

Consolidating the periphery: three residential complexes in Zaragoza by Grupo Z

Juan Carlos Salas Ballestín and Raimundo Bambó Naya

DOI: <https://doi.org/10.20868/cpa.2023.13.5174>

Introduction

Grupo Z was a group of architects that played a major role in the critical renewal of architecture in Zaragoza in the 1970s and 1980s. The members of the group came and went over time, but Saturnino Cisneros Lacruz and Juan Antonio Carmona Mateu remained throughout its history. Their professional careers began when they finished their studies at the Barcelona School of Architecture and occasionally collaborated with other architects before establishing the group and naming it Grupo Z7—which they later shortened to Grupo Z. Their methodological approach was innovative in their vision of architecture as a specific response to particular needs, rather than the implementation of generic ideas¹. Cisneros and Carmona bestowed their architecture with social content, at times collaborating with neighbourhood movements and Christian base communities. With this approach, their projects were committed to the users' needs and situations. They paid painstaking attention to the urban context in all their works by offering spaces especially designed to foster social interaction. They imbued their projects with a formal strength that gave them their own recognisable character.

Before designing the residential complexes that are the focus of this study, the architects of Grupo Z had already completed a wide variety of projects in the city, mostly residential buildings and public facilities on the outskirts. From 1981 to 1984, they built three adjacent residential complexes in the peripheral neighbourhood of La Paz. These complexes reflect the change underway at the time in the sensitivity towards the contextual problem of the city², framed in new ways of understanding and shaping the outskirts. This is clearly seen in the collective residential buildings located at Calle Unceta 63 (1975) and 56 (1977)—where they experimented with combining housing of different types and heights—and in Cooperativa Pirineos (1979)—where they provided specific solutions to the surroundings with an interesting volumetric and typological combination adapted to a semi-closed type of block³. The most remarkable public facilities they designed were, among others, the parish church and residence of Santa María de Begoña (1973)—a building with a complex programme that

expanded the paltry amount of surrounding public space by opening new routes inside—and the extension of the Faculty of Law (1983), an intervention that combined a solid volumetry and an implementation that was sensitive to the pre-existing building and the surrounding campus⁴. The group's work concluded with the project to rehabilitate the Antiguo Hogar Pignatelli to host the seat of the Regional Government of Aragón (1984), a large-scale institutional building in which Grupo Z introduced concepts relating to ecology and sustainability.

The purpose of this study is to analyse the characteristics of these three residential complexes and to identify the innovative architectural values that have contributed to the consolidation of this peripheral neighbourhood, a suburban settlement that emerged precariously to accommodate an emigrant population from rural areas. Unlike previous urban planning interventions in the area that followed the model of commuter town with large generic residential slabs, Grupo Z designed buildings that blended into the surroundings and enhanced their vernacular character. This architecture expressed an individual and specific nature, produced by logic via a decision-making process adapted to an urban context, a collective identity and an economic situation. To achieve this purpose, this work draws on written sources—which thus far have mostly been urban planning texts about the district—oral sources⁵, archival documentation⁶ and collection of data on the current state of the complexes.

Suburban morphology and identity of the La Paz neighbourhood in Zaragoza

The district of La Paz is located on the southern outskirts of Zaragoza, separated by the boundary marked by the Imperial Canal of Aragón. The location rises above the rest of the city and enjoys a more pleasant climate, with less fog in winter and cooler temperatures in summer. The area was originally active in agriculture and extractive activities. During the 1940s, a settlement called “Colonia de La Paz”⁷ was founded on the right bank of the canal, marking the city's new southern boundary, behind a peri-urban area that mixed cultivated land and residential and industrial buildings. This new suburban fabric was organised into closed, low-density blocks divided by party walls into small plots, with constructions around farmyards. Public spaces were unpaved streets lacking services or public facilities, except for the school and the church. The buildings generally stood one or two storeys high, were made of adobe or brick, had been built by the residents themselves and lacked municipal permits. In the 1950s, a Roma shanty town appeared in an old gravel quarry in the northern part of the district, a group of substandard dwellings lacking any form of planning and known as “Las Graveras” [Fig. 01].

