



Meeting	Carbon Neutrality Open Forum
Date and Time	Wednesday, 29th September, 2021 at 6.30 pm.
Venue	Virtual Meeting

## AGENDA

1. **Introduction**
2. **Panelist presentations - (Pages 3 - 54)**
  - a) Winchester City Council
  - b) University of Winchester
  - c) Winchester Action on Climate Change
3. **Live polling**
4. **Q&A**
5. **Closing**

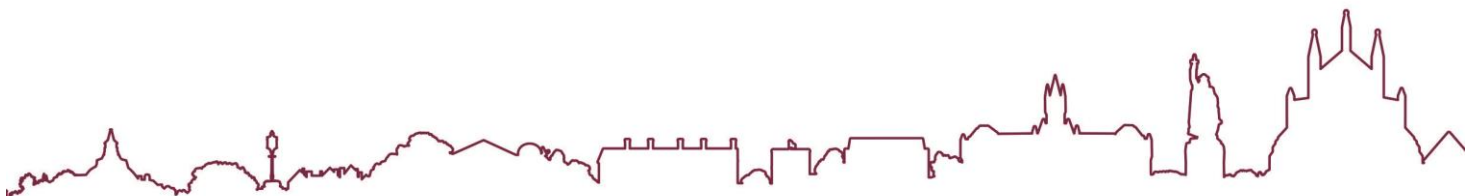
Agenda Contact: Alex Eburne Email: [aeburne@winchester.gov.uk](mailto:aeburne@winchester.gov.uk) Tel: 01962 848 538

## **MEMBERSHIP**

### **Carbon Neutrality Open Forum**

Councillor Murphy (Chairperson)

Other councillors and representatives of external partner organisations will form a panel at each meeting to present and take part in the debate



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## **Panelist presentations**

- a) Winchester City Council
- b) University of Winchester
- c) Winchester Action on Climate Change

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Susan Robbins

Corporate Head of Economy & Community

## Climate Emergency Open Forum - 29 September 2021

### Winchester District:

- Carbon Neutrality Action Plan
- Green Economic Development Strategy
- Greener Future Fund







# Winchester District Carbon Neutrality Action Plan

## Annual Review Year 1 and Priorities for 2021/22



# YEAR 1 ANNUAL REVIEW 2020/21

The review covered

-  the challenges of COVID-19,
-  what we have achieved and projects delivered,
-  new carbon emissions data for both council and the district,
-  resources – chiefly our expenditure and what we have been able to secure from external funding,
-  campaigns and collaborations and
-  Delivery, monitoring and governance.

# WHAT WE HAVE ACHIEVED

## Transport

- Installation of 34 electric vehicle charging points in council-owned carparks completed
- 2 of 5 WCC's Neighbourhood Services vehicles are now electric and our Parking Team has replaced one of its higher emissions vehicles with a hybrid vehicle
- University of Southampton commissioned to research where to best locate more electric vehicle charging points across the district
- New Homes team has updated their new build requirements to include provision of EV charging points in new affordable housing schemes
- Taxi licensing policy approved by Cabinet in November 2020 incentivises uptake of electric taxi vehicles

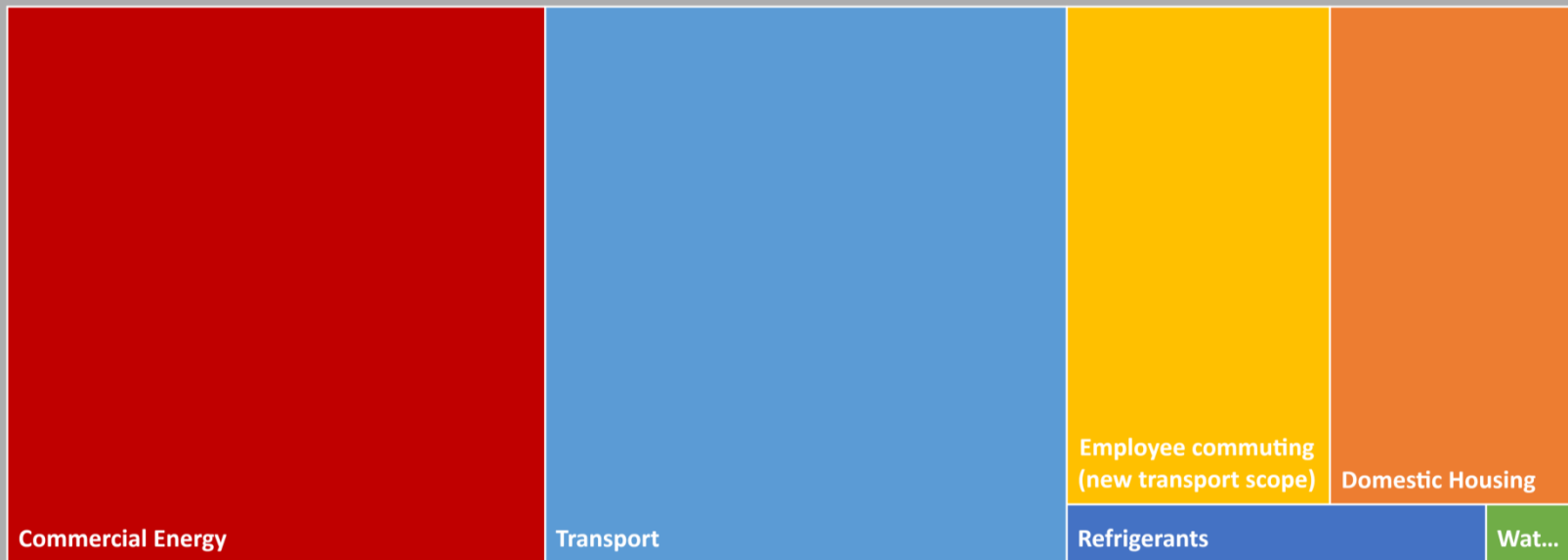
## Domestic energy

- Passiv Haus housing scheme submitted for Planning (due July 2021). Design meets all accreditation tests and on track to achieve "net carbon neutral" if not better
- Council now approved £15m (£1.5m pa). council housing stock improvement programme approved to focus on "fabric first" insulation of void properties
- Local Plan consultation event on Strategic Issues included climate emergency and sustainable development.
- £115k secured from BEIS to enable energy efficiency works to homes with the lowest energy ratings and experiencing fuel poverty.
- New Homes' Employers Requirements (ERs) amended to reflect no gas heating with immediate effect and new homes to be built to AECB (Association for Environment Conscious Building) standard as minimum

## Commercial energy

- Green energy tariff signed up April 2020, cutting CO<sub>2</sub> emissions by 19%
- £38k secured for solar panels at the Biffa depot in Bar End
- 400 solar panels on new Winchester Sport & Leisure Park will provide enough energy to power the main swimming pool hall for 21.5 hours a day
- Littleton Triangle procured contract for feasibility study

# COUNCIL EMISSIONS DATA - CO<sub>2</sub>t 2019/20



The council's emissions in 2019/20 are **11.7% lower** compared to the 2018/19 baseline for the Carbon Neutrality Action Plan. Total emissions were 4383 tonnes of CO<sub>2</sub>e

The **most significant emission sources are electricity and gas consumption**, together accounting for 48.3% of Winchester City Council's carbon footprint.

