

# SW Net Zero Hub

## Delivering a Low Carbon Future for Schools

Phillip Morris  
Strategic Stakeholder Engagement Manager



# Housekeeping

1. Today's 90 minutes session will be recorded for sharing
2. There will be a further 20 minutes at the end of questions
3. Q&A is allowed during speaker presentations in the chat function
4. Any unanswered questions please raise your virtual hand in the Q&A session at the end of all of the presentations and I will come to you in turn
5. All presentations will be shared with all attendees as a pack
6. Follow up support is available from the Net Zero hubs

# Agenda

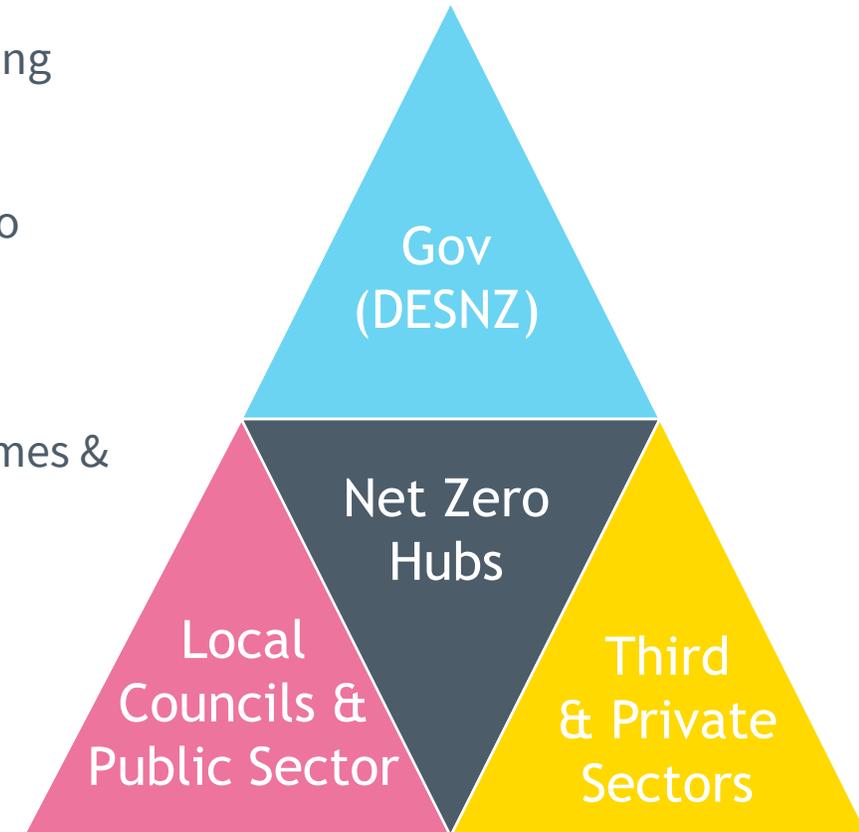
1. Intro to event – Phillip Morris – 10 mins
2. Decarbonising schools the challenge and the opportunity – Sharon McHale – 15 mins
3. Public sector decarbonisation guidance – Stephanie Parker – 10 mins
4. The value of a good decarbonisation audit and plan – Matt Fulford– 15 mins
5. Case study school – Stephanie Franklin – 15 mins
6. Easy wins for school decarbonisation - Nikki Webb– 15 mins
7. Support from the Net Zero Hubs – John Allen - 10 mins

Q&As – 20 mins

# The Net Zero Hubs

Government Net Zero Strategy established 5 regional hubs with proposed core objectives:

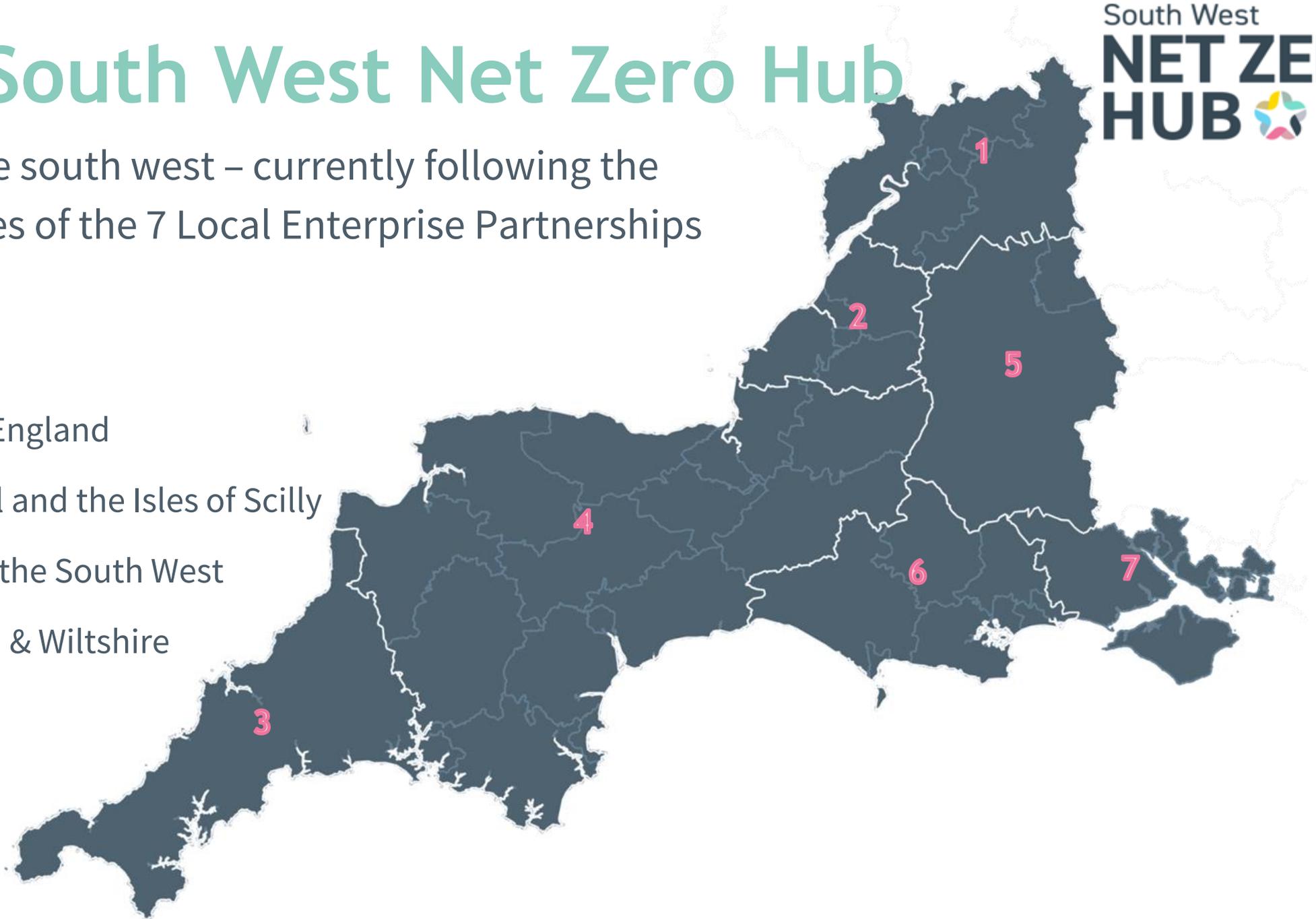
1. Increase the number, quality and scale of local Net Zero projects being delivered
2. Attract commercial investment & help LA's and other public sector to develop investment models which accelerate progress to Net Zero.
3. Collaborate with the Department for Energy Security and Net Zero (DESNZ ) to develop & support Net Zero elements to wider programmes & initiatives e.g. Levelling Up
4. Support a national knowledge transfer programme to improve information sharing, training & evaluation
5. Raise local awareness of opportunities & benefits of local Net Zero investment



# The South West Net Zero Hub

Covers the south west – currently following the boundaries of the 7 Local Enterprise Partnerships (LEPs):

1. Gfirst
2. West of England
3. Cornwall and the Isles of Scilly
4. Heart of the South West
5. Swindon & Wiltshire
6. Dorset
7. Solent



# Services & Programmes

- 1. Energy Project Development** – providing local technical resources and support to public sector net zero projects
- 2. Community Energy Support** – funding to develop projects
- 3. Home Retrofit Grant Programmes:**
  - i. Home Upgrade Grant
  - ii. Warm Homes Fund
  - iii. Social Housing Decarbonisation Fund
- 4. Public Sector Decarbonisation** – supporting wider public sector to develop net-zero organisational plans and develop investment grade proposals for funding
- 5. Local Energy Advice** – delivering a number of in person advice demonstrator projects

Sharon McHale

Department for Education

# POLICY PICTURE

- DfE Sustainability & Climate Change Strategy

April 2022

- **Policy vision:** The UK's education sector will be a world leader in sustainability and climate change by 2030

- **Four strategic aims:**



## Five action areas:

1. Climate education
2. Green skills and careers
3. The education estate and digital infrastructure
4. Operations and supply chains
5. International leadership

# CLIMATE EDUCATION AND SKILLS

- Natural History GCSE coming in 2025
- Support for teaching climate change (Science CPD, Primary Science Model Curriculum, free access to high quality teaching resources)
- Inspiring young people to choose green skills careers (T levels, apprenticeships, Skills Bootcamps)
- International Green Skills Conference



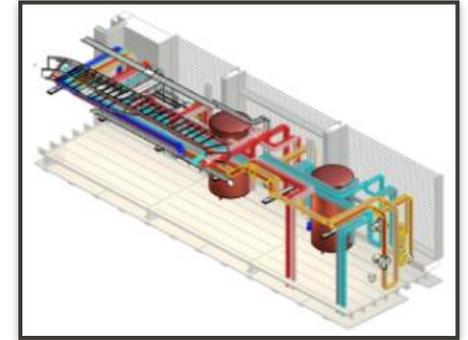
# THE NATIONAL EDUCATION NATURE PARK AND CLIMATE ACTION AWARD

- A vast virtual park
- Practical action by children and young people
- Community science, biodiversity monitoring, digital and data skills
- Nature connectedness
- Recognition and celebration
- Piloting now
- £15 million in grants
- National roll out from autumn 2023
- [www.educationnaturepark.org](http://www.educationnaturepark.org)



# EXAMPLES OF THE INNOVATION WE ARE DOING WITH OUR ESTATE:

- **Forward leading and evidence based building standard for education buildings:**
  - **Net Zero:** energy generation and lower energy costs
  - **Better Spaces:** light, acoustics, thermal comfort and ventilation
  - **Greener Spaces:** health and well being, access to the outdoors and flood resistance
  - **Better Spaces:** light, acoustics, thermal comfort and ventilation
- **Resilient Schools Project:** four high impact, low cost retrofit solutions in Bradford. The project will test decarbonisation, improving ventilation, improving data connection, climate adaptation and improving health outcomes improving air quality.
- **Gen zero pathfinders:** 4 schools and 1 college designed and construction from completely natural material (ultra low carbon). The college is in construction - Northumberland FE College, Ashington Campus.
- **St Marys School:** UKs first school designed to biophilic principles, increasing access to the outdoors, pupil well being, site resilience and indoor nature. The schools is making good progress in construction and is expected to open in October 2023.
- **Energy pods:** currently in progress, testing off-site manufactured low carbon plant rooms for new and existing sites.
- **Decarbonisation / Net Zero –** A small number of pilots to replace end of life carbon heating solutions with low carbon alternatives, reducing disruption and our reliance on fossil fuels.
- **Passivhaus pilots:** UKs largest number of passivhaus schools testing the approach against our own standards
- **Sustainability pods:** build out version of the prototype for provision on real school sites
- **Energy Management pilot -** We have Energy Sparks energy management systems at 285 schools to help them be more efficient on energy use. This pilot will inform how schools engage and utilise energy management systems and the learning will inform how we expand this offer in the year ahead.



# Main areas to focus

To support you to maximise the energy efficiency of your school, [guidance for schools and colleges](#) has been published on GOV.UK.

The guidance sets out how schools can reduce their:

- energy demand and consumption
- energy costs
- carbon emissions

It focuses on how to reduce energy use for:

- heating
- hot water
- lighting
- technology
- equipment

It includes a range of advice from everyday behavioural changes to more complex interventions that will need investment and planning.

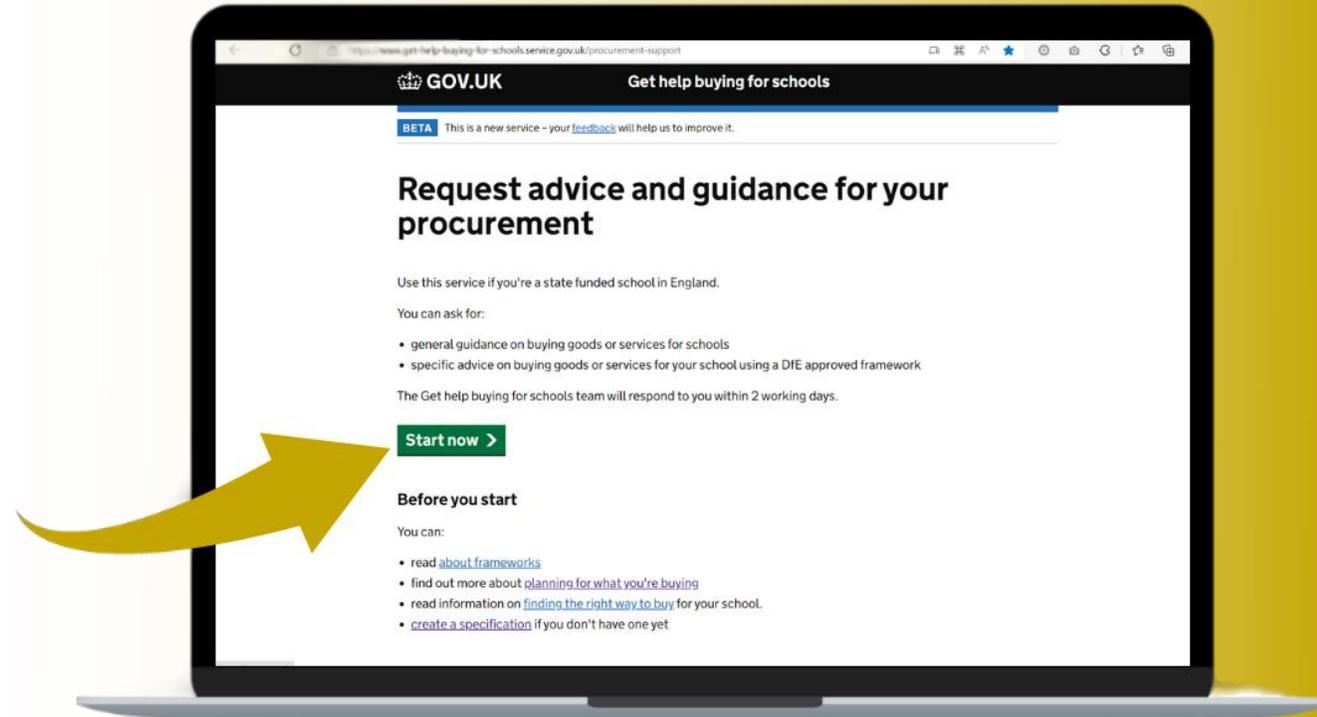
# Get help buying for schools

What is it and how can you access it

Get help buying for schools is a **free** and **impartial** service, delivered directly by the DfE, for all state funded schools in England

