
Overview & Scrutiny

Local Warming: Increasing Home Insulation in Lewisham: a scrutiny review

Sustainable Development Select Committee

September 2009

The **Sustainable Development Select Committee** scrutinises the Council's performance, and its Mayor and Cabinet's decisions, on issues relating to:

- the protection of the environment, including 'green' issues such as the conservation of natural resources; energy efficiency; and the reduction of all types of pollution;
- economic development; support to businesses; employment and training;
- the formulation of the Council's planning policies, including the preparation of the Council's Local Development Framework and other local plans for the use and development of land, but excluding planning control and building control functions;
- highways, parkways, traffic and transport, urban regeneration and housing;
- public health and the environment including waste disposal, environmental health, street and market trading; and
- public protection, refuse collection and disposal, street cleaning, consumer protection, cemeteries and crematoria.

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Councillor Ron Stockbridge (Vice Chair of Overview & Scrutiny)

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1. Chair's Foreword

Reducing carbon emissions to combat climate change is one of the most urgent challenges we face today. Lewisham's *Carbon Reduction and Climate Change Strategy* provides a useful portrait of the particular challenges that this duty poses in Lewisham. Housing in our borough accounts for 44% of our carbon emissions, compared to 27% nationally, making it a key area to tackle if we are to meet our targets.

If the urgency of climate change is not incentive enough to reduce our dependence on fossil fuels, dwindling global supplies and future volatility in energy prices should be. It is the poorest in our society who are most harshly affected by fluctuating energy prices. One of the most effective ways of tackling the fuel poverty this leads to is by improving home insulation.

Lewisham's existing schemes, such as the Energy Action Zones which promote means-tested government grants for insulation, have undoubtedly raised awareness, but take up of these grants has at best been patchy. Our Sustainable Resources team are to be congratulated on their recent success in obtaining additional funds for a low-carbon zone within the borough and government funding under the Social Housing Energy Saving Programme (SHESP), but all these piecemeal approaches to tackling the huge task we face are ultimately insufficient.

To cut our carbon emissions sufficiently and eradicate fuel poverty, we know that we need to systematically insulate each and every home in the borough. This is a daunting and expensive prospect. Lewisham's housing stock, ranges from Victorian conservation area properties to inter-war and post-war housing estates, tower blocks and pre-fabs, as well as more recent builds. Each requires a different approach and incurs differing costs.

Approximately 30% of housing is in the social rented sector, a similar percentage is privately rented and the remaining 40% is owner-occupied. Within the social rented sector a wide range of delivery vehicles have been chosen to implement the Decent Homes programme, meaning liaison is necessary across a number of bodies. Within the private rental sector, private landlords needs to be convinced of the benefits of investing in their properties' energy efficiency, and supported in doing so. The 40% of homes that are owner-occupied present further challenges and require yet another distinctive approach.

So where to turn our attention initially? It makes sense to pick the low-hanging fruit first – approximately 25% of housing in the borough would benefit from cavity wall insulation, and around 27% still needs better loft insulation. These are quick wins both in carbon savings and in tackling fuel poverty. For social housing, this is largely being addressed through the Decent Homes programme, so the bulk of the remaining 'low-hanging fruit' is now in the private sector.

At the same time the committee was mindful of the need to look ahead to how we can tackle the 47% of housing in Lewisham which is solid-wall, and therefore more problematic, more costly to insulate and involves greater disruption for the resident.

There's no escaping the fact that insulating every home in the borough requires significant financial outlay, and securing funding in the current economic environment will be challenging. However, the potential benefits, in terms of eradicating fuel poverty, creating new 'green' jobs and lowering carbon emissions mean this is a challenge Lewisham needs to be at the forefront of tackling, not lagging behind.

2. Introduction

- 2.1 This report is the product of an investigation by the Sustainable Development Select Committee into increasing home insulation in Lewisham. The committee considered the benefits of and barriers to improving the insulation of existing homes, with a view to identifying the most effective way of ensuring every home in the borough is insulated to a high standard as quickly and efficiently as possible, in order to meet our carbon reduction targets and eradicate fuel poverty.
- 2.2 The first part of the review sought to gain an understanding of what the Council and its housing partners are doing to increase home insulation in the borough. In doing this, the select committee considered evidence from the Group Manager for Sustainable Resources, the Council's Head of Business Regulatory Services and representatives from registered social landlords in the borough. Here the committee's focus was on the particular challenges encountered in Lewisham and the outcome and impact of the activities and programmes undertaken by the Council and its housing partners.
- 2.3 The second part of the review focussed on the national and regional policy drivers that impact home insulation. The committee considered evidence from a wide variety of sources, including other local authorities in London, the Local Government Association, London Warm Zone, the Energy Saving Trust and British Gas.
- 2.4 This report provides a brief account of the context of this work, the reasons for undertaking the review, what the select committee's aims were in carrying out the review and its work programme, before setting out the findings, conclusions and recommendations for action and improvement.

3. Reasons for undertaking the Review

- 3.1 The select committee decided to carry out a review of home insulation in Lewisham as:
- Domestic energy use accounts for 44% of the borough's carbon emissions (compared to 27%) nationally, and reducing this is key to the borough meeting our targets within our Carbon Reduction and Climate Change Strategy, as well as national indicators 185, 186 and 187.
 - Reducing carbon emissions and tackling fuel poverty are issues of concern to members, as well as the general public;
 - The topic is relevant to the Sustainable Communities Strategy priorities of 'decent homes for all' and 'clean, green and liveable'; as well as issues of broader national and international importance, such as economic wellbeing, reducing fuel poverty, and tackling climate change.
- 3.2 **The broader benefits of home insulation are well-known and include:**
- Better energy efficiency for homes which could increase their value.
 - One of the most efficient ways to keep warm and cut energy bills.
 - Reduces carbon emissions.
 - Creates jobs for the community if local labour is utilised.
 - Improvement in fuel poverty with more effective provisions of affordable warmth.
 - Reduction in sickness costs to NHS and PCTs as homes become a healthier environment.

4. Aims of the Review

- 4.1 The select committee determined the following as the terms of reference for the review:
- What are the benefits of and barriers to improving the insulation of existing homes in Lewisham?
 - What further actions are needed to achieve improvements to home insulation in Lewisham?
- 4.2 In answering the above questions, the committee will examine the following:
- gaps in the Council's knowledge of the insulation needs of homes in Lewisham, and how these gaps could be filled;
 - home insulation schemes and other good practice currently operating in the borough;
 - good practice examples from outside of the borough, and what lessons can be applied to future schemes in Lewisham;
 - proposals from central Government, the GLA and the LGA to improve home insulation, and the implications of these for Lewisham;
 - the extent to which insulation measures are taken into account in the terms of transfer of council-owned housing stock; and
 - the extent to which Building Regulation duties around home insulation are enforced on properties still to be built, or on conversions/extensions to existing properties.

5. The Select Committee's Programme of Work

- 5.1 The select committee held five meetings in all, taking extensive written and oral evidence from the Local Government Association, London Warm Zone, British Gas, the South East London Housing Partnership, the Energy Saving Trust, Lewisham Homes, Hyde Housing Association, Phoenix Community Housing, officers from the London Boroughs of Islington, Greenwich, Sutton and Camden, as well as Lewisham Council officers.
- 5.2. A list of all the sources of evidence considered by the select committee and all those who gave evidence can be found in the appendices.

6. Policy Context – National, Regional and Local

National

- 6.1 The Climate Change Act 2008, aimed at creating greener homes and neighbourhoods, introduced a target to reduce carbon emissions by at least 26% by 2020, then 80% by 2050, against a 1990 baseline. In March 2009, the government published a draft Heat and Energy Saving Strategy, which sets out its heat and energy vision to 2020 and beyond. This seeks views on policies to reduce carbon emissions from homes and businesses, and to increase the amount of energy generated by renewable energy sources. The current Housing Minister, John Healey, has promised to tackle climate change as a core part of his work. The Mayor of London has produced a climate change mitigation and energy strategy for London, with an ambitious target of 60% reduction in carbon emissions by 2025.
- 6.2 The Heat and Energy Saving Strategy Consultation sets out the Government's long term vision for reducing emissions of carbon dioxide from buildings. The overall vision is for carbon dioxide emissions from buildings to be approaching zero by 2050.
- 6.3 The proposals contained in the consultation aim to ensure that
- Emissions from existing homes to be near zero by 2050.
 - All lofts and cavity walls filled by 2015 where practical.
 - 7 million homes taking up microgen/solid wall insulation by 2020.
 - All homes to have received a whole house package by 2030.
 - All households to have access to Home Energy Advice.
 - 44Mt CO₂ by 2020, 30% reduction of household emissions.

