Retrofit Hampshire

Helping Hampshire homeowners make their Homes more Energy Efficient

"Trusted, Independent, Free Advice"

Peter Moss

Energy Pillar Lead – Greening Campaign

Chair – Hampshire Retrofit Consortium

Trustee – Petersfield Climate Action Network

COMMUNITY ENERGY SOUTH

tec the Environment Centre (tec)

GREENING CAMPAIGN

WinACC

Energy Alton

RetrofitSouthampton

Dragonfly POWER

Building a low carbon community...

PeCAN

Hitting the cold spots - helping you to stay warm

Affordable Warmth Support

Dealing with Energy Poverty

Hampshire County Council

the Environment Centre (tec)
you ▪ your business ▪ your community

What is Westbourne's carbon footprint?

This figure shows the annual carbon emissions (measured in tonnes CO_2e^2) emitted as a result of the different activities that residents within your ward's boundary engage in – from heating to eating.

https://impact-tool.org.uk/

- Homes are 34% of emissions
- 5.4t CO_2e^2 per household annually
- £2580 annually (average)
- **Mostly heating (space heating and hot water)**
- Combination of Oil, Gas and Electricity

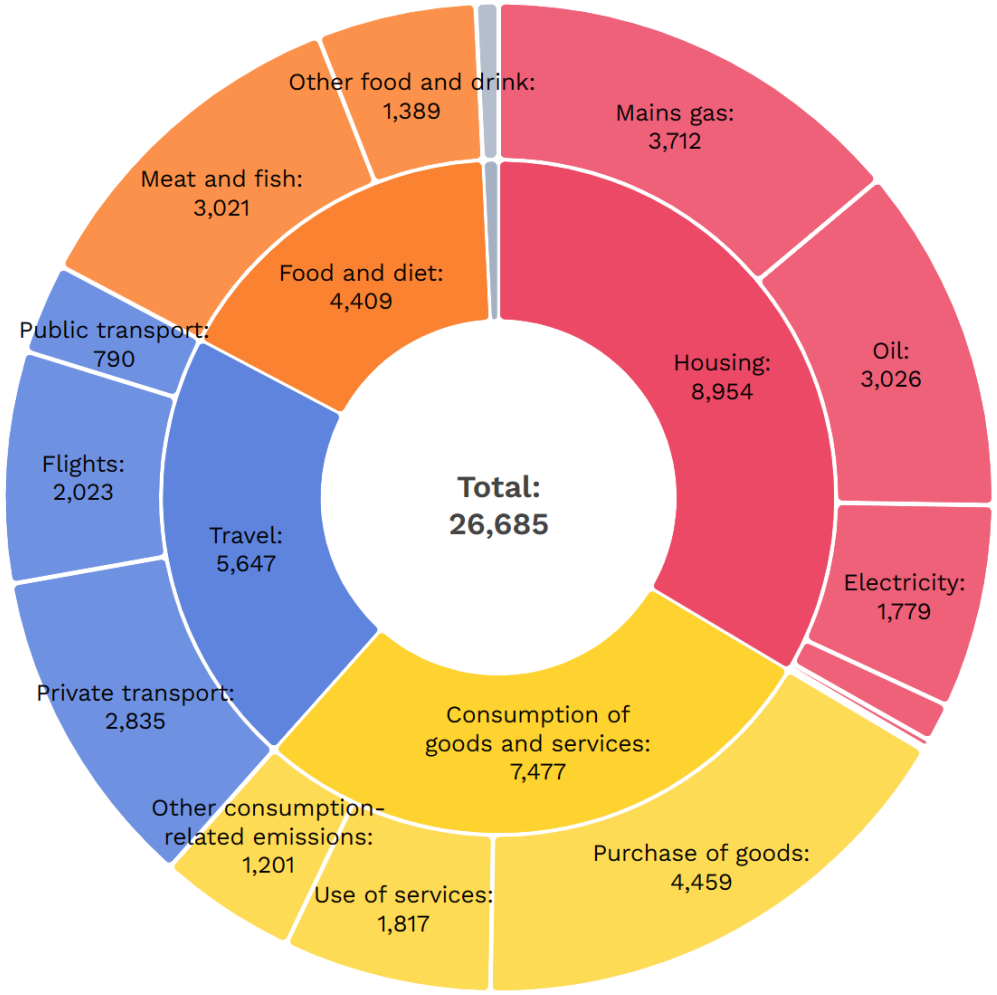
Housing
Emissions resulting from residents' use of energy in their homes.

Food and diet
Emissions resulting from the consumption of food and drink products by residents.

Travel
Emissions resulting from the transport choices & behaviours of residents.

Waste
Emissions resulting from the management of waste generated by residents.

Consumption of goods and services
Emissions resulting from the purchase of goods and the use of services by residents.



