



# Case Study Humberside Police



Protecting Communities, Targeting Criminals

## Humberside Police Select 'Freecool®' the UK's Leading Evaporative Cooling Solution by Workspace Technology to Support its Data Centre Renovation Project

Ambitious energy optimisation provided by a high efficiency cooling system combined with resilient data centre infrastructure were key objectives for the Humberside Police Data Centre Renovation Project.

### Solution

Workspace Technology applied the principals of their EcoDesign™ strategy, which provides 'beyond best practice' industry leading energy and operational optimisation of data centre infrastructure.

The EcoDesign™ solution combined Workspace Technology's renowned energy frugal Freecool® Evaporative Free Air Cooling and its FlexAisle® vendor independent aisle containment system to deliver a highly efficient and resilient data centre cooling system, fulfilling the demanding Humberside Police project brief.

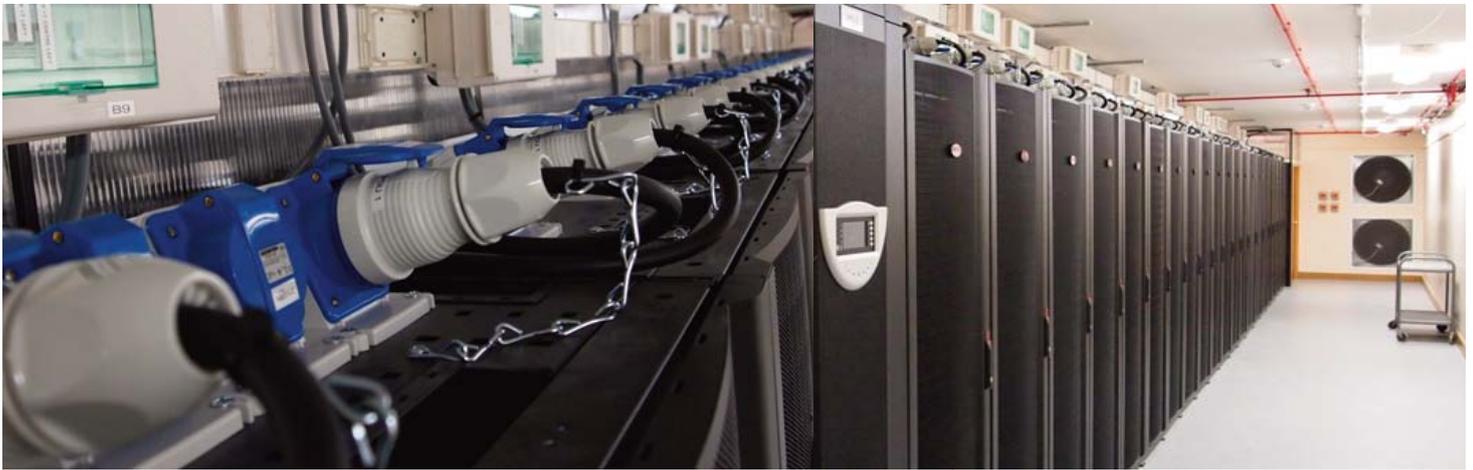
The data centre location was within a long and narrow room, which may have proved difficult for the provision of conventional data centre cooling and infrastructure. The versatile EcoDesign™ solution made it ideal to deploy a total of 20 equipment racks and configure them in a single aisle. The equipment racks were integrated with Workspace Technology's FlexAisle® aisle containment system to create a fully segregated hot and cold aisle configuration.

5 x Freecool® Evaporative Free Air Cooling modular units were deployed delivering a total of 120kW N+1 cooling capacity. Workspace Technology worked within the constraints of the existing space and cleverly engineered an air 'mixing chamber' within a room separating the data centre from the external space. The mixing chamber allows 'atemperation' - the controlled air mixing of hot exhaust and cold intake airflow to accurately deliver a constant equipment inlet temperature. The use of Ziehl Abegg EC Blue energy efficient EC fans further improved the overall energy

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### Standards & Accreditations





## Benefits

The selection process by The Energy and Environment Officer of Humberside Police, resulted in the use of Workspace Technology's Freecool® solution, was both rigorous and comprehensive. A number of the most recognised energy efficient alternative cooling systems were considered, subsequent detailed analysis showed that when measured against the next most efficient alternative cooling system, the Freecool® system provided Humberside Police with the following additional commercial and environmental advantages;

- A reduction in annual energy consumption in excess of 300,000 kWh
- A reduction in annual energy bills by at least £30k
- A reduction in annual CO<sub>2</sub> emissions by at least 165 tonnes The forecasted operational PUE at full design load will be < 1.1

This installation demonstrates the engineering skills of Workspace Technology, consistently delivering the highest of standards in the provision of industry leading PUE figures.

Workspace Technology's unique Freecool® evaporative free air cooling system makes the use of external air to cool server room and data centre equipment. Unlike simple air economizers which require supplemental DX or chilled water cooling when external ambient temperatures exceed 21°C, the Freecool® system engages the evaporative cooling mechanism which reduces external air temperature by simply passing the airflow through wet filter pads.

Workspace Technology's Freecool® evaporative free air economizer technology delivers consistent equipment inlet temperatures of 21°C to 24°C depending on client preferences. The dew point temperatures are no longer an issue due to the practical working temperatures.

**Freecool® can use as little as 10% of the energy required for traditional air-conditioning units substantially reducing operational costs associated with cooling.**

## Freecool® Installation Benefits

- Reduced CO<sub>2</sub> emissions
- Significantly reduced energy consumption and operating costs
- Supports existing cooling technologies
- Improved DCiE/PUE\*\* Efficiency Ratings
- Improved company 'Green Credentials'
- Improved resilience with practical support by UPS systems

\*\*Data Centre Infrastructure Efficiency/Power Usage Efficiency are industry recognised standards for data centre room efficiency measurement introduced by the Green Grid.



## Interested in finding out more?

Our friendly team are on hand to take your call on **0121 354 4894** or send us an email at [sales@workspace-technology.com](mailto:sales@workspace-technology.com)

[www.workspace-technology.com](http://www.workspace-technology.com)