

48 Entrepatrios Las Carolinas cohousing

Calle de González Feito, 28041

SPAIN **Madrid**

2018
 Finished

About

Las Carolinas is the first ecological cohousing under the Right of Use regime in the Community of Madrid. The building consists of 17 houses that are combined with different common spaces: kitchen, dining room, laundry, workshop area, two multipurpose rooms, terrace, patio, parking for bicycles.

The project follows stringent environmental design standards and green architecture strategies such as green building, life cycle analysis, high energy efficiency, bioclimatic design and water management. All its materials are eco-friendly, low-impact, organic and certified, such as ecological varnishes, vegetable paints and FSC sustainably managed wood.



Aerial view.



Main façade towards González Feito Street



Agents involved

Architect	sAtt	Triple Balance	
Developer	Cooperativa Entrepatrios. Promoción Las Carolinas		
Construction company	GEOH		
Structural engineer	Miguel Nevado		
Timber installer	Madergia	Timber manufacturer	Stora Enso



Inner courtyard with communal kitchen garden



General

16,6	Height (m)	4	Floors above ground
3.313	Built-up area (m ²)	533	Ground floor area (m ²)
2.366.927	Budget (€)	714	€/m ²

Building use **Residential**



Back façade



Technical data

Mass Timber Structural system Bracing system **CLT walls**

Timber products used

- CLT panels on slabs and walls
- GLT beams

- 0 Concrete floors
- 4 CLT floors
- 0 Concrete-timber floors



Construction process. Placement of CLT panels on the second floor.

Entrepatrios <https://n9.cl/vmzfc>



Construction timing

21 Months to complete the building

10 Weeks to build the structure



Wind actions

Terrain category IV

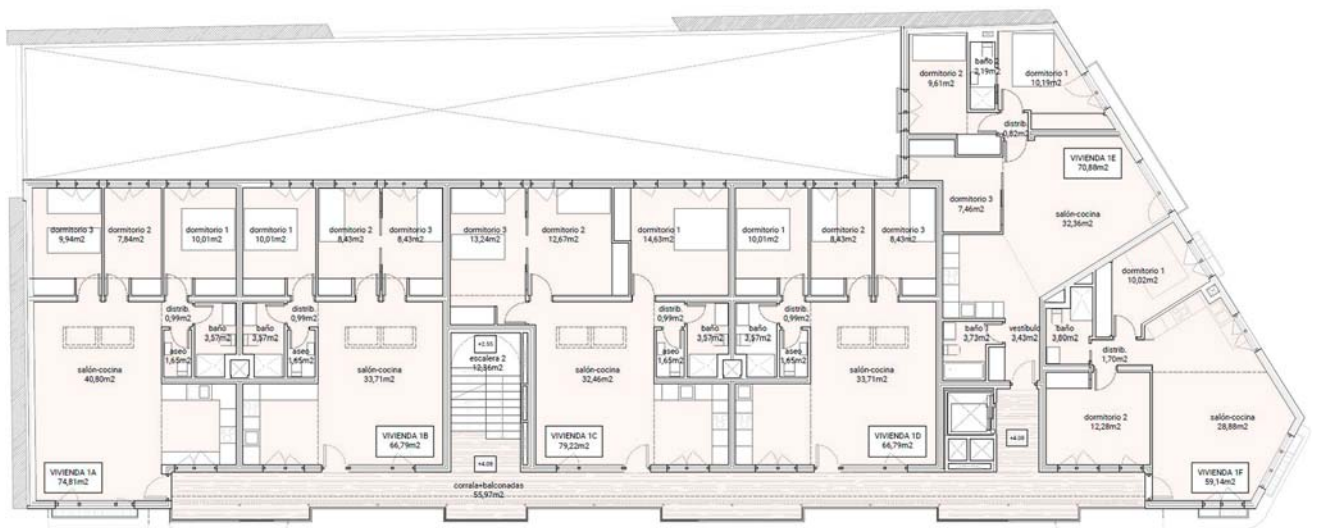
Area in which at least 15% of the surface is covered with buildings and their average height exceeds 15 m.

Slenderness **1,5**




Construction process of the basement floor.

Entrepatrios <https://n9.cl/vmzfc>



General floor plan



 Sustainability

Picea abies Wooden specie

410 Wood volume (m3)

125 Potential CO2 benefit (t)
1.100

2200 Distance of transportation (km)

Special transportation needed

84% Percentage of structure made of wood



Construction process seen from the outside. Structure phase.
 Entrepatis <https://n9.cl/vmzfc>



Main elevation



Longitudinal section

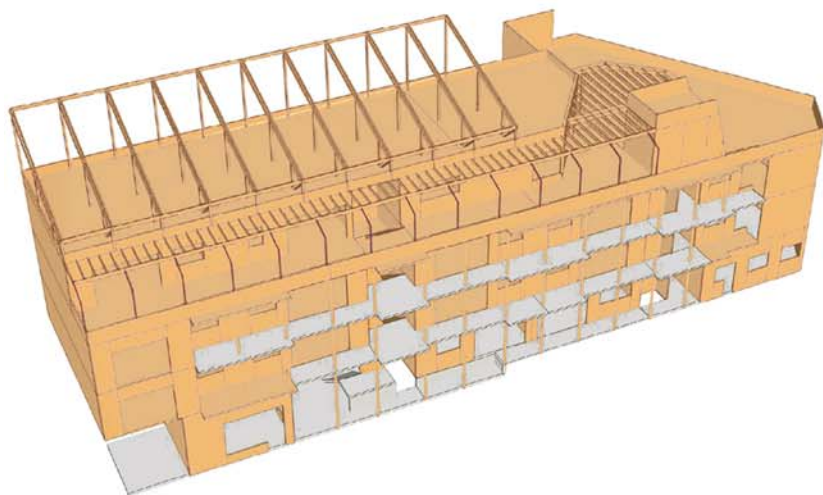




Inner courtyard view



Sectional axonometry



Structure design



Access and community corridor



Outdoor common area on the ground floor



References:

- sAtt. <https://n9.cl/31f9g> [16.11.21].
Online survey to Fernando Campos Alguacil on 04.11.21.
- Visit to the building on 15.07.21.
- Entrepatrios <https://n9.cl/bploz> [31.03.21].
- Distrito Natural <https://n9.cl/78wjx> [31.03.21].