

Sustainable Homes Local Housing Strategy 2021-2026 Evidence Paper

Tackling climate change
Improving energy efficiency
Reducing fuel poverty

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The logo consists of five stacked words in a bold, sans-serif font. "LIVE" is green, "LEARN" is pink, "WORK" is blue, "INVEST" is light blue, and "VISIT" is purple.

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1. Introduction

Tackling climate change, improving the energy efficiency of Scotland's homes and reducing fuel poverty are key local and national priorities.

In 2019, both North Lanarkshire Council and the Scottish Government declared 'climate emergencies', recognising the impact of climate change on homes and communities. In the same year, the Scottish Parliament passed the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 requiring Scotland to become 'net zero' by 2045. It also enacted legislation requiring no more than 5% of all households to be living in fuel poverty by 2040.

Reducing domestic energy consumption will be key to delivering on these statutory targets. Activities which will improve the energy performance of Scotland's homes are coordinated through the Energy Efficient Scotland programme, with local authorities having key roles in both implementing actions and enforcing minimum standards.

In their Local Housing Strategies (LHSs), councils are required to set out their priorities and plans for delivering on these inter-related priorities. This paper meets and exceeds the requirements set out in the guidance, by considering key evidence to help identify a range of actions for tackling climate change and fuel poverty and improving the energy efficiency of North Lanarkshire's homes.

2. Strategic and Legislative Context

The Scottish Government has described climate change as 'humanity's biggest challenge'¹. Across the world, temperatures are rising, ice caps are melting and bringing with it rising sea levels and more frequent extreme weather events like droughts, floods and wildfires.

Research by NASA² finds that the earth's temperature has risen by 1.1 degrees Celsius since the late 19th century. The US space agency's role includes observing climate change on planet earth and it finds that much of this change has happened in the past 35 years, with 18 of the 19 warmest years on record occurring since 2000. NASA attributes much of this rise to human activity, caused by the increasing emissions of harmful greenhouse gases, which is confirmed by reports by the Intergovernmental Panel on Climate Change (IPCC). The IPCC provides the United Nations and world governments with research and advice on climate change. Its report³ on 'the physical science basis' for climate change finds that 'the science now shows with 95 per cent certainty that human activity is the dominant cause of observed warming since the mid-20th century'.

Key international agreements for tackling climate were struck at conventions in Rio (1992), Kyoto (1997) and most recently in Paris in 2016. These agreements required signatory nations to reduce carbon emissions. The Paris Agreement aims to keep temperatures to 'well below 2 degrees Celsius [above pre-industrial levels], while pursuing efforts to limit the increase to 1.5 degrees'⁴. An IPCC report⁵ subsequently warned that failing to meet the lower target could have significant impacts, with an increased risk of coastal and river

¹ <https://www.gov.scot/publications/climate-week-2019---photo-competition-for-schools-primary/>

² <https://earthobservatory.nasa.gov/images/144510/2018-was-the-fourth-warmest-year-continuing-long-warming-trend>

³ <https://www.ipcc.ch/report/ar5/wg1/>

⁴ <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>

⁵ <https://www.ipcc.ch/sr15/>

flooding and extreme weather events. The ‘catastrophic’ consequences include food shortages (as crop yields worsen), higher levels of heat-related morbidity and mortality, declining tourism and increased poverty in affected areas.

In Scotland, Met Office data⁶ finds that temperatures have similarly been rising (and rising fastest since the turn of the millennium). Nine of the 10 warmest years on record have been recorded since 2002 (with the ninth warmest recorded in 1997). The average temperature in 2014 was 1.42 degrees Celsius above pre-industrial levels.

The Climate Change Act 2008 gave statutory force to the UK’s commitment to reduce carbon emissions by 80% (based on 1990 levels) by 2050. The following year the Climate Change (Scotland) Act 2009 was passed by the Scottish Parliament, similarly, requiring emissions in Scotland to reduce by four fifths within this time period. The Act also set an interim target of a 42% reduction by 2020. This target was met early (in 2015) and the 2009 Act targets have subsequently been amended to become among the most ambitious in the world.

The Climate Change (Emissions Reductions Targets) (Scotland) Act 2019 requires Scotland to be ‘net zero’ (eliminating carbon emissions or balancing them with carbon removal methods) by 2045 at the latest. Interim targets for reductions of at least 56% by 2020, 75% by 2030 and 90% by 2040 were also set.

Research⁷ by the UK Government’s Department for Business, Energy and Industrial Strategy (BEIS) finds that residential dwellings account for 15% of all of the UK’s carbon emissions (mostly natural gas used for cooking and for space heating).

The Climate Change Committee advises both the Scottish and UK Governments, including on how housing adapts to and mitigates climate change. The key findings from the Committee’s 2019 *UK Housing: Fit for the Future?*⁸ report were that:

- Climate change targets will not be met without the near-complete elimination of greenhouse gas emissions from UK buildings.
- Emissions reductions have stalled, with energy use increasing between 2016 and 2017.
- Efforts to adapt the UK’s housing stock to the impacts of the changing climate: for higher average temperatures, flooding and water scarcity, are lagging far behind what is needed to keep us safe and comfortable, even as these climate change risks grow.

