Home Energy Conservation Act Progress Report 2017

London Borough of Bexley
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1 Progress to date

1.1 Introduction

This document summarises the progress made by London Borough of Bexley (the Council) in relation to the Home Energy Conservation Act\(^1\). The Energy Saving Trust (EST) has prepared this progress report in accordance with the Home Energy Conservation Act (HECA) 1995 and the associated guidance which was published on 4\(^{th}\) January 2017\(^2\).

TheEnergy Saving Trust is a leading energy efficiency research and advice consultancy which has been at the forefront of the delivery of energy efficiency policy in the UK for the last 25 years. Our experience of working in the building, energy efficiency, technology and wider climate change sectors means we have the technical, research and economic experience required to deliver successful, energy efficiency strategies, policies and projects. We have an innovative range of services which local authorities, Registered Providers of social housing, businesses and other organisations use to benefit their residents, tenants, employees and customers. In particular, we are highly experienced in delivering reports for local authorities to meet Governmental regulations, and have delivered a number of HECA progress reports both for 2017 and in previous years. We remain independent and we will continue to provide impartial advice based on sound evidence and expertise.

1.2 Summary

Over the last few years the Council has taken part in energy supplier switching programmes to help keep energy bills low and combat fuel poverty. The Council also took advantage of Green Deal Communities funding to improve the energy efficiency of older properties in the borough. The Council intends to find a suitable partner to deliver further Energy Company Obligation (ECO) funding following recent changes to the ECO programme.

Although there are currently fewer resources available to London Borough of Bexley to invest in energy efficiency of residential housing than in previous years, a situation that is similar across the country, the Council continues to offer grants and loans to improve the energy efficiency of the housing stock and reduce the incidence of fuel poverty among the most vulnerable residents. The Council are also promoting the Mayor of London’s Better Boiler scheme to improve the efficiency of the heating systems of properties.

1.3 Introduction to HECA

The Home Energy Conservation Act 1995 (HECA) requires local authorities to improve the energy efficiency of all residential accommodation in their areas.

Authorities are expected to consider practical and cost-effective measures that will bring about a significant improvement in the energy efficiency of all types of housing in their areas. The original aim was to achieve a 30% improvement in energy efficiency over 10 years, but this was later extended to 15 years.

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\(^1\) Home Energy Conservation Act. HM Government, 1995

From 1997, English authorities were required to submit annual reports showing their progress towards achieving the 30% target. The 12th annual report was produced in 2008 and then the requirement ceased.

Following the introduction of new guidance in 2017, which replaces the previous guidance dated 2012, the legal requirement remains for Councils to improve home energy efficiency, and to report on progress. The aim is to make continuous improvements to home energy efficiency to 2027, and Councils are required to publish further reports and action plans every two years which set out the energy conservation measures that the authority considers practicable, cost-effective and likely to result in significant improvement in the energy efficiency of residential accommodation in its area. Reports are required to outline issues such as the local authority’s local energy efficiency ambitions and priorities and the steps that the local authority will be taking that take advantage of financial assistance and other benefits offered from central Government initiatives. All the Home Energy Conservation Act reports must be published online, with a link forwarded to the Secretary of State on or before the required date.

1.4 Climate Change and CO₂ Emissions

The Climate Change Act 2008 sets a legally binding national target to reduce CO₂ emissions by 80% by 2050 compared to 1990 levels.

The Act requires the Committee on Climate Change to recommend a series of five-year carbon budgets leading to the 2050 target. In June 2016 the Government accepted the Committee’s recommendation for the 5th budget: a limit of 1,765 MtCO₂e over the years 2028-2032, equivalent to an emissions cut of 57% on 1990 levels by 2030.

The Government has stated that local authorities are expected to play a major role in meeting these targets through the management of their buildings and vehicle fleets, and in how they influence householders, businesses and transportation in the wider community.

Figure 1 shows the total annual carbon dioxide (CO₂) emissions from domestic properties in Bexley as calculated by the Department for Business, Energy and Industrial Strategy, for 2005 to 2014. These are the most recent figures available.

