

# Greening the Past: Decarbonising Historic Buildings

Climate Change and Renewables Network - Thursday 18 December, 10.30-12.00

Starts: 10.30



Work in local  
government?  
Need to resolve  
an issue?





## Agenda for today 10.30 – 12.00

- **Opening Remarks:** *Councillor Freddie Bailey, Cabinet Member for Environment and Community Safety at Preston City Council (Chair);*
- **APSE Update** – *Matt Ellis, APSE Principal Advisor;*
- **Historic Building Energy Efficiency – Thing to consider** – *Chartered Energy Manager at Salvis Group and APSE Energy Associate*





## Network Query Service

Tap into the collective experience of the APSE network by:

- Posing practical questions to peers
- Sharing solutions
- Identifying good practice across local government

Email [enquiries@apse.org.uk](mailto:enquiries@apse.org.uk) with your query and we will do the rest!





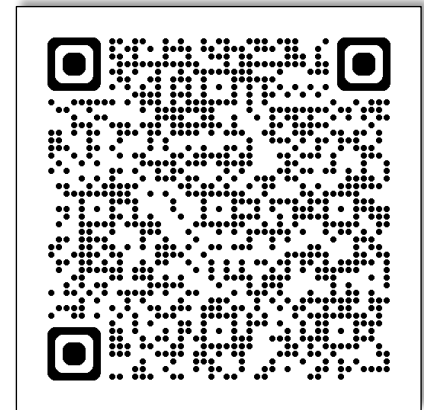
## Carbon Literacy for Local Authorities

This one-day course looks at the valuable contributions we can make to battle the climate change crisis. We evaluate the climate change objectives in local authorities and analyse the impacts, then help construct your own strategies to take action.

**Next course:** Tuesday 17 March 2026, 09:00 - 17:00 (Microsoft teams)

## **In-house courses**

All our courses, including those on carbon literacy and renewables, are available as in-house options (face to face or online). For more information, contact [training@apse.org.uk](mailto:training@apse.org.uk) or complete our [in-house enquiry](#) form.



Scan the QR code or [click here](#) to view our courses on Renewables, Climate Change and Carbon Literacy



## APSE Energy Events



### APSE Energy webinar – Decarbonising blocks of flats

Date - Tuesday 13 January 2026, 14:00 – 15:30

Venue – MS Teams



### APSE Energy webinar – East Lothian Heat: A Community Energy Network

Date - Tuesday 20 January 2026, 10:00am – 11:00am

Venue – MS Teams



### APSE Energy Event – London – Sustainable Futures: Local Action & Innovation

Date - Tuesday 03 February 2026, 10:00am - 3:30pm

Venue - Broadway House, Westminster, London, SW1H 9NQ

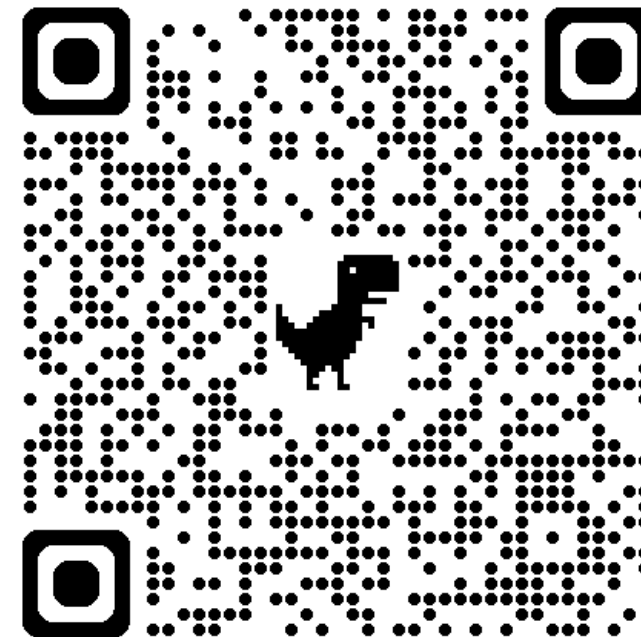
This event is free for APSE Energy member authorities.



### The BIG APSE Energy Summit 2026

Date - Tuesday 24 and Wednesday 25 February 2026

Venue - Birmingham Conferences and Events Centre, Hill St, Birmingham B5 4EW



FREE meetings for APSE  
Energy members –  
Book now!



