Council has operated an energy co-op under the Big London Energy Switch scheme. Branded as Tower Hamlets Energy Community Power, the scheme aims to provide residents access to cheaper gas and electricity secured through the power of collective purchasing. During its last auction in May 2019, the scheme was estimated to deliver a saving of approximately £212 per household. As part of his manifesto commitment made during the 2018 elections, the Mayor of Tower Hamlets pledged to explore the creation of a publicity owned community energy company to continue to offer residents cheaper gas and electricity. Officers however noted that with the exception of Bristol Energy and Robin Hood Energy operated by Nottingham City Council, most other attempts by local authority have failed and have shown little additional benefits to customers over and above that which is offered through the energy switch scheme.
- 3.4 Since 2017, the Council's energy switch scheme has also been supported through the 'Affordable WARMTH Home Visits' programme offering free of charge advice and access to free energy saving measures for fuel poor and vulnerable residents. This includes measures such as low energy lights and draught proofing, radiator panels and where applicable top up loft insulation. As of February 2019 the scheme had delivered 383 visits leading to an estimated CO<sub>2</sub> emission reduction of 123,426kg.
- 3.5 In addition to the energy switching and advice schemes, the Council have also operated a free boiler replacement programme for home owners in the borough in receipt of a qualifying benefit. The programme funded through Carbon Offset contributions replaces existing boilers with a like-for-like 'A' rated high efficiency condensing boiler with upgraded heating controls. The scheme also advertised through THH, has delivered 68 new boilers since January 2018. In light of the success of the programme, funding has been made available for a second phase due to commence in Spring 2019 with a projected 160-170 boilers expected to be replaced over the duration of a three year programme.



- 3.6 In March 2019, in response to a petition asking it to declare a Climate Emergency the Council agreed to review its target and instead aim to become a zero carbon borough by 2025. The petition also commits the Council to divesting funds from fossil fuel related industries, and improving energy efficiency through better access for local businesses and residents to affordable green energy.
- 3.7 Although the Council seeks to achieve its ambitious target of becoming a carbon neutral borough by 2025, it also recognises that it only contributes directly to a small percentage of the emissions produced in the borough. Areas such as Canary Wharf contribute significantly to the level of emissions produced by the borough. This requires the Council to adopt a collaborative approach, working alongside a wide range of partners.
- 3.8 Whilst recognising the Council's commitment to reducing its carbon footprint and the wide range of support on offer for residents, the Panel queried whether the energy sourced through the Council's energy co-op was from sustainable sources. Officers advised that cost was the primary driver influencing purchasing decisions for the co-op as its primary objective is to offer cheaper, affordable energy for residents. There is however a recognition that consideration should be given to the sustainability of the energy sourced.
- 3.9 Officers highlighted that in light of the funding pressures faced by public sector organisations, it was often very difficult to balance the desire to procure sustainable goods and services against the need to achieve the maximum value for money. The Council, driven by its commitment to becoming a carbon neutral organisation, was nonetheless exploring how it currently meets its own energy requirements. This includes exploring the possibility of transitioning away from energy sourced through frameworks managed by HM Treasury to the London Energy Project which offers affordable and sustainable energy for 36 member authorities. This shift would also ensure energy purchased for THH by the Council would also be drawn from sustainable sources.

### Recommendation 1

The Council to procure energy for THH from sustainable sources



## Retrofitting THH stock

- 4.1 Since 2010 THH has delivered a range of retrofitting schemes of various sizes and complexity to its housing stock across the borough. Improvements have included a range of measures such as insulating roofs, and external walls benefitting in excess of 4,000 homes. Other measures have included upgrading glazing and installing high efficiency communal heating systems to reduce the cost of energy use.
- 4.2 Recent schemes have included improvements to Brodick House, located on the St Stephen's Estate. The works completed in 2017 were supported by a £369,000 funding contribution to an existing capital budget through the Energy Company Obligation (ECO) scheme which requires large energy suppliers to provide support to households to benefit from energy efficiency measures. The works aimed to address issues of poor thermal comfort, condensation and high carbon emissions through the installation of the Permarock external wall insulation system, upgraded double glazing and the installation of a high efficiency communal heating system with individual heat interface units for each dwelling.
- 4.3 In 2016, THH delivered a scheme across the Avebury and Bancroft Estates installing energy efficiency measures across 25 blocks affecting 317 dwellings. The scheme costing in the region of £4 million was made possible through a £2.254m contribution from the Department of Energy & Climate Change, now part of the Department for Business, Energy & Industrial Strategy. The works included External Wall Insulation, including roof insulation, to improve thermal performance and reduce the carbon footprint. This has delivered an estimated reduction in fuel costs by £136 per household each year, and is expected to deliver 5,300 tonnes of CO<sub>2</sub> savings over the course of its lifetime.
- 4.4 Whilst recognising the scale and range of improvements delivered to existing dwellings, members of the Panel noted that there appeared to be limited progress since 2017 in continuing to roll out similar schemes across the remainder of THH's existing stock. Officers highlighted that the events at Grenfell Tower in 2017 had significant impact on investment priorities as a result of which the focus now was on improving fire safety rather addressing energy efficiency.
- The limits on resources and the lack of external funding which made previous schemes possible had meant it is not possible to continue to actively pursue large scale retrofitting projects whilst delivering the required level of investment to deliver fire safety improvements across THH's housing stock. Despite this THH was still taking small steps through its Better Neighbourhoods Investment Programme to upgrade features such as new double glazing, new insulated roofs and communal lighting to more efficient solutions. In addition to small scale changes through the Better Neighbourhoods programme, THH was also looking at new technologies such as heat monitoring technology to help identify inefficiency and direct investment.
- 4.5 The Panel queried whether THH had an agreed set of minimum standards on energy efficiency which informs its approach and choice of products and services used to deliver capital investment programmes and the responsive repairs function. Officers explained that THH did have some informal guidance which set out some standards but this had not been fully developed or formally adopted. Measures included in these standards largely focused on ensuring properties have basic energy efficiency measures such as double glazing in place.