Based on 2019 emission levels there needs to be a **reduction per year of, on average, 800 tonnes of CO<sub>2</sub>** for the between 2020 and 2024 if we are to achieve our target.

# Council priorities 2021/22

## **Council top priorities to achieve a 20% reduction in CO<sub>2</sub> emissions on 2019 levels**

### Transport

1. Work with Hampshire County Council on a Winchester District Bus Breakthrough plan – to include moving to zero carbon buses – and supports the Hampshire Bus Service Improvement Plan
2. Ensure employee commuting remains at reduced carbon emission levels

### Commercial Energy

3. Develop a proposal for energy saving measures at the Guildhall and West Wing

### Domestic Energy

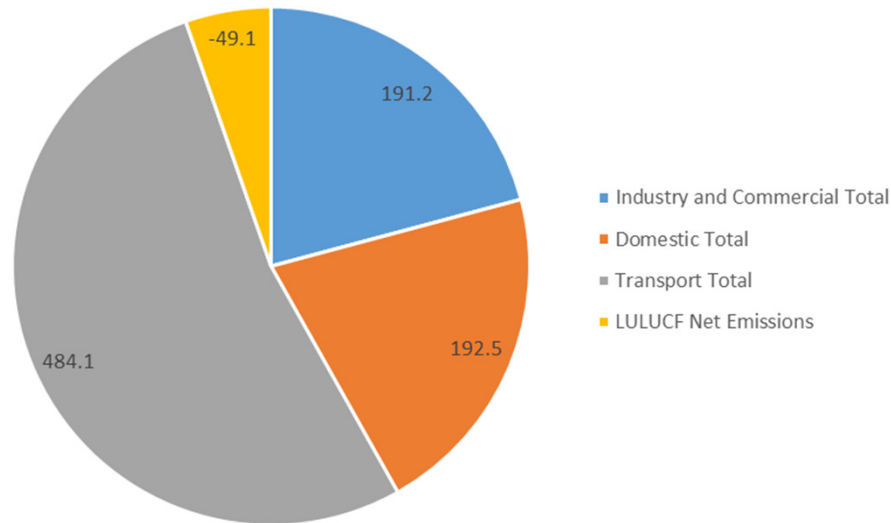
4. Identify measures to reduce emissions at Chesil Lodge

### Natural Environment / LULUCF\*

5. Agree the council's mitigation / off setting policy
6. Develop a viable business case for investment in energy generation on council land

# DISTRICT CARBON EMISSIONS

Winchester District Total territorial CO<sub>2</sub> emissions 2018 (ktCO<sub>2</sub>)



Total district CO<sub>2</sub> emissions in 2018 was 818.8 kt

The rate of CO<sub>2</sub> reduction needs to significantly increase.

All sectors within the district must substantially reduce carbon emissions and the most polluting areas are road vehicles (59%), heating homes (23%) and commercial electricity consumption(23%).

# District Priorities

## **Top district priorities to achieve a 10% reduction in CO<sub>2</sub> emissions on 2018 levels**

### Transport

1. Pilot emissions-based car parking charges
2. Support expansion of zero emission delivery services.
3. Work with Hampshire County Council to commission a Local Cycling and Walking plan (LCWIP) for the district

### Commercial Energy

4. Work with the largest businesses in the district to reduce energy use
5. Create circular economy initiatives that uses waste as resources

### Domestic Energy

6. Spend £1.5m on retro-fitting housing stock

### Natural Environment / LULUCF

13. Deliver 80% of the 73 actions from the BAP

# IMPORTANT SUPPORTING ACTIVITY

- Three areas of work where additional capacity will be directed have been identified:
  - Sustainable transport – to develop proposals, co-ordinate and liaise with key agencies and be ready to bid for any government funding
  - Campaigns and communications – to help promote more widely all that is being done and to encourage behaviour change
  - A roadmap of quantified and timed interventions that are needed to achieve in particular the district target.
- Two key policy documents
  - The Local Plan Review
  - Green Economic Development Strategy