## Next online meeting...

*Friday 20 February, 10.30-12.00*

If you have any suggestions for the agenda – speakers or topics – please let me know:

Matt Ellis, [mellis@apse.org.uk](mailto:mellis@apse.org.uk)





# Decarbonisation of Heritage Buildings

---

**By Alan Barber and Mike Keating**

APSE Energy Associates & Directors of Salvis

# Guide to Historic Buildings



Improving Historic Buildings with reference to 'Adapting Historic Buildings for Energy and Carbon Efficiency' (Historic England)



# Building Fabric

---

	Single Glazing	Secondary Glazing	Double Glazing	Triple Glazing
U-value (W/m <sup>2</sup> K)	4.8-5.8	2.7	1.2-3.7	<1.0

- **Glazing**
- **Doors**
- **Draught proofing**
- **Fireplaces**
- **Walls**
- **Roof**



# Decarbonising Heating

- **Heat Pumps**
  - **Ground**
  - **Air**
  - **Water**
    - **High Temperature**
    - **Low Temperature**
- **Electric Boiler**
- **District Heating**



Figure 11: Air source heat pumps have been installed in an inconspicuous location to the right-hand side of the door and are barely visible on the front elevation of the Grade I listed building.  
© Historic England

# Renewables

- PV can be acceptable in some cases
- Consider locating panels on outbuildings or carparks
- Wind turbines



**Grade I Listed Chester Cathedral**

# No Brainers

---

- More effective controls, such as BMS, smart thermostat and zone control  
**No need for planning permission or (in most cases) listed building consent.**
- Insulating and draught proofing in unused chimney flues  
**No need for planning permission or (in most cases) listed building consent.**
- Repair and Maintenance
- Replace fluorescent lighting with new LEDs to reduce energy usage

# Risks

---

- Electrical capacity
- Procurement
- Planning consent
- Resources

# Funding

---

- **National Lottery Heritage Grants**  
**£250,000 to £10million**
- **Public Sector Decarbonisation Scheme**  
**not being extended**
- **Heat Network Efficiency Scheme**
- **Borrowing**



# Case Study

## Walton Hall

- Grade II listed 19th-century hall
- Replaced two gas boilers and upgraded radiator systems
- Total heat load 125kW
- Drilled 18 boreholes to 167m depth (3,006m total)
- 7-month program duration
- Installed a compact plant room with 2 GSHPs
- PSDS funding utilised - £342,218 Feb 2023
- Near by crematorium



# Case Study

## Marble Hall



Retain the recently installed pipework and radiators, a hybrid Air Source Heat Pump and Electric Boiler was proposed. The ASHP was housed to the rear façade to protect the architectural value of the front.

Carbon Savings in Year 1 = 37 tCO<sub>2</sub>e

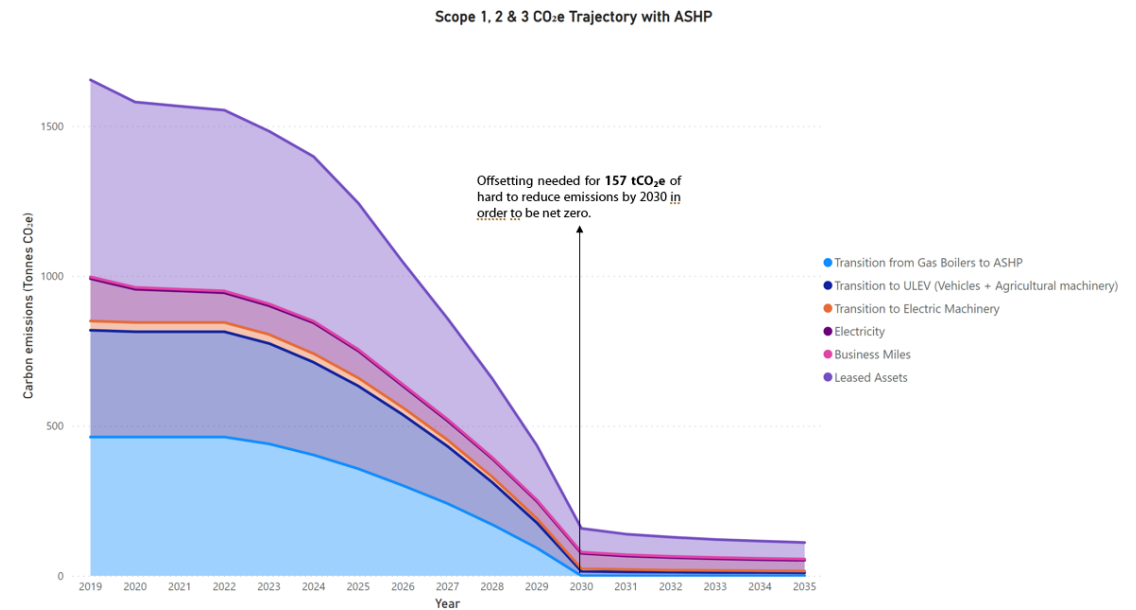
A Cascade Heat Pump was also considered but decided against due to the high capital cost. Carbon Savings in Year 1 = 34 tCO<sub>2</sub>e

