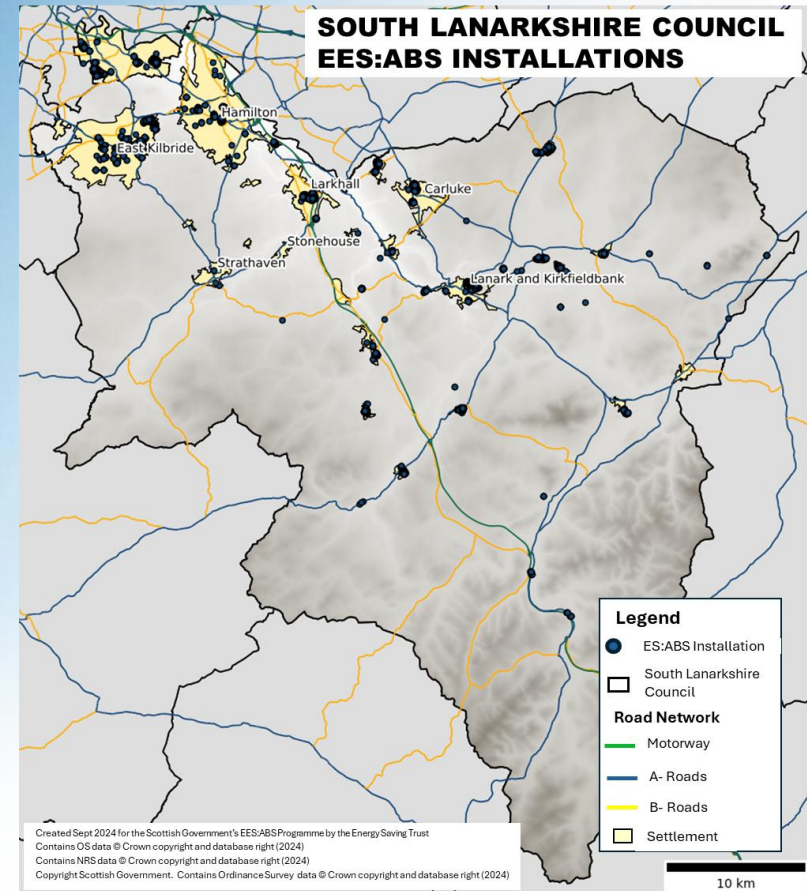


South Lanarkshire Council

EES: ABS Case Study

energy
saving
trust

Energy Saving Trust
September 2024



Overview

The Scottish Government's EES: ABS* team requested the case studies to compare the available EES: ABS install data, alongside other energy efficiency related characteristics, with three goals in mind:

- To provide a more detailed breakdown of the installed measures data to date.
- To allow greater comparison between the different local authorities as well as across the duration of the EES: ABS programme.
- To provide a series of illustrations that the Scottish Government or local authorities can use to promote the work achieved under the EES: ABS programme.

This presentation contains the case study and illustration set for reported South Lanarkshire Council EES: ABS activity to date (Sept 2024).**

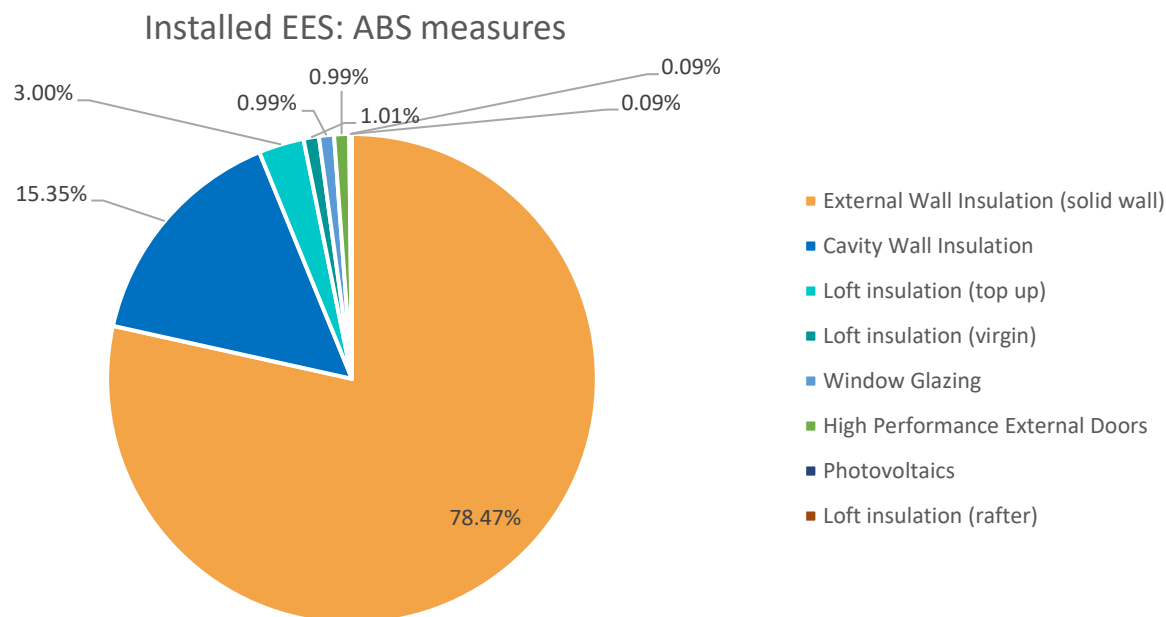
South Lanarkshire Council EES: ABS dataset

Financial Year	Number of records*	% of records
2013/14	1,154	25.91
2014/15	873	19.60
2015/16	865	19.42
2016/17	550	12.35
2017/18	316	7.09
2018/19	146	3.28
2019/20	170	3.82
2020/21	0	0.00
2021/22	142	3.19
2022/23	0	0.00
2023/24 ¹	238	5.34
Total Installs	4,454	100.00

Reference numbers	Number of records ¹	% of records
With pre-installation EPC	2,511	55.24
With post-installation EPC	2,490	54.77
With pre and post-installation EPC	1,989	43.75
With GDAR	0	0.00
With measure reference number	10	0.22

The South Lanarkshire Council has contributed 3.47% of the total EES: ABS installs across Scotland reported to date (Sept 2024).

Installed Measures

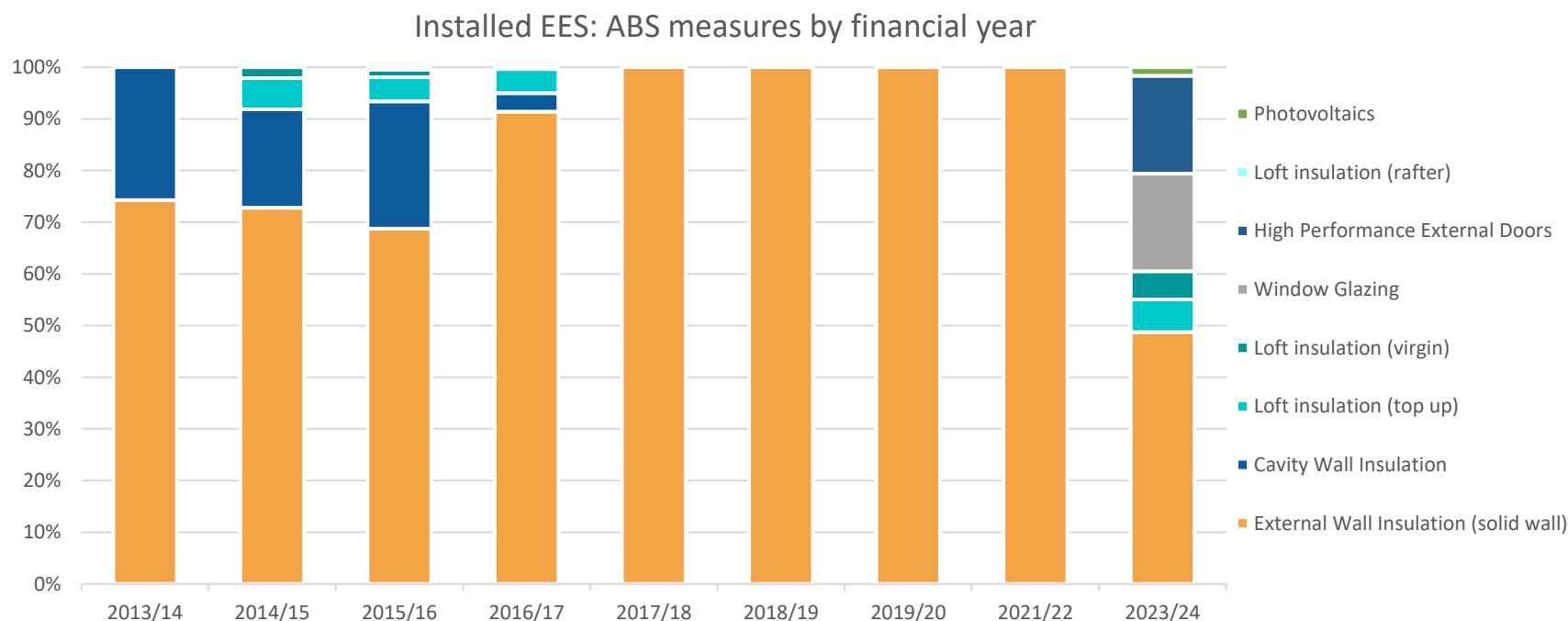


South Lanarkshire Council has offered a variety of measures as part of their EES: ABS programme. Nearly 94% of all measures have been for wall insulation including external wall insulation for solid wall and standard cavity wall insulation. Others include loft insulation, High Performance External door installation, window glazing, photovoltaics and storage battery installation.

Installed Measures

Measure Name	Number of records*	% of records
External Wall Insulation (solid wall)	3,557	78.47
Cavity Wall Insulation	696	15.35
Loft insulation (top up)	136	3.00
Loft insulation (virgin)	46	1.01
Window Glazing	45	0.99
High Performance External Doors	45	0.99
Loft insulation (rafter)	4	0.09
Photovoltaics	4	0.09
Total Installs	4,533	100.00

Installed Measures by Financial year

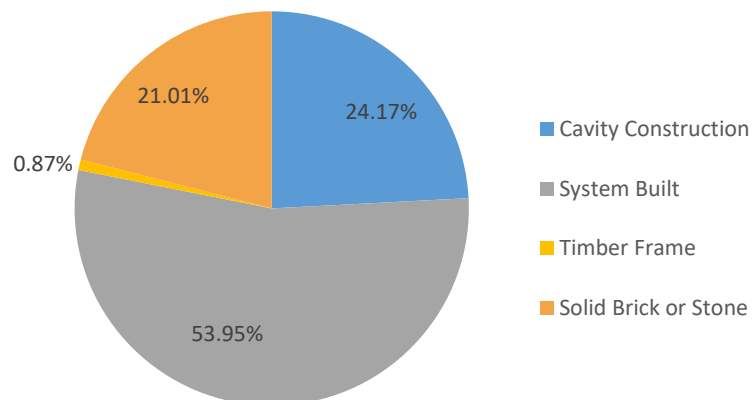


In the first year of the programme, South Lanarkshire Council offered two measures (cavity wall insulation and external wall insulation for solid wall). Loft insulation was included in the programme in 2014/15. Renewable energy source (photovoltaics & storage batteries), High Performance external door and window glazing were included in the later part of the programme. From inception to date, external wall insulation contributed 78.5% of all the measures.