We can:

- give you general guidance or specific advice on buying goods or services for your school
- give you support with buying goods or services for your school using a framework agreement
- buy on your behalf through a framework agreement
- buy on your behalf by getting quotes or bids for contract renewals or new procurements from an open supplier market



Access the service here: [Get help buying for schools](https://www.get-help-buying-for-schools.service.gov.uk/procurement-support)

# Find out more

Get in touch by searching Buying for schools on GOV.UK



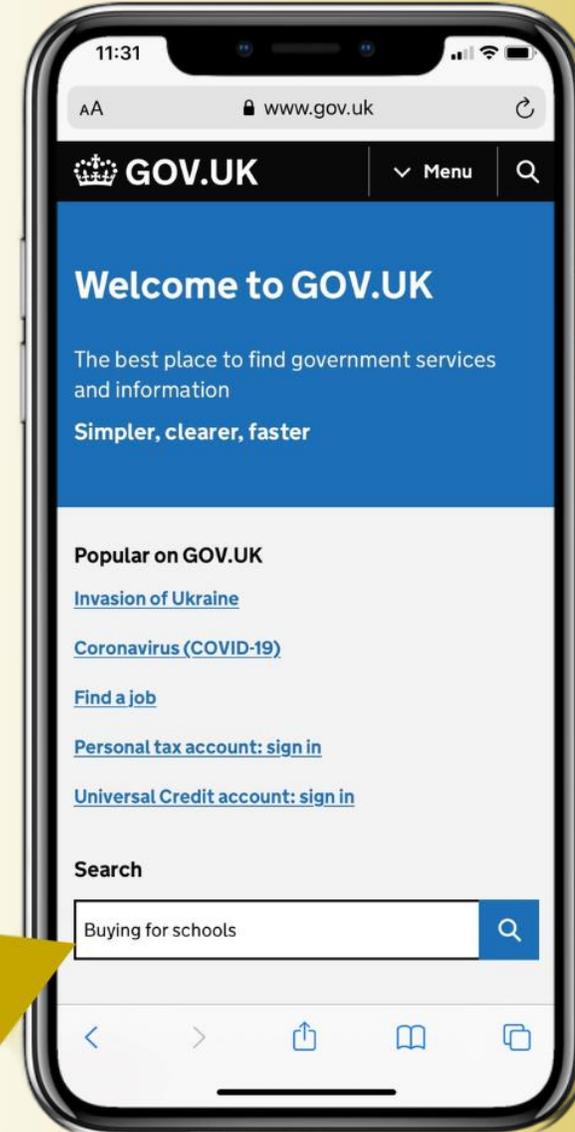
Buying for Schools - Blog



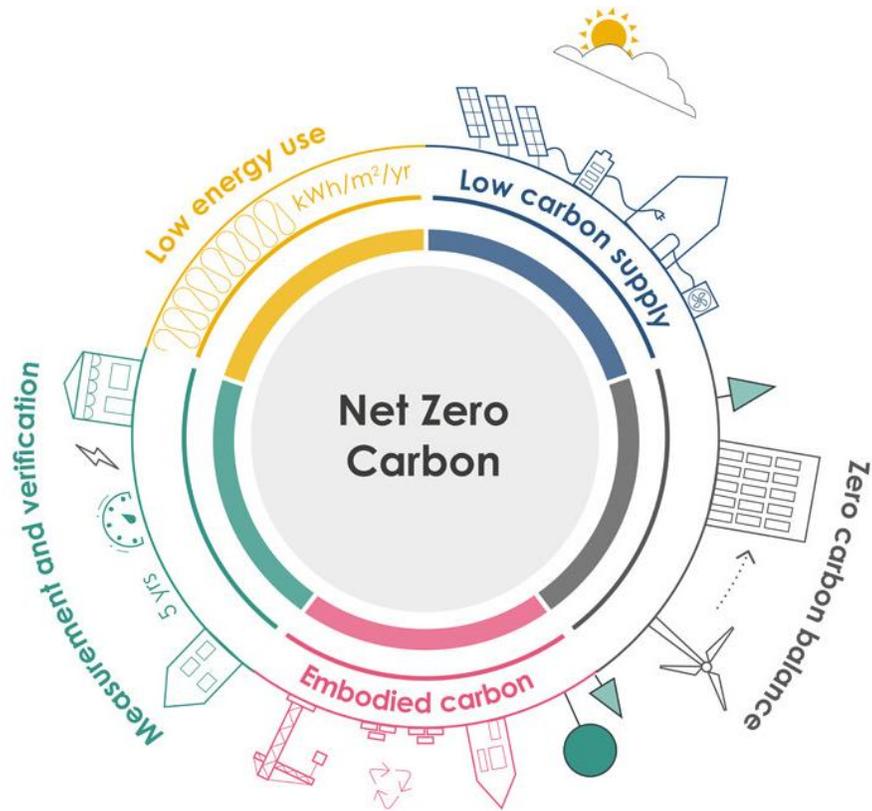
Buying for Schools - LinkedIn



SCAN ME



# BACKGROUND



## Education estate: the context

**UK Government has committed to achieving net zero by 2050**



DfE estimates an energy spend of £1.67bn this year



Education estate represents 36% of total UK public sector building emissions



The school estate covers 514 million m2 (circa 127,000 acres)



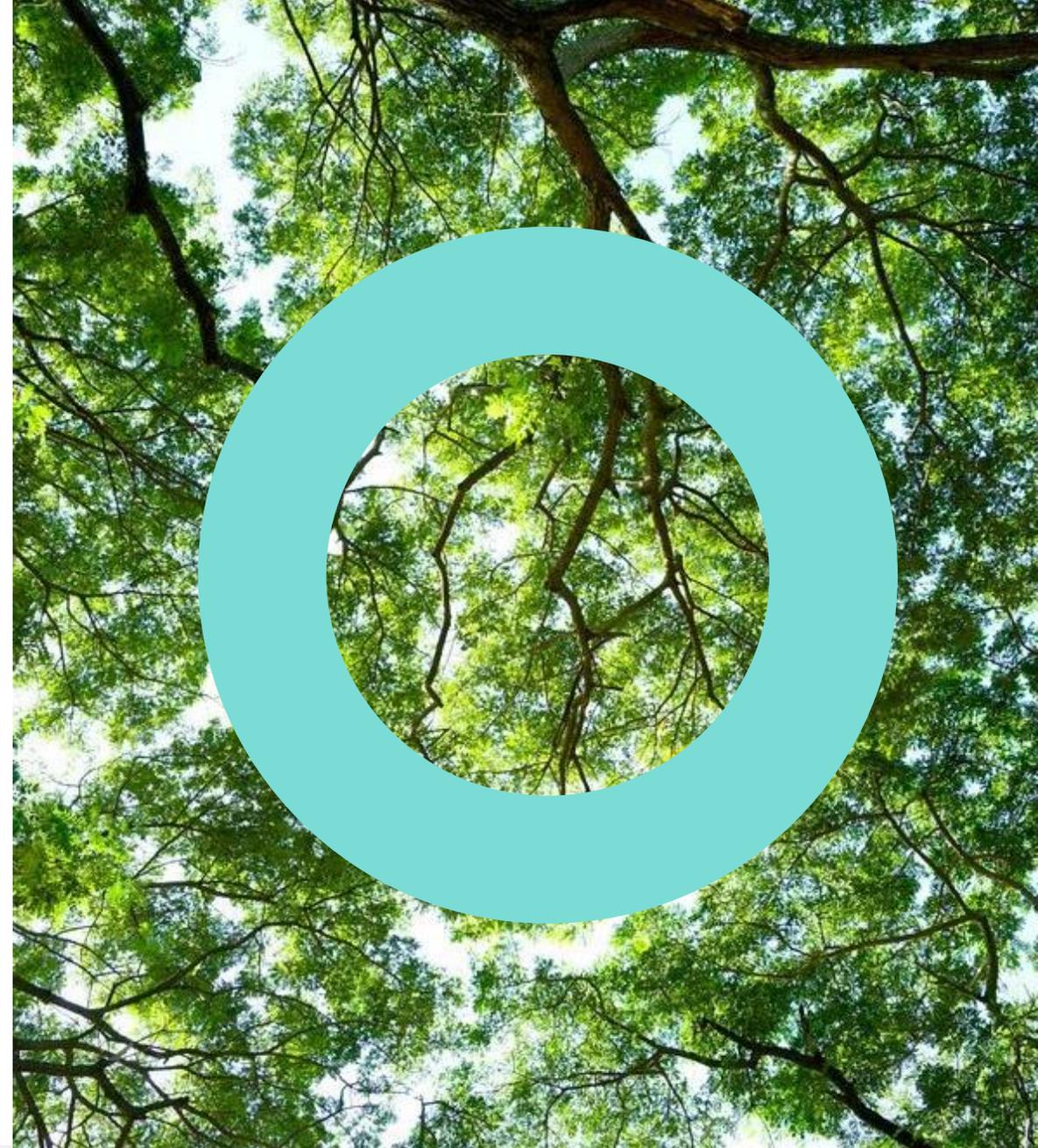
**Opportunity for significant improvement of energy performance in the education estate**



# VISION

## **The Net Zero Accelerator will facilitate the rapid rollout of decarbonisation initiatives across the education estate**

- The vision is to create a service which can support responsible bodies in the assessment of the existing condition of their estate and advise what building works they need to do and the order in which to do them
- Provide hierarchy of intervention, most likely to be – condition and basic fabric improvements, adaptation measures, energy efficiency measures, energy generation and decarbonisation
- This will be supported by a finance scheme. Through feasibility work, we will also explore whether a combination of debt/equity finance could be used.



# HOW

## Before



Schools in need of condition improvement

1

School Expresses Interest in Accelerator Service

3b

School offered loan and proposed energy savings

4

School accepts loan and is linked with their regional delivery supplier

5

Supplier Undertakes Improvement works



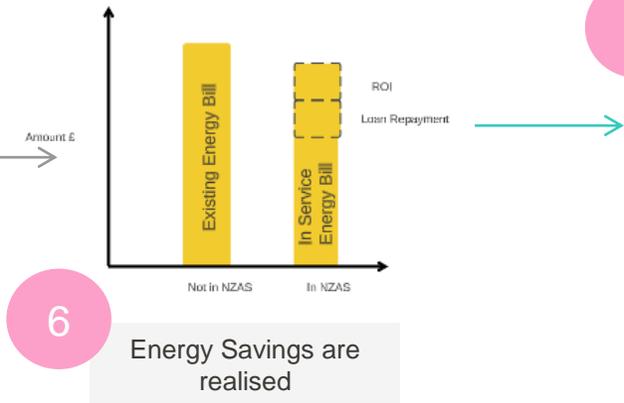
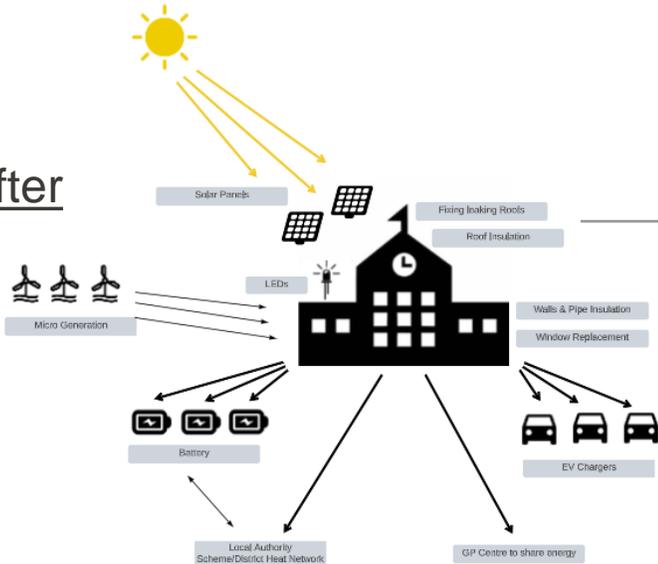
2

Schools are batched into packages for suppliers

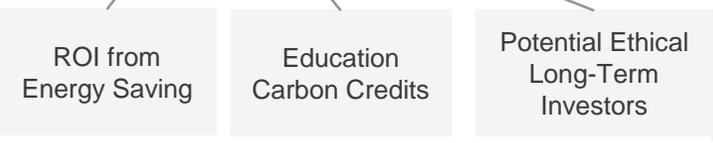
3a

Packages are "advertised" to market and suppliers have to deliver an agreed energy saving based on their interventions.

## After



7



Potential revenue streams to expand service

Not Government Policy – Indicative Only

# PURPOSE

**To further understand the extent of the opportunity to deliver decarbonisation efficiencies across the education estate**

Starting with a proof of concept/feasibility to determine the potential and appropriate technology for the decarbonisation of a selected batch of existing school sites

- This study will articulate a model for the private sector to work in partnership with the DfE/LocatED to deliver Net Zero at selected group of schools which is commercially viable
- The aim is that this feasibility study will inform the development of a 'Net Zero Accelerator' to decarbonise the wider school estate and achieve the Government's 2050 net zero target
- We have appointed five contractors to work with us on a 'proof of concept' feasibility study for the 'Net Zero Accelerator'.



