



Home Energy Conservation Act (HECA) Report 2013

Authors: Louise Lyons and Carolyn Munns



HART DISTRICT COUNCIL - HOME ENERGY CONSERVATION ACT REPORT 2013-2018

LOCAL ENERGY EFFICIENCY AMBITIONS & PRIORITIES

At Hart we understand we are well positioned to help our residents reduce their dependence on fossil fuels. By embracing this challenge and setting ambitious goals for ourselves, we will be able to support other local strategic priorities including fuel poverty, health and well being, local economic growth and local regeneration. We will also be able to support broader national targets around carbon emissions. We see our ambitions & priorities as:

- help to reduce fuel bills for local residents
- help to make homes warmer and healthier for residents
- reduce energy consumption and carbon emissions within the district
- leverage the opportunity for physical regeneration (improving the appearance of areas of the district)
- support the creation and maintenance of local green business, jobs and skills (helping them to access the growing UK market in sustainability)

LOCAL ENERGY EFFICIENCY TARGETS

Hart District Council's HECA targets are:

- To reduce residential carbon emissions by 5% (5,725 tonnes CO₂) during the period 2013-2018
- To reduce resident energy spend by £803k during the period 2013-2018
- To reduce the number of homes that are in fuel poverty from 4% (1,445) to 3.5% (1,268) during the period 2013 – 2018
- To actively engage private landlords, resulting in 5% of privately rented homes having participated in some element of the Green Deal (assessment, ECO funding or GD finance)
- To run 5 local and 1 centrally based awareness events (energy efficiency measure and behavioural change) by the end of 2014

CURRENT POSITION

There is strong relationship between SAP, tonnes CO₂, and household spend on energy. By increasing SAP scores and reducing carbon footprints per household, we will be reducing spend on energy and at the same time addressing fuel poverty. Hart District Council (HDC) worked with a consultancy, Parity Projects, to understand the retrofit potential of the domestic properties within Hart. The report has provided the mapping of potential energy savings measures across the district which will enable us to create area based targeting programmes. In addition, it has given Hart an understanding the Energy Company Obligation (ECO) funding potential as well as the cost to achieve reductions. The data from the Parity report is the basis of HDC's HECA 2013 report.

Carbon Emissions

The estimated annual carbon footprint per household in Hart is 3.16 tonnes CO₂, the UK average household emissions are 4.1 tonnes CO₂. This is based on a modelling of assumed household usage across property types used in Energy Performance Certificates (EPC's). During the life of National Indicator 186, which looked at household carbon footprints, we can see that actual usage in Hart was typically higher than the modelled data. This could be related to higher levels of affluence in the district and shows that behavioural change in Hart is important and to be communicated alongside any technological measures.

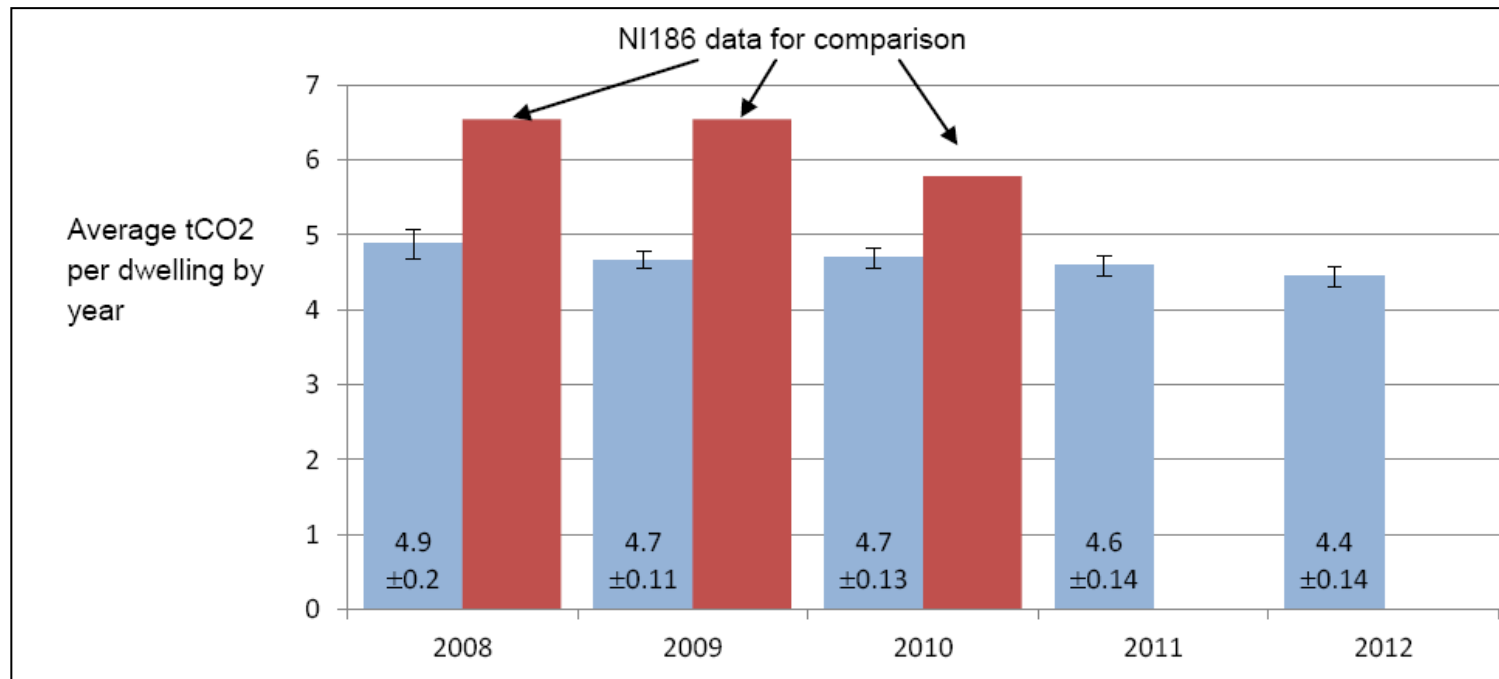


Figure 1. Tonnes CO₂ based on EPC data compared to actual usage.

SAP

The Hart average SAP score (based on RdSAP 2009) is 62.6 ± 0.7^2 , in 2011 the UK average SAP per household was 57 (a 12 SAP increase since 1996), there is no 2013 data for comparison. Figure 2 shows the SAP distribution across Hart. Figure 3 shows the geographic spread of SAP across Hart.