Successive urban planning efforts acted on this slum disorder to provide proper services, public facilities and road infrastructure that would enable the construction of new

residential areas at a time when the city was undergoing disproportionate demographic growth⁸. The requalification of buildable land as “intensive residential” land enabled the construction of high-rise housing states [Fig. 02] on the new plots, which were much larger than the original ones. This was a speculative model of a commuter town linked to the future southern ring road that put the weight of mobility on private vehicles and prioritised broadening the streets over respecting the existent layout. A large part of the existing urban fabric should be demolished to that end and the residents who just a generation before had built their homes with their own hands should be evicted with no trace of empathy.

The consequences of these plans were the opposite of the residents' demands, as the new housing states were filled with enormous residential slabs without the desired municipal services. The residents reacted and organised against the Development Plan, held assemblies⁹, formed a Compensation Board¹⁰, collected signatures and challenged all construction permits granted. This unprecedented social support finally had an effect on the new democratically elected municipal government, which added these demands in its policies and started to lay the foundations for a general plan aligned with the neighbourhood's characteristics.

After years of protests, a revised version of the Urban Development Plan—much more respectful of the existing fabric—was finally approved in 1979¹¹. “Las Graveras” shanty town became a park and its former inhabitants were relocated to a nearby residential complex¹². This operation affected the entire district, created a green area that gave continuity to the line of trees running alongside the canal, reorganised the road traffic entering the district through a perimeter road and created a new urban façade on the plots that closed the bordering blocks and, in turn, the backyards and rear façades that used to be exposed. In 1981, a modification of several blocks of Polígono 37 was processed and the final alignments of the new plots bordering “Las Graveras” were approved, with fewer effects on the existing plots and tree-lined streets—corridors with extensive pavements that were even pedestrianised. This revised plan defined the three residential complexes that are the subject of this study.

In 1981, the morphology of La Paz combined the characteristics of the original settlement, with a highly fragmented plot division grouped into blocks where modest one- or two-floor dwellings had been built with small front gardens and back farmyards, interrupted by subsequent housing states with large slabs. The public relational spaces were limited to narrow, winding and sloping streets with abundant vegetation and sweeping views of the surrounding landscape. The identity of the district was linked to the social class and origin of its inhabitants, mostly workers from rural environments who interacted as well-acquainted neighbours, with great capacity for self-defence and group action.

An architectural proposal that reflects the context

The architects of Grupo Z were aware of the district's problems and took part in pressing the residents' demands¹³. Their architectural proposal—three subsidised housing complexes called Palma de Mallorca, Orense and Goicochea¹⁴ built between 1981 and 1984—applied innovative concepts inspired by people's experiences to consolidate this peripheral neighbourhood [Fig. 03]. The three residential complexes were adapted to the unique character of the place, interacting with the environment while respecting its original identity. Complexes such as the Tiburtino neighbourhood in Rome (1950-54), by Marco Ridolfi and Ludovico Quaroni¹⁵, and the subsidised housing estate Caño Roto in Madrid (1957-69), by José Luis Íñiguez de Onzoño and Antonio Vázquez de Castro¹⁶, could be considered as precedents of residential models expressing a certain vernacular and popular character that respect the morphology and psychological dimension of the place.

The three residential complexes that are the subject of this study are part of the neighbourhood's new façade facing La Paz Park and are part of the effort to transform the old rundown area of "Las Graveras" into the suburb's new centre of activity. The three complexes are located on three plots of land bounded by wavy shapes that continue the existing urban fabric without interfering in it and are the result of less aggressive urban planning interventions achieved by the residents' group action. The buildings adapt to the contour through distinctly modulated orthogonal floors consisting of rows of short-bay dwellings with façades running parallel to the alignments. Unlike the last detached slabs built in the neighbourhood that sparked great controversy, these buildings continue the urban fabric of the adjacent blocks and conform to the neighbourhood's original scale [Fig. 04].

