



<b>Meeting</b>	Health and Environment Policy Committee
<b>Date and Time</b>	Wednesday, 30th September, 2020 at 6.00 pm.
<b>Venue</b>	This meeting will be held virtually and a live audio stream can be listened to via <a href="http://www.winchester.gov.uk">www.winchester.gov.uk</a> .

**Note:** *Owing to the ongoing Covid-19 pandemic and government guidance, it will not be possible to hold this meeting in person. The Council has therefore made arrangements under the Coronavirus Act 2020, and subsequent Regulations permitting remote meetings, to hold the meeting virtually. If you are a member of the public and would like to listen to the audio stream of the meeting you may do so via [www.winchester.gov.uk](http://www.winchester.gov.uk)*

## AGENDA

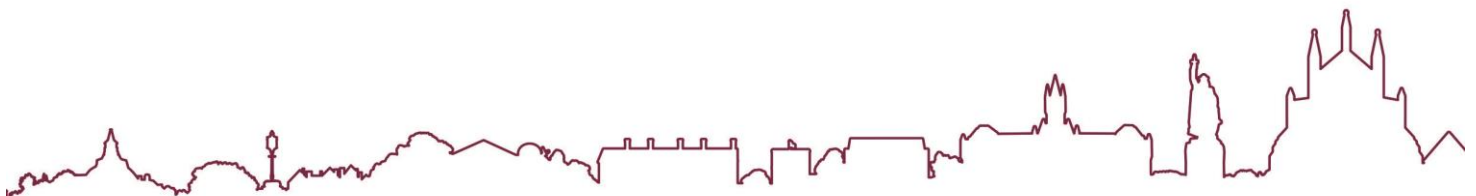
### PROCEDURAL ITEMS

- 1. Apologies and Deputy Members**  
To note the names of apologies given and deputy members who are attending the meeting in place of appointed members.
- 2. Declarations of Interest**  
To receive any disclosure of interests from Members and Officers in matters to be discussed.

*Note: Councillors are reminded of their obligations to declare disclosable pecuniary interests, personal and/or prejudicial interests in accordance with legislation and the Council's Code of Conduct.*

If you require advice, please contact the appropriate Democratic Services Officer, prior to the meeting.

- 3. Chairperson's Announcements**
- 4. Minutes (Pages 5 - 8)**  
Minutes of the previous meeting held on 7 July 2020.



## BUSINESS ITEMS

### 5. **Public Participation**

To receive and note questions asked and statements made from members of the public on matters which fall within the remit of the Committee.

Members of the public and visiting councillors may speak at this Committee, provided they have registered to speak three working days in advance. Please contact Democratic Services **by 5pm on Thursday, 24 September 2020** via [democracy@winchester.gov.uk](mailto:democracy@winchester.gov.uk) or (01962) 848 264 to register to speak and for further details.

### 6. **To note the work programme for 2020/21** (Pages 9 - 12)

### 7. **Climate Change Update:**

- a) **Property and Energy Update (Presentation)** (Pages 13 - 36)
- b) **Reducing the Environmental Impacts (Carbon) in Council Housing Stock (Presentation)** (Pages 37 - 54)

### 8. **Biodiversity Action Plan - Presentation (to follow)**

**Lisa Kirkman**  
**Strategic Director: Resources and Monitoring Officer**

All of the Council's publicly available agendas, reports and minutes are available to view and download from the Council's [Website](#) and are also open to inspection at the offices of the council. As part of our drive to minimise our use of paper we do not provide paper copies of the full agenda pack at meetings. We do however, provide a number of copies of the agenda front sheet at the meeting which contains the QR Code opposite. Scanning this code enables members of the public to easily access all of the meeting papers on their own electronic device. Please hold your device's camera or QR code App over the QR Code so that it's clearly visible within your screen and you will be redirected to the agenda pack.



22 September 2020

Agenda Contact: Claire Buchanan, Senior Democratic Services Officer  
Tel: 01962 848 438 Email: [cbuchanan@winchester.gov.uk](mailto:cbuchanan@winchester.gov.uk)

*\*With the exception of exempt items, Agenda, reports and previous minutes are available on the Council's Website [www.winchester.gov.uk](http://www.winchester.gov.uk)*

## **MEMBERSHIP**

**Chairperson:** Clear (Liberal Democrats)

**Vice-Chairperson:** Laming (Liberal Democrats)

### **Conservatives**

McLean  
Pearson  
Read  
Scott

### **Liberal Democrats**

Achwal  
Bell  
Hutchison  
Williams

## **Deputy Members**

Brook and Gemmell

Becker and Green

Quorum = 4 members

## **PUBLIC PARTICIPATION AT VIRTUAL MEETINGS**

Representations will be limited to a maximum of 3 minutes, subject to a maximum 15 minutes set aside for all questions and answers. To reserve your place to speak, you are asked to **register with Democratic Services three clear working days prior to the meeting** – please see public participation agenda item for further details. People will be invited to speak in the order that they have registered, subject to the maximum time period allowed for speaking not being exceeded. Public Participation is at the Chairperson's discretion.

## **FILMING AND BROADCAST NOTIFICATION**

This meeting may be recorded and broadcast live on the Council's website. The meeting may also be recorded and broadcast by the press and members of the public – please see the Access to Information Procedure Rules within the Council's Constitution for further information, which is available to view on the [Council's website](#).

## **VOTING**

- apart from the Chairperson, every Member has one vote when a matter before the meeting requires a decision.
- in the event of an equality of votes, the Chairperson may exercise a casting vote and that vote may be exercised in any way seen fit.
- a Member may abstain from voting, or vote differently from how they may have indicated during the debate, without further explanation.
- the way each Member voted will not be recorded in the minutes, unless a motion to have a Recorded Vote has been passed.

2.