Regional

- 6.4 On 22 July 2009 the Mayor of London announced a £9.5m programme to establish a pan London Homes Energy Efficiency Programme (HEEP). The programme is a joint initiative between the LDA, London Councils' London Futures and the capital's 33 London boroughs.
- 6.5 The programme has invited bids from London's 5 housing sub-regions for boroughs to pilot a demonstration project with £249,000 funding available in 2009/10 to each sub-region to test the delivery of free 'easy to install' energy efficiency measures such as stand by switches and visual display units combined with loft and cavity wall insulation. Bids are due at the end of September.
- 6.5 A further £1.5m will be made available for 2010-12 for each of the 5 housing sub-regions. The GLA intend that delivery of the HEEP programme will position London to bid for potential post 2012 funding to the order of hundreds of millions of pounds resulting in increased delivery of insulation and energy efficiency across the capital.

Local

- 6.7 Lewisham published a Climate Change Strategic Framework in 2006, which set out the Council's proposals for adaptive solutions to climate change. These proposals are included as part of the Council's overarching climate change strategy. 'Carbon Reduction and Climate Change Strategy July 2008'.
- 6.8 The profile of Lewisham's carbon emissions shown below (taken from the Carbon Reduction and Climate Change Strategy, 2008), shows that as a high proportion of emissions in the borough are domestic, improvements to home insulation are likely to have a high positive impact on the borough's overall emissions.

| | Industry and commercial | Domestic | Road transport |
|----------|-------------------------|----------|----------------|
| Lewisham | 26% | 44% | 30% |
| London | 42% | 33% | 24% |
| UK | 45% | 27% | 27% |

Figures given are % CO² emissions by sector. Source: AEA Energy and Environment/DEFRA 2005

- 6.9 When discussing home insulation, it is useful to distinguish between homes where typical methods of insulation can be applied (usually meaning cavity wall insulation or loft insulation), and so-called 'hard to treat' homes. The latter generally refers to older buildings with solid walls, which would not be suitable for cavity wall insulation, or properties with loft conversions, which would rule out conventional forms of loft insulation. Insulation for these types of buildings is considerably more expensive, as well as disruptive for occupiers.
- 6.10 Lewisham is similar to many London boroughs in that a high proportion of its housing relative to other areas of the UK is likely to be 'hard to treat'. This is because much of it was built prior to 1945 and is likely to have been built with solid walls; it will therefore not be suitable for cavity wall insulation. According to Lewisham's Housing Needs Survey 2007, over two-thirds of Lewisham's housing stock was built before 1945, and over 70% of detached, semi-detached or terraced housing was built before 1919.
- 6.11 Data on the amount of insulation already carried out in Lewisham is difficult to collect, as there is no simple method of counting the number of privately owned properties which have had work carried out. However, data given as evidence by the Energy Savings Trust, based on the National Home Energy Efficiency Database (HEED), which is a record of energy audits or surveys undertaken on properties as well as energy efficiency measures installed, estimated that there are around 25% of the borough's lofts and cavity walls which require insulation.
- 6.12 In addition, the London Assembly Environment Committee's recent report *Lagging Behind: Insulating homes in London* (December 2008) suggested that the amount of insulation carried out in London was proportionally lower than elsewhere in the country. The report also provided the following estimates for the whole of London:

- 80% of London homes could benefit from some type of wall insulation.
- 60% of homes in London have solid walls; almost all of these are un-insulated.
- Of the estimated 40% of London homes which would in theory be suitable for cavity wall insulation, around two-thirds are un-insulated.
- Around a quarter of London homes could benefit from thicker loft insulation.
- About a third of homes in London only have single glazed windows and over half are not fully double-glazed.

6.13 The type of tenure is important, as while local authorities, social landlords and private landlords are obliged to ensure some basic insulation is provided by 2010 as part of the Decent Homes Standard, owner occupiers are not. Persuading the latter to invest in home insulation, or to accept the disruption of work being carried out even when financial assistance is available, can provide a significant obstacle¹. In addition, it can be difficult to engage with private landlords and persuade them to take up offers of improved insulation. The 2007 Housing Need Survey revealed that 40% of housing in Lewisham is privately owned.

6.14 As part of the ongoing process of the transfer of housing stock from the council to housing associations or ALMOs, the negotiation of terms of transfer will include a commitment to ensure properties are made thermally efficient. Where the demand is there from local residents, transfer terms may include the need to provide insulation for hard to treat buildings – for example, as part of the Lee Housing Stock transfer, there are plans to fit two blocks of flats with a thermal insulation board on the outside.

6.15 New build properties are subject to building regulations with minimum standards for insulation etc. Although the focus of this review is very much on existing properties, how effectively these regulations are being enforced needs to be considered.

6.16 Data available on the insulation needs of homes in Lewisham is likely to be improved by the completion of a Stock Conditions Survey by Lewisham Homes, and a forthcoming sample survey of private sector housing in Lewisham. In addition, aerial mapping of the borough, which will give further information on the quantity of emissions per area, has been carried out and the data should be available soon.

The limitations of existing insulation schemes

6.17 In England, free insulation is available for householders in receipt of certain benefits or for people over the age of 70 through the government's Warm Front scheme. Critics of this approach argue that it is deficient in a number of respects:

- People who may be in fuel poverty (spend over 10% of their income on gas/electricity etc) may not be in receipt of benefits. With rising fuel prices this will increasingly become the case.

¹ Take-up of the Kirklees Warm Zone scheme, which offers free cavity wall or loft insulation, has only been 60% so far.

- As the scheme is 'entitlement' based it will by its nature result in a 'pepperpotting approach' where only certain houses get done and opportunity to do adjacent properties are missed
- The scheme is inefficient as non area-based approaches require more travel between jobs and time has to be spent confirming entitlement.

6.18 Contractors can cherry pick 'good' areas with high levels of benefit entitlement and suitable properties, to the detriment of rural areas and London Boroughs where the lack of suitable properties and the congestion charge make it an unattractive prospect (in 2007/08 only 11,000 grants were issued in the entire Greater London area, the same as Kirklees for the same period!).

7. Existing schemes and approaches in Lewisham

7.1 The Committee heard that a range of approaches and schemes were already in place in the borough to both promote the benefits of effective home insulation and support the Council to meet its carbon reduction targets. Council officers explained that:

- it is generally easier to improve the energy efficiency of houses and the nature of the Council's housing stock and tenure means that the Council has a range of additional challenges to overcome whilst seeking to increase the number of homes effectively insulated in the borough;
- the council's sustainable resources group was actively promoting better insulated properties across the borough by increasing the number of residents accessing national grants for insulation and raising awareness of the benefits of better insulation and other energy efficiency measures;
- a general support and advisory service was available for all residents, with a more targeted approach for particular geographical areas and those deemed vulnerable or experiencing fuel poverty;
- Lewisham has an Energy Action Zone² (EAZ) which seeks to reduce fuel poverty and lower CO₂ emissions in the borough by focussing support and advice on those vulnerable to fuel poverty;
- the Council actively promotes the national Warm Front³ scheme;
- Lewisham residents are able to access the Coldbusters scheme through the sustainable resources group. The scheme provides free basic home insulation up to a maximum cost of £5,000 to those living in fuel poverty in the private sector accommodation.
- the Staying Put scheme provides grants or loans to older or disabled homeowners for home improvement work;
- London Warm Zone⁴ – the council actively refers eligible residents to London Warm Zone who provide free home insulation to those aged over 70 and people in receipt of certain benefits;
- the Council has a small contract with London Warm Zone to increase energy efficiency;
- Lewisham is also working in partnership with London Warm Zone in the Crofton Park ward to help residents improve the efficiency of their homes and reduce fuel bills;
- there is no legal requirement for private sector homes to meet the Decent Homes Standard⁵ (DHS);
- the implementation of DHS will make a contribution to the Council's Carbon reduction target;
- the Council does not require homes to meet a minimum Standard Assessment Procedure⁶ (SAP) rating as part of the Decent Homes work.