# Winchester District Green Economic Development Strategy 2020 - 2030







# A NEXT GENERATION STRATEGY

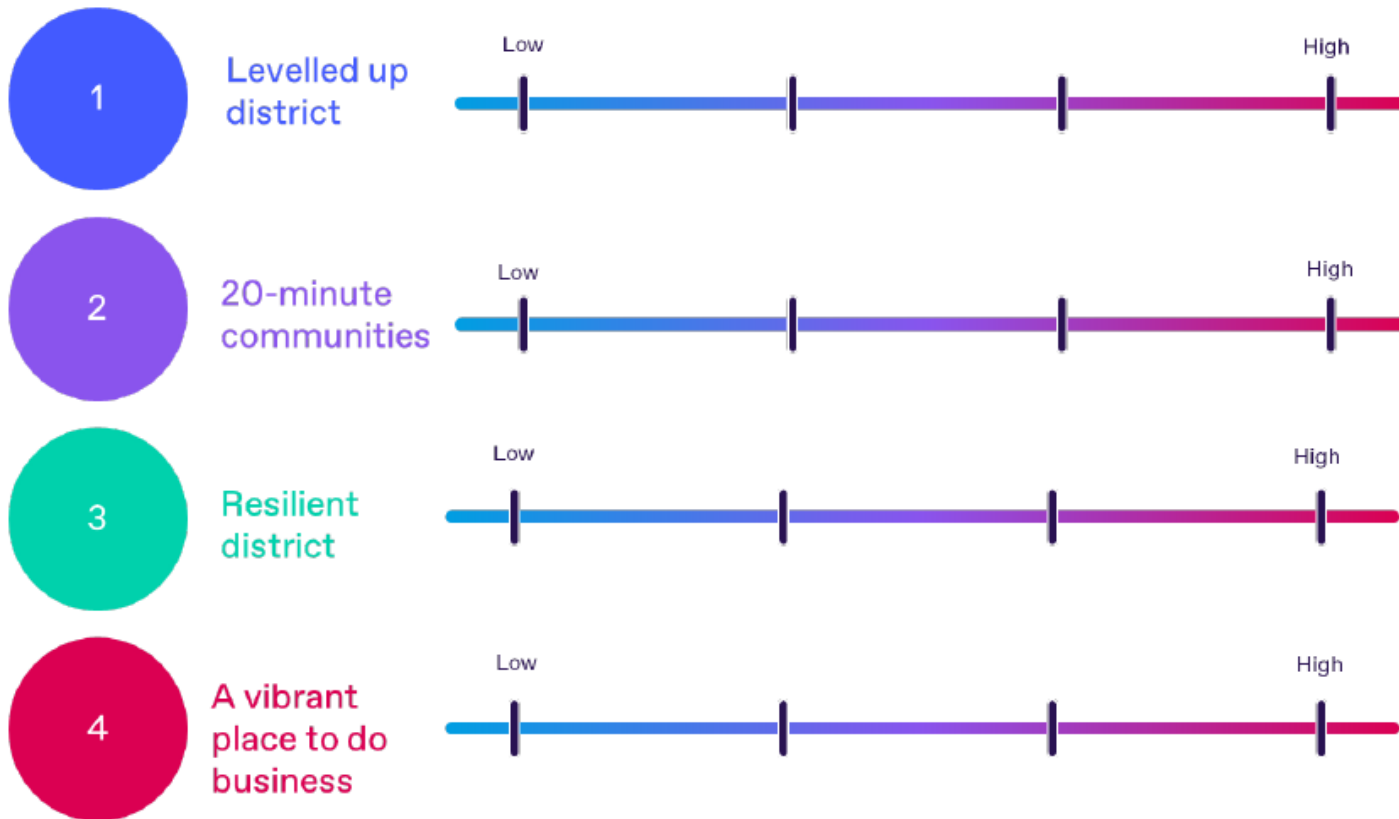
Traditional pre-pandemic place-based strategies		Post-pandemic, post-Brexit local economic strategies
Tendency to linear blueprints	----->	Scenario and contingency-based
Primary focus on productivity and employment goals	----->	Primary focus on wellbeing, sustainability and resilience
Emphasises technology-led innovation and knowledge-rich sectors with hard infrastructure	----->	Balances knowledge-rich with foundation sectors, good work, social and natural capital
Often a bidding document for specific government investment	----->	A place prospectus and approach to leadership and partnership working
Assumptions of agglomeration and globalisation	----->	Tailored to distinctive qualities of places and communities



# GREEN GROWTH

-  An anticipated Green Dividend is expected to generate **natural capital growth / nature recovery** benefits, **improved health and wellbeing**, and the **greening / resource efficiency improvements to mainstream businesses**.
-  However, it will also have **direct, positive impacts on jobs and GVA**
-  The UK's Low Carbon and Environmental Goods and Services (LCEGS) sector employed 1.28million people in 2020/21 and was worth £205.7bn to the UK's economy.
-  Assuming the District follows national growth trends, the LCEGS sector could generate an additional **2,100 jobs** and **£337mn in sales** over the lifetime of the GEDS.

# 4 SCENARIOS



# WHAT THIS MEANS

<b>Levelled-up</b>	<b>20 minute communities</b>
<ul style="list-style-type: none"><li>• Inclusive growth by linking the knowledge and foundational economies.</li><li>• Just transition through meeting the challenges facing different parts of the district.</li><li>• Improved housing affordability and sustainability.</li></ul>	<ul style="list-style-type: none"><li>• Reducing the need for travel between different places in the district.</li><li>• An improved live-work offer within market town centres.</li><li>• Starts to address the congestion challenge.</li></ul>
<b>Resilient district</b>	<b>A vibrant place to do business</b>
<ul style="list-style-type: none"><li>• Flood protection and adaptation to rising temperatures.</li><li>• Enhancing local biodiversity and capitalising on local food production.</li><li>• Local renewable energy generation to protect against supply shocks and price rises.</li></ul>	<ul style="list-style-type: none"><li>• Rethinking retail space for the future.</li><li>• Flexible and affordable space for start-ups and growth.</li><li>• The UK centre for sustainable tourism.</li><li>• Invest in the District wide cultural infrastructure</li></ul>

# 6 THEMES



Innovative business & economy



Connected, public and electric transport



Skills & competitiveness



Affordable, low carbon housing











Culture, creative & visitor economy



Green infrastructure, biodiversity & renewable energy

# 8 OUTCOMES

-  Increased business density and diversity
-  Higher skills and productivity
-  Reduced socio-economic and spatial inequality
-  More affordable, sustainable, and flexible housing stock
-  Net CO2 emissions reduced to zero
-  Greener transport and less congestions
-  More local renewable energy
-  Increased biodiversity and green infrastructure

All increasing Winchester's profile and reputation as a dynamic, sustainable District with a compelling, instinctive blend of assets, capabilities and development opportunities

# Greener Future Fund



# GREENER FUTURES FUND

- For not for profit organisations and small businesses
- Match funding grants are available for projects that address issues such as transport, energy consumption or behavioural changes.
- Grants of up to 50% of project costs, up to a maximum of £2,000.
- Applications via the Crowdfunder platform
- To find out more visit [www.crowdfunder.co.uk/funds/greener-future-fund](http://www.crowdfunder.co.uk/funds/greener-future-fund)



# Thank you



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# OUR CARBON JOURNEY

## University of Winchester Climate Neutrality Open Forum

Mat Jane  
Head of Environment and Building Services  
Estates and Facilities Services

Page 25



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# The University

- Founded in 1862
- The University for Sustainability and Social Justice
- 8,400 FTE students
- 900 FTE staff
- Rapidly growing institution
- 77,500 m2 of estate (79% increase since 2006)
- 10% increase in estate in 2020/21 alone
- 1800 students in halls

Page 26



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# My Role

- Carbon reduction and energy efficiency
- Utilities procurement
- Waste and recycling
- Biodiversity
- Environmental compliance
- Travel and Transport
- Fleet Management
- Building Services and plant
- Maintenance department and Service Contractors

Page 27



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# Carbon Terminology

- Scope 1 - Direct emissions
  - Scope 2 - Indirect emissions
  - Scope 3 - Other indirect emissions (more difficult to calculate)
- Location based reporting - based upon the grid emissions factor
- Market based reporting - based on energy supply factors

Type of Emissions	Emissions sources
<b>Scope 1</b> Direct emissions from our activities	<b>Fossil Fuels</b> used to heat and operate our buildings <b>Vehicle fuels</b> from fleet consumption <b>Refrigerant Gas</b> losses from cooling
<b>Scope 2</b> Indirect emissions from our electricity use	<b>Electricity</b> used for lighting, IT, equipment, ventilation
<b>Scope 3</b> Other indirect emissions associated with our activities and supply chain	<b>Water</b> consumed <b>Water</b> discharged to sewer <b>Waste</b> generated on campus & waste generated from construction projects <b>Business travel</b> Air and rail travel booked for business related work Grey fleet usage
<b>Emissions measured</b>	
<b>Emissions not originally measured</b>	<b>Staff/ student travel</b> Commuting to campus <b>Goods &amp; services</b> All the things we purchase



