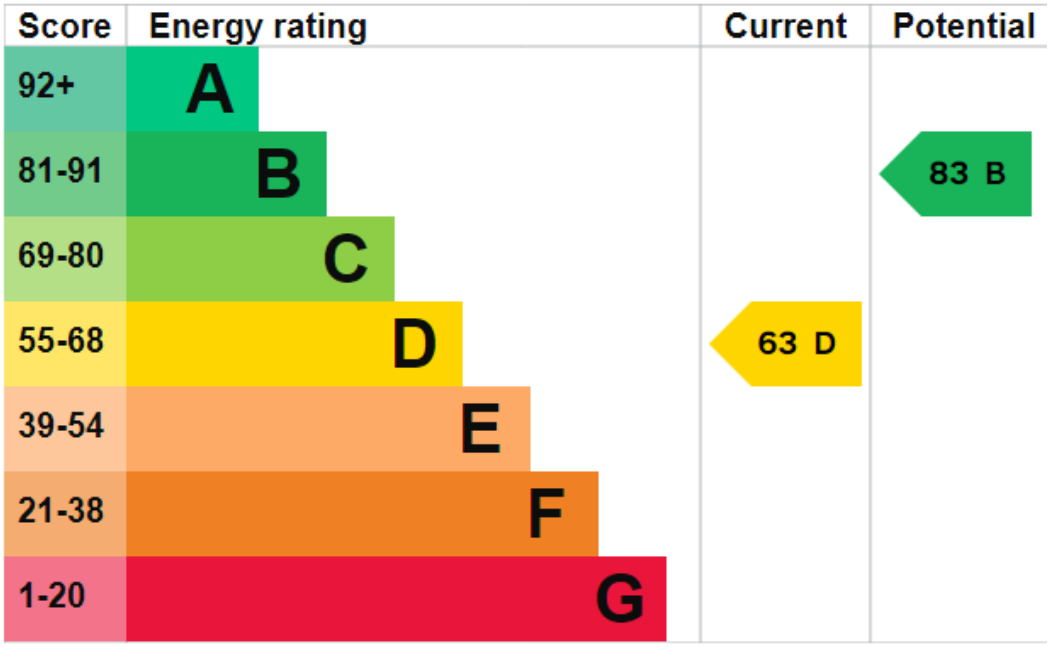
APPENDIX 1
Briefing paper on what is currently known about the energy efficiency of Wirral's housing stock

1. The Energy Efficiency of Wirral's Housing Stock

The energy efficiency of housing stock is expressed in terms of SAP (Standard Assessment Procedure) score. The higher the SAP score, on a scale of 0 to 100, the more energy efficient a property is. Scores are divided into bandings to give an energy rating from G (least efficient) to A (most efficient).

SAP scores and energy ratings are provided on Energy Performance Certificates. They are displayed as in the example below.

Figure 1 – example SAP score and energy rating as displayed on an Energy Performance Certificate



Around 60% of Wirral's dwellings have EPCs, and some of these will be out of date. For those properties without EPCs, to get an overall picture for the borough, data is obtained from different sources to provide modelled EPCs, which have a margin of error for each property depending upon how much data can be obtained for that particular property. The Liverpool City Region Combined Authority has funded access to software known as Pathways which provides actual EPC data and models EPCs for those properties not surveyed. Pathways provides the following split of Wirral dwellings by energy rating.