These residential groups increase the average density of the neighbourhood without distorting it, thereby sharing the burdens of urbanisation among more residents. They also help to establish public facilities and services in the neighbourhood and boost circulation, which in turn increase safety and help to preserve public spaces. The buildings acquire a mostly horizontal fragmented volume, with dwellings grouped in rows standing taller among surrounding urban events such as intersections, bends and backdrop perspectives [Fig. 05]. They expand the visual space and incorporate vegetation to the streets using setbacks from the exterior alignments of the plots. The resulting space is therefore filled with strips of gardens marking a transition between the public and private spheres. Just like in their suburban environment, access to dwellings and commercial premises is gained through several entrances distributed along the entire façade, which point to a clear interest in activating pedestrian routes along the entire perimeter rather than making a closed housing state.

There are two simultaneous scales to the complexes' volumetry. The domestic scale is respectful of the scale of the neighbourhood in the encounters with other dwellings in the block. Though the buildings designed by Grupo Z are generally larger than other buildings in their surroundings, they reduce their size in the encounters with the walls limiting the neighbouring properties¹⁷ [Fig. 08]. On the urban scale, they make up an entire front façade facing La Paz Park and become larger as their height increase at the corners and at the backdrop perspectives of some adjacent streets. The commercial premises support this perception because they occupy the ground floors of taller volumes¹⁸.

Even though the urban fabric dictates the buildings' orientation, the dwellings take advantage of their two façades to place the main spaces in the most favourable position¹⁹. As such, the façades can be assigned to two different categories: active and passive [Fig. 06]. Active façades are oriented towards the outside of the block or towards the south if the outside faces north. They bend, forming recesses and projections that delimit the exits to the terraces and gardens, so that each resident can personalise them by adding plants or furniture. Despite their length and marked modulation, each dwelling is recognisable from the outside, showing no sign of the monotony of large and repetitive residential slabs. Passive façades are oriented towards the interior of the blocks, or towards the north in certain cases. They are much flatter than the front façades and contain large panels of movable slats that cover the openings of the kitchens. In both types of façade, the openings of the bedrooms conform to the proportions of the windows of the popular architecture surrounding them, with the clear intention to blend into the suburban complex. Their materiality also evokes traditional structures, reinterpreted with a contemporary sensibility. They combine the two-tone facebrick wall sections with the geometry of the openings and the slanted roofs in an expressive, non-repetitive compositional approach that varies based on the relationship between the façade and its surroundings.

Typological combination to accommodate population diversity

To prevent having new residents all belonging to the same type of family unit, Cisneros and Carmona combine dwellings with different features, which is an advance of one of the main themes of residential architecture in the years to come: the importance of accommodating different types of users²⁰. The surface areas of the dwellings in these subsidised residential complexes vary from a small 60m² studio with two bedrooms to a 90m² maisonette and four bedrooms. The possibility of addressing the needs of conventional families with children—as most residential buildings at the time—and also of other cohabitation units, like single people, couples without children or couples whose children have left home, complements the homogeneous offer of both the original low-rise dwellings between party walls and the detached residential slabs built later in La Paz [Fig. 01]. This population diversity has

an impact on the immediate public space, leading to a wider range of needs and uses that call for longer time frames, thus favouring the conditions for neighbourhood watch to prevent the crime and vandalism that may occur in temporarily empty environments²¹. In terms of urban planning, attracting people of different age groups supports a more rational and balanced use of the health and educational facilities of the district.

For the planning of Colonia Juan XXIII, in Carabanchel (1963-66), Romani, Mangada and Ferrán propose an elaborate typological combination of building complexes: up to six types of housing with different characteristics are grouped together in dialogue with the surroundings, sometimes in a row and other times in high-rises²². The architects of Grupo Z use this same mechanism to meet the housing needs of a diverse group of people. They had already tested and improved this resource in previous buildings, and it reaches its greatest expression in these residential complexes: a versatile combination of types of residences through stacking, juxtaposition and twinning, perfectly adapted to the geometry of the blocks and party walls. They propose four types of residences: high-rise dwellings, ground-floor dwellings, stacked maisonettes and twin maisonettes.