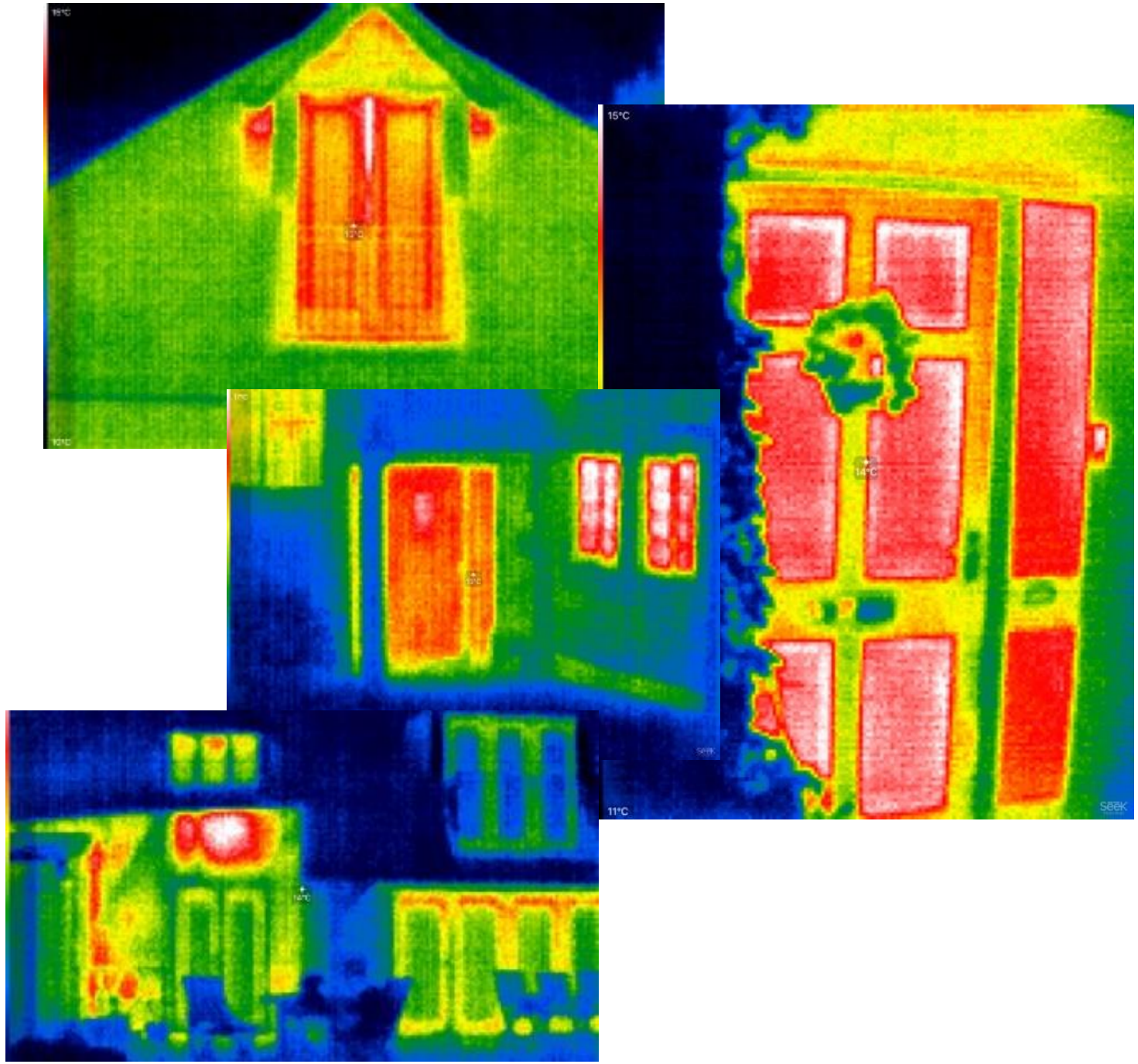
Goods – all household goods (not food), including homeware, toiletries, medicines, furnishings, electronic goods, appliances, & large items such as cars.

Services – use of services, including the maintenance and repair of home, vehicles and other equipment, banking and insurance, medical services, treatments, education costs, communications (e.g. TV, internet and phone contracts), and other fees and subscriptions.

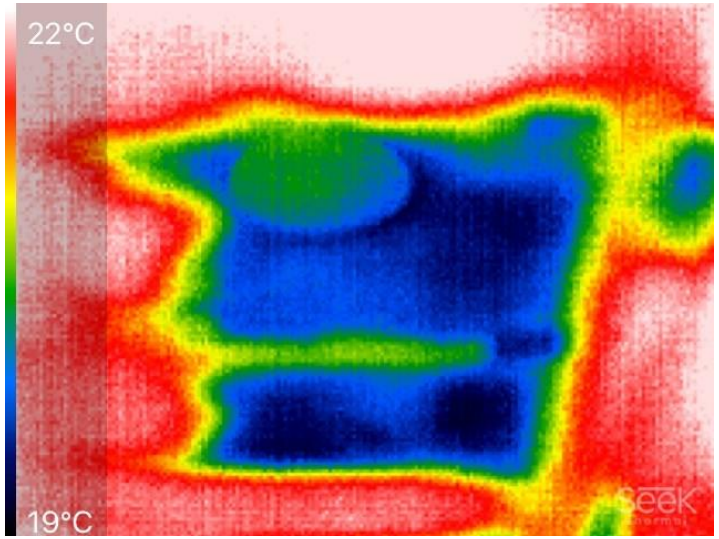
Other – leisure, entertainment, sporting or social activities.

Heat Loss

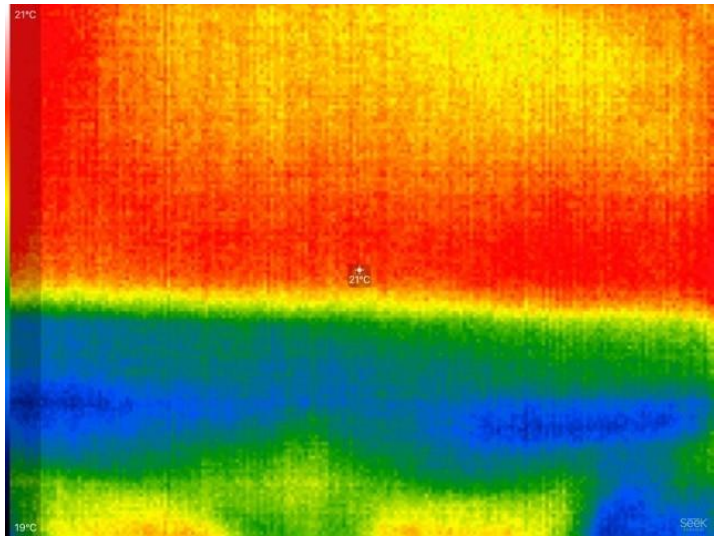
- Heating is the largest contributor to energy bills during the winter months.
- When it is cold outside ALL houses lose heat through the roof, walls, floor, windows, and doors.
- How much heat is lost drives how much heat you need to produce to keep your home warm.
- So minimising heat loss is one of the most effective ways of reducing your bill.
- Some examples of heat loss:



Example thermal images (interior)

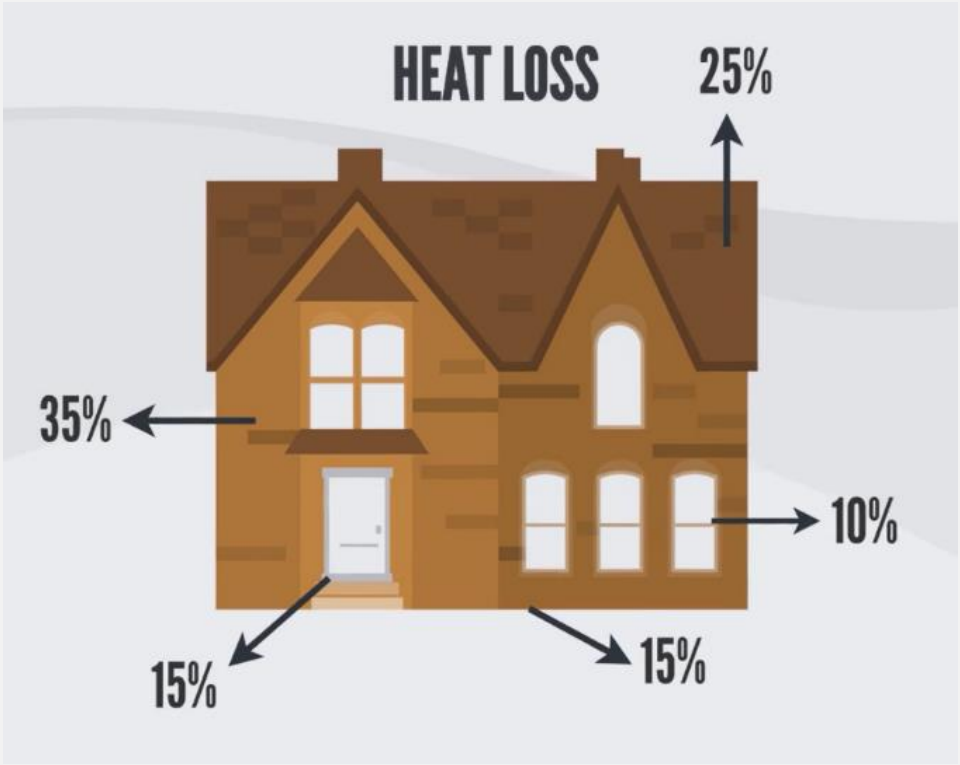


Picture of a ceiling – insulation removed to install a light fitting, causing heat loss (blue areas)



Picture of a ceiling – shows uninsulated part of ground floor extension

Top tips: keep the heat in



Keep the heat in with

- Loft insulation
- Wall insulation
- Double glazing
- Floor insulation

Do-it-yourself:

- Draught proofing
- Thermal curtain liners
- Reflective radiator foil
- Hot water tank and pipe lagging

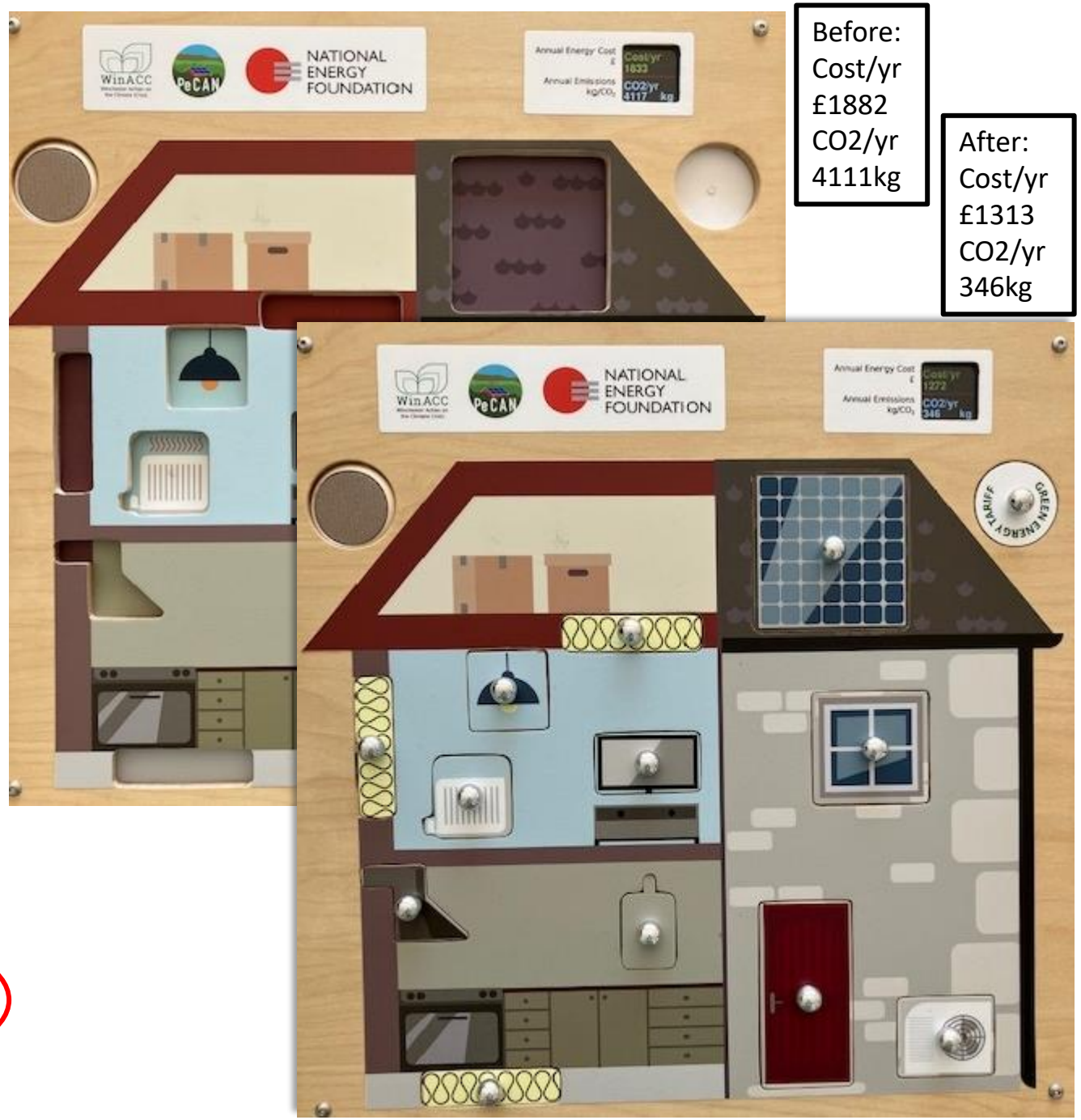
Simple Home Hacks or Full Retrofit?