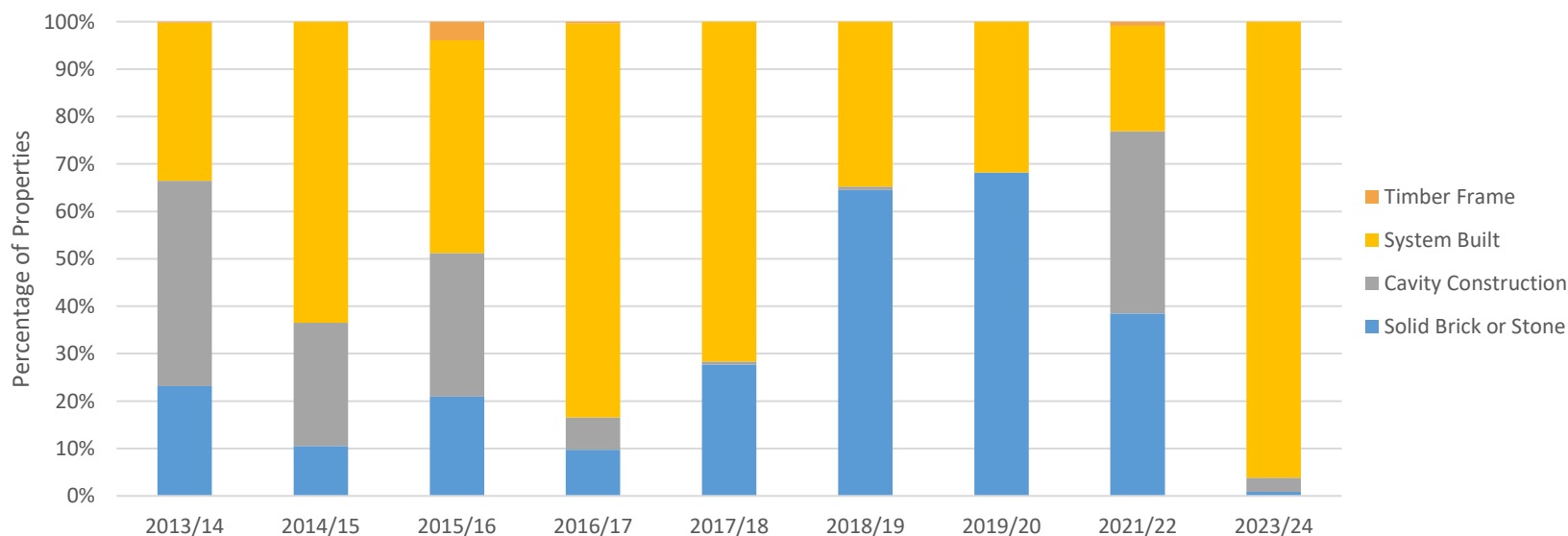
Wall Type

The chart on the right shows the distribution of different wall types within the programme. Below you can see the division of these wall types throughout the years.

EES: ABS Properties by wall type

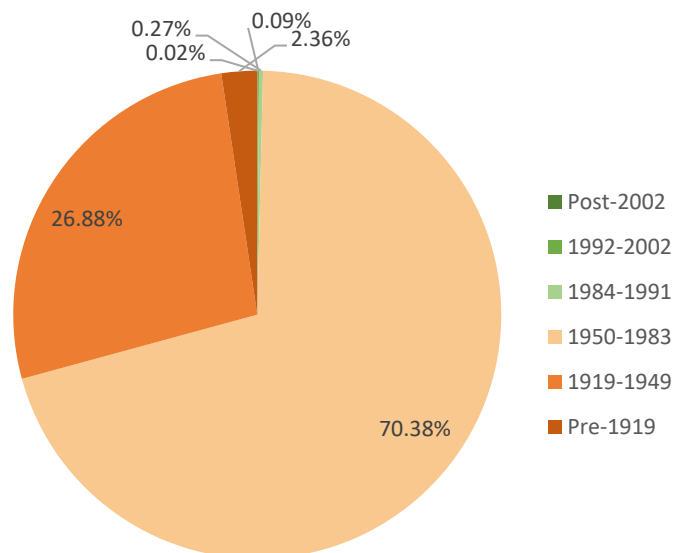


EES: ABS properties and construction type by financial year

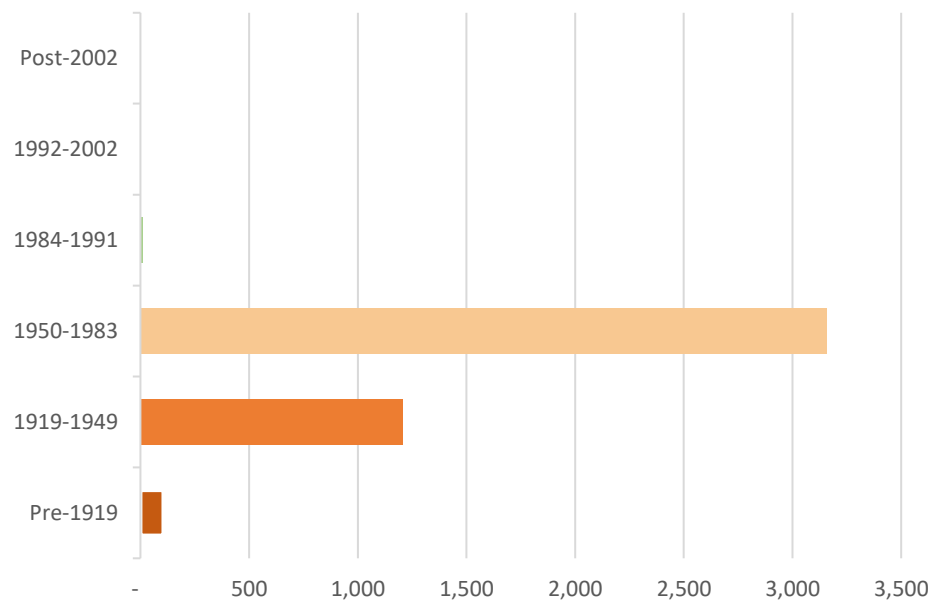


Construction Age

EES: ABS properties by construction age



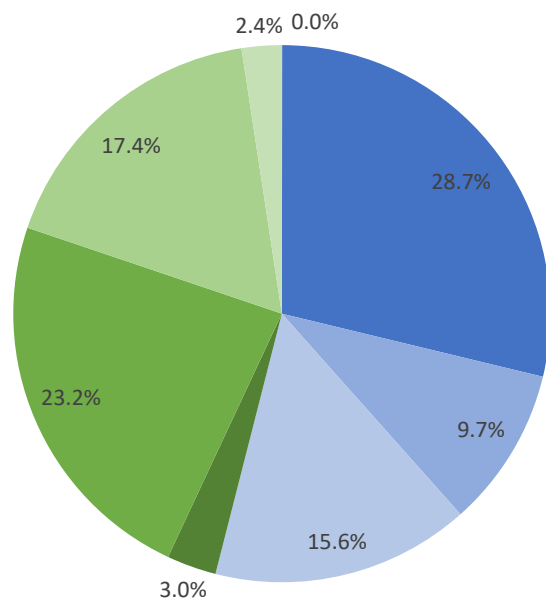
EES: ABS properties by construction age



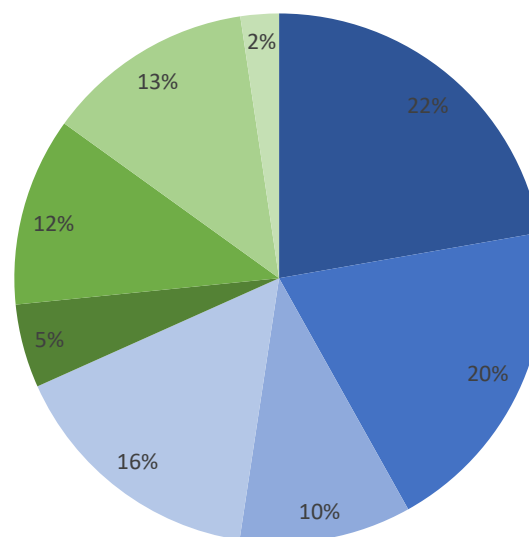
Most of all participating properties were constructed between 1950 and 1983 (70.4%). 29.2% of all properties were constructed between 1919 and 1949 or pre-1919.

Dwelling Type

EES: ABS properties by dwelling type



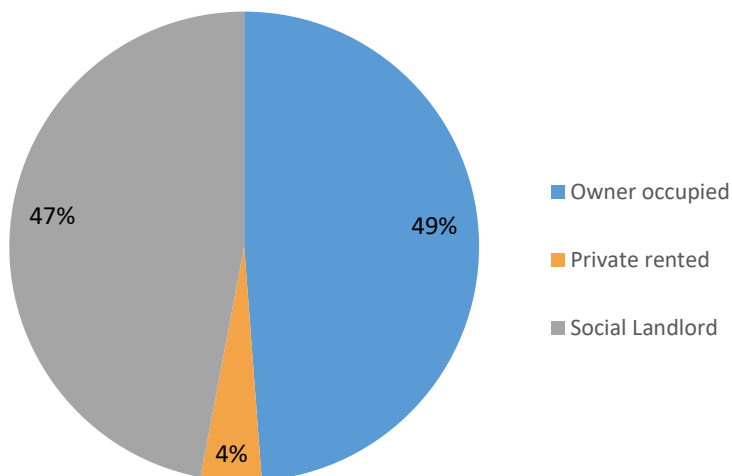
South Lanarkshire properties by dwelling type



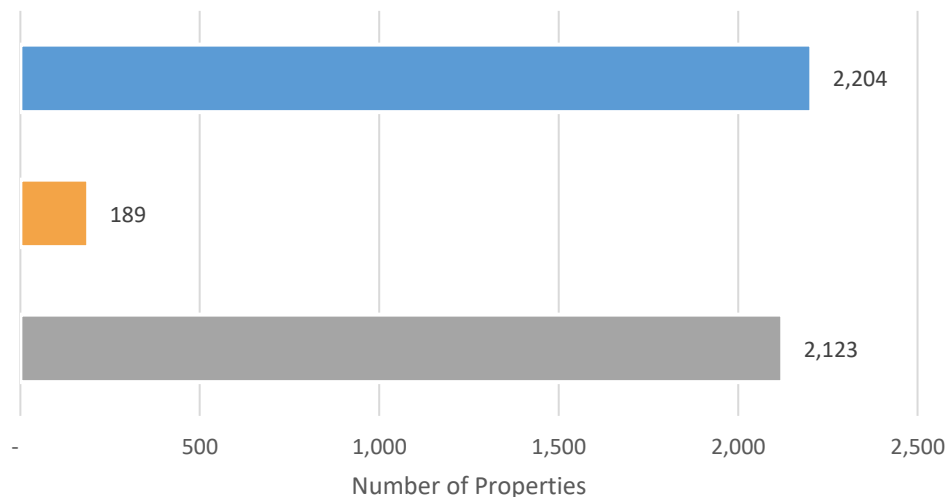
The South Lanarkshire Council has targeted a mixture of houses (53.98%) and flats (46.02%). As a whole, 68% of the dwelling types within South Lanarkshire Council consists of houses and 32% of flats.