The Scottish Government’s principal response to these issues is the development of its Energy Efficient Scotland programme for making Scotland’s homes and buildings warmer, greener and more energy efficient. Energy Efficient Scotland provides a ‘route map’ to achieving the national ambition for Scotland’s buildings to be warmer, greener and more energy efficient. In the route map, the Scottish Government set out how it intends to deliver on this ambition, including through regulating for minimum energy performance standards in the nation’s homes.

Social rented homes will be required to meet the standards set out in the Energy Efficiency Standard for Social Housing post-2020 (“EESH2”); social homes should meet Energy

⁶ <https://www2.gov.scot/Topics/Statistics/Browse/Environment/TrendTemperature>

⁷

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/862887/2018_Final_greenhouse_gas_emissions_statistical_release.pdf

⁸ <https://www.theccc.org.uk/publication/uk-housing-fit-for-the-future/>

Performance Certificate (EPC) rating of D by 2025 and achieve EPC B rating by 2032. This Standard will be monitored by the Scottish Housing Regulator.

Energy Efficient Scotland also set out the journey it expects private sector housing to take over the next two decades.

Private rented sector properties should meet EPC E by 2022, D by 2025 and C by 2030. The Energy Efficiency (Domestic Private Rented Property) (Scotland) Regulations 2020 introduced a duty on local authorities to enforce the standards expected to 2025 however implementation has been delayed due to the impact of Covid-19. Landlords will be able to access loan funding to pay for works required. In its draft Heat in Buildings Strategy the Scottish Government has subsequently proposed requiring private rented sector properties meet EPC C by the earlier date of 2028.

The route map set out a journey for owner-occupied homes to meet EPC C by 2040, suggesting that regulations requiring this standard was achieved would be in force from 2030. These plans were subsequently brought forward, and the Scottish Government has consulted on plans to require that minimum standards are met from 2024. It is currently unclear how these plans will be impacted by the pandemic.

The council has developed its own route map to meeting EESSH2, based on recommendations made by specialist consultants. This will have a significant impact on how the council invests in its housing stock during the lifetime of this Strategy and beyond.

Other activities being coordinated through the programme include funding schemes like Home Energy Efficiency Programme Scotland: Area Based Schemes (HEEPS: ABS) and the piloting of Local Heat and Energy Efficient Strategies (LHEESs) by local authorities. From 2023 councils will be required to prepare a LHEES which provides a long-term framework to planning and delivery of an area's transition towards low and zero carbon heating. In its pilot LHEES, North Lanarkshire Council undertook a socio-economic analysis of potential energy efficiency interventions. It found that significant investment (running into the billions of pounds) would be required to bring properties up to future standards, and also recommended that semi-detached houses should be a key area for focus on any future energy retrofit project. The key legacy benefit from the LHEES was the establishment of a cross-service officers' group to manage the pilot. This group was later reconvened to coordinate the council's climate change, energy efficiency and fuel poverty policies and plans for domestic buildings.

At the time of writing, the Scottish Government is consulting on its proposals for a 'New Build Heat Standard' requiring new homes have 'zero direct heating emissions' by 2024/25. This is part of its wide-ranging draft Heating in Buildings Strategy which aims to accelerate the take-up of renewable heating, noting that climate change targets can only be met if virtually all emissions from heating (and cooling) buildings are eliminated.

Among the 107 actions proposed in the Strategy are reviews of the effectiveness and future viability of current and emerging technologies. This includes the role of District Heating – where communal heating is provided to homes and buildings by a centralised, typically low carbon source – and hydrogen in our future energy system. The Scottish Government also intends to review evidence on the effectiveness of heat pumps and the role of solar energy and battery storage in reducing emissions from heating. In February 2020, the Heat Networks (Scotland) Act was approved by the Scottish Parliament. It requires the creation of heat networks and requires that public bodies assess their buildings for their suitability to connect to district heating.

The Scottish National Investment Bank was established in 2020 by legislation of the same name, introduced in the Scottish Parliament. Then Finance Secretary Derek Mackay told

MSPs that the bank’s ‘primary mission will be to face up to the global climate emergency by accelerating the just transition to net-zero carbon emissions’⁹.

In 2019, the Scottish Parliament also passed the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act. The Act redefined fuel poverty, introduced new, legally binding targets for the near eradication of fuel poverty and required the Scottish Government to publish a new strategy setting out how this will be achieved.

Under the new definition of fuel poverty, a household is considered to be fuel poor if the costs of maintaining a satisfactory heating regime¹⁰ are more than 10% of its net adjusted (i.e. after tax) income and where its remaining income after deducting notional costs for energy, housing, council tax and childcare is less than 90% of the [minimum income standard](#) applicable to the household.

A quarter of Scottish households are estimated to be fuel poor under this new definition, with around half of these (12% in total) considered to be in ‘extreme fuel poverty’ (where it spends more than 20% of its net adjusted income on fuel costs. The Act requires that by 2040, no more than 5% of households are fuel poor and that 1% or fewer are in extreme fuel poverty. Interim targets for 2030 and 2035 were also set, requiring reductions to 15% and 10% (for fuel poverty) and 5% and 3% (for extreme fuel poverty), respectively.