² An Energy Action Zone – insert definition

³ Warm Front – insert definition

⁴ London Warm Zone - definition

⁵ Decent Home Standard – insert definition

- in conjunction with Phoenix Community Housing Association, the Council has applied for additional funding as part of the EAZ .
- the Council, in conjunction with Lewisham Homes has recently received funding of just over £800,000 from the Local Development Agency, for the Lewisham Park Area and Social Housing Energy Saving Programme. This fund will provide cavity wall insulation in 2,000 homes.
- the Council has received approximately £250,000 from the Greater London Authority as part of the 'Low Carbon Zones' programme to reduce carbon emissions and improve insulation in buildings in the Lewisham Park area, including public buildings such as the hospital and fire station, as well as homes.

London Green Homes Concierge Service

The Green Homes Concierge is a service which was launched just over two years ago by the London Development Agency. The service, which costs residents £199, offers a detailed home energy survey, and a year's worth of expert, practical support for homeowners who want to make their homes more energy efficient and cheaper to run.

- Initially, a qualified home energy advisor thoroughly surveys the property to highlight where energy is being lost.
- A comprehensive report is produced to help recommend a programme of improvements to reduce both the customer's carbon footprint - and their fuel bills.
- Customers will receive guidance on the best improvement options and how to do them through a dedicated team of researchers.
- Unlimited support with the practicalities of obtaining grants, quotes and the best suppliers and products to meet the customer's requirements - saving time, energy and the environment.

Green Homes Concierge Service Results – Lewisham Scheme, July 2009.

| CO ₂ Reporting | Tonnes of CO ₂ Saved | | | |
|------------------------------|---------------------------------|-------------------------------|-----------------|---------------|
| | To end of current FY | To end of lifetime of measure | To end of 2025 | Per annum |
| *Measures implemented | 10.42 | 205.90 | 166.05 | 9.88 |
| **Measures committed to | 18.19 | 397.64 | 328.97 | 19.73 |
| ***Measures being considered | 116.39 | 2,479.52 | 2,165.41 | 130.10 |
| Totals | 145.00 | 3,083.06 | 2,660.43 | 159.71 |

* these figures relate to improvement measures that have already been implemented by the customer

** these figures relate to improvement measures that the customer has requested supplier quotations for

*** these figures relate to improvement measures that the customer has requested further information/research on

⁶ The standard application procedure that defines the energy efficiency of a structure by taking into account items such as heating systems, the position of the site and the makeup and materials of the structure.

Eco Street Project

The Lewisham Eco Street project piloted an area-based approach to reducing CO₂ emissions promoting take-up of wider sustainability measures. An open competition for residents to nominate their street was held, and Rockbourne Triangle was identified as the most suitable.

The project ran from October 2008 – February 2009 and achieved the following:

- Overall CO₂ emissions reduction: 47.49 tonnes of CO₂
- Number of households to make at least one improvement measure: 72
- Number of households to make more than one improvement measure: 27
- Number of physical improvement measures made (e.g. insulation or installation of 'easy measures'): 94
- Number of households to participate in behavioural change activities: 40
- Number of households to participate in events: 15

The aim was to test the effectiveness of the regional 'Green Homes Concierge' advice service and other low-cost measures in enabling citizens to reduce CO₂ emissions. Building upon the success of the Energy Action Zone model the Eco Streets project was designed to use the area based approach as a means of raising wider awareness of what people can do to save money on their energy bills and reduce their carbon footprint.

Although the energy surveys were free, residents had to pay for any measures to improve their home energy efficiency, unless they were entitled to means-tested grants such as Coldbusters or Warm Front. As the data above shows, although residents were keen to get the surveys done, the percentage that actually took action as a result of the survey was fairly small.

7.2 Insulation Grants In Lewisham

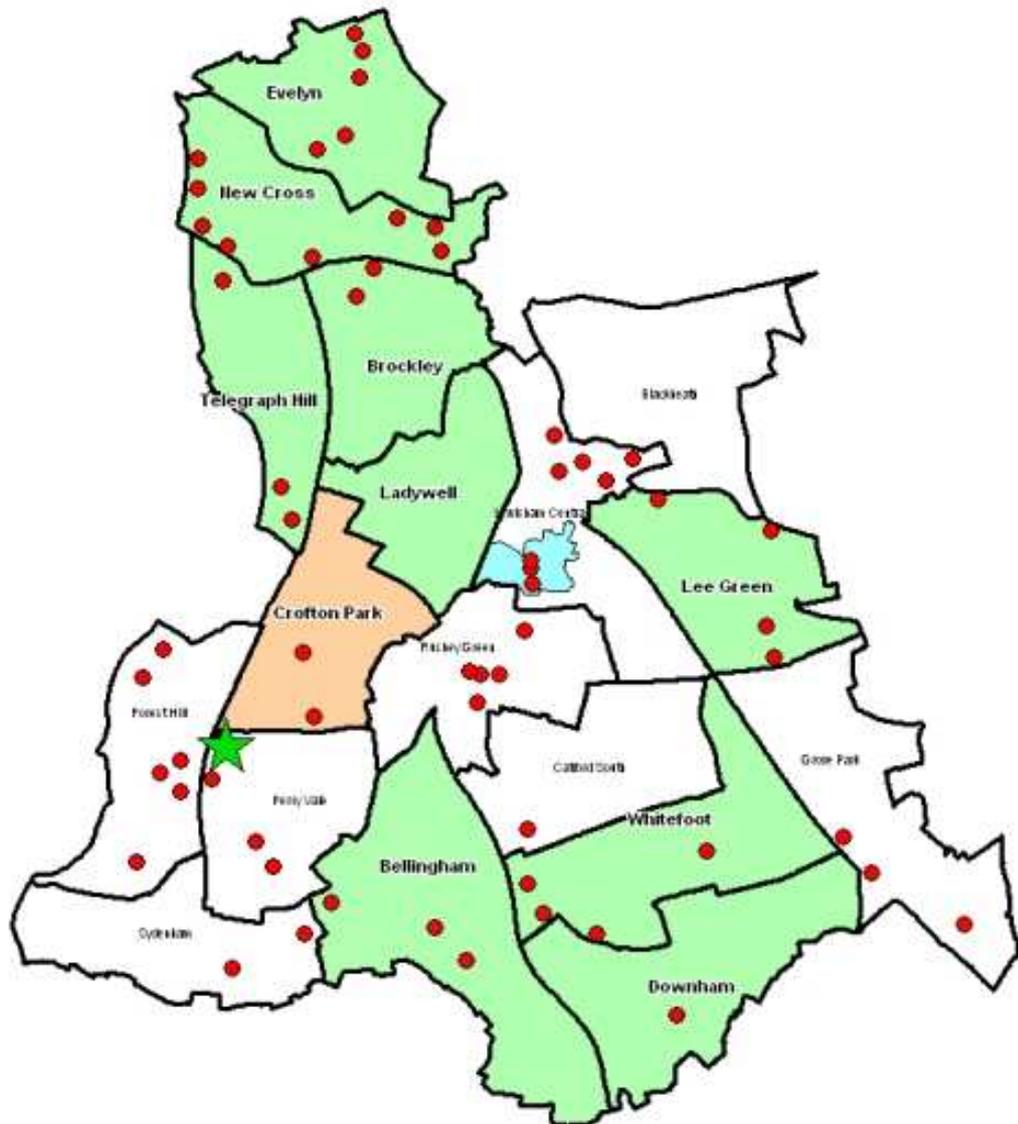
The following table shows loft and cavity wall insulation measures delivered in the borough through Government grants and Carbon Emissions Reduction Target (CERT) funding. The figures shown are for 2008/09.

Except for Warmfront, the data only relates to grants secured by residents through Lewisham Council⁷. There are no available figures for householders responding directly to national or London marketing campaigns, or CERT funded insulation delivered through energy suppliers to their customers.