1. Solar Panels
   - And a Battery
2. Loft Insulation
3. Windows & Doors
4. LED Lights
5. Lag your hot water tank
6. Use less water
7. Insulate your walls
8. Smart Meter
9. Energy Efficient Appliances
10. Draught Proofing
11. Adjust your thermostats (install TRVs)
12. Collect rainwater
13. Install a Heat Pump
14. Charge your electric car at home
15. Insulate your floors
16. Adapt your garden

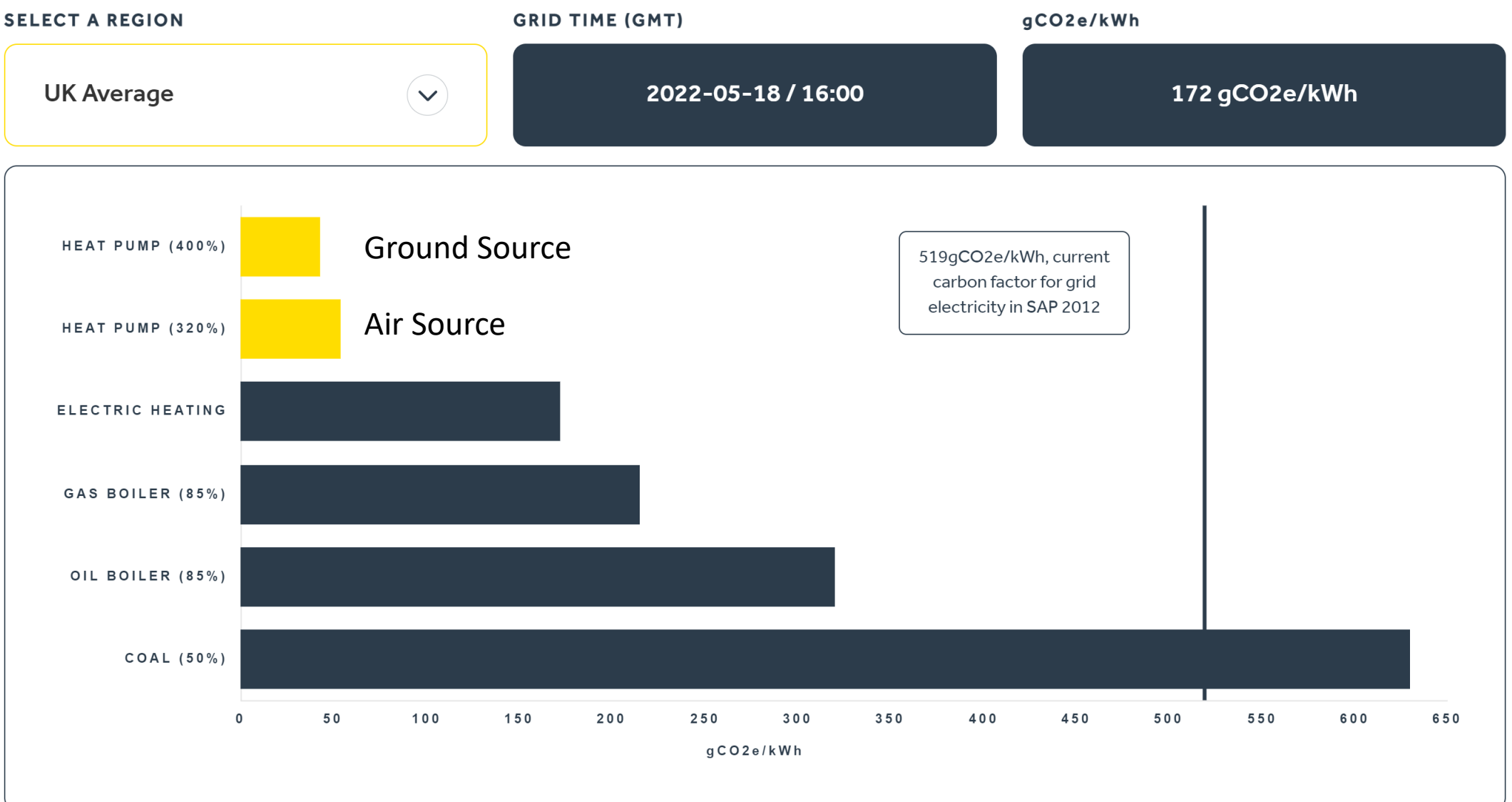
https://www.hart.gov.uk/impact-hart/homes/grants-and-advice