Property Tenure

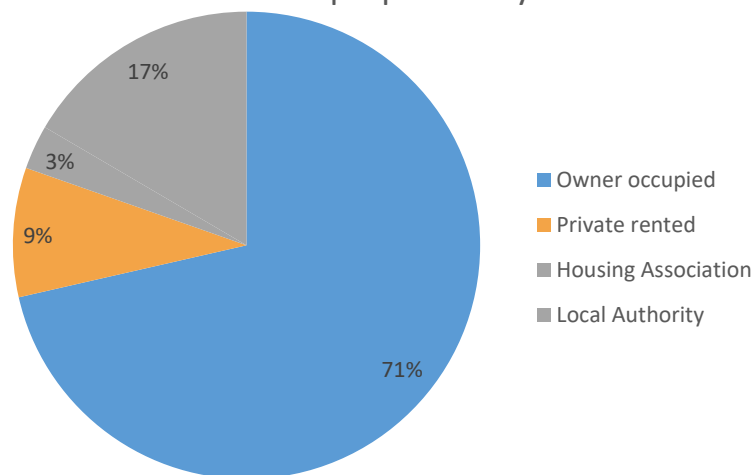
EES: ABS properties by tenure



EES: ABS properties by tenure



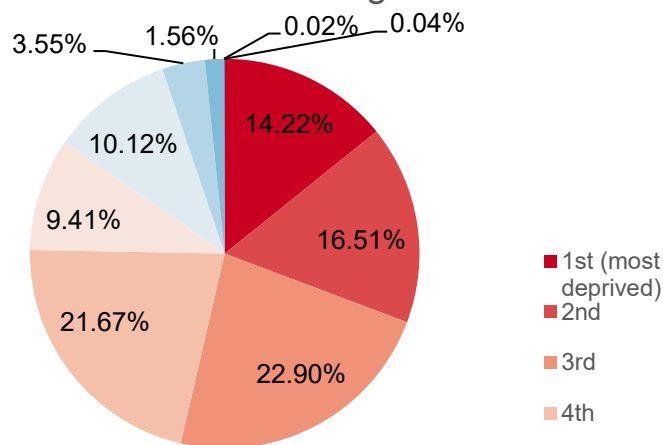
South Lanarkshire properties by tenure



South Lanarkshire Council has treated mixed tenure types within the allocated area. The programme has targeted a significantly higher proportion of social housing than the council's general division of tenures (47% vs 20%*). This is largely in line with the Council's priority of implementing energy efficiency measures in council tenant homes.

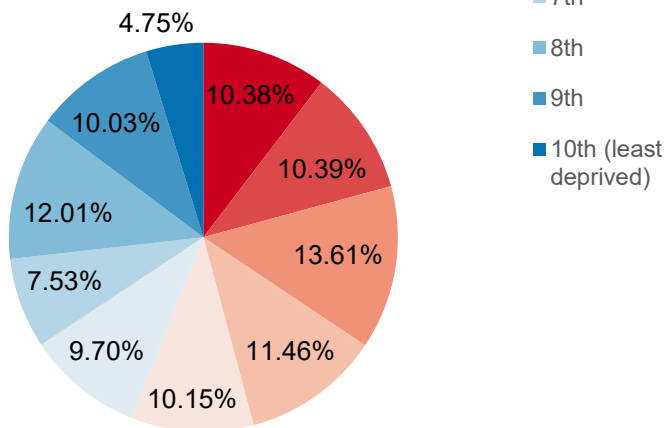
Scottish Index of Multiple Deprivation (SIMD)

EES: ABS properties by overall SIMD decile ranking



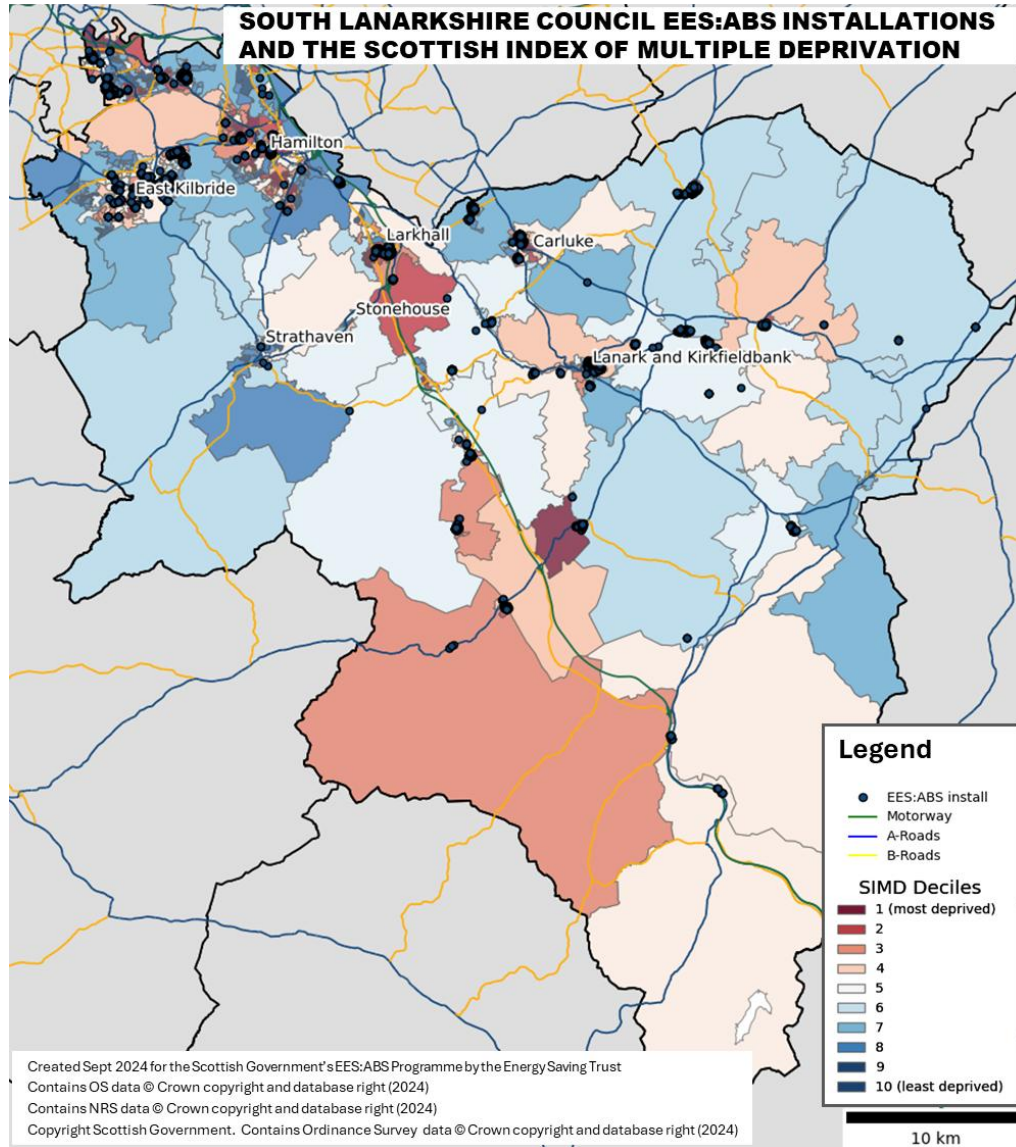
Comparison of these two illustrations shows the correlation between the overall SIMD ranking of South Lanarkshire Council properties and of those targeted in the EES: ABS programme. A total of 94.82% of all participating properties are in the most deprived areas of the council and can be found within the six lowest SIMD ranks as seen in the top chart.

