

# Winchester Carbon Neutrality Action Plan 2020-2030

Programme Update  
Property and Energy

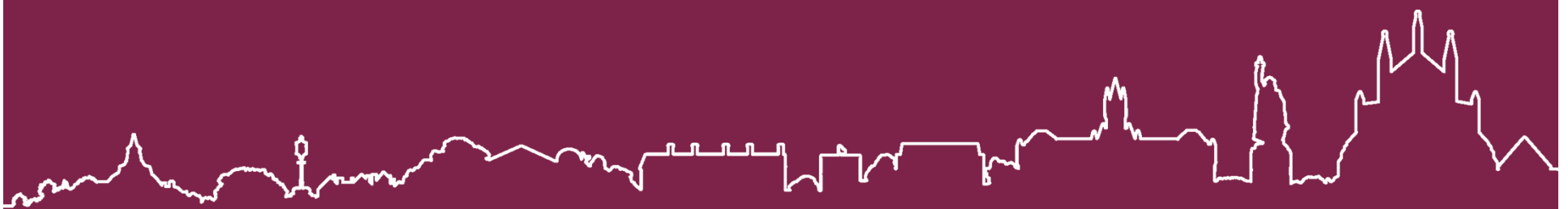
Housing & Environment Policy Committee  
30 September 2020



# CONTENTS

- **Property**
- **Energy**
- **Funding applications**
- **Sustainability Conference: “Routes to Carbon Neutrality”**
- **Future reports to HEP Committee**

# PROPERTY



# PRIORITY ACTIONS - PROPERTY

## HOUSING | 420 tonnes CO<sub>2</sub>e

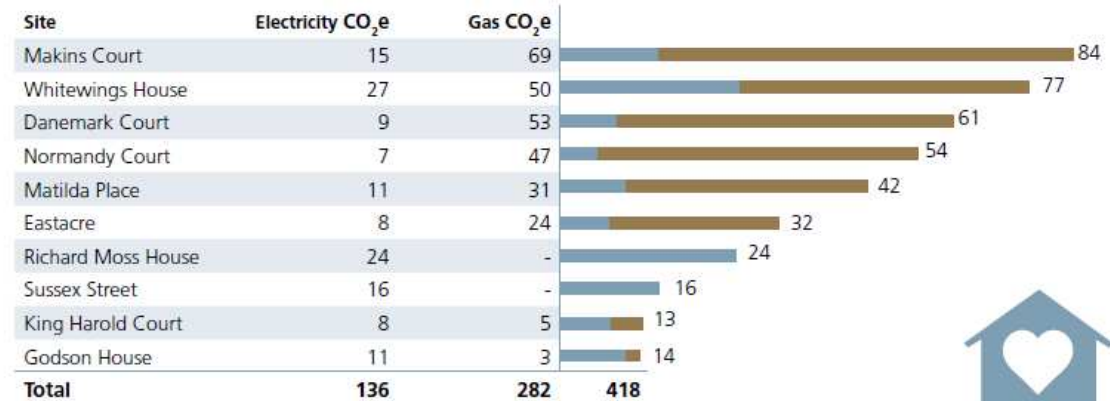
The carbon emissions from sheltered housing and communal areas is the only data captured for council housing – as tenanted properties have their own meters.

As the second largest contributor to carbon emissions in the district reducing domestic energy consumption must be a target and for residents to live in a more energy efficient homes.

### KEY

blue = electricity CO<sub>2</sub>e  
brown = gas CO<sub>2</sub>e

### TOP 10 EMITTING SITES (HOUSING)



**PROPERTY/HOUSING**  
420 tonnes CO<sub>2</sub>e through council operations and 193,000 tonnes CO<sub>2</sub>e district emissions overall.

- To develop a council led pilot Passivehaus housing scheme in Micheldever by 2021;
- To invest an additional £1m per annum on energy and water efficiency measures to council housing stock;
- To bring forward the Local Plan update with an emphasis on low carbon housing development by 2021.