# Carbon Management Plan

- CMP in place since 2006/7
- Significant reductions in CO2
- £1.8m energy costs
- 100% of electricity sourced from renewables since 2008

Page 29

Onsite PV generation 2020/21 - 77mWh - around 2% of our total demand

- 100% of gas sourced from renewable sources (biomethane) since September 2020
- We have spent over £2m on specific carbon reduction projects since 2006
- £3.12m decarbonisation project underway



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# Carbon Reduction Projects

Boiler replacement - oil to gas - gas to gas -  
focus now on gas to electric

Insulation to pipework and buildings

Pump and motor upgrades

Variable speed drives

BMS systems and improved controls

LED lighting and Controls

Efficient ventilation and heat recovery

Removal of AC systems

Voltage optimisation

800+ sub-meters connected to AMR

Renewables



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# Carbon Emissions 2020/21

Net-zero Target by 2030 but we aspire to get there by 2025

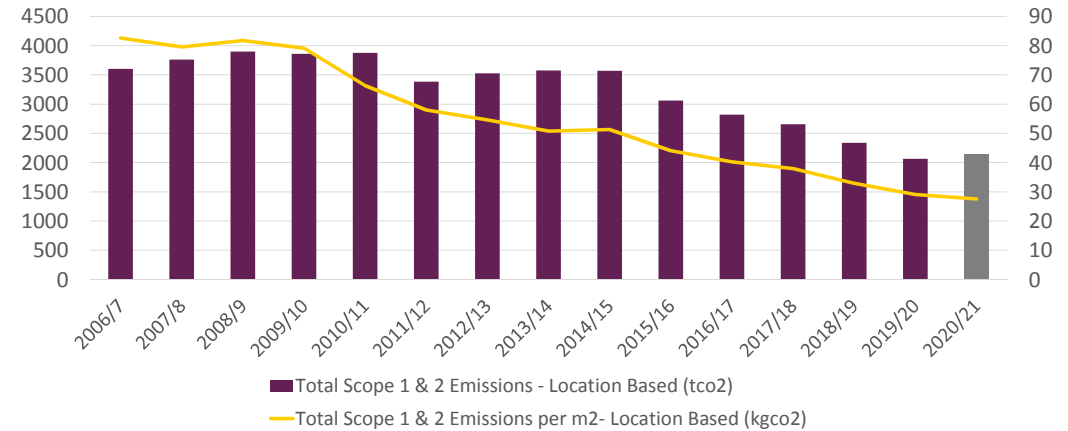
## Location based energy emissions

- 66% reduction relative to estate growth
- 40% reduction total energy emissions - New building has increased size of estate by 10% but emissions only increased by 4% in 1<sup>st</sup> year

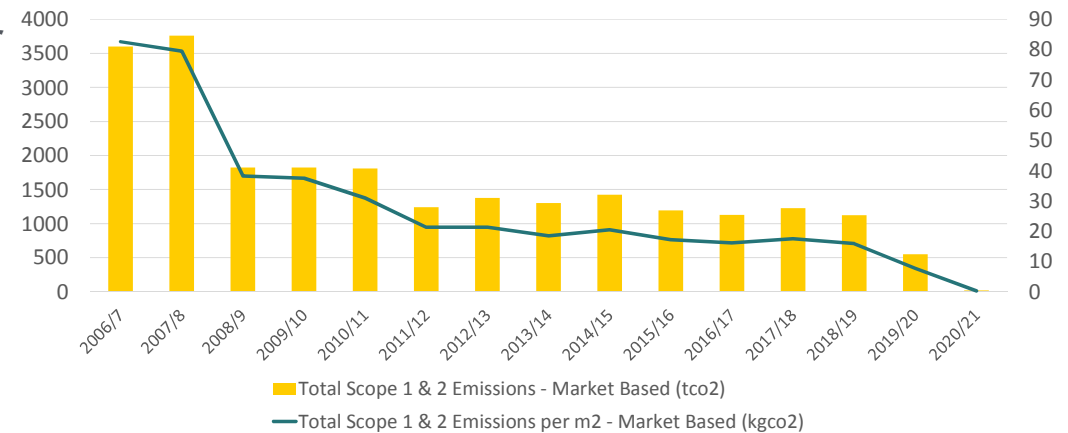
## Market based energy emissions (need to verify green gas emission factor for 20/21)

