



Let's reduce
inequality

VISION 2020

Fuel Poverty in Lincoln
Needs Assessment 2017



The Aim

Introduction from Cllr Peter West, Executive Member for Housing

The report presents contextual national data and information about fuel poverty and related issues as an introduction to the latest fuel poverty data for Lincoln.

The information should be used to help inform the planning of local service strategies and provision such as the Lincoln Housing Strategy, and the City Vision 2020.

In early 2017, City of Lincoln Council launched Vision 2020. This outlined the city council's medium-term vision for the city, and what we would do, together with partners, over the next three years to work towards that vision. Vision 2020 contains four strategic priorities:

- Let's drive economic growth
- Let's reduce inequality
- Let's deliver quality housing
- Let's enhance our remarkable place

Whilst working to promote affordable warmth and tackling fuel poverty helps meet more than one of these strategic priorities, this work programme is specifically nestled within our commitment to deliver quality housing. A home provides safety and embeds people in their place, enabling them to become part of a community, and to have a sense of belonging. To achieve this we need to work with mainly the Private Rented Sector and Owner Occupiers to address some of the poorer quality homes.

Poor housing has a direct impact on people's health. Those who live in cold, damp homes because they can't afford to heat them properly; and where condensation becomes an issue; will suffer health problems. People who live in poor quality homes, often towards the bottom of the rental market where rents are cheaper, can suffer a range of issues if minimum living standards are not maintained. The fact remains that the quality of housing can be one of the biggest impacts on a person's life, be it the standard of the property; the security of the tenure; or the physical environment in which the home is located. It is for this reason that any efforts to reduce inequality, must include activity to improve the condition of peoples' homes.



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1 Key Issues

Fuel poverty not only damages the well-being of individual households, but also imposes additional costs on the wider community in treating poor health, financial disadvantage and social exclusion.

Whether a household is in fuel poverty or not is determined by the interaction of three key elements: income; fuel prices; and fuel consumption (which is dependent on the dwelling characteristics and lifestyle of the household).

Under the LIHC definition a household is considered to be fuel poor where they have required fuel costs that are above average, and were they to spend that amount, they would be left with a residual income below the official poverty line.

This report presents the latest Low Income High Costs (LIHC) fuel poverty data for Lincoln, along with contextual national data and information, which could be used to help inform the planning of local service strategies and provision. The following key issues have been identified:

- In 2014 (latest government statistics) Lincoln had a fuel poverty level of 11.6% which was higher than the remainder of the County.
- In 2011, it was estimated that there were around 19.3% of Lincoln households in fuel poverty, - this was worse than both the Greater Lincolnshire Local Enterprise Partnership area (19.1%) and England (14.6%) averages.
- Fuel poverty affects households in all Lower Super Output Areas¹ (LSOAs) across the whole city, to some extent. 38.5% of Lincoln's 57 Lower Super Output Areas have higher levels of fuel poverty compared with the city average of 11.6%. (See page 12).
- Around 1,000² Lincoln homes have no gas central heating leading to above average electric use, and other fuel type uses and so are disproportionately disadvantaged by the cost of heating their homes. (See page 13).
- Both the incomes and the energy efficiency of the homes of those living in fuel poverty would need to improve by a relatively larger amount than other households in order to lift households out of fuel poverty.

¹ Super Output Areas are a geography for the collection and publication of small area statistics. They are used on the Neighbourhood Statistics site and across National Statistics. There are currently two layers of SOA, Lower Layer Super Output Area (LSOA) and Middle Layer Super Output Area (MSOA).

² Due to number being low there is some rounding from data provided by EHS so individual households cannot be identified.



The link with fuel poverty and deprivation can be complex and areas with relatively low levels of deprivation will contain households living in fuel poverty. It is not the intention of this report to duplicate information relating to the wider poverty issues for the City of Lincoln, these can be found in the Lincoln Poverty Profile 2016³ findings.

It is also necessary to be aware of the experience of previous local and national energy efficiency programmes which has shown that some householders do not want to accept support, or to face the upheaval that some major energy efficiency interventions require. This is a challenge common to all efforts to improve energy efficiency and one that may change as awareness and confidence with newer technologies increases.

2 Statement on data and methodology

The data in this report comes from national sources, in particular the Department of Energy & Climate Change (DECC). The data are the most recent figures available to illustrate the current national and local picture of fuel poverty.