- 10% of council carbon footprint
- 31% of district carbon footprint

# RETROFIT OF COUNCIL HOUSING STOCK

- £10m built into HRA business plan over next ten years
- Various options for how this could be used
- Need to maximise carbon reduction but can impact on energy cost to tenants
- More detail in presentation “***Reducing the Environmental Impact (carbon) in the Council housing stock***”

# NEW HOMES PROGRAMME - PASSIVHAUS



- Proposal for Southbrook Cottages Garage Court site in Micheldever
- 6 flats including 4 x 1-bed and 2 x 2-bed flats
- Built to Passivhaus Plus standard
- Public consultation in August 2020
- Potential start on site in 2021
- Emerging Housing Development Strategy sets out design expectations for future schemes



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# What is Passivhaus

Passivhaus is an Energy Standard, focussing on achieving excellent levels of internal comfort with an energy input that is as close to its theoretical minimum as possible.

You can visit the Passivhaus trust website at <https://www.passivhaustrust.org.uk/>

## Passivhaus Origins



**“I was working as a physicist. I read that the construction industry had experimented with adding insulation to new buildings and that energy consumption had failed to reduce.**

**This offended me – it was counter to the basic laws of physics. I knew that they must be doing something wrong. So I made it my mission to find out what, and to establish what was needed to do it right”**

**- Wolfgang Feist**

# Why Passivhaus?

A Passivhaus building achieves high levels of comfort while using a minimal amount of energy.

What do we mean by comfort?

- No draughts
- No condensation or mould
- No hot or cold radiant discomfort
- Limited summer overheating
- Fresh air always
- Consistent warm temperature
- Fuel cost reduced

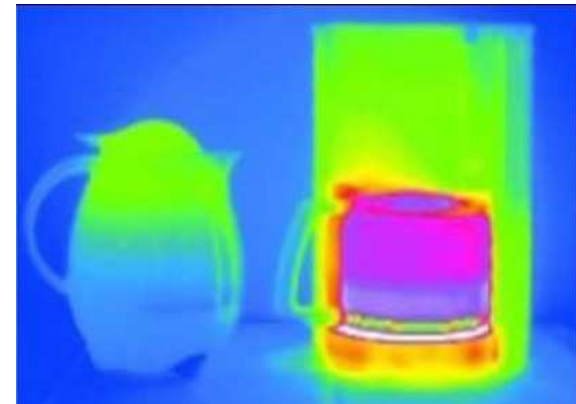
Comfort means that the building will not be too hot in the summer . . .



The difference between a Passivhaus and traditional  
is similar to the difference between a thermos  
flask and filter coffee machine . . .



Or too cold in the winter.



A thermos keeps the coffee warm by design, a coffee machine does it by using energy.



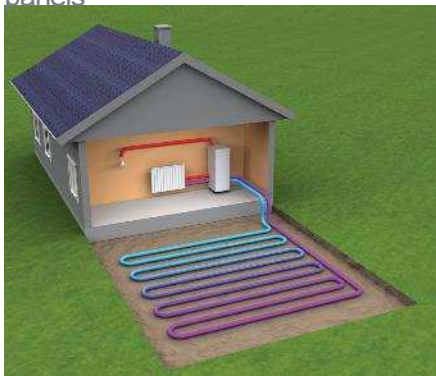
# Passivhaus

For Southbrook Cottages, we are aiming to achieve Passivhaus Plus, meaning the building will generate all the energy it needs on site, without having to use the national grid.

