

Urban renewal in Milan powered by Holcim Italy

Porta Nuova: Building the future



The wide range of building types and sizes in the three areas of Porta Nuova meant that several products were required to cover the different project requirements.

The Porta Nuova project stems from the vision to improve and reunite a large area of Milan through the redevelopment of three adjacent neighborhoods. Holcim Italy is supplying the main contractors of this huge project with high-performance ready-mix concrete products together with technical and logistics services.

The Porta Nuova project consists of the regeneration of about 290,000 m² to improve and reunite a large area of Milan by redeveloping the Garibaldi, Varesine, and Isola areas of the city. 25 architects from eight different countries have been engaged by Hines Group to produce the structure of this important new district. The project will incorporate new housing, shopping areas, offices, and cultural venues. A continuous pedestrian area with green areas, squares, bridges, and a large park will seamlessly connect the different neighborhoods efficiently and safely.

Certified green

Porta Nuova has been pre-certified under one of the most prestigious green building rating systems, LEED¹. The new buildings incorporate the latest energy-saving solutions and sustainable materials that provide a model of innovation.

All products supplied by Holcim Italy thus have been designed for sustainability, using recycled aggregates, low-clinker-factor cements, and active additives in low-heat concretes. This contributed to the achievement of LEED credits for using recycled materials, limiting the use of natural resources, and regionally sourcing quarried and manufactured materials. With reference to this important issue, Holcim Italy has also been

¹ LEED (Leadership in Energy and Environmental Design) is an internationally recognized green building certification system developed by the U.S. Green Building Council.



validated by the independent certification body ICMQ to be conform with international standard “UNI EN ISO 14012:2002” (self-declared environmental claims) for the content of recycled materials in concrete delivered from both the Porta Nuova and Segrate ready-mix concrete plants.

Holistic services and real partnership

The Porta Nuova redevelopment project demanded an integrated and customized solution by Holcim Italy to meet the different and specific needs of the building contractors for the various products’ technical performance, quality controls, and certification. Together with the development and supply of special products, Holcim Italy provided its customers with customized services, technical facilities, and certification. Specific mix designs and high-performance concretes with high strength, low heat of hydration, and high workability even after long-distance vertical pumping were designed to meet project specifications and the customer’s requirements.

Furthermore, there was a need for technicians to be permanently on site to work together with contractors to control product quality and supply and coordinate long-distance vertical pumping. A logistics service, demanded by the large numbers of cement mixers, concrete pours, and the required high level of pumping coordination, together with a custom built technically and environmentally advanced plant on site, was also provided as part of

Scope of concrete supply: Porta Nuova in numbers

Garibaldi-Repubblica	140,000 m ³
Varesine	150,000 m ³
Isola	45,000 m ³

Including:

- ca. 80,000 m³ of strength class C 30/37 or C 32/40 low heat of hydration, high workability concrete produced using Holcim pozzolanic cement with low clinker content/reduced CO₂ footprint, natural aggregates with CE mark (attestation level 2+) from Holcim quarries, and pozzolanic additives.
- ca. 9,000 m³ strength class C 60/75 and C 70/85 concrete, specifically designed by Holcim to achieve sufficient fluidity and stability to maintain workability and pumpability up to 160 meters of elevation without separation.

The Porta Nuova ready-mix concrete plant supplies certified products for the urban regeneration project.

the full solution, as of course was ensuring compliance with LEED instructions and regulations to which all Porta Nuova buildings had to conform.

Urban fabric

Porta Nuova connects three projects, Garibaldi, Varesine, and Isola, with the regeneration of the urban fabric being a natural development of existing neighborhoods. Pelli Clarke Pelli Architects redesigned the area Garibaldi-Repubblica. The plan centers around a town square featuring three towers of 33, 22, and 11 stories, and a hotel. Restaurants, coffee shops, boutiques, plus the “Porta Nuova Gardens” and the regional authority headquarters, add to the bustling center.

The Isola area includes cultural and civic buildings spread over 30,000 m² with two residential towers, “Bosco Verticale,” designed by Boeri Studio, one office

building designed by William McDonough, and low-rise residential units by Lucien Lagrange Architects. Varesine, designed by Kohn Pedersen Fox Architects, covers 85,000 m² mainly dedicated to offices and is distinguished by two towers 130 and 140 meters high and a cultural building.

Porta Nuova represents an excellent model of regeneration planning and innovative sustainable design for both Italy and Europe as a whole.

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