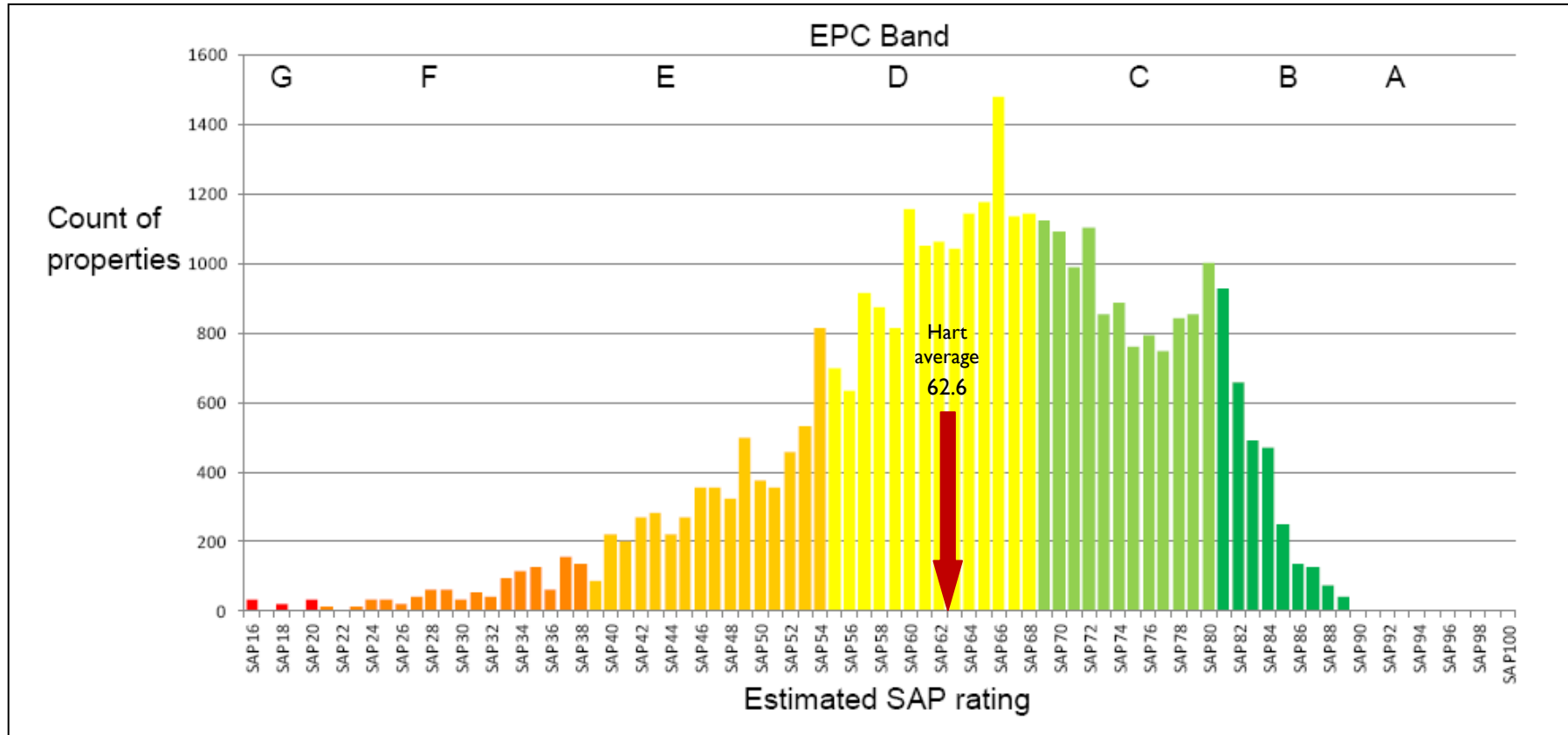


Figure 2. SAP distribution across Hart.