This is achieved by using;



Photovoltaic (PV) panels



Ground Source Heat Pumps



# PRIVATE SECTOR HOUSING – FUEL POVERTY, ENERGY EFFICIENCY

- LEAP - Part of the Warmer Homes Consortium – gives local residents access to various energy efficiency, and central heating grants:  
<https://applyforleap.org.uk/apply/>
- Launched in January 2020
- 21 referrals / 5 home visits prior to lockdown
- Also applied for BEIS LAD funding as part of a consortium led by Portsmouth City Council
- Due to announce (October 2020) a new partner to run 12 month mapping and engagement exercise, focused on decarbonising private sector homes



**LEAP -**  
The Energy and Money  
Saving Service

**FREE**  
FOR LOCAL  
RESIDENTS

We are offering local residents a completely **FREE OF CHARGE** service called **LEAP** (Local Energy Advice Partnership). **LEAP** can help you to save money and keep your home warm and cosy.

**HOW IT WORKS:**  
If you're eligible, you will get a **FREE** home visit from a friendly, qualified Home Energy Advisor. **LEAP** can:

- **Help check if you are on the cheapest energy tariffs** - could save you over £280 a year.
- **Install FREE, simple energy saving measures** which can save the average household £30 on their energy bills a year.
- **Give you day-to-day energy efficiency hints and tips** and ensure your heating system is set up to keep you warm and save money.
- **Arrange a FREE telephone advice service** to help with benefits, debt and other money problems.
- **Refer you for further energy efficiency improvements**, such as loft insulation or a new boiler.

**ARE YOU ELIGIBLE?**  
You may be eligible for the LEAP service if one of the below apply. If you:

- have a low income
- receive tax credits
- receive Housing Benefit
- receive an income or disability related benefit
- have a long term illness or disability.

**Call us now on 0800 060 7567\***  
(Freephone) to book your free home visit, or apply online:  
[www.applyforleap.org.uk](http://www.applyforleap.org.uk)  
\*8:45am - 7:00pm Monday to Friday, and 9am-12pm on Saturdays.

**LEAP**  
LOCAL ENERGY ADVICE  
PARTNERSHIP

# ENERGY



# PRIORITY ACTIONS - ENERGY


- 42% of council carbon footprint
- 27% of district carbon footprint

## ENERGY | 1,780 tonnes CO<sub>2</sub>e

The largest part of the council's existing carbon emissions are attributable to electricity (39%) and gas usage (24%). Therefore making the estate more energy efficient has to be a priority, along with purchasing and generating renewable energy.

### TOP 10 EMITTING SITES (EXCLUDING HOUSING)

Site	Electricity CO <sub>2</sub> e	Gas CO <sub>2</sub> e	Total
River Park Leisure Centre	424	513	937
Guildhall	156	61	217
Car Park - The Brooks	188	-	188
City Offices	82	43	125
Kings Court	77	9	86
Car Park - Chesil Street	60	-	60
Meadowside Leisure Centre	34	20	54
Car Park - Tower Street	51	-	51
Bar End Depot	17	19	36
Basepoint	22	-	22
<b>Total</b>	<b>1,111</b>	<b>665</b>	<b>1,776</b>



### ENERGY

1,780 tonnes CO<sub>2</sub>e through council operations and 172,000 tonnes CO<sub>2</sub>e district emissions overall.

- Source 100% of all electricity purchased by the council from renewable sources by 2021;
- Build or invest in large scale renewable generation project(s), e.g. solar farms, heat pumps, solar-battery car ports, anaerobic digester, wind farm.



# RE:FIT

- Procurement initiative for public bodies wishing to implement energy efficiency measures
- Competitively tendered, OJEU compliant framework geared to the needs of public sector
- Delivered in partnership with Local Partnerships - jointly owned by the Local Government Association, HM Treasury and Welsh Government
- Energy Performance Contract (EPC) with a pre-approved service provider to retrofit energy conservation measures designed to reduce electricity, gas and water consumption