# Public Document Pack Agenda Item 4

## HEALTH AND ENVIRONMENT POLICY COMMITTEE

Tuesday, 7 July 2020

Attendance:

Councillors  
Clear (Chairperson)

Achwal  
Bell  
Hutchison  
Laming  
McLean

Pearson  
Read  
Scott  
Williams

Others in attendance who addressed the meeting:

Councillors Ferguson (Cabinet Member for Climate Emergency and Local Economy), Porter (Cabinet Member for Built Environment and Wellbeing) and Tod (Cabinet Member for Service Quality and Transformation)

Audio recording of the meeting

A full audio recording of this meeting is available via this link:

[Full audio recording](#)

1. **APOLOGIES AND DEPUTY MEMBERS**

All members were in attendance.

2. **DECLARATIONS OF INTEREST**

No disclosures of interest were declared.

3. **CHAIRPERSON'S ANNOUNCEMENTS**

There were no Chairperson's announcements.

4. **TO NOTE THE DATE AND TIME OF FUTURE MEETINGS OF THE COMMITTEE**

RESOLVED:

That the timetable of meetings for 2020/21 be agreed, as set out on the agenda.

5. **MINUTES**

RESOLVED:

That the minutes of the previous meeting held on 4 March 2020, be approved and adopted.

6. **PUBLIC PARTICIPATION**

No members of the public were present to make representations.

7. **BRIEFING ON RESTORATION WORK - COMMUNITY, OPEN SPACES AND TRANSPORT IMPACTS (PRESENTATION)**

The Service Lead for Community and Wellbeing, the Corporate Head of Regulatory and Head of Programme gave a presentation on proposals for restoration work in response to the Covid-19 pandemic. The presentation was available on the Council's website [here](#).

Members asked questions and raised various comments which were addressed by Councillors Porter and Tod and the relevant officers.

RESOLVED:

1. That the content of the presentation be received and the comments of the Committee be noted; and

2. That a progress update on the restoration works in response to the Covid-19 pandemic be taken to a future meeting of the committee.

8. **UPDATE ON THE CARBON NEUTRALITY ACTION PLAN (ONE YEAR ON) - PRESENTATION**

The Corporate Head of Engagement gave a presentation on the Council's response under the Carbon Neutrality Action Plan and informed the Committee of the highlights and achievements over the last year and the preparation work in place for the coming year. The presentation was available on the Council's website [here](#).

Members asked questions and raised various comments which were addressed by Councillor Ferguson and the relevant officers.

RESOLVED:

1. That the contents of the presentation be received and the comments of the committee be noted; and

2. That a progress update on the Carbon Neutrality Action Plan be taken to a future meeting of the committee.

9. **PROPOSALS FOR NEW GARDEN WASTE SERVICE (CAB3234)**

Councillor Tod introduced the report which was due to be considered by Cabinet at its meeting on 9 July 2020. The report set out the detail of the new garden waste collection service, due to commence from February 2021.

Members asked questions and raised various comments in relation to charging, cost and value implications, alternative options for residents, support for residents experiencing financial hardship, storage and fly tipping which were addressed by Councillor Tod and the Strategic Director.

RESOLVED:

That the report be received and the comments of the committee noted by the Cabinet Member for Service Quality and Transformation

10. **HEALTH & ENVIRONMENT POLICY COMMITTEE WORK PROGRAMME FOR 2020/21 (HEP009)**

RESOLVED:

That the Work Programme for 2020/21 be approved.

The meeting commenced at 6.00 pm and concluded at 8.55 pm

Chairperson

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**HEALTH AND ENVIRONMENT POLICY COMMITTEE – SCHEDULED ITEMS OF BUSINESS ETC**

<b>30 SEPTEMBER 2020</b>					
	<b>BUSINESS</b>	<b>LEAD OFFICER</b>	<b>COMMITTEE DATE</b>		<b>STATUS/ COMMENT</b>
			<b>Original</b>	<b>Revised</b>	
	Climate Change Update: <ul style="list-style-type: none"> <li>• Property and Energy Update</li> <li>• Reducing the Environmental Impacts (Carbon) in Council Housing Stock</li> </ul>	Steve Lincoln  Andrew Kingston	30 September 2020		Presentations
	Biodiversity Action Plan	Susan Croker	30 September 2020		Presentation
<b>8 DECEMBER 2020</b>					
	<b>BUSINESS</b>	<b>LEAD OFFICER</b>	<b>COMMITTEE DATE</b>		<b>STATUS/COMMENT</b>
	Street Cleaning & Grounds Maintenance Update (including update on grass verges)	Campbell Williams	8 December 2020		

	Arrangements for Health Partnership Working	Steve Lincoln	8 December 2020		
	Progress Update – Movement Strategy	Andy Hickman	8 December 2020		Standing Item
	AQMA Annual Update	David Ingram	8 December 2020		
	Petition - Extinction Rebellion Winchester	Andy Hickman	8 December 2020		(referred by Council at its meeting on 8 July 2020)
<b>3 MARCH 2021</b>					
	<b>BUSINESS</b>	<b>LEAD OFFICER</b>	<b>COMMITTEE DATE</b>		<b>STATUS/COMMENT</b>
	Progress Update – Community and Wellbeing Strategy	Susan Robbins	3 March 2021		Standing Item
	Progress Update – Movement Strategy	Andy Hickman	3 March 2021		Standing Item

**Other reports are provisionally listed to come forward to the Health & Environment Policy Committee during 2020/21 are as follows: (Meeting date to be confirmed)**

	Enforcement Policy	Date TBC
	Tree Policy	Date TBC
	Local Plan Update	Date TBC

	Mental Health - Understanding of Service Provision (Title TBC)	Date TBC
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# Winchester Carbon Neutrality Action Plan 2020-2030