The Act also requires that the median fuel poverty gap (the amount a fuel poor household would need to lift them out of fuel poverty) is no more than £250 by 2040, with interim targets also set for 2030 (£350) and 2035 (£300).

Table 1: Fuel Poverty Reduction Targets

Year	% fuel poverty	% extreme fuel poverty	Median fuel poverty gap
2030	15%	5%	£350
2035	10%	3%	£300
2040	5%	1%	£250

Source: Scottish Government, Fuel Poverty (Target, Definition and Strategy) (Scotland) Bill 2018: guide

There are however clear tensions between heat decarbonisation and fuel poverty. Natural gas is the cheapest way to heat most homes and research by National Energy Action¹¹ finds that an average fuel bills in the UK will be £200-800 more expensive if heat is decarbonised. Under current funding arrangements (where the costs of decarbonising are largely levied on electricity bills) low-income households are likely to bear a larger share of costs, as they are both more likely to have electric heating and less likely to benefit from subsidies granted to owner-occupiers.

Another way in which housing’s carbon emissions can be reduced is through better energy efficiency – where homes are warmer and require less heating to meet minimum standards and provide adequate thermal comfort to their occupants.

⁹ <https://www.bbc.co.uk/news/uk-scotland-scotland-politics-51195959>

¹⁰ Heating a living room to 21 degrees Celsius and other rooms to 18 degrees, for 9 hours a day on weekdays and 16 hours a day at weekends; households requiring an ‘enhanced’ heating regime should have living rooms heated to 23 degrees and all other rooms to 20 degrees for at least 16 hours on each day of the week.

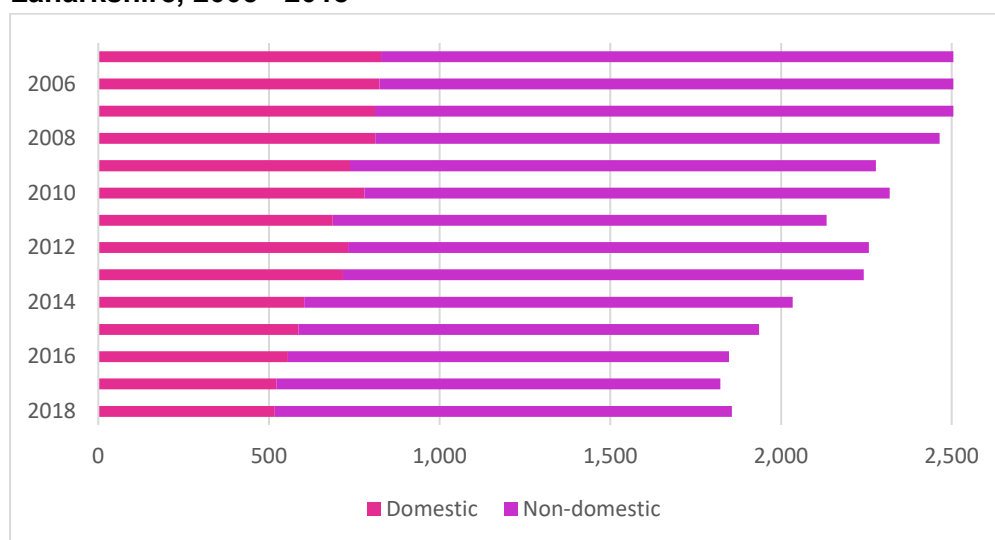
¹¹ <http://www.nea.org.uk/wp-content/uploads/2017/09/Heat-Decarbonisation-Report-2017.pdf>

3. Key Evidence

Greenhouse Gas Emissions

In 2018, 28% of all North Lanarkshire’s greenhouse gas emissions were ‘domestic’ (i.e., arose in our homes), down from 32.5% in 2005. While emissions from all sectors fell during this period, those from our homes fell further (37.6%) than those from non-domestic sectors (22.1%) during this period. These declines were driven by a range of factors, including the rise of renewable energy and improvements in the energy performance of homes and buildings.

Chart 1: Domestic and Non-domestic Greenhouse Gas Emissions (kt CO2) in North Lanarkshire, 2005 - 2018



Source: BEIS (2020) Emissions of carbon dioxide for local authority areas, 2018 estimates

Much of the reduction in emissions from our housing stock was achieved through the greening of our electricity supply (with more of our electricity now coming from renewable sources like solar and wind power). Far greater reductions were achieved in emissions from electricity (64.2%) than from natural gas (19%) or other fuels (18.7%) in this period.