Considering the previous 2 years, the figures show that despite a small population increase (approximately 2.5%) the total domestic emissions have reduced by 90kt CO₂ (19%) since 2012. Similarly, per capita domestic emissions have reduced from 2 tonnes to 1.6 tonnes per person (21%).
Should the current trend in emissions reduction continue at a similar rate, the projected total domestic emissions in 2020 would be 333kt CO₂ in 2020. However it cannot be assumed that the current rate of improvement will be maintained; simple measures such as cavity wall and loft insulation have been installed in the majority of homes, primarily leaving the harder to treat housing stock still remaining. Ongoing improvement will therefore require measures with higher capital costs such as solid wall insulation and renewable energy technologies. The Council's capacity to carry out measures to improve the energy efficiency of the housing stock depends on the availability of resources and funding. Additionally, changes in energy consumption can change due to a number of factors, including energy cost changes, changes in economic activity, and seasonal temperature changes, each of these being outside of the Council's control.
1.5 Fuel Poverty

Fuel poverty in England is measured by the Low Income High Costs (LIHC) definition, which considers a household to be in fuel poverty if:

- They have required fuel costs that are above average (the national median level); and
- Were they to spend that amount they would be left with a residual income below the official poverty line.

This is different to the previous definition prior to 2013, consequently it is not possible to compare earlier statistics prepared using the different definitions.

The latest figures from the Department of Business Energy and Industrial Strategy (BEIS), published in June 2016, show that there are an estimated 8,400 households in Bexley that are considered to be in fuel poverty. This equates to 8.5% of total households. This is 2.1% lower than the national average.

Figure 2 shows a spatial analysis of the fuel poverty rates in each LSOA (Lower Layer Super Output Area) in Bexley. The figure is taken from Energy Saving Trust’s Home Analytics database. The darker red areas indicate higher rates of fuel poverty; these are the areas in which schemes could be targeted.

Figure 2: Fuel Poverty by LSOA
1.6 Energy Company Obligation

In January 2017 BEIS published its response to its Energy Company Obligation: Help to heat consultation. As proposed in the consultation, the scheme is moving to focus much more on fuel poverty. The Affordable Warmth Obligation (officially known as Home Heating Cost Reduction Obligation – HHCRO) will now make up 70% of the scheme’s budget and the Carbon Emissions Reduction Obligation (CERO) will make up the remaining 30%. The ECO transition period will run from 1 April 2017 until September 2018 and around £960m will be spend on energy efficiency over that period.

Some of the biggest changes compared to the previous scheme include:

- The increased focus on fuel poverty.
- The greater role for local authorities – they will now be able to determine eligibility for part of the affordable warmth component (more details below).
- The scheme being opened up to poorly insulated social housing properties.
- A relaxing of the eligibility criteria.

1.6.1 Main considerations for local authorities

There are a number of inclusions in the Government’s decision on ECO that impact local authorities and grant a greater role for their involvement in the scheme. Local authorities will be able to determine eligibility for up to 10% of the Affordable Warmth component of ECO (which will make up 70% of ECO), social housing properties rated E, F and G will be eligible to receive measures under Affordable Warmth (although not heating system replacements/repairs) and local authorities will be able to determine non-fuel poor households as eligible for solid wall insulation, where this forms part of a project that delivers solid wall insulation to fuel poor, or low income and vulnerable households.

1.6.2 Flexible eligibility and local authority declarations

Local authorities will now be able to determine eligible homes under the new ‘flexible eligibility’ mechanism. This is primarily aimed at targeting fuel poor households not in receipt of the eligible benefits and low income households that are vulnerable to the effects of living in a cold home. This will be a voluntary mechanism that suppliers can use to meet up to 10% of their Affordable Warmth Obligation. Under this mechanism local authorities would be required to:

1. Publish a ‘statement of intent’ detailing the methodology and criteria they intend to use to identify eligible customers, before they can provide a declaration to suppliers.

2. Issue a declaration to energy suppliers stating that they had determined a household, or a number of households, as eligible under Affordable Warmth (AW), and the reasons for determining them as eligible.

As this is an untested process, Government has limited it to 10% of AW and intends to monitor quite closely how it is working, including requiring local authorities to produce annual reports on their use of flexible eligibility, collect and maintain evidence on their targeting processes, and participate in the evaluation.

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Guidance will be published before the transition period starts (i.e. before April 2017) on whom local authorities should be targeting and the criteria, information to include in declarations, statements of intent and annual reports.

Social housing properties (other than those rated E, F and G – see below) will not be eligible for flexible eligibility.

1.6.3 Solid wall insulation for non-fuel poor households

Under flexible eligibility, local authorities will be able to determine non-fuel poor households as eligible for AW in order to facilitate the installation of solid wall insulation, where this forms part of a project that delivers solid wall insulation to fuel poor, or low income and vulnerable households. The in-filling provision is to make it easier to install solid wall insulation in fuel poor private tenure homes. The in-filling will only apply to SWI and will apply in the following circumstances:

- In private tenure flats, maisonettes, terraces or detached properties next door to each other, as long as at least two thirds of households in any individual project are declared fuel poor, or low income and vulnerable to the effects of living in a cold home (as per local authority declarations above), by the local authority.
- In the case of a pair of semi-detached properties, or in the case of a single building that contains two flats, at least one of the pair must be occupied by a household in fuel poverty or on a low income and vulnerable to the cold.

