

# Strategic Data Centre Site Profiles

## Data Centre Co-Location – London North

### Document details

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## 1. LONDON NORTH

### 1.1 LOCATION

Stevenage, Hertfordshire

### 1.2 TECHNICAL SPECIFICATIONS

#### 1.2.1 BUILDING AREA

- 6 Technical Halls
  - Technical Hall 1 - **530m<sup>2</sup>** (Technical Space)
  - Technical Hall 2 - **817m<sup>2</sup>** (Technical Space)
  - Technical Hall 3 - **465m<sup>2</sup>** (Technical Space)
  - Technical Hall 4 - **430m<sup>2</sup>** (Technical Space)
  - Technical Hall 5 - **757m<sup>2</sup>** (Technical Space)
  - Technical Hall 6 - **492m<sup>2</sup>** (Technical Space)
  - Comms Room 1 - **99m<sup>2</sup>** (Technical Space)
  - Comms Room 2 - **98m<sup>2</sup>** (Technical Space)

#### 1.2.2 CLASSIFICATION

Certified Tier 3 (Design and Build certified by The Uptime Institute-First In Europe)

#### 1.2.3 STRUCTURE

- Brick and cladding
- Heavy duty, **1000mm** raised floor
- Heavy Grade floor, **12kN/ m<sup>2</sup>**

#### 1.2.4 POWER (MAINS AND EMERGENCY)

- **7.5 MVA** site load
  - **2 x 11 kV** feeds
  - Each providing **7.5 MVA**
- DRUPS
  - 6 Hitec Diesel Rotary Un-interruptible Power Supplies (DRUPS)
  - Each providing **1.67MVA**
  - **N+2** Configuration
  - DRUPS provides all site power
  - On site fuel and water storage
  - **72 hours** supply at full load



## 1.2.5 CONTROLLED ENVIRONMENT

- Power for all cooling systems DRUP supplied
- 3 x 2,560kW water cooled centrifugal chillers
  - Variable speed drive
  - N+1 Configuration
- Heat Rejection
  - 3 x 2,350 open circuit cooling towers
  - 3 plate heat exchangers
  - Partial free cooling

## 1.2.6 DETECTION AND SUPPRESSION SYSTEMS

### 1.2.6.1 FIRE AND SMOKE

- Kentec Smoke detection throughout site
- Inert gas fire suppression system to Technical Halls (2 hour fire rated construction) and electrical rooms
- Fog, Mist and sprinkler system for mechanical plant rooms, data centre bridge and office
- Aspirated Very Early Smoke Detection Alarm (VESDA)
  - Installed in Technical Halls and corridor floors

### 1.2.6.2 WATER LEAKAGE DETECTION

- Leak detection tape
  - Installed around all CRAC Units
  - Installed underneath all internal chilled water pipes
  - Monitored by BMS

## 1.2.7 BUILDING MANAGEMENT

- Dedicated 24/7 site operation team
- Intelligent BMS (Trend) monitors all critical systems

## 1.2.8 NETWORKS

- 2 communication rooms
  - Providing diverse entry points to site

## 1.2.9 SECURITY

- Perimeter
  - Palisade electrical fence
  - Electrification to 3m with detection
  - Turnstile access control on perimeter
  - Detect and Monitor Zone
  - Detection between building and fence
  - Supported by fixed primary camera coverage
  - Secondary camera coverage with dome tracking functions
- Vehicle and pedestrian entry points
  - All controlled and secured
  - Embassy standard anti-ram barrier
- Access controls for all areas of the building
  - Turnstile control for reception
  - 2<sup>nd</sup> level of control to main working areas
  - 3<sup>rd</sup> level of control to sensitive areas via PIN and biometric access controls
- Active monitoring and integration of CCTV

- Access control and alarms presented via efficient monitoring display
  - Multiple monitoring points
  - Access systems configured to allow for resilience
- Manned Security
  - Reception and equipment room
  - **24/7** security team
- RVR Remote Monitoring Centre
- Surveillance
  - 39 fixed external cameras
  - 136 fixed internal cameras
  - 11 domes with tracking
  - 30 days CCTV storage capacity

### 1.3 ADDITIONAL FEATURES

- Highly efficient energy design
- Provision for **2.3MVA** Wind Turbine
- Full and partial free cooling throughout the year
- Heat from technical halls used to reheat incoming fresh air
- Fibre backbone installed to all halls

## 2. GLOSSARY

Acronym or Term	Meaning
BMS	Building Management System
CRAC	Computer Room Air Conditioning
DRUPS	Diesel Rotary UPS
HSSD	High Sensitivity Smoke Detection
kV	Kilo Volt
kW	Kilo Watt
M&E	Mechanical and Electrical
MVA	Mega Volt Amp
MW	Mega Watt
N	The level of redundancy required to support customer load
UDL	Uniform Distributed Load
UPS	Uninterruptable Power Supply
VESDA	Very Early Smoke Detection Apparatus