<https://www.gov.uk/government/collections/fuel-poverty-statistics>

Additional key data and information for Lincoln can be found on <http://www.research-lincs.org.uk/Home.aspx>. Lincolnshire Research observatory is the county's Local Intelligence System and the host of Lincolnshire's online Joint Strategic Needs Assessment (JSNA). This is a public-facing website which presents key data for Lincoln and allows this to be downloaded.

DECC has recently undertaken a review of the methodology used to produce sub-regional estimates of fuel poverty, in conjunction with the Office for National Statistics (ONS) Methodology Advisory Service. This work found that estimates of fuel poverty were robust at local authority level, but were not robust at very low level geographies. Therefore estimates of fuel poverty at Lower Super Output Area (LSOA) should be treated with caution. The estimates should only be used to describe general trends and identify areas of particularly high or low fuel poverty. They should not be used to identify trends over time within an LSOA, or to compare LSOAs with similar fuel poverty levels.

³ WWW.lincolnagainstopoverty.co.uk



3 Background

Fuel poverty not only damages the well-being of individual households, but also imposes additional costs on the wider community in treating poor health, financial disadvantage and social exclusion.

This report presents contextual national data and information about fuel poverty and related issues as an introduction to the latest fuel poverty data for Lincoln, which could be used to help inform the planning of local service strategies and provision.

3.1 What is fuel poverty?

Under the Low Income High Costs definition, a household is considered to be fuel poor if:

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

The key elements in determining whether a household is fuel poor are:

- income
- fuel prices
- fuel consumption (which is dependent on the dwelling characteristics and the lifestyle of the household)

Previously, a household was said to be fuel poor if it needed to spend more than ten per cent of its income on all fuel use to heat the home to an adequate standard of warmth, in 2011 the Government announced its intention to adopt a new definition of fuel poverty.

The new definition is based on the Low Income High Costs (LIHC) framework that was recommended by Professor Hills in his Independent review⁴, this is now the basis of reporting on fuel poverty in the future for England. The LIHC indicator is based on incomes calculated after housing costs are taken into account. Mortgage and rent payments are deducted from the full income to give an After Housing Cost (AHC).

⁴ Getting the Measure of Fuel Poverty [Final Report of the Fuel Poverty Report] John Hills March 2012



The LIHC indicator consists of two parts (**Fig 1**):

- the **number** of households that have both low incomes and high fuel costs (the bottom left quadrant of the diagram)
- the **depth** of fuel poverty amongst these households. This is measured in terms of a fuel poverty gap.