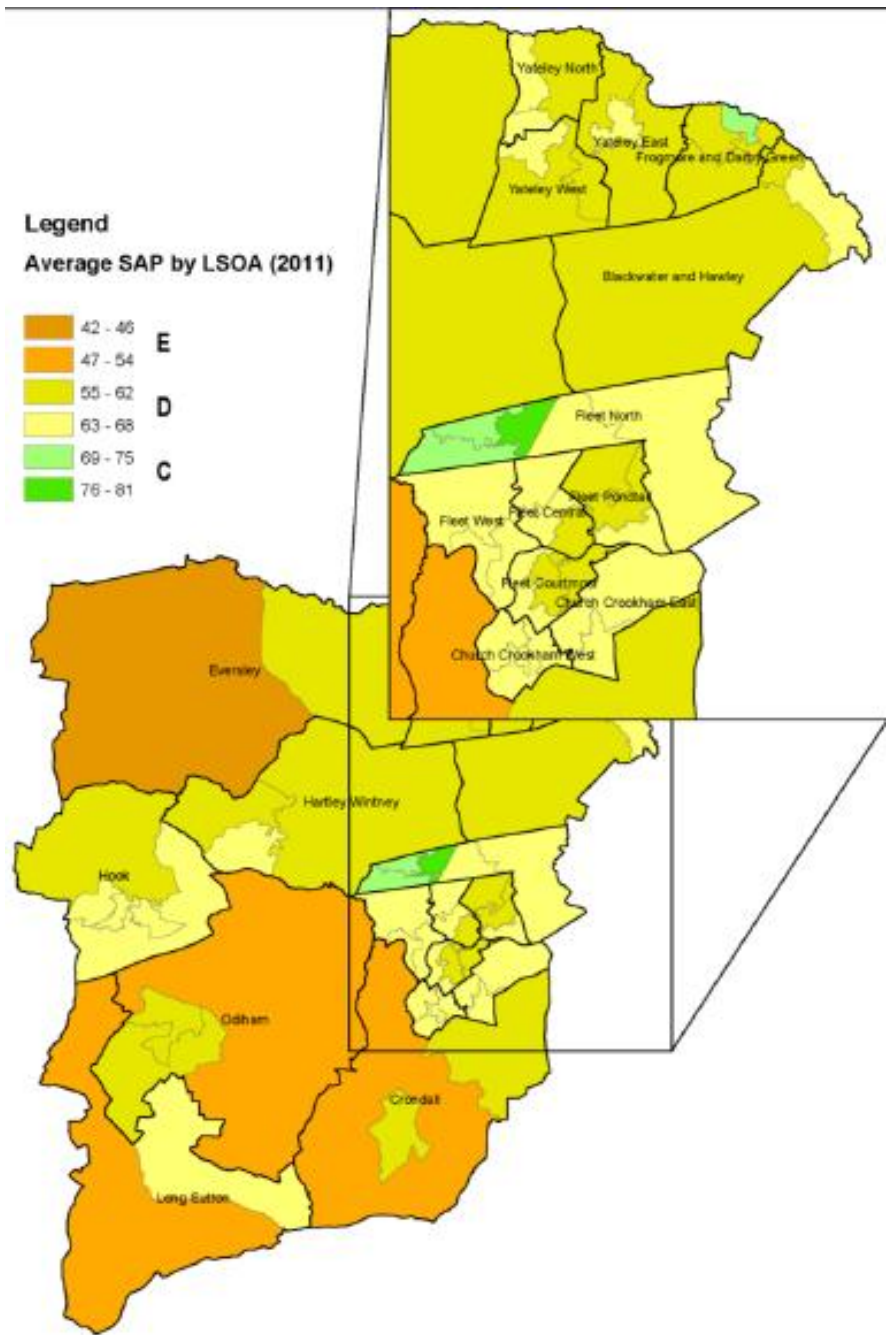


Figure 3. Geographic spread of SAP across Hart

Fuel Poverty

4% of households in Hart are considered to be in fuel poverty, this equates to 1 in 25 residents. Hart are ranked 7 of 354 English boroughs (the higher the ranking the lower the fuel poverty). The UK average 6%. Figure 4 shows the geographic spread of fuel poverty across the district.

