

## THE HERITAGE CONSIDERATION OF THE VIRGEN DEL CARMEN GROUP (VALENCIA): A HISTORICAL REINTERPRETATION

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### ABSTRACT

The conservation of Modern Movement architecture as a built architectural heritage requires also its renovation to reach today's standards of comfort and efficiency. It is even more necessary when it is still in use, as in the case of residential architecture. Moreover, it is a living heritage that, to be understood holistically, requires consideration of the experiences of its inhabitants.

The Virgen del Carmen Group in Valencia is a residential complex designed and built by GO-DB Arquitectos between 1958 and 1963, and included in the DOCOMOMO Ibérico database. This architectural complex has been taken as an object of study to analyse the interpretation of its past based on exhaustive historical and archival research. This is the necessary first step towards its heritage consideration on which its future revitalisation and energy upgrading will be supported.

This paper will detail the main results of the historical and archival research carried out. The changes and transformations, that the Virgen del Carmen Group has undergone over the years, have been evidenced by comparing the original project, the renovation projects, and its current state.

To this end, the documents kept in the main national archives and those of the Valencian

Community and the city of Valencia were consulted, as well as various historical photographic, newspaper and video sources.

### KEYWORDS

Modern Architecture; historical and archival research; Virgen del Carmen Group; conservation; renovation.

### 1. INTRODUCTION

The Virgen del Carmen housing group was commissioned by the Ministry of Housing to the GO-DB Arquitectos Asociados studio, formed by Fernando Martínez García-Ordóñez and Juan María Dexeus Beatty. The architects Vicente Valls Abad and Mauro Lleó Serret collaborated in the direction of the work.

As a result of the tragic flood of 1957, the housing policy of Franco's regime carried out several actions in Valencia, among which this complex stands out. Within the framework of the "Plan Riada" (Flood Plan), the Valencia City Council and the Obra Sindical del Hogar were entrusted with the construction of 2,500 social housing units on duly developed plots of land, of which 1,812 were finally built. The third part corresponds to the Virgen del Carmen Group, which consists of 614 homes, 28 commercial

premises and a school group. It is located in the Poblados Marítimos area, on a site next to the cemetery of the old town of El Cabanyal and the Valencia-Barcelona railroad line. The plot is shaped like a quarter of an ellipse, whose major and minor axes follow a north-south and east-west orientation, respectively. The east-west orientation is the direction of most of its longitudinal blocks, 4 or 5 floors high, resolved with exposed concrete structure and two dwellings per floor. Along the curved perimeter and also in a second, practically parallel line, are the towers, raised 3 to 5 stories high with load-bearing brick walls and three dwellings per floor (Jordá Such 2009).

The urban planning of the complex shows the assimilation of the principles of the Athens Charter in the separation of traffic, as well as the definition of green and living spaces between parallel blocks. As for the dwellings, all of them have double orientation and a minimum area for 2, 3 or 4 bedrooms, and are inspired by the chain houses of Miguel Fisac (1950). They are located around the stairwell, modulating the living room and bedrooms by means of the structure perpendicular to the façade. Its floor plan stands out for its large terraces on both sides, thanks to the arrangement of structural porches perpendicular to the facade. The expressiveness of the blocks is accentuated in their original accesses, with free-standing lobbies of curved perimeter and rustic finish. The structure combines load-bearing wall systems for the towers and reinforced concrete for the rest of the buildings (Jordá Such 2007). The innovative project had an important media repercussion at the time, being published in the prestigious journal *Informes de la Construcción* in 1963, where it was explained in the following way:

"This set comprises 614 flats, which have been contained in two distinct types of buildings to avoid monotony; low blocks and tall ones. The heights of the buildings vary, and increase from the centre outwards. The schools of only one level, and

also five storey buildings, are situated near the lower boundary of the site.

Each space between parallel blocks is limited at one of its ends by a higher building, thus becoming an outdoor resting space, and not merely a thoroughfare.

The shops have been located on the most important street which runs round the set of blocks and then runs inwards towards a garden square, which is reached through this commercial zone. The roads for vehicles have been so placed that do not interfere with the pedestrian pathways.

The satisfactory organization of the blocks, volumes and circulation patterns makes this set of apartment blocks one of considerable interest from the urban planning of view" (García-Ordóñez and Dexeus Beatty 1963, 25).