Fuel poverty under the Low Income High Costs indicator

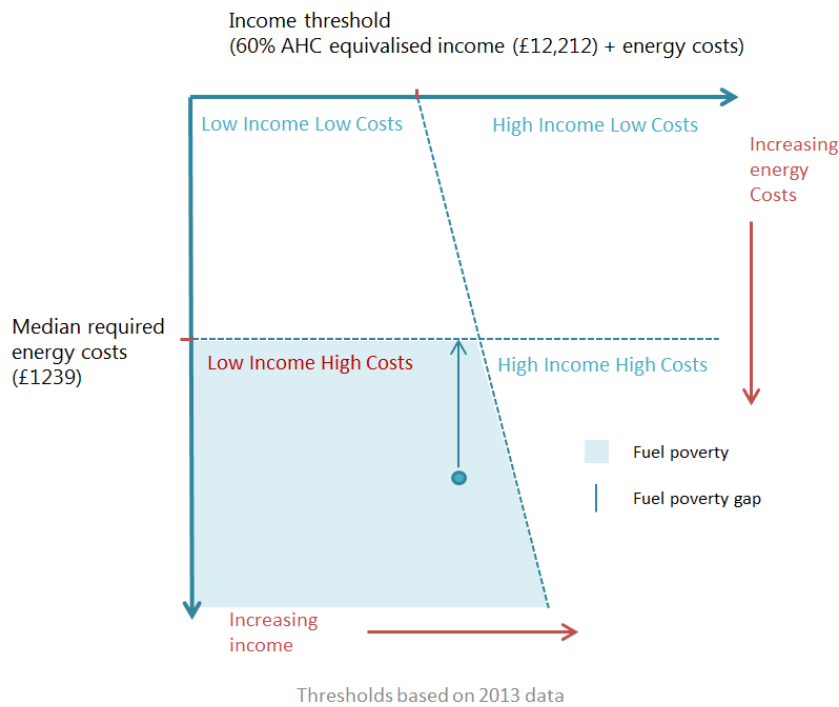


Fig 1: Annual Fuel poverty Report 2015 DECC⁵

(Fig 1) shows the four quadrants of the LIHC indicator. Those defined as fuel poor are in the bottom left quadrant. This quadrant includes some households who might not usually be considered to be poor under standard poverty definitions, but are pushed into fuel poverty by their very high energy requirements (reflected in the slope to the income threshold). While it is recognised that those households in the top left quadrant have low incomes, they also have relatively low fuel costs, and so are not considered fuel poor. Those to the right of the income threshold have relatively higher incomes, with those in the top right box being those households with high incomes and low costs, and those in the bottom right being households with high income and high costs.

The depth of fuel poverty is also defined for households with low incomes and high costs (**Fig 1**). This is measured as the difference between a household's required fuel costs, and what these costs would need to be for them not to be in fuel poverty. This is referred to as the fuel poverty gap, and gives an indication of the severity of the problem for different households. The gap for each household can be summed to

⁵ The reporting cycle for fuel poverty data is every two years hence the 2015 report considers 2013 data.



produce an aggregate fuel poverty gap, which gives an understanding of the national scale of the problem.

Since the Annual Fuel Poverty Report published in May 2013, there has been a change to the methodology used to equalise fuel bills. Fuel bills are now equalised by the number of people in the household, rather than the household composition (e.g. lone parent, couples with dependent children). This is to reflect the fact that different sizes of households will have a different required spend on fuel.

Chart 2.4: Domestic energy prices and the Consumer Price Index, 2003 – 2013

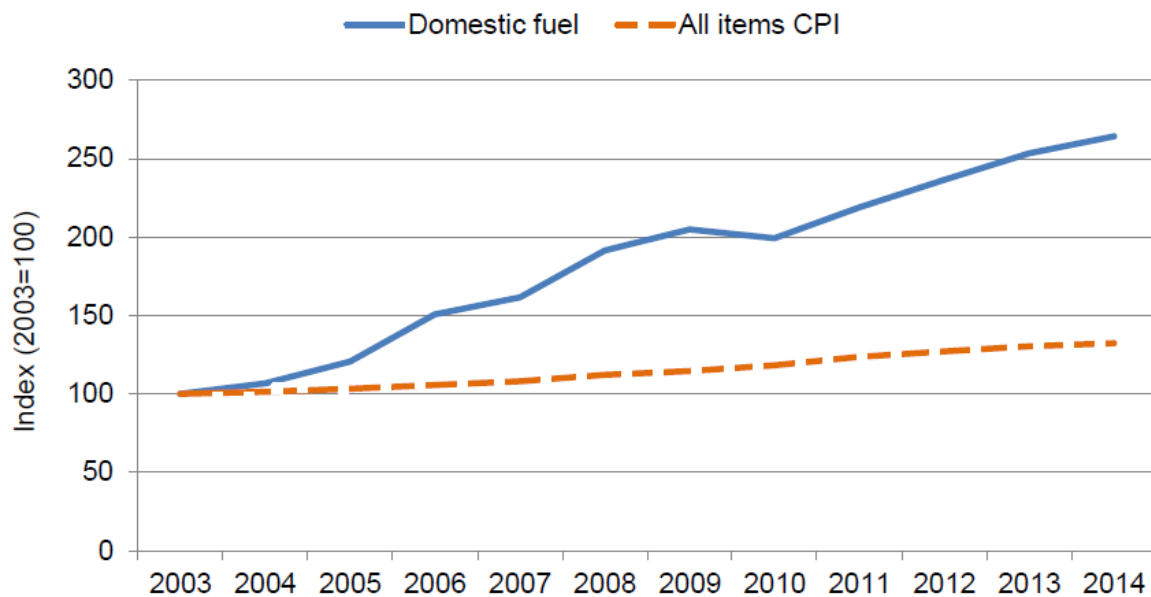


Fig 2: Domestic energy prices and the CPI, 2003 -2013 Fuel Poverty Report 2015 DECC

The chart (Fig 2) above is taken from the Annual Fuel Poverty Statistics Report, 2015 and shows the retail prices of domestic energy since 2003, and compares these against the prices of a 'typical' basket of goods and services that make up the Consumer Price Index (CPI). 2010 marked the first calendar year that domestic energy prices decreased from the previous year. However from 2011 onwards fuel prices have continued to rise.

