

Getting started with energy efficiency improvements







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# What is 'whole-house retrofit'?

- An approach to the installation of measures that considers the requirements of the entire home or building
- Occupancy comfort, health & wellbeing
- Fabric first
- Interfaces between measures
- Avoiding unintended consequences
- Ventilation





# **Ecofurb process**

- Survey home
- Analyse potential energy efficiency measures
- Recommendations made in Ecofurb Plan
- Client discussion
- Installer referrals (RetrofitWorks Co-op)



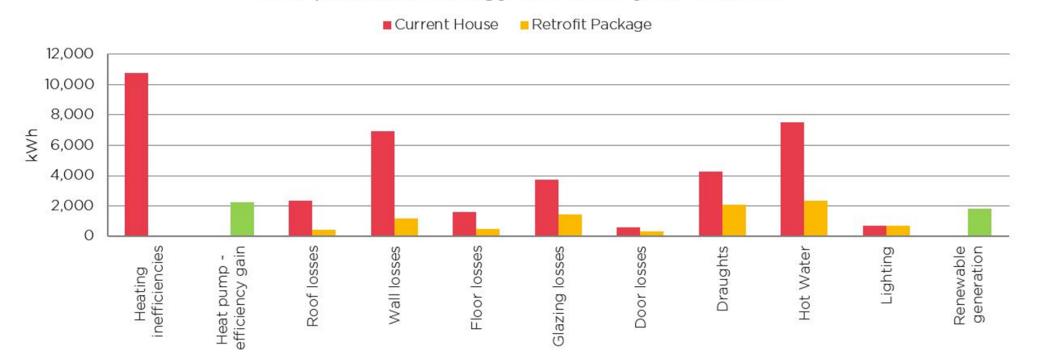
### Whole House Plan

#### 7. What you can achieve

Below are the projected energy performance improvements for your home, based on our evaluation:

Ť	Comparison	Energy Rating	Fuel Bills	tCO <sub>2</sub>
	Before	33 F	£3,850	7.15
	After	82 B	£1,130	0.35

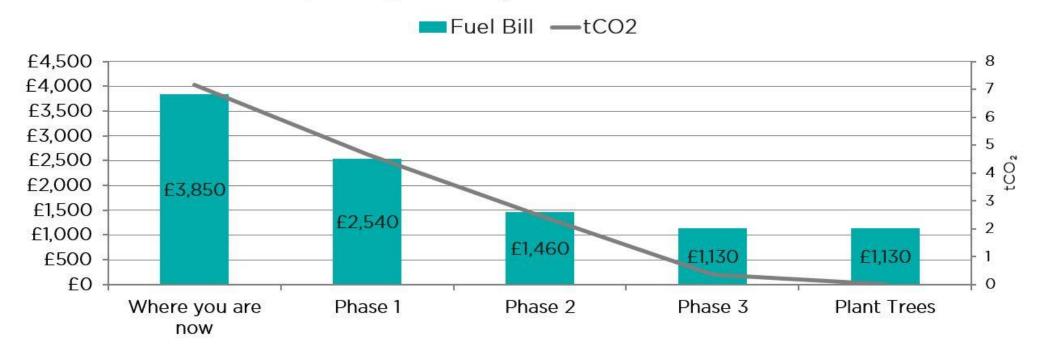
#### Your potential energy use after your retrofit



#### 8. Phasing your improvements

Summary of Packages	Estimated Costs Per Phase	Energy Rating	Fuel Bill	tCO <sub>2</sub>
Where you are now		33 F	£3,850	7.15
Phase 1:	£4,620	54 E	£2,540	4.66
Phase 2:	£70,110	73 C	£1,460	2.46
Phase 3:	£25,250	82 B	£1,130	0.35
Combined savings Combined reduction			£2,720 saving 71%	6.81 saving 95%
Trees that you could plant to bring the remaining 0.35 tC	O <sub>2</sub> to zero:15			

#### How the phasing affects your annual bills & emissions



#### 8. Phasing your improvements (continued)

The measures recommended below aim to significantly reduce your energy use, annual energy costs and CO<sub>2</sub> emissions. This demonstrates a good range of the possibilities available. We can of course limit recommendations to your more immediate needs to fit within your current budget.

Phase 1 Measures	Estimated Costs	Energy Rating	Fuel Bill	tCO <sub>2</sub>
Where you are now	Per Measure	33 F	£3,850	7.15
Remove secondary heaters - gas	£360	41 E	£3,280	5.98
Full controls (TRVs and room thermostat) from programmer	£420	45 E	£2,980	5.40
Low energy lighting	£120	47 E	£2,900	5.39
Block open chimneys	£840	51 E	£2,730	5.05
300mm loft insulation from 25mm	£2,880	54 E	£2,540	4.66
After Phase 1 Measures		54 E	£2,540	4.66
Package Cost & % Improvements	£4,620		34%	35%

Phase 2 Measures	Estimated Costs	Energy Rating	Fuel Bill	tCO <sub>2</sub>
After Phase 1	Per Measure	54 E	£2,540	4.66
Insulated floors (150mm) from 1900-1929 suspended timber floor	£7,340	56 D	£2,410	4.39
A+ double glazed casement windows from single glazing	£37,800	61 D	£2,140	3.84
Two Part L insulated doors (all doors)	£4,750	62 D	£2,110	3.78
Humidity controlled kitchen extractor	£750	62 D	£2,110	3.78
Humidity controlled extractors per wetroom	£750	62 D	£2,110	3.78
External insulation (150 mm) to 1900-1929 solid walls	£18,720	73 C	£1,460	2.46
After Phase 2 Measures		73 C	£1,460	2.46
Package Cost & % Improvements	£70,110		43%	47%
Cumulative Cost & % Improvements	£74,740		62%	66%

Phase 3 Measures	Estimated Costs	Energy Rating	Fuel Bill	tCO <sub>2</sub>
After Phase 2	Per Measure	73 C	£1,460	2.46
Install PV system where potential has been identified	£6,750	82 B	£1,100	2.22
ASHP (45 degree emitters) with enhanced existing radiator central heating and hot water, from D rated gas boiler	£18,500	82 B	£1,130	0.35
After Phase 3 Measures		82 B	£1,130	0.35
Package Cost & % Improvements	£25,250		23%	86%
Cumulative Cost & % Improvements	£99,990		71%	95%



# Referral measures

- New doors and windows
- Suspended timber floor insulation
- Loft insulation at joists
- Flat roof insulation
- External Wall Insulation (EWI)
- Internal Wall Insulation (IWI)\*
- Solar panels (PV) and battery storage
- Heat pumps
- Ventilation upgrades



## Finding installers



www.trustmark.org.uk

- TrustMark the Government endorsed quality scheme for work carried out in or around your home
- Microgeneration Certification Scheme (MCS) certifies low-carbon energy technologies and contractors - mcscertified.com