South Lanarkshire properties by overall SIMD decile ranking

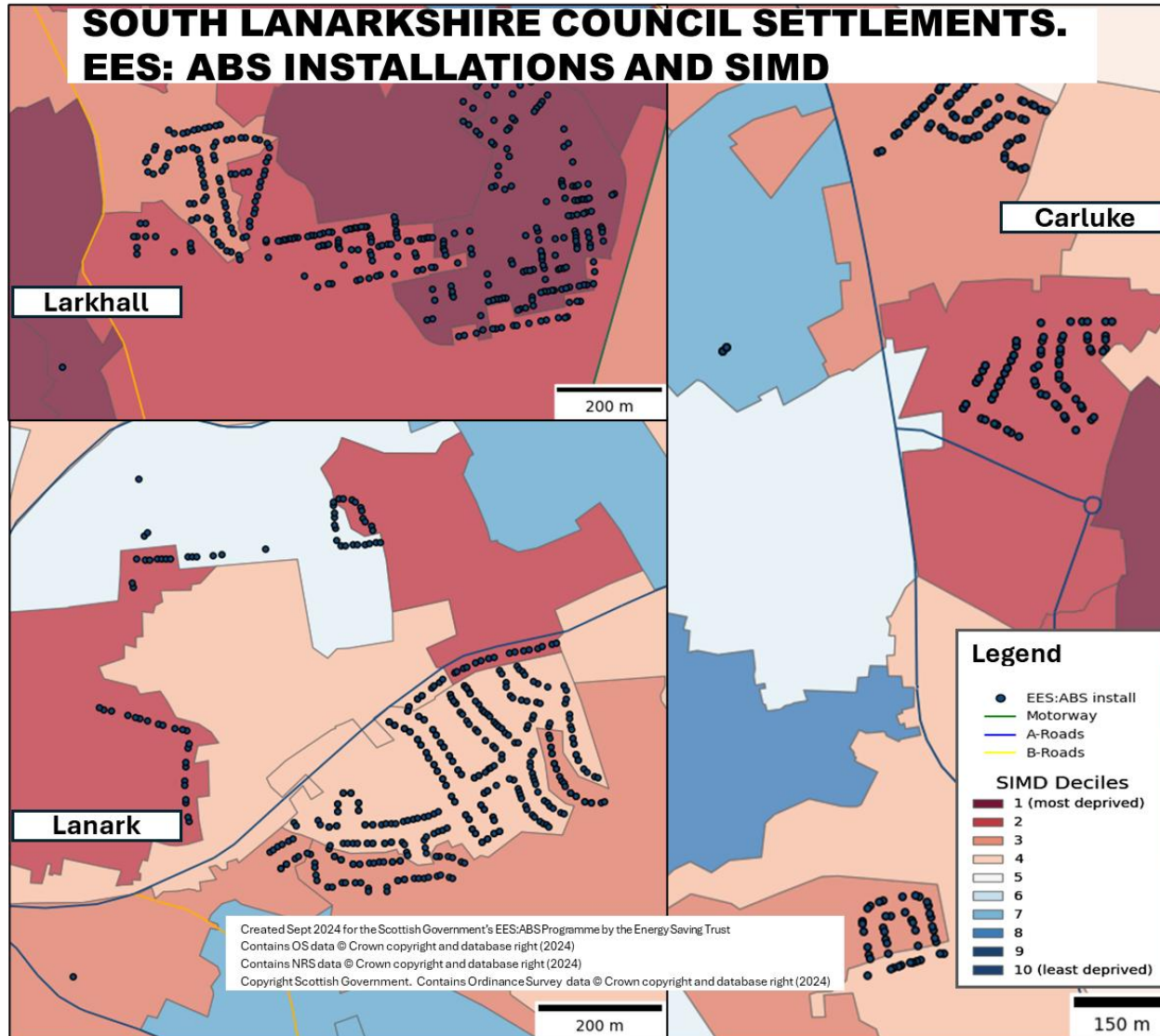


It is good to note that the SIMD can be a slightly problematic indicator for rural settings as each data zone contains between 500 and 1000 properties. Rural populations are very dispersed, so this means that very large catchments are created in order to reach the required range. Larger areas are more likely to group deprived and non-deprived households together and this results in rural SIMD rankings shifting towards the median. Whilst the programme is most likely helping deprived areas, the SIMD ranking can be a slightly inaccurate method to fully test this hypothesis.

Scottish Index of Multiple Deprivation (SIMD) II

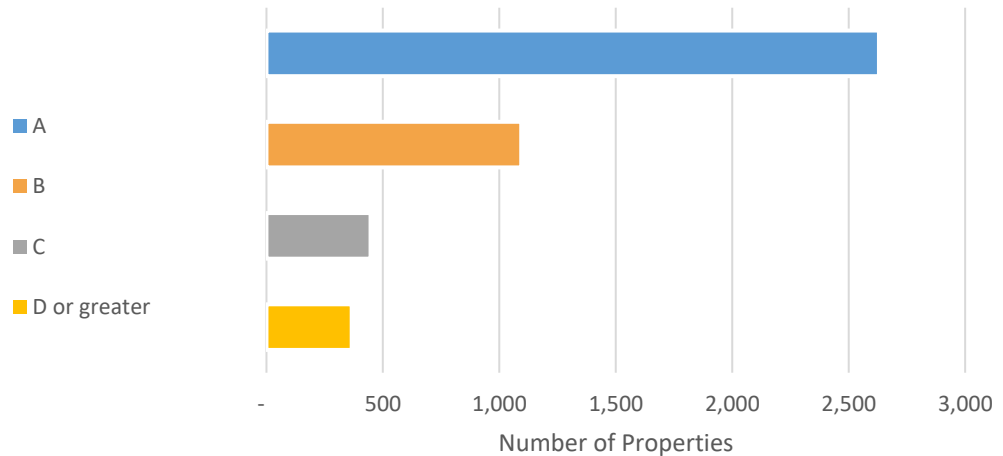
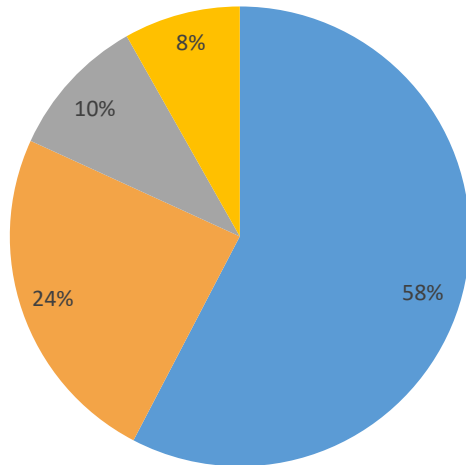


Scottish Index of Multiple Deprivation (SIMD) III

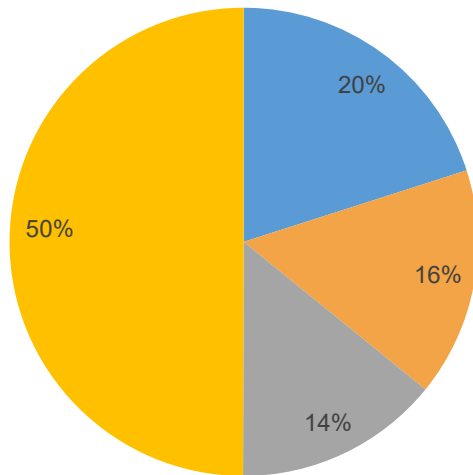


EES: ABS Installs by Council Tax Band

EES: ABS properties by council tax band



South Lanarkshire properties by council tax band

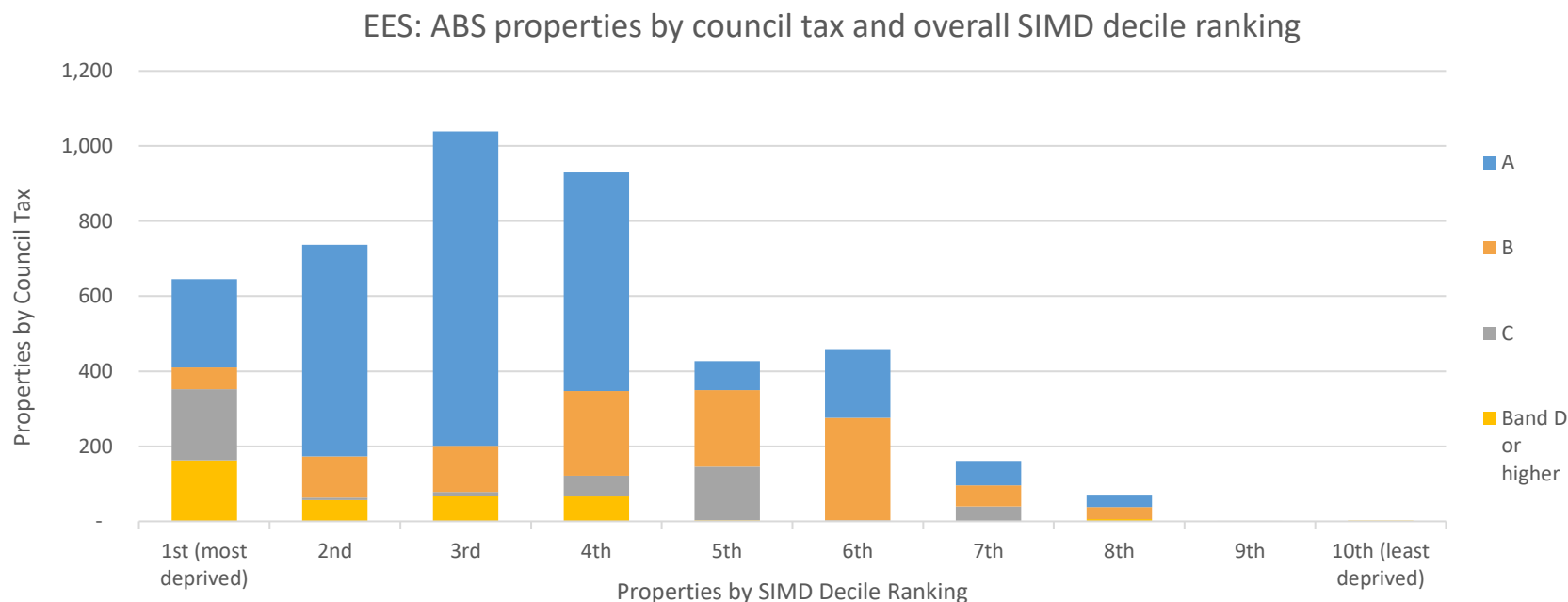


The South Lanarkshire Council has specifically targeted bands A-C for the EES: ABS work. 92% of properties receiving measures fall into council tax bands A, B and C. 8% of the treated properties are band D or greater.

The below chart presents all properties in South Lanarkshire based on the council tax band. It is evident that the programme has succeeded in focusing on the lower end of the band within the council's area.

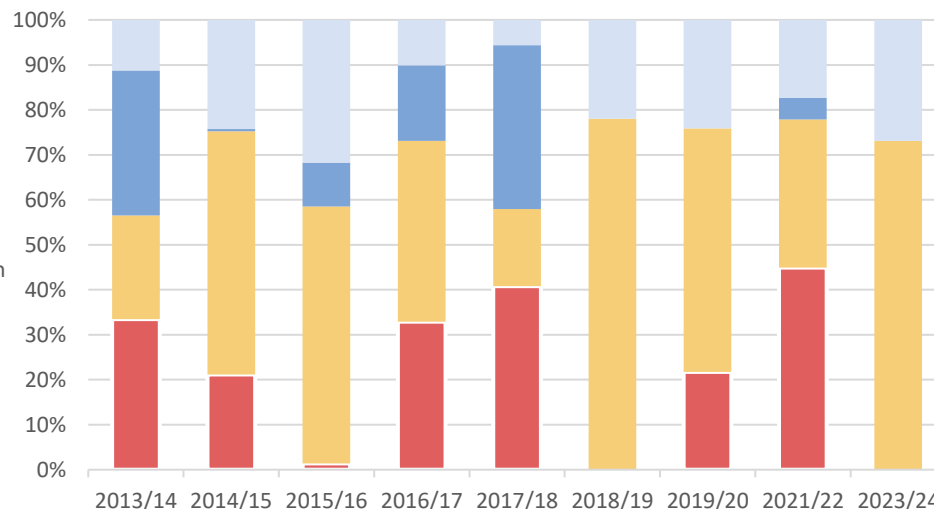
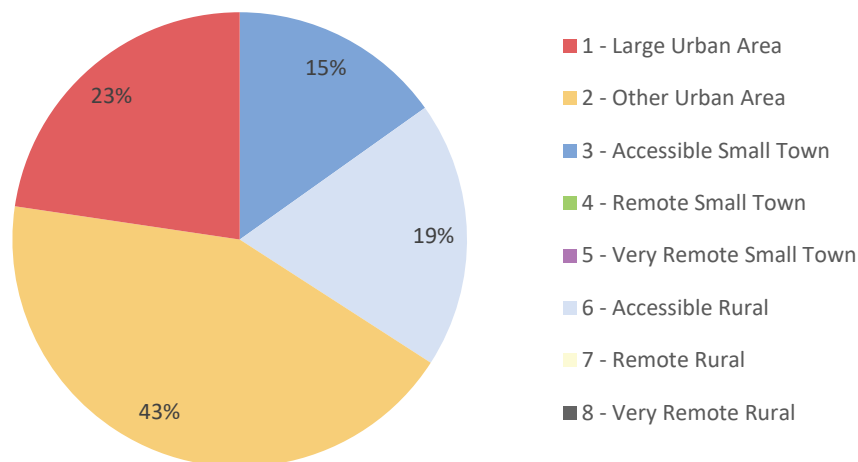
EES: ABS Installs by Council Tax Band and SIMD

Council tax banding can often be seen as an indicator for income and this illustration examines the property council tax bands against the income SIMD ranking of the areas involved. 83.58% of the installations treating A, B and C council tax banded properties are located within the five most SIMD deprived areas when ranked by income as seen below.

