CyrusOne

# MIL1
## CyrusOne Data Center

Via Reggio Emilia, 39
20054 Segrate MI
Italy



## Introduction

CyrusOne MIL1 is a brand-new state of-the-art data center strategically located on a 74,866 sqm (18.5 acre) site in the Municipality of Segrate, East Milan, at the gateway between Italy, Europe and the Mediterranean basin. The facility will initially deliver 27 MW of IT capacity to 9,000 sqm of world class technical space within a single building over three floors with a total of three 9 MW data halls. The data center will be delivered in three phases, with the first phase operational by Q3 2027.

## Overview

- 27 MW IT capacity with the potential to further expand

- 9,000 sqm of total technical space within a single building

- The building is designed to achieve BREEAM Very Good Certification

- Acquired a 658,628 sqm biodiverse plot of land, known as the Golfo Agricolo, which has been gifted to the Municipality of Segrate for community use

- Planting of over 130 trees of 12 different species to enrich local biodiversity and attract wildlife

- Installation of photovoltaic panels on certain buildings within the Municipality of Segrate and the surrounding community

- Financing and execution of key infrastructure projects in the Redecesio district, including a link road and the redevelopment of Via delle Regioni with expanded pedestrian walkways and dedicated cycling paths

- Low WUE achieved through utilisation of closed loop chilled water system and no evaporative cooling

- Low PUE (<1.3) achieved through highly efficient design and equipment selections, utilising free-cooling technology and optimised operating temperatures in accordance with ASHRAE Standards

- Energy supply will be procured from 100% renewable energy sources as in all CyrusOne's data center portfolio in Europe since 2021

- Designed and built to recover waste heat for internal use, providing the option to distribute to local third parties

## Sustainable Design and Construction

### BREEAM CERTIFICATION

Sustainability and biodiversity will play a central role in the new data center, the campus is designed to achieve a BREEAM "Very Good" certification as a minimum ensuring it complies with multiple sustainable criteria including:

- Best practice site waste management delivered through a Site Waste Management Plan (SWMP) and a Zero Waste to Landfill (ZWL) plan with the use of recycled aggregates.

- Utilizing building materials which provide optimum environmental performance with minimal environmental impact over the building's full life cycle.

- Staff and contractors sourced locally where possible to support the local economy.

- Protection of existing ecological features to mitigate the impact to the environment throughout the construction process.

- Best practice design for health, well-being, and occupancy ensuring thermal comfort, lighting and control, indoor air quality, and acoustic performance, and encouraging reduction in car travel through the provision of cyclist facilities.
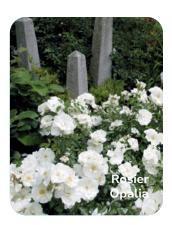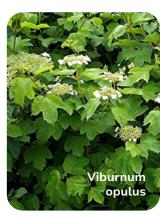
## BIODIVERSITY AND COMMUNITY

In planning and developing this facility, CyrusOne is committed to supporting the local economy, prioritizing community opportunities, and protecting the environment through the following initiatives:

- Planting of over 130 trees of 12 different species to enrich local biodiversity and attract wildlife.

- Distribution of native and ornamental species shrubs along the perimeter for filtering functions and biodiversity enrichment.

- Installation of photovoltaic panels on certain buildings within the Municipality of Segrate and the surrounding community.

- Financing and execution of key infrastructure projects in the Redecesio district, including a link road and the redevelopment of Via delle Regioni with expanded pedestrian walkways and dedicated cycling paths.

- Acquired a 658,628 sqm biodiverse plot, known as the Golfo Agricolo, which has been gifted to the Municipality of Segrate for community use.



Philadelphus Belle etoile



Rosier Opalia



Viburnum tinus



Viburnum opulus



Lavandula-Angus Tifolia



Cornus sanguinea été

## EMISSIONS AND RENEWABLE ENERGY

- Energy supply will be procured from 100% renewable energy sources as have all CyrusOne's data center portfolio in Europe since 2021.

