



Steve Roberts
NHS Heat Pump Case Study

econic
renewable energy solutions

The Project - Hellesdon Hospital Norwich

- n Client - Norfolk & Waveney Mental Health Foundation Trust
- n New build Psychiatric Intensive Care and Low Security Units - £9.4m project
- n Vanguard project, aiming for the NHS carbon neutrality target of 2018 now
- n Officially Opened 12th May 2009



Project Aims and Challenges

- n Highly sustainable building featuring:
 - .. Low carbon heating system via GSHP
 - .. Under floor heating
 - .. Solar PV to offset heat pump electricity
 - .. Very well insulated, high performance glazing
 - .. Natural ventilation
 - .. Rainwater harvesting
- n Maximise use of grant funding
- n Building on an existing hospital site
 - .. Continued operation throughout works
 - .. Residential area so noise an issue



The Econic Solution

- n Ground Source Heat Pumps
 - .. 2 x 45kW Dimplex systems
- n “Pushed” ground collector
 - .. Pipes pushed into ground using hydraulic rams
 - .. 120 pushes in total – largest in UK
 - .. Almost silent and no mess
 - .. Pioneered by Econic and Lankelma
- n Under floor heating
- n 44kW PV array

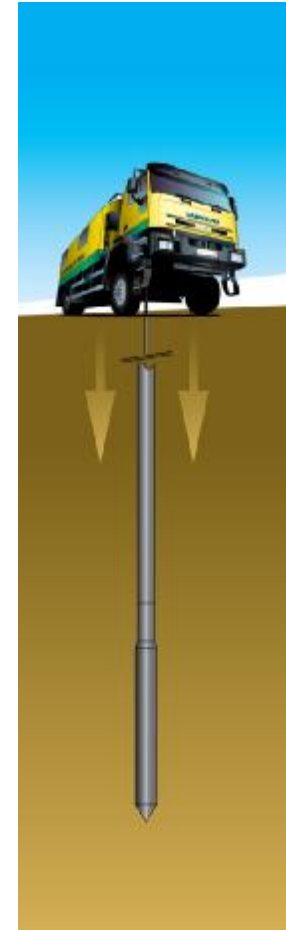


Installation in progress at Hellesdon



The Result

- n Client has a low carbon, low maintenance heating system with low running costs
 - .. Gets better as grid de-carbonised
- n Payback accelerated thanks to LCBP2 grants
 - .. Could not have happened without the grants
- n As the client says: “Not only is this a state-of-the art purpose built facility, it also demonstrates the Trust’s commitment to sustainability and renewable energy sources.”



Thank You!

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