Programme Update  
Property and Energy

Housing & Environment Policy Committee  
30 September 2020

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Agenda Item 7a



# 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

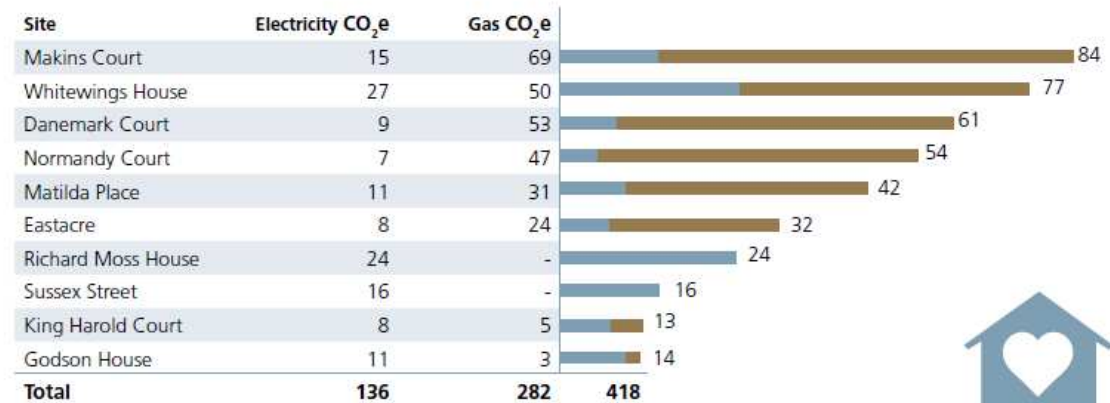
The carbon emissions from sheltered housing and communal areas is the only data captured for council housing – as tenanted properties have their own meters.

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

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- 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

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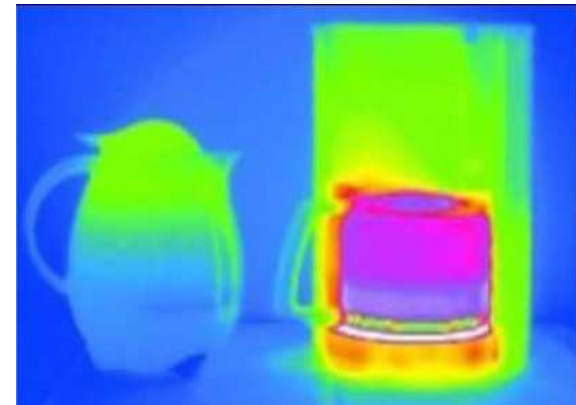
Comfort means that the building will not be too hot in the summer . . .



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

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- 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.




# ENERGY



# PRIORITY ACTIONS - ENERGY

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



**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.

## 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>





## RE:FIT

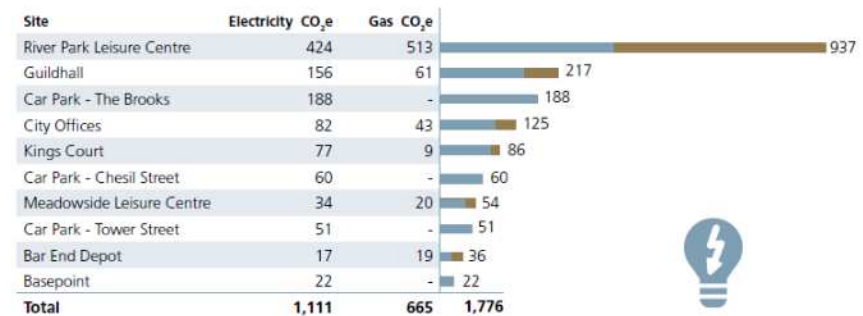
- Procurement initiative for public bodies wishing to implement energy efficiency measures
- Competitively tendered, OJEU compliant framework geared to the needs of public sector
- Delivered in partnership with Local Partnerships - jointly owned by the Local Government Association, HM Treasury and Welsh 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

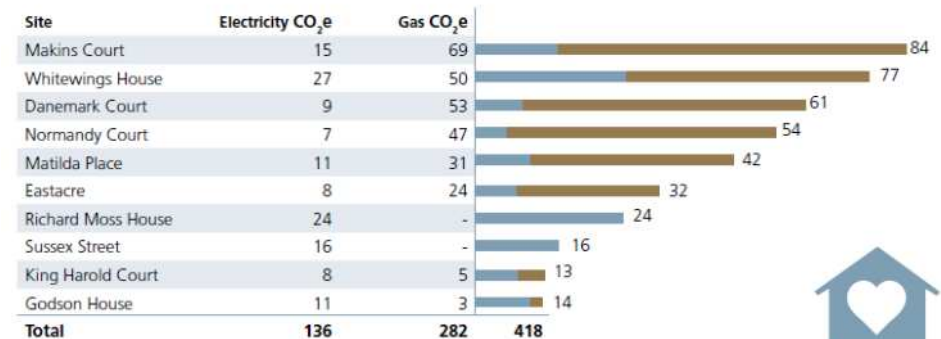
The following properties would form part of phase 1:

- 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

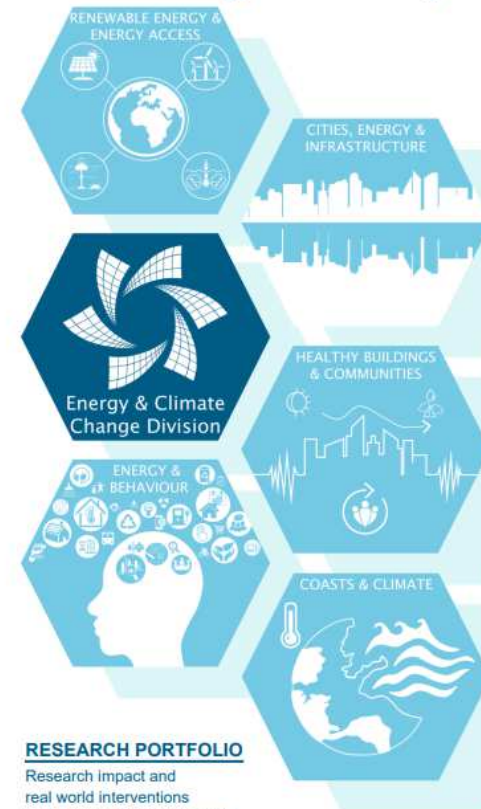
Collaboration with Energy and Climate Change Division Research Group led by Professor 'Bakr Bahaj, University of Southampton