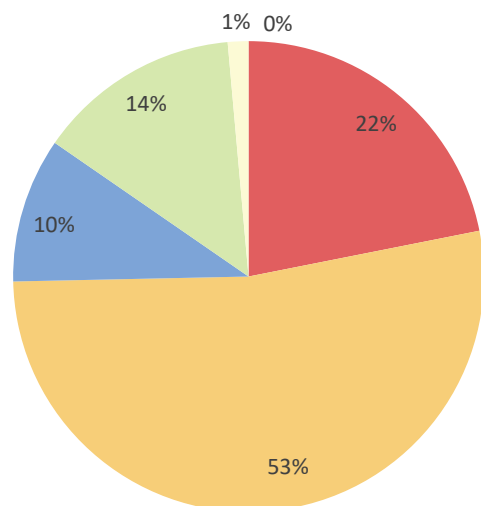


Urban Rural Classification I

EES: ABS properties by urban rural classification

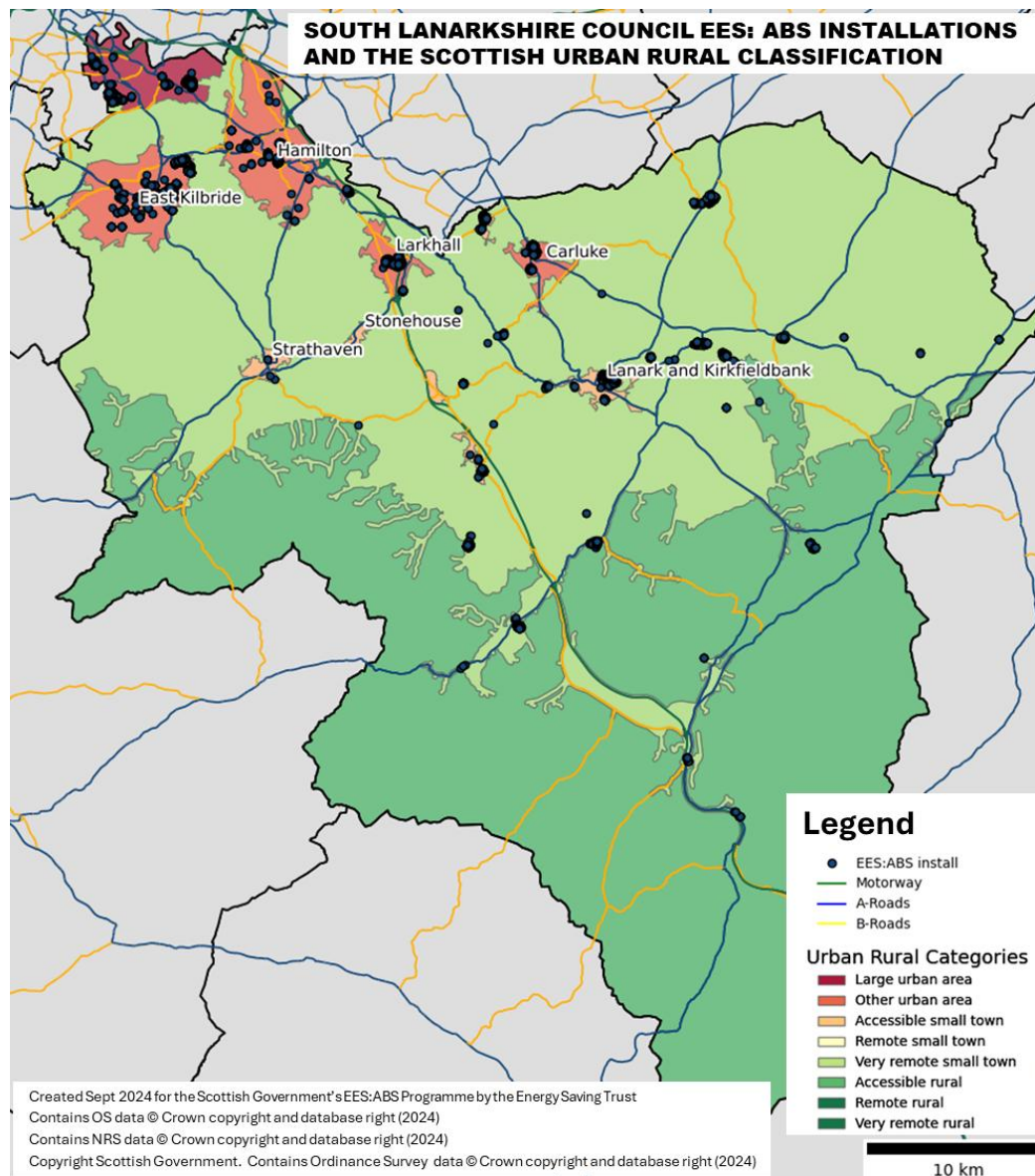


South Lanarkshire properties by urban rural classification



The South Lanarkshire Council area consists of five different urban rural classifications. Four of these areas (Large Urban Area, Other Urban Area, Accessible Small Town, Accessible Rural and Remote Rural areas) are represented in the programme. The breakdown of installs amongst these four classifications broadly aligns with the total dwellings found within each. Whilst installs within Other Urban area are slightly under-represented.

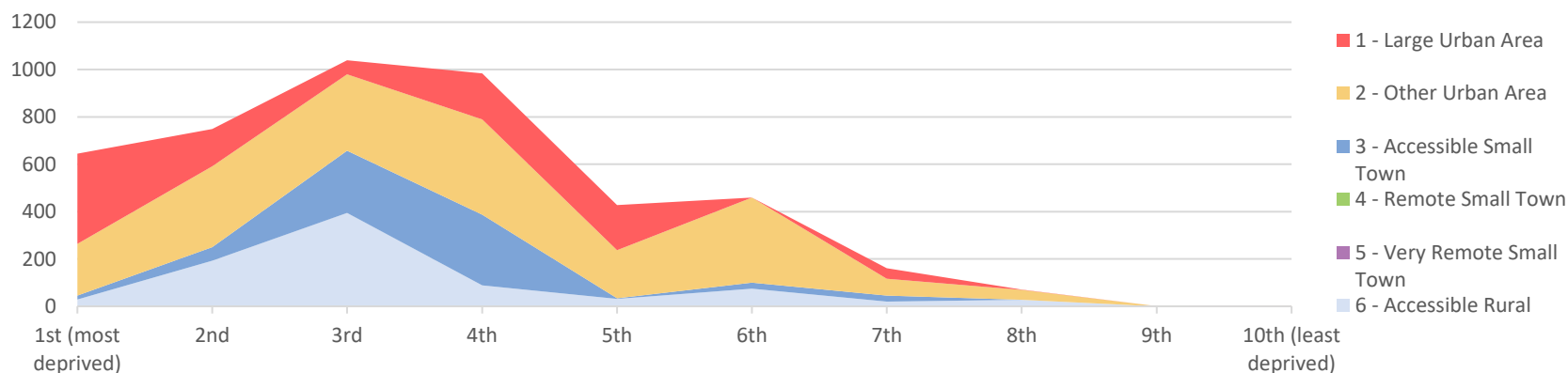
Urban Rural Classification II



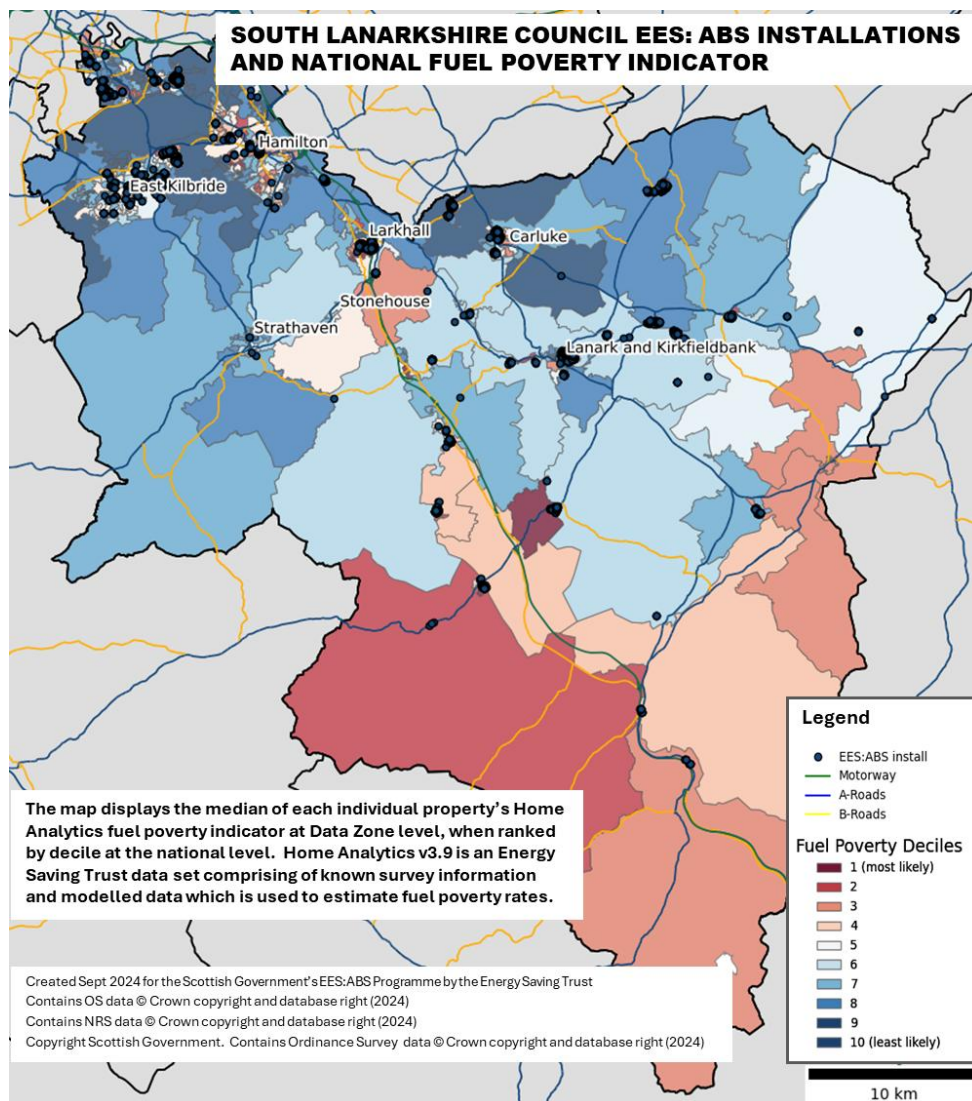
Urban Rural Classification and SIMD

84.70% of the work was completed within the five most deprived SIMD ranks, predominantly within Large Urban, Other Urban and Accessible Rural areas. Of the 15.30% of all installs completed within less deprived SIMD ranks (6 -10), 74.93% occurred in Large Urban and Other Urban areas and 25.07% in Accessible Rural area and Accessible Small Towns. According to South Lanarkshire Council, urban rural classification alone is not one of the key features for participating properties, as factors such as SIMD ranking, council tax, income and the condition of the property are considered. Furthermore, it is worth noting that in addition to rural data zones tending to lean towards the average SIMD ranks, not all deprived households can be found within highly deprived areas.

