**Issue Date: 29/07/21** Sustainability Data Sheet "Ark sets the tone for Socially Responsible data centres in the UK and we openly share the benefits with the customers we serve. We believe that by honouring Ark's own sustainability objectives, we can empower our customers to achieve their own carbon reduction goals. Everyone wins, including the planet". CLIMATE **NEUTRAL** +44 (0)845 389 3355 DATA Info@arkdatacentres.co.uk CENTER www.arkdatacentres.co.uk



# Reducing Water Consumption

Water Consumption is a great example where a data centre using evaporative cooling could have a significant adverse impact on the local water supply. By employing innovative thinking the team at Ark has developed a 'Water Buffering and Saving Mode' for our cooling equipment which reduces our original peak water usage by a staggering 85%.

Employing this approach with our established rainwater harvesting designs it is possible for our data centre evaporative cooling systems to operate solely on harvested rainwater. (With the exception of the first year where we need to do an initial fill of the storage tanks).

Our facilities therefore have no adverse influence on the local utility water supply.

In "hard" water areas (London) rainwater harvesting has the additional benefit of removing the need to soften mains water, reducing the inevitable wastewater produced and the energy demanded by the treatment process. In this case rainwater harvesting saves both water and energy.



# How we maintain some of the lowest PUE's in the industry

Ark has developed innovative direct air evaporative cooling capability that dramatically lowers energy consumption and cost, capable of providing compressor free cooling for 100% of every year.

Our use of sophisticated technology ensures that the data centre cooling adapts to IT load in real time to reduce wasted energy and to deliver just the right amount of cooling to each rack across its operating spectrum up to 50kW per rack.



## We're eliminating diesel

Over the next 2 years we are replacing the diesel in the fuel tanks of our standby generators with Hydrotreated Vegetable Oil (HVO). This will reduce our existing very limited Scope 1 fossil emissions by 90%, our NOx emissions by >15% and our particulate emissions by >25%

Recognising that growing fuel crops is not as sustainable as eliminating carbon based fuel entirely, every new market-defining London facility under development by Ark will employ gas generators that can ultimately run on 100% hydrogen, providing a defined route to net zero carbon generation.

Even running on natural gas the generators at our new London sites will produce significantly lower particulate NOx and SOx emission than equivalent diesel generators running on HVO.



# Why we favour steel over concrete

We realise that the abundant use of concrete accounts for around 8% of all carbon emissions globally, that's more than 3 times that of the entire aviation industry.

Our factory focused modular building process not only reduces the construction time on site (along with the health & safety risks of a construction site) but it also favours steel over concrete and allows us to recycle up to 90% of our building fabric in the future; thereby lessening the overall environmental impact of our buildings, when compared to a traditionally constructed building.



### **Encourage the use of Electric Vehicles**

Each Ark facility has significant provisions to accommodate and encourage the use of electric vehicles including dedicated sections of our car parks equipped with Multiple EV Chargers with provision for up to 20% of car parking spaces in the future.



#### **Living Walls**

Our Living Walls on urban data centres contain 'planters' at each floor level which act as significant flower beds with ample soil and water retention that can be easily maintained, producing a real living garden.

In addition to encouraging biodiversity, the vegetation produces its own 'microclimate' absorbing heat when the weather is hot preventing it from getting into the building and acting as an insulator when it is cold.



# Leveraging 100% renewable energy

For the last 6 years, all Ark facilities have been powered by 100% renewable energy.

By purchasing renewable energy upto 3 years ahead Ark is providing strong market signals for the installation of additional grid connected renewable generation capacity. In turn, our customers benefit from the lowest renewable energy prices available in the UK market, while dramatically lowering their own carbon footprint.



### **Waste** reduction

Ark's Waste Management Strategy is simply to become a 'zero waste to landfill business'.

Our aim is to reduce the unnecessary use of raw materials and encourage re-use of materials and products. We reduce waste to landfill through recycling, composting or energy recovery, leading to a lower environmental impact and positive carbon reductions.

In 2020 our waste management system identified that 96% of our waste was recycled with 4% going for energy recovery.



#### **Biodiversity**

Biodiversity is an area that is not often synonymous with data centres. However, in a campus setting biodiversity can play a significant part in both the wellbeing of the people working on the campus and contribute to our customers sustainability goals.

The current Ark Data Centre campuses between them have in excess of 5 hectares dedicated conservation areas which include bat corridors and a bat cave, badger sets and hibernaculae all designed to encourage the local wildlife to thrive.



Info@arkdatacentres.co.uk www.arkdatacentres.co.uk