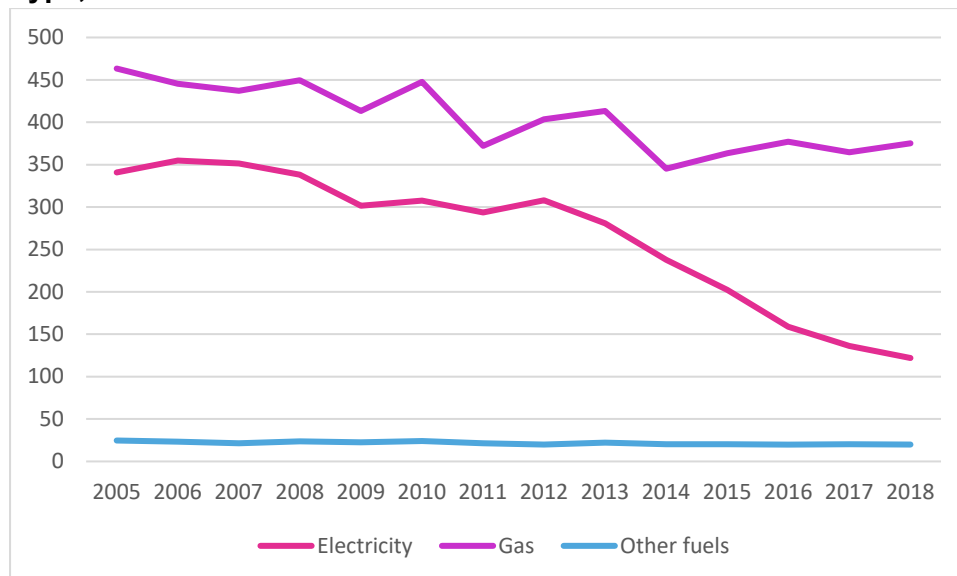
This appears to be borne out in the number of households installing renewable heating technologies in their homes. In the almost seven years between April 2014 and December 2020, 107 North Lanarkshire households installed a technology (like heat pumps or solar thermal panels) through the Renewable Heat Incentive scheme, just 0.7% of the Scottish total¹². During this period significant progress was however made in decarbonising heat in council homes, with all tenants in areas which are off the gas grid offered an air source heat pump to provide their heating and hot water with 316 installed. Additional insulation was provided in these properties to ensure the effectiveness of the heat pumps (which typically require properties to be very well insulated to be effective).

North Lanarkshire relies more on natural gas to heat our homes than the nation. In 2018, natural gas was responsible for 72.5% of all domestic emissions in the area compared to 61.4% in Scotland. This may make it more difficult for North Lanarkshire to reduce its domestic emissions than other areas, particularly as natural gas is currently cheaper than

¹² BEIS (2021) RHI Deployment data, December 2020

other fuel types (providing less incentive for owners and residents of existing homes to move towards more renewable heat sources).

Chart 2: Domestic Greenhouse Gas Emissions (kt CO2) in North Lanarkshire by Fuel Type, 2005 - 2018



Source: BEIS (2020) Emissions of carbon dioxide for local authority areas, 2018 estimates

Investment in Energy Efficiency Measures

The council invested more than £130m in improving the energy efficiency in its existing homes between April 2016 and March 2021, and significant developments have been made in providing low carbon new homes. During this period, solar photovoltaic panels (generating energy for tenants to use) were installed on 415 new council homes and plans have also been developed to deliver 19 ‘net zero’ homes on the former towers site at Holehills in Airdrie in partnership with housebuilder CCG. The council will also deliver a ‘whole house’ approach (combining energy generation and storage with excellent levels of insulation to lower demand) at a new development in Glenmavis. Both developments will be the first of their kind in Scotland and will pilot new approaches which will inform future investment. Electric vehicle charging has also been rolled out across many of our new build sites¹³.

The council also manages the HEEPS ABS scheme in North Lanarkshire. This scheme has delivered almost £9.5m of energy efficiency improvements in North Lanarkshire since 2016, benefiting more than 1,000 owners and the tenants of 460 social rented homes¹⁴.

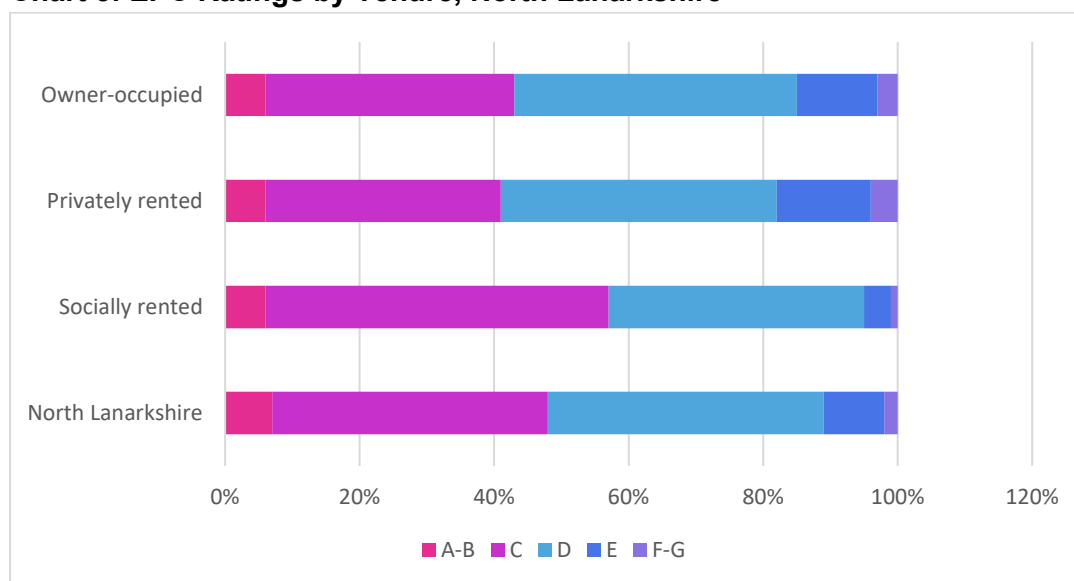
Analysis of Energy Savings Trust data finds that slightly less than half (47.8%) of all homes in North Lanarkshire currently has an EPC ‘C’ rating (the minimum required of all homes by 2040) or better. This is higher than the Scottish average (45%). There are however significant variations across tenures and by property types.