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

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## Energy and Climate Change Division

Sustainable Energy Research Group



UNIVERSITY OF  
Southampton



# ENERGY & PROPERTY RESEARCH PROJECTS

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		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



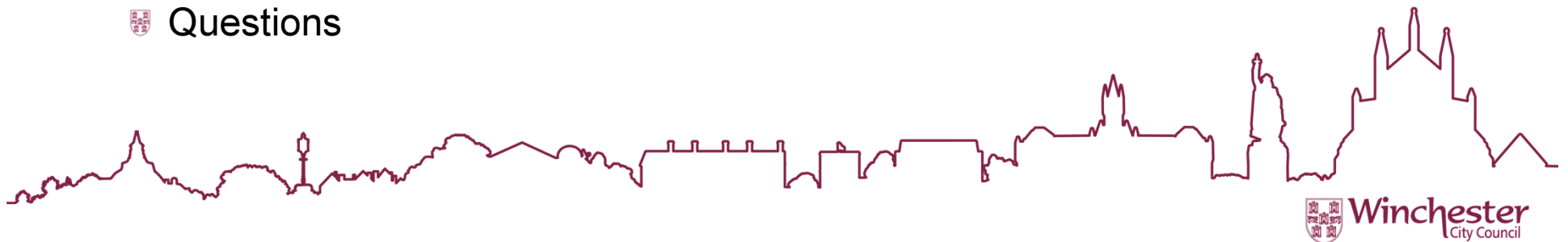
# Reducing the Environmental Impact (carbon) in the Council housing stock (Part 2)

Health & Environment Policy Committee  
30 September, 2020



## Overview of Presentation

- Key drivers for change
- Re-cap on March Member/Tenant Briefing (Tuesday 3<sup>rd</sup> March, 2020)
- Progress and actions since March
- What would it cost to achieve carbon neutrality ?
- Options
  - Fabric first
  - Improvement measures when property is void/empty
  - Other heat sources
- Practical/Financial considerations for tenants
- Recommendations
- Tenant Consultation
- Questions



## Key Drivers for Change

🏰 To support WCC`s Climate Emergency/corporate energy targets

🏰 Carbon neutral council by 2024

🏰 WCC district to be carbon neutral by 2030

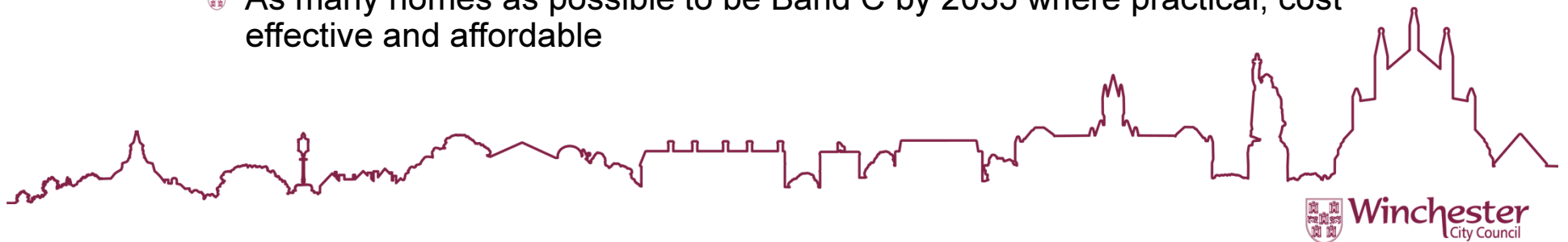
🏰 All WCC council homes to be Band C or above by 2030

🏰 National Clean Growth Strategy

🏰 Phasing out of high carbon fossil fuel off-gas heating systems during the 2020s ( and to prepare the Council`s housing stock to benefit from the de-carbonisation of the electricity grid)

🏰 Improving all fuel poor homes to EPC Band C rating by 2030

🏰 As many homes as possible to be Band C by 2035 where practical, cost effective and affordable

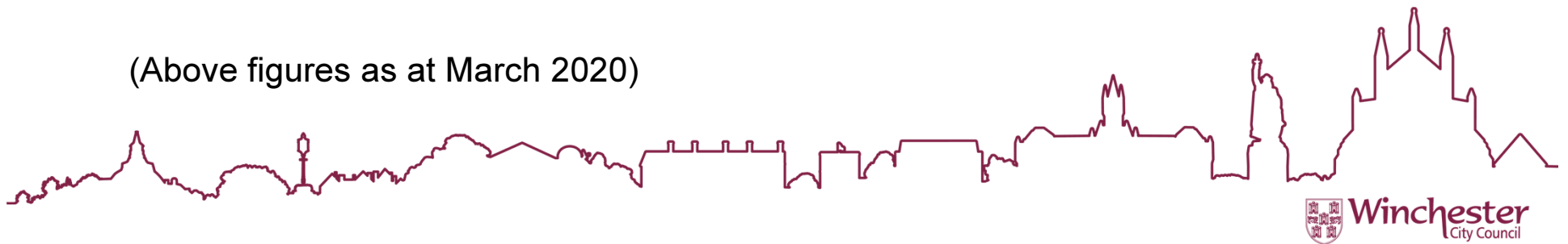


## Energy Efficiency and Environmental Impact - WCC stock

Band	Energy Efficiency (Running costs) % of stock	Environmental Impact (Carbon) % of stock
A	1%	2%
B	3%	6%
<b>C</b>	<b>56%</b>	42%
D	39%	<b>41%</b>
E	1%	8%
F	0%	1%
G	0%	0%