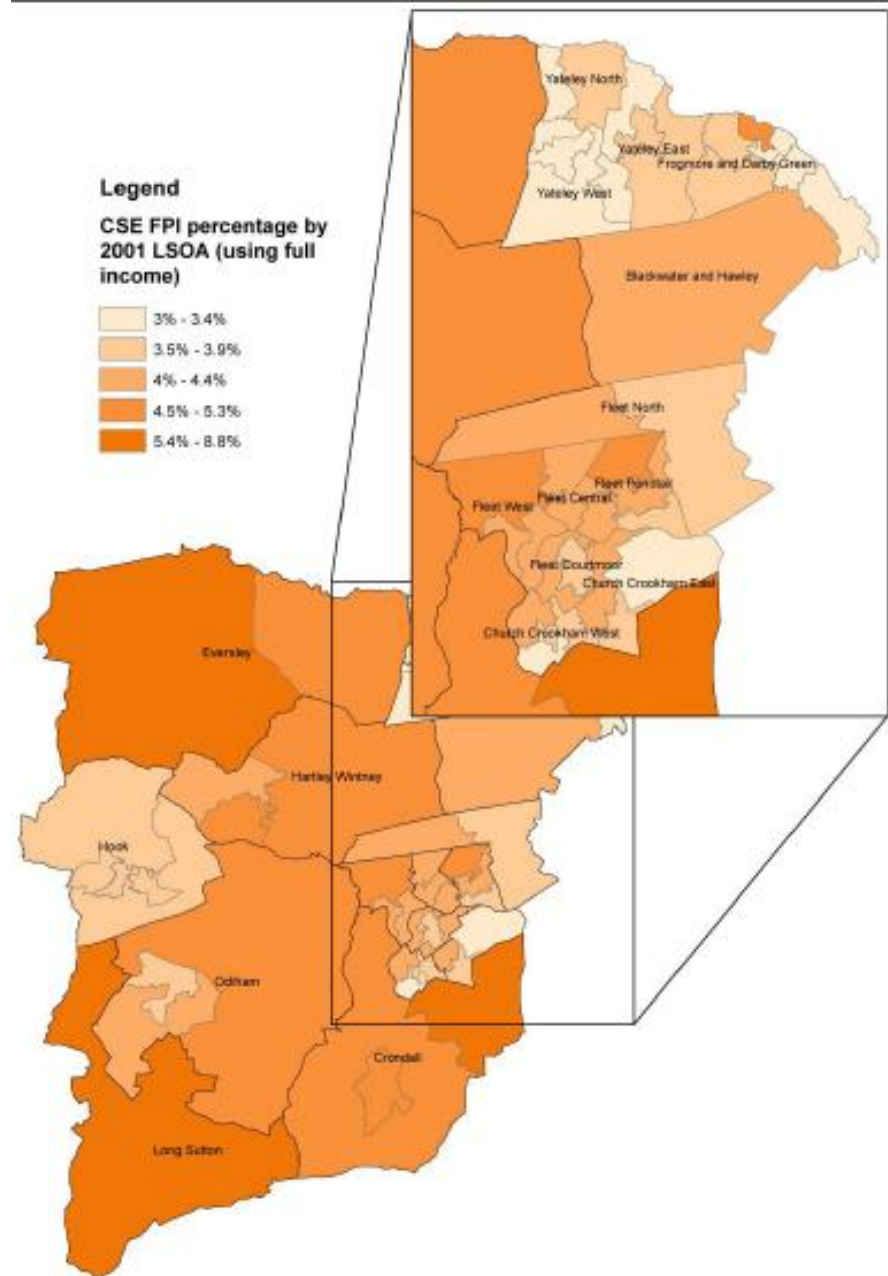


Figure 4. Geographic spread of fuel poverty across Hart

LOCAL ENERGY EFFICIENCY ACTION PLAN 2013-15

PROGRAMME	ACTIVITY	TIMING
Green Deal & ECO	Sign post residents and local business (for example to Solent Green Deal, The Environment Centre and Energy Savings Trust web sites) for advice on the Green Deal. We have employed an Energy Caseworker for two days a week via our Home Improvement Agency, they will assist in signposting residents to relevant schemes.	Now
	To identify a Green Deal delivery partner that will ensure HDC residents can access the maximum available ECO funding and have independent energy assessments on their properties. It is HDC's intention to align with Basingstoke and Deane borough council, to build upon existing strong partnership working in North Hampshire. This will give residents more continuity in messaging around the Green Deal.	Autumn 2013
	Help local private landlords understand how they can improve the energy efficiency of their homes via the Green Deal. For example, via Landlord forums and newsletters.	2013/14
	It is HDC's intention to form a North Hampshire Partnership with other local authorities to create larger programmes and attract higher levels of ECO funding.	2013
	HDC will be running a series of different area based programmes. The following measures and target areas have been identified as priorities within the Parity Report. The savings are the first year assumed savings in both carbon and pounds.	
	<p>Loft Insulation (see Appendix 2)</p> <ul style="list-style-type: none"> • 300 confirmed un-insulated lofts, there may be as many as 800 more. The highest concentration of these lofts can be found in Blackwater & Hawley, Crondall and Odiham. • 2,600 confirmed as only having 12-100mm of loft insulation. The highest concentration of these lofts are within Hook north, Church Crookham East, Yateley (areas within). <p>TARGET</p> <ul style="list-style-type: none"> • Insulate 125 lofts from 0mm to 300mm, saving 161 tCO2 and £23.9k • Insulate 125 lofts from 12mm to 300mm, saving 91 tCO2 and £14.4k • Insulate 125 lofts from 25mm to 300mm, saving 61 tCO2 and £9.6k • Insulate 125 lofts from 50mm to 300mm, saving 38 tCO2 and £6k • Insulate 125 lofts from 75mm to 300mm, saving 25 tCO2 and £3.9k • Insulate 125 lofts from 100mm to 300mm, saving 20 tCO2 and £3.1k 	2013-2018
	<p>Cavity wall insulation (see Appendix 3)</p> <ul style="list-style-type: none"> • 7,000 un-insulated cavities. The highest concentration of these are in Yateley north, Frogmore & Darby Green, however high levels can also be seen in Eversley and Crondall. 	2013-2018

	<p>TARGET</p> <ul style="list-style-type: none"> • Fill 1,000 pre-1976 empty cavities, saving 1,039 tCO₂ and £165k • Fill 500 1976-82 empty cavities, saving 277 tCO₂ and £44k 	
	<p>Internal/external Insulation – Solid wall and older timber framed properties (see Appendix 4)</p> <ul style="list-style-type: none"> • ~3000 properties fall within this category, with the highest concentrations being found in Hartley Wintney, Odiham and Crondall central. Other areas that require targeting as a priority includes Eversley. <p>TARGET</p> <ul style="list-style-type: none"> • Insulate 250 solid wall properties (internally or externally), saving 461 tCO₂ and £76k (this uses external insulation data as it performs slightly worse than internal) • Insulate 75 1900-1966 timber framed properties, saving 197 tCO₂ and £29k 	2013-2018
	<p>Off gas heating (see Appendix 5)</p> <ul style="list-style-type: none"> • Electrically heated homes, up to 3000 electrically heated homes in Hart. There are a variety of upgrades that can be offered ranging from fan assisted storage heaters to ASHP and other low carbon technologies. There is a very high concentration of these homes in Hartley Wintney, Fleet Central and Fleet north. With a high concentration being found in other areas of Fleet and Yateley. • Other non-mains gas (Solid fuel, LPG, oil), up to 1000 homes in Hart uses other non-mains gas fuels to heat their homes. There are a variety of upgrades that can be offered ranging from fan assisted storage heaters to ASHP and other low carbon technologies. The highest concentration can be found in Eversley followed by Odiham then Hook. There are other areas that fall into this category that would also be targeted. <p>TARGET</p> <ul style="list-style-type: none"> • Replace electric ceiling heating with fan assisted storage heaters in 25 homes, saving 7 tCO₂ and £4.3k • Upgrade old storage heaters to fan assisted storage heaters in 25 homes saving 14 tCO₂ and £2.2k • Upgrade storage heaters to Air Source Heat Pumps in 100 homes saving 425 tCO₂ and £26.5k • Upgrade other storage heaters to Air Source Heat Pumps in 100 homes saving 218 tCO₂ and £12.7k • Upgrade storage heaters to ground source heat pumps in 30 homes saving 172 tCO₂ and £12.3k • Upgrade F rated oil boilers to A rated oil boilers in 8 homes saving 12 tCO₂ and £1.8k • Upgrade E rated oil boilers to A rated oil boilers in 20 homes saving 23 tCO₂ and £3.4k • Upgrade D rated oil boilers to A rated oil boilers in 15 homes saving 25 tCO₂ and £3.7k • Upgrade C rated oil boilers to A rated oil boilers in 10 homes saving 9 tCO₂ and £1.3k • Upgrade solid fuel heated homes to new oil central heating in 10 homes saving 21 tCO₂ and £2.3k 	2013-2018
	<p>Gas heating (see Appendix 6)</p> <ul style="list-style-type: none"> • ~13,000 E rated boilers, ~ F rated boilers and ~230 G rated boilers • These can be replaced with low carbon technologies, such as ASHP/ GSHP or solar thermal panels • There are very high concentrations of inefficient boilers in Yateley west, Blackwater & Hawley north. 	2013-2018

	<ul style="list-style-type: none"> • There are high concentrations of inefficient boilers in Church Crookham east & west, Blackwater & Hawley and other parts of Yateley. • There are areas that do not currently have gas central heating up to 500 homes fall into this category, some additional work with SSE is required to map across Hart to identify these. <p>TARGET</p> <ul style="list-style-type: none"> • Replace electric heaters with A rated gas combi boiler where there is gas available to property in 100 homes, saving 254 tCO2 and £31.9k • Replace storage heaters with A rated gas combi boiler where there is gas in property in 95 homes, saving 435 tCO2 and £26.8k • Replace electric heating to A rated gas combi boiler in properties where the gas needs to be brought into the property for 25 homes, saving 62 tCO2 and £6.7k • Upgrade gas room heaters to central heating with combi boiler in 10 homes saving 21 tCO2 and £3k • Upgrade regular G rated boiler to combi boiler in 125 homes, saving 180 tCO2 and £28.1k • Upgrade regular G rated boiler to A rated combi with heat recovery in 75 homes saving 111 tCO2 and £17.2k • Upgrade G rated combi to A rated combi with heat recovery in 25 homes saving 20 tCO2 and £3k • Upgrade regular F rated boiler to A rated combi with heat recovery in 75 homes saving 70 tCO2 and £10.9k • Upgrade regular E rated boiler to A rated combi boiler in 75 homes saving 63 tCO2 and £9.9k • Upgrade regular E rated boiler to A rated combi with heat recovery in 75 homes saving 66 tCO2 and £10.3k • Upgrade E rated combi to A rated combi with heat recovery in 75 homes saving 48 tCO2 and £7.5k 	
	<p>Glazing (see Appendix 7)</p> <ul style="list-style-type: none"> • ~2000 with 100% single glazed windows, ~4,100 properties with a proportion of single glazed windows. A very high concentration of these can be found in Odiham, Crondall and Eversley. With a high concentration found in Eversely, Yateley west, Frogmore & Darby Green. <p>TARGET</p> <ul style="list-style-type: none"> • Replace 125 whole house single glazing with double glazing, saving 125 tCO2 and £9.6k • Replace 125 remaining single glazing in part double glazed properties, saving 34 tCO2 and 5.5k 	2013-2018
	<p>Other measures</p> <ul style="list-style-type: none"> • We will be looking into communicating other measures such as chimney balloons, floor insulation, improved heating controls and thermostatic radiator valves (TRV's), other draught proofing measures and renewable energy: <p>TARGET</p> <ul style="list-style-type: none"> • Block 2,500 open chimneys, saving 525 tCO2 and £85k • Upgrade remaining inefficient lighting in 2,500 homes, saving 225 tCO2 and £57.5k • Install Solar PV panels on 60 South facing roofs, saving 39 tCO2 and £8.3k 	2013-2018