⁷ Through the Sustainable Resources Group, Energy Action Zone or the Housing Grants Team.

| Funding source | Completed jobs | Spend |
|--|-----------------------|--------------|
| Coldbusters Insulation funding as well as heating and draught-proofing. Scheme managed through the South-East London Housing Partnership. Up to £4,000 available per qualifying household. | 48 | £151,876 |
| Warmfront Insulation funding as well as heating and draught-proofing. Funded direct by central government. Up to £3,500 available per qualifying household. | 348 | £262,658 |
| London Warmzones Free insulation for priority groups and discounts for all residents. CERT funded. | 91 | £20,191 |
| British Gas CERT insulation scheme London, free or discounted. | 20 | Not known |
| CERT funded insulation provided by energy companies to their customers. | Not known | Not known |

Climate Change projects operating in Lewisham



Energy Action Zone



Warm Zone
self-generation scheme



Low Carbon Zone
LSOA E01003291



Eco Street



Social Housing Energy Saving Programme (SHESP)

Sept 2009

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- 7.3 The Committee heard from Mark Johnson, Regional Director of London Warm Zone that the Council is an active member of the South East energy efficiency partnership. He also explained that London homes have lost out on a range of funding streams, such as CERT-funding due to the nature of the housing tenure and economies of scale – it is cheaper for energy companies to reach their carbon reduction targets by insulating a cavity walled house outside London, than insulating a solid wall home in central London, where contractors may also have to pay congestion charge and parking permits. He suggested that a range of alternative, innovative approaches must be identified and piloted to enable a step change in the number of homes that are adequately insulated in London.
- 7.4 As with other initiatives, the experience of London Warm Zone was that area-based approaches with a focus on health issues tended to be more effective in increasing the number of homes insulated and addressing fuel poverty. This approach has been effective in East London.
- 7.5 The committee was informed of a range of approaches undertaken by Registered Social Landlords in the borough:
- 7.5.1 Phoenix Community Housing is involved in the EAZ in Bellingham and consideration is being given to setting a minimum SAP rating which all properties must meet;
- 7.5.2 Broomleigh Housing Association are planning to externally clad two poorly-insulated blocks as part of the Lee Green stock transfer scheme⁸;
- 7.5.3 Lewisham Homes have been working with the Sustainable Resources team to secure funding for a number of insulation schemes (see above for details of SHESP).
- 7.6 The committee was told that the priorities for works carried out under decent homes programmes are often based on resident feedback, and for many residents new kitchens and bathrooms, or double glazing might take priority over loft or wall insulation. The committee felt that perhaps more could be done to promote the benefits of insulation to tenants, in terms of savings on fuel bills, during the decent homes process.
- 7.7 The Committee noted that 50% of homes vulnerable to fuel poverty in Lewisham are located in the private rented sector and recognised that Council officers have no formal mechanism with which to ensure that private homes meet the energy efficiency requirements specified in the Decent Homes Standard. However, the Council does have powers, discretionary power under the Housing Act 2004 to require works to deal with Excess Cold Hazards where it is not a duty. The committee heard from Islington, where their environmental health team make considerable use of this power.
- 7.8 In addition, energy performance data for private rented sector is not made easily available to authorities - they have to rely on when complaints are made. Once genuine data collection has been undertaken, staff could act on the information and knock on doors to address issues.
- 7.9 The Committee discussed the challenge of improving energy efficiency in existing housing stock and whether there are ways that our planning policy could be used to support this. It was suggested that introducing a local

⁸ See appendix A for further details of this.

requirement that conversions and extensions must be insulated to at least modern building regulation standards would be one way of ensuring encouraging improved insulation in the private sector.

- 7.10 The Committee was advised that the challenges of increasing the number of homes insulated did not centre on the availability of funds alone. Indeed a number of London local authorities, have significant amounts available but have been unable to identify sufficiently large numbers of residents to have their homes insulated. A large focus of any scheme seeking to improve the energy efficiency of homes must concentrate on promoting the benefits of energy efficiency and changing the mindsets of people as a reluctance to accept that a number of measures can be implemented at no cost has been identified as a barrier to insulating homes. It is known that residents do not welcome any type of disruption, but this fear could be minimised if a number of improvements are proposed to coincide with routine decoration.
- 7.11 Colin Dawes, Asset Investment Manager at Lewisham Homes advised the committee that the insulation of cavity walls in high rise blocks is not problematic in itself, although high rise flats tended to be more expensive to insulate because of scaffolding costs. It was felt that more flexible funding arrangements could make it easier to insulate a greater number of homes, for example, if funding streams permitted residents to apply for funds instead of the landlord, then this could potentially have a positive impact on the number of homes insulated.
- 7.12 Members noted that the level of Carbon Emission Reduction Target (CERT) funding for Lewisham was lower than that of other local authorities. Whilst the Committee recognised the limitations of the existing mechanisms in place to attribute CERT funding⁹ and the impact of the housing stock on this (a high percentage of 'hard to treat' properties), the Committee felt that more could be done to maximise the amount of CERT funding in the borough.

⁹ the data available only relates to grants secured by residents through Lewisham Council. There are no available figures for householders responding directly to national or London marketing campaigns, or CERT funded insulation delivered through energy suppliers to their customers.

8. The approach of other local authorities

- 8.1 The challenge of improving home insulation is not a problem confined to the borough and so the Committee was keen to consider the experiences of other authorities, particularly those recognised as being leaders in this field, with innovative approaches.
- 8.2 In considering the approaches of other authorities, the Committee was mindful of the current economic environment and the potential for insulation schemes to create employment opportunities within the borough. The committee noted Greenwich Council's work with Greenwich Local Labour and Business (GLLaB), which works in partnership with employers and a range of organisations to maximise job opportunities for local people.
- 8.3 The Committee noted the targeted approach to EU funding which the local authority witnesses outlined. In particular, Sutton council takes a proactive approach to seeking EU funding for energy efficiency measures and expressed the view that whilst securing the funding was often very complicated and burdensome, the pressure on public sector budgets meant that all possible funding streams had to be explored.
- 8.4 In Kirklees, the Council has worked in partnership with Scottish Power to deliver 'Warm Zones', an area-based scheme which offers free loft and cavity wall insulation to every home in the area, irrespective of the residents' or tenants' socioeconomic status. (See case study in appendix for further details). The scheme is costing £21m, of which the Council has invested £9m through prudential borrowing, and Scottish Power have invested £11m, under the CERT scheme. Members were particularly impressed by the scale and ambition of the project.
- 8.5 In order to find out more about the approaches being taken by other London local authorities, the Committee heard from officers of Greenwich, Islington and Sutton Councils.
- 8.6 No London authority is currently rolling out a Kirklees style free insulation scheme, but there are a number of interesting pilots and schemes underway.
- 8.7 Perhaps the most ambitious of these is Sutton Council's 'One Planet Sutton' project, which aims to reduce the borough's ecological footprint by 65% by 2025, by a range of initiatives, including the retrofitting of existing housing with insulation. (See case study in appendix for further details of this).
- 8.8 Sutton have also done work with local builders to encourage them to undertake insulation work as an integral part of building work, as opposed to a specialist piece of work that is expensive and requires an expert to complete.
- 8.9 Greenwich council refurbished a two-bedroom house in Abbey Wood to a high energy efficiency standard in 2008, as a demonstration eco-home, which is now open to visitors including school groups. The council deliberately selected an existing 80-year-old home, rather than a new-build property, to show that bringing an existing home up to good environmental standards need not cost a lot. Their ongoing work to promote energy efficiency and

home insulation centres around promoting the government's means-tested grants, like Lewisham, and using the decent homes programme to increase insulation in their council housing stock. All of Greenwich's council housing has been kept in-house. (See case study in appendix for further details of Greenwich's Eco House)

- 8.10 Islington Council face considerable challenges as they have a large number of high rise blocks as well as a significant number of solid wall homes, including a number of listed Georgian properties. They are keen to be part of any future London-wide approach to insulate solid walls. John Kolm-Murray, Islington's Affordable Warmth Co-ordinator felt that the key challenge is making the treatment of such properties cost effective for contractors and less disruptive to residents.
- 8.11 Islington and Camden councils are currently considering commissioning abseiling companies to insulate high rise blocks.
- 8.12 Bromley Council are looking into doing a pilot programme to insulate solid walls, with the help of CERT funding from energy companies. The scheme has yet to start as funding is still being finalised. In addition, the Council has arranged for a number of local decorators and building contractors to have free training from the company that supplies a product called 'Sempatap' internal wall insulation. They have subsequently marketed the product and the organisations locally that can supply it. Sempatap is perhaps the most commonly-used product currently on the market for internal wall insulation, and is popular as it is thin and relatively easy to use. However, in terms of thermal efficiency, its effectiveness is substantially lower than other thicker products on the market.
- 8.13 Despite the inherent difficulties with having no formal powers to encourage landlords to better insulate their homes for tenants, Islington's environmental health officers and health and safety officers consider the effects of poor home insulation (such as excess cold and damp) as part of home visits and make use of the authority's discretionary power under the Housing Act 2004 to require works to deal with Excess Cold Hazards.
- 8.14 The Committee was keen to establish the national picture and likely developments in energy efficiency and home insulation. To that end, the Committee considered written evidence from the Local Government Association (LGA), the national voluntary lobbying organisation, that acts as the voice of the local government sector.
- 8.15 In March 2008 the LGA published its '*Switched On, Switched Off*' report on home insulation and energy efficiency, which launched the start of its '*Small Change, Big Difference*' campaign. The campaign highlighted the central role of Councils in tackling climate change and called for a national, area-based free home insulation scheme, based on the Kirklees model as well as a refocusing of CERT funding on insulation (rather than low-energy light bulbs etc).