3.2 National context

Fuel poverty in England is now measured using the Low Income High Costs (LIHC) indicator. In March 2015 the Government published 'Cutting the cost of keeping warm: a fuel poverty strategy for England', setting out in detail their statutory target to raise as many fuel poor homes in England as is reasonably practicable to SAP Band C by 2030. The strategy also set out interim milestones to lift as many fuel poor homes in England as is reasonably practicable to SAP Band E by 2020 and SAP Band D by 2025, alongside a strategic approach to developing policy to make progress towards those targets.



The strategy places emphasis on the Standard Assessment Procedure (SAP)⁶, which is the industry standard rating system to measure the energy efficiency of a property. Any improvements in the SAP ratings of properties will be measured as part of efforts to track progress towards alleviating fuel poverty.

SAP improvements will be recorded as and when measures are installed that seek to address some of the contributory factors that cause fuel poverty - improving cold, damp and hard to heat homes by increasing insulation and installing more efficient heating systems.

The SAP rating is expressed on an Energy Performance Certificate (EPC) for a property. An EPC is required whenever a property is built, sold or rented and contains information relating to the property energy use, typical energy costs and recommendations for improvements. An EPC gives a property an energy efficiency rating from A (most efficient) to G (least efficient). EPC's are valid for 10 years.

SAP ratings are strongly influenced by the main fuel type in a property, as these determine the costs of heating a given floor area. It therefore follows that households using the more expensive heating system will have lower SAP ratings; while those using heating systems with less expensive running costs will have a higher SAP rating.

SAP Banding	SAP Score
A	92 – 100
B	81 – 91
C	69 – 80
D	55 – 68
E	39 - 54
F	21 - 38
G	1 - 20

Fig 3: Table showing SAP band along with comparable SAP rating score

4. Fuel poverty data for Lincoln

This part of the report examines the overall picture of fuel poverty in Lincoln at local authority level, compared with the region and nationally. It then goes on to explore the data at LSOA level and the range of fuel poverty across the city.

⁶ SAP is based up on the predicted running costs of a dwelling per square metre of floor area (independent of occupancy) under a defined set of conditions. SAP ratings run from 1 (lowest level of energy efficiency) to 100 (highest level) these ratings can also be banded into A – G (with A being the highest).



4.1 The picture for Lincoln

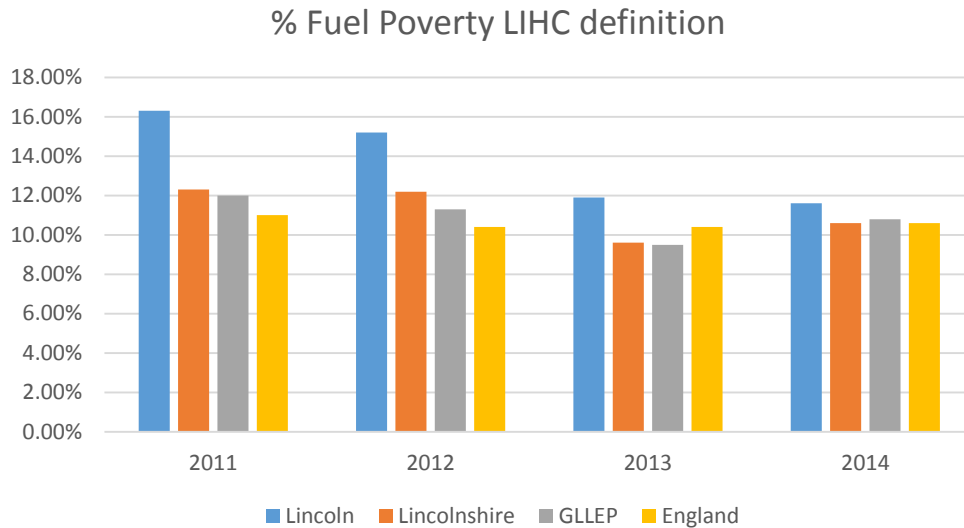


Chart 1: % Fuel Poverty comparison 2011 – 2014 using LIHC definition

Chart 1 provides a picture of fuel poverty from 2011 to 2014 using the LIHC definition. According to the Annual Fuel Poverty Statistics Report 2015 the changes seen between 2012 and 2013 are to do with income changes, most noticeably the poorest 20 per cent saw bigger rises in income. Also housing costs rose by just 0.6 per cent for the bottom decile between 2012 and 2013 compared to 4.0 per cent for the population as a whole. Although fuel prices continued to rise in 2013 this was tempered by the relative higher rise in incomes among the low income group.