	<ul style="list-style-type: none"> • Install Solar PV panels on 60 SE/SW facing roofs, saving 37 tCO2 and £8k • Install solar hot water systems onto 50 homes, saving 23 tCO2 and £3.2k • Upgrade to full zone controls (TRVs, programmer room thermostat) from no controls in 50 homes saving 68 tCO2 and £10.2k • Add full controls (TRVs, room thermostat) from programmer only in 100 homes saving 62 tCO2 and £10.2k • Add hot water tank thermostat in 200 homes saving 24 tCO2 and £3.8k 	
	<p>Mobile Homes</p> <p>Although not covered within the Parity report HDC consider mobile homes within the district to be a high priority as they house most vulnerable residents and are hard to heat. HDC are seeking to attract ECO funding to continue HDC's subsidised programme to insulate mobile homes. ECO does not currently cover this type of domestic dwelling, however, HDC has been assured it will in the future. It is unclear at this time the amount of funding we are able to attract and as such we cannot be more specific with target.</p>	2013-2018
Planning and Planning Policy	Hart aligns with national policy guidance around sustainability in development.	On going
	Future plans around sustainability are covered within the Core Strategy, which is currently being reviewed.	2013
	HDC Housing Team and Planning Development Control will work closely together to ensure consistent and easily understandable information for residents around the installation of energy saving measures such as solid wall insulation. Housing will also ensure that Planning are aware of the timescales of any area based approach that could increase incoming queries.	2013
Reducing energy bills	Hart are participating in the Hampshire wide collective energy buying programme 'Switch Hampshire' and will continue to do so for the full four year duration. The first auction was in June 2013 with a further auction expected in Autumn 2013. In the first auction 64% of registrants had not switched in the previous two years, and the average savings in Hart for residents on all electric tariffs was £172 and those on dual fuel £97.	Programme ends 2017
Fuel Poverty	4% of HDC Households are considered fuel poor. The areas of very high concentrations of fuel poor are Eversley west, Crondall east and Long Sutton. It is largely evenly spread across the district after that. We will be focusing activity on those areas with higher levels with programmes such as Hitting the Cold Spots. The Energy Caseworker will assist people who are in fuel poverty and sign post them to relevant assistance.	2013-14
Awareness raising	The distribution of an advice leaflet that has been created in partnership with all local authorities across Hampshire. The leaflet covers behavioural changes to save money as well as measures that will increase SAP points of a household.	2013/14

	Provide advice on Council website and on the television screens in reception.	2013
	Green Deal and ECO Roadshows will be held across the district with our selected Green Deal partner. The schedule of these to be confirmed once a partner has been identified.	2013-2015
Private Rented Sector	Update landlords on Green Deal & ECO schemes via Forums and newsletters.	2013
	Advice and information to Estate Agents and Managing Agents on Green Deal and ECO.	2013
	Advice and information to tenants on saving energy e.g. via advice leaflet.	2013
	We will ensure the Private Rented Sector are up to standard by dealing with complaints from tenants, taking action using the Housing Health & Rating System HHSRS e.g. to deal with hazards such as Excess Cold.	2016
Partnership working	Sentinel Housing Association are the largest social housing provider within Hart. Where applicable, programmes will be communicated to Sentinel residents along side private residents.	On going
	Basingstoke and Deane Borough Council and Hart are working together on Green Deal and ECO to (a) maximise ECO potential (b) help give continuity in messaging and (c) to help local economy benefit from the Green Deal.	On going
	Greening Hart Partnership is a group led by Hart district council to reduce carbon emissions within the District. This group includes local business, residents, local Parish councils and local Churches. This group will be leading on some of the communications programmes and included in all of them.	On going
	Hampshire Sustainable Business Network is a network run by Hampshire Chamber of Commerce to help businesses address all issues around sustainability. HDC are active within this and sit on the steering committee. Communications of programmes will be circulated to this group.	On going