"Many of the most forward-thinking councils in the country have focussed their efforts on systematically raising the energy efficiency of the existing housing stock. The Local Government Association is proposing that this should be a focus for national and local action.

Specifically, energy suppliers should contribute £500 million a year towards a national home insulation programme to fully insulate every home in the country, regardless of household income, within ten years. This programme would save around 10 million householders over £200 a year on their energy bills, cut household carbon emissions by over 20 per cent, and help eradicate fuel poverty.

It requires systematic and co-ordinated local action. Councils know the housing stock in their areas, and as a service provider, have strong connections with households. They would promote the programme more effectively, integrate it with other public services and make it accountable to local residents.

We are asking national government to scale up the Carbon Emissions Reduction Target (CERT¹) and strengthen local involvement, in particular as they consider its future beyond 2011.”

9. The role of partnerships, the private sector and others

9.1 In considering the range of evidence available, the Committee was struck by the key role partnership working needs to play in any successful home insulation programme, given the range of housing tenures and funding from sources, in particular CERT funding from energy companies.

9.2 The Committee heard from the Energy Saving Trust, British Gas and the South East London Housing Partnership and considered the roles of these (and similar) organisations in working together with the Council and its housing partners to increase the number of homes insulated in the borough.

9.3 The Energy Saving Trust (EST) provides free, impartial energy advice to residents and its vision is that every home is a low carbon home and that everybody leads a low carbon lifestyle by:

- taking energy savings decisions
- buying the most energy- efficient products
- fitting homes with energy saving measures
- making sustainable travel choices
- choosing renewable energy
- conserving water
- reducing and recycling waste

The Energy Savings Trust works with local authorities as a key route to achieving large scale carbon saving through their position as community leaders – to act as a catalyst for carbon reduction.

9.4 The Committee learnt that a shortage of fitters, installers and the reluctance of contractors to work in London posed a significant challenge to meeting government targets as set out in the Heat and Energy Saving Strategy (HESS). Richard Hurford, Head of Energy Savings Trust South East argued that local authorities would have to adopt an area based approach to make home insulation more cost effective and attractive to contractors and identify a range of local solutions to address challenges such as congesting charging and parking difficulties.

9.5 The Energy Saving Trust acknowledged that Lewisham has a successful track record of investing in energy and climate change projects, which has had a positive impact on the number of well insulated homes, relative to the housing stock. Nevertheless, the EST identified that there is still potential for further insulation work, particularly in the private sector.

9.6 The South East London Housing Partnership (SELHP) provided additional evidence on the importance and impact of partnership working on energy efficiency. Members were advised that the partnership had piloted a range of energy saving initiatives across South East London. Examples included

- A solid-wall insulation programme in Bromley, aimed primarily at residents able to meet the costs of insulation. The intention is that local contractors would be used to carry out the insulation activity;

- An eco-home in Greenwich that is open to members of the public;
- The ward based EAZ in Lewisham that contacts every home in a particular ward, offering energy advice to residents and referring those who qualify for grant funded schemes;
- A Green Homes concierge scheme in Southwark where the Council met the costs of an energy audit and provided each household with tailored advice and support on energy measures for one year

9.7 The Committee was struck by the information presented by SELHP:

- Whilst on average, homes in London have a higher energy efficiency rating, 740,000 households in London are living in fuel poverty.
- London has a high percentage of 'hard to treat' properties which have solid walls and are generally more expensive and difficult to insulate.
- There must be a huge step change to increasing the energy efficiency of homes in London if London is to meet the Carbon reduction target in 2050
- SELHP funding is allocated to boroughs on a demand basis
- The lack of contractors poses a real challenge for the spending of SELHP funds in financial year 2009/10.

9.8 Wayne Smith, the National Business Development Manager at British Gas outlined his company's current approach to meeting CERT obligations and the range of schemes in place. The Committee was informed about the following schemes:

9.8.1 Here to Help scheme

Through this programme residents could receive free energy efficiency products (such as insulation), free safety products, free security products, receive help in claiming benefits, free quality of life check and free tailored advice and services from British Gas Here to Help charity partners.

9.8.2 Council Tax rebate scheme

This is a partnership between British Gas and Councils. This scheme is promoted to customers via the Councils, with dual branded letter and leaflet included in the Council Tax bill. It could mean up to £125 Council tax rebate per household, and up to £400 rebate on solar hot water systems. The scheme would provide savings of up to £160 on annual energy bills from cavity wall insulation and £205 on annual energy bills from loft insulation.

9.8.3 Greater London Authority schemes

In 2007, British Gas joined forces with the Mayor of London to promote a home insulation offer. The customer offer consisted of home insulation from £250 and £100 cash back once the work is complete (£50 from the Mayor of London and £50 from British Gas).

Another GLA scheme followed in 2008 where the customer offer consisted of DIY loft insulation for £49 (after the £50 cash back). The insulation is delivered directly to the loft and includes a protective DIY insulation kit.

As a result of the scheme, 4,500 surveys were completed and 2,800 measures were installed in London in 2008.

9.8.4 Energy Experts scheme

Energy Experts co-ordinate and carry out Energy Efficiency assessments, have dedicated time with the consumer to work through their entire property, measure energy use and assess efficiency rating, post assessment help each resident to understand the best options, guide each property through their installations and give them behavioural help and advice on implementing tailored Energy Efficiency measures.

- 9.9 The Committee enquired about the likelihood of British Gas participating in a scheme similar in size and scale to the Kirklees model which Scottish Power had recently participated in. Wayne Smith said that whilst there were no current plans for involvement in a programme of this nature, it is not something they would rule out for the future. He added that British Gas was actively submitting bids for large scale contracts across the Country and it was anticipated that the successful award of these contracts would provide an additional 15,000 jobs.
- 9.10 To date, the majority of insulation work British Gas has funded through CERT payments has been cavity wall and loft insulation. However, given that 30% of housing is solid wall, the company has decided that it needs to gain a greater knowledge of the solid wall insulation market, as this will be the next step once the bulk of easier cavity walls have been filled. They are currently getting to know the supply chain and working out ways of reducing the price, with a view to taking it to the private sector for roll out, in early 2010.
- 9.11 When asked whether they would be interested in working with a local authority partner on a pilot scheme to install solid wall insulation in 200 void council homes a year, they said they would be.

10. Key Findings

The committee:

1. Notes the challenging carbon reduction targets within the borough's Carbon Reduction and Climate Change Strategy, the GLA's Climate Change Strategy, the Climate Change Bill and the UK government's Heat and Energy Saving Strategy.
2. Notes the unusually high percentage of our total emissions in the borough that come from domestic use (44% compared to 27% nationally).
3. Notes that improving home insulation and energy efficiency is likely to be the most effective way for Lewisham to meet its targets.
4. Notes that in addition to reducing carbon emissions, investment in insulating the borough's homes would bring other clear benefits such as reducing fuel poverty and creating local employment.
5. Recognises and welcomes the work that Lewisham has already carried out in recent years to increase energy efficiency in homes, as outlined in section 7 of the report.
6. Congratulates officers for their recent successful bids for funding for insulation work in the borough, including:
 - 6.1 A successful funding bid in partnership with Lewisham Homes for just over £800,000 as part of the Social Housing Energy Saving Programme (SHESP), as a result of which nearly 2,000 homes in Lewisham will soon be getting cavity wall insulation.
 - 6.2 Approximately £250,000 of funding from the LDA to create a 'Low Carbon Zone' in the Lewisham Park area. The funding is available to reduce carbon emissions and improve insulation in both homes and public buildings in the area.
7. Welcomes the decision of London Warm Zone to earmark £1million for increasing home insulation in South East London and looks forward to receiving further details about Coldbusters and how this will benefit Lewisham residents.
8. Notes the establishment by the Mayor of London of a £9.5m programme to establish a pan London Homes Energy Efficiency Programme (HEEP) and would urge Lewisham, as part of the SELHP to submit a bid for funding under this scheme.
9. Believes that we need to increase the rate at which we insulate properties in the borough, in order to meet local, regional and national carbon targets, within the timescale scientific consensus suggests we have.
10. Notes that as part of the review, we looked at a number of options to address this:

- 10.1 Continue as we are: EAZs, promoting means-tested grants available such as Warm Front, continued roll-out of insulation via Decent Homes programme.
 - 10.2 Follow Sutton's approach and aim to become a 'One Planet' borough.
 - 10.3 Follow the Kirklees approach with a borough-wide free insulation scheme
 - 10.4 Implement a council tax based scheme, whereby residents get a council tax rebate when they install insulation. e.g. British Gas rebate scheme
 - 10.5 A mix of the options above
11. Concludes that on balance an area-based, borough-wide free insulation scheme would be the most effective way of reducing fuel poverty and carbon emissions in the borough.
 12. Recognises that it makes sense to tackle the 25% or so of homes in the borough without adequate cavity or loft insulation first, but that we also have an urgent need to start working out how we are going to address the insulation needs of the 40% of properties in the borough that have solid walls.
 13. Recognises the potential of a borough-wide insulation programme to create local jobs and apprenticeships
 14. Notes the current lack, both locally and regionally of skilled builders with expertise in insulating 'hard to treat' properties.
 15. Notes the added complexities of insulating Lewisham's housing stock when there are so many different vehicles being used to deliver Decent Homes – PFI, ALMO and RSLs – as well as sizeable private rental market and owner-occupation sectors, compared to local authorities where council housing remains in-house, or under one vehicle.
 16. Regrets that while the Generation Homes project was a most commendable scheme, the opportunity was not taken to collect useful data from the four homes it renovated to high thermal efficiency standards, nor to use the homes to raise awareness among residents about domestic energy efficiency, as has been done with similar schemes in Camden and Greenwich. Notes however that officers are now taking retrospective steps to try and get some useful data from these homes.
 17. Notes that Stroud recently held an 'Eco Renovation Open Homes' event, and notes that one or two 'eco retrofitted' homes within Lewisham are also open to the public under the Open House programme this year.
 18. Notes the large and growing percentage of Lewisham's housing stock that is in the private rental market, and the challenges faced in persuading landlords of the benefits of insulating their properties.
 19. Notes the comments of a number of witnesses that there is a need to streamline the funding available for insulation schemes. Rather than having a plethora of inflexible grants and funding sources that local authorities, RSLs,

homeowners and private landlords have to spend time chasing and applying for, one single, clear funding source from national government is needed.

20. Notes the views of local residents who have taken steps to insulate their home and their concern that VAT on insulation acts as a disincentive to people trying to 'do the right thing', and that perhaps this should be lifted.

11. Recommendations for Action

This committee recommends:

1. That the Mayor/Council roll out an area-based free insulation scheme similar to the Kirklees model. This could be funded in partnership with an energy supplier. A three-year programme to cover approximately 25,000 properties would cost around £10m, funded in partnership with an energy supplier.
2. That the Mayor/Council instruct officers to look at introducing a scheme, in partnership with RSLs, Lewisham Homes and an energy supplier (using CERT funding) to fit internal solid wall insulation in void socially-rented properties, as part of redecorating works before they are re-let. (Approximately 200 solid wall properties become void in the borough per year).
3. That the Mayor/Council set a target date by which all homes in Lewisham will have been offered free cavity wall insulation where applicable, plus a target for the number of homes per year to receive solid wall insulation.
4. That officers continue liaising at a regional and national level to assess the potential of Lewisham becoming a pilot scheme, under the London Homes Energy Efficiency Programme (HEEP) or as part of the national Heat and Energy Saving Strategy (HESS), with a view to reducing further the cost of implementing the first two recommendations.
5. That the Mayor/Council instruct officers to investigate how skills and capacity can be built up, to enable a borough-wide insulation scheme to be rolled out which would maximise local labour and training, as far as is legally possible.
6. That as part of this officers investigate the potential for working with an RSL to train up unemployed people in insulation work or to work in partnership with Lewisham College to train up people to carry out the work.
7. That officers look at developing a sustainable builders scheme and establishing a register of skilled local insulation installers, to make it easier for home owners looking to get work done.
8. That the Mayor/Council add a new target within the Carbon Reduction and Climate Change Strategy, specifically to reduce carbon emissions from housing across the borough.
9. That the Mayor/Council consider whether there is a need for a further 'demonstration eco home' within the borough that could be open to the public and used to raise awareness of home energy efficiency issues and insulation.
10. That the Mayor/Council provides support for an 'Eco-renovation Open Homes' event (perhaps as part of the Open House weekend) in Lewisham in 2010.
11. That the Mayor/Council instruct officers to investigate what more can be done to ensure that all our social housing tenants who are British Gas customers

are aware that they can get free insulation, and are supported in and encouraged to apply for it.

12. That the Mayor/Council adds a policy to the Local Development Framework (or as a supplementary planning policy), requiring applicants for home extensions to demonstrate that as part of the works the energy efficiency of the whole property will be improved, and, where reasonable, that the entire dwelling is brought up to or beyond current building regulations for insulation and air tightness or the whole house. Further that any applications for conversions of single dwellings into flats also have to meet or exceed current building regulation standards on thermal efficiency.
13. That the Mayor/Council instruct officers responsible for parking to engage with recognised insulation installers carrying out works in the Borough, to identify and overcome obstacles to their work. This should include parking difficulties and the cumulative effect of charges on their programme. Further that officers promote to energy suppliers and installers the fact that Lewisham although largely inner London, does not have the congestion charge and are relatively few parking restrictions - previously given as deterrent to more work being carried out in inner London.
14. That the Mayor/Council instruct officers to investigate whether Lewisham's environmental health team could be making greater use of its discretionary power under the Housing Act 2004 to require works to deal with Excess Cold Hazards where it is not a duty.
15. That the private sector housing team, in partnership with SELHP explore new ways to work with and incentivise private landlords, who are often not aware of funding available, such as Warm Front grants for vulnerable tenants. Furthermore to look at what could be done to tackle the problems of those living in private rental property and facing fuel poverty.
16. That a more robust and targeted approach to Lewisham's promotion of home insulation grants to landlords and other home occupiers is adopted, for example to the large number of landlords letting properties to students in the New Cross area.

Appendix A: Case Studies of home insulation retrofitting schemes

a) Lewisham

1. Crofton Park Warm Zone 'self generation' scheme

Lewisham Council is working in partnership with London Warm Zone in the Crofton Park ward to help residents improve the efficiency of their homes and reduce fuel bills. The 'self-generation' scheme involves a London Warm Zone approved insulation contractor working directly in the ward. A letter from the Council and London Warm Zone is delivered to every resident notifying them that the opportunity for CERT-funded insulation is being promoted locally. The contractor then follows this up on the doorstep where they can assess if the property would benefit from insulation and schedule appointments for any work to be carried out.

Any insulation measures delivered are free for the over 70s and people on income-related benefits, with CERT-funded discounts for all other households.

The central benefit of the scheme is combining a direct marketing approach with the opportunity to significantly speed up delivery of the insulation as the contractor is working directly within the area. This scheme started in August 2009 and is expected to have covered the ward by the end of October.

2. Proposed over cladding of tower blocks as part of Lee Stock Transfer

Four tower blocks that form part of the Lee stock transfer will benefit from over cladding to improve thermal insulation. Leybridge Court towers and Merridale are all 11 storey tower blocks comprising a total of 174 separate dwellings. As part of the stock transfer consultation process a range of improvements were identified, which would improve the thermal efficiency of these dwellings and reduce heating costs for residents. The full package of energy efficiency works will include energy efficient boilers and heating systems featuring programmable controls and thermostatic radiator valves, double glazing where needed (mainly Merridale) and the over cladding system.

Broomleigh will be consulting with residents in the near future on the specific details of the over cladding system for installation as part of their work programme, especially with a view to the final appearance of the blocks.

3. Generation Homes Project

The Generation Homes project was a Lewisham Council funded initiative that delivered a range of energy efficiency measures in Council managed properties, with the aim of understanding the costs and practical implications of achieving national targets for reducing carbon emissions by 60%.

Because of the intrusive nature of the works the project involved void properties where decent homes works could also be carried out.