1.6.4 E, F and G rated social housing properties eligible under affordable warmth

Social housing properties rated E, F and G will be eligible under AW and will not be subject to any of the other eligibility requirements (i.e. being in receipt of eligible benefits). Insulation measures and first time central heating (including renewable heat) or first time district heating will be eligible measures. Boiler and other heating system replacements or repairs (of any fuel type) will not be eligible.
1.7 Housing Stock

The following section shows current information on the housing stock in the local authority area. Figures are from Energy Saving Trust’s Home Analytics database which uses a combination of historical energy efficiency installation records along with statistical and geo-spatial models to provide an accurate profile of the housing stock in Great Britain.

Home Analytics is unique because of the quality of the data that underpins it and the advanced modelling processes used to predict accurate property attributes and energy efficiency information at the address level. This data will help the authority develop strategic, evidence-based planning and market assessment when considering energy efficiency improvements.

Home Analytics models are calibrated wherever possible to verify published sources of data such as the UK Census and national housing surveys. As well as actual data the Home Analytics database includes statistically modelled values and should therefore be treated as a guide rather than an absolute view of the entire housing stock.
1.7.1 Property Type

There are approximately 99,000 households in Bexley\(^4\).

Bexley has 17% fewer detached houses than the national average. However there are approximately 8% more semi-detached houses than the national average. Both detached and semi-detached houses are generally bigger than other property types and therefore can be more expensive to retrofit. However they generally have more space around them making them the most suitable house types for ground source heat pumps and biomass boilers.

Bexley has 5% more terraced houses, and 4% more flats than the national average. Both terraces and flats are the most suitable property types for mass roll-outs of energy efficiency measures which can provide economies of scale. However flats can pose access issues depending on their design and the permission required by different stakeholders (e.g. a mix of owners and renters, freehold and leasehold). For these reasons single flats can be difficult to treat individually. Similarly individual terraced properties can be difficult to treat because of planning considerations and detailing required between properties.

**Figure 3: Property types, comparison with national average**

\(^4\) DCLG Household Projections for 2017
1.7.2 Property Tenure

Bexley has a particularly high proportion of owner occupied properties (12% higher than the national average). Owner occupied properties have fewer stakeholders involved in the decision to make energy efficiency improvements, compared to rented properties, and can therefore be a relatively easy demographic for targeting improvements towards and offering financial assistance (e.g. homeowner loans).

Approximately 11% of the housing in Bexley is housing association owned. Housing association properties can be suitable for mass roll-outs of energy efficiency improvements given the high level of control that the housing associations have over their properties. These improvements can provide economies of scale and significant improvements to the overall energy efficiency of housing in the authority.

Figure 4: Property tenure, comparison with national average

![Property Tenure Chart]

Table 1: Property tenure, private and social housing

<table>
<thead>
<tr>
<th>Primary Tenure</th>
<th>Secondary Tenure</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>Owner Occupied</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Privately Rented</td>
<td>12%</td>
</tr>
<tr>
<td>Social</td>
<td>Local Authority</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Housing Association</td>
<td>11%</td>
</tr>
</tbody>
</table>
1.7.3 Property Age

Bexley has 14% more pre-1950 properties than the national average with almost half of the housing stock having been constructed between 1900 and 1949. Older properties like these are generally solid wall construction. They are more likely to have period features which can be more expensive to retrofit than newer properties.

Figure 5: Property age, comparison with national average

<table>
<thead>
<tr>
<th>Age</th>
<th>National Average</th>
<th>Bexley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1900</td>
<td>12%</td>
<td>4%</td>
</tr>
<tr>
<td>1900-1949</td>
<td>47%</td>
<td>26%</td>
</tr>
<tr>
<td>1950-1966</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>1967-1982</td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>Post-1982</td>
<td>21%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Table 2: Property age

<table>
<thead>
<tr>
<th>Property Age</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1900</td>
<td>4%</td>
</tr>
<tr>
<td>1900-1949</td>
<td>47%</td>
</tr>
<tr>
<td>1950-1966</td>
<td>13%</td>
</tr>
<tr>
<td>1967-1982</td>
<td>23%</td>
</tr>
<tr>
<td>Post-1982</td>
<td>12%</td>
</tr>
</tbody>
</table>
1.7.4 Fuel Type

Approximately 92% of Bexley’s properties are on the mains gas network. Mains gas is a relatively low carbon and inexpensive fuel. Modern condensing boilers provide high efficiency and low running costs.