# NET ZERO ACCELERATOR

## The 'Net Zero Accelerator' will:

Provide responsible bodies with a low burden service to address condition and energy efficiency to help improve their estate including delivery of decarbonisation interventions



Reduce risk to responsible bodies by requiring no upfront payment and through sharing the risk of delivery with external market partners

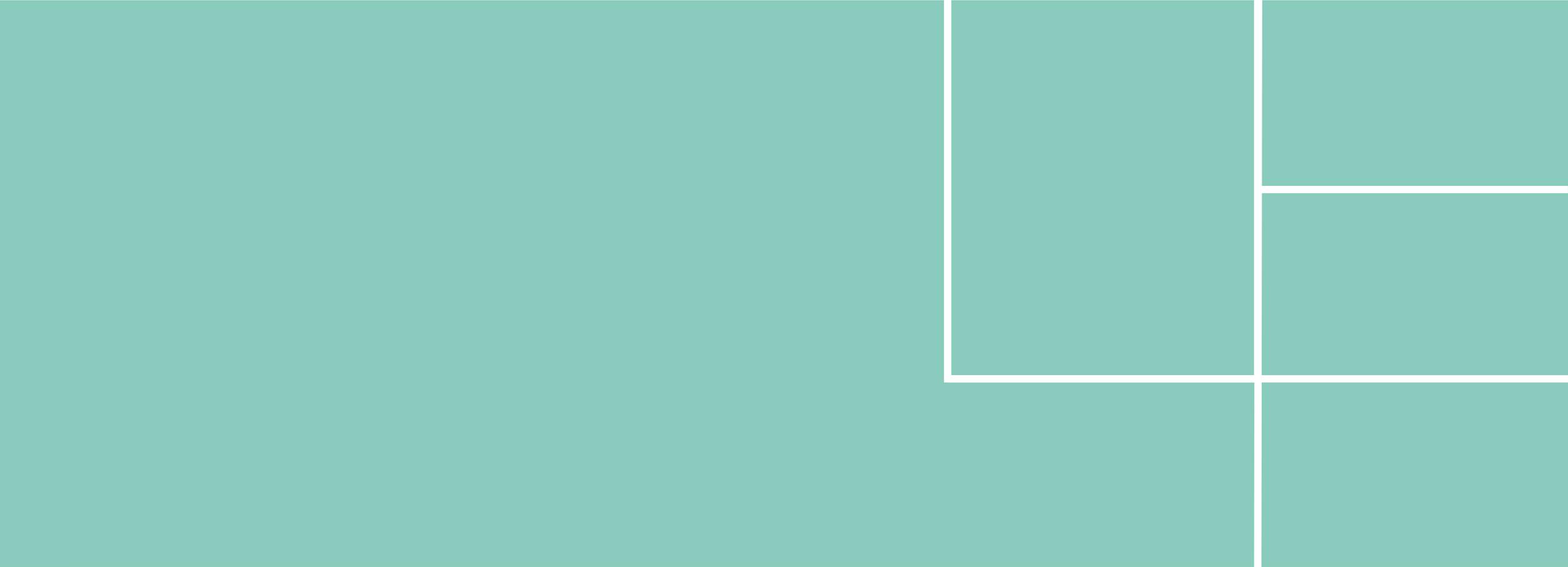


Demonstrate that measurable energy savings can be achieved to support the roll out of a commercially viable programme of work



Develop a service which does not require the education setting to input significant time and resource. The intervention and funding should be arranged for them





**Stephanie Parker**

**Energy Systems Catapult**

# Public Sector Decarbonisation Guidance

Making energy savings and Net Zero simpler  
across public buildings and estates



Public Sector  
Decarbonisation  
Guidance



# About Energy Systems Catapult



We help energy innovators launch new products and services



Supported over **100** SMEs and launched two challenge calls



Reached c.**2000** homes (across the UK) – went live with WESA



Independent  
Not for Profit



Completed over 120 Projects



Published **over 45 publications** (+35 Public Sector Decarb Guides) with **over 14,500+ downloads**



Based in Birmingham  
250+ experts



Established by  
Innovate UK



allowed us to help nearly **1,000** households to keep warm this winter

# What is/was Modern Energy Partners (MEP)?



Award winning Innovation programme funded by SICE.



In partnership with the Cabinet Office and Energy Systems Catapult.

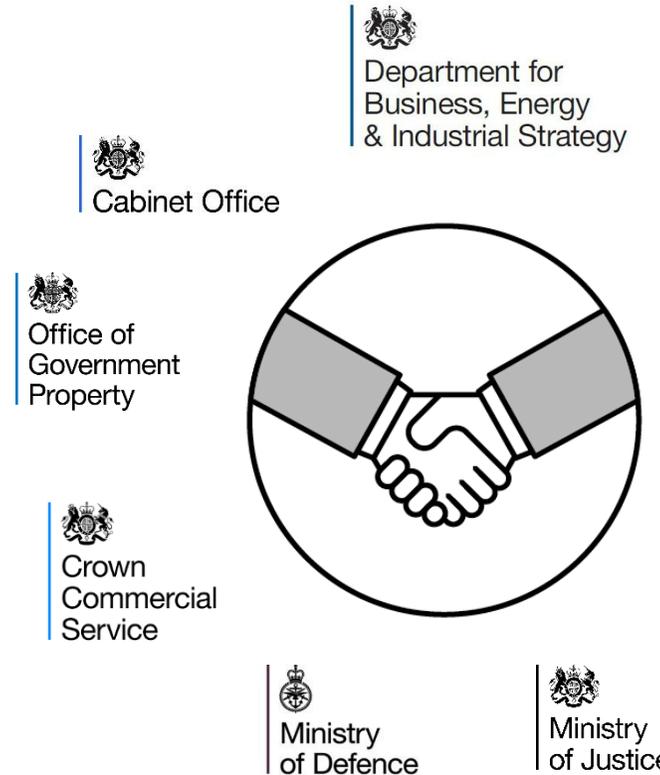


Collaborative across government.

**Phase 1**  
£2m  
June 2018 – March 2019

**Phase 2**  
£20m  
April 2019 – March 2021

\*Ended Sept 21 after Covid Extension



# Testing practicalities through doing, with a testbed of 42 sites



**12**  
establishments

**15**  
prisons

**13**  
hospitals

**5%**  
of total MOD  
built environment  
related scope 1 &  
2 emissions\* \*\*

**13%**  
of total prison  
related scope  
1 & 2 emissions\*

**4%**  
of total English  
NHS scope 1 & 2  
built environment  
related emissions\*  
\*\*\*



**4**

**Pathfinder sites**  
Progressed from decarbonisation plans to test delivery.

**36**

**Assessed for submetering**  
All assessed and deployed at 23 sites in a consistent manner, of which...

**24**

**Having decarbonisation plans**  
Detailing a pathway to delivery carbon reduction targets by 2032

Supported by:

**9** Consultancies  
**3** FM companies  
**4** Implementors

**8** Submetering installers  
**6** Data collection platforms  
**2** other

\* emissions cover pathfinder and concept design sites

\*\* excluding 2 dockyards Devonport and Clyde

\*\*\* hospitals in devolved nations also participated

# Key barriers to uptake

The table below summarises the key barriers identified.

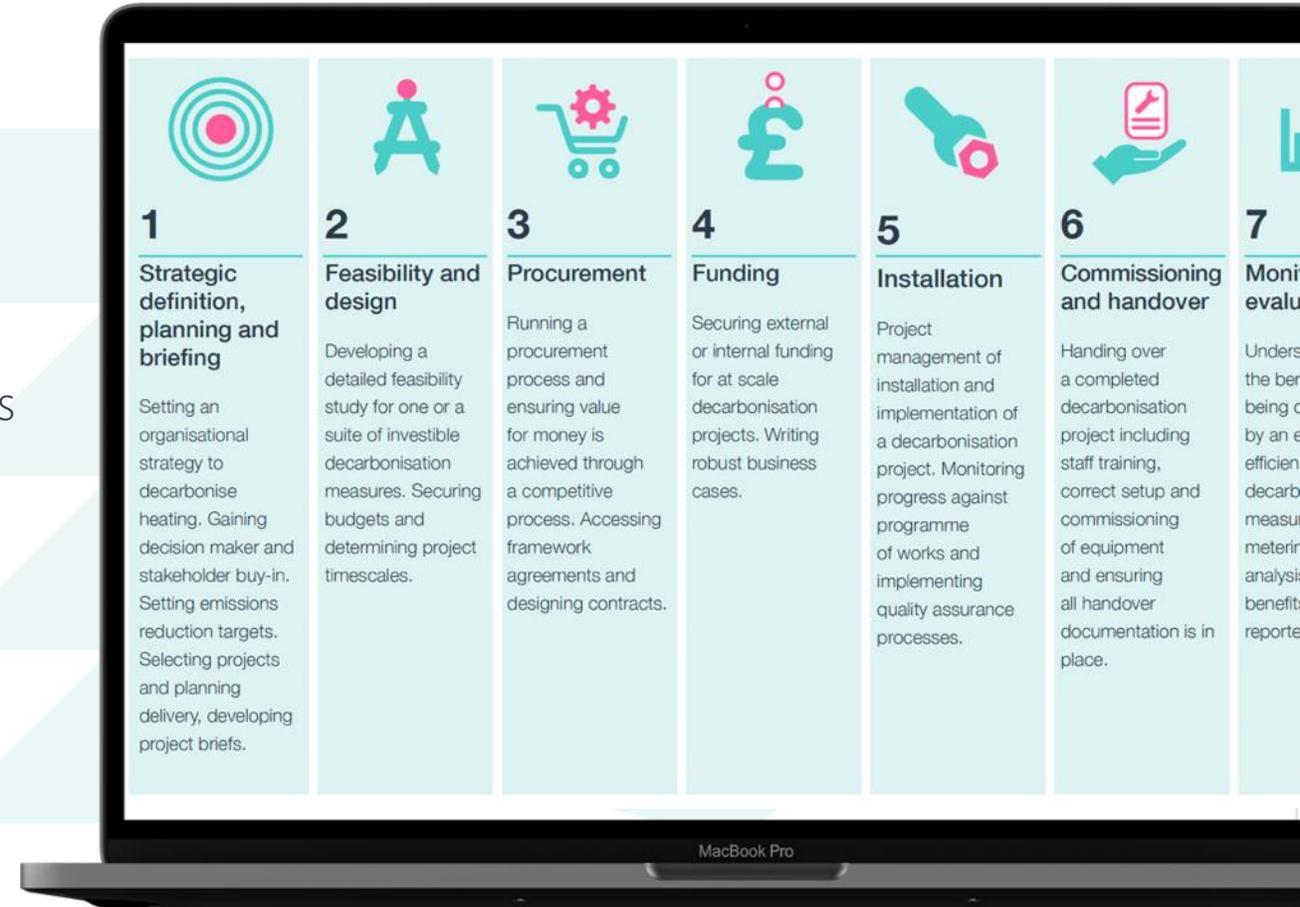
Governance	Capability and capacity	Delivery routes	Funding and planning	Better data monitoring and reporting	Technical thinking
Further senior level commitment required	Increase specialist numbers	Restructure estates delivery frameworks for NZ	Ensure the cost of decarbonisation is understood	Gather and use data appropriately	Ensure portfolio planning adopted
Stronger integrated into the whole organisation	Improve general carbon literacy and ensure capability is in the right place	Standardise outputs through expected code of practice to get consistency and quality	Plan project deployment and cash flow for project bidding and deployment	Generate half hourly benchmarks to support design	Ensure that whole system used with consistent technical issues covered
Provide clear governance reporting framework	Empower challenge of supply chain	Select delivery route for best VFM and test out scaled deployment	Blend funding with other upgrading programmes	Generate code of practice for monitoring projects and delivery	Synchronise with maintenance and other capital programmes

Launched in March...

# The Public Sector Decarbonisation Guidance

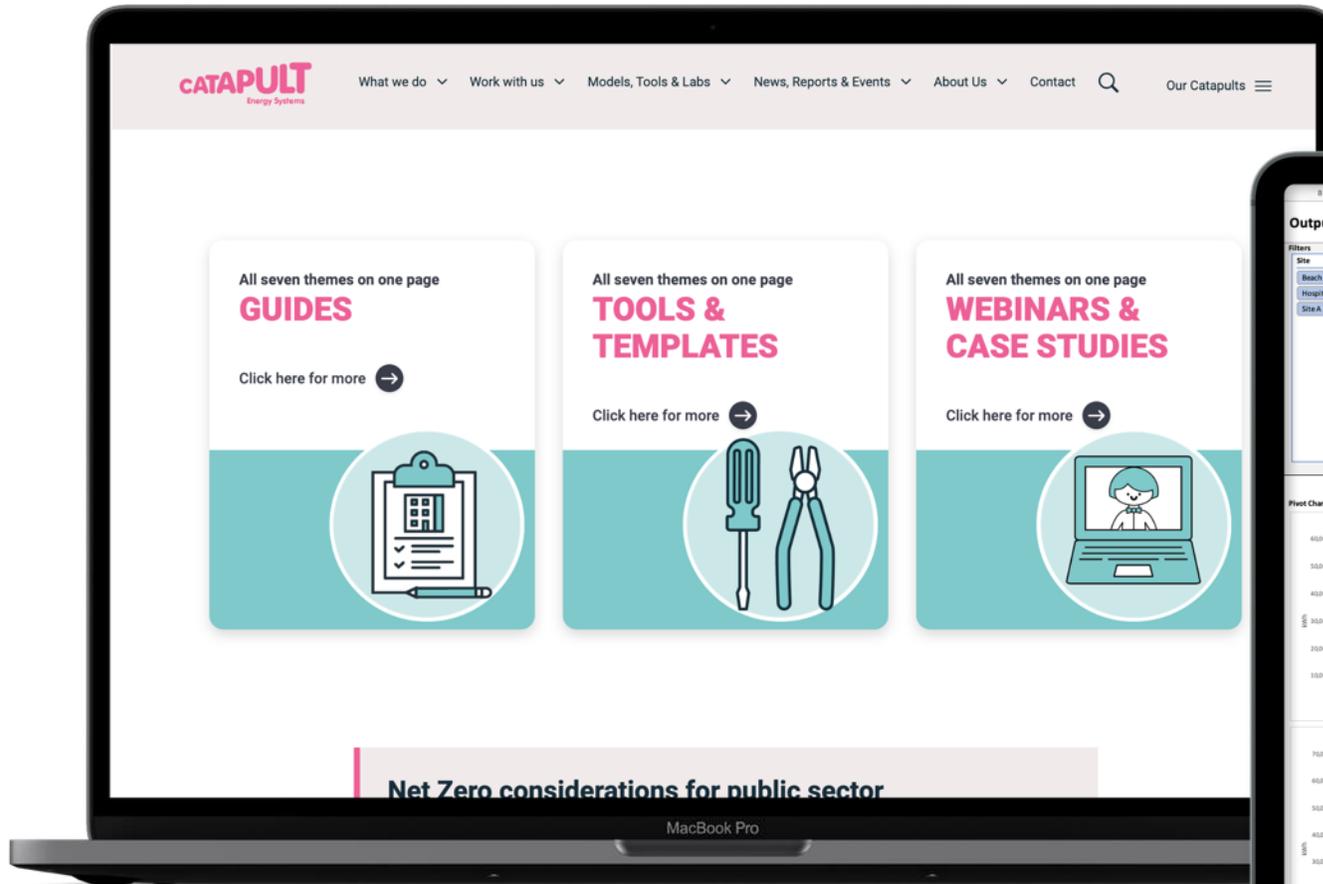
## Making it simpler to...