- 99% reduction total energy emissions and relative to growth

Scope 1 & 2 Emissions - Location Based

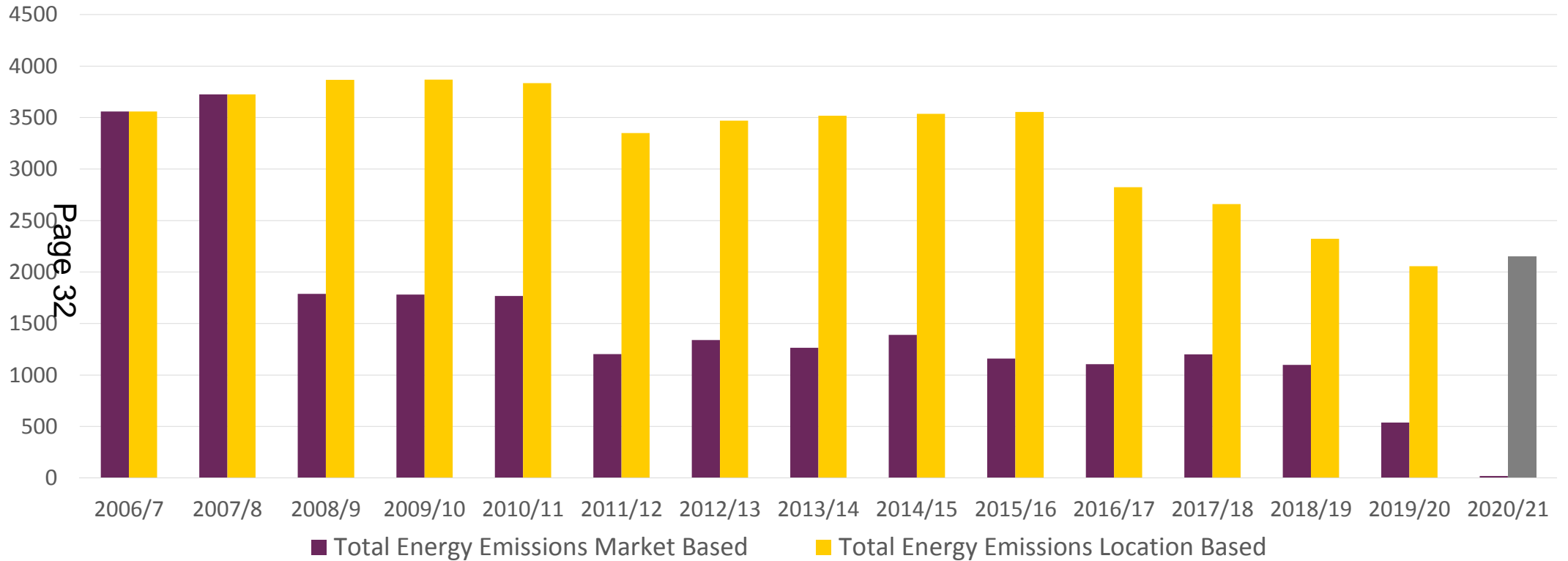


Scope 1 & 2 Emissions - Market Based



# Carbon Impact of buying renewable

## Market vs Location Based Emissions



# Large Scale Decarbonisation Project

PSDS Funded project focused on degasification and improving air quality

£1bn fund - £3.12m grant to UoW

Installation of -

- 34 ASHP for 11 large buildings
- 151 kWp Solar PV (200% increase)
- BMS installation and optimisation of existing systems
- LED lighting upgrades
- £68k energy cost savings and 484t CO<sub>2</sub>



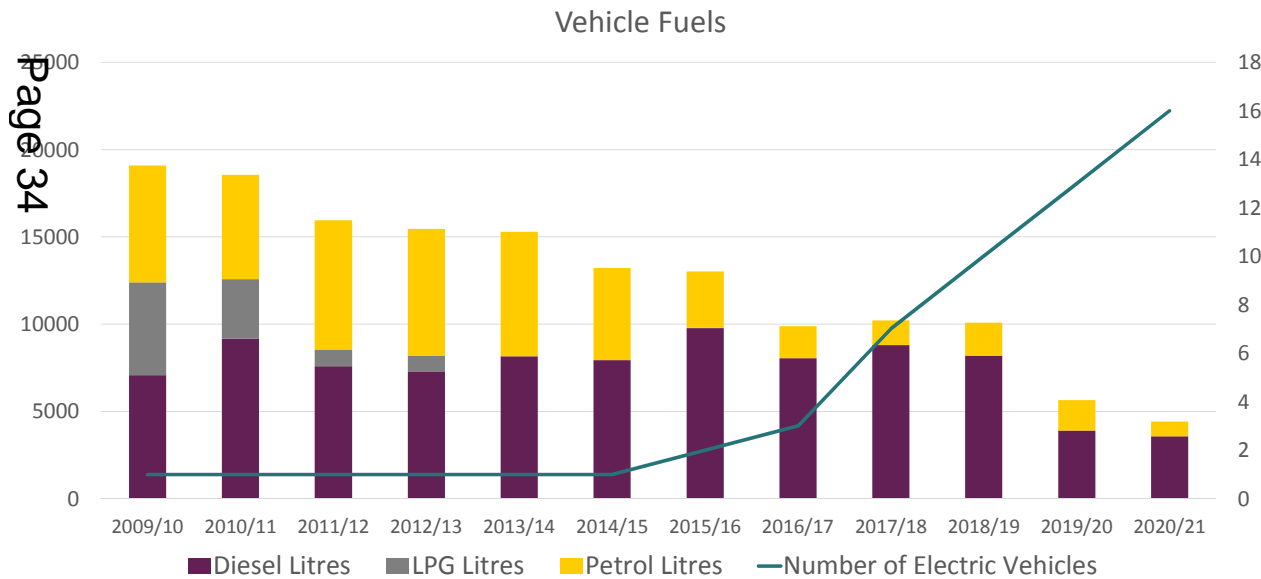
# Fleet vehicles

Majority of remaining scope 1 from vehicle fuels

Fleet is 35 vehicles - now 16 are electric

Target - all fleet switched from ICE to EV by 2025

Priority for replacement is Diesel due to air quality



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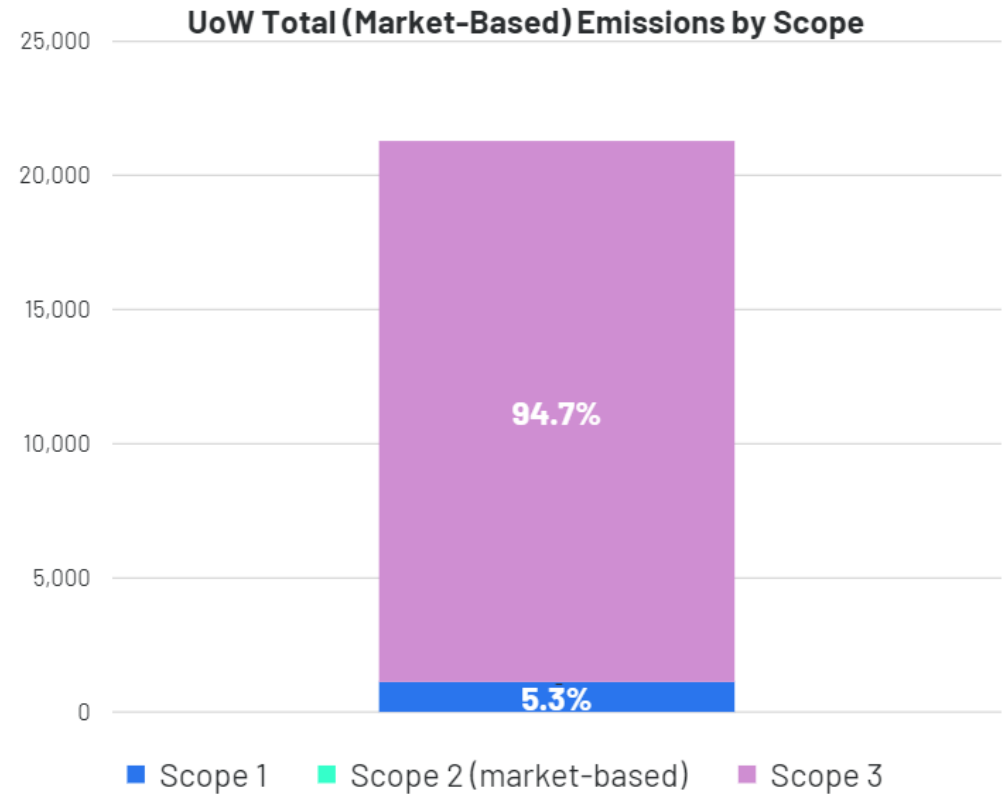
## But.....Scope 3 Carbon

Scope 3 emissions dwarf our Scope 1 and 2 energy emissions - 22k tonnes

Scope 3 is 95% of our carbon footprint by current estimates (first pass)

To get to net-zero we will need a robust strategy to;