(Average – Band C)      (Average – Band D)

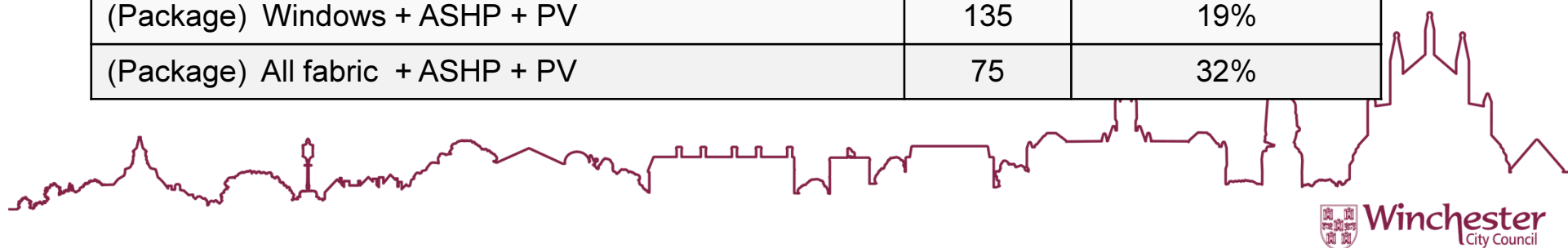
(Above figures as at March 2020)





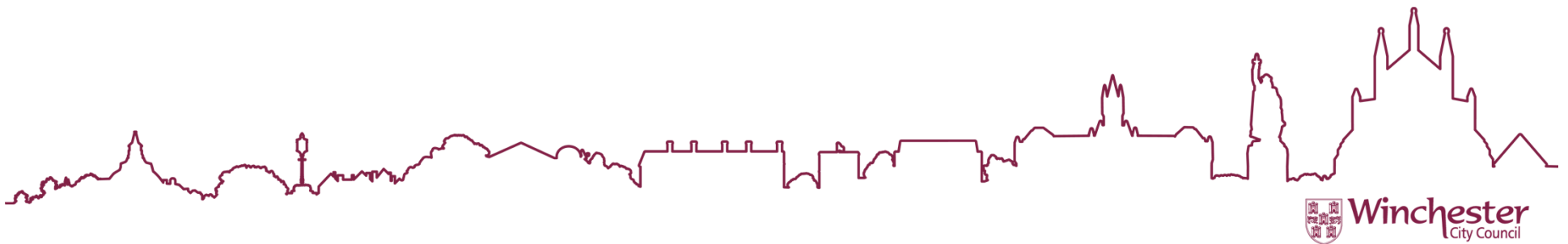
## Impact on Carbon & Running Costs by spending £1m p.a

<b>(comparison against a 3-bed-gas heated property)</b>	<b>Carbon Saved (t)</b>	<b>Running Cost (est. % saving)</b>
(Fabric) Upgrade existing windows and doors (d/g)	22	3%
(Fabric) Upgrade existing windows and doors (t/g)	28	5%
(Fabric) Insulate ground floor	30	4%
(Fabric) External wall insulation	19	6%
All fabric	24	14%
Quantum heating	193	-33%
(Renewable energy) PV	57	19%
(Renewable energy) Solar water heating	76	6%
(Renewable energy) ASHP	228	-6%
(Renewable energy) GSHP	151	-17%
(Package) Windows + ASHP	152	-1%
(Package) Windows + ASHP + PV	135	19%
(Package) All fabric + ASHP + PV	75	32%



## Progress since March Member Briefing

- 🏰 Technical energy assessments of the housing stock
- 🏰 Grant funding bids
- 🏰 HRA budget re-modelling – assessment of overall costs to achieve a “carbon neutral” housing stock
- 🏰 Ongoing Programme to install Oversized radiators, dropping flow and return temperatures to 50 degrees
- 🏰 ‘Swedish’ timber frame (non-trad) - pilot scheme



## 'Swedish' timber system-built homes

26 No. post-war 'Swedish' type timber homes

Basic timber framework, with external cladding (internal plaster-boarding added in the 1990's).

Worst energy performing homes in the housing stock (E or F)



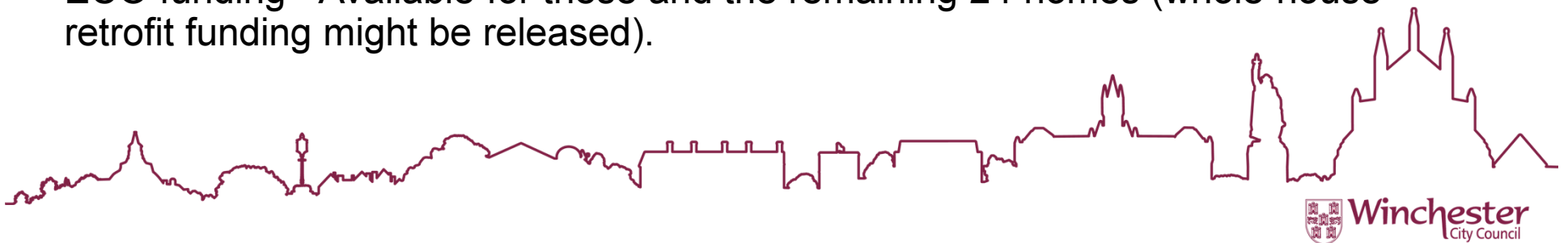
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Pilot scheme - Two Swedish homes in Bramdean.

Aim - to establish if, and at what cost, these homes can be improved to a SAP 'C' rating.

Work tendered. Pre-contract meeting this month with the successful PAS2030 accredited contractor.


ECO funding - Available for these and the remaining 24 homes (whole house retrofit funding might be released).