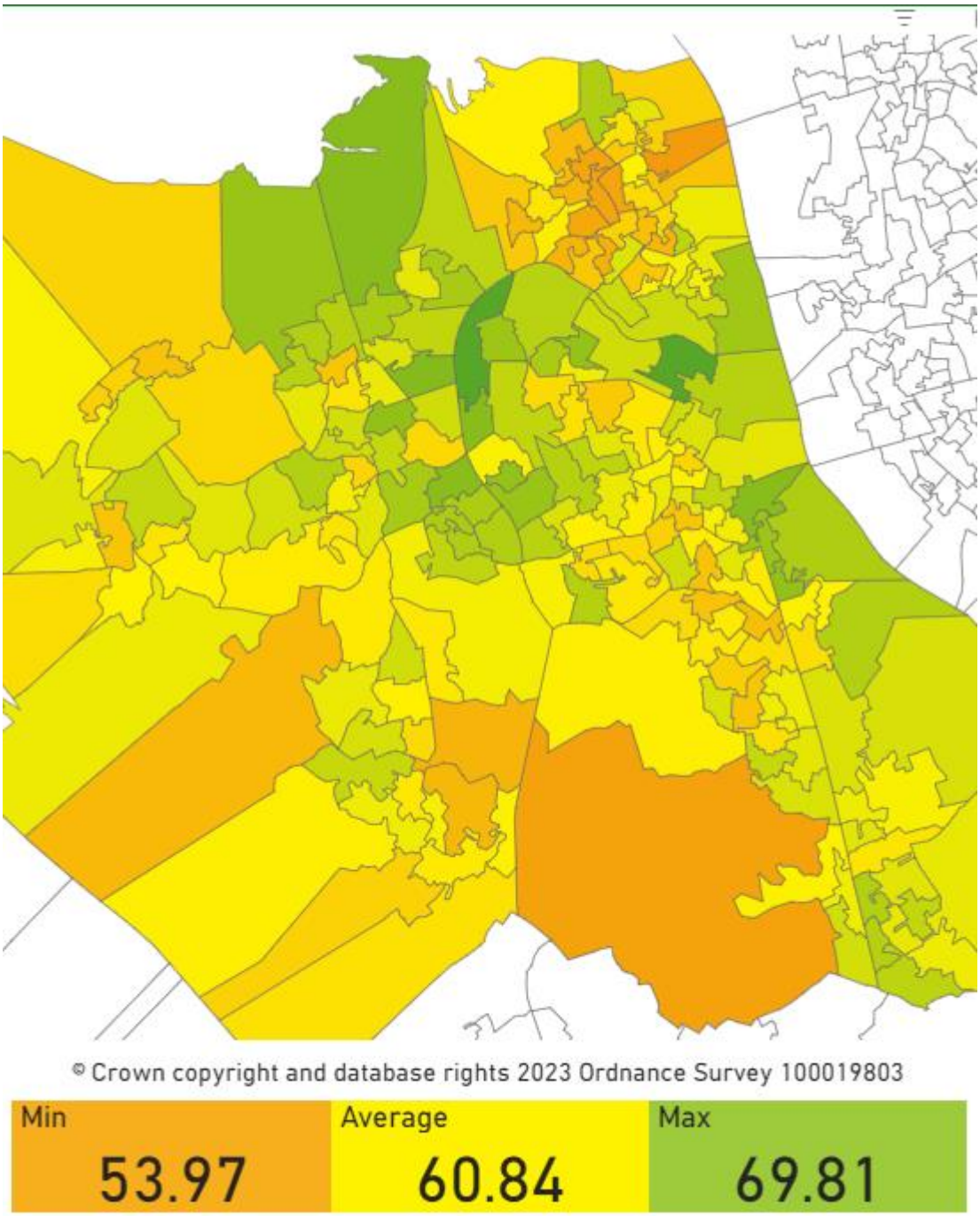
Table 1 – Estimated breakdown of Wirral dwellings by energy rating

Energy Rating	Number of properties	% of housing stock	English Housing Survey 2021 national % for comparison
A-B	1,287	0.9%	3.0%
C	33,350	22.1%	44.5%
D	81,732	54.3%	42.7%
E	30,304	20.1%	7.1%
F	3,552	2.2%	2.2%
G	682	0.5%	0.5%

The table does not indicate a simple link between specific heating and insulation measures and energy performance. The energy performance of a dwelling is determined by a wider range of factors than the heating and insulation measures within the dwelling.

Pathways also provides the map below in Figure 2, showing average SAP ratings for each Lower Super Output Area (LSOA).

Figure 2 – Distribution of estimated average SAP scores by Wirral LSOA



The table below picks out the best and worst LSOAs for estimated average SAP scores. It demonstrates the general geographic distribution of higher SAP scores where there are concentrations of social housing, which are generally more energy efficient, and lower SAP scores in areas containing concentrations of larger, older privately owned housing which are least efficient.