- Avoid emissions
- Remove emissions
- Carbon Capture and Storage
- Sequestration
- Offset (the least preferable)

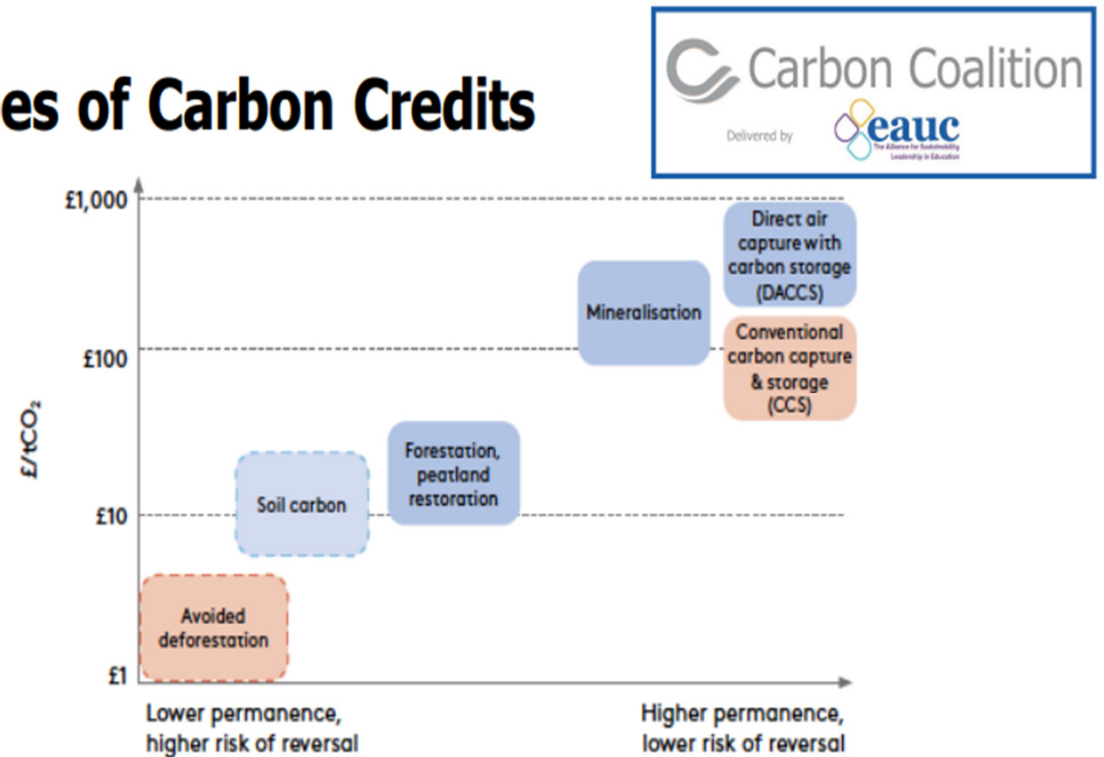


# EAUC Carbon Coalition Pilot

Consortium of UK and Ireland higher and further education institutions that have joined together to deal with their Scope 3 emissions.

- 386 tCO<sub>2</sub>e purchased for 2019-20
- Carbon Neutral for Scopes 1&2 plus Business Travel, Waste & Water.
- 50% UK Forest Carbon Code
- 50% Carbon Coalition Portfolio
- Peer reviewed process for ensuring offsets are verifiable, additional and of good quality

## Types of Carbon Credits



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## Future plans

- Deliver decarbonisation project by March 2022
- Invest in further EV fleet to meet 2025 target
- Work on methodology for improving scope 3 emission accuracy reporting
- Deliver a new low carbon Estate Masterplan - refurb vs new build?
- COVID carbon challenge



Thankyou

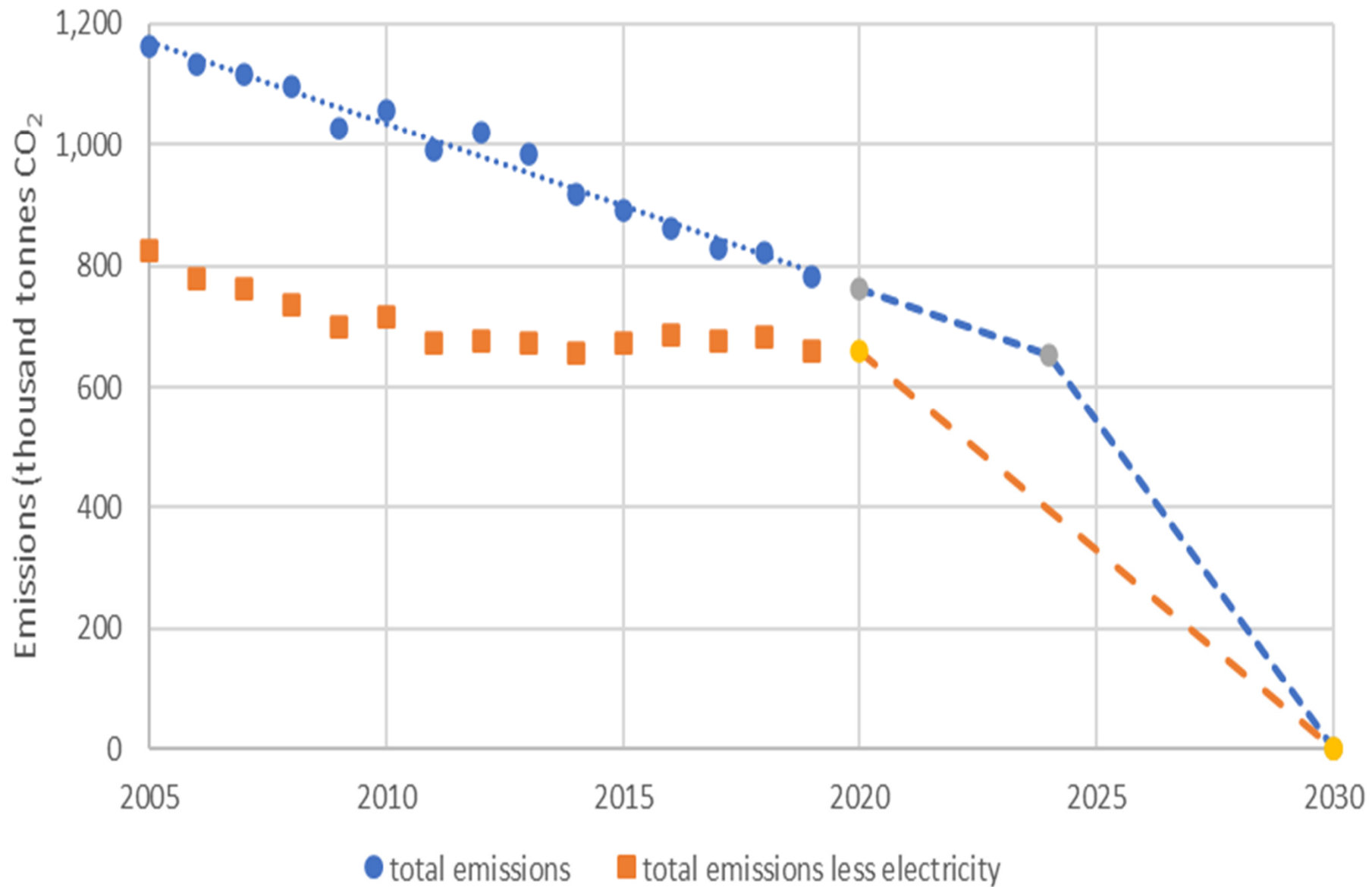
[Mat.Jane@winchester.ac.uk](mailto:Mat.Jane@winchester.ac.uk)