Figure 1. Aerial view of the complex. Source: (García-Ordóñez and Dexeus Beatty 1963)

This paper will detail the main results of the historical and archival research carried out. The changes and transformations, that the Virgen del Carmen Group has undergone over the years, have been evidenced by comparing the original project, the renovation projects, and its current state. To this end, the documents kept in the main national archives and those of the Valencian Community and the city of Valencia were consulted, as well as various historical photographic, newspaper and video sources.

## 2. THE PROJECTS OF THE VIRGEN DEL CARMEN GROUP IN VALENCIA: CHRONOLOGY AND PECULIARITIES

The flood of Valencia took place between October 13 and 14, 1957, causing serious damage and the loss of housing for many families. Only four days later, on October 18, the newly created Ministry of Housing approved the so-called "Plan Riada" (Flood Plan), which entrusted the construction of 1,500 houses to the Valencia City Council, and another 1,000 to the Obra Sindical del Hogar (Gaja 1989, 178). Although the architects were commissioned quickly, the land could not be definitively acquired until January 1960, which delayed the entire execution of the buildings.

The Valencia City Council was in charge of the construction of the 382 dwellings that make up the South zone and the Obra Sindical del Hogar carried out another 232 in the North zone. The project undertaken by the City Council included a group of stores and the necessary sewage system, and was divided into three phases: the first, of 128 homes, was awarded to the construction firm Colomina GS; the second, of 140 homes, was executed by Sicop, and the third, of 114 homes and 28 stores, was carried out by Dragados y Construcciones. The contract was awarded to these three companies on July 16, 1959, and the deadline for completion of the works was September 30, 1961. For its part, the northern zone, promoted by the Obra Sindical del Hogar, was divided into two phases: a first phase of 142 "Limited Income Housing Units", executed by Focsa, and a second phase, which included 90 "Social Housing Units" and the urbanization project, carried out by the company Cleop. In this case, the contract award was granted on April 29, 1960, establishing the date of October 30, 1962 as the end of construction (Gaja 1989, 190).

The works were carried out between 1960 and 1965, although the projects had been drawn up in 1958. The plot belonged to a French industrial company, the *Société des manufactures des glaces et produits chimiques de Saint Gobain*

*Chauny et Cirey*, which had acquired it for a possible long-term expansion of its factory. The land was being farmed by tenant farmers and was classified as "urban reserve". It was necessary to modify the planning and reclassify it as "urban building land", which delayed the start of construction until 1960 (Gaja 1989, 188).

On July 26, 1960, the document verifying readiness for construction of all the houses in the northern zone was signed. On December 21, 1961, the final construction certificate was signed for the 90 homes of the second phase of this northern zone, and on December 21, 1965, the final acceptance was signed. On October 26, 1964, the final acceptance of the 142 dwellings of the first phase was signed on October 26, 1964. In December 1962 the provisional acceptance of the works in the southern zone was signed, and on December 22, 1965 the final acceptance of the 114 dwellings and the 28 stores of the third phase of this southern zone (Rosa Báguena and Gallart Torán 1994, 25).

All the plans for the project were drawn between April and June, 1958, while the two preserved memories (corresponding only to the actions of the Obra Sindical del Hogar) are dated October 20 of the same year (EVha.GODB. 1-2-2 II and 1-3-2 II). In them are found some interesting comments. For example, that:

"[...] due to the requirements of the high density foreseen, it has been thought to establish a series of volumes as articulated as possible, so that the whole does not appear variegated." (García-Ordóñez and Dexeus Beatty 1958, s/f).

In addition to the linear blocks A and B, the so-called type D is conceived:

"[...] the concentrated type D, in its different heights, allows a good use of the land, and volumetric variety, while closing perspectives, allows the creation of pleasant interior spaces" (García-Ordóñez and Dexeus Beatty 1958, s/f).

From a constructive point of view, the commitment to standardization is total, as was otherwise frequent in GO-DB projects (Palomares Figueres 2009; 2018; Palomares, Portales and Blasco 2018), since "it was intended to use as many standardized pieces as possible":

"[...] In the A blocks, with a concrete structure, the aim has also been to make it as expressive as possible, while at the same time acting as an enclosure [...] the structure is reduced to a linear series of porticoes braced by longitudinal façade planes, which also act as parapets along the entire length of the building." (García-Ordóñez and Dexeus Beatty 1958, s/f).

On these beams, whose position will coincide with the partition walls, a slab of prefabricated joists, simply supported, would be laid. As for the buildings of concentrated floor plan type D, "their structural system is reduced to four parallel walls of brick masonry", whose edges are accentuated externally "to distinguish their function from the strictly screen walls" (EVha.GODB. 1-3-2 II).

