

Strategic Data Centre Site Profiles

Data Centre Co-Location – London East

Document details

Version: 1
Last Updated: 12/07/2013

Contents

1.	LONDON EAST	3
1.1	LOCATION	3
1.2	TECHNICAL SPECIFICATIONS	3
1.2.1	BUILDING AREA.....	3
1.2.2	CLASSIFICATION	3
1.2.3	STRUCTURE	3
1.2.4	POWER (MAINS AND EMERGENCY)	3
1.2.5	CONTROLLED ENVIRONMENT	3
1.2.6	DETECTION AND SUPPRESSION SYSTEMS	4
1.2.7	BUILDING MANAGEMENT	4
1.2.8	NETWORKS.....	4
1.2.9	SECURITY.....	4
2.	GLOSSARY.....	5

1. LONDON EAST

1.1 LOCATION

Thurrock, Essex

1.2 TECHNICAL SPECIFICATIONS

1.2.1 BUILDING AREA

- Total Technical Area - **5,100 m²**
- Technical floor capacity **4,641 kW**
- 4 Technical Halls
 - Technical Hall 0 – **1107m²** (Technical Space) – **829 kW**
 - APC Cube – **72 m²** (Technical Space) – **600 kW**
 - Technical Hall 1 – **1285m²** (Technical Space) – **966 kW**
 - Technical Hall 2 – **1159m²** (Technical Space) – **865 kW**
 - Technical Hall 3 – **1500m²** (Technical Space) – **1246 kW**



1.2.2 CLASSIFICATION

Designed & Operated to Tier 3 standard. Certified with the Management and Operation stamp of approval by The Uptime Institute

1.2.3 STRUCTURE

- Steel frame construction covered with profile metal sheeting and brick detailing
- Roof overdrawn with insulation and butyl type weatherproofing
- **1000mm** raised floor, with antistatic vinyl finish
- Floor capacity weight loading for dead and imposed loads of (Heavy grade flooring) **12kN/ m²** UDL (Uniform Distributed Load)

1.2.4 POWER (MAINS AND EMERGENCY)

- 6 Transformers
 - Each providing **4MVA**
- **N+1** redundancy on IT Power
- Dual A & B Power Distribution Units (PDU)
- An uninterruptible power supply system (UPS) with 3 diverse strings
 - Backed up with **20 mins** battery autonomy
 - Each string has **N+1** configuration
- 13 standby generators (**19MVA**) on site
 - 6; each providing **2MVA** across Technical Halls 1 and 2
 - 7; each providing **1MVA** across Technical Halls 0 and 3
 - **N+1** redundancy
- On site fuel storage (**248,000 litres** of diesel) to provide minimum capacity of **48 hrs+** at full load
 - **N+1** redundancy

1.2.5 CONTROLLED ENVIRONMENT

- 4 external chillers
 - **N+1** redundancy
- Chilled water system serves Technical Halls 0 and 1

- Direct Expansion (DX) serves Technical Halls 2 and 3
 - N+20% redundancy
- Operating Temperature of 18°C -27°C
- Relative Humidity of 30% - 70%

1.2.6 DETECTION AND SUPPRESSION SYSTEMS

1.2.6.1 FIRE AND SMOKE

- Siemens detection system (monitoring system)
- Inert gas (Argonite) fire suppression system to Technical Halls
- OxyReduct Protection to Mechanical and Electrical (M&E) areas
- High Sensitivity Smoke Detection (HSSD)

1.2.6.2 WATER LEAKAGE DETECTION

- Flood Line 128 System
 - Audio and Visual Zone alarms
 - Linked into the BMS system

1.2.7 BUILDING MANAGEMENT

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

1.2.8 NETWORKS

- 2 communication rooms
 - Providing Diverse entry points to site

1.2.9 SECURITY

- Stringent data centre access controls and procedures in place
 - Biometric access to all Technical Halls & Communications Rooms
 - Restricted levels of access
- 125 x internal/external CCTV cameras
 - 34 external cameras
 - 24 x static
 - 10 x pan tilt zoom 360° rotation cameras
 - 91 x internal cameras (static cameras)
- On Site Security guards
 - Dedicated 24/7 security team
- Remote Monitoring Centre
- Secure loading and delivery areas
 - Pre-arranged loading and deliveries
 - Electronic operated gates
- Anti-Ram protection for exterior doors
- Site/Perimeter electric fence
 - Tumbler alarms
 - Tannoy System on Perimeter

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