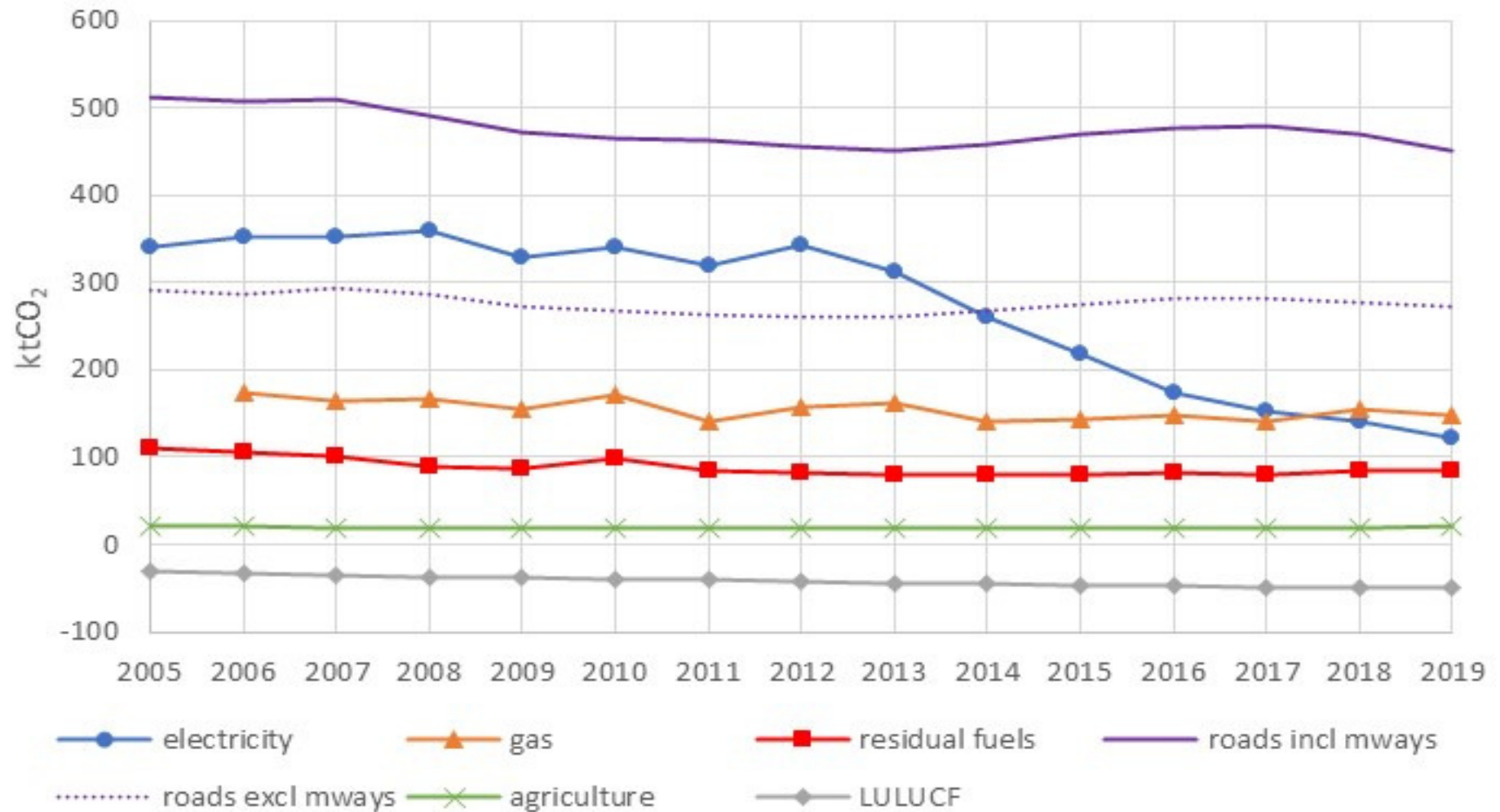
[environment@winchester.ac.uk](mailto:environment@winchester.ac.uk)