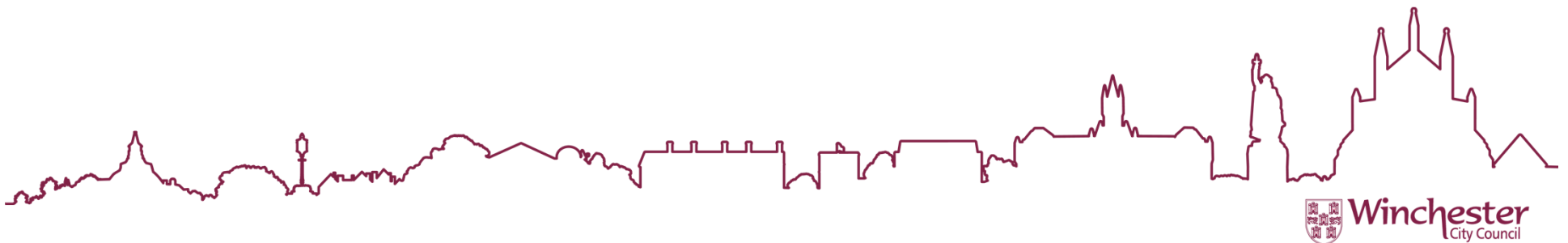


## So how much would carbon neutrality cost ?

 **Gas to ASHP by 2030** - Change 1000 No. heating systems (20% of stock) from gas to ASHP (**est. cost £10m**) - estimated overall carbon reduction = approx. 16%

 **Low Carbon Heating Systems to all homes** - all Gas Boilers to ASHPs (or Quantums) at next heating change - est. **£50m** additional major works costs over 30 years

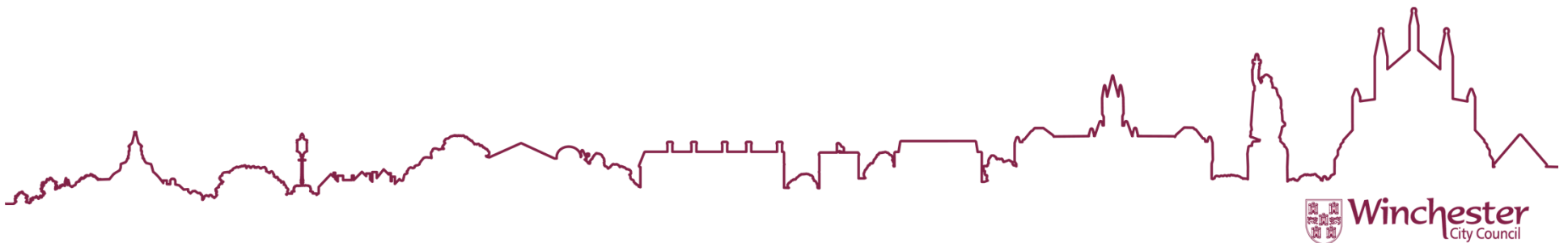
 **Package to all homes** - as above plus accelerated A+ window upgrades + Solar PV install from 2022 onwards - est. **£70m** additional major works costs over 30 years



## Hierarchy of Energy Efficiency \*

- Priority 1 - Reduce Energy Demand/Reduce Waste (“fabric first” approach )
- Priority 2 - Improve Efficiency of the dwelling by using more energy efficient products (boilers; wdws; doors etc.)
- Priority 3 - Provide renewables where appropriate to generate heat and/or power

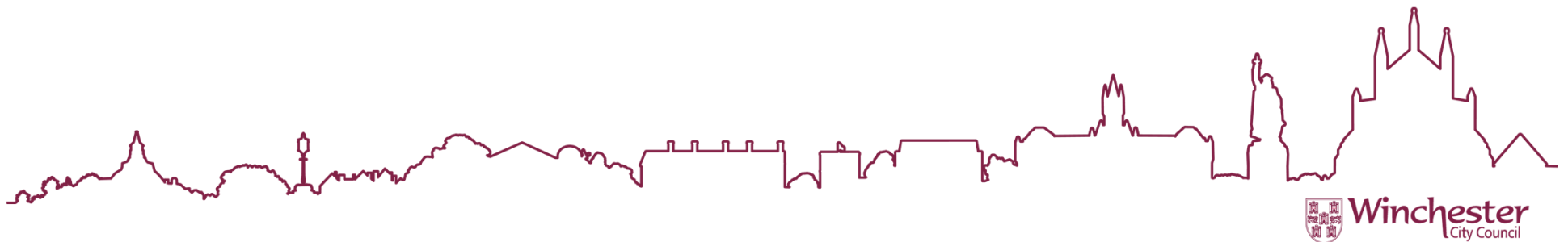
(\* DECC , The hierarchy of energy efficiency was conceived as part of the Local Government Position Statement on Energy, 1998)



## Fabric First

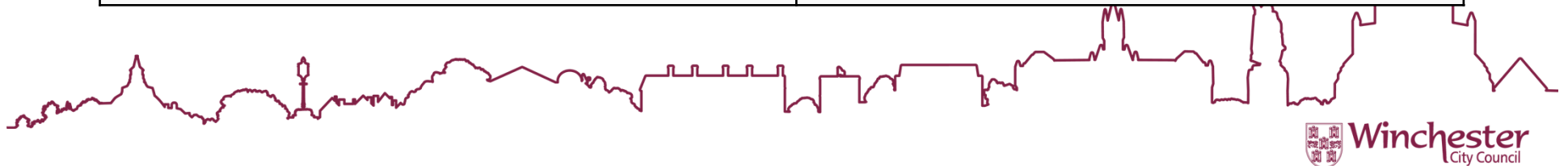
(Insulation options, estimated costs and retro-fit impact on tenants)