EES: ABS Properties by Urban Rural Classification and SIMD Overall Decile Ranking

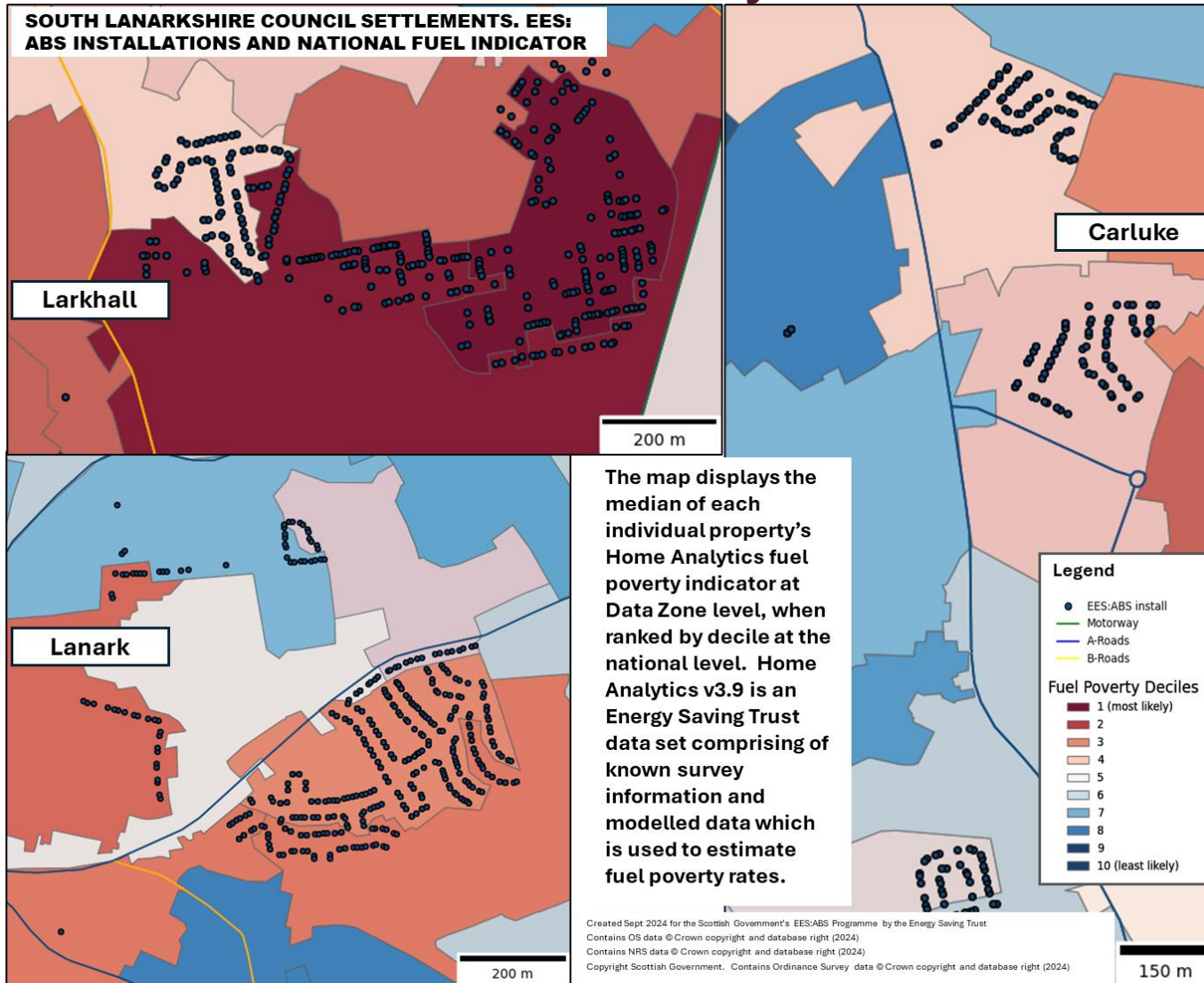


National Scottish Fuel Poverty Indicator I

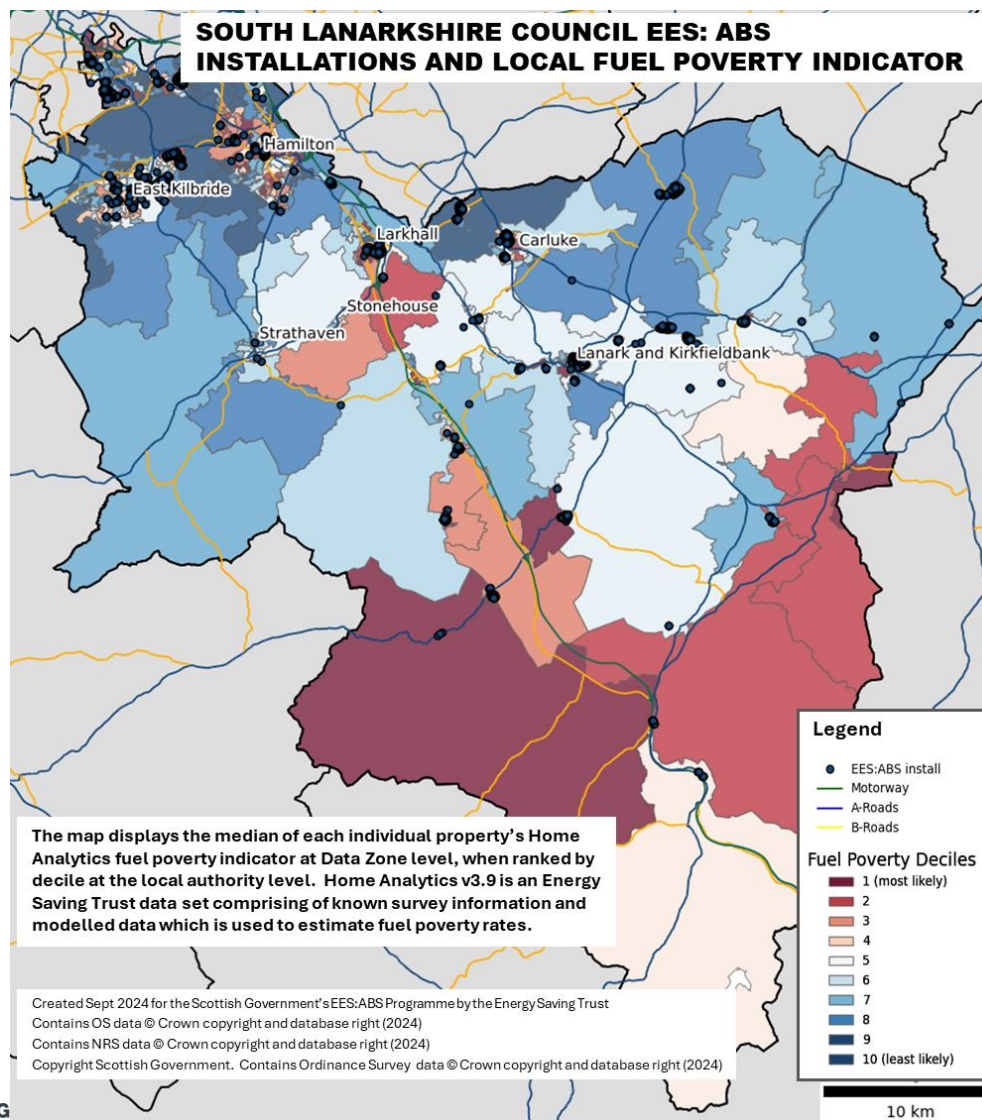


Here we can see the state of fuel poverty in South Lanarkshire Council compared to the rest of Scotland. The blue areas have the lowest fuel poverty rates on a national scale when fuel poverty by data zone is ranked for all local authorities in the country. According to the Scottish Housing Condition Survey (SHCS), the average fuel poverty rate in the South Lanarkshire Council area is around 22% of all homes. This is two percent lower than the Scottish national average (24%) and places the South Lanarkshire Council as 8th of all 32 local authorities in the country.

