

29 Apartments in Cavallers

Carrer Cavallers 57, 25002

SPAIN **Lérida**

2013
 Finished

About

It is a multi-family building located in the historic center of Lérida, consisting of a ground floor and four floors plus a semi-basement and an attic. The building houses 9 social flats promoted by the private sector. The structure of the semi-basement is made of reinforced concrete walls and the ground floor is supported by concrete blocks made in-situ. From the ground floor up to the top floor, the entire structure, including the communication core, is made of cross-laminated timber panels. It was the first five-storey building in Spain to use this structural system.



Aerial view.



Main façade from Cavallers street.
 Trass Arquitectura



Agents involved

Architect	Trass Arquitectura		
Developer	Arrendaments Sandiumenge S. L.		
Construction company	Construcciones Pallás S.A.		
Structural engineer	Miguel Nevado		
Timber installer	AlterMATERIA	Timber manufacturer	KLH



Main façade from Cavallers street.
<https://n9.cl/agn85>



General

16 Height (m)	6 Floors above ground
941 Built-up area (m ²)	177 Ground floor area (m ²)
820.000 Budget (€)	871 €/m ²

Building use **Residential**



Back façade.
 Trass Arquitectura



Technical data

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

Timber products used

-CLT panels on slabs and walls

- 1 Concrete floors
- 6 CLT floors
- 0 Concrete-timber floors



Construction process. CLT panels. Trass Arquitectura



Construction timing

12 Months to complete the building

9 Weeks to build the structure



Wind actions

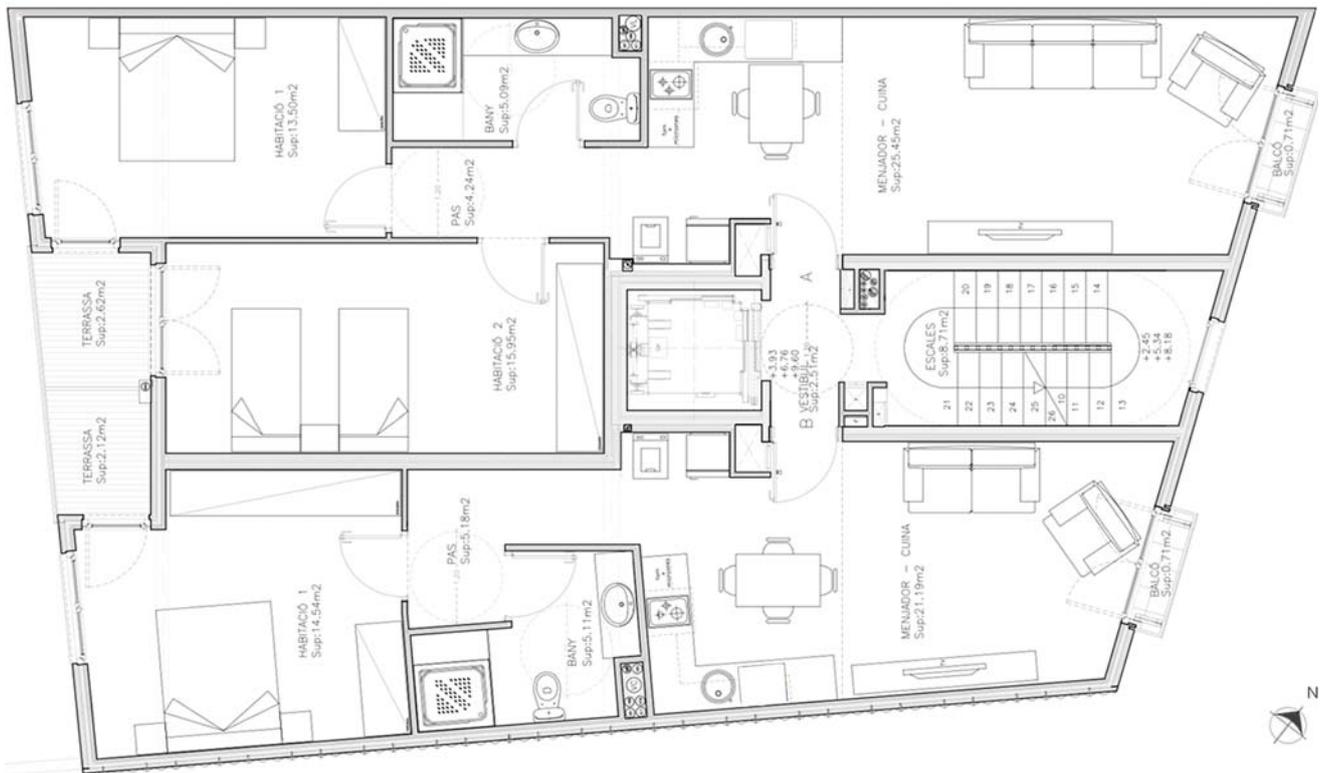
Terrain category IV

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

Slenderness **1,7**



CLT core. Lift shaft. Trass Arquitectura



General floor plan



Sustainability

Picea abies Wooden specie

236 Wood volume (m3)

91 Potential CO2 benefit (t)

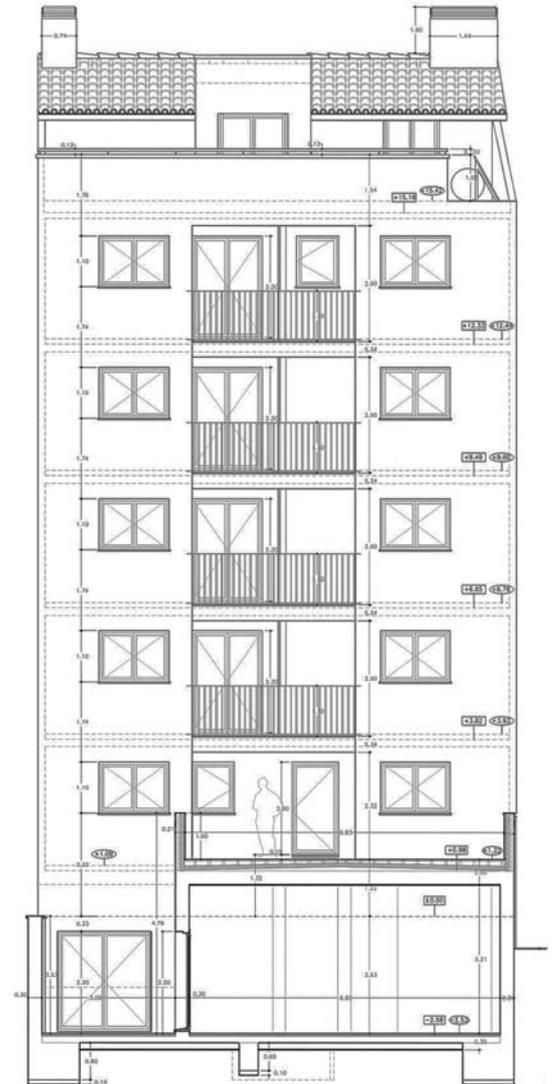
1740 Distance of transportation (km)