- **Plan:** Step-by-step framework
- **Fund:** Clear, Salix-vetted approaches and guidance
- **Deliver:** Practical tools, guides, calculators; free outputs
- **Access:** Open resource (no login needed)
- **Scale:** Consistent, cost-effective, proven approaches based on the award-winning MEP programme.
- **Upskill:** Ultimate resource hub for estates decarbonisation. All-in one place.
- Developed with Government and industry.



Easy-to-use guides. Practical tools.  
Free outputs.

## Tool example: Business-as-Usual Estimator



- Free, interactive and downloadable
- Use building, site or portfolio energy data
- Provides a baseline and forward look of energy, carbon and costs.

# Working with DfE and Schools

## Engagement

We are **early in our journey with schools**, but we are very keen to help!

From the engagement we've had so far, we suspect that:

- Our guidance is a **little overwhelming** for smaller organisations like schools
- Smaller organisations will have less resource, stretched over more responsibilities, **intensifying the challenges faced**

We only had a few responses to our survey from Academy Trusts (but lots of LA responses) **very keen for more responses**, and to do more direct engagement to further our understanding.

**Open to suggestions of how to do this!**

## Planned Guidance

We are **continuing our work with DfE**. We will produce guidance for schools in the coming months that will answer questions like:

- Why is decarbonising heat important?
- What is a Heat Decarbonisation Plan (HDP)?
- What does a good HDP include and look like?
- What are the steps to producing an HDP?
- What data will you need to produce an HDP?
- What are the common appropriate heat solutions for different school building archetypes?
- What support should you seek to help you produce an HDP?
- What skills/capabilities should suppliers have if they are supporting you to produce an HDP?
- What are the common pitfalls/challenges of producing an HDP and how can they be mitigated?

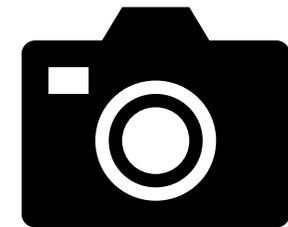
# Getting feedback...

**Search:**  
**Public Sector Decarbonisation Guidance**

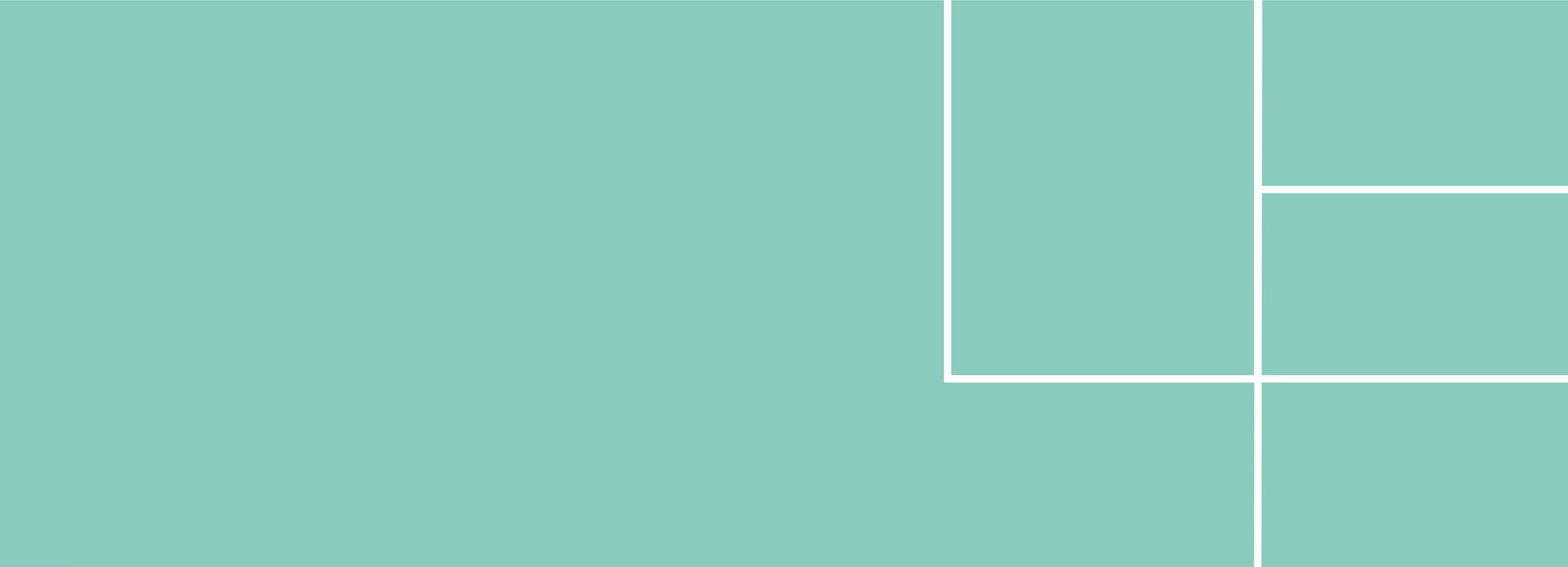
**Visit:**  
[https://es.catapult.org.uk/tools-and-labs/  
public-sector-decarbonisation-guidance/](https://es.catapult.org.uk/tools-and-labs/public-sector-decarbonisation-guidance/)

**Have your say:**  
Take the 3-minute survey here  
(also posted in the chat)

**Email:** PSDecarbGuidance@es.catapult.org.uk



**TAKE A PIC  
OR  
CAPTURE  
SCREEN!**



**Matt Fulford**

**Inspired Efficiency**



# Developing a Decarbonisation Plan

South West Net Zero Hub  
November 2023



# What should a Decarbonisation Plan Involve?

- Should be a Decarbonisation Plan (not a Heat Decarbonisation Plan)!
- Determine if you want it to cover just Gas and Electricity use within your estate or wider issues around transport, waste, food, school trips etc.
- Costed and prioritised. Should allow you to set 5 year budgeting plan
- Identify potential funding solutions, especially PSDS
- Note issues with planning and electrical upgrades



# Identify the 'Quick Wins'

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- External lighting time clocks
- Movement sensors settings on lighting
- Heating controls
  - Holidays off
  - Summer off (from now until end of Sept)
  - Check timings, especially hot water
  - Set points
- Power saving settings on printers and copiers
- IT automatic power saving settings
- Remove water coolers
- Kitchen staff training
- Check VAT and CCL on energy bills



Applicable in 70% of schools. Can typically save £250/school and reduce the estates total energy consumption by 2%



# Fabric First Approach

- Fabric insulation required:
  - Cavity Wall Insulation
    - 34% of schools have un-insulated cavity walls
    - Typical annual savings of £280
  - Roof Insulation (lofts or above suspended ceilings)
    - 21% of schools require basic roof insulation
    - Typical annual savings of £250
  - Insulate pipework
    - 54% of schools have un-insulated pipework (mainly fittings)
    - Typical annual saving of £280
  - Replace Single Glazed Windows
    - 42% of school have single glazed windows remaining
    - Average saving of £320 in school energy bills per year
- Other measures included draught proofing doors, adding in new insulated suspended ceilings and insulating beneath suspended timber floors



# Review PV Potential



- 82% of school has viable PV opportunities
- Could generate average of 15,000 kWh per year per school (around 1/3<sup>rd</sup> of electricity use)
- Saving each school an average of £2,150 per year
- Payback of 10.2 years
- Various financing schemes available with good Power Purchase Arrangement set ups

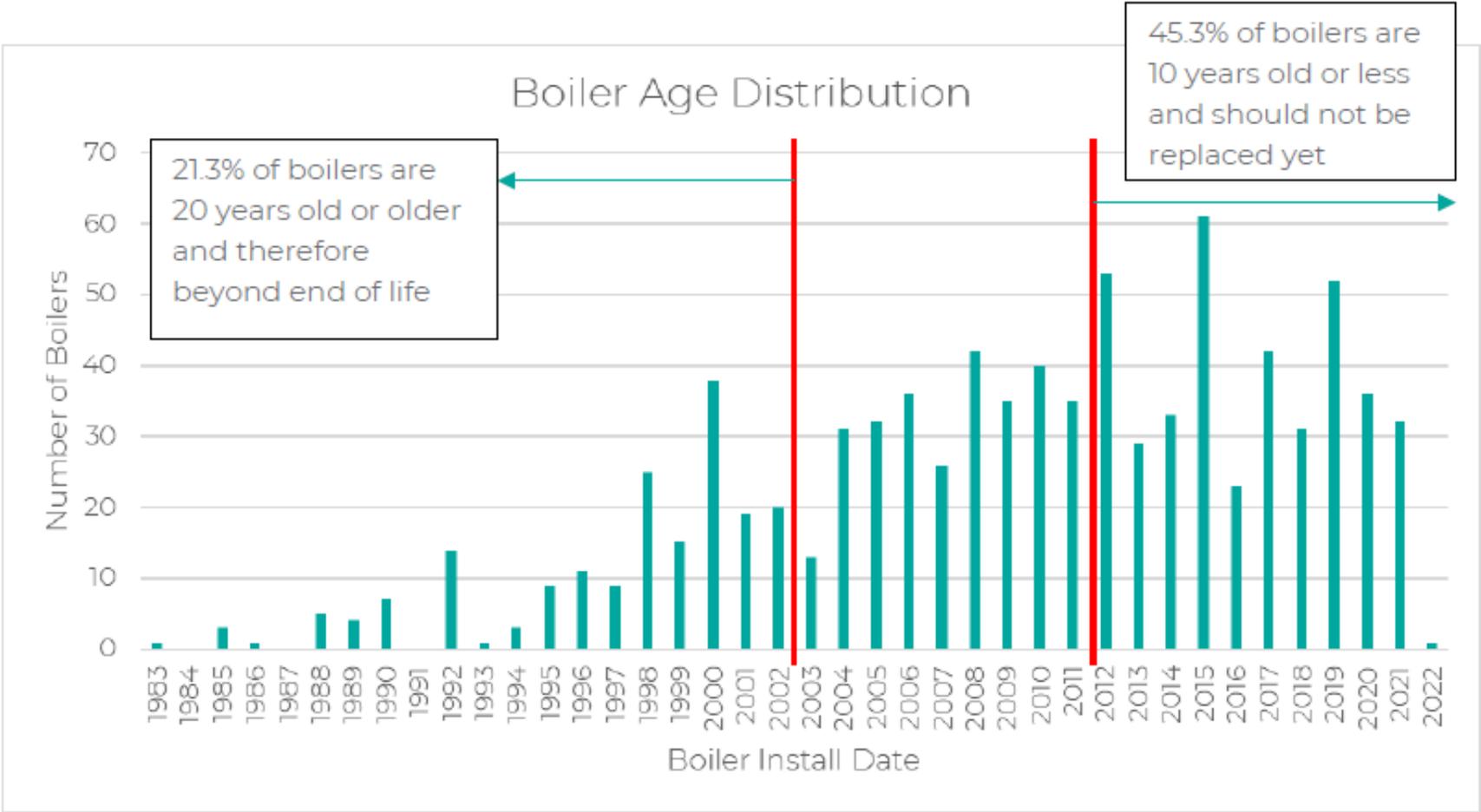


# Hot Water (not just heating) – change to electric point of use heaters

- First step in decarbonisation
- Moves hot water from gas to electric
- Reduces energy usage, “always available but only on when tap runs”
- Reduces legionella risks
- Applicable to 45% of school (rest already use)
- Would save average school £680 per year in thermal fuel costs



# Boilers to Heat Pumps!



55% of the estate will require new 'boiler' before the 2030 target



# Key Technologies

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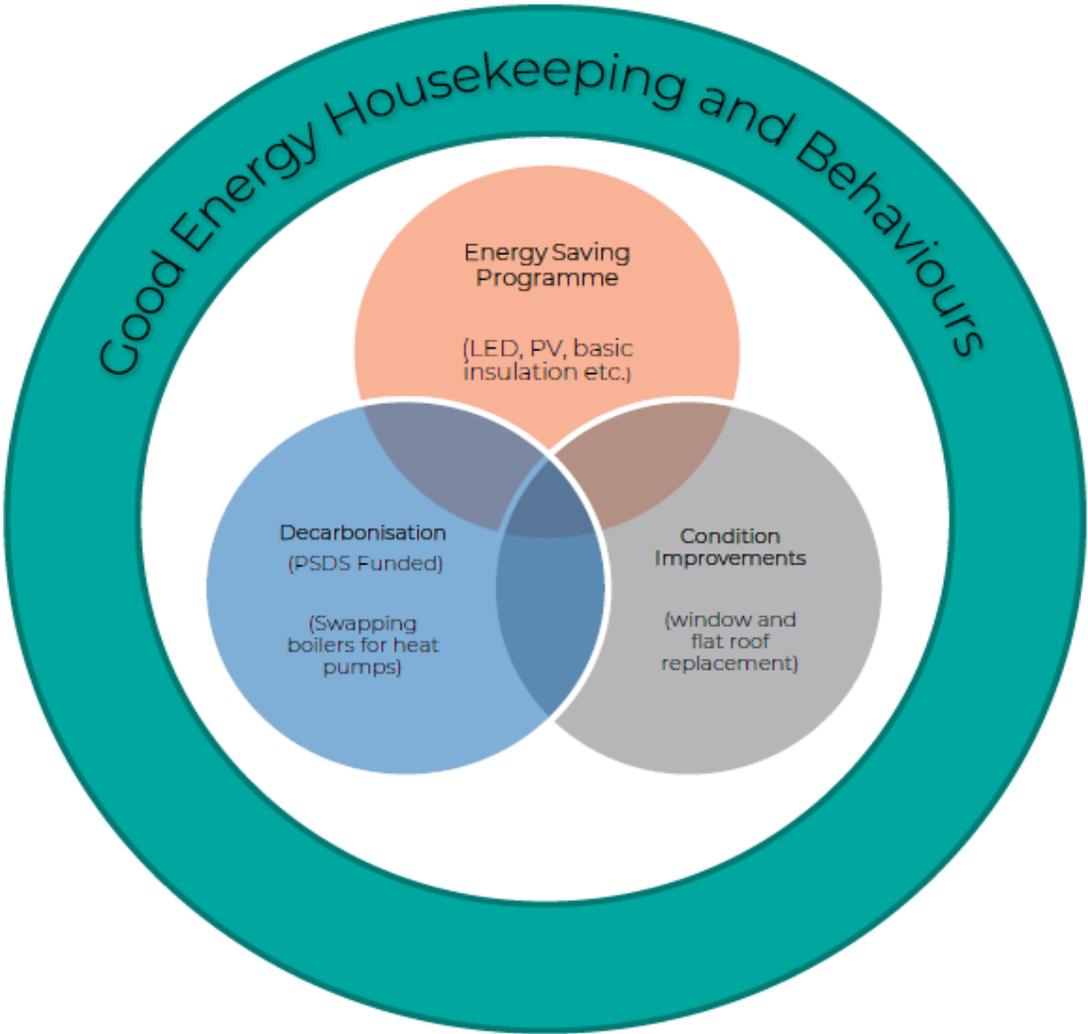
## Decarbonised Heat Recommendations

- Air-to Air Heat Pumps (51% of schools)
- Air-to-Water Heat Pumps (12% of schools)
- High Temp Air-to-Water Heat Pumps (3%)
- Air Source – type to be determined (33%)
- Ground Source Heat Pumps (1%)
- Direct electric heating (Ad hoc areas)



# Probably Strategy for Net Zero Carbon

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# Process

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- A site visit will be needed, access to all boiler (and an other plant) rooms, electricity meter, review of all internal and external areas
- Ensure Enhanced DBS is available to avoid time consuming escort
- Is it best for term time or holiday scheduling
- Avoid exam periods!