Social rented homes (58.4%) are more likely to meet this standard than owner-occupied (44.1%) or private rented (40.3%), and social homes (4.3%) are less likely to be rated in the lowest bands of E, F or G than owner-occupied (14%) or PRS (17%) properties.

¹³ North Lanarkshire Council data

¹⁴ North Lanarkshire Council data

Chart 3: EPC Ratings by Tenure, North Lanarkshire



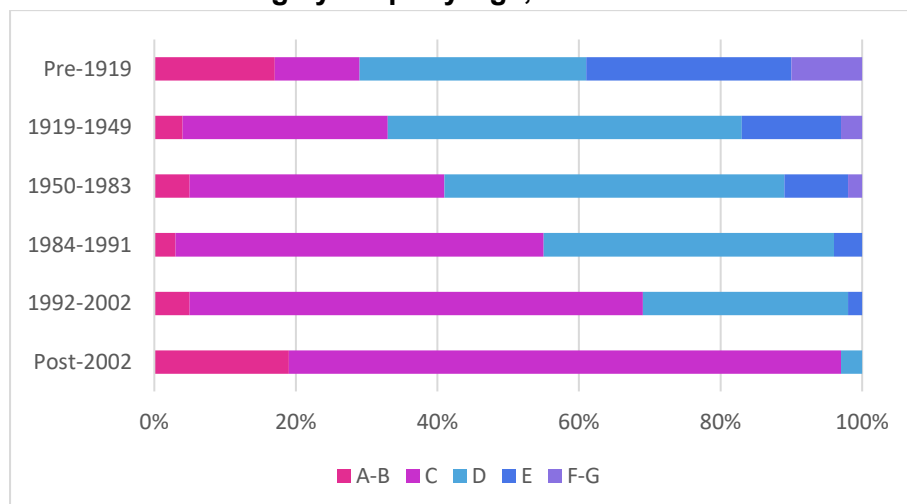
Source: Energy Savings Trust (2020) Home Analytics Report – North Lanarkshire

Higher energy performance standards are however required from homes in the social rented sector. Currently, fewer than 1 in 20 (4.4%) social homes are estimated to meet the EPC B rating required by EESSH2, with the council’s own analysis suggesting only 3.4% of council stock currently meets the Standard.

The council plans to align investment in energy efficiency improvements with other works to improve the condition of homes in the area. This includes its own capital investment programme where, for example, plans are being developed to deliver external wall insulation to homes at the same time as re-rendering. Similarly, it will develop a coordinated approach to enforcing minimum standards in the private rented sector, including for energy efficiency and house condition.

There is a strong relationship between energy performance and property age. While 97% all homes built since 2002 are A, B or C-rated, more than 7 in 10 (71%) of pre-1919 are rated E, F or G (and will consequently require significantly greater intervention to be brought up to standard). These homes are also the most likely to be in other forms of disrepair.

Chart 4: EPC Rating by Property Age, North Lanarkshire



Source: Energy Savings Trust (2020) Home Analytics Report – North Lanarkshire

There is a strong correlation between the energy performance of a home and the household's fuel bills. The estimated average fuel bill for North Lanarkshire properties in EPC bands A or B is £465 compared to £1,620 for properties rated F or G, with bills progressively rising in each band, from £671 for EPC C rated homes to £923 (D) and £1,199 (E).

Fuel Poverty

The Scottish House Condition Survey 2017-19¹⁵ estimates that North Lanarkshire has lower rates of fuel poverty (20%) and extreme fuel poverty (7%) than the national averages (24% and 12% respectively). The area's 'median fuel poverty gap' (adjusted to 2015 figures) is also lower (£520 compared to £650). This is an improvement on findings in the previous 2016-18 Survey, particularly for households in the social rented sector (suggesting that social landlords' investment in meeting EESSH is paying dividends in reduced fuel costs, and reducing fuel poverty, for tenants). The Survey estimates that one quarter (25%) of social tenants are fuel poor, compared to around one third (32%) in 2016-18 and almost four in every ten (38%) social renters in Scotland¹⁶.

Renters are more likely than owner occupiers to be in fuel and extreme fuel poverty. This may be due to their generally lower household incomes (with evidence from the Scottish Household Survey suggesting that 60% of social rented households have an income of less than £20,000 per year compared to 31% of owner-occupiers)¹⁷. It may also be caused by the higher housing costs experienced by renters, particularly when compared to households which own their homes outright.

While North Lanarkshire has one of the fastest growing economies in Scotland, evidence suggests that inequality is increasing across the area. The Scottish Index of Multiple Deprivation (SIMD) is the official tool for identifying places in Scotland suffering from deprivation. The Index has been published six times between 2006 and 2020. The SIMD splits Scotland into neighbourhoods (or data zones) of approximately 700 households, with 447 in North Lanarkshire, including a growing number among the poorest 5% in Scotland.