- A minimum of 18% of all parking spaces will be equipped with electric vehicle (ev) charging stations, ensuring enhanced accessibility and support for electric vehicle usage.

- To reduce nox emissions, all generators are provided with selective catalytic reduction (scr) systems and can run on hvo fuels procured from secondary oil sources. This typically offers up to 5x reduction on standard nox emissions.

## HEAT RE-USE

The data center will be designed and built to recover waste heat, initially for use in ancillary spaces within the data center and providing the option to distribute to local third parties where demand exists.

## OPERATED TO INTERNATIONAL STANDARDS

- ISO 14001 Environmental Management

- ISO 27001 Information Security Management

- ISO 9001 Quality Management

- ISO 50001 Energy Management

## Technical Specifications

### POWER

- Derived from 100% renewable energy sources

- Mains power supplied via 100% rated A&B 220 kV incomers diversely routed active / active with a capacity of 100 MVA

- Low PUE (<1.3) achieved through highly efficient design and equipment selections, utilising free-cooling technology and optimised operating temperatures in accordance with ASHRAE TC9.9 A1

- All IT power metered and charged as consumed

- 9 MW block redundant topology with 7 independent and compartmentalised power blocks per data hall

- 99.999% reliability with the ability for concurrent maintainability

- IT power supplies are derived from primary and reserve feeds from each block via STS's creating a meshed IT distribution topology between all 7 blocks in an N+1 configuration

- Block redundant UPS topology with 1500kW UPS system per power stream

- Fully rated block redundant LV back-up generators with 48-hour fuel autonomy, capable of continuous running, paired with each power stream

- Re-fuelling contracts to ensure timely replacement

### COOLING

- Low WUE achieved through utilisation of closed loop chilled water system and no evaporative cooling

- N+1 free cooling air cooled chillers

- Critical cooling distributed via multiple pipework rings per data hall for maximum resilience

- 9 MW IT capacity cooling solution per hall

- Computer Room Air Handing Units at N+2 per Data Hall

- Chilled water circulation pumps N+1

- Cooling infrastructure individually managed and linked to BMS

- Independently regulated temperature and humidity within each hall

- Power supplies to cooling equipment for full redundancy configured in a block redundant topology

### CONNECTIVITY

- Carrier neutral access and diverse fibre connectivity to active A&B Meet-Me-Rooms from multiple telecommunications providers

- Four diverse fibre routes onto site

- Diverse fibre rings around entire facility to permit multiple building/hall connectivity

### FIRE DETECTION AND SUPPRESSION

- VESDA (Very Early Smoke Detection Apparatus) for early warning, and double-interlock fire suppression systems in critical spaces (data halls and MMRs.

- VESDA (Very Early Smoke Detection Apparatus) for early warning, in LV/UPS Pods

- Fire detection in all rooms, in air plenums and in voids as required and to meet local regulations

- Nitrogen filled pre-action sprinkler system to data halls and MMR's

- Wet sprinklers pre-charged in offices and ancillary spaces

- Fire detection and suppression systems interconnected to central BMS for additional monitoring and alarms

### BUILDING & ENERGY MANAGEMENT SYSTEM (BMS & EMS)

- Power and building monitoring systems to provide alarms and live visual graphics in command centre

- Data collection and Trend logging for reporting purposes and equipment condition monitoring

- Power surge management

- 24/7 year-round-on-site M&E engineers undertaking Planned Preventative Maintenance (PPM) programmes

- Real-time monitoring of electrical and mechanical systems

## SECURITY

- 2.5-metre-high security perimeter fence cast within concrete base

- Vehicle lock at the entrance to site with PAS 68 rated gates to protect from physical attack

- Gatehouse at the entrance to site for both vehicle and pedestrian management

- Extensive external CCTV to cover external areas of the buildings, roadways and site extents including the perimeter fence

- 24/7 year-round-on-site security located in a secure control room, with mobile patrols

- Extensive CCTV and access control throughout the facility

- Progressive layers of security to restrict access through the site

- Mantraps with biometric readers into data halls and other areas as required

## Site Plan