4.2 Looking Deeper at LSOA Level

LINCOLN LSOAS WITH HIGHER % OF HOUSEHOLDS IN FUEL POVERTY (ESTIMATED) THAN LINCOLN AVERAGE

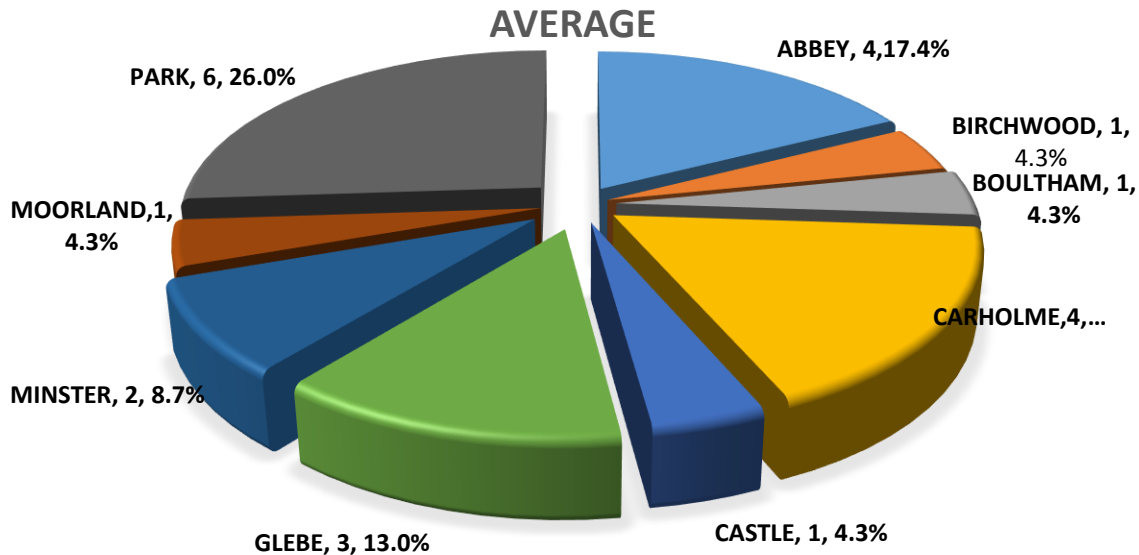


Fig 3: Lincoln LSOAs with higher % of households in fuel poverty (estimated) than the Lincoln Average. Source: (DECC)

Lincoln is sub divided in to fifty-seven Lower Super Output Areas (LSOAs). Super Output Areas (SOAs) are a set of geographical areas developed following the 2001 census, initially to facilitate the calculation of the [Indices of Deprivation 2004](#) and subsequently for a range of additional [Neighbourhood Statistics](#) (NeSS). The aim was to produce a set of areas of consistent size, whose boundaries would not change (unlike electoral wards), suitable for the publication of data such as the Indices of Deprivation.

They are an aggregation of adjacent Output Areas (OAs) with similar social characteristics. Lower Layer Super Output Areas (LSOAs) typically contain 4 to 6 OAs with a population of around 1500. Of the 57 LSOAs in Lincoln, it is estimated that 22 have a higher proportion of households living in fuel poverty than the Lincoln average of 11.6% (**Fig 3**). It is estimated that Park ward has 6 LSOAs with a higher proportion of households in fuel poverty than the Lincoln average, making up 26% of those 22 LSOAs. Abbey ward (4 LSOAs) account for 17.4% of the LSOAs with a higher proportion of households in fuel poverty than the Lincoln average. Carholme ward (4 LSOAs) also accounts for 17.4% of the 22 LSOAs with a higher proportion of households in fuel poverty than the Lincoln average. Glebe accounts for around 13% (3 LSOAs). Minster ward accounts for approximately 8.7% (2 LSOAs). While the wards of Birchwood, Boultham, Castle and Moorland account for around 4.3% each (1 LSOA each).⁷ While these estimates of Fuel Poverty can be used for

⁷ Estimates of fuel poverty at Lower Super Output Area (LSOA) should be treated with caution



describing general trends in identifying areas of particularly high or low fuel poverty they should not be used to identify trends over time within an LSOA, or to compare LSOAs with similar fuel poverty levels.