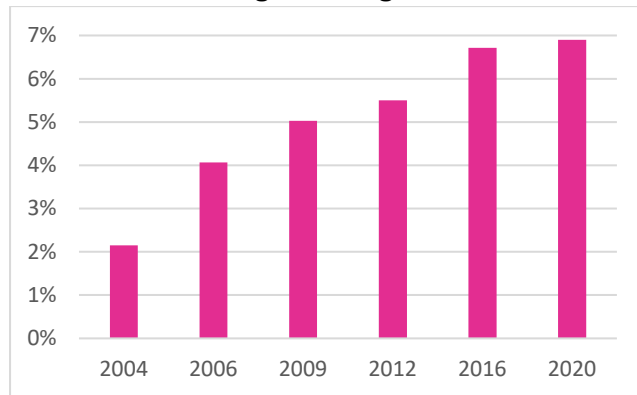
¹⁵ Scottish Government (2021) Scottish House Condition Survey Local Authority Tables 2017-2019

¹⁶ Scottish Government (2019) Scottish House Condition Survey Local Authority Tables 2016-2018

¹⁷ Scottish Government (2019) Scottish Household Survey 2018 Local Authority Tables

In 2004, 2.2% of North Lanarkshire’s neighbourhoods were in the most deprived 5% in Scotland. The area’s share of these ‘SIMD5’ neighbourhoods had tripled by 2016 (6.7%) and increased further in 2020 (6.9%).

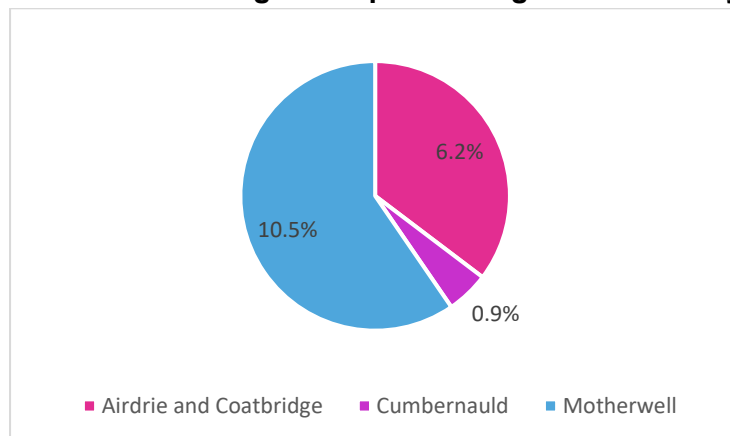
Chart 5: Percentage of Neighbourhoods in Scotland’s Most Deprived 5%, 2004-2020



Source: Scottish Government (2004; 2006; 2009; 2012; 2016; 2020) Scottish Index of Multiple Deprivation

These most deprived neighbourhoods are unevenly spread throughout North Lanarkshire, with just 1 of North Lanarkshire’s 33 SIMD5 data zones in the Cumbernauld Housing Sub-Market Area (0.9% of neighbourhoods in the HSMA). More than 1 in 10 neighbourhoods in the Motherwell HSMA are however among Scotland’s most multiply deprived 5%.

Chart 6: Percentage of Deprived Neighbourhoods by HSMA



Source: Scottish Government (2020) Scottish Index of Multiple Deprivation

While the energy performance of North Lanarkshire’s homes is relatively good (when compared to the rest of Scotland), the area has higher unemployment (4.6% compared to 3.5%) than the nation as a whole¹⁸. Resident incomes are slightly below the national average, with the average full-time worker resident in North Lanarkshire earning £580.50 per week in 2019/20 compared to £595 in Scotland as a whole. This analysis suggests that low household income is, in relative terms, a greater driver of fuel poverty in North Lanarkshire than elsewhere, and that greater concentrations of fuel poverty will be found in the most deprived areas with a higher prevalence of rented homes.

The council supports households to increase their incomes in various ways, including by providing employability support and social security and money advice. Between 2016 and 2020, more than £140m in additional benefit income was generated for local people by these

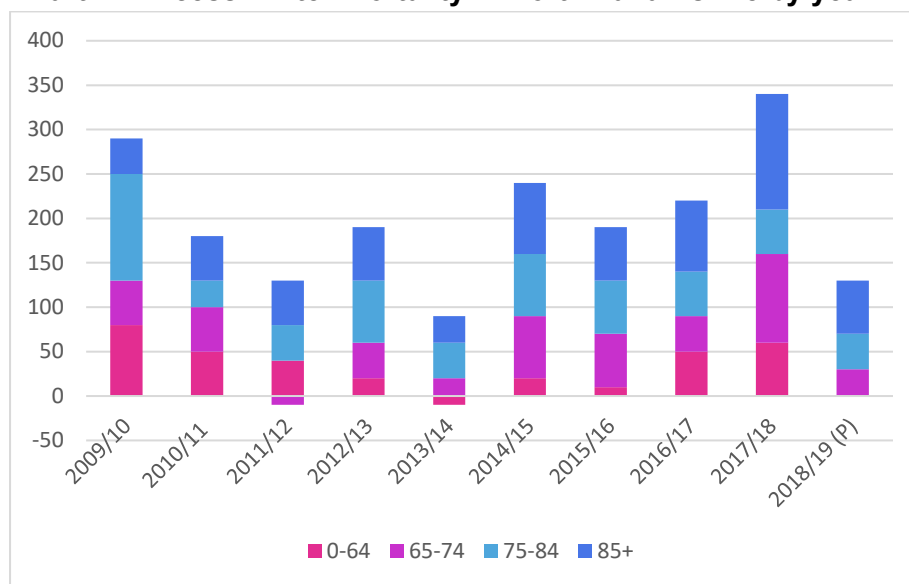
¹⁸ Nomis (2020) Labour Market Profiles – North Lanarkshire