National Scottish Fuel Poverty Indicator II

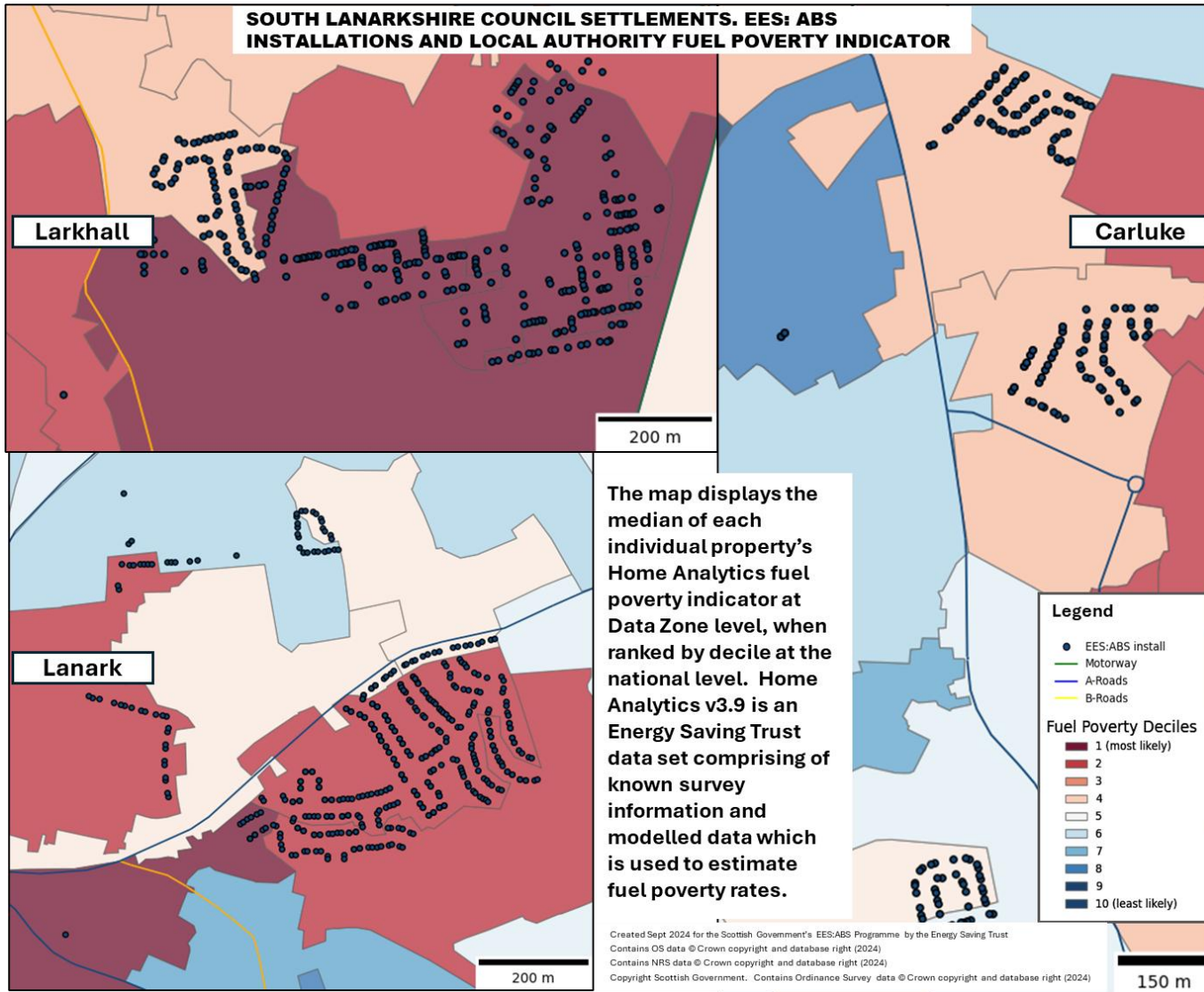


South Lanarkshire Fuel Poverty Indicator I



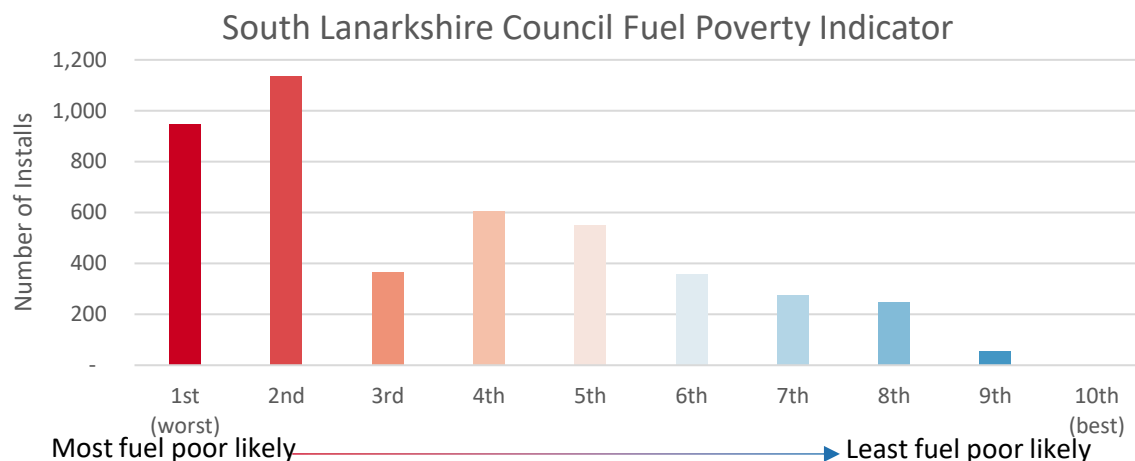
This map demonstrates the probability of fuel poverty by data zone ranked on a local authority level for the South Lanarkshire Council only. The highest fuel poverty areas within the council are shown here in red. It is worth noting that the fuel poverty indicator used here is a snapshot of the situation. Thereby, in some cases the past work completed by energy efficiency programmes, such as EES: ABS, will be contributing to the lower fuel poverty rates at present.

South Lanarkshire Fuel Poverty Indicator II

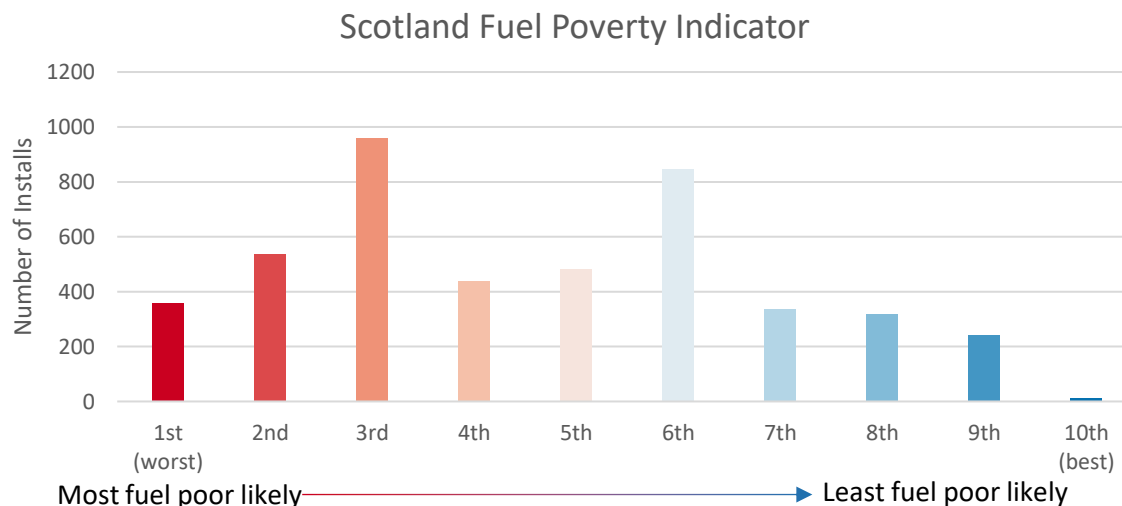


South Lanarkshire Fuel Poverty Indicator III

87.26% of all EES: ABS installs took place within the six most fuel poor ranked data zones as seen in the top illustration. This is looking at the local authority specific fuel poverty indicator for the South Lanarkshire Council.

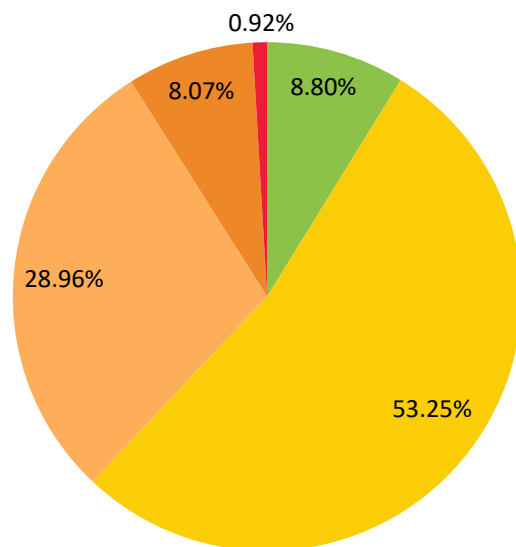


The bottom chart shows the difference when the installs are looked at on a national scale for Scotland. 79.96% of the installs are within the six most fuel poor ranks when compared to the national figures.

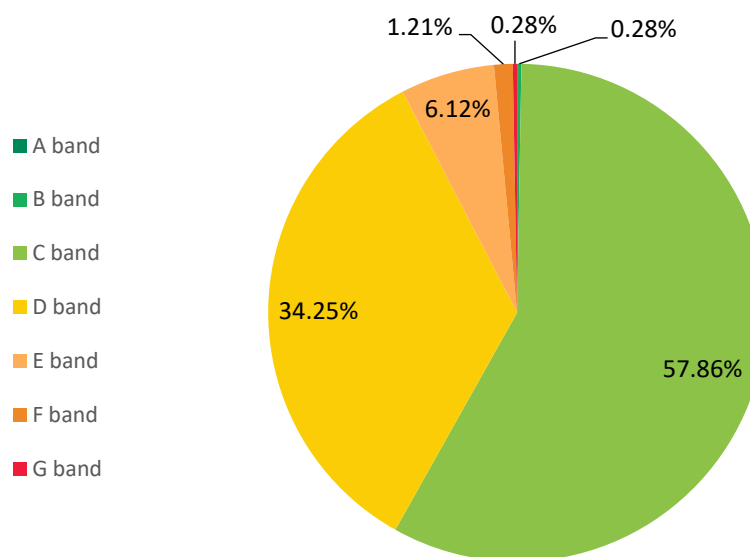


EES: ABS SAP Band Analysis I

EES: ABS properties by pre-installation EPC banding



EES: ABS properties by post-installation EPC banding



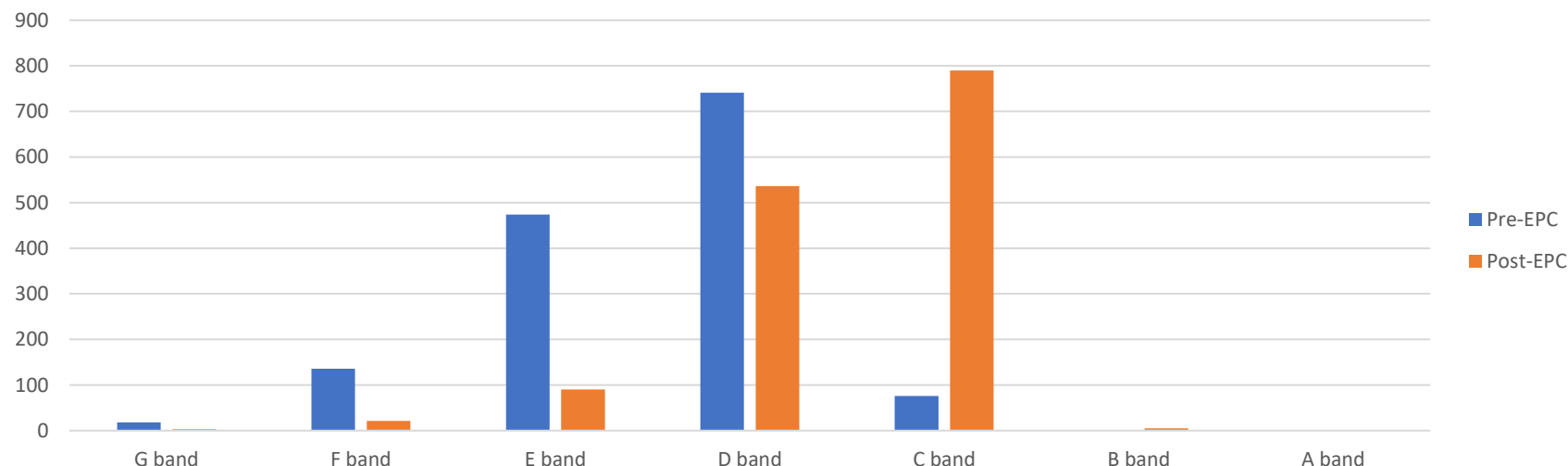
A valid pre-installation EPC was provided for 2,182 properties participating in the programme. 91.20% of these were within the national band D average or lower.

