



# **Retrofit and Carbon Reduction Update**

For consideration by: Housing Scrutiny Commission

Date: 28 February 2022

Lead Director: Chris Burgin

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### **Useful information**

- Ward(s) affected: potentially all
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## **1. Summary**

This report has been prepared to update commission members on what has happened since the last report was bought on the 12 April 202.

## **2. Recommended actions/decision**

That the contents of this report be noted and that commission members make any observations and comments.

## **3. Detailed report**

### **What did we say we were going to do in April 21**

*We now need to do more to ensure we meet the Councils target to be carbon zero by 2030 and to try and achieve this we are:*

#### ***For the housing stock:***

- *Council houses make up 16% of the total housing stock in the city, across all tenures. Our average EPC rating is C which is good, however this means that we have some properties that are performing below this level and we need to take action to improve the performance of these properties.*
- *We are commissioning environmental experts to carry out a review of our stock so that we can agree a road map to carbon savings and energy efficiency.*
- *We need to identify a list of measure per house type that need doing to make sure that each are as efficient as possible, this will help in two ways, firstly we can tailor the capital programme to help deliver these improvements where possible. Challenge ourselves and hopefully make better decisions, for example we may fit different boilers or increase the window specification to fit triple glazing as standard.*
- *It will also ensure we know what measures we need to carry out when we have future opportunities for bidding for grants to carry out energy efficient measure, rather than being reactive, we will know exactly what each property type will need and we will have models for a whole house approach as well as an incremental approach.*
- *Therefore, the plan is to approach the issue in two ways, by securing funding to deliver schemes and by maximising business as usual activities. As a result of this work we will know exactly what we need to do to our housing stock to make it as*

*energy efficient as it can possibly be and we will be able to ensure we tackle the worst performing properties first*

### **What has happened since April 2021.**

The decision to appoint consultants to identify what we needed to do to our stock to make them more energy efficient has changed. We decided that it would be best if we directly employed somebody to do this in house and we have. A new Senior Technician post was created in Technical Services and the post holder has been tasked with delivering on our previous commitments.

To meet our commitments, we have decided on the following steps:

Rather than rely on separate reporting mechanisms it has been agreed that all our data should sit in the same place, on Northgate, the divisions IT system, so it has been agreed that two new modules will be purchased, Assets and Energy, this means we will be able to lodge EPC's and model the impact of energy works on our stock to ensure the works we are doing are targeted.

We also need a comprehensive delivery strategy, and the new post holder is currently working on this, and it is intended to bring this to a future meeting of the HSC for comments and observations.

We also need to secure funding and we have been busy bidding for government grant to deliver retrofit schemes:

### **Update report on GHG – LAD phase 2**

#### **Background:**

During July 2020 central government through the Department for Business, Energy & Industrial Strategy (BEIS) announced the opportunity for local authorities to bid for funding through Green Homes Grant - Local Authority Delivery (GHG – LAD) to improve energy efficiency and reduce carbon emissions to domestic housing stock. This being part of a government commitment to provide £3.7 Billion in funding over the next 10 years.

As an authority we were successful in acquiring approximately £4.5 Million to improve domestic stock for owner occupier and private sector rented homes through Phases 1a and 1b of GHG-LAD within the city.

Following on from the roll out of GHG-LAD Phase 1a & Phase 1b, BEIS launched Phase 2 of the available funding to support their programme to deliver low carbon measures to low income households.

#### **GHG-LAD Phase 2:**

Phase 2 of the GHG-LAD programme included the opportunity to bid for funding to support works to social housing stock.

We subsequently submitted a bid for GHG-LAD Phase 2, which was successful and has provided capital funding of £1.95 Million to support further solid wall insulation and Photovoltaic panels to generate renewable electricity.

The eligibility criteria for the property and householder are the same as Phase 1b; this enabled us to include properties from EPC band D to be eligible for solid wall insulation upgrades which will be one of the main measures we wish to carry out as part of our 'Fabric First' approach to improving the least energy efficient properties in our stock portfolio. The bid also included further support for owner occupier households, solid wall insulation to our own LCC council stock and support for landlords in the private rented sector.

High national demand and current shortages in both skilled labour and the availability of materials has resulted in significant increases in the cost of carrying out solid wall insulation (SWI) and related improvement measures but our available match funding will enable us to carry out SWI improvements to approximately 80 of our social stock homes. Funding for private sector properties will enable SWI to be installed to a further 45 properties.

Installation works to LCC stock are now commencing and are programmed to be completed by early June 2022. The SWI works are targeted on four main streets, this will effectively complete SWI improvements to our housing stock in the Saffron area of the city.