Insulation Element	Est. works cost (3 BED S/D House)	Proportion in existing stock (Excl. New Builds)	Retro-fit impact on tenant
External wall insulation (EWI)	£10/15,000	0%	Moderate
Internal wall insulation (IWI)	£ 5/10,000	<1%	Significant
Roof (loft) insulation (50mm+)	£ 200/£300	99%	Low
Floor insulation	£ 2/3,000	0%	Significant
Windows (new A+ rated)	£5,000	<1%	Low
External Doors (new A+ rated)	£600	<5%	Low



## Improvement Measures when property is void/empty

Pros	Cons
No impact/disruption to tenant	Loss of rental income (est. 2 wks. per void)
Works completed quicker	KPI re-let time increases (est. 2 wks. per void)
Less expensive	Programme dictated by void occurrence
Property can be advertised/promoted as more fabric/heating energy efficient	Procurement restrictions?
No perceived loss of amenity	
No conservation/planning issues	
100% of funds spent on fabric/property improvements - i.e. not wasted on decant costs	
Passive and constant form of energy saving (no tenant input required)	

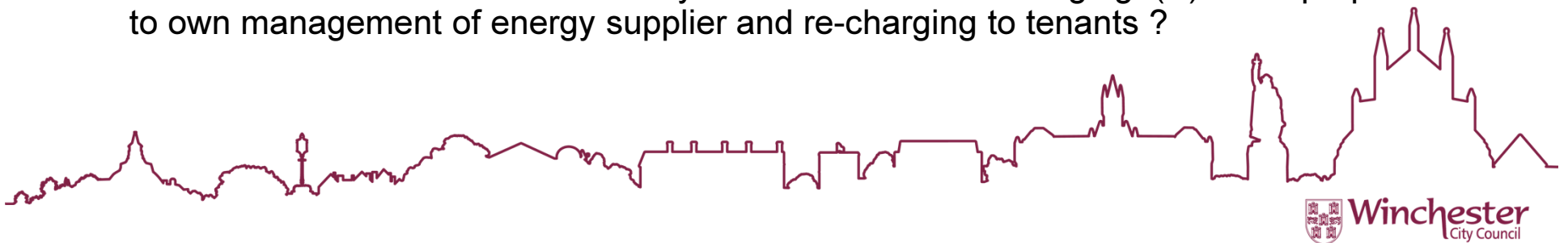


## Other heating systems that show significant carbon savings (over gas systems)

- **High heat retention storage heaters** (quantum) - typically show carbon savings of approx. 50% over gas. However, the running cost for the occupants typically show a 30% increase.
- **Air source heat pump (ASHP)** - typically show carbon savings of approx. 80% over gas. However, the running cost for the occupants typically show a 6% increase.
- **Ground source heat pump (GSHP)** - typically show a similar carbon saving as ASHPs over gas (80%), However, the running cost for the occupants typically show a 17% increase. The capital installation cost is also typically 50% higher than ASHPs.

(the above running cost increases are all mainly due to current differences between gas and electricity supply charges)

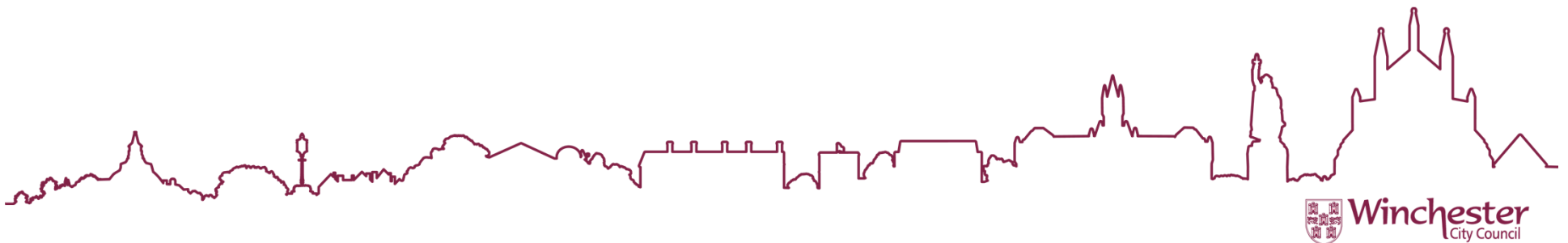
- **District/communal ASHP/GSHP** - perhaps an option for blocks of flats/maisonettes - but is dependent on number of additional factors - (i) site limitations (ii) willingness of tenants to move to a communal system and central re-charging (iii) WCC prepared to own management of energy supplier and re-charging to tenants ?





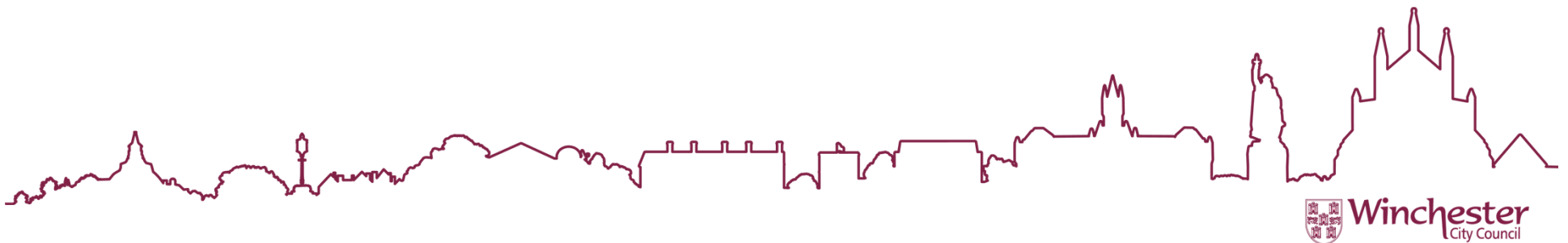
## Practical/Financial considerations for tenants