Special transportation needed

82% Percentage of structure made of wood

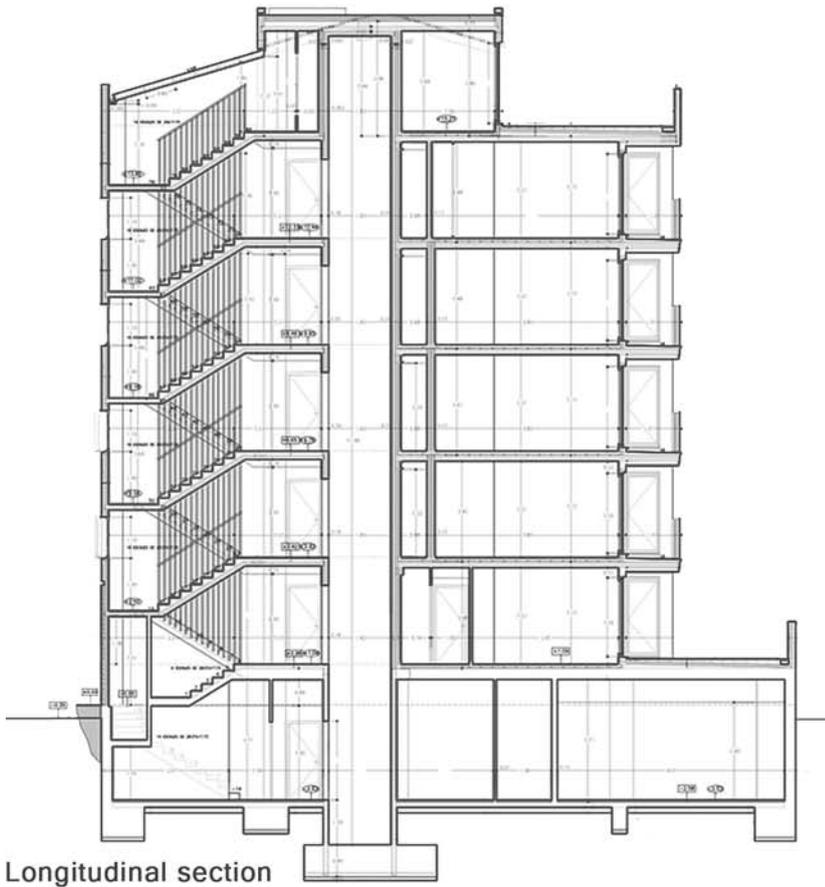


Construction process and environment.
Trass Arquitectura



Main and back elevation

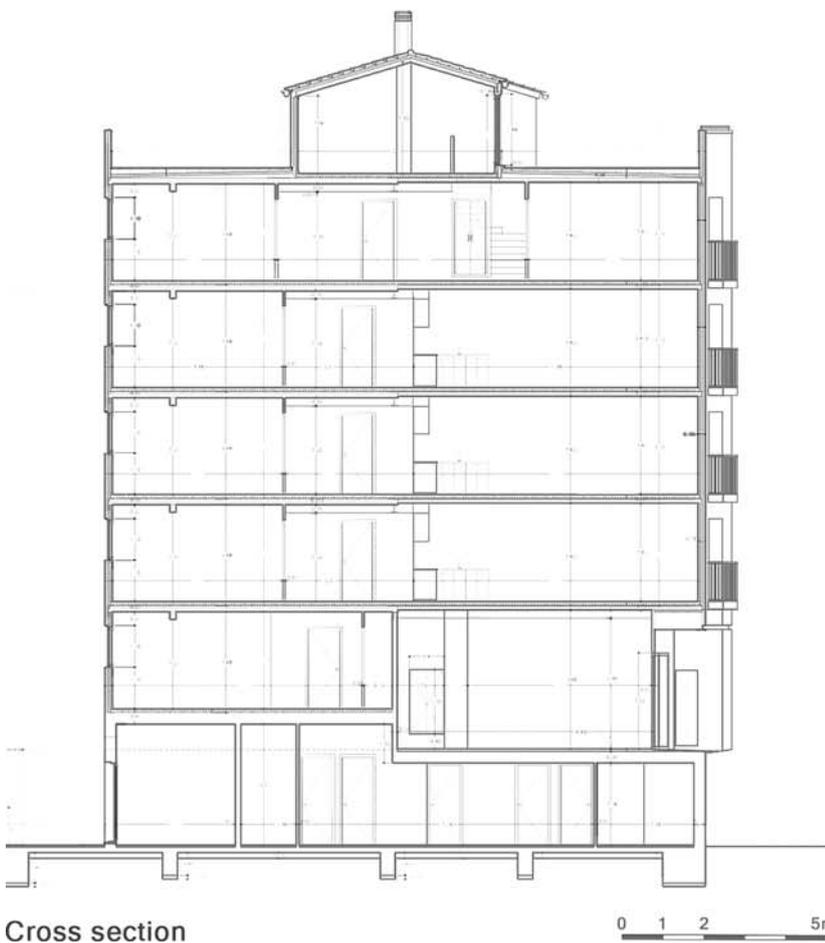




Construction process. Back façade.
Trass Arquitectura



Construction process. Main façade.
Trass Arquitectura



References:

- Arquitectura Trass- Ramon Llobera. <https://n9.cl/agn85> [14.10.21] Online survey on 15.04.21. and online interview to Ramón Llobera on 18.11.21.
- alterMATERIA. <https://n9.cl/lt7ln> [19.03.21] Online survey to Manuel Gigante.
- EcoHabitat <https://n9.cl/5q5ie> [19.03.21].