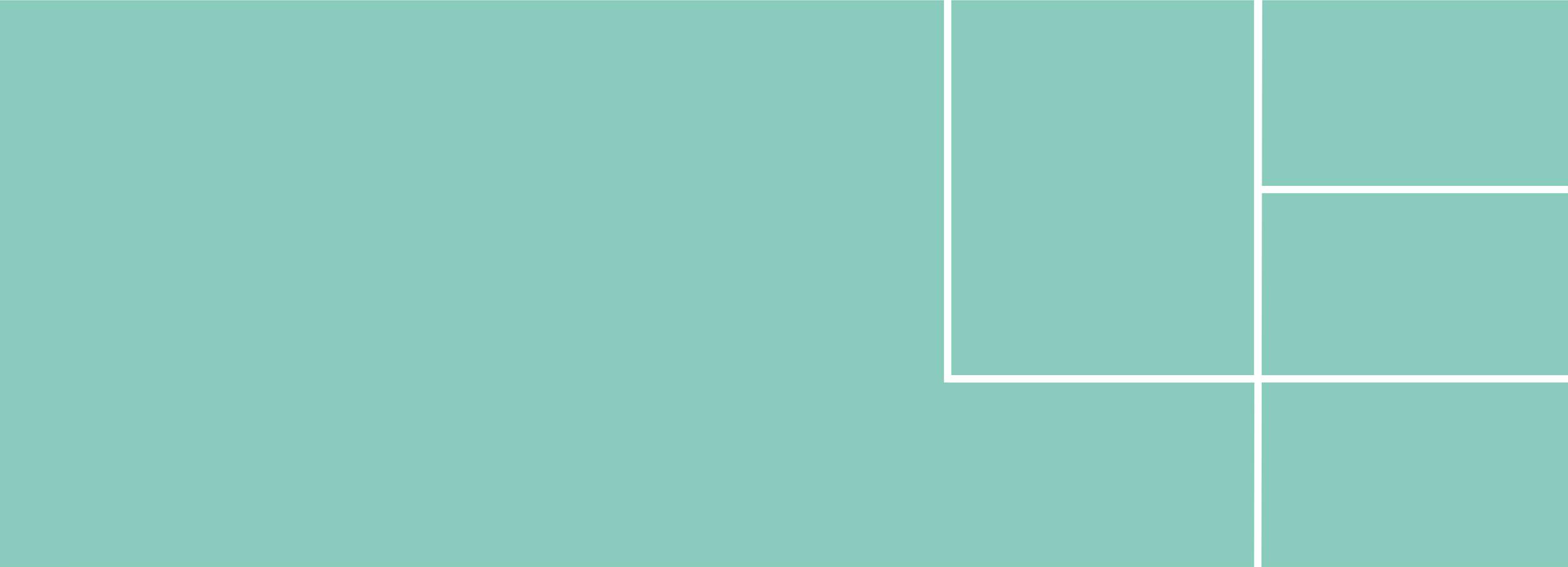


# Plan not an Application

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- Identifications of all measures, forming a holistic, costed and prioritised plan.
- PSDS Application requires detailed design so decarbonisation plan unlikely to include:
  - Schematics of existing and proposed systems
  - Heat loss calculations
  - System design and data sheets
  - Contractors quotations
  - Liaison with planners and DNOs
  - Programmes and Risk Registers





**Stephanie Franklin**

**Lighthouse Schools  
Partnership**



LIGHTHOUSE  
SCHOOLS PARTNERSHIP

# Decarbonisation and PSDS at Lighthouse Schools Partnership Trust

LSP Trust – Case Study  
Stephanie Franklin -  
Sustainability & Project  
Manager



# Background and overview

- School and MAT experience

1 single Academy

30 schools across the Trust estate

Churchill Academy & Sixth Form - Net-zero carbon by 2030.

LSP - Net-zero carbon by 2035.



LIGHTHOUSE  
SCHOOLS PARTNERSHIP

# The start of the journey

## 1. Energy efficiency to save money

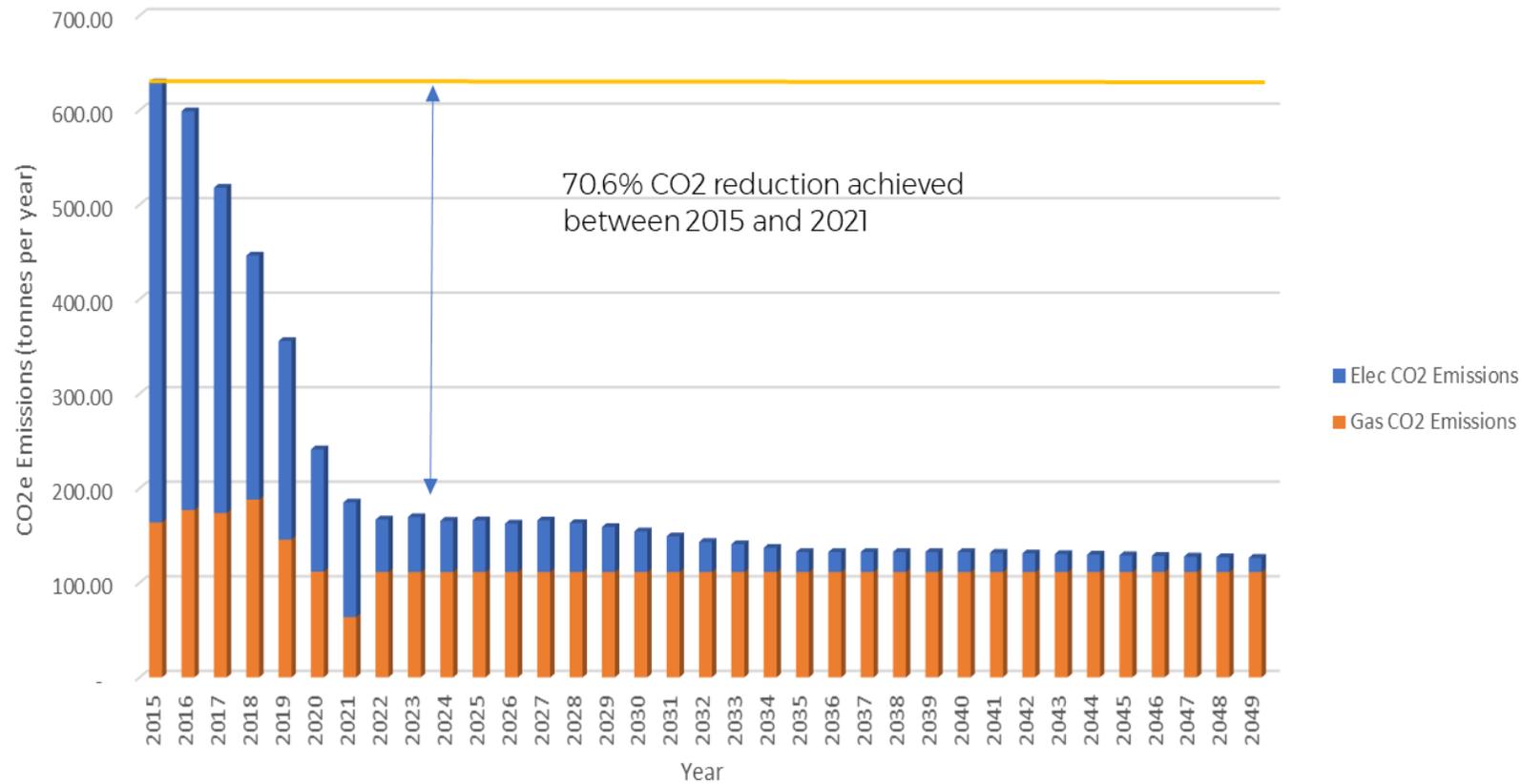
## 2. Understanding where to start

- Data and audits
  - Energy bills - what were we spending?
  - How to reduce this



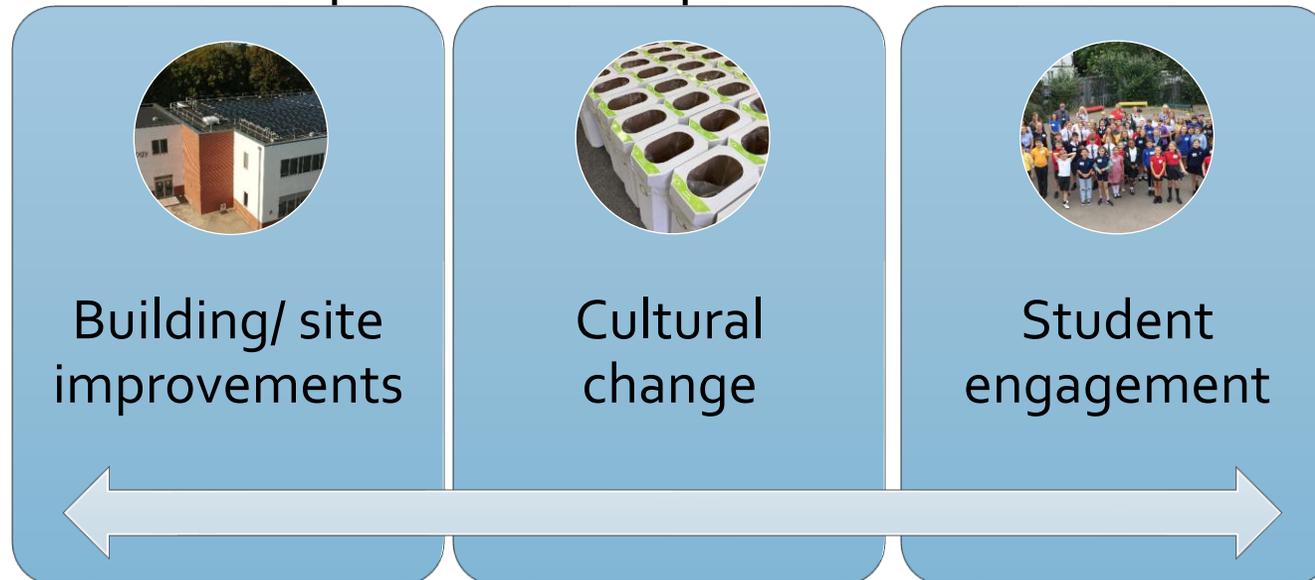
# One step at a time

Churchill Academy CO2 Annual CO2 Emissions



# Savings other than carbon

- Carbon savings - Net zero carbon
- Budgets - energy savings = cost savings
- Improved comfort for students
- Inspire and engage students
- Create shared accomplishment and pride



# School and Trust

- Strategic priorities across the estate
- Individual priorities at school level
- Logistics
- Value for money
- Savings



# PSDS and funding

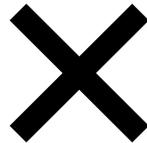
- Decarbonisation can't happen without alternative funding
- LSP - PSDS

Electrical infrastructure halted the projects

- Churchill Academy - PSDS

Air source heat pump installation over the summer.

70% off gas.