A total of 1,813 participants had a valid post-installation EPC regardless of the validity of the pre-EPC. After the completion of the installs, 58.14% of these properties made it to band C or higher.

EES: ABS SAP Band Analysis II

Out of the 2,185 properties with valid pre-EPCs, a total of 1,655 had a valid pre- and post-installation EPC and can be used for further analysis. 82.72% of these 1,655 properties had a starting SAP band of D or lower. The Post-EPC's show that after the completion of installs, 47.73% of the properties have reached band C and 32.39% reached band D. Five properties also moved up to band B. 6.89% of the properties have a post-installation EPC band of E, F or G despite of the impact of the EES: ABS treatment.

EES: ABS properties by EPC banding



EES: ABS SAP Band Analysis III

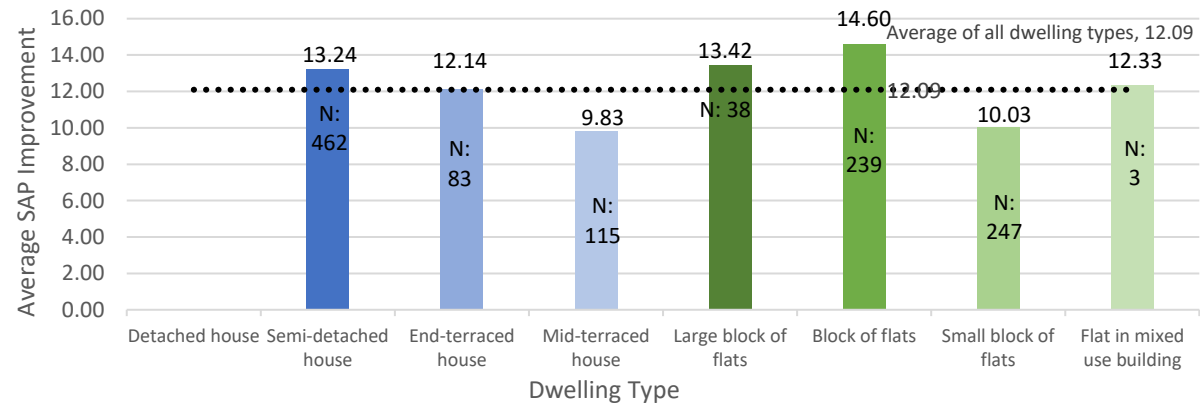
62.3% of the participating properties in the programme increased in SAP score by around 8 to 15 points. The larger SAP increases (19 to 30 points) included in this case study were due to installation of external wall insulation or loft insulation across all dwelling types included in the programme.

EES: ABS Property Count by SAP Improvement



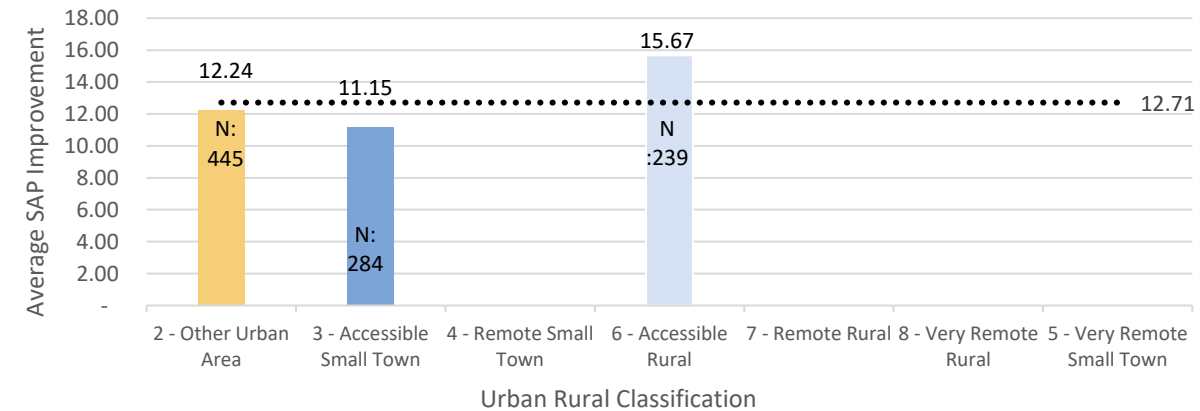
EES: ABS SAP Band Analysis IV

Average SAP improvement by dwelling type



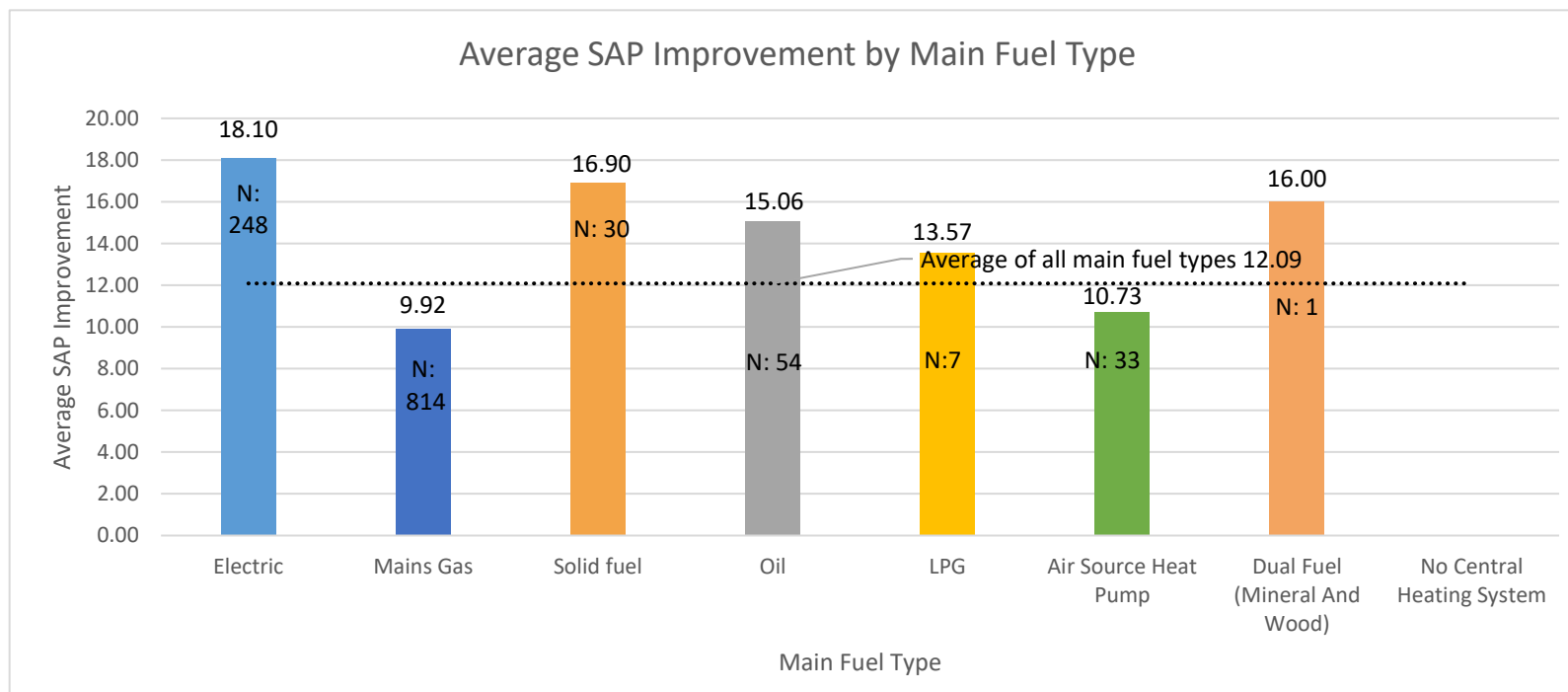
The average SAP improvement for all dwelling types is 12.09. The biggest sample size is for semi-detached houses (N:462) and the average increase for this dwelling type has been 13.24.

Average SAP improvement by urban rural classification



The average SAP improvement for all urban classifications where data was available for further analysis, has been 12.71. The biggest sample size is for other urban area (N:480) where the average improvement was 12.24.

EES: ABS SAP Band and Main Fuel Type



The average SAP improvement for all main fuel types was 12.09. The greatest increase in SAP scores were for properties with electric heating (18.10). The biggest sample size available was for mains gas properties (N:814) where the average improvement was 9.92. One dual fuel property also improved its SAP score by 16.00.

Conclusions and notes

- A variety of measures have been included in the programme since outset and 78.5% of all the installations were external wall insulation.
- The typical participating property is a blend of houses (53.98%) and flats (46.02%) and constructed between 1950 and 1983 (70.4% of all properties).
- 94.82% of the properties included can be found within the six most deprived SIMD areas.
- Most properties had a starting EPC of band D or lower (91.20%) and 58.14% of these properties reached band C or higher.
- The programme had a positive impact on the participating properties as a whole and most properties used for this analysis increased their SAP score between 8 to 15 points.

Sources

Variable	Source	Notes
EES: ABS Measure, Address and Tenure	Local Authority	Held on behalf of the Scottish Government's EES: ABS programme by EST.
Dwelling Type, Construction Age, Council Tax Band, Fuel Poverty Probability	Home Analytics	Combination of EPC and modelled data created by EST. Typically not for publication.
Main heating fuel type, EPC SAP scores and SAP bands	Scottish EPC register	Obtained by cross referencing EPC Report Reference Numbers provided by the local authority with Scottish EPC register extracts
Scottish Housing Condition Survey	Scottish Government	Available online. SHCS 2017-19 used.
SIMD	Scottish Government	Available online. SIMD 2020 used.
Urban Rural Classification	Scottish Government	Available online. 8-Fold classification (2020) used.

Special thanks to Sheila Young, the Investment Officer in South Lanarkshire Council, for providing insight and assistance towards the completion of this case study.

Contacts

Energy Saving Trust EES: ABS Contact:

Christiana Osuolale

Data Management Officer

est_eesabs.reporting@est.org.uk

Scottish Government EES: ABS Contact:

SGareabasedschemes@gov.scot

Jonathan Cairney

Delivery Manager - Area Based Schemes

jonathan.cairney@gov.scot

Josh Kumar

Programme Officer | Area Based Schemes

Josh.Kumar@gov.scot

The South Lanarkshire Council EES: ABS Contact:

Sheila Young

Investment Officer

sheila.young@southlanarkshire.gov.uk