Fifty-six of the 131 dwellings²³ in the three residential complexes of La Paz are grouped in high-rises whilst the remaining 75 are arranged in rows, thereby showing general prevalence of suburban features [Fig. 04]. Of the three, the Orense residential complex serves as the best example of this typological combination [Fig. 07]. Its floor plan follows two parallel rows around ten metres deep that are interrupted by several high-rise slabs. All the dwellings in this complex have active façades facing the south to receive as much sunlight as possible.

- The high-rise flats are grouped into two volumes with four raised floors. Each floor has two dwellings distributed by a central core with a staircase and a lift. All have double orientation with at least two façades. The living-dining rooms have large terraces facing the most favourable orientation and the kitchens are in the rear.

- The ground-floor dwellings are much more versatile. Their geometry is more flexible, so they adapt to the ground floor of the high-rise buildings, to the bends of the floor and the encounters with the party walls of the block. They have disparate features, yet all share a powerful link with the semi-private gardens related to the street.

- The northern row of the Orense residential complex is made up of stacked maisonettes that form a total of four levels, with one maisonette stacked on top of another. The lower ones are directly accessible from the public space, whilst the upper ones are accessible via an outside distribution corridor serving as an aerial street [Fig. 07]. The lower level of each maisonette houses the day rooms—a living-dining room and a large terrace or private garden connected to the active façade, and a kitchen—and the upper level has three rooms.

- The southern row of the Orense residential complex is shorter to let sunlight in to the northern row [Fig. 08]. There, twin maisonettes are grouped into modules with four dwellings combined in three heights. Two dwellings occupy the ground floor, two the second floor and all four share the first floor [Fig. 08]. The dwellings on the ground floor are connected to the semi-private front garden by a spacious open living-dining room. The master bedroom and kitchen are at the back, providing access to the private back garden. Two more bedrooms are located on the first floor. The upper dwellings are accessible from the first floor via an outside staircase located in the semi-private front garden, through a smaller dining-living room and a kitchen in the back, with four bedrooms on the second floor.

Variety of in-between spaces for community relations

Cisneros and Carmona advocate a close relationship between the dwellings in these buildings and the surrounding public space, similarly to a village. Instead of the large hermetic residential slabs built on the outskirts in previous years, Grupo Z proposes a housing model more permeable to the street, inspired by popular experience governing structures like the original constructions in the neighbourhood. The thresholds between the dwellings and the street become, therefore, spaces of physical and psychological connection between neighbours, where visual and acoustic barriers fade away to expand the sphere of influence and surveillance from the private to the public sphere²⁴. The housing in Preston designed by James Stirling (1957-59) could have been the reference of the architects of Grupo Z for the design of these residential complexes²⁵. These buildings enhance the use of the street by placing the building in low, horizontal rows with independent entrances and tight connections with the street to foster events such as children's games, sporadic chats and monitoring from the windows to improve the life of the neighbourhood, as was the case in "bye-law" working-class neighbourhoods in 19th-century England²⁶.

The spaces that most turn to the street in all three residential complexes are the terraces and semi-private gardens located next to the active façades²⁷. Designed for long stays, they have effective rest areas suitably sized to accommodate furniture and integrated planters to introduce vegetation²⁸. They also enjoy a great deal of sunlight and artificial lighting. Living in these threshold spaces fosters familiarity and creates links between users and specific aspects of the immediate public space that bestow the buildings with their own identity, like the weather, the times that residents circulate and pass by, seasonal changes in the plant life, smells, sounds and more. The three buildings are rather short, as they are never higher than the ground floor and four upper floors. The thresholds, therefore, stay in contact with the ground level [Fig. 09].

The thresholds of the different types of suburban housing play an even more complex

role. These semi-private gardens not only serve for stays, they acquire an in-between character as a route providing access to the dwellings in a smooth and easily accessible transition between the public and the private. They are bounded by small fences, which mark their limits but do not create a striking visual separation²⁹. Access points to these gardens are independent and spread all along the perimeter of the building. Generally grouped four by four, they have small shaded areas and steps—to foster random encounters between neighbours—that can become spaces for occasional stays and improvised conversations [Fig. 10]. All these features support the flourishing of neighbourhood life, as the inhabitants cross paths with people passing by and going about their day in the many entrances to the dwellings. This favours relationships in the public space, similar to what happens in rural settlements.