Signed off by –

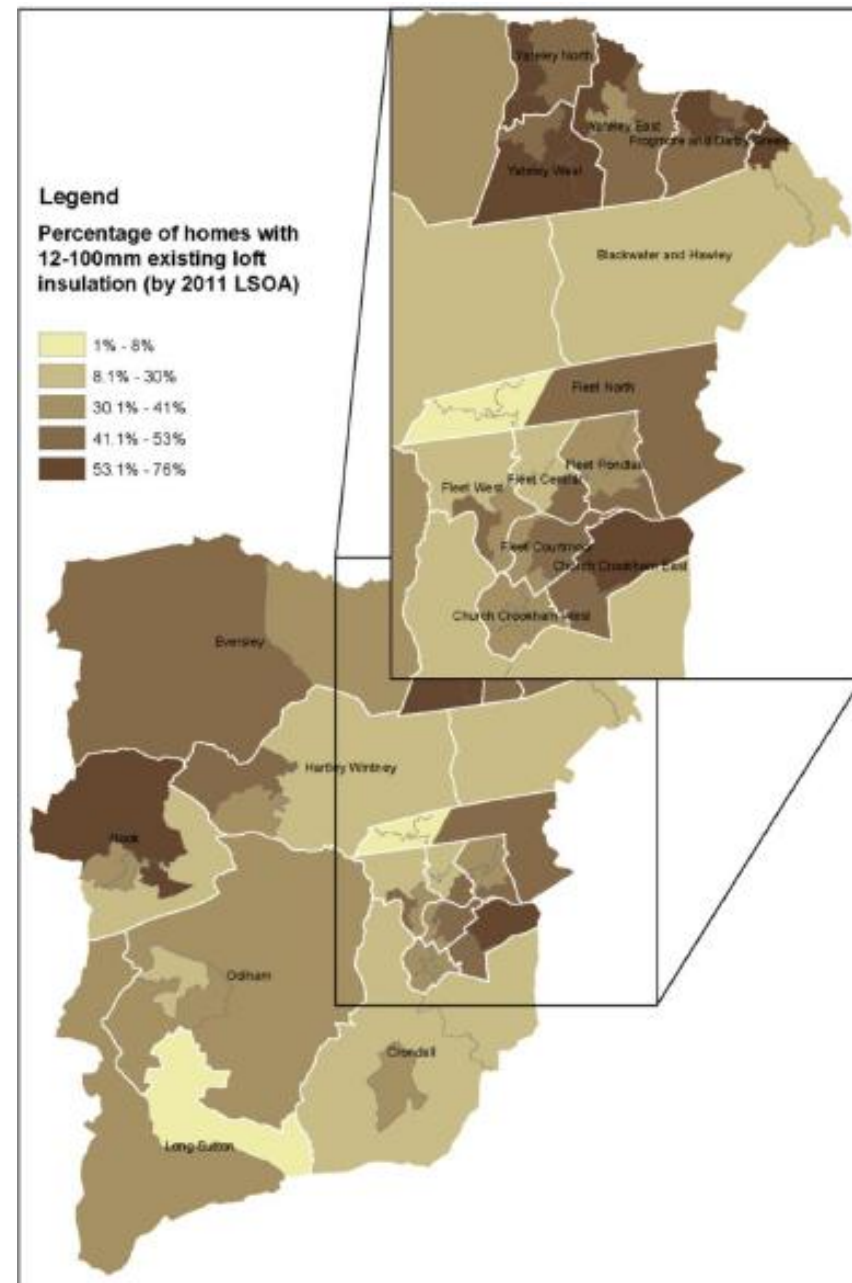
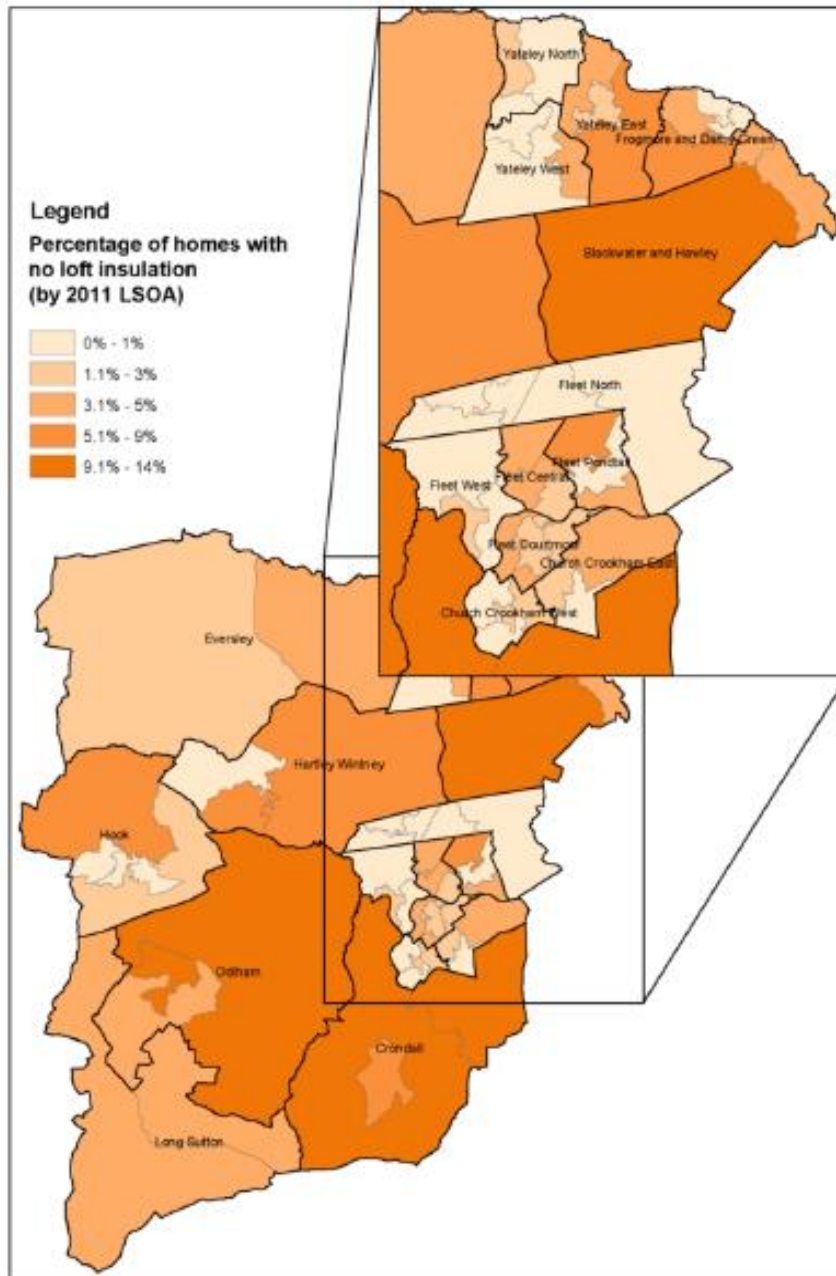
Geoff Bonner, Chief Executive Hart District Council

