



# RENEWABLE ENERGY SOLUTION FOR CHESTER MENTAL HEALTH UNIT



## The Challenge

---

An ICS Cool Energy air source heat pump is providing the essential heating and cooling for Ancora House, a new £14.8m state-of-the-art facility in Chester that provides in-patient and day care for children and young people with complex mental health conditions. The solution had to be renewable, fail-safe and meet the comfort needs and high demand for domestic hot water 24/7.

"We had to develop an energy efficient, robust, renewable and fail-safe solution in this special building for vulnerable people to ensure the domestic heating and cooling demands are met at all times."

## WE MAKE IT WORK

### The Solution

ICS Cool Energy was called in to design a renewable heating and cooling solution for Ancora House, a £14.8m specially designed acute mental health facility at the Countess of Chester Health Park.

Providing day and residential care for vulnerable young people, the heating and cooling system not only had to be renewable, its design also needed to ensure continuity of supply, with a back-up in the event of any system failure.

An ICS Cool Energy High Efficiency Air Source Heat pump (ASHP) has been installed on a run and standby basis (N+1), with an intelligent control system and a 60% reduction in CO<sup>2</sup> emissions compared with more traditional systems. It provides the hot and cool water for the underfloor heating and cooling system that runs throughout the two storey building with 26 beds in two wards plus specialist units, recreation areas and an education suite. A calm environment is also an essential part of the building's design so the ASHP's silent operation thanks to its insulated compressors was also key to the specification.



### The Result

Opened in 2016, the project using renewable technologies that include the ICS Cool Energy heat pump as well as solar energy has been hailed as a 'best practice' facility.

Tim Welch, deputy chief executive and director of finance for the Cheshire & Wirral Partnership NHS Foundation trust said: "This project addresses the national agenda to provide increased mental healthcare and support for young people and we anticipate that it will become a best-practice facility, benefitting from the latest green technologies."

ICS Cool Energy Sales Representative added: "The design of this building meant we had to offer heating and cooling into each of the rooms through the floor slab which creates its own challenges in terms of the temperature ranges that we can operate in. Our optimised high temperature heat pumps with class leading energy efficiency fitted in with the specification and also helped with the overall energy grading of the building to meet the Part L building regulations."



Date code: 03/17

#### Our International offices:

Ireland: +353 (0)46 92 52934

Germany: +49 (0)7046 88087 0

Netherlands: +31 (0)88 258 258 0

Switzerland: +41 (0)55 415 91 09

Austria: 00800 0116 0117

France: +33 1 60 66 80 83