An architectural approach to establish the peripheral district

Even though the original settlement was distorted by urban planning projects that allowed the construction of large and out-of-context residential slabs, thanks to subsequent urban interventions and buildings that respected the pre-existing built environment—such as these three residential complexes—the district of La Paz has filled holding to the positive traits of its original identity whilst rectifying its shortcomings. Instead of applying generic and universal solutions, the architects of Grupo Z designed these buildings based on common sense, providing specific and individual solutions seeking integration in the surroundings, adaptation to the socioeconomic situation and the promotion of an identity.

The architecture of these residential complexes reflects the urban context, gives continuity to the pre-existing blocks, increases the density of the neighbourhood without distorting its scale and fragments the volumes in the most important positions of the surrounding street. This architecture uses a modern language expanded through the reinterpretation of vernacular features: low-rise façade fronts, independent points of access to dwellings and commercial premises, gardens in front courtyards and farmyards, openings with domestic proportions, inclined roofs and facebrick materiality.

The buildings are aimed at working-class inhabitants living on the outskirts of the city. Despite the financial limitations, all the dwellings enjoy great spatial quality, abundant lighting and cross ventilation. To attract a diverse population, the complexes provide four different types of housing units, combined both in row and in height by stacking, juxtaposing and twinning. Most of these types of dwellings have suburban features and a strong connection to the street.

The architects of Grupo Z offer users the possibility personalise their terraces and gardens with vegetation and furniture. These thresholds between housing and public space are conceived as efficient places for rest, extending the area of -

1. Juan Antonio Carmona, *Grupo Z, Quince años de supervivencia* (Zaragoza: Colegio Oficial de Arquitectos de Aragón y La Rioja, 1981), pp. 62-68.
2. Antón Capitel, *Arquitectura Española. Años 50 - años 80* (Madrid: MOPU Arquitectura, 1986), pp. 28-32.
3. Juan Carlos Salas Ballestín and Raimundo Bambó Naya, *La arquitectura de lo específico. Cooperativa Pirineos en Zaragoza. Proyecto, Progreso, Arquitectura* (Sevilla: Editorial Universidad de Sevilla, 27, 2022), pp. 148-165.
4. Luis Miguel Lus Arana and Lucía Pérez-Moreno, *Un edificio invisible. Nuevo aulario de la Facultad de Derecho de la Universidad de Zaragoza. Proyecto, Progreso, Arquitectura*. (Sevilla: Editorial Universidad de Sevilla, 24, 2021), pp. 88-105.
5. The visit to the residential complexes took place on 19 February 2021, with Juan Carmona. On 9 January 2021, Juan Carmona was interviewed about the trips made by members of Grupo Z and on 17 January 2023 he was interviewed again about issues related to these dwellings.
6. Municipal Archive of Zaragoza City Council: End of the works on the Goicochea residential complex (File 28402/1981), Execution project for the Palma de Mallorca residential complex (file 38802/1981) and Execution project for the Orense residential complex (File 35.780/82). Archive of the Professional Association of Architects of Aragón: Polígono 37 Development Plan, Polígono 37 Revised Development Plan and Modification Plan for several blocks of Polígono 37.
7. José Garrido, *Evolución histórica y socioeconómica del barrio de Torrero-La Paz* (Zaragoza: Geodesma, 2003), p. 39.
8. The 1957 General Urban Development Plan of limited the area surrounding the Imperial Canal and the "Las Graveras" settlement as green areas. Yet it was the 1968 General Plan that classified the residential use of the neighbourhood as "intensive suburban" to support high density and more built volume. The Polígono 37 Development Plan, approved in 1974, organised the area in more detail, delimiting the land for residential and facility use, realigning the roads and proposing new bridges over the canal connecting to the city.
9. With an extraordinarily large demonstration attended by 600 to 800 people. See Elvira Adiego, *Zaragoza barrio a barrio. Tomo IV* (Zaragoza: Federación de Asociaciones de Vecinos de Zaragoza, 1984), p. 207.
10. The Compensation Board was officially established in 1977. Promoted by the Association of Homeowners and Residents of the Neighbourhood of La Paz and some of the largest landowners, the Board advocated for neighbourhood movements by pressuring the authorities to review the planning under way. See Elvira Adiego, *Zaragoza barrio a barrio. Tomo IV* (Zaragoza: Federación de Asociaciones de Vecinos de Zaragoza, 1984), pp. 189-190.
11. The text lists the following premises: "a) Do not fully make the road structure secondary to road traffic needs. b) Avoid radical surgical urban planning that breaks up the established urban fabric as much as possible. c) Obtain spaces for public use by grouping together buildings provided for in previous planning efforts. d) Limit impacts on tree-covered areas as much as possible."
12. This policy to relocate the people who lived in the substandard housing failed spectacularly. In 1982, the 140 families living in "Las Graveras" moved to La Quinta Julieta, a residential complex built on the other side of the canal to accommodate the Roma population from various districts. The problems caused by this modern ghetto forced the residents to move yet again and it was demolished a few years later.
13. Saturnino Cisneros and Juan Carmona attended some neighbourhood assemblies (interview by the author of the article with Juan Carmona on 17 January 2023).
14. In relation to the main streets bordering the plots of land.