Councillor Dr Anne Crampton, Housing & Health Portfolio Holder

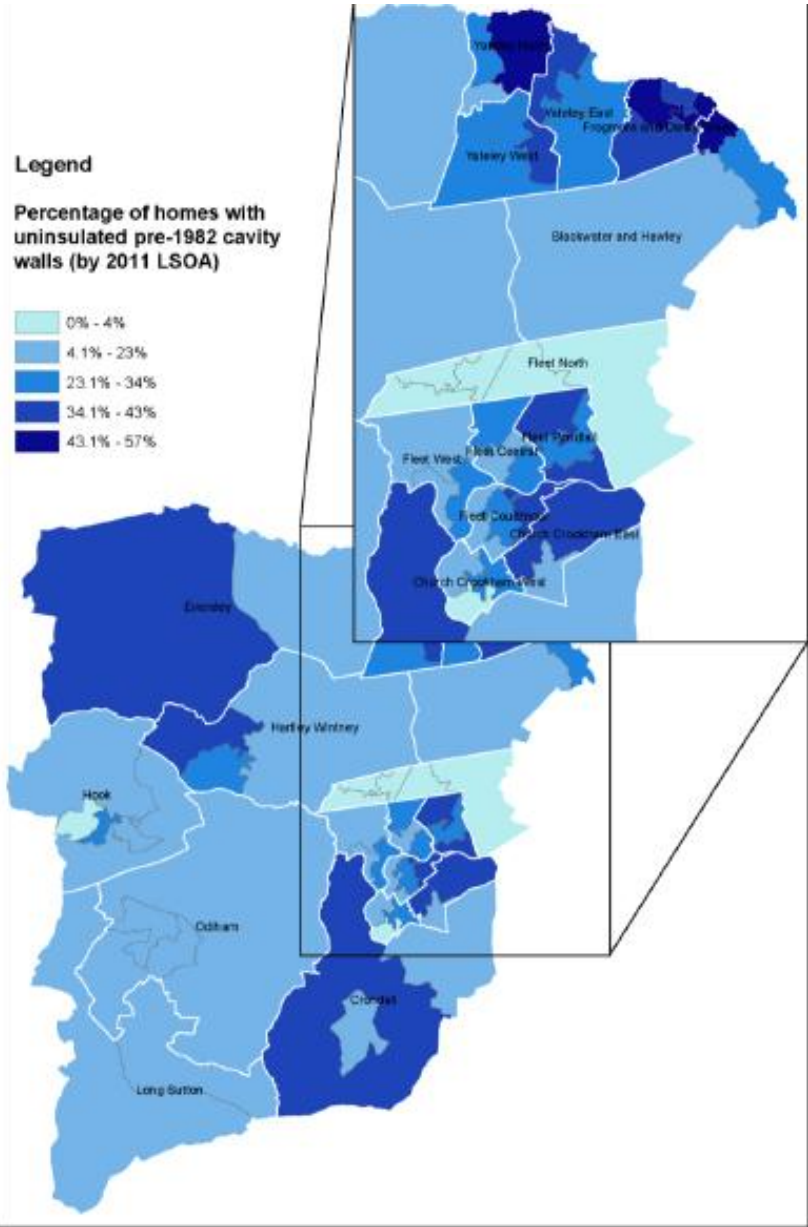
APPENDIX I - Glossary

ASHP	Air Source Heat Pump
CERO	Carbon Emissions Reduction Obligation
CPSU	Combined Primary Storage Unit
CSCO	Carbon Saving Communities Obligation
CSE	Centre for Sustainable Energy
ECO	Energy Companies Obligation
EEC	Energy Efficiency Commitment
EPC	Energy Performance Certificate
FGHRS	Flue Gas Heat Recovery System
FPI	Fuel Poverty Indicator
GSHP	Ground Source Heat Pump
LSOA	Lower Super Output Area
PCDF	Product Characteristics Data File (boiler database)
RdSAP	Reduced Data Standard Assessment Procedure
SAP	Standard Assessment Procedure
TRV	Thermostatic Radiator Valve

