

Eastbourne District General Hospital

The UK's First Renewably Heated Hospital

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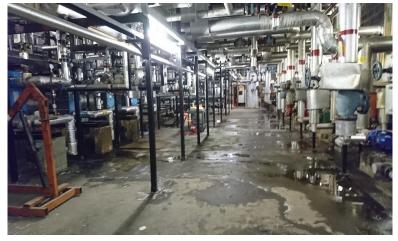
- The original site configuration
- Options considered & De-Steam
- Fabric Improvements
- Heat Pump System
- Electrical Infrastructure Upgrade
- Funding and Procurement
- Lessons Learned





The Challenge











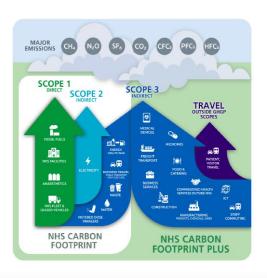
- High carbon intensity
- Ageing plant and unreliable CHP plant
- Poorly performing building fabric

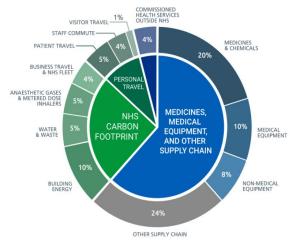


The Project Brief









- NHS Carbon Target of Net Zero by 2040
- Use Salix PSDS3 Funding to make a significant in road to this target
- Project needs to minimise cost in achieving the target
- Needs to address backlog maintenance wherever possible



Options Considered



Salix PSDS3 focused on heat decarbonisation – What happens if we decarbonise all the heat? £28million – Game Changing!!

- UK Electricity Grid is decarbonising through central government action
- Need to be focused on heat decarbonising solutions
- Has to be delivered within circa 12 months (grant criteria)

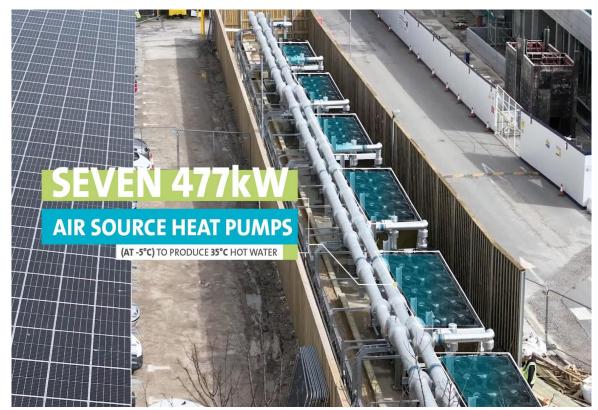
Potential Options

- Convert existing / install new assets to hydrogen
- Biomass fuel (wood chip or pellet)
- Deep Geothermal
- Solar Thermal
- Heat Pumps (Air Source, Water Source or Ground Source)
- Low Carbon District Heating



Preferred Solution – Heat Decarbonisation First







4.8MWth of Cascade Heat Pumps (N+1) – Generators for Resilience – Offsets all fossil fuel heating Significant electrical works to facilitate the new equipment.

Preferred Option – Reduce Revenue Impact





Preferred Option - Optimise





With a significant grant capital after heat pumps and solar PV there is an opportunity for a holistic fabric improvement, which optimizes heat pump performance (low flow temp) but also improves patient experience

D&B Facades System to minimize installation time, to meet grant criteria.



Procurement – The Carbon and Energy Fund



- Membership organisation
- Specialist in house skills to assist NHS Trusts
- Framework procurement, 5 frameworks as of 2024
- IHEEM Recognised best practice guide for Healthcare Estates
- Projects managed from feasibility to construction and delivery
- Current ongoing projects valued in excess of £0.8bn
- Guaranteed combined savings of £80m p.a

- Largest Framework for Public Sector Decarbonisation Schemes (PSDS)
- NHS approved process and UK procurement regulations compliant
- Contractors held accountable throughout project life
- Proven to work with c. 10 PFI hospitals
- Guaranteed Carbon and revenue savings for all members



Project Learnings



- Ambition of this scale is possible and should be achievable
- Boards need to be prepared that currently there is a cost of decarbonizing (unless there is a change in UK tariff structure)
- Early engagement, particularly of clinical and operational teams are essential.
- Grant funding, timescales and resourcing

Where next?? – Deep geothermal.....