15. David Franco, *Escenografía simulada de lo colectivo: Mimesis y simulacro en el barrio de Tiburtino* (Valencia: Editorial Universitat Politècnica de València, 2015), pp. 75-100.
16. Carlos Sambricio (ed.), *Un siglo de vivienda social. 1903-2003. Tomo II* (Madrid: Nerea, Ayuntamiento de Madrid, Consejo Económico y Social de España, 2003), pp. 108-109.
17. The original dwellings in the neighbourhood of La Paz have one or two floors.
18. Only two of the four commercial premises are currently in use in the Palma de Mallorca residential complex and the two in the Goicochea residential complex have never been prepared for use.
19. The general criterion is to situate the main rooms facing south, or barring that, towards the street. The serving spaces seek the north façades or those facing the block's courtyard.
20. Josep María Montaner, *La arquitectura de la vivienda colectiva. Políticas y proyectos en la ciudad contemporánea* (Barcelona: Reverté, 2015), p. 169.
21. This phenomenon can occur in suburban areas with a homogeneous population, during work and school hours, or in other areas that attract activity during a specific time frame through excessive zoning and that remain empty the rest of the time. See Jane Jacobs, *Muerte y vida de las grandes ciudades* (Madrid: Capitán Swing Libros, 2013), pp. 175-184.
22. María Antonia Fernández, *Las colonias del hogar del empleado. La periferia como ciudad* (PhD dissertation, Escuela Técnica Superior de Arquitectura de Madrid, 2006), pp. 106-115.
23. Count of the typological combination of residential complexes: Goicochea with 21 dwellings (12 twin maisonettes + 1 ground-floor + 8 high-rise) and 2 commercial premises, Palma de Mallorca with 57 dwellings (20 twin maisonettes + 5 ground-floor + 32 high-rise) and 2 commercial premises and Orense with 53 dwellings (10 twin maisonettes + 22 stacked maisonettes + 5 ground-floor + 16 high-rise).
24. Jan Gehl, *La humanización del espacio urbano. La vida social entre los edificios* (Barcelona: Reverté, 2020), p. 135.
25. Cisneros and Carmona, future members of Grupo Z, travelled to England in 1967. The trip was organised for students of the Barcelona School of Architecture (ETSAB) and they visited works by Stirling and others. Information collected from an interview with Juan Carmona, a member of Grupo Z, conducted by the author of the article on 9 January 2021.
26. John Jacobus, *James Stirling. Edificios y Proyectos 1950-1974* (Barcelona: Gustavo Gili, 1982), pp. 48-53.
27. To receive maximum sunlight, the active façades either face south or, if that is not possible, the outside of the block.
28. Today we can see how these spaces for extended rooms work perfectly, as they are filled with tables, chairs and lots of vegetation.
29. Today, almost all the fences have been covered with elements providing visual independence, such as climbing vegetation, textile screens and natural heather.

Periphery

Suburban areas

Residential architecture

Typological combination

In-between spaces