Table 2 – Top 5 best and worst Wirral LSOAs for estimated average SAP scores

Bottom 5 LSOAs for Average SAP scores			Top 5 LSOAs for Average SAP scores		
LSOA Name	**Ward**	**Estimated Average SAP**	**LSOA Name**	**Ward**	**Estimated Average SAP**
Magazine Promenade	New Brighton	53.97	Beechwood North	Bidston and St James	69.81
Clatterbridge West	Clatterbridge	54.47	Birkenhead East Float	Bidston and St James	69.79
Liscard North	Wallasey	54.55	Moreton Sandbrook	Leasowe and Moreton East	67.12
Earlston Gardens West	Liscard	54.57	Beechwood South	Bidston and St James	66.98
Wallasey Elleray Park	Wallasey	54.62	Leasowe Castle	Leasowe and Moreton East	66.97

Key characteristics that contribute towards the energy efficiency performance of Wirral's housing include the following:

- 51% of homes have cavity walls, less than the regional and national averages (74% and 65% respectively). Of these, 78% are insulated;
- 46% of homes have solid walls, more than the regional and national averages (21% and 28% respectively). Of these, just 12% are insulated
- Half of Wirral's properties have at least 150mm thickness of loft insulation installed, which is higher than both the regional (46%) and national (39%) averages. Wirral had a programme of free loft insulation installation during 2010-13 which has probably contributed to this being higher. Around 13% of homes do not have lofts;
- Only 5% of dwellings have floor insulation, which aligns with regional and national averages. 35% of Wirral's homes have suspended timber floors, and although slightly disruptive, can easily be insulated when compared with solid floors;
- A large majority of Wirral properties (92%) use mains gas as their primary heating fuel (10% more than the national average), with only 6% on electricity and 3% on other fuel types;
- In Wirral, nearly 95% of properties have doors and windows that are predominantly double or tripled glazed, which is characteristic of the regional trend and slightly higher than the national average;
- Approximately 41% of residential properties in Wirral are suitable for the installation of solar systems (based on roof orientation, property type and listed building status). This is lower than both the regional (45%) and national average (49%).
- 3% of homes in Wirral do not have cavity or solid walls and are either system-built or timber framed.
- Around 2,250 homes in Wirral have photovoltaic panels installed under the old Feed-in tariff scheme

The report produced by Energy Saving Trust in 2020 for Wirral Council states that in order to bring as many dwellings up to a Band C as technically possible, around 340,000 individual measures are required to fulfil the Cool Wirral 2030 target. This equates to 34,000 a year, around 10 times the number delivered on average over the past five years. To give an indication of what type of measures are required, they are set out in the table below. LED lighting upgrades have been excluded, which are required in most homes and which do also contribute to improving EPC scores but can generally be installed or provided at the time of a major measure installation. PV has also been excluded and the approach taken was one of

“fabric first”, i.e. upgrading the insulation of the fabric of the building as primary measures, followed by improvements to heating systems.

Table 3 – Energy efficiency measures required and able to be installed in Wirral’s housing stock to lift all dwellings to Band C or above.

Measure	Approx. Number
Loft insulation	37,000
Internal wall insulation	26,000
Underfloor insulation	26,000
External wall insulation	17,000
Cavity wall insulation	12,000
Heat pumps	3,000
Thermostatic Radiator Valves	50,000
Replacement boilers	45,000
New external doors	40,000
Draught-proofing external doors	40,000
Glazing	40,000
Radiator upgrades	5,000
Room-in-roof insulation	1,500
Total	342,500

Recent past delivery (and forecast for 2023/24) on low carbon measure installations has been as follows (approximate numbers, where known activity has taken place):

Year	Energy Company Obligation (average/year)	Local Authority Delivery 2	Sustainable Warmth Fund	Solar together	Known social housing programmes	Total installs
2017/18	3,400	0	0	0	0	3,400
2018/19	3,400	0	0	0	0	3,400
2019/20	3,400	0	0	0	0	3,400
2020/21	3,400	0	0	0	100	3,500
2021/22	3,400	150	0	0	0	3,550
2022/23	3,400	350	530	200	300	4,780
2023/24 (estimates)	3,400	0	30	100	44	3,574