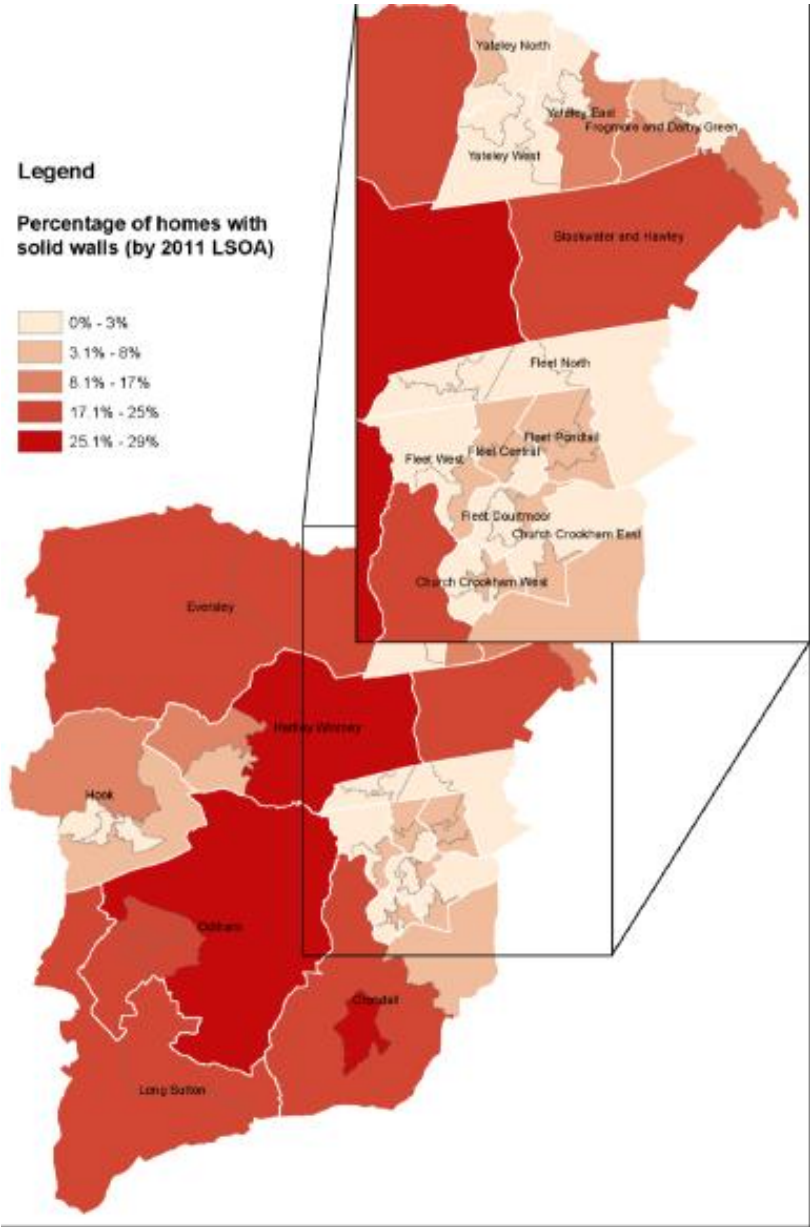
APPENDIX 2 – Loft Insulation



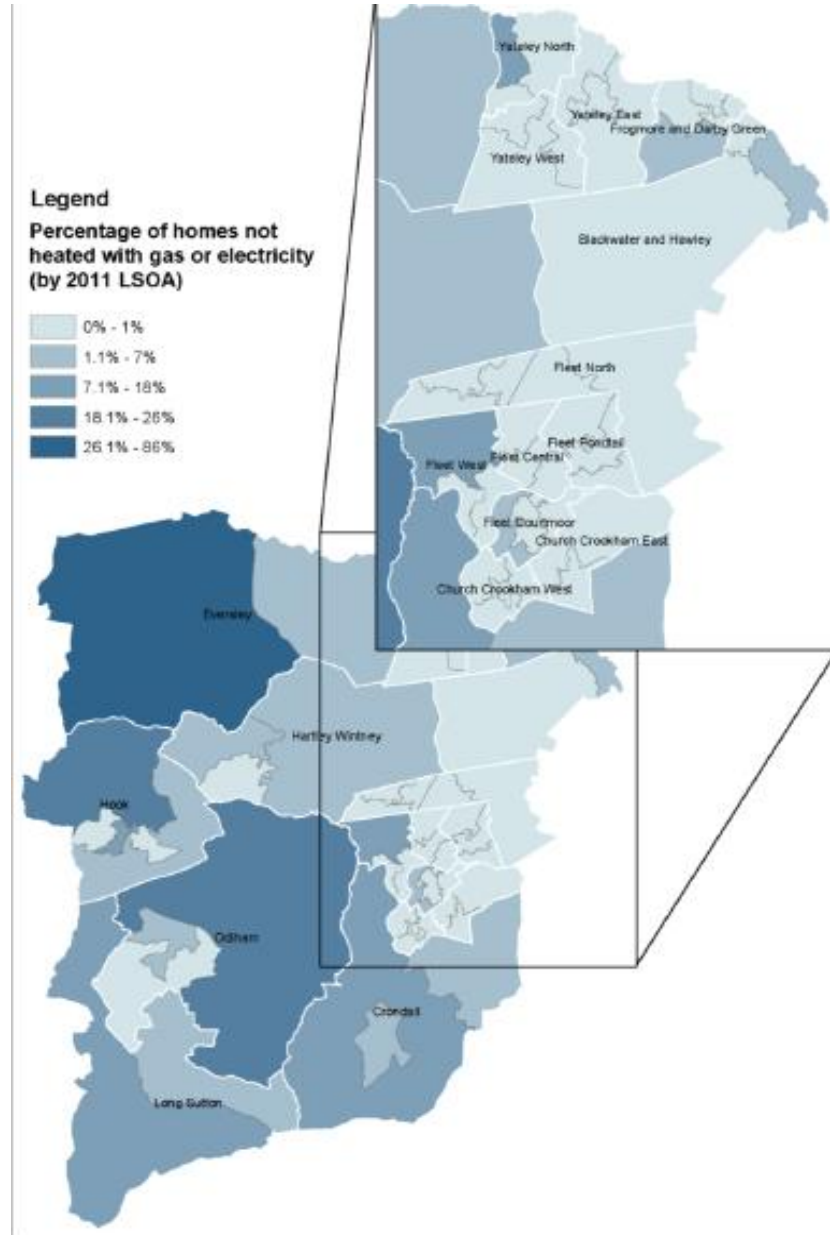
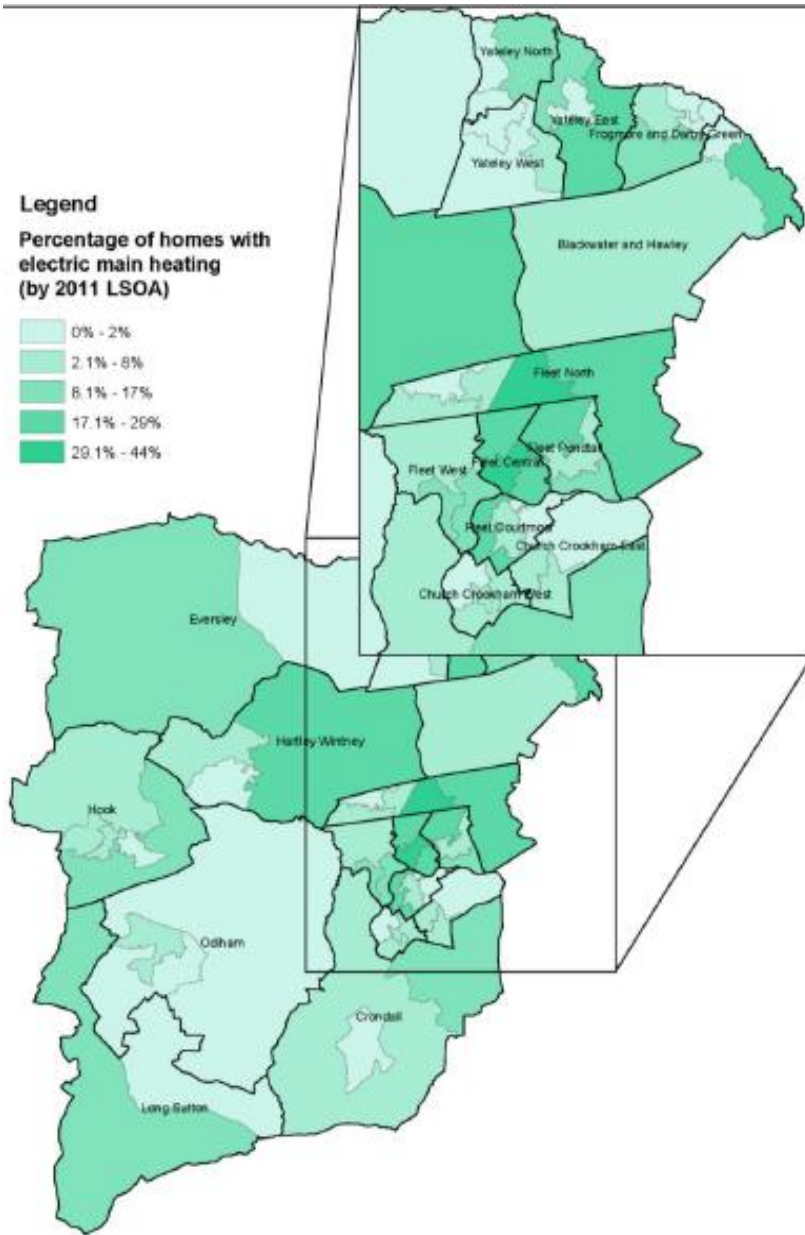
Appendix 3 – Cavity wall insulation



Appendix 4 – Solid wall insulation



APPENDIX 5 – Non-mains gas heating



APPENDIX 6 – Gas heating