services¹⁹. Financial inclusion workers, including 8.5 full time equivalent posts funded by the Housing Revenue Account to help council tenants, also help residents with energy debt matters. The council also supports the North Lanarkshire Advice Network of Citizens Advice Bureaus and independent advice agencies to help residents maximise their incomes, and partners with Home Energy Scotland to help residents address specific energy issues like accessing grant and loan funding.

In 2020, the council launched 'It Pays to Switch', a free to use comparison website which enables residents to switch to a cheaper energy supplier or tariff. On average, households using the service save more than £200 per month off their energy bills.

National Records of Scotland also reports on 'excess winter deaths' (that is, the seasonal variation in deaths during the months between December and March). While there is no single cause of these excess deaths, any increase in the number of deaths is linked to the health of the elderly population, fuel poverty and the adequacy of home insulation and heating systems²⁰. Analysis of the ten years between 2009/10 and 2018/19 finds that North Lanarkshire recorded the second highest number of deaths of any local authority area (behind only Glasgow) during this period. The vast majority (83.7%) of victims of excess winter deaths over this period were of pensionable age, with the 85+ age group making up almost a third (32.7%) of the total figure.

Chart 7: Excess winter mortality in North Lanarkshire by year

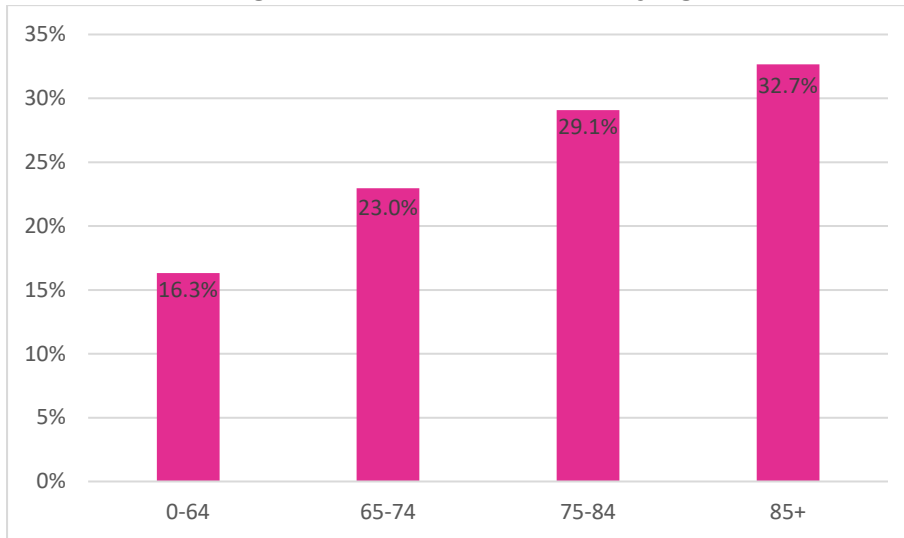


Source: National Records of Scotland 2018/19

¹⁹ North Lanarkshire Council data

²⁰ https://www.eas.org.uk/en/increased-winter-mortality-excess-winter-deaths_50538/

Chart 8: Percentage of Excess winter death by age band, 2009-19



Source: National Records of Scotland 2018/19

4. Areas of Development

There are a several strands of work underway which will impact on housing's contribution to our climate change targets over the lifetime of the new LHS:

Climate Ready Clyde - Glasgow City Region Climate Adaptation Strategy

The council is a member of Climate Ready Clyde and contributes to the Glasgow City Region Climate Adaptation Strategy and Action Plan. This strategy aims to ensure Glasgow City Region's economy, society and environment is not only prepared for, but continues to flourish in the face of the impacts arising from the climate crisis. The strategy sets out 11 interventions to address the priorities identified in the Climate Risk and Opportunity Assessment and has adopted a place-based approach to identifying areas that are regionally

and nationally significant for adaptation. For North Lanarkshire this includes Ravenscraig and Eurocentral/ Mossend as they are priority areas for development. To support the delivery of the strategy, the action plan sets out 16 flagship actions. These represent a significant,

step change from business as usual to create conditions for change and inspire further action. These actions involve the public, private and third sector, are at different stages of maturity and recognise that real resilience involves changing our culture, finance, governance and institutions. Some of the ways in which we will contribute include, but are not limited to:

- Working together with other GCR local authorities to build capabilities and deliver collaborative adaptation
- Supporting our communities to shape climate-ready places
- Incorporate climate resilience into regional supply chains and procurement
- Contribute and learn from the net zero climate resilient housing retrofit project
- Embedding climate resilience into regional economic and spatial strategy

Green Park, Green Power, Green Neighbourhood

Green Park, Green Power, Green Neighbourhood will see key Council services (including Education, Greenspace and Housing) pool resources and collaborate to deliver the flagship project in our ambitious plans. Aiming to deliver the Net Zero redevelopment of Strathclyde Park and harness 'park power' to provide low-carbon heat to neighbouring homes, businesses, community and public buildings, this Green Park, Green Power, Green Neighbourhood will provide an exemplar of how local authorities can build on their existing assets to develop sustainable places and make the just transition to Net Zero.