### **Social Housing Decarbonisation Fund (SHDF):**

During the autumn of 2021 BEIS announced the launch of the first wave of the Social Housing Decarbonisation Fund (SHDF), which is specifically targeted for local authorities to bid for funding to provide deeper retrofit solutions to improve energy efficiency and reduce carbon emissions from their social housing stock.

This also afforded Local Authorities seeking to upgrade their own social housing stock, to work in partnership with Housing Associations to upgrade their social housing and were encouraged to apply for funding.

We were encouraged by a number of local HA's contacting us to be part of a consortium bid, where we would be the lead partner. Partners for our bid were NCHA, Midland Heart, Pinnacle, Maynard and Ross Walk, together with ourselves. The primary measure all parties wish to implement is solid wall insulation (SWI) to support energy efficiency improvements and carbon reduction to their worst performing stock. Additionally we have included an element of loft insulation top ups and the inclusion of air source heat pumps to be installed in our refurbishment of The Leys seven storey block which include 33 individual flats.

We have subsequently submitted a bid to BEIS (which includes SWI to 177 of our LCC stock) for £4.5 million of funding, which together with consortium member contributions has a total value of £6.9 million. The funding will enable solid wall insulation to be carried out to improve 377 homes within the city.

We, along with all other bidders are currently awaiting confirmation of our bid from BEIS.

### **Photovoltaic Panels (PV) Feasibility Study:**

We are currently conducting a feasibility study on the potential to install photovoltaic panels (PV), together with battery storage to four of our high-rise blocks in the St Peters area of the city - Maxfield House in Neptune Close, Clipstone House in Taurus Close, Framland House in Pluto Close and Gordon House in Jupiter Close.

Renewable electricity generated would provide power to operate way lighting, laundry facilities and power lifts.

The works would be carried in two stages; Stage 1 - Fitting of panels, to be sited onto the roofs of the blocks, Stage 2 – Review of generation and consumption data after 12 months subject to which installation of battery storage units

### **New build council houses:**

Commission members have been previously briefed on the energy efficiency of the phase 2 new build properties; the following is a summary;

#### **Layout and Orientation:**

The layout of the scheme has been designed to ensure that as many plots as possible have a southeast or southwest orientation to maximise solar PV generation. However, it has not been possible to do this on all plots. Main living rooms have also been designed to have a dual aspect to maximise the potential for solar gain and cross flow ventilation to limit any overheating

All new homes will be built to better thermal efficiency standards than the current building regulations require, insulation levels will be higher in the walls, roofs and floors and this will ensure that overall, the improvement is 70% higher.

#### **Air to Air Heat pump:**

An air source heat pump takes heat from the air and boost it to a higher temperature, the pump needs electricity to run but should use less electricity than the heat that it generates

#### **Solar PV panels:**

PV panels convert solar radiation into direct current electricity. They are a very good source of renewable energy as they convert the most abundant source of energy on the earth, the sun, into the most useful source of energy, electricity.

PV panels are silent in operation, they have no moving parts, have low levels of maintenance and a long-life expectancy. They are connected into the grid via an inverter and more recently battery technology has improved so the electricity can now be stored.

Solar PV is more efficient in lower temperatures; they should be located to avoid over shading and preferable face due south at an angle of 35 degrees. The output of PV panels is measured in KWP, kilowatts peak.

We are proposing installing 6 x 250-watt panels to each of the roofs, with the exception of two plots that will need 8 panels to achieve the required EPC 'A' rating

All dwellings will have an EPC rating of A

This is an improvement on the energy efficiency of the 29 phase 1 properties, however this improvement for phase 2 should not be seen as a static list of measures, each future phase will be assessed individually, lessons learnt, and new technology and ideas incorporated.

#### **4. Financial, legal, equalities, climate emergency and other implications**

##### 4.1 Financial implications

n/a

##### 4.2 Legal implications

n/a

##### 4.3 Equalities implications

n/a

##### 4.4 Climate Emergency implications

Housing is responsible for 33% of carbon emissions in Leicester. Following the city council's declaration of a Climate Emergency in 2019, and its aim to achieve carbon neutrality, addressing housing emissions is a vital part of the council's work. The council has the most direct influence within its own housing stock, but also needs to do all it can to support decarbonisation within other tenures, as illustrated within the report.

As such, the current and proposed programmes detailed within the report are making an important contribution towards reducing emissions from housing in the city. This includes through the fitting of measures including insulation, low carbon heating and solar PV panels, and in the construction of new low carbon housing. As noted within the report, seeking further funding and opportunities will be crucial in continuing and seeking to scale up this work.

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