

# Elean Data Campus

Sutton, Cambridgeshire



Potential for 40% lower cooling costs

Planning consent for a data centre campus  
development 65,000m<sup>2</sup> (700,000 sq ft)



## Overview

The campus incorporates a power generation solution that can offer low cost power and is probably the greenest data centre location in Europe.

### Location

The Elean data campus is located in a rural setting just outside the village of Sutton on the A142 approximately 8 miles to the east of Ely and 12 miles north of Cambridge. The centre of London is approximately 63 miles as the crow flies and fibre distances are estimated at around 125 km (78 miles) to the City.

Ely Railway Station is 5.6 miles from the campus with a regular service to London Kings Cross and Liverpool Street. Cambridge Airport is 13 miles to the south.

### Site description

The campus is on land formerly a part of Mepal Airfield, a Second World War airbase, latterly as a Trident Missile base in the 1960's. After 1985 the concrete from the runways was crushed and used to re-grade the site after which roads and landscaping were laid out for the development of Elean Business Park. Outline Planning Consent was granted in 2003 for a 2 million sq ft colocation facility. Planning consent has now been granted for data centre and business continuity uses on 17.4 hectares (43 acres).

To the north of the site perimeter is a biomass straw burning power station supplying 38MW directly to the sub-station within the campus. Adjacent to the campus is a proposed EcoVillage of 450 environmentally conscious homes designed to offer efficient and sustainable living supported by low cost energy released from the campus and the off take heat from the Biomass station.



### The Data Campus

The campus will comprise 65,000 m<sup>2</sup> (700,000 sq ft), of two storey detached buildings of 12m eaves with individually secure perimeters ranging from 5,000 sq ft to 10,000 m<sup>2</sup> within a secure estate. It is anticipated that the site will house up to six separate buildings.

Adjacent to the data centres, within the secure perimeter is a boiler house for the management of the waste heated water from the biomass power station and an electricity sub-station to distribute the energy to the data centres. The

energy supply to the campus has been designed to offer data centre space with an average of 1,500 watts / m<sup>2</sup> with multiple redundancy of supply through the National Grid and the adjacent Biomass plant.

The developer is able to offer the data centre buildings of a size and specification to meet the occupiers needs with the backing of an assured engineering team and a background in technology property development.



The waste free heat from the plant will be available as an energy source for the village to heat the homes and also to cool the data centres through absorption cooling.

The absorption chillers are a simple heat exchange process using super-heated lithium bromide which would be energised using the off take heat from the power station, which consumes almost no new energy.

Studies have not yet been completed, however at this stage it appears that the data centres power demand, for which are a theoretical maximum 72MW, could be very significantly reduced through the absorption cooling process. Preliminary estimates suggest that the cooling load may fall by 30MW, a saving of approximately 40%.

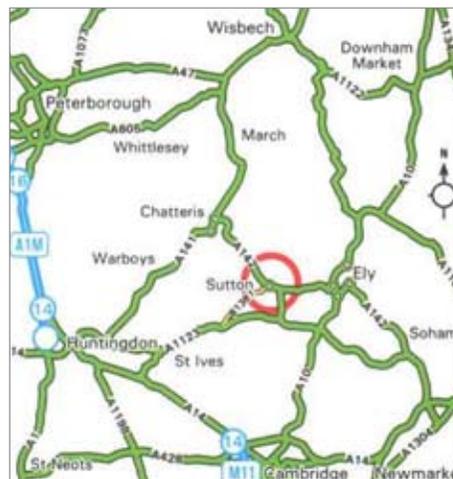
The reduction in the energy burden will translate directly to reduced operational costs by the data centre occupiers in addition to reducing the impact on the environment by the campus. The combination of the biomass plant, the EcoVillage and the absorption cooling will probably establish Elean Data Campus the most environmentally friendly and cost efficient data centre location in Europe.



## Low cost energy & Sustainability

The philosophy of the Elean Data Campus is to provide world class data centre facilities in a discrete rural setting, using energy efficient techniques to deliver low running costs and at the same time provide a village community with a sustainable benefit from the waste energy from the campus.

The data centres will be powered from multiple redundant sources, principally from the adjacent 38 MW straw burning combined heat and power plant delivering demonstrable energy conservation. The plant will also use animal waste as a power source reducing its environmental impact and further establishing its sustainability credentials.



## Further information

The developer has a flexible approach to the delivery of data centre space within the campus and is available to discuss the structure that best suits each occupier; whether it be through the delivery of a turn-key solution, a shell building with power and cooling or a development partnership arrangement.

Detailed information about the campus is available in manual form or CD from the developer's Agents or via the GVA Connect website.



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