Green Growth Accelerator support will also enable the later development of the Green Power and Green Neighbourhood elements of this project, subject to the availability of further funding. These elements will see the development of a District Heat Network for North Motherwell, powered by the heat and electricity generated in the Park, capable of meeting heat demand from homes, businesses and the public sector estate in the area. Current plans, informed by a feasibility study (appended) and engagement with property owners, are that the DHN will initially provide zero-carbon heat to:

- More than 1,100 social rented homes, located in three SIMD datazones which are in Scotland's 5%, 10% and 15% most multiply deprived neighbourhoods respectively
- Two local primary schools (Logan and St Bernadette's)
- Other buildings used for community and health care functions (Avondale Care Home, North Lanarkshire Heritage Centre, Orchard Medical Centre and Pat Cullinan Community Centre), and
- MB Aerospace, a local engineering firm and a large industrial heat user.

In doing so we will demonstrate how existing homes and buildings across a range of settings and sectors can transition to Net Zero while also tackling fuel poverty and insecurity and helping to sustain amenities, services and skilled jobs in the area. Later extension of the DHN will enable it to meet the significant additional heat demand in the area as homes and buildings are upgraded to meet future energy performance standards, as set out in Scotland's draft Heat in Buildings Strategy.

Glasgow City Region Retrofit Programme

A home energy retrofit programme, delivered at scale across Glasgow City Region, has the potential to deliver on several our local and national policy ambitions, including:

- Support the economic recovery from the pandemic
- Create many meaningful, skilled jobs
- Improve the quality of housing
- Reduce fuel poverty
- Deliver on the net zero carbon and climate mitigation of Glasgow City Region and Scotland

As part of our work with our GCR partners we are progressing a Feasibility Study to help us set a clear route map to successfully deliver a large scale retrofit programme.

The Feasibility Study will provide a clear set of recommendations that take into account the function, role and powers of a range of different partners and will require the support and active participation of a wide range of different stakeholders. In addition to this, it will also require expert technical knowledge, financial resources, market capacity to deliver, a skilled workforce and to be supported by national policy and regulations.

The scope of the programme includes both energy efficiency (home insulation) and low and zero emissions heating options and will focus on homes which have the lowest energy efficiency ratings, to deliver the best outcomes in terms of fuel poverty reduction. It will focus on all types of property and all tenures and it is anticipated that delivery of the programme will be over at least ten years.

North Lanarkshire's Climate Plan

The council has recently developed and published a Climate Plan and as outlined earlier has committed itself and the area of North Lanarkshire to achieving net zero by 2030. There is much related activity and actions (mitigation, adaptation and sustainability) required to help achieve this. The target commits the council to working towards zero emissions as far as reasonably practicable to do so and thereafter to consider sequestration or carbon offsetting for the residual emissions. In June 2021 the council also agreed to sign up to the Edinburgh Biodiversity Declaration. As a local government authority, it has a role to promote the biodiversity agenda and has a responsibility to protect its local biodiversity. The plan sets out a number of key actions and potential solutions which relate specifically to housing in targeting emission reductions, which include energy efficiency improvements in housing in addition to new innovative projects such as the 'Green Heat in Greenspaces' project, linked to the Strathclyde Park masterplan, in which energy is one of the core principles. Focused on heat pumps and solar photovoltaics, should the council choose to progress the project proposals, it will positively contribute to the North Lanarkshire footprint by reducing energy-related emissions. The planning for these proposals will link into the development of the council's LHEES.

5. Key Issues

- Tackling climate change and fuel poverty are key local and national priorities
- Our homes are responsible for a significant though reducing proportion of the area's greenhouse gas emissions but far more needs to be done if national climate change targets are to be met
- While our homes are relatively energy efficient when compared to Scotland as a whole, significant improvements are required to meet national targets set for each tenure
- These improvements will require significant investment, including in emerging technologies
- Fuel poverty rates have fallen in recent years but too many of our residents are fuel poor, with rates four times higher than the 2040 target
- The actions taken during the next five years will provide the foundation for meeting 2040 and interim targets

6. Suggested Actions

- Adopt as standard a non-gas heating approach for new council homes
- Investigate further opportunities for district heat zones

- Develop an understanding of whole life costs and issues associated with the transition to low and zero carbon heat on the council and its tenants
- Develop a route map to meet 'EESHS2'
- Continue to deliver and manage Energy Efficient Scotland: Area Based Scheme (EES: ABS)
- Help households out of fuel poverty
- Evaluate the impact of low-carbon heating on tenants' energy use and costs to ensure a 'just transition'
- Improve fuel poverty advice
- Improve our understanding of the extent, nature and scale of fuel poverty in North Lanarkshire
- Engage with private landlords to improve awareness and compliance with energy efficiency regulations