- Majority of stock has gas combi boilers - so currently no hot water cylinder/airing cupboard space - ASHP and Quantum systems both require a hot water cylinder.
- Running cost of ASHP and Quantum (for 3 bed- house) typically 6% and 33% higher than gas - but degree of impact depends on existing/current system.
- Flow temperatures much lower with ASHP than with gas - so radiators have to be proportionately larger to meet same heat demand.
- Managing tenant expectations - property can appear cooler/colder due to lower radiator temperatures; unlike gas, ASHPs are not an instantaneous heat form;
- Cultural shift from combi gas systems which are the cheapest to run, space saving, quiet and very responsive



## RECOMMENDATIONS

- Set aside £100k for specialist match-funded/trial projects e.g. whole house “deep” re-fits (similar to Swedish project)
- Undertake a detailed/in-depth cost-benefit analysis/review into the pros, cons and practicalities of introducing ASHP and GSHP technologies
- Engage with Southampton University on NetZeroCollective partnering initiatives and/or similar
- Target poorest energy-performing voids with a variety of fabric/heating improvement measures to raise property to Band C or above (target 100 No. p.a. where funding/practicalities allow)
- When “off-gas” systems become “beyond economic repair”, replace systems in houses, bungalows (and possibly grd flr flats ?) with ASHP and remainder with quantum heaters

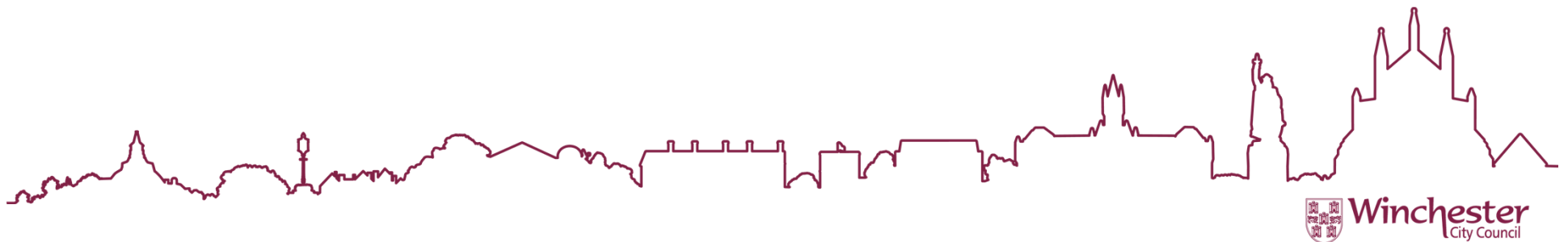


## RECOMMENDATIONS (cont`d)

- ❏ As ASHP/GSHP technologies and others (e.g. hydrogen) develop and advance, move from current heating offer (of either gas or quantum only) to ASHP/GSHP or quantum only
- ❏ Encourage tenants to use green energy suppliers
- ❏ Consider de-prioritising or extending replacement programmes on other capital elements to free-up additional funding (e.g. defer programme of non-urgent roof replacements until after 2030 ? )

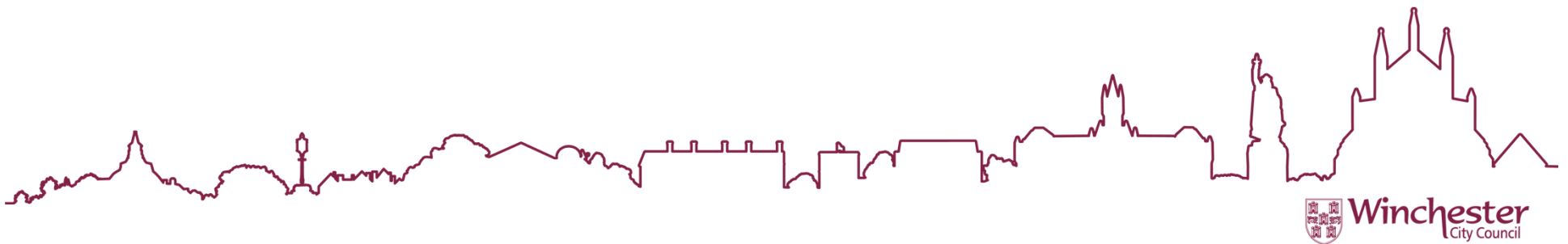
### Alternative Option (not recommended)

- ❏ Tenant running costs aside, maybe shift everything over to Quantum ?  
Much cheaper to install than ASHPs + can be fitted anywhere + safe + very little ongoing responsive or cyclic maintenance costs etc. - and then rely and wait on the corresponding de-carbonisation of the grid by 2030 ?

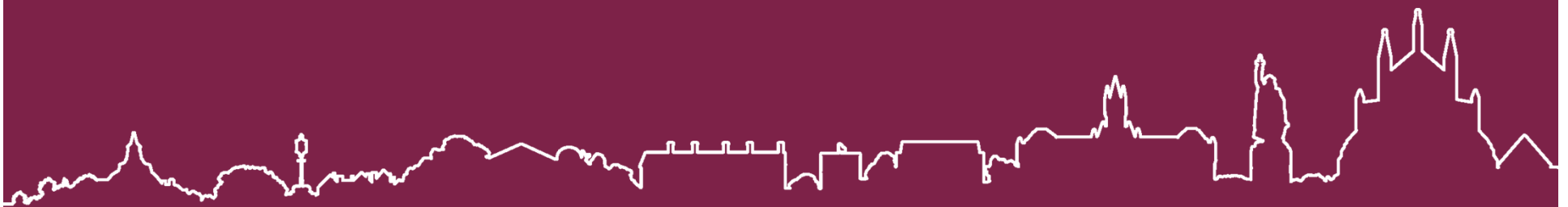


## Tenant Consultation

- Presentation to TACT - 15<sup>th</sup> September,2020.
- Possible digital survey to gauge tenant opinion/preferences on possible options



# Questions



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