# One step at a time - Strategy

Energy audits and consumption data

Cost savings and paybacks create priority areas

Short term, mid-term, longer term

Energy and Carbon saving Recommendations	Electricity Usage Impact (kWh/year)	Gas Usage Impact (kWh/year)	Estimated Annual Cost Saving (£)	Estimated Capital Cost	Simple Payback (years)	CO <sub>2</sub> saving (tonnes of CO <sub>2</sub> e per year)
Remove water coolers	-110	-	£33	Nil	Immediate	0.0
Install SavaWatt devices on fridges and freezers	-1900	-	£370	£671	1.2	0.4
Install local electric point of use hot water to replace stored tank (Link)	-7,193	-	£2,158	£3,080	1.4	4.1
Fit timed fused spurs to hot water heaters	-590	-	£177	£396	2.2	0.1
Insulate exposed pipework and fittings in plantrooms	-	-2,898	£290	£1,210	4.2	0.5
Install a Solar PV array to roof of building	-32,259	-	£9,678	£46,691	4.8	6.8
Recommission controls to Gleebe building	-	-5,796	£580	£3,300	5.7	1.0
Change existing lighting for LED / low energy fittings	-16,687	-	£5,006	£29,873	6.0	3.5
Install PIR motion sensors on selected lighting circuits	-530	-	£159	£1,873	11.8	0.1



# Audits and data – MAT level

Support site  
planning /  
Estates

Support SCA  
bids and  
priorities

Savings re-  
invest



# Ambition moving forward

Continue to implement energy efficiency programmes

Utilise funding sources such as PSDS when appropriate

Celebrate progress towards net-zero 2035



# Lessons learnt

- Data is King
- Patience and perseverance
- Don't underestimate the administrative role in implementing low carbon technologies - PSDS
- The benefits are bigger and wider stretching than just the bottom-line savings

*“We want to support our pupils to be aware of and act on reducing their own carbon footprint.”*



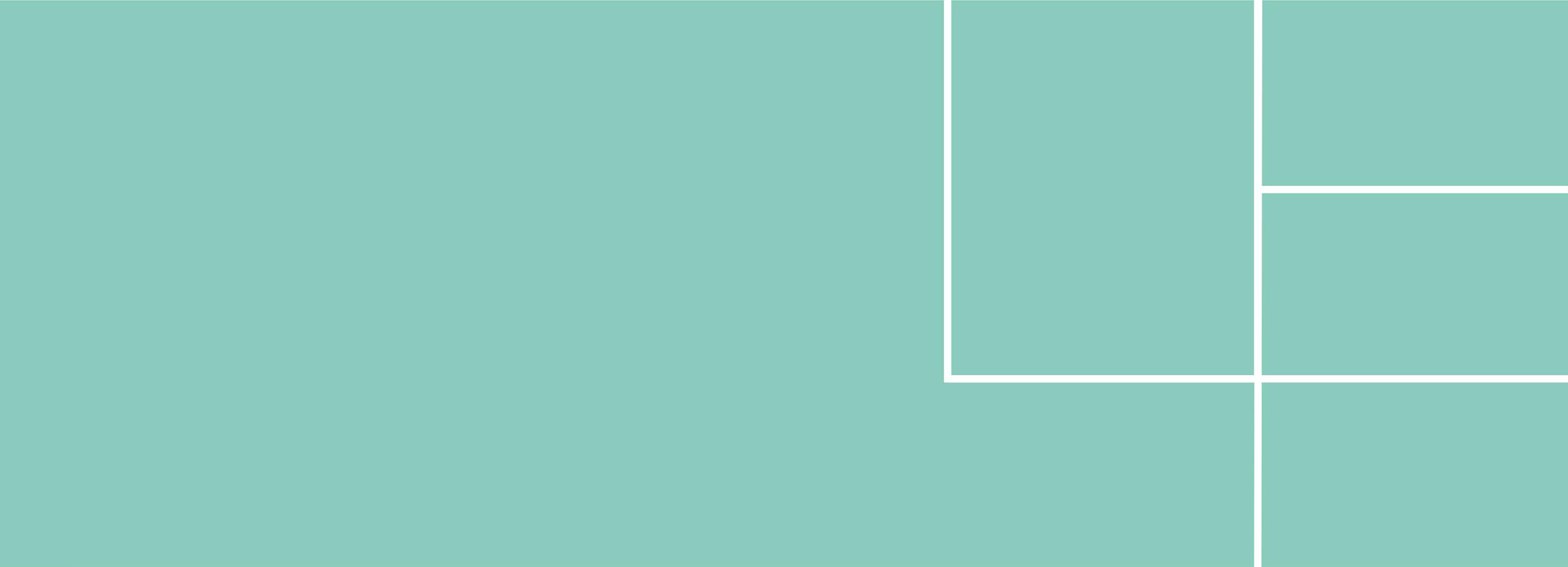


LIGHTHOUSE  
SCHOOLS PARTNERSHIP



Thank you!





**Nikki Webb**

**Energy Sparks**



# Energy Sparks

Helping schools fight climate change

Online, school-specific energy management tool and energy education programme

We currently have fully funded places for schools in London and the South West



Nikki Webb, Energy Sparks

[nicola.webb@energysparks.uk](mailto:nicola.webb@energysparks.uk)

[www.energysparks.uk](http://www.energysparks.uk)

Energy Sparks is a registered charity in England and Wales, registration 1189273.



# Overview of Energy Sparks

- School specific energy management tool and education programme
- Uses smart meter data to show pupils, staff and volunteers how much energy the school is using each day
- Bespoke analysis of school energy data with suggestions of actions the school community including pupils could take to save energy and carbon
- Focus on no and low cost opportunities for energy saving
- Education opportunities using real life data
- Allows pupils to see the impact of their actions

Saundersfoot Community Primary School Visible Public Process data Data visible Regenerate Pupil dashboard Manage School

## Adult Dashboard

Summary of recent energy usage

		Use (kWh)	CO2 (kg)	Cost (£)	Potential savings	% Change
⚡ Electricity	Last week	1,370	171	£205	n/a	+3.9% 🚫
	Last year	63,200	7,460	£9,480	£4,020	-7.0% 🟢
🔥 Gas	Last week	1,820	383	£54.70	n/a	+11% 🚫
	Last year	232,000	48,800	£6,970	£1,630	-29% 🟢

Electricity data: 19 Mar 2020 - 7 Oct 2022. Gas data: 23 Jan 2019 - 7 Oct 2022. [More information](#)

Act on energy usage

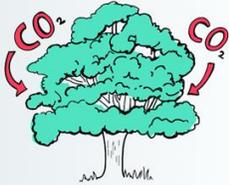
🕒 Well done, you are making progress towards achieving your target to reduce your electricity and gas usage! [Review progress](#)

🏠 This school uses 1,500 kWh of energy per pupil each year. This costs around £79 and generates 270 kg CO2 per pupil. What can you do to reduce your carbon footprint at school?

Saundersfoot Community Primary School Visible Public Process data Data visible Regenerate Adult dashboard Manage School

Last year your school used 230,000 kWh of gas.

It will take 55 trees, each living 40 years, to absorb the carbon dioxide released when this gas was burnt.



[Find out how much energy has been used](#)

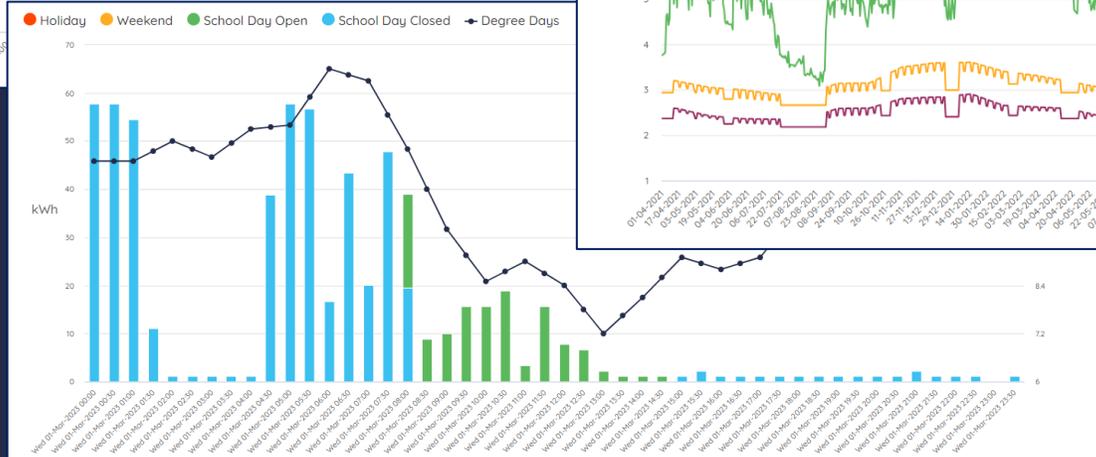
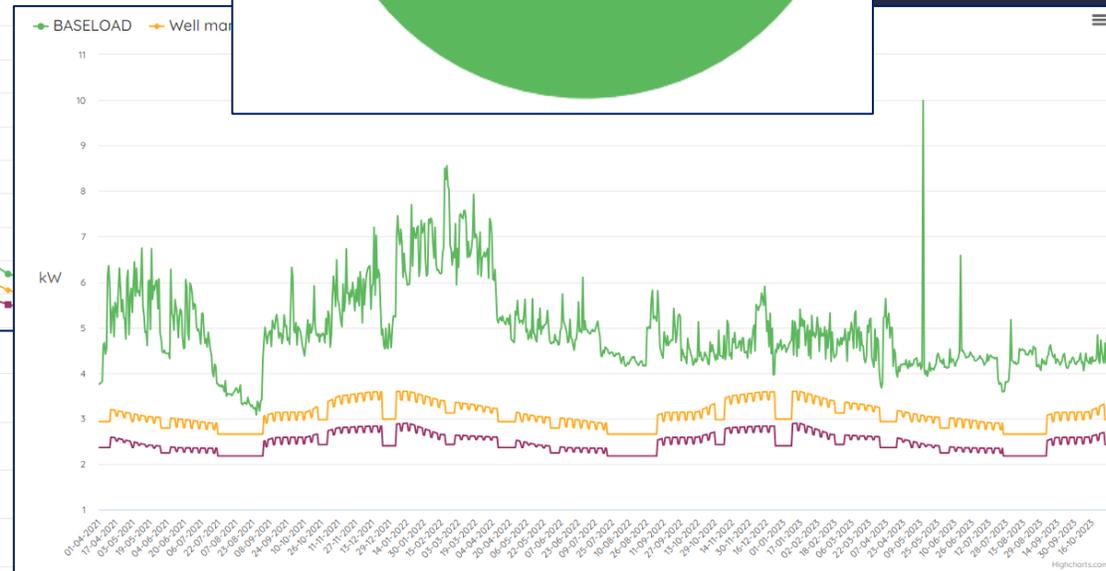
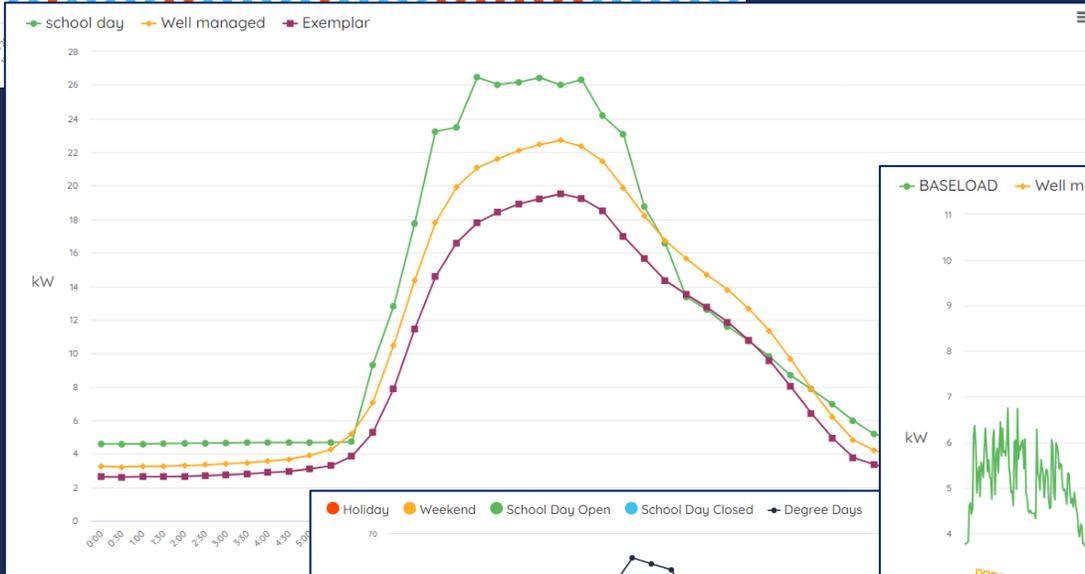
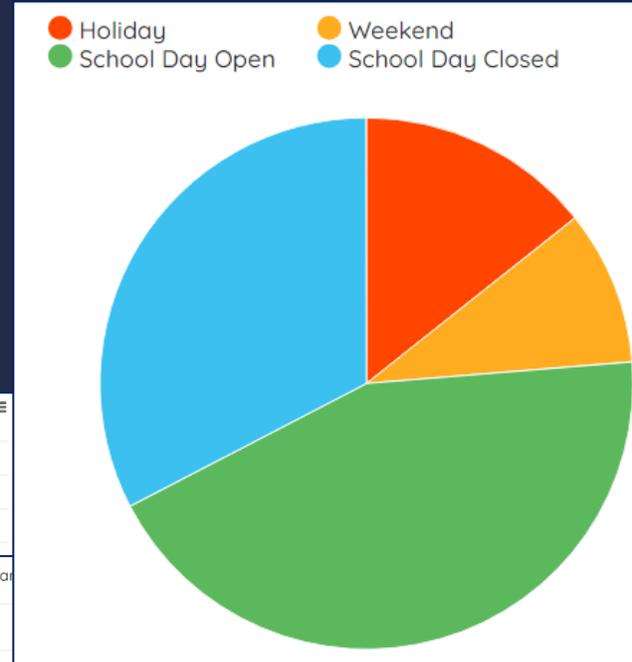
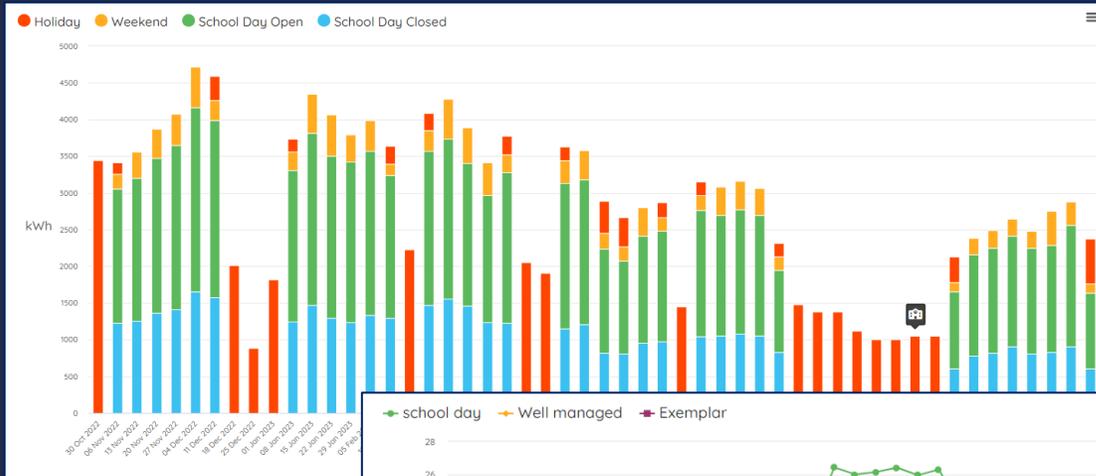
Let's look at the energy use data for your school:

⚡ Electricity and Solar PV

🔥 Gas

Things to do

⚡ Hey Team! - The amount of electricity your school uses overnight is high. Over the last year you used on average 3.6 kW. In other schools like yours (similar number of pupils), this baseload is 2.5 kW. Can you bring your baseload down, and save the school £1,500? [Find out more...](#)



# Energy efficiency priorities



## Electricity

- More expensive = bigger savings
- Lower carbon emissions = smaller impact on carbon footprint
- Used all over the school
- Used by lots of people
- Often more complex to reduce

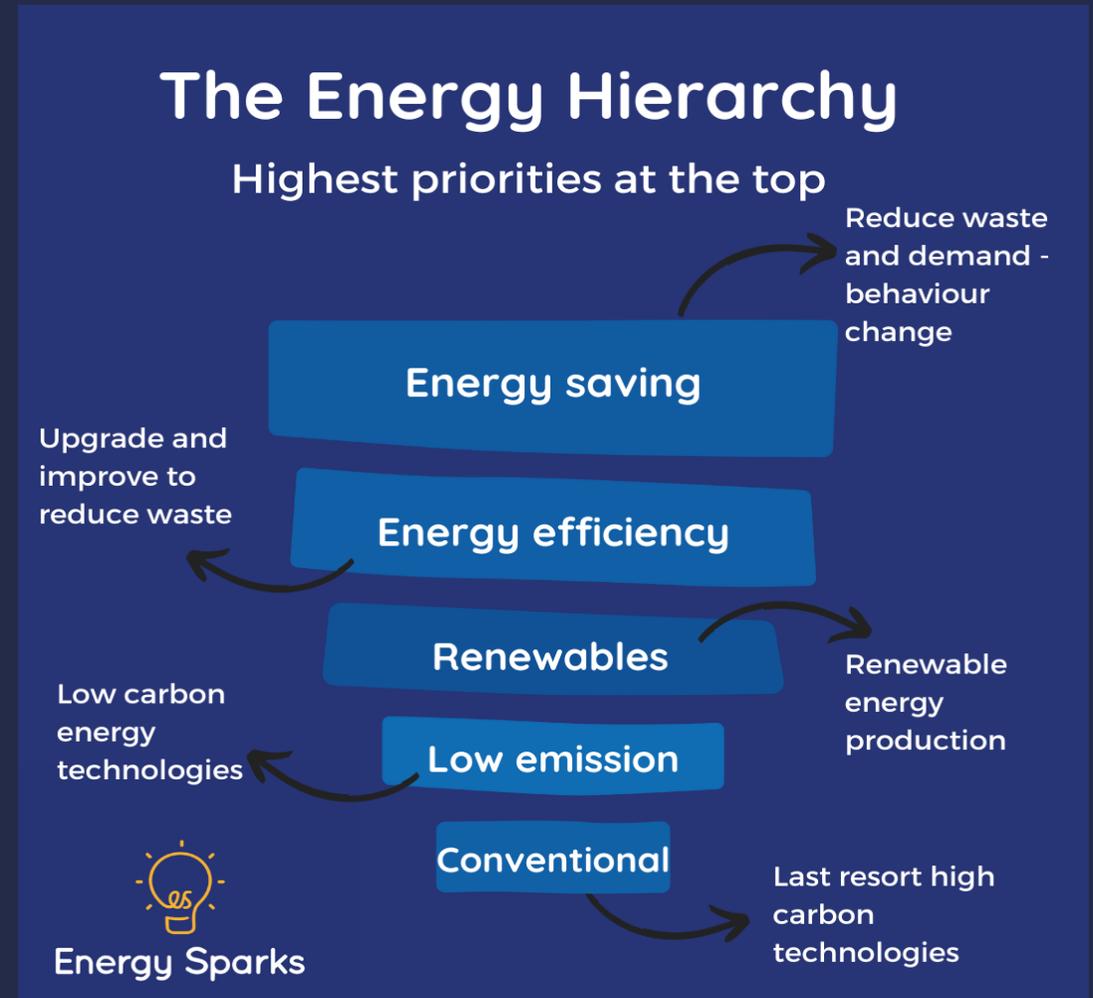
## Gas

- Cheaper = smaller savings
- Higher carbon emissions = bigger impact on carbon footprint
- Mainly only used for hot water and heating
- Controlled by small number of people
- Often simple to reduce

# Energy Hierarchy



1. Reduce waste first
2. Improve energy efficiency of buildings and equipment
3. Install renewable energy production
4. Install low emission technologies
5. Install conventional technologies



# Energy Hierarchy



1. Reduce waste first
2. Improve energy efficiency of buildings and equipment
3. Install renewable energy production
4. Install low emission technologies
5. Install conventional technologies

Free: saves money immediately

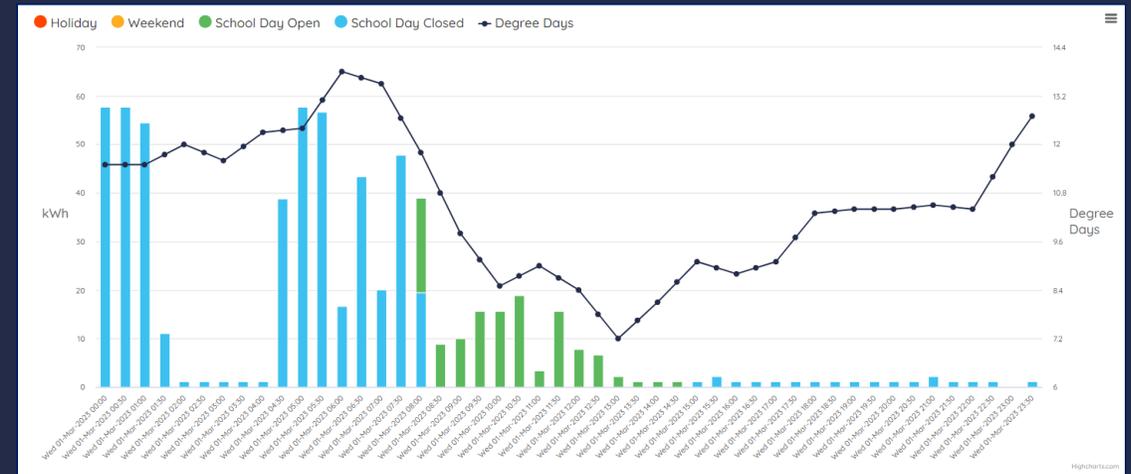
Spend to save: sometimes payback can be very fast

# Energy data helps target out of hours energy waste



- Common causes for high gas consumption outside of school hours:
  - heating is left on during weekends and holidays
  - heating is set to come on too early in the morning, particularly because of poorly understood optimum start control
  - heating set temperature is too high or heating thermostats located in hard to heat areas, requiring the heating to start very early to get the school up to temperature.
- Access to energy data alerts schools to out of hours use, and gives them the confidence to make changes to heating controls because they can see the impact of their actions.

**The average primary school uses 62% of their gas outside of school hours and the average secondary school uses 68%.**

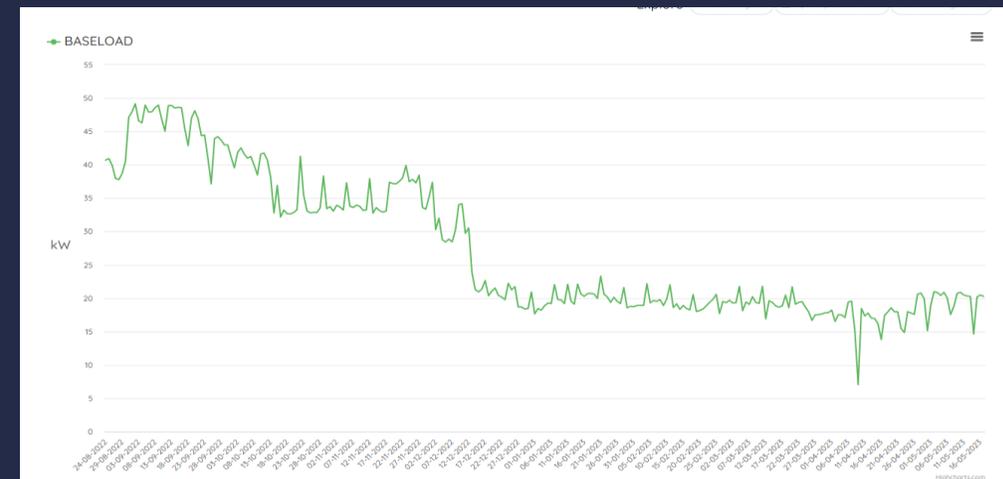


# Electricity use outside of school hours



- Common causes for high **electricity** consumption outside of school hours:
  - Computers, whiteboards and other electrical equipment left running when the school is closed.
  - Inefficient commercial fridges and freezers
  - ICT servers
  - Security lighting
- Harris Academy Sutton introduced an automatic shutdown of all networked IT equipment every evening. Through this simple measure, the school is on track to save around £20,000 per year.

**The average primary school uses 58% of their electricity outside of school hours and the average secondary school uses 63%.**



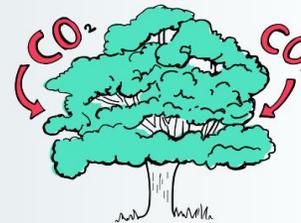
# Teamwork and Pupil Pester Power

**Find the thing that works  
for your school**

- Not one person's job
- Communication
- Policies
- Job roles
- Check lists
- Competitions
- Pupils are a powerful tool
  - Checking
  - Monitoring temperatures
  - Reminding staff
- Pupils learn valuable life skills
- Pupils learn they can affect change
- Reduce eco anxiety

Last year your school used 66,000 kWh of electricity.

It will take 12 trees, each living 40 years, to absorb the carbon dioxide released when this electricity was generated.





# *Thank you*

[nicola.webb@energysparks.uk](mailto:nicola.webb@energysparks.uk)

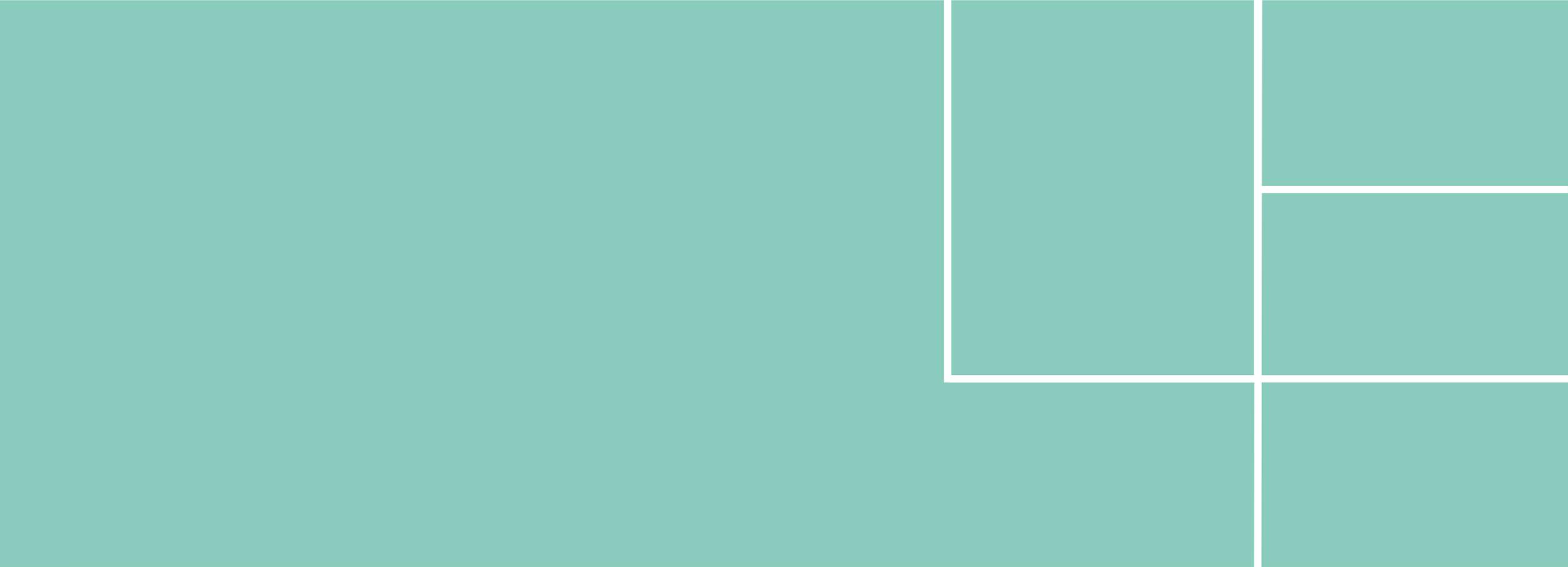
<https://energysparks.uk/enrol>

<https://www.gov.uk/government/publications/energy-efficiency-guidance-for-the-school-and-fe-college-estate/energy-efficiency-guidance-for-the-school-and-further-education-college-estate>