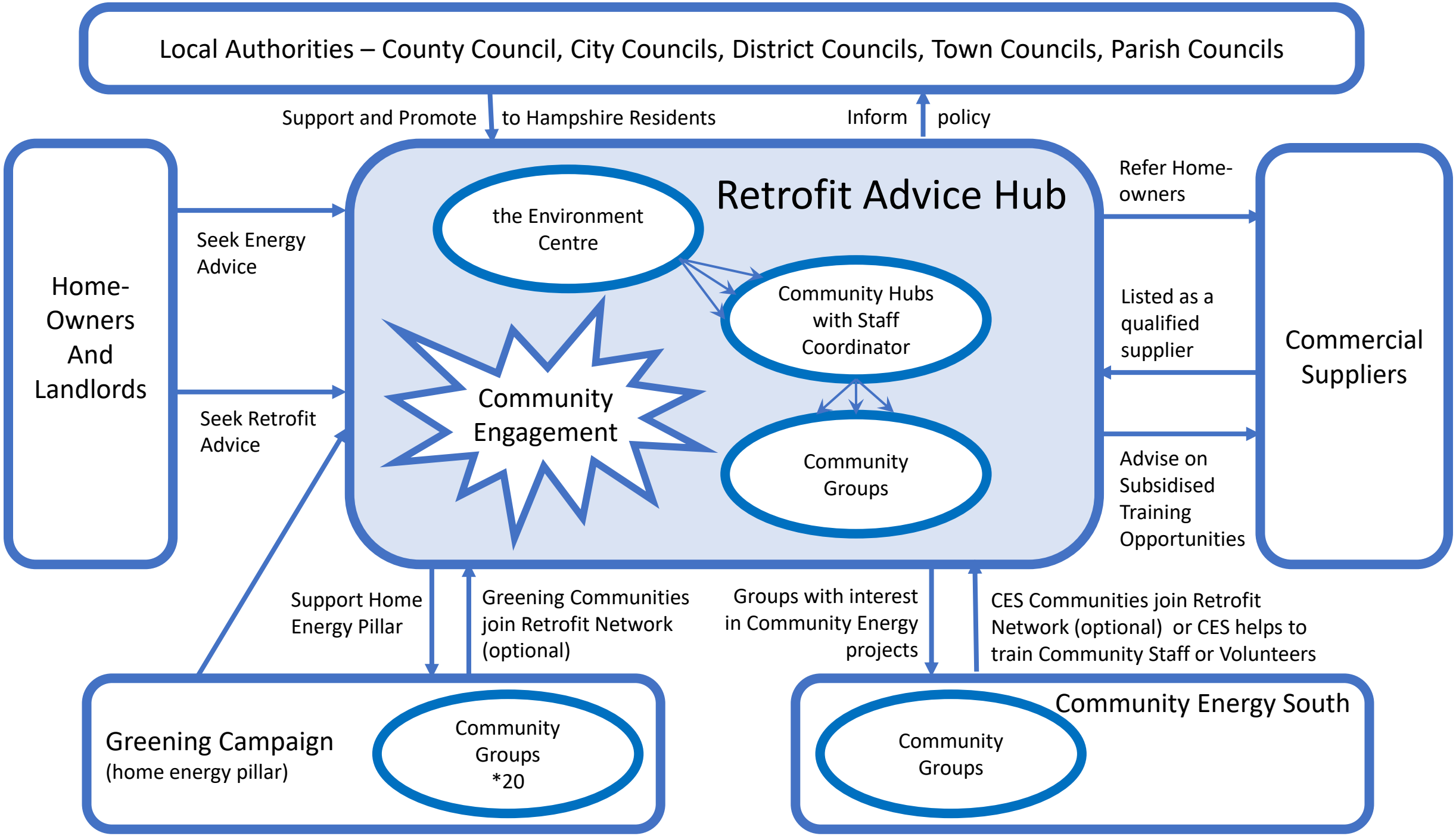
A Simulation for an "average" 3 bed house

Retrofit Measure	Cost/yr £	CO2/yr kg
Starting Point	1626	4111
Fully Insulate (Loft, Walls & Floor)	1274	2894
Upgrade windows and doors (remove draughts)	1190	2602
Heating Controls, LED Light Bulbs, Switch off Appliances	1078	2436
Install Solar Panels (a battery improves yield)	876	2239
Install a Heat Pump and Remove Gas Boiler	1178	346



Why are heat pumps so carbon efficient?




Local Authorities – County Council, City Councils, District Councils, Town Councils, Parish Councils
Support and Promote
to Hampshire Residents
Inform
policy
Home-Owners And Landlords
Seek Energy Advice
Seek Retrofit Advice
Retrofit Advice Hub
the Environment Centre
Community Hubs with Staff Coordinator
Community Engagement
Community Groups
Refer Home-owners
Listed as a qualified supplier
Advise on Subsidised Training Opportunities
Commercial Suppliers
Support Home Energy Pillar
Greening Communities join Retrofit Network (optional)
Groups with interest in Community Energy projects
CES Communities join Retrofit Network (optional) or CES helps to train Community Staff or Volunteers
Greening Campaign
(home energy pillar)
Community Groups *20
Community Energy South
Community Groups

Next Steps…

Explore how to make your home more energy efficient

Some places to go:
https://environmentcentre.com/
https://www.cse.org.uk/
https://petersfieldcan.org/home-energy
https://www.winchester.gov.uk/historic-environment/historic-buildings-and-energy-efficiency
https://www.hart.gov.uk/impact-hart/homes/grants-and-advice

There are many others. Our goal is to provide a Retrofit Advice Service for Hampshire.