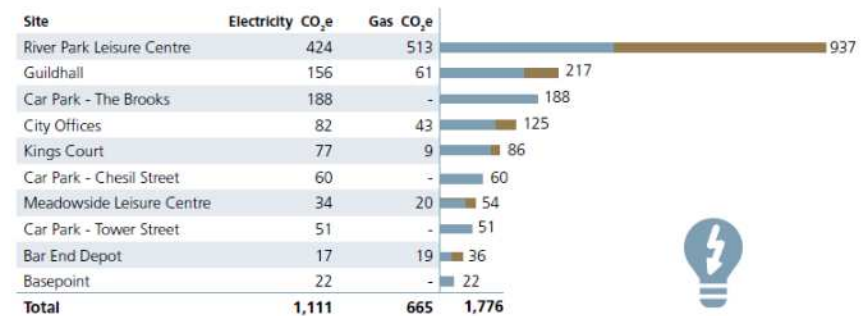


# RE:FIT

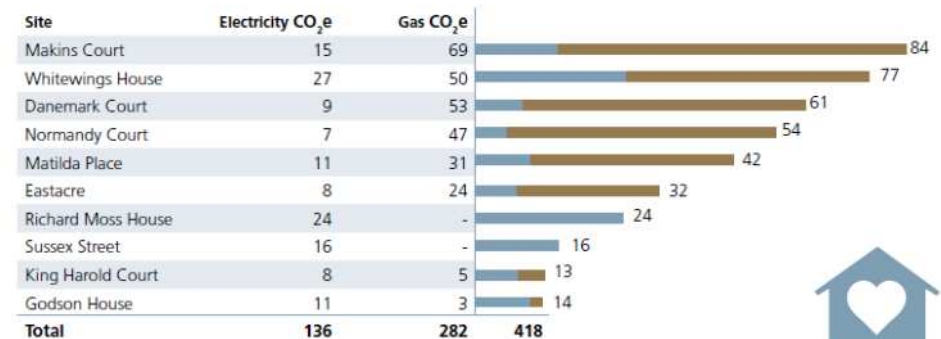
The following properties would form part of phase 1:

- Guildhall
- City Offices
- West Wing/Kings Court
- Basepoint
- Brooks Shopping Centre underground car park
- Chesil Street multi storey car park
- Meadowside Leisure Centre
- Danemark Court
- Makins Court
- Matilda Place
- Richard Moss House
- White Wings House

TOP 10 EMITTING SITES (EXCLUDING HOUSING)



TOP 10 EMITTING SITES (HOUSING)



## RE:FIT

- Expected capital costs in excess of £1m
- Proposal for general fund capital costs to be funded through prudential borrowing and covered by the ongoing energy savings
- Costs related to the sheltered housing schemes would be funded through the HRA
- Estimated total carbon savings in excess of 600 tonnes per year (14% of total carbon emissions)

# RE:FIT

## Anticipated timescales:

- NOV 2020 - Production of the Invitation To Tender
- NOV 2020 - Launch of competition including site visits
- JAN 2021 - Receive bid submissions and high level appraisals
- FEB 2021 - Evaluation of bid submissions and appraisals
- MAY 2021 - Seek Cabinet approval to proceed
- JUN 2021 - Award decision and standstill period
- JUL 2021 - Production and evaluation of investment grade proposal including specifications and monitoring / verification plan
- JUL 2021 - Signing of the agreement
- SEP 2021 – Onsite works commence

# THIRD PARTY SOLAR

- Working on two models:
  1. Installing solar panels on Council-owned properties and selling power to tenants
  2. Renting space on businesses' roofs, installing solar panels and selling power from panels to business below
- Currently two businesses and two Council properties being considered
- Have already received additional interest from business and community groups
- If pilot schemes are successful, in 2021 develop a strategy to roll out to additional businesses and Council sites
- **Challenges still to work through:**
  - Legal agreements
  - State aid implications

# ENERGY & PROPERTY RESEARCH PROJECTS

Collaboration with Energy and Climate Change Division Research Group led by Professor 'Bakr Bahaj, University of Southampton