## Energy Sparks

Helping schools save energy



# South West Net Zero Hub Public Sector Skills Service Team

John Allen



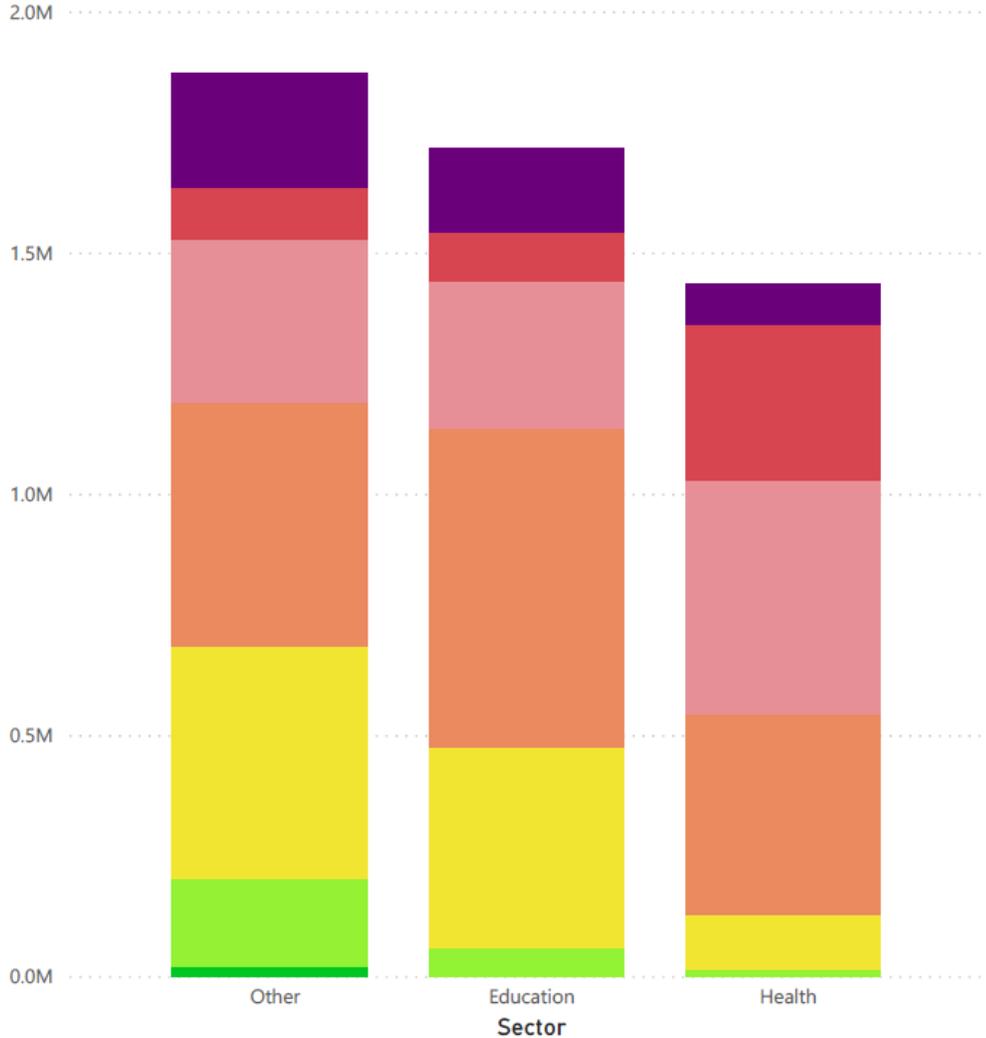
# Public Sector Decarbonisation Skills Service - Objectives

- Support in identifying and delivering low-carbon opportunities to public sector organisations.
- Develop net-zero organisational plans.
- Develop carbon reduction proposals to gain internal approvals and make an application to current and future government funding opportunities, including in particular to the **Public Sector Decarbonisation Scheme**.
- Focus on proposals that have either stalled or abandoned due to lack of project management and delivery capacity

# Breakdown of Sectors using DEC data

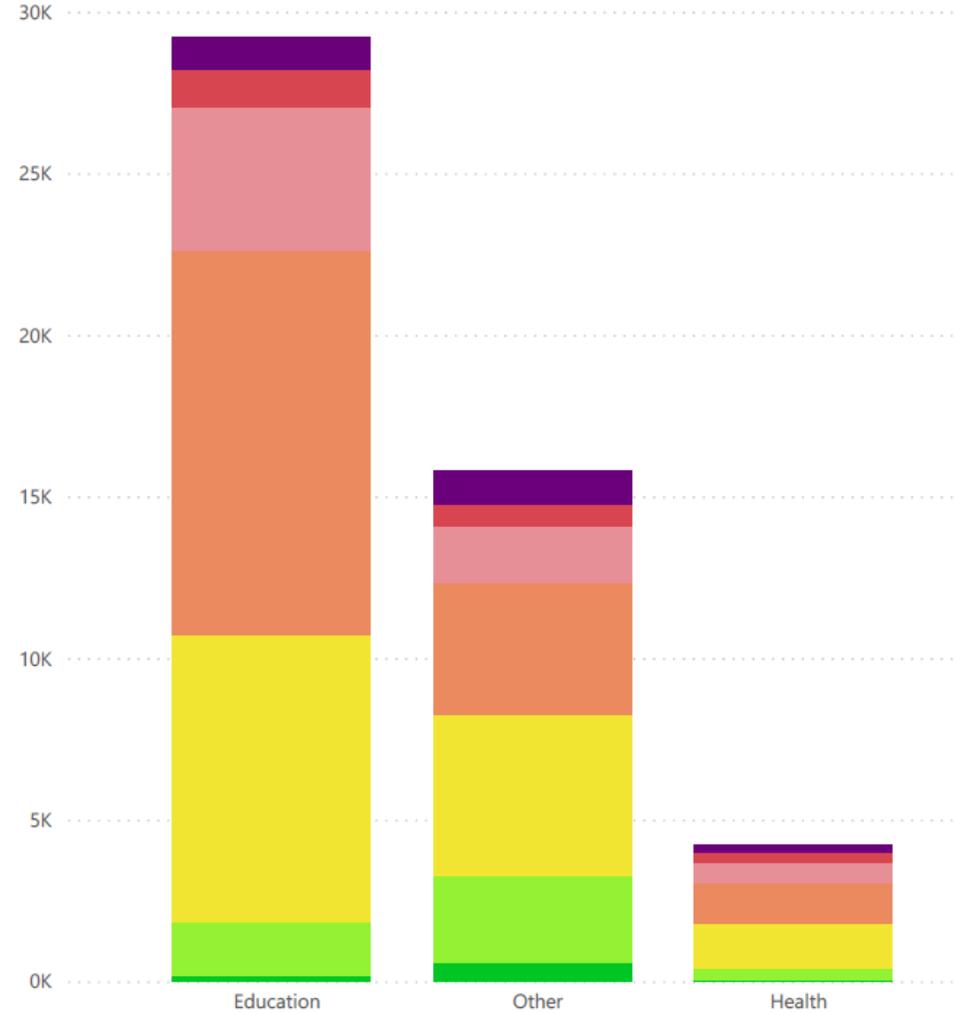
Heating C02 per Operational Rating Band per Sector

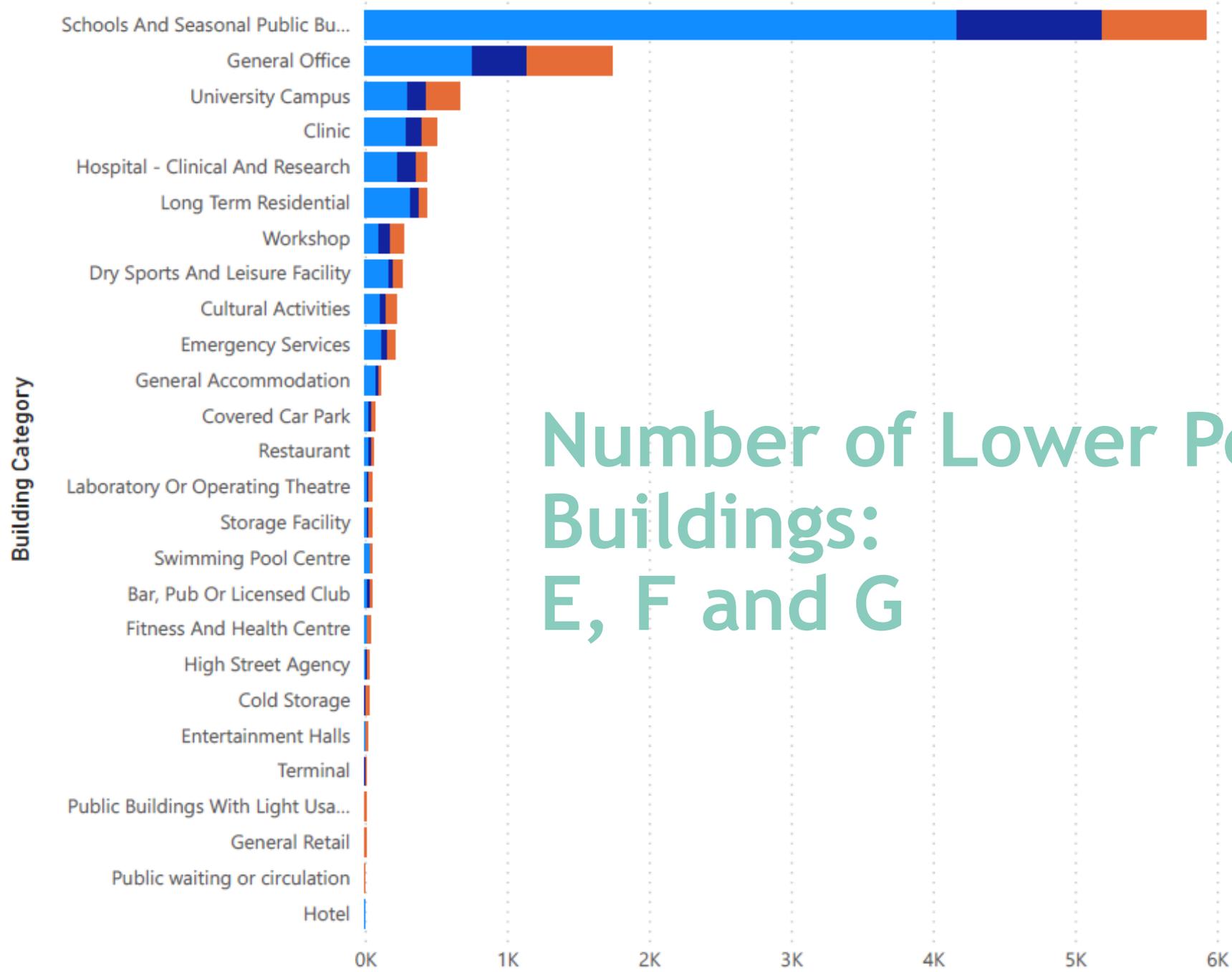
Operational Rating Band ● A ● B ● C ● D ● E ● F ● G



Operational Rating Band per Sector

Operational Rating Band ● A ● B ● C ● D ● E ● F ● G





# Number of Lower Performing Buildings: E, F and G

# How Can The Hub Support

- What are the Organisations targets?
  - Carbon neutral/net carbon zero
  - Leadership support from the senior leadership
- Understanding the Portfolio
  - Building/site information
- What is the level of skills and resources within the MAT or LA
- Types of Support
  - Basic Funding application support
  - Portfolio assessment
  - Support carrying out analysis of pre-selected buildings, specifying survey requirements and support with engaging subcontractors to develop plans
  - Support and set out business cases to take forward for internal approvals
  - PSDS support working as acritical friend to take an existing survey and develop a full PSDS application

# Future for the Hub team

- Expanding the Team to provide a greater level of scrutiny as a critical friend with Heat Decarbonisation Plans
- Develop the ability to provide Heat Decarbonisation Plans to certain Schools outside of the LCSF funding.
- Continued support towards funding opportunities such as LCSF and PSDS future programmes

# Our family of Net Zero Hubs

North West Net Zero Hub:

<https://www.localenergynw.org/>

North East and Yorkshire Net Zero Hub:

<https://www.neynetzerohub.com/>

Midlands Net Zero Hub:

<https://www.midlandsnetzerohub.co.uk/>

Greater South East Net Zero Hub

<https://www.gsenetzerohub.org.uk/>

South West Net Zero Hub:

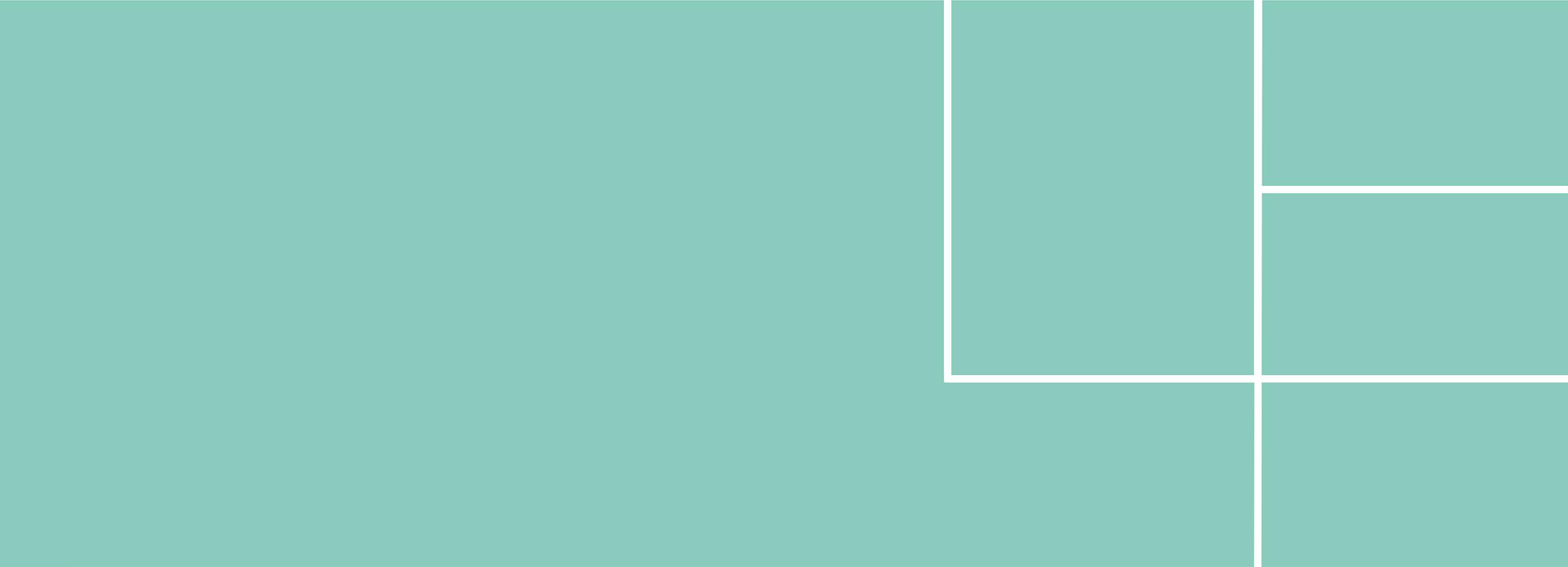
<https://www.swnetzerohub.org.uk/>



# HNES Event

- Other opportunities include HNES Webinar - 28<sup>th</sup> November
- The HNES is open to:
  - Organisations in the public, private or third sectors in England and Wales.
  - On District Heat Network through a Communal Network
- Email the HNES team on [hnes@gemserv.com](mailto:hnes@gemserv.com)





# Questions

# And finally...

1. Thank you for your time today
2. We will be making the recording of today available on our website and on the website of other Hubs to share learning on this topic
3. Please do consider signing up to our newsletter (every two months): [South West Net Zero Hub Newsletter](#)

# Contact us

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 [phillip.morris1@westofengland-ca.gov.uk](mailto:phillip.morris1@westofengland-ca.gov.uk)

 Phillip Morris 07385 957320

 [South-West-Net-Zero-hub](#)