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HQE™-CERTIFIED SOCIAL HOUSING IN BOGOTÁ, COLOMBIA

RESERVA DE MADRID

Located in the town of Madrid Cundinamarca near Bogotá, "Reserva de Madrid" is a project consisting of 2,600 units of affordable housing. It was constructed as part of the Colombian capital's growth strategy. Private property developer Prodesa has built a mixed-housing real-estate project containing a large proportion of social housing units that are environmentally friendly and HQE™-certified.

The environmental profile, improved during the certification process to "excellent" level, far exceeds the basic requirements recommended in HQE™ certification, in particular regarding the relationship between the quality of life of future occupants and environmental responsibility in areas such as water consumption and respect for biodiversity.

KEY DATA

- 1st HQE™-certified project in Colombia
- 2nd HQE-certified social housing project in South America
- 520 certified housing units with an average floor space of 50 m²
- 26 5-storey certified blocks with a surface area of 35,157 m²

INNOVATIONS

▶ The choice of HQE™ is innovative, making this the very first certified social housing project in Colombia, and only the second in South America. HQE™ certification of the Piamonte project in the Reserva de Madrid programme also raises the new issue of finding a compromise between sustainability and the economic constraints specific to social housing. Prodesa successfully implemented a strategy that would include sustainability in all aspects of the project so as to obtain the lowest economic impact and the highest environmental performance possible. The flexibility of the HQE™ process makes it possible to establish guidelines for studies, while adapting to the specific features of the project in its context. For example, acoustic comfort is usually not taken into account in Colombia, meaning that the performance of certified housing will exceed the general level for residential buildings. Reserva de Madrid required Cerway to deal with the issue of delivery of "buyer-completed" housing units (in other words, some of the finishes and fittings are payable by the purchaser), and helped to further develop HQE™ through the creation of an addendum to its Housing Reference Guide

STAKEHOLDERS

▶ The town of Madrid Cundinamarca was confronted with fast, unplanned growth which was adversely affecting the local natural environment. With Reserva de Madrid, private property developer Prodesa wanted to stop to this state of affairs. French sustainable development engineering firm Terao suggested that Prodesa seek HQE™ environmental certification, delivered internationally by Cerway. An independent auditor visited the site to assess effective implementation of HQE™ technical requirements.

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IMPLEMENTATION

- The certification process includes three audits in the pre-project, design and construction phases.
- Requirements related to environmental management of the project, introduced from the planning phase, help the property developer structure the process in consultation with the various parties involved as soon as the initial designs are drawn up.
- Regular audits of technical requirements in terms of energy, environment, health and comfort allowed the developer to adjust the solutions chosen while complying with the schedule and budget.
- During the process, the developer was supported by an HQE™ certification advisor recognised by Cerway who provided guidance on the best choice of solutions with a view to attaining certification.
- Correct implementation of HQE™ is guaranteed by concerted awareness-raising of the various operational stakeholders in the project (builders, service providers and engineers).

Juan Antonio Pardo,
Prodesa CEO

"The sustainable development advice and support provided Terao Colombia and Cerway was a decisive factor. HQE™ certification is much more than just a tick list, it goes beyond solely environmental concerns and includes the relationship between the building and the town, and between the people who inhabit it, and its impact on the local area."

RESULTS

- Compliance with the budgetary constraints and schedule of the project
- CEMEX prize for best design of a housing complex
- HQE™ certification with Excellent rating for the design phase submitted at Construverde 2016, an international event organised by the CCCS (Colombian Council for Sustainable Construction).

FINANCIAL ASPECT OF THE OPERATION

- The main issue was to find the best possible compromise between sustainability and compliance with the budget allocated as a result of the social nature of the project.
- Detailed, comprehensive monitoring of all aspects of the project from the planning phase resulted in fewer corrective interventions on delivery.
- HQE™ certification improved marketing of the housing units.

KEY FIGURES

- Average sale price of a certified social housing unit: €30,000
- Budget allocated to certification: €0.52/m²
- Cost overrun for the total construction budget, including support and designs: 3.5%

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