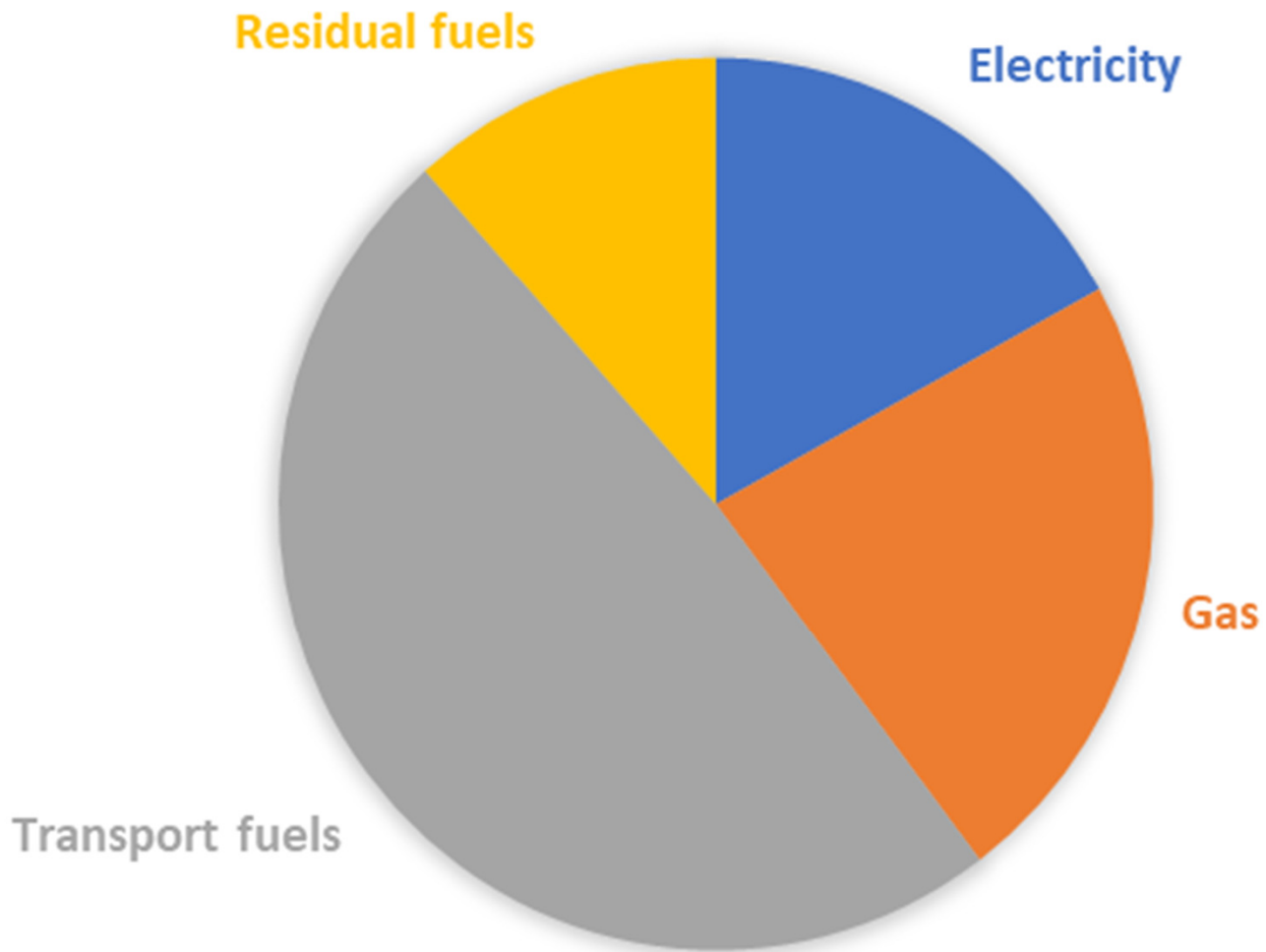


# Climate emergency or climate crisis?





CO<sub>2</sub> annual emissions in the Winchester District 2005-2019



Relative amounts of energy consumed for the main fuel categories in the Winchester District. Figures are for 2019

## **What changes will make the biggest impact on the climate?**

- reducing emissions from transport
- reducing emissions from buildings – homes, offices, shops, businesses
- taking money out of fossil fuels, and investing in green business instead
- increasing renewable energy

**Who can  
make change  
happen?**



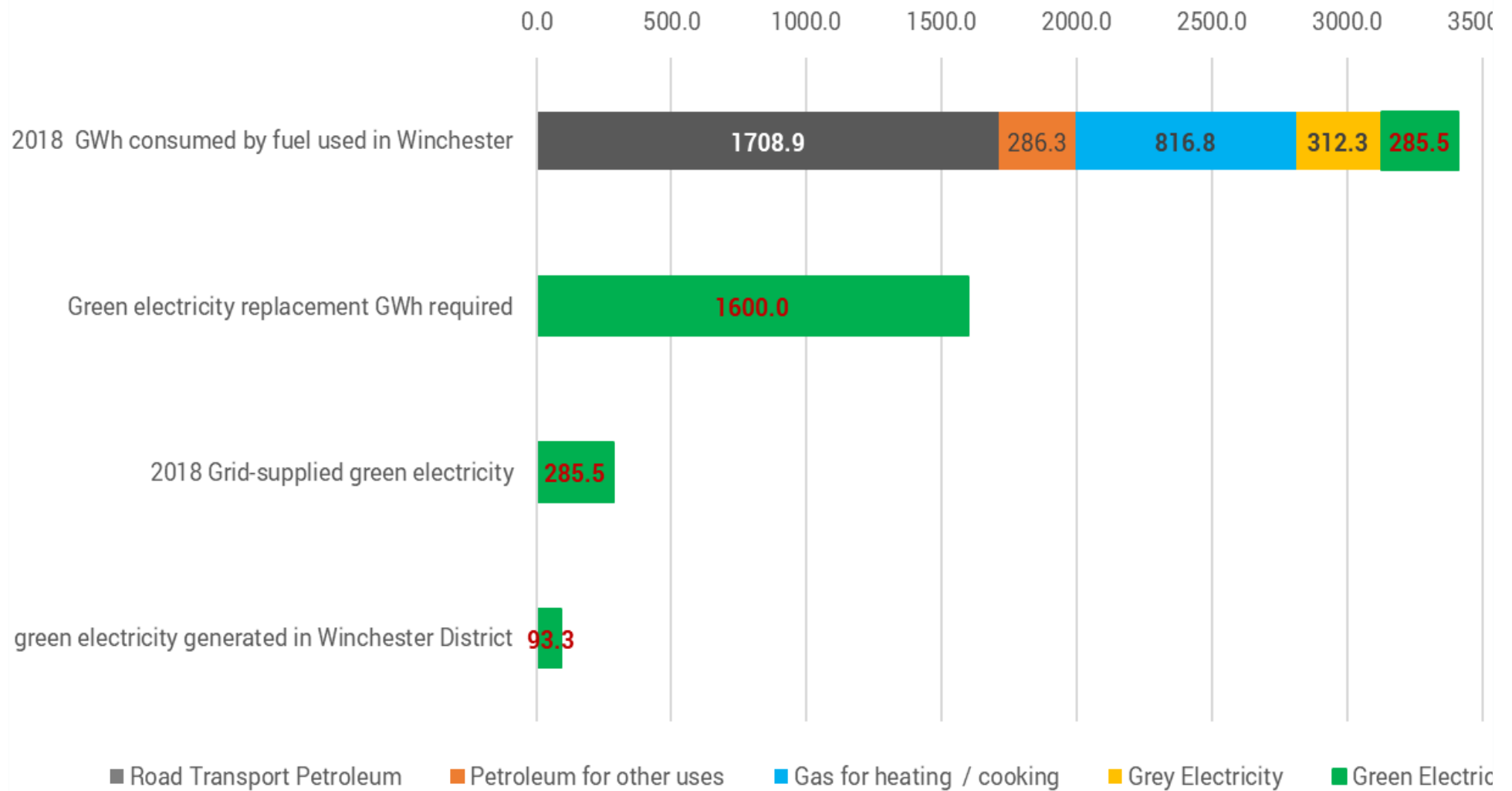






## GWh: replacing road fuel and gas with green electricity

assuming battery electric is 2.5 times more efficient than internal combustion, air source heat pumps / induction are 4 times more efficient than gas







# Winchester

TOGETHER FOR  
OUR PLANET

# Winchester Action on Climate Change

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### Ranked potential emissions savings by 2030