Project commencement 1<sup>st</sup> October 2020 - initially six months

## Energy and Climate Change Division

Sustainable Energy Research Group



UNIVERSITY OF  
Southampton





# ENERGY & PROPERTY RESEARCH PROJECTS

		Timeline 2020/21					
		October	November	December	January	February	March
2.1	Low carbon energy hub for the District						
i.	PV with storage						
ii.	Options for charging points around the hub						
iii.	Understanding fleet that can be electrified						
iv.	Feasibility of private wire to connect assets						
2.2	Listed/non-listed building retrofit						
i.	Residential buildings energy performance						
ii.	Estimate the cost of retrofitting homes						
iii.	Quantify the energy savings						
2.3	Mapping of EV charging points and network resilience						
i.	Charging point mapping GIS						
ii.	LV resilience & approaches to inform network operator						
2.4	Reporting						
i.	Monthly meetings	X	X	X	X	X	X
ii.	Draft reports						
iii.	Final reports						

[https://energy.soton.ac.uk/wp-content/uploads/sites/372/2019/10/Research-portfolio-book\\_V4\\_web.pdf](https://energy.soton.ac.uk/wp-content/uploads/sites/372/2019/10/Research-portfolio-book_V4_web.pdf)

# COMMUNITY RENEWABLE ENERGY

In 2021 the Council will work with community groups to establish community energy schemes.

These could include anaerobic digestion, solar panels, hydropower, renewable heat networks and the aim will be to assist community groups access...

## The Rural Community Energy Fund

- Open to community energy organisations
- Grants of up to £40,000 to assess the feasibility of community-led renewable energy projects
- Follow on grants of up to £100,000 to support the more ambitious projects gain planning consent and get them ready to attract investment

### Community energy



Share this

Share

Community ownership and local benefit are essential components of a successful energy transition in a complex market democracy. Beauty is often in the eye of the owner.

<https://www.uk.coop/promoting-co-ops/influencing-policy/energy-co-ops>

# FUNDING APPLICATIONS

- **ERDF: LoCASE 3 - Consortium led by Kent County Council**
  - £28.5k match funding for business engagement and energy audits
- **ERDF: LoCASE 4 - Consortium led by Kent County Council**
  - Bid for £115k match funding for solar panels, intelligent hot water heating (Chilcomb) and ground source heat pump for Meadowside
- **BEIS Local Authority Delivery scheme - Consortium led by Portsmouth City Council**
  - £115k for energy efficiency measures in social and private sector housing
- **LEP Funding Application**
  - Air source heat pump and solar panels for local business £144k
  - Structural improvements and solar panels on a Council building £50k
- **Total Applied For: £452,500**
- Due to hear mid-late September 2020

# SUSTAINABILITY CONFERENCE

**Session 1. National Perspective - 1 October 10am Start**

**Chair: Cllr Thompson**

**Speakers**

- **Chris Goodall – Author “What we need to do now”**
- **Maggie Shelton – Hampshire and Isle of Wight Wildlife Trust**

**Session 2: Net Zero Carbon Buildings - 1<sup>st</sup> October 2pm Start**

**Chair: Cllr Learney**

**Speakers**

- **Paul Phasey, Architecture PLB**
- **Laura Dale and Mark Butt, University of Winchester**

**Session 3: Transport – 2 October 10am Start**

**Chair: Councillor Tod**

**Speakers**

- **Paul Walker, Strategic Development Manager, Go South Coast Nation**
- **Megan Streb, Sustrans**

**Session 4: Energy – 2 October 2:30pm Start**

**Chair : Councillor Murphy**

**Speakers**

- **Professor Bakr Bahaj – University of Southampton**
- **Dr Duncan East – Marwell Zoo**

**Full details and to book - <https://www.winchester.gov.uk/climate-change-and-energy/climate-emergency-what-we-are-doing-now/sustainability-conference-2020>**

# FUTURE REPORTS TO HEP COMMITTEE

- 8 December 2020
  - Carbon footprint reporting
  - Data collection
  - Longer term carbon forecasting
  
- 3 March 2021
  - Transport
  - Engagement



# Questions