The works included new kitchens, bathrooms, dampproofing, roof repairs and decorations. The energy efficiency measures included:

- Groundfloor insulation
- Cavity and loft insulation
- Condensing boilers and new heating systems
- Solar panels

The works took place in 7 separate 3 bedroom houses managed by the Council. 3 of these properties are now managed by Phoenix Community Housing, the others by Lewisham Homes.

Total spend across the 7 properties was £380,000. In a report setting out the findings of the project officers identified the significant expense and disruption from the works as significant constraints in undertaking similar works across the borough's housing stock. The Council's Sustainable Resources Group is in the process of contacting residents who have since moved in to the properties to identify the impact the improvements to the buildings have had

4. Retrofitting of a self-build home in Honor Oak, Lewisham. Interview with Paul Capel, who talks about his family's experience of retro-fitting a 1980s self-build house in Honor Oak, Lewisham.

As one of the fruits of architect Walter Segal's 1980s self-build project, in which people with no previous building experience were empowered to raise their own homes, Paul Capel's distinctive house is not typical of Lewisham's housing stock.

But it did share other homes' common problems of draughty construction, minimal insulation and a resulting torrent of heat loss and wasted energy, prompting Paul to embark on a grand green retrofit which would showcase eco-refurb methods while preserving the building's distinctive character.

Aiming to get his home close to 'Passivhaus' standard, Paul went at the project from all angles. The roof came off, was insulated with sheep's wool and replaced, and an extra shell was added to the existing exterior, with a range of insulation materials including wood wool and a lime render finish creating a thick – but 'breathing' – solid wall. Hemp and cotton insulation went into the ceilings, and windows were replaced with triple-glazed versions.

Going even further, the house gained a glass extension with heat-retaining floor, and a mechanical ventilation system with heat recovery and sensors to measure temperature and humidity and programmed to suggest when windows should be opened or closed to retain or purge heat. Solar thermal panels use the sun's warmth to provide hot water throughout the house, linking to an underfloor heating system, while a condensing boiler – needed for no more than an hour a day – completes the refurb.

Paul did make use of the GLA's Green Homes Concierge service, and while conceding that the scale of his works means he is far from their typical customer, he saw room for improvement. The service provided the initial pressure-test of the house to show just how energy-inefficient it was (as bad

as a single-glazed terrace home), which provided useful data. But Paul believes a post-job, follow-up test is vital:

“They say get a boiler and you’ll save this much but they don’t actually know for sure – you might put insulation in your walls but if it’s done badly and has leakage it won’t work properly. They should be doing full second reports so you can see for real what the changes are. People think job done, but with a bit more care they could get a lot better.

“They could also offer support when you’re trying to source materials too. I’ve had to get quite specialist companies, so a bit of guidance would help. But the service is probably more suited to the bottom-rung houses. If you’re already at the middle and trying to get to the top of the energy efficiency ladder I don’t know if it’s as good as it could be. In any case, they told us they have now stopped taking new clients on.”

But Paul is firm about the main barrier to eco-refurbs – not lack of advice, but lack of money.

“For a conventional house it’s going to be the same old stuff that’s needed: a gas condensing boiler, cavity wall and loft insulation – you’d think we’d know it all by now. But there have got to be easier grant schemes. When people visit their first question is ‘How much did it cost?’

“We tried to get a grant for the solar thermal, which was £400 to £500, but the companies accredited for grant-funded work were charging more than others, cancelling out the benefit of the grant, so in the end we didn’t take it and went with an unaccredited company.”

But the sorest point for Paul was the barrier actively put in his way by the tax system:

“I was disgusted that each time you buy materials you get charged VAT. It is shocking that we are trying to do something good and they’re putting this barrier in the way – they should be giving it to us for free! When you have spent £20K on windows it would have cut quite a bit off the cost if we could reclaim the VAT. My sister has built a conventional home and has been able to claim back, but on refurbishments it doesn’t seem to be the same.

“People are going to have to stop looking at the short term, shallow view of things. We are going to have to bite the bullet.”

b) Outside of Lewisham

1. Kirklees Warm Zone

Kirklees Council’s Warm Zone was set up in 2007. Kirklees Council and Scottish Power pooled public and private funding of £21m to improve the energy efficiency of homes in Kirklees. The council have contributed £9m and Scottish Power contribute £11m through CERT funding. It offers all homes the opportunity to have free loft and cavity wall insulations, irrespective of the residents’ or tenants’ socioeconomic status. Over the three years of the programme, the council expects more than 40,000 homes to install energy efficiency measures.

As part of this project, each house in Kirklees is visited individually and residents are informed about options to lower energy consumption, renewable energy production, and water conservation measures. They are offered referrals for benefits and debt advice, home fire safety checks and support for long-term carers. Four energy efficient light bulbs and a Carbon Monoxide detector are also offered free to each household. Once people sign up to the scheme a survey is carried out and if the property is suitable, cavity wall and loft insulation is installed free of charge. Where properties cannot be insulated using these measures, householders are informed about other local schemes such as RE-Charge, which offers an interest free loan to install renewable energy technologies. The project runs from 2007 – 2010 and is already showing impressive results.

The council leads the Affordable Warmth Strategy which was initiated in April 2006 and fed into the development of Kirklees Warm Zone with the support of over 40 public organisations, e.g. several government departments, the National Health Service, voluntary and community groups and private organisations

It was estimated that between 35,000 – 45,000 households are living in fuel poverty in Kirklees (around 26% of the population), hence creating a need for action. The energy efficiency of existing housing stock in Kirklees was deemed to be low, while tenants and residents were hardly aware of or confused by the variety of available options or funding schemes to decrease their energy consumption. To date, over 140,000 households have already been visited.

The focus of the project is not a long-term behavioural change, but a one time positive decision to allow work on the building one lives in to insulate walls and/or roof. The fact that this service is offered for free and requires hardly any effort to organise the work might pose the biggest incentive. Unusual and certainly highly ambitious, however, is the size of the target group which includes all households of Kirklees Council. Providing such widespread support and service backed up by sufficient time, staff and funding is unprecedented in the U.K.

The key objectives of the scheme are to lower the energy consumption of all households, reduce the number of people in fuel poverty and lower CO₂ emissions in Kirklees.

It is anticipated that the scheme will create 150 new jobs and save householders money on their fuel bills – over £10,000,000 per year by 2010 and reduce Carbon emissions by 38 – 50,000 tonnes per year

2. One Planet Sutton

'One Planet Sutton' is a major initiative to promote more sustainable council services, lifestyles and workplaces within the borough of Sutton. The local authority is working in partnership with Bioregional, a sustainability charity, as well as local residents, voluntary organisations and businesses to find ways of reducing their ecological footprint by 65% by 2025.

As part of the initiative, Sutton Council is aiming to transform the Hackbridge neighbourhood and create the UK's first sustainable suburb. One Planet

Hackbridge will combine community involvement work with a large scale programme of environmental upgrades to existing homes, and the development of 1100 new environmentally-friendly homes. Project targets cover energy use, waste and recycling, sustainable transport, low impact materials, food, water, habitats, local identity, economic regeneration and improving community wellbeing.

Clearly the vision behind 'One Planet Sutton' is much broader than simply insulating homes, but the retrofitting of existing housing stock in Hackbridge will be a key to reaching their carbon targets. The council proposes to fund the scheme by accessing a range of regional, national and European funding. One of the initiative's Sutton is currently promoting is working in partnership with B&Q to promote DIY Loft Insulation. They are offering triple packs of loft insulation for just £3. Insulation for an average sized home will cost around £27.

3. Greenwich Eco House

Greenwich council refurbished a two-bedroom house in Abbey Wood to a high energy efficiency standard in 2008, as a demonstration eco-home, which is now open to visitors including school groups.

The council deliberately selected an existing 80-year-old home, rather than a new-build property, to show that bringing an existing home up to good environmental standards need not cost a lot. The property is currently open

Some features of the Eco House include:

- cavity wall insulation, loft insulation and dry lining – all designed to keep the warmth in, and made of 'green' materials wherever possible
- energy-efficient central heating installed with an 'A' rated condensing combination boiler and inexpensive radiator panels

In addition, the house was decorated with eco-organic paints throughout, has low-energy light fittings, energy-efficient oven, fridge and washing machine, water-saving taps, shower and low-flush toilet, disabled access at front and rear, removable 20-litre recycling bins built into kitchen units - with flaps in the kitchen work surface leading directly to the bins, dining room big enough to work from home, cycle shed and water butt.