5 Related Data for Lincoln

This section considers likely determinants for fuel poverty as well as issues that link to fuel poverty.

5.1 Central Heating

Being able to keep warm at an affordable cost is a pre-requisite to removing people from fuel poverty. The links to cold damp homes and ill health have been well documented and reported over the years. Housing that does not meet decency standards, has little or no insulation, old inefficient, or no heating can lead to residents being in fuel poverty especially when combined with low income.

The Census 2011 asked people to record what type of central heating their accommodation has (a central heating system generates heat for multiple rooms). Around 2.5% of Lincoln households report they have no central heating, which equates to around 1,000 Lincoln homes⁸. Gas appears to be the fuel of choice with 86% of households reporting that they have gas central heating. Electric heating is the next popular with approximately 7% of households having electric heating systems.

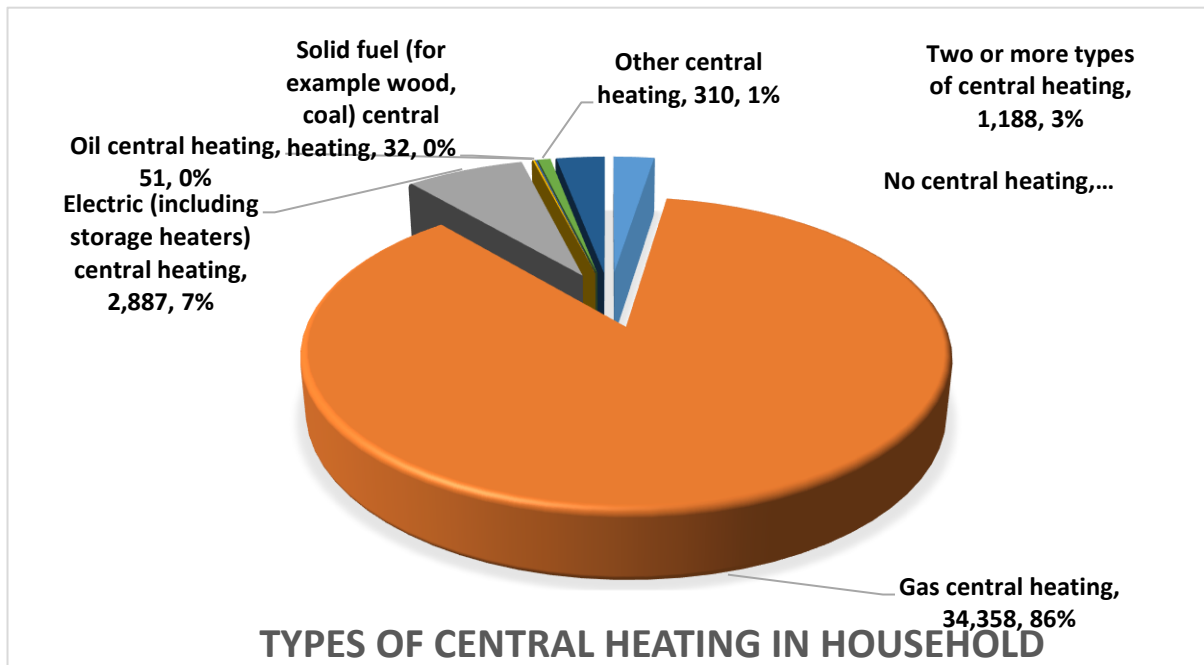


Fig 4. Results from 2011 Census

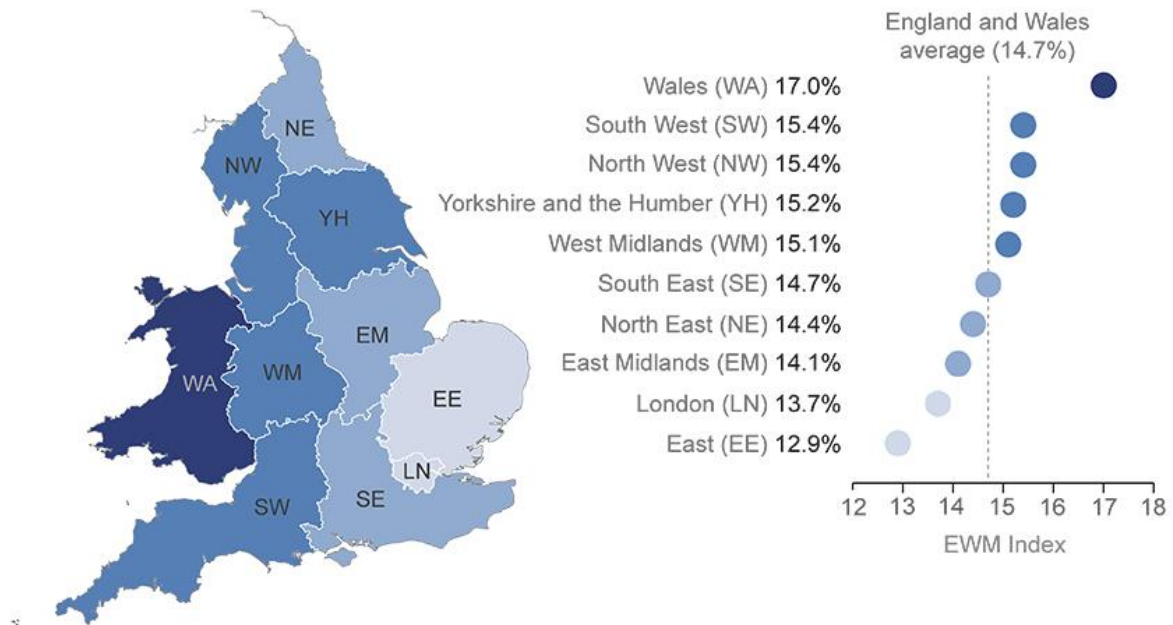
⁸ Low numbers produced during the Census are aggregated and rounded to protect individual data



5.2 Excess Winter Mortality

Excess winter mortality (EWM) for regions of England, and Wales, 2015/16

Fig.5



Source: Office for National Statistics licensed under the Open Government Licence v.3.0.
Contains OS data © Crown copyright 2016

Figure 5. presents the Excess Winter Mortality (EWM) indices, also referred to as Excess Winter Deaths (EWD)⁹ for each region of England and for Wales for the most recent 3 winter periods. Regions are ordered by EWM index from highest to lowest for the 2015/16 period. EWM has significantly reduced in every region from the 2014/15 period to the 2015/16 period but the rate was still higher than that observed in the 2013/14 period for each region.