Decide to act

Need professional help

Decide to implement measures yourself or using someone from lists of qualified local professionals

- DIY Measures
- Reach out local handymen
- Reach out to local installers (list available)

Decide to act

Reach out to local Retrofit Coordinators (list available)

Review retrofit plan and select measures to implement

Decide to get a retrofit plan using someone from our list of qualified local retrofit coordinators

‘Whole House Retrofit Plan’ (WHRP)

- Medium Term Improvement Plan to BSI PAS2035 “Retrofitting dwellings for improved energy efficiency” – Gov endorsed approach
- Produced by an accredited ‘Retrofit Coordinator’ (Level 5 Diploma)
- Fully independent
- Retrofit blueprint towards net zero by 2050
    - Risk assessment
    - Options appraisal
    - Benefits and impacts (energy modelling – emissions, running costs etc)
    - Phasing plan of work
    - Cost effectiveness assessment and more

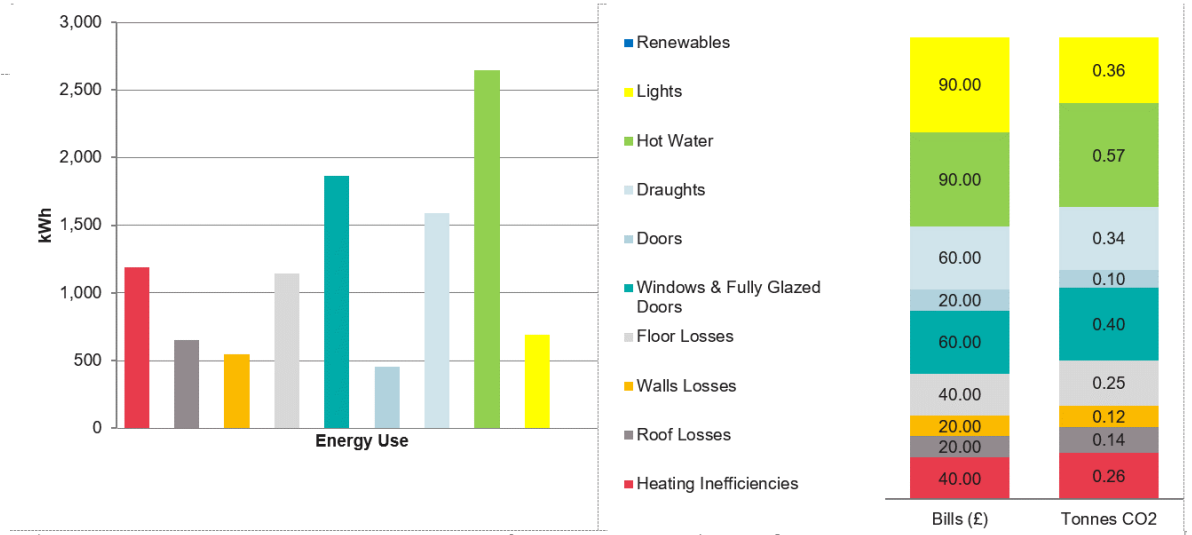
WHR Plan cont'd… Extract of contents before retrofit

10 Where you are now

Below is the estimated baseline of your home's energy performance, from which we evaluate improvements:

Energy Rating 1 to 100 – higher is better	Fuel Bills Annual[1]	Tonnes CO_2 Annual[1]	kWh/m^2 Heat Demand Annual
A rating of your home on a scale of 1 – 100. The rating is calculated based on your home's modelled running costs.	*Fuel bills – this estimated cost includes the energy used for heating your home, providing hot water, ventilation and lighting. It does not include energy costs for household appliances. When making a comparison remember that your energy bills will include costs for household appliances*	*Carbon dioxide emissions from energy use are a significant contributor to climate change. Fossil fuel heating systems using gas, oil or coal will have high CO_2 emissions. Low carbon heating systems such as heat pumps will perform well here.*	*The is the amount of energy needed to heat your home. Because this figure is calculated before the type of heating system and its efficiency is considered, it's a really good way to look at how good the fabric of your home is before thinking about the type of heating and renewable energy system to use.*
72 C	**£580**	**2.32**	**78.0kWh/m²**
The national target for all homes by 2035 is **C**[2]	Modelled using SAP[3] The UK average is **£1,184**[4]	The UK average per home is **3.50**[5]	A measure of how much heat your house loses, above 150 is typical, below 70 is excellent

Your estimated current energy use, bills & emissions



[1]Figure is net after revenue/adjustments from any renewables; [2]Clean Growth Strategy; [4]OFGEM; [5]Catapult (See References)

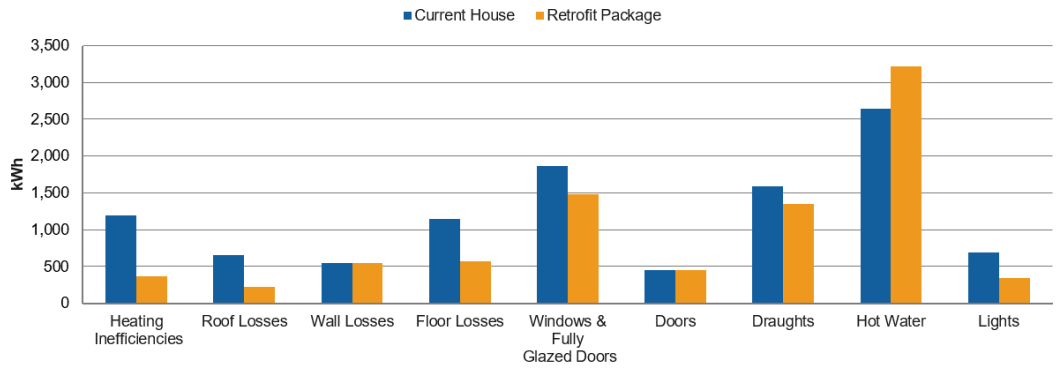
WHR Plan cont'd... Extract of contents after retrofit

11 What you can achieve

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

Comparison	Energy Rating	Fuel Bills	tCO_2	kWh/m^2
Before	72 C	£580	2.32	78.01
After	91 B	£150	1.27	57.68

Your potential energy use after your retrofit



12 Phasing your improvements

Summary of Packages	Estimated Costs Per Phase	Energy Rating	Fuel Bill	tCO_2	kWh/m2
Where you are now		72 C	£580	2.32	78.01
Phase 1:	£650	74 C	£530	2.17	74.56
Phase 2:	£70	75 C	£520	2.13	71.23
Phase 3:	£11,880	91 B	£150	1.27	57.68
Combined savings			£430 saving	1.05 saving	
Combined reduction			74%	45%	
Trees you could plant to bring the remaining 1.27 tCO_2 to zero: 55					