4. Mottingham retrofit pilot project (Hyde Housing)

Hyde Housing Association have strong policies on sustainability and, with responsibility for over 40,000 dwellings mainly around south and south-east of England they were interested in the potential of low-carbon refurbishment. ECD Architects who also have a long standing interest in improving the energy efficiency in existing stocks in the residential sector approached Hyde late in 2007 with a proposal to undertake an exemplar retrofit project and in January 2008, they identified a suitable 3 bedroom mid-terrace house in Mottingham, south-east London.

Retrofit initiatives to date have focused primarily on installing individual renewables or other low-carbon technologies. Hyde and ECD therefore agreed that the aim of the project would be to establish the most effective

overall package of retrofit measures necessary to achieve 80% reduction in CO₂ emissions at the Mottingham house and to monitor the performance of the low-carbon improvements in use. In addition, it will record the impact of the retrofit on the incoming tenants over a 24 month period and, at the end of that time, develop a full cost/benefit analysis, with a view to ascertaining the optimum expenditure. This will enable Hyde and others to make the most efficient and effective choices about how best to apply energy saving as part of large scale retrofit programmes. This project will therefore be of huge benefit both in terms of the developing national policy and of helping frame the approach of individuals and organisations to retrofit.

Hyde estimate that energy consumption will be reduced by up to 85% with a saving to residents of around £600 per year as a result of the retrofit they are carrying out (at current energy costs). They envisage that the project could therefore make a major contribution to the growing problem of tackling fuel poverty.

5. Camden Low energy Victorian house

Camden council recently extensively refurbished a six bedroom house. The building has been renovated to reduce more than 80% of the CO₂ emissions produced by living in the house. The project combines high levels of insulation to external walls, roof and floors with heat recovery ventilation, solar thermal and photovoltaic renewables to reduce carbon emissions by 80% over comparable conservation area properties

The renovations included numerous innovative CO₂ reduction technologies. The biggest CO₂ saving was achieved through insulation. In most houses, including this one, the majority of energy is used for heating, and much of this heat is simply lost through walls, windows, floors and roofs, with walls being the primary source of heat loss.

The house, like all housing built before 1930, has solid walls. Properties built after 1930 tend to have cavity walls which consist of two layers with a thin space or “cavity” in between. Filling this cavity is relatively simple and low cost, and provides dramatic improvements in heat insulation. Insulating solid walls, however, is more complex and costly. To insulate these walls, a second layer of insulated wall is placed onto the internal walls.

Other elements of renovation house included:

- Fitting double-glazed windows
- Insulation of roof and floors
- Heat recovery ventilation (add attached picture “HR25B”)
- Solar thermal and photovoltaic renewables
- A 90% efficient gas condensing boiler.

The building was open to the public for a number of weeks and over 1,500 people visited to see how the carbon savings had been made. The property is now occupied by tenants.

6. Holles House, Angell Town, Brixton

London Borough of Lambeth's scheme focused on the Angell Town estates which were built in the early 1970s which consisted of four storey deck access blocks linked with high level bridges and garages at ground level. Challenges they were faced with included poor quality of internal environment and the lack of security.

In the early 1990s the bridges connecting the blocks were demolished and a pilot scheme was set up to convert the first blocks to meet sustainable objectives in the context of regeneration. The buildings did not have any wall, roof or floor insulations, this resulted in cold buildings throughout the year, with overheating problems in some parts in the summer. There were also problems with draughts and cold from ill fitted windows leading to condensation and internal mould growth. A comprehensive package of energy improvements to the fabric of the building and the heating and hot water systems were developed. This work took place at the same time as improvements to the local environment to improve safety and security and amenities.

The refurbishment included a range of environmental features relating to energy efficiency and the use of sustainable and natural materials:

- cellulose insulation in roofs and timber frame and external cladding to solid walls.
- cavity insulation.
- insulated render for cold bridging.
- low e coated double glazed timber frame windows (from sustainable sources).
- condensing boilers with intelligent controls responding to solar gain.
- low energy light fittings
- passive stack ventilation.
- consideration as given to reclaiming and reusing bricks and using crushed concrete for infill.
- concrete roof tiles not replaced – a form of passive recycling.

Residents were involved in decisions for the refurbishment program and the Estate Group had close links with the architect throughout the project. The firm of architects also worked in partnership with a major building contractor and developed a package that could be delivered to ensure environmental benefits.

Monitoring of the occupied and refurbished Holles House and the occupied but un-refurbished Warwick House was carried out for a full year. This has confirmed that the Holles House residents use 50% less energy than Warwick House residents. This proved that affordable warmth was being delivered to Holles House residents while substantially reducing CO₂ (approx. 200kg per flat per annum reduction).

Appendix B: Types of Home Insulation

A brief glossary of the main types of home insulation is provided below¹⁰:

- *Cavity wall*: this is a cost-effective method of insulation, whereby insulating material is injected into the cavity between the two walls. It costs approximately £250 to carry out, and can save around 800kg of CO₂ per year, and £160p/a from energy bills.
- *Solid Wall insulation*: approximately 47% of the housing stock in the borough is solid wall construction, rather than cavity wall. Generally this applies to houses built before 1930. Solid walls can be insulated either internally or externally:
 - *Internal wall insulation*: insulation layers (usually either rigid thermal board or flexible thermal lining) are added to existing walls. Both will reduce room size. Approximate costs for a 3 bedroom mid-terraced house would be £2100 for rigid thermal board, and £1000 for flexible thermal lining.
 - *External wall insulation*: an insulation layer is added to an existing wall, with protective render or decorative cladding over the top. The internal walls (and therefore room sizes) are unaffected, although the exterior appearance of the building will be altered – thereby ruling it out for listed buildings. An estimated cost would be in the region of £4500 for a small property such as a 3 bedroom mid-terraced house. Savings would be in the region of £500p/a and 2.5tonnes of CO₂ p/a.
- *Loft insulation*: using, in most cases, mineral wool, although other natural materials such as sheep's wool and recycled newspaper can also be used. Depending on the materials used, this costs approximately £250 to carry out for 0-270mm, and c.£60 for 50-270mm. Loft insulation could save up to a tonne of CO₂ per year.
- *Draught proofing*: full draught proofing costs around £200 and can save approximately 150kg of CO₂ and £30p/a.

There are three main benefits from having a well insulated home:

Lower energy bills: The cumulative effect of improving a home's insulation can be very significant, saving around £250-350 off a home's annual energy bill. These savings can be even more for, typically older, homes with solid walls.ⁱ

Reduced carbon emissions: Climate change is a global problem – but actions taken at home will be an important part of the solution. Insulation has the potential to reduce London's a household carbon emissions by around a quarter.

Warmer, healthier houses: Lack of insulation can lead to a cold and damp house – and this increases the likelihood of health problems such as flu and pneumonia and increases the risks of having a heart attack, stroke or fall.ⁱⁱ

¹⁰ Descriptions and cost/savings estimates are taken from the Energy Saving Trust and National Insulation Association.

Appendix C: Evidence Sources

| Title | Author | Date |
|--|--|----------------------------------|
| Home Insulation – scoping report | Joel Hartfield, Scrutiny Manager | |
| Home Insulation review – supporting evidence for first evidence session | Joel Hartfield, Scrutiny Manager | 9th April 209 |
| Carbon Reduction and Climate Change Strategy – London Borough of Lewisham | | |
| Shaping Our Future – London Borough of Lewisham | | |
| Local Development Framework | | |
| Local Implementation Plan | | 2006 |
| Lewisham Air Quality Action Plan | | Feb 2008 |
| Environmental Responsible Procurement Strategy | | 2001 |
| Guide to Green Procurement | | |
| Affordable Warmth Strategy | | |
| Insulation potential overview for the London Borough of Lewisham | Andy Deacon, Richard Hurford, Energy Saving Trust | 10th June 2009 |
| Lagging Behind – Insulating Homes in London | London Assembly Environment Committee | December 2008 |
| Response to the heat and energy saving strategy | Local Government Association | 14th May 2009 |
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Appendix D: Acknowledgements

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ⁱ Energy Saving Trust, *Energy Savings Assumptions*, Energy Saving Trust website, November 2008. <http://www.energysavingtrust.org.uk/Energy-saving-assumptions>

ⁱⁱ Health Housing and Fuel Poverty Forum, *Health Effects*, Warmer House, Healthier Homes website, November 2008. <http://www.warmerhealthyhomes.org.uk/default.asp?action=category&ID=52>