Although it is often thought the main cause of excess winter deaths is temperature, it is not the only factor affecting levels of mortality. Though temperature clearly has a role, the link between average winter temperature and EWDs is very unclear in some years. For example, winter 2009/10 was exceptionally cold, but excess winter mortality (EWM) was similar to years with mild winters. In contrast, the higher number of EWDs in 2012/13 was likely to be due to cold weather, but it was the unusual pattern of a sustained cold from mid-January until early April, rather than just a cold January period, that influenced mortality.

⁹<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/excess-wintermortalityinenglandandwales/201415provisionaland201314final#definitions>



Since the introduction of the Home Energy Conservation Act 1996 a greater proportion of homes in England now have measures to improve energy efficiency, such as cavity wall insulation, modern central heating and double-glazing compared with 1996. In 2013, 80% of homes had full double glazing, up from 30% in 1996. More than a third (37%) of homes had 200mm or more of loft insulation in 2013, up from 3% in 1996. Approximately 9.6 million dwellings had cavity wall insulation in 2013, up from less than 3 million in 1996. This means homes are becoming more energy efficient (Department for Local Communities and Government, 2015). It may be that the outdoor temperature now has less of an effect on excess winter mortality, as better insulation and energy efficiency means that houses are easier to heat and keep warm, potentially resulting in more stable indoor temperatures.

5.3 Deprivation

The Indices of Multiple Deprivation¹⁰ (IMD) from 2015 showed 10 areas in Lincoln within the highest 10% of deprived areas nationally. This is an increase from seven areas in the IMD 2010, and five areas in the Indices of Multiple Deprivation 2007. These 10 areas account for 16,014 Lincoln residents, or 16.6% of the total city population.