The plans were reviewed by the technicians of the Obra Sindical del Hogar and, with the required modifications, were submitted to the Colegio Oficial de Arquitectos on December 4, 1958. It lacked the Economic Study that, for lack of time, was provided on December 12 of that year, within the eight days announced in the report (EVha.GODB.1-2-1 and 1-3-1). The magnitude and urgency of the project probably led to take advantage of some detail drawings already prepared. This is evident in the carpentry plans, which are undated. All except two, one dated December 1957 (EVha.GODB.3-3-7-34 Door 10 P1) and the other in November 1956, in Madrid (EVha.GODB.3-3-7-38 Bulding D Window 6 V1c).

## 2.1. Original project vs. constructed project

The executed work seems to have been quite faithful to the project. However, it must have undergone modifications during its drafting, of which we have only partial evidence. In this sense,

it is interesting to compare the urbanization plan of April 1958 (EVha.GODB.3-3-6-5) with the urbanization, sanitation and general lighting plan dated the same month and year (EVha.GODB.3-3-6-6). Although at first glance they appear to be the same, a closer look reveals that there have been changes in the position and typology of some of the isolated buildings in the northern zone, and that many of them appear rotated. This second plan coincides with the current layout of the complex. The commercial area also respects the GO-DB design, but not the school, which was the last building to be erected (it does not appear in the 1963 photographs) based on a project independent of the one presented for the housing in 1958.

At the construction level, the most important differences refer to the foundations and the construction solution of the suspended floor. In March 1962, two other complementary foundation projects were drafted, corresponding to phases I and II executed by the Obra Sindical del Hogar (EVha.GODB.1-1-1 and 1-1-2). The project reports indicate that it had not previously been possible to carry out soundings on the land, since the problem of its occupation had not been resolved. Finally, these studies were carried out, showing that the characteristics of the subsoil made it advisable to discard the footing foundation system and use a piling system to guarantee the stability of the constructions. On the other hand, in order to allow the discharge of the collectors into the general local sewerage system, the ground level had to be raised. This resulted in a considerable layer of backfill, which would not be excessively serious in the general terrain, but would be so in the buildings, where a complementary backfill had already been planned to raise the level of the first floors. The sum of the two backfills led to a very high level, so it was preferred to solve the first level floors by means of an additional suspended floor slab, which would guarantee the stability of the first floor and the absence of dampness. These reports were accompanied by a complementary measurement and three plans (similar for the two phases), also dated

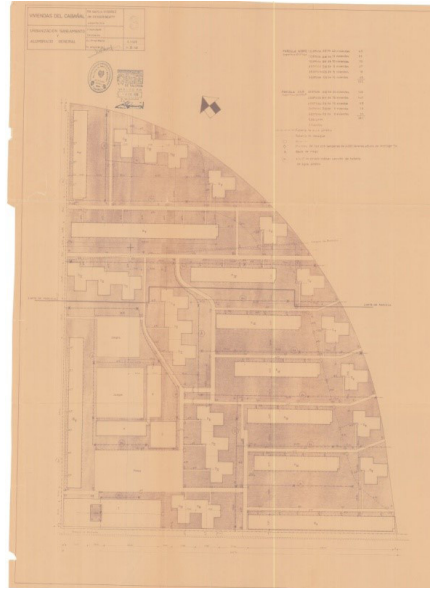
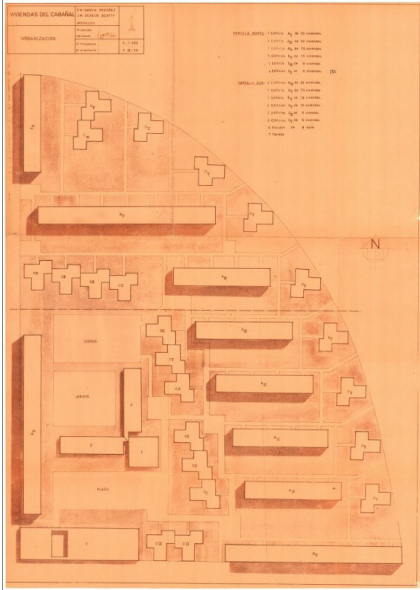


Figure 2. Two versions of urban planning in the 1958 project. Source: (EVha.GODB.3-3.6-5 y 3-3.6-6)

March 1962 (EVha.GODB.3-3.3-1; 3-3.3-2; 3-3.3-3; 3-3.3-4; 3-3.3-5 and 3-3.3-6).