4.6 The Panel stressed the importance of ensuring THH had a clear and formally agreed strategy in order to realise the wider potential to improve energy efficiency across its housing stock through its planned capital investment and responsive repairs functions.

### Recommendation 2

THH to develop a strategic approach to underpin investment planning and responsive repairs

4.7 The Panel sought assurance on whether THH had actively engaged with opportunities such as the Mayor of London's RE:NEW programme to maximise the possibility of expanding its retrofitting programme. Officers confirmed that there had been engagement with the RE:NEW programme as part of the retrofitting projects undertaken by THH. There was however a lack of communication as a result of the lack of major schemes being in the pipeline and the loss of key contacts from within the GLA.

4.8 The Panel noted that the GLA was currently in the process of refreshing its offer under the RE:NEW programme. The refreshed offer is expected to launch later in the year will include free advice and support on a range of areas, such as guidance on carrying out stock assessments, programme optimisation, support for building business cases for retrofitting, identifying funding sources and assistance with the procurement process.

4.9 In light of the renewed offer from the GLA, the Panel recommended that officers from THH seek to re-establish links with the RE:NEW programme in order to explore the potential for delivering further retrofit schemes across the borough.

### Recommendation 3

THH to work with the refreshed RE:NEW programme to explore the potential for delivering further retrofit schemes



## Improving efficiency through district heating systems

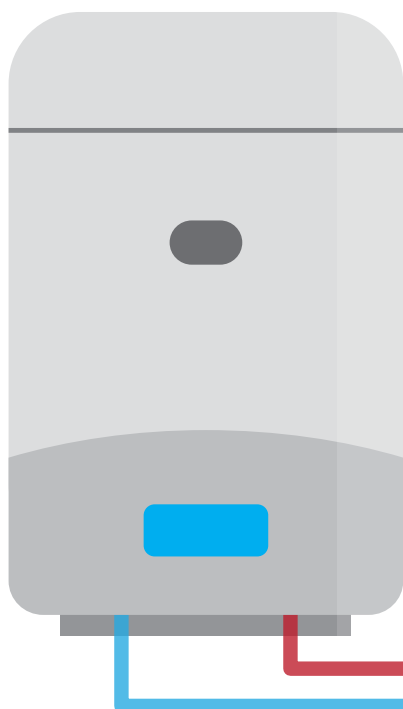
- 5.1 Members of the Panel cited examples from Denmark and queried whether the Council or THH were considering expanding the use of district heating systems which are recognised to offer cheaper and greener heat. THH currently manages 61 heat networks on behalf of the Council. These range from small scale communal heating systems serving one block to larger district heating systems serving multiple blocks and several hundred dwellings. Officers from the Council advised attempting to retrofit such solutions can be very costly and often not feasible given the restrictions on funding. Whilst there were no immediate plans to explore the possibility of retrofitting district heating networks, there was appetite to make greater use of them as part of new developments, including new council homes which will be managed by THH.
- 5.2 Officers from THH highlighted that communal heating solutions were often unpopular with leaseholders who often expressed a preference for individual boilers. This in turn undermines the potential benefits that can be achieved through district heating systems. There are also challenges to renewing ageing systems and the lack of regulation around district heating in the UK. At present, energy suppliers are not required to cap energy prices in line with the price caps set by Ofgem resulting in many residents across the UK locked in to a supply from a single provider and paying more for their energy. Data compiled by the Competition and Market Authority (CMA), who work to promote competition for the benefit of consumers, suggests that there were 14,000 heat networks across the UK in 2018 with some offering 'poor value for money'.
- 5.3 Although there was limited scope for expanding the use of district heating across existing THH stock, work was currently underway to replace boilers older than 12 years with newer models that are more efficient and easier to maintain. As an additional benefit to the programme, this also provides residents with newer and more efficient models where possible helping to reduce the cost of energy use.
- 5.4 The Panel noted the work being undertaken by THH through its boiler replacement programme but noted that recent government regulations will restrict the installation of gas boilers serving communal heating systems in new build properties as of 2025. In light of this change, the Panel recommended that consideration is given to the types of solutions used by THH as part of its existing replacement programme in order to rationalise its repairs and maintenance arrangements post 2025.