The IMD consists of 6 domains, plus a separate child poverty indicator. These are:

- income deprivation
- housing deprivation
- health deprivation and disability
- education skills and training deprivation
- employment deprivation
- geographical access to services.

The child poverty indicator is a subset of the income domain and consists of children living in households dependent on benefits. The overall IMD represents the weighted combination of the 6 individual domains.

While it is recognised that Fuel Poverty causes are mainly associated with fuel prices, house conditions and income levels it is clear that other contributing factors found within the IMD are linked by association and may exacerbate the depth of fuel poverty for some residents.

6.0 Tackling Fuel Poverty

Fuel poverty affects the most vulnerable residents in our communities and can have serious adverse impacts on their well-being. Fuel price rises combined with flat incomes are combining to increase fuel poverty levels.

¹⁰ It should be noted that the IMD only goes down to the level of electoral wards. It does not provide information at the sub-ward level, e.g. enumeration district, postcode sector.



Fuel Poverty crosses a number of other Local Authority strategic responsibilities and it is therefore essential that City of Lincoln Council ensure that a high level strategic approach is taken to tackle fuel poverty ensuring that links are made between different areas and partners.

The City of Lincoln Council is both a signatory and an active member to the Countywide Affordable Warmth Strategy and the Home Energy Lincs Partnership¹¹ (HELP). The Countywide Affordable Warmth Strategy published and adopted by all districts in 2010 is currently planned for a refresh later in 2017.

Joint Health and Wellbeing Strategy for Lincolnshire 2013-2018. The Strategy underwent a mid-term review in 2016 to refresh priorities under each theme. Ensuring that people have access to good quality, energy efficient housing that is both affordable and meets their need remained a priority under the theme of tackling the social determinants of health. In order to help achieve this, the actions reaffirmed commitment to work with HELP to refresh and deliver the Lincolnshire Affordable Warmth Strategy to address fuel poverty and reduce the fuel poverty gap. Fuel poverty and the fuel poverty gap remain the leading measure to demonstrate the progress being made to meet the housing priorities for this theme.

The **Joint Strategic Needs Assessment (JSNA)** that provides the evidence base for the Strategy is being refreshed for publication in 2017 in time for a new strategy to be produced for 2018. The JSNA will contain a topic covering Excess Seasonal Deaths and Fuel Poverty. HELP is intending to work with Public Health analysts to ensure the evidence base for fuel poverty is as strong as it can be.

The **Lincoln Housing Strategy** - "This Housing Strategy directly tackles the key issues within Lincoln's housing provision. It also seeks to provide a framework for those endeavouring to build or assist in improving housing conditions in the city. The strategy offers guidance as to the housing that is most needed and how issues should be constructively addressed. It is strong on actions seeking to redress the current ills of the local housing market".

The Housing Strategy identifies Lincoln's six housing challenges and specifically targets five outcomes which were developed through stakeholder events and supported by a statistical evidence base. The action plan attached to each targeted outcome within the strategy concentrates on initiatives to improve the current situation or performance. The strategy has, as two of its five outcomes, 'Improve property conditions and 'Promote and increase sustainable living in the city'.

¹¹ The Home Energy Lincs Partnership includes the seven district councils and Lincolnshire County Council. Its membership consists of officers who are involved with the domestic energy efficiency and/or the wider climate change agenda.



7 Concluding Remarks

It has long been acknowledged that fuel poverty causes burdens on the wider communities in treating poor health, social exclusion and financial disadvantage as well as impacting on and damaging the well-being of individual households.

This report presents the latest available fuel poverty data for Lincoln, along with contextual national data.

Lincoln is not alone in the fact that it has higher than the national and local average level of fuel poverty. The change to the LIHC definition has impacted on some areas more severely than others.

The evidence in this report reveals that areas within Park ward have the highest percentages of fuel poverty in Lincoln, closely followed by areas within both Abbey Ward and Carholme Ward.

By using known dwelling characteristics to help identify potential likelihood of incidences of fuel poverty. Along with using knowledge gained through other area focused initiatives, such as the rogue landlord scheme, to help identify households that may be suffering from fuel poverty or having to suffer the consequences of living in cold homes will help to signpost funding through such schemes as the Energy Company Obligation (ECO) to help lift people out of fuel poverty or the risk of becoming fuel poor.

The actions within the City of Lincoln Councils housing strategy seeks to improve the condition of some of the poorest housing in Lincoln.