The same problem had arisen two years before with the housing built by the City Council. Although the memory is not preserved, there are two plans dated July 1960 of the piling for the block of 70 dwellings called Bv (EVha.GODB.3-3.4-1 y 3-3.4-2).

## 2.2. Reform and repair projects

At an undetermined date, after 1963, a proposal was made for the construction of a "Home for the Elderly" and a "Nursery", represented at the level of the floor plan in the plan inventoried as EVha.GODB.2-2.3-2 and its copy EVha.GODB.2-2.3-3. The sheet appears already with the definitive name of "Virgen del Carmen" and has the indication of 15 million, perhaps referring to the budget in pesetas. We have no further news of this proposal.

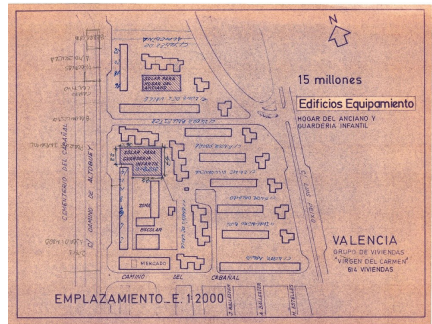


Figure 3. Plan showing the site for the Home for the Elderly and the Nursery 1963. Source: (EVha.GODB.2-2.3-2 y EVha.GODB.2-2.3-3)

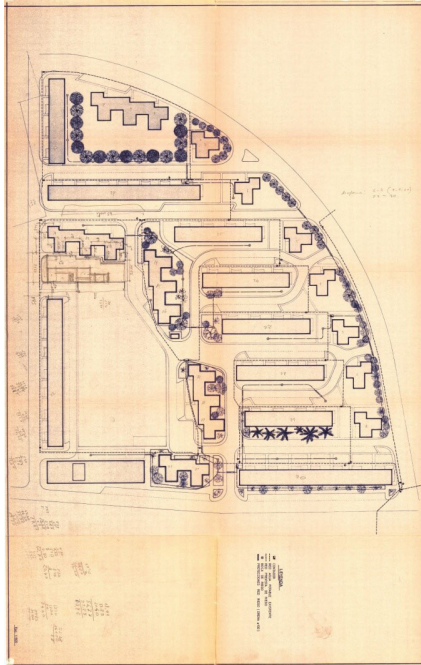


Figure 4. Plan showing the modification of the road system in the complex n/d. Source: (EVha.GODB.2-2.3-1)

The avant-garde urban planning approach of traffic separation was not respected. As the number of vehicles among the owners increased, in 1977 the initial pedestrian proposal was abandoned and vehicular traffic was introduced. This modification was managed by Mauro Lleó, who indicated in the project report (July 1977) that:

"The use that has been given to it has been devastating for this urbanization. The users, most of them with their own vehicles, have wanted to drive their cars right up to the doorways of their homes, invading the land destined for landscaped open spaces" (Gaja 1989, 187-188).

To this project may belong the undated plan catalogued as EVha.GODB.2-2.3-1, which already shows a road layout similar to that shown in one of Lleó's plans published by Gaja (1989, 188).

In May 1986, architects Juan Luis Gastaldi Albiol and Jaime García Matarredona presented an intervention project for the social housing complex. Cracks and spalling had been detected in the exterior supports of the rectangular blocks. A comparison with the project plans showed that there were hardly any significant changes, except for the aforementioned replacement of the lower slab by a suspended floor slab. It was noted that the problem could derive from a poor dosage of the concrete aggregate, with oversized gravel and an increase in the water/cement ratio during construction, as well as significant carbonation. The structural design was correct, although it does not meet current standards. The damage affected all the exterior supports, consisting of cracks in the concrete parallel to the reinforcement and spalling where the rusted steel appears. There were vertical cracks on the exterior front of the supports, and horizontal cracks on the lateral faces, parallel to the abutments, especially at the junction of the girders with the supports. The problems accumulated in the lower part of these supports. The direct cause of the problem would have been degradation by carbonation, accompanied by a decrease in the Ph of the concrete. All this would have affected the passivating effect of the concrete on the reinforcement, which would have corroded. The planned action consisted of pitting and repair with epoxy resin mortars (Gastaldi and Garcia 1986). The works were carried out by the company TEXSA between November 21, 1986 and December 31, 1987, with provisional acceptance on July 20, 1988 and final acceptance on September 6, 1989 (Rosa Báguena and Gallart Torán 1994, 26). The other major intervention was the "Proyecto de Actuaciones de Rehabilitación y mejora del Grupo Virgen del Carmen Cabanyal-Valencia" promoted by the Instituto Valenciano de la Vivienda in 1994 and completed in 1999. It



