

CASE STUDY:



KAO DATA

About Kao Data:

Kao Data design and operate data centers engineered for AI. With hyperscale-inspired facilities east and west of London (Harlow, Slough and Northolt) and northern England's largest data center planned for Greater Manchester, they are home to technology's most demanding computing infrastructure – powered by 100% renewable energy.

The following case study reports on Excool's deployments at Kao Data's Harlow and Slough sites.

Client considerations:

The Excool Zero was selected for these sites due to its efficiency credentials and its compact design that allows us to maximise the white space. The Slough campus site is also noise-sensitive due to residential proximity, which makes the Excool Zero a perfect solution as it can be housed inside. The Zero unit uses indirect evaporative cooling during periods of high ambient temperatures, which reduces the requirement for full mechanical cooling (DX) built into the units. This improves both the annual and peak PUE of the units and therefore the site, reducing the electrical infrastructure required and reducing the operational cost of the equipment.

EQUIPMENT DEPLOYED:

HARLOW: 72 X 250KW EXCOOL ZERO UNITS (EXHR2500CE)

SLOUGH: 48 X 250KW EXCOOL ZERO UNITS (EXHR2500CE)

Harlow campus:

Harlow was Excool's first engagement with Kao Data, commencing in 2021, developing what was at the time the UK's largest data center campus under development. The campus covers an impressive 150,000sq ft, scheduled to accommodate a max-capacity of 83MW, all powered by 100% renewable energy.

To manage the demand, there are now a total of 72 of the Excool 250kW Zero units installed onsite. Each data hall at Harlow has a maximum capacity of 2.3MW, each cooled by 12 Excool 250kW Zero units.



Slough campus:

The Slough campus is positioned in the UK's data center heartland, located within the Slough M4/M25 tech corridor. The Slough campus has 48 of the Excool 250kW Zero units onsite that cover 2 x 4MW and 1x 2.5MW halls at N+2 design capacity. All capacity is operating to an SLA-backed PUE of 1.25, with all IT-load powered by 100% renewable energy. The Slough campus is also utilising a refrigerant with a lower GWP (global warming potential), R454B refrigerant.