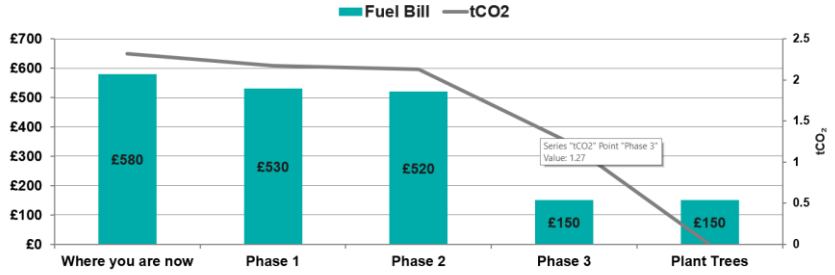
12 Phasing your improvements (continued)

The measures recommended below aim to significantly reduce your energy use, annual energy costs and CO_2 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_2	kWh/m^2
Where you are now	Per Measure	72 C	£580	2.32	78.01
Low energy lighting	£300	73 C	£540	2.27	79.73
300mm loft insulation from 100mm	£350	74 C	£530	2.17	74.56
After Phase 1 Measures		74 C	£530	2.17	74.56
Package Cost & % Improvements	£650		9%	6%	

Phase 2 Measures	Estimated Costs	Energy Rating	Fuel Bill	tCO_2	kWh/m^2
After Phase 1	Per Measure	74 C	£530	2.17	74.56
PCDF boiler reference from generic SAP boiler information	£0	75 C	£520	2.14	71.80
Draughtproof doors and windows	£70	75 C	£520	2.13	71.23
After Phase 2 Measures		75 C	£520	2.13	71.23
Package Cost & % Improvements	£70		2%	2%	
Cumulative Cost & % Improvements	£720		10%	8%	

How the phasing affects your annual bills & emissions



Grants for home energy improvements: who is eligible?

Occupants with:

- Means tested benefits OR
- Income below £31,000 OR
- A combination of other factors such as:
  - Living in “low income area”
  - Being vulnerable to the cold
  - Receiving free school meals or council tax reduction
  - Referrals from CA (in cases of debt)

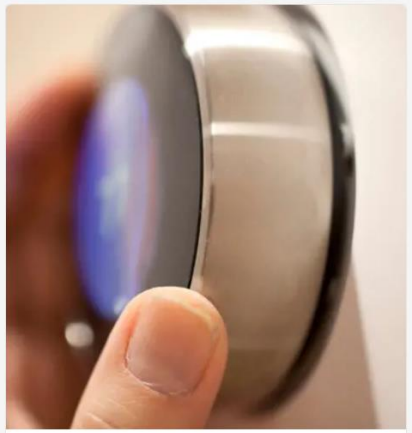
The names of these grants are **ECO, ECO Flex, LAD, and HUG**
Contact tEC for an assessment and tailored advice

Great British Insulation Scheme

- Great British Insulation scheme: 450,000 homes with £1billion of extra funding over 3 years.
- Widening of eligibility, removing all income-related criteria but focus on fewer low-cost measures.
- **Council tax bands A-D AND**
- **EPC of D or below**
- It is available to **all tenures**

Boiler Upgrade Scheme

- The **Boiler Upgrade Scheme (BUS)** encourages **'able to pay' homeowners** to install a low carbon heating system by covering part of the upfront costs of installation.
- Air source heat pumps (£7,500)
- Biomass Boilers (£5,000)
- Ground source heat pumps (£7,500)



Funding and Finance

You may be eligible for schemes or grants that could help with your energy bills or fund improvements to increase your homes efficiency.

Funding and Finance

Energy Saving Guide

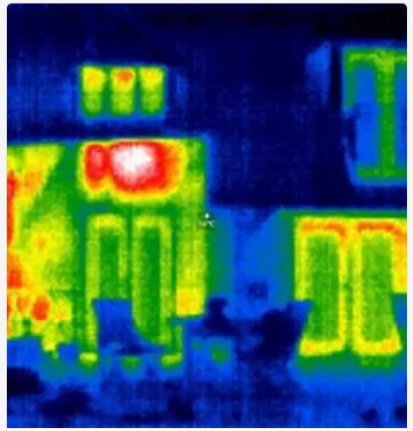
There are many simple ways to help reduce your energy usage at home which both reduces your carbon footprint and your energy bill.

Energy saving tips

Case Studies

Read about some of our customers who have retrofitted their homes

Case Studies



Home Retrofit Plan

A Whole House Retrofit Plan is a great way to understand how you can improve your home to reduce its energy consumption and carbon footprint. PeCAN can introduce you to a professional retrofit coordinator to carry out this work.

A house like mine

Find out what sort of retrofit measures might be suitable for a house like yours. We have included extracts from retrofit reports that have been done for a number of houses in Petersfield, along with some details of what these retrofit measures entail.

Thermal Imaging

Our Thermal Imaging project runs in the winter. Find out more about how thermal imaging can help you understand where you are losing heat from your home.

Explore more:

[Home Energy (petersfieldcan.org)]

Thank You!

Hitting the cold spots - helping you to stay warm

Affordable Warmth Support

Hampshire County Council

the Environment Centre (tec)

you ▪ your business ▪ your community

About the Environment Centre

Has been working in Southampton, Hampshire and beyond for nearly 30 years.

An independent charity which aims to :

- Reduce carbon emissions
- Advise on energy efficiency
- Improve air quality
- Help people keep warm and well in their homes.