Direct Electric Water Heater for Domestic Hot Water.  
Carbon Savings in Year 1 = 0.7 tCO<sub>2</sub>e

New 44.15 kWp Solar Panel System, not visible from the ground. Carbon Savings in Year 1 = 7.4 tCO<sub>2</sub>e

# The Net Zero Journey Summary

- Get your **Data** & estate in order
- Calculate **Baseline Emissions** & **Set Net Zero Targets**
- Do a **Net Zero Trajectory**
- Carry out **on-site Energy Audits**
- **Engineering Design**
- Procurement
- Installation
- **Measure & Optimise** for *Continuous Improvement*



# Contact Details



APSE Energy Associates



**Alan Barber**  
Director: Sustainability



alan.barber@salvisgroup.co.uk



**Mike Keating**  
Director: Engineering



mike.keating@salvisgroup.co.uk





# Next Steps

Ready to take action?

Contact Phil Brennan for further details on delivery of projects

[Phil.Brennan@apse.org.uk](mailto:Phil.Brennan@apse.org.uk)



GB 11409



GB 11132



GB 14074

# Greening the Past: Decarbonising Historic Buildings

Climate Change and Renewables Network - Thursday 18 December, 10.30-12.00

Q&A





# Closing Remarks

- Councillor Freddie Bailey, Cabinet Member for Environment and Community Safety at Preston City Council (Chair)



**Association for Public Service Excellence**

3rd floor, Trafford House, Chester Road

Old Trafford

Manchester

M32 0RS

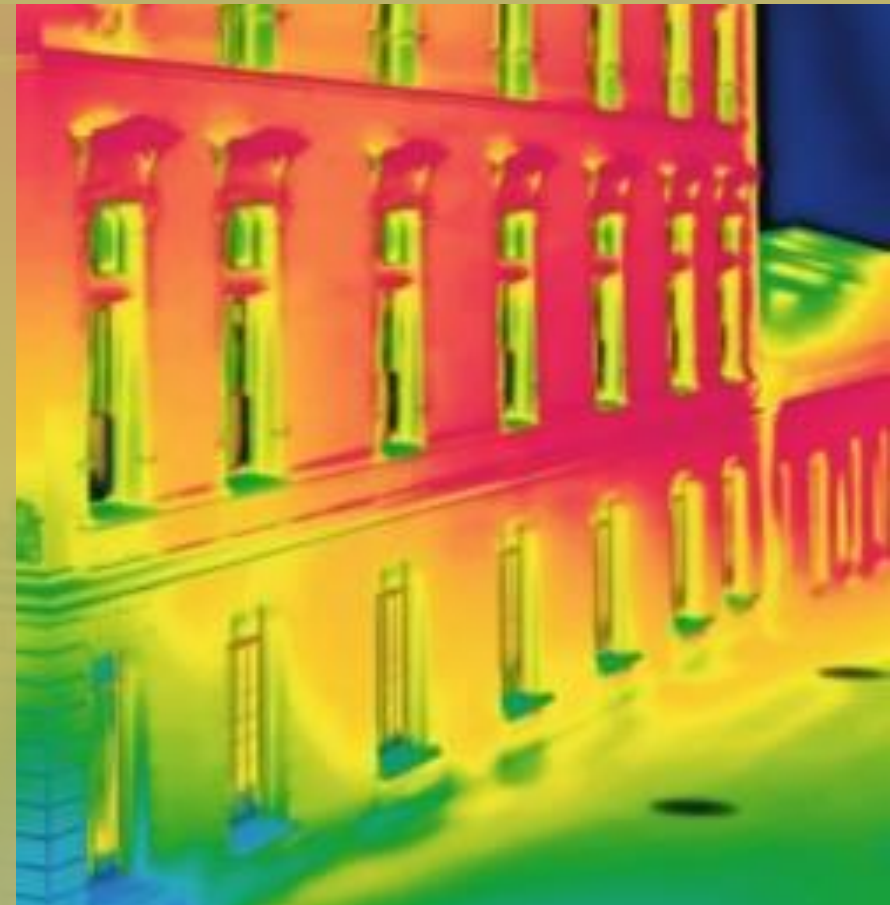
**telephone:** 0161 772 1810

**web:** [www.apse.org.uk](http://www.apse.org.uk)



# Greening the Past: Decarbonising Historic Buildings

Climate Change and Renewables Network - Thursday 18 December, 10.30-12.00



**Thank you!**

**Presentations  
will be available  
from the APSE  
website  
tomorrow**