

## 25 ARV8 residence

Calle Antonio Rodríguez Villa 8, 28002

**SPAIN**      **Madrid**

**2019**  
**Finished**

### About

ARV8 is the tallest building constructed with CLT panel structure in Madrid. The 7-storey timber-structure building contains three dwellings, each with a different configuration adapted to its owners. Prefabrication and innovation become the leitmotiv of the construction. Workshop-assembled parts make the construction faster, more comfortable, and energy-efficient. The building has two basements' levels made of reinforced concrete. The efficiency of the CLT panel system made it possible to build a 6-metre span slab structure without the presence of intermediate posts. This means maximum use of the useful surface area of the house, which is also organized with criteria of flexibility in the distribution of space.



Aerial view.

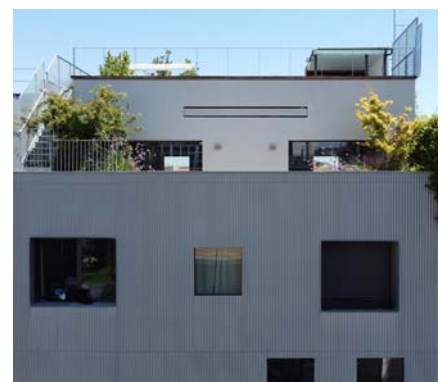


Aerial view of the entire façade.



### Agents involved

Architect	Ábaton		
Developer	ABATON Construye		
Construction company	Haba tonsurada S.L.		
Structural engineer	Madergia		
Timber installer	Madergia	Timber manufacturer	Stora Enso



Main façade. Finished grilled sheet metal.



### General

<b>23</b> Height (m)	<b>7</b> Floors above ground
<b>1.235</b> Built-up area (m <sup>2</sup> )	<b>143</b> Ground floor area (m <sup>2</sup> )
<b>1.400.000</b> Budget (€)	<b>1.134</b> €/m <sup>2</sup>

Building use **Residential**



Passable roof of the building.