### Recommendation 4

THH to explore opportunities to transition Gas Boilers in existing properties to alternative technologies at the end of life (in line with government regulations for boilers serving communal heating systems in new builds post 2025)

## Resident led retrofitting

- 6.1 The scale at which energy efficiency projects can be delivered is largely dependent on the availability of funding. To date, most of the retrofitting work across THH's housing stock has been made possible through a range of funding initiatives driven by government. This has included schemes such as the Social Housing Energy Savings Programme, the Energy Company Obligation scheme and funding from the Department for Business Enterprise and Industrial Strategy (BEIS). To be able to continue delivering large scale retrofit programmes across THH's housing stock, there is a need for retrofitting to be recognised as key to meeting the UK's carbon emissions targets, and supported through significant funding from government as highlighted by the Committee on Climate Change (CCC).
- 6.2 Whilst noting the challenges, the Panel explored the potential for residents as individuals or collectives to take advantage of opportunities to independently secure access to energy efficiency measures, such as solar panels. Officers advised that at present there was no provision which would facilitate such requests. In the event of significant demand from residents, the matter would need to be referred to the Council for it to adopt a formal policy on the issue. In the interim, schemes such as the Council's boiler replacement or home visits programme would be promoted to residents through THH's existing communication channels.
- 6.3 The Panel concluded its review by noting that its recommendations would be formally presented to the Tower Hamlets Homes Board before being adopted. Once agreed, an action plan would be produced setting out how these recommendations would be implemented. A progress update would be offered to the Panel in 12 months.



Tower Hamlets Homes Residents' Panel  
**Scrutiny Review Action Plan 2019-20**  
 Retrofitting Energy Efficiency Solutions

Recommendation	Actions	Lead	Completion
<b>1</b> The Council to procure energy for THH from sustainable sources	The Council procures energy through a bulk contract for landlords supply. The Council buys at a competitive commercial rate and green energy tariffs are generally more expensive than brown energy tariffs. When there is an opportunity to switch tariffs the Council always looks to procure green tariffs where it is at the same cost or cheaper. In the longer term we are looking to transition THH away from the energy framework managed by HM Treasury to the London Energy Project enabling it to benefit from energy drawn from renewable sources.	Service Manager, Energy and Sustainability, (LBTH)	On-going
<b>2</b> THH to develop a strategic approach to underpin investment planning and responsive repairs	THH is currently in the process of reviewing its Business Plan. This provides us an opportunity to explore the role of energy efficiency and sustainability as an organisational priority and adopt and implement standards that will inform our approach to Investment planning and Responsive Repairs. Energy Efficiency and environmental sustainability standards will also be included as part of the re-procurement of the Responsive Repairs contract.	Head of Property Services / Business Development / Repairs	Business Plan – March 2020 Asset Strategy – August 2020 New Repairs Contract – April 2021
<b>3</b> THH to work with the refreshed RE:NEW programme to explore the potential for delivering further retrofit schemes	The successor programme has not been launched by GLA as of yet. This area will continue to be monitored and will be included as part of the refreshed THH Asset Management Strategy.	Head of Property Services	On-going
<b>4</b> THH to explore opportunities to transition Gas Boilers in existing properties to alternative technologies at the end of life (in line with government regulations for boilers serving communal heating systems in new builds post 2025)	This area is being added to the THH Asset Management Strategy. The Resident's Panel will be kept informed of developments and invited to play a part in shaping the priorities in the revised strategy. THH will also commission a study to understand the cost implications for replacing boilers with newer technology.	Head of Property Services	Oct-Dec 2020



Residents' Panel  
**Retrofitting Energy Efficiency Solutions**  
Scrutiny Review Report  
December 2019



**UKHA**  
**INSIDE HOUSING 2019**  
**LANDLORD OF THE YEAR**

[thh.org.uk](http://thh.org.uk) [@THHomes](https://twitter.com/THHomes)  
PO Box 66355, London, E14 1GU.

If you would like to help THH improve its services, please get in touch by emailing us at [scrutiny@thh.org.uk](mailto:scrutiny@thh.org.uk)