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Hitting the cold spots - helping you to stay warm

Hitting the Cold Spots: Our Aims

1. Identify vulnerable households

2. Reduce the risk and impact of fuel poverty by:
   - Improving energy efficiency
   - Reducing energy bills
   - Facilitating access to wider support

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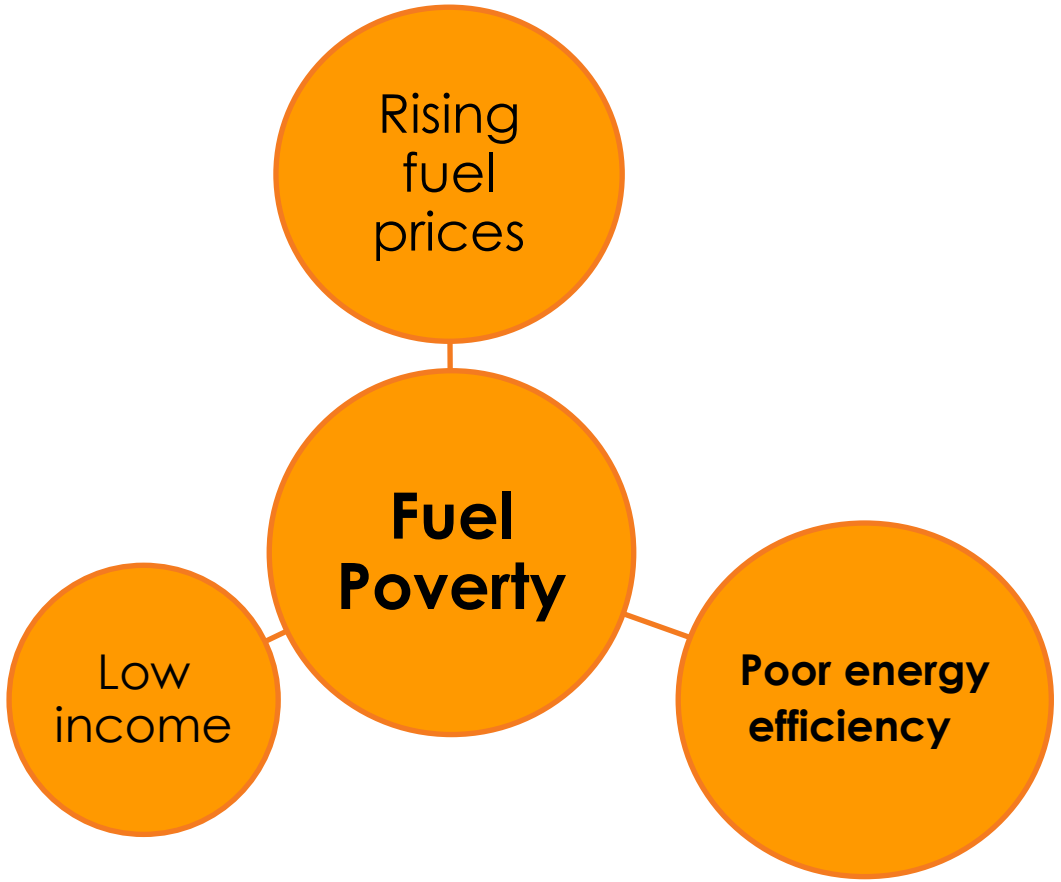
What is Fuel Poverty?

Where **low income** and **high heating costs** mean that a household cannot adequately heat their home.



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Impact of Cold Homes

- Respiratory and cardiovascular illnesses
- Exacerbation of other health conditions
- Mental health problems
- Low educational attainment
- Social isolation and/or spending less time at home
- Poor diet – 'heat or eat'

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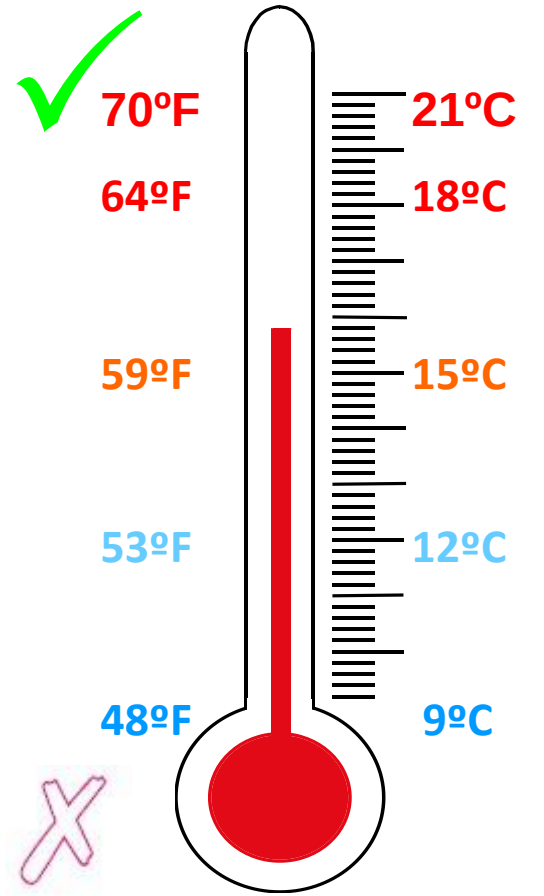
Recommended Temperatures



Comfortable

Some discomfort but no serious health risks

Discomfort and risk of respiratory disease, bronchitis, etc.

Risk of heart problems, strokes, etc.

Risk of hypothermia

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How we can help: Energy Bills

- Tariff switching
- Support with payment plans
- Applications for help with fuel debt
- Smart meter information
- Warm Home Discount – £150
- Priority Services Register – extra services free of charge for vulnerable groups

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How we can help: Water Bills

- Applications to water company reduced tariffs

- Priority Services Register – extra services and support free of charge for vulnerable groups, similar to energy companies

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How we can help: Additional Support

- Signposting and referrals for other services, for example:
  - Benefits, budgeting, debt
  - Home safety and improvements
  - Charitable organisations
- 'Making Every Contact Count' – trained in healthy conversation skills

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Hitting the cold spots - helping you to stay warm

Hitting the cold spots - helping you to stay warm

✆ 0800 804 8601 (Monday-Friday, 9am-5pm)

✉ staywarm@environmentcentre.com

💻 www.hants.gov.uk/cold-spots

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Thank you

Any questions?

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