consisted of an intervention in the buildings, the redevelopment and sewerage of the neighborhood and, finally, the construction of a nursery school (Córdoba Vallet 1999). The intervention on the buildings was signed by the technicians Carmen Rosa Báguena and Vicente Gallart Torán and, in addition to the structural reinforcement to guarantee the durability of the complex, it included the renovation of the horizontal and vertical sanitation network, as well as the repair of roofs and the façade.

In the Municipal Archives of Valencia, a part of this project has been located, which was drawn up for the partial rehabilitation of one of the largest linear blocks, with seven doorways and five floors (Municipal Archives of Valencia, Exp. 5922/94). At the express request of the neighborhood, in order to avoid problems of citizen insecurity, the vestibules were demolished and the affected façade was remodeled (Rosa Báguena and Gallart Torán 1994, 20-22). These vestibules, perhaps inspired by the staircase of Le Corbusier's Swiss Pavilion, were one of the most original elements in the design of the complex, and were described in this way in the aforementioned article in *Informes de la Construcción*:

"The entrance portals to the blocks have been taken out of the stairwell and covered with a small concrete membrane hanging over their edges. The outer edge is a curved wall that contrasts and stands out against the modulated background of the façade." (García-Ordóñez and Dexeus Beatty 1963, 26).

Although it is not expressly stated, it is likely that the original vestibules, which protruded from the façade, generated angles with poor visibility that could be exploited by criminals. The new project proposed the construction of canopies made of translucent polycarbonate sheets on a metal structure to mark the entrances and protect them from the rain. The doors would also be replaced by more modern ones of better quality. Finally, the façades would be treated to solve the humidity problems, with the application of

a single-layer mortar consisting of a hydraulic binder modified with plasticizing, water-repellent and resin additives. This coating would receive a scraped finish, and should be permeable to water vapor to allow the substrate to breathe, as well as being unalterable against UV rays. The same mortar would also be applied on the facing brick walls, with a previous preparation to fill the joints. All the existing sliding shutters were also dismantled and repaired in the workshop, stripping and replacing the paint, replacing the bearings and also the guides of the sliding doors that were in poor condition (Rosa Báguena and Gallart Torán 1994, 20-22).



Figure 5. View of the block in a photograph from the 1960s. Source: (IVVSA Archive)

The redevelopment and sewerage project was designed by architect Juan L. Gastaldi, whose overall approach envisaged a renovation of the infrastructure and durable finishes facilitating social relations. For this reason, the electrical, lighting, telephone and gardening installations were refurbished. In addition, the problem of humidity in the complex was solved with the renovation of the entire sewage system. The new sewerage system was connected to the Serrería sewer and the solution adopted eradicated the periodic flooding of the basements. Finally, the new kindergarten building was designed by the architect Miguel Campos, also at the request of the neighborhood to complete the neighborhood's educational facilities. For this reason, the neighborhood association has been in charge of managing its operation (Córdoba Vallet 1999).

<b>Date</b>	<b>Event</b>
1958	Start of drafting of the original project
1960	Start of construction works
1962	Completion of first blocks
17/06/1962	Franco visits the group
1963 (July)	Housing delivery (first occupancy)
1965	Completion of all works
1986	Drafting of a project for the repair of the facade pillars.
1994	Drafting of the renovation project. Intervention of the GVA in facades, pillars, terraces, elimination of vestibules.
1999	Completion of renovation works

Table 1. Timeline with the most significant dates. Source: (Authors 2022)

### 3. CONCLUSIONS

The historical and archival research carried out has allowed us to know in detail all the vicissitudes of the Virgen del Carmen Group in Valencia, not only after its construction, but also from the drafting of its project until its execution. This work is considered essential and necessary for its valuation as architectural heritage, since it is a project of special interest due to the use of standardized elements and the avant-garde of the complex from an urban, constructive and formal point of view. Likewise, the information discovered is of great importance to be able to promote its material conservation and to propose an adequate revitalization and energetic updating of the buildings and their surroundings, in order to adapt them to the current standards of comfort and efficiency, and even more so when they are still in use, since it is a residential architecture.

### ACKNOWLEDGEMENTS

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