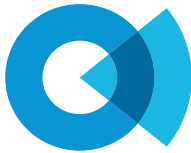


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COIMA
Real Estate, since 1974


SOCOTEC

May 8, 2026

LEED in Urban Transformation Tour @ Olympic Village & Symbiosis District

REGENERATION AND STRATEGY

The **Milano-Cortina 2026 Olympic Village** commissioned by **COIMA** represents an **urban regeneration intervention** that **enhances an existing site**, generating **environmental benefits and long-term value** without additional land consumption.

In this context, the main design strategies focused on:

- Reuse of a previously urbanized area
- Environmental remediation interventions
- LEED v4 BD+C Gold Certification
- Alignment with the EU Taxonomy
- WiredScore v3 Home Student Development Platinum Certification – first Student Housing in Italy

Sustainability has been integrated as a core principle since the **earliest strategic phases**.

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ENERGY AND DECARBONIZATION (KPI)

The **project** was developed to **significantly reduce energy demand and greenhouse gas emissions** through **advanced building systems** and on-site **renewable energy production**.

ENERGY KPIs



Building Area (excluding parking)
62.228 m²



Total energy consumption
5.772.733 kWh/year



Normalized energy consumption
93 kWh/m² year



Photovoltaic production
21 kWh/m² year



PV system contribution
22,2% (1 MW)

ENERGY REDUCTION STRATEGIES



High-performance building envelope

- Walls U = 0.14 W/m²K
- Roofs U = 0.16 W/m²K
- Glazing = 1.3 W/m²K | SHGC = 0.30



High-efficiency lighting

- Average installed power density: 4.78 W/m²



High-efficiency HVAC systems

- Air-to-water heat pumps
- COP: 2.88 – 3.23 | EER: 2.69 – 3.32



Domestic hot water production

- Dedicated heat pumps
- DHW COP: 3.46
- DHW consumption reduction: -35%

LOW-GWP REFRIGERANTS



Mitsubishi heat pumps with
R134a and **R454B**



Mitsubishi multisplit systems with
R32

VENTILATION AND ENVIRONMENTAL QUALITY



Rooms:
Natural ventilation and CO₂ sensors in rooms



Mechanical ventilation:
for kitchens, common areas, lobbies, etc.

ENERGY AND DECARBONIZATION (KPI)

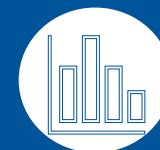
**93 kWh/m²
year**

Normalized energy
consumption



-34,2%

Overall energy savings
with PV



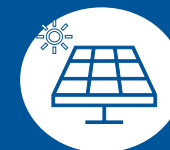
-35%

DHW reduction through high-
efficiency heat pumps



22,2%

Photovoltaic
contribution



WATER AND RESOURCES

EFFICIENT AND CIRCULAR WATER MANAGEMENT

- **100%** irrigation supplied through **rainwater reuse** and **high-efficiency irrigation** systems
- **-42% potable water consumption for indoor uses**
- **Dual plumbing** network throughout the development **to reduce potable water use** for toilet flushing
- **Low-flow fixtures** installed throughout the project

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WATER AND RESOURCES (KPI)

The project prioritizes **resource reuse** and **consumption reduction** through integrated technological systems designed to minimize potable water demand.

RAINWATER COLLECTION AND REUSE

Rainwater collection and storage systems serve the entire landscaped area of the campus.

WEST BLOCK TANK

120 m³

CENTRAL BLOCK TANK

141 m³

261 m³

Total storage capacity

LANDSCAPED AREAS SERVED



Trees

3.583 m²



Turfgrass

2.646 m²



Groundcover

1.129 m²

7.357 m² of total green areas

LOW-CONSUMPTION WATER FIXTURES



RESIDENTIAL AREAS

- Dual-flush toilets: **3 / 4,5 L**
- Washbasin mixers: **5 L/min**
- Shower mixers: **7 L/min**
- Shared kitchen mixers: **5 L/min**



LOBBY/RETAIL

- Dual-flush toilets: **3 / 4,5 L**
- Washbasin mixers: **1,9 L/min**
- Shower mixers: **6 L/min**

WATER AND RESOURCES (KPI)

100%

Irrigation supplied by
rainwater harvesting



-35%

Reduction through
low-flow fixtures



-42%

Potable water
consumption



SPACES, BIODIVERSITY AND COMFORT

ENVIRONMENTAL QUALITY AND USER WELLBEING

- **72% accessible outdoor surfaces**
- **26% green areas**
- **Heat island mitigation strategies:**
 - **Luserna Stone** with **SR Index 0.35**; **light-colored calcestre** with **SR index 0.64** and **metallic roofing RAL 9006** → **SRI 60**
- **Rainwater collection** and **reuse systems**
- Presence of **green areas** supporting **habitats**

Outdoor spaces are designed to enhance usability, **improve the urban microclimate** and **support biodiversity**, contributing to **users' comfort**.



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MATERIALS AND LIFE CYCLE

REDUCTION OF ENVIRONMENTAL IMPACT ACROSS THE ENTIRE LIFE CYCLE

- 50-year **Life Cycle Assessment (LCA)**
- **549kg** di CO₂eq/m²
- Use of timber and prefabrication solutions:
 - **XLAM façade** panels
 - **Glulam timber roofs**
 - Prefabricated bathrooms
 - **Mixed steel-concrete NPS®** structure
- **Certified Materials: 38 materials with EPD;**
 - 25 products meeting material ingredient reporting requirements
 - 15 products with material ingredient optimization



Total GWP:
3,82E+07 kg CO₂e
Normalized GWP:
549 kg CO₂eq/m²

The design approach considers the entire building life cycle, with particular attention **to embodied carbon reduction** through **sustainable construction choices and materials**.

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Photo credits: COIMA

ASSET VALUE

The project integrates **innovation, sustainable mobility and connectivity**, positioning itself as an asset capable of meeting the future needs of users and investors.

This approach translates into key benefits:

- **279 Total parking** spaces
- **-82% parking spaces** compared to baseline
- **72% of parking spaces** equipped with **EV charging infrastructure**
- More than **600 bicycle parking** spaces
- **96%** of construction **waste recycled**

Sustainability acts as a **long-term value creation driver**, making the **infrastructure resilient** and **future-ready**.



EUROPEAN TAXONOMY

Compliance with **European Taxonomy – 7.1 Construction of New Buildings**

Substantial contribution to **climate change mitigation**:

- - the primary energy requirement is lower than the threshold set for the NZEB requirements by more than 20%.

EP gl < 80% EP gl , limit "as built calculation"

- airtightness and thermal integrity tests;
- the life cycle global warming potential (GWP) of buildings was calculated for each life cycle stage.

The **climate risk assessment** identified the following risks:

- Changes in air temperature / heat waves
- Change in precipitation pattern and type / heavy precipitation (rain, hail)
- Drought

The following aspects were considered:

- Rainwater drainpipes sized at 0.06 l/sec/m² (instead of 0.045 l/sec/m²)
- HVAC sized at 35°C (instead of the standard 32°C)
- Oversized heat pumps with a 10% margin
- Anti-hail photovoltaic panels



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Photo credits: COIMA

DEVELOPMENT & ASSET MANAGEMENT



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