## Technical data

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

### Timber products used

- CLT panels on walls and slabs
- GLT beams

0 Concrete floors

5 CLT floors

0 Concrete-timber floors



Construction process. 2nd floor apartment. Queima Films <https://n9.cl/lgm3z>



## Construction timing

16 Months to complete the building

6 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

1,9




Back façade under construction. Madergia



General floor plan

0 1 2 5 m

 Sustainability

**Picea abies** Wooden specie

**320** Wood volume (m3)

**2200** Distance of transportation (km)

**55%** Percentage of structure made of wood

**98** Potential CO2 benefit (t)

Special transportation needed

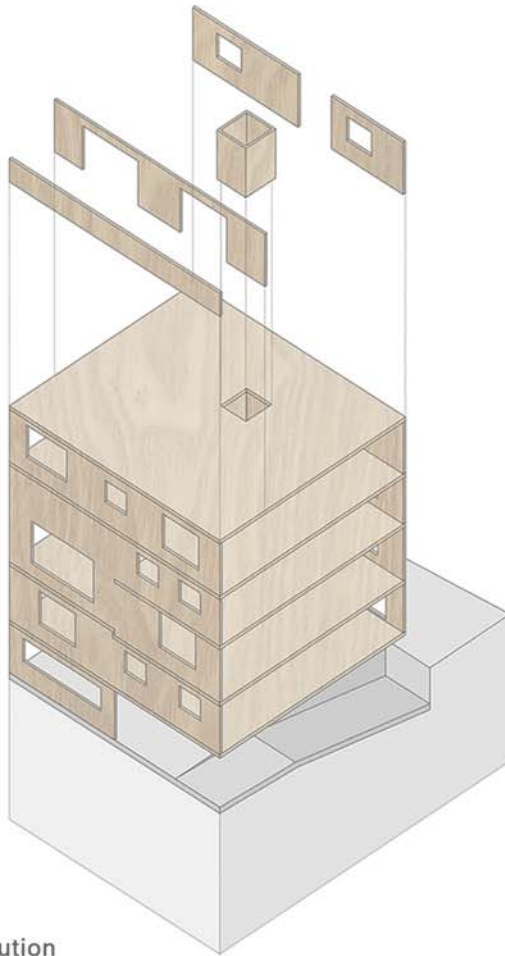


Main Façade under construction with CLT. Madergia

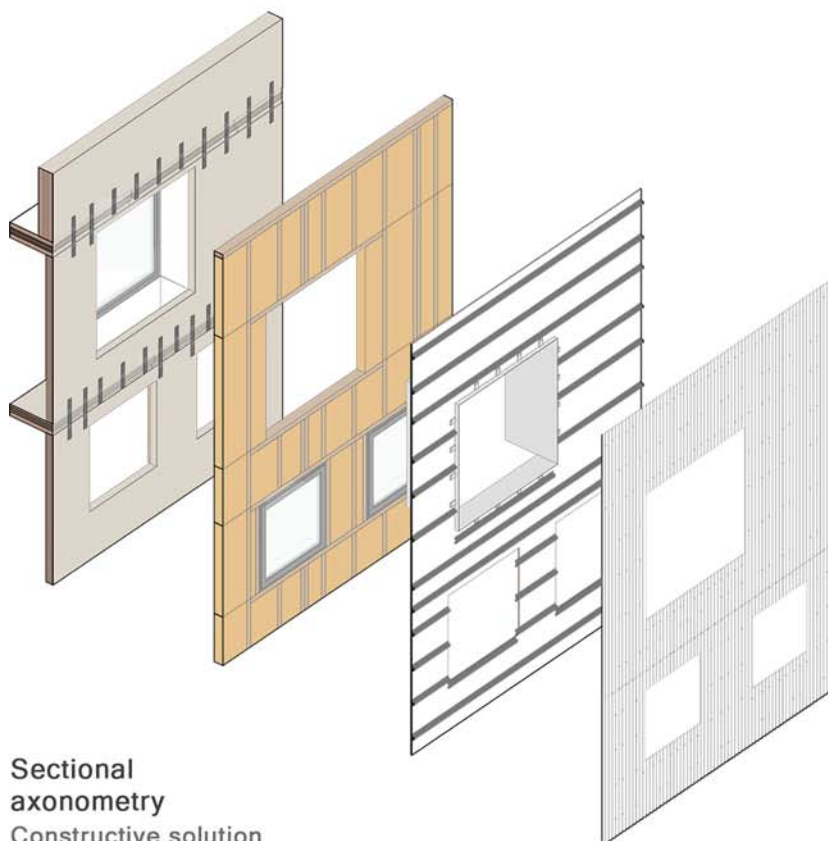


Cross section





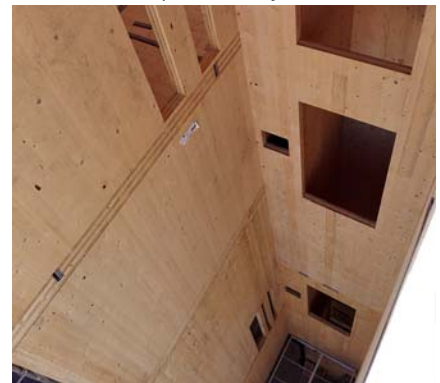
Exploited axonometry  
Constructive solution



Sectional axonometry  
Constructive solution



CLT panels used as floors and walls and GLT beam.  
Queima Films <https://n9.cl/caj8l>



CLT core.  
Madergia



### References:

- Madergia. <https://n9.cl/gcvl3> [18.03.21]  
Online survey to Diego Núñez on 18.10.21.
- Visit to the building on 15.07.21.
- Ábaton. Online survey on 23.06.21.
- Tectónica <https://n9.cl/lgm3z> [18.03.21].