Casa Carromeu

Carromeu, Mira

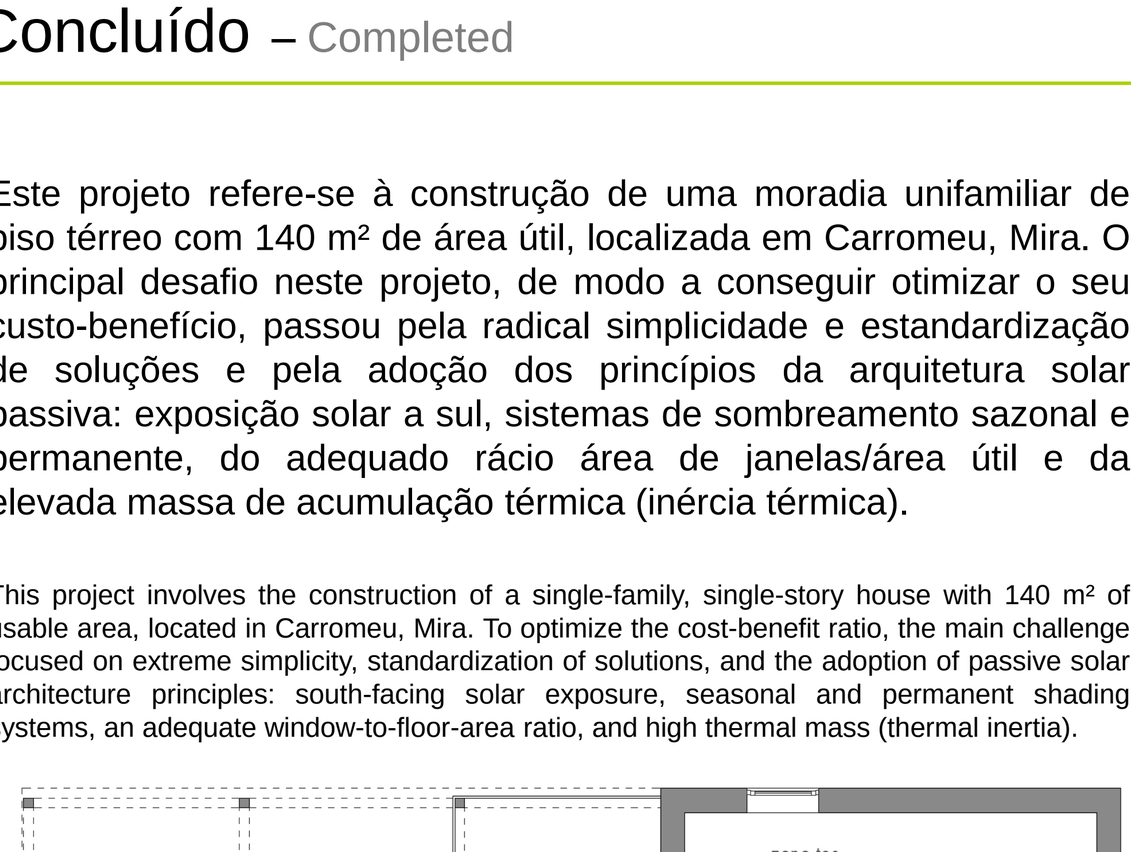
Construção nova – New construction

Concluído – Completed

Este projeto refere-se à construção de uma moradia unifamiliar de piso térreo com 140 m² de área útil, localizada em Carromeu, Mira. O principal desafio neste projeto, de modo a conseguir otimizar o seu custo-benefício, passou pela radical simplicidade e estandardização de soluções e pela adoção dos princípios da arquitetura solar passiva: exposição solar a sul, sistemas de sombreamento sazonal e permanente, do adequado rácio área de janelas/área útil e da elevada massa de acumulação térmica (inércia térmica).

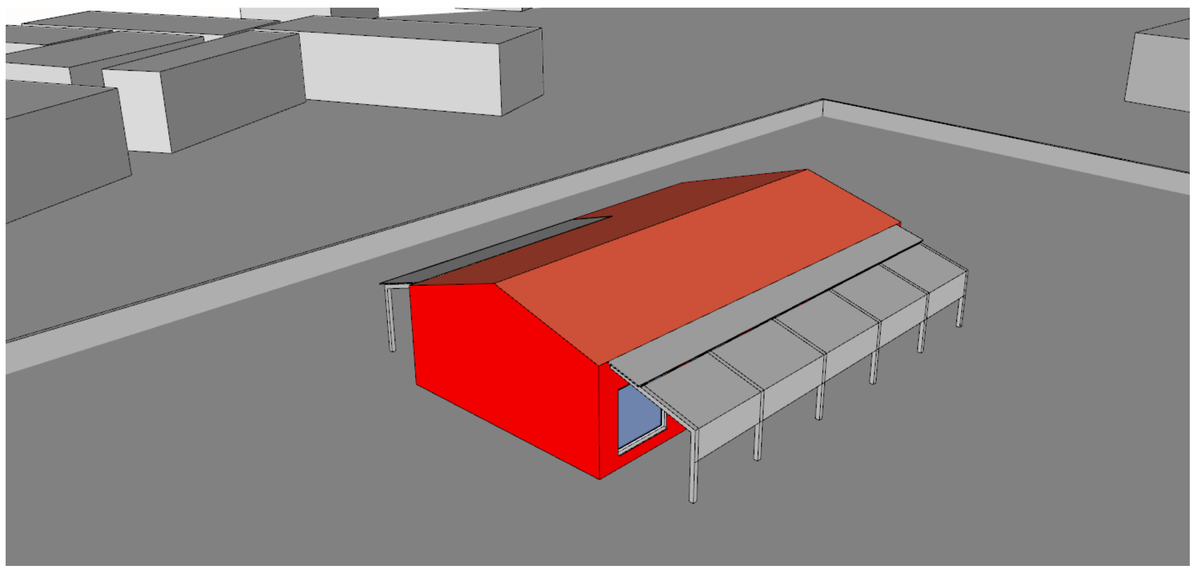
This project involves the construction of a single-family, single-story house with 140 m² of usable area, located in Carromeu, Mira. To optimize the cost-benefit ratio, the main challenge focused on extreme simplicity, standardization of solutions, and the adoption of passive solar architecture principles: south-facing solar exposure, seasonal and permanent shading systems, an adequate window-to-floor-area ratio, and high