Approximately 8% of the housing stock uses electricity as its main space heating type. Electric heating is generally the most expensive form of heating and is currently a very carbon intensive fuel. There is the potential for installing heat pumps in these properties to improve the efficiency of electric heating systems.

Table 3: Fuel type

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>92%</td>
</tr>
<tr>
<td>Electric</td>
<td>8%</td>
</tr>
<tr>
<td>Oil</td>
<td>0.0%</td>
</tr>
<tr>
<td>LPG</td>
<td>0.1%</td>
</tr>
<tr>
<td>Solid Fuel</td>
<td>0.1%</td>
</tr>
</tbody>
</table>
1.7.5 Loft Insulation
Loft insulation is a relatively cheap measure that can provide significant energy bill savings, reducing levels of fuel poverty and carbon emissions. Although the majority (54%) of properties have good levels of loft insulation (over 151mm), this is lower than the national average. There is the potential for a loft insulation scheme to improve levels of loft insulation in the properties in the authority that have the lowest levels of insulation. However, these schemes can have diminishing economic returns as the remaining properties are generally harder to treat.

Figure 6: Levels of loft insulation, comparison with national average

Table 4: Levels of loft insulation

<table>
<thead>
<tr>
<th>Loft Insulation Thickness</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Loft</td>
<td>14%</td>
</tr>
<tr>
<td>0-50mm</td>
<td>11%</td>
</tr>
<tr>
<td>51-150mm</td>
<td>20%</td>
</tr>
<tr>
<td>151mm+</td>
<td>54%</td>
</tr>
</tbody>
</table>
Figure 7 shows a spatial analysis of the proportion of properties with good levels of loft insulation (over 150mm) in Bexley. The figure is taken from Energy Saving Trust’s Home Analytics database. The darker red areas indicate areas with lower amounts of insulation. These are the areas in which schemes could be targeted.

Figure 7: Loft insulation by LSOA

**Bexley Borough Council - Loft Insulation by LSOA**
1.7.6 Wall insulation

Figure 8 shows the breakdown of wall types and proportion of insulated cavities. The majority of the cavity wall properties in Bexley have been insulated, with approximately 18% of the houses in Bexley having uninsulated cavity walls – this is 38% of the cavity wall properties. Compared to solid wall insulation, cavity wall insulation is a relatively inexpensive and easy measure. However the remaining cavity wall properties are likely to consist of harder to treat properties which are more expensive to insulate.

Figure 8: Wall type and insulation

[Diagram showing wall types and proportions: 52% Solid, 48% Cavity Insulated, 30% Cavity Uninsulated, 18%]
Figure 9 shows a breakdown of wall type and insulation, compared to the national average. Bexley's housing stock is composed of an almost even mixture of solid (52%) and cavity wall (48%) properties. There are significantly more solid wall properties in the authority than the national average. Although solid wall properties are more expensive to insulate than cavity walls, the solid wall properties represent a significant proportion of the housing stock that remains to be insulated.

**Figure 9: Wall types and insulation, comparison with national average**
Figure 10 shows a spatial analysis of the proportion of properties with insulated walls in Bexley. The figure is taken from Energy Saving Trust’s Home Analytics database. The darker red areas indicate areas with lower amounts of insulation. These are the areas in which schemes could be targeted.

Figure 10: Wall insulation by LSOA

Bexley Borough Council - Wall Insulation by LSOA
## 2 Local energy efficiency ambitions and priorities

### 2.1 Energy efficiency loans and grants

Bexley Staying Put is an on-going service that assists older & vulnerable tenants by providing grants and loans to assist with energy efficiency measures and combat fuel poverty. The main form of engagement with vulnerable residents is through targeted mailings to those residents identified as vulnerable. Around 2,000 vulnerable residents received leaflets through the Staying Put scheme in 2015/16.

Staying Put is a frontline service in which energy advisors visit homes to give energy saving advice and tips, and advise on improvements and repairs. Where appropriate advisors install simple energy saving measures to reduce energy costs. Further to this elderly residents receive comfort packs including a fleece blanket, thermos mug and room thermometer that help them stay warm during winter months.

Funding for energy efficiency measures is provided in the form of grants and loans:

- **Home Repairs Assistance Grant** – grants of up to £3,000, paid over a three year period, with payback required if the property is sold within 10 years of receiving the grant.

- **Owner Occupier Loans** - interest free loans for vulnerable householders, to be paid when property changes ownership.

A total of 962 Bexley households received assistance through the Staying Put service in 2015/16.

### 2.2 Handyperson service

The Bexley Staying Put service also provides a discounted handyperson service which provides low cost repairs and adaptations to the homes of Bexley residents who are over the age of 60, or are in receipt of disability benefits. A wide range of work is provided by the service, including a number of improvements to warmth and energy efficiency of the home (e.g. draught-proofing windows, doors and chimneys).
| 2.3 | **Energy supplier switching** | Bexley were one of 18 Councils that took part in the Big London Energy Switch scheme in 2013/14. The scheme enabled households to save money off their electricity and gas bills by encouraging energy companies to offer lower prices to the residents who had registered for the scheme. There was a total of 1,571 registrations in Bexley. The scheme was primarily targeted towards the fuel poor residents who could benefit the most from switching energy supplier. Energy team advisors assisted many elderly residents to register for the scheme. Until June 2016 energy supplier switching assistance was provided through the Home Heat Helpline, a free, impartial and confidential service that connected residents on low incomes or in poor health with financial help and practical advice on how to manage their energy bills. The service was accessible online and through the free telephone helpline. The Council currently recommends that residents contact Ofgem’s “Go Energy Shopping” to obtain price comparisons on gas and electricity tariffs which was launched in response to consumer demand for simple and impartial advice. | 2013-present |
| 2.4 | **Advice publication** | The Bexley Magazine is a quarterly publication produced by the Council and distributed throughout the borough. The magazine includes articles providing news and information on energy efficiency schemes and developments in Bexley. | On-going |
| 2.5 | **Renewable technology** | There were 316 domestic solar PV installations claiming feed in tariffs in the Council between Jan 2015 and Jan 2017, amounting to 1.12MW of generating capacity. | Recent Activity |
| 2.6 | **Local partnerships** | The Council continues to work closely with a number of local partners including social services, carer support, and environmental health. The Council works closely with Age Concern which provides a number of services to the over 50s in Bexley. A full list of services can be found online at: [http://www.ageuk.org.uk/bexley/](http://www.ageuk.org.uk/bexley/) | On-going |
## 3 Central Government initiatives

### 3.1 Green Deal Funding
From 2012 to 2016 Bexley, Bromley and Lewisham Councils ran the Warm Homes programme in partnership with Osborne Energy, one of the UK’s leading energy efficiency project management providers. The programme secured over £1.5 million through the Department of Energy and Climate Change Green Deal Communities programme to install measures (such as external wall insulation) in older properties in the three boroughs.

The Council is currently reviewing the January 2017 publication of BEIS’ response to ‘Energy Company Obligation: help to heat consultation’ and its increased focus on Affordable Warmth. They will soon be looking for a partner to deliver further ECO funded measures.

### 3.2 Boilers and heat pumps
The Council is promoting the Mayor of London’s Better Boiler scheme. The scheme, which was launched in January 2017, provides free repairs or replacements of boilers to homeowners who are receiving benefits and have inefficient or broken boilers.

### 3.3 Smart meters
The UK Government expects that most households will have smart meters installed at no cost by their energy company by 2020. Energy companies are currently installing smart meters in the authority. Research on some of the first customers who had smart meters installed has shown they reduced their energy consumption by 1.5-2 per cent.

Smart meters are being advertised to residents through energy suppliers. The Council will support residents seeking information on smart meters by speaking to their energy company on the resident’s behalf.

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5 Smart Metering Early Learning Project: Domestic Energy Consumption Analysis, DECC, 2016

6 Smart Metering Early Learning Project: Domestic Energy Consumption Analysis, DECC, 2016
3.4 Minimum energy efficiency standards

Along with the LIHC measure of fuel poverty, the Government's fuel poverty strategy, “Cutting the Cost of Keeping Warm” launched in March 2015 confirmed the adoption of new minimum Energy Performance Certificate (EPC) E standards in private rented homes from 2018.

Additionally DECC sets a new “fuel poverty target” of EPC C by 2030 for “as many fuel poor homes as is reasonably practicable”. This target is supported by two intervening milestones of EPC E by 2020 and D by 2025, for as many homes “as is reasonably practicable”.

The Council intends to investigate its options for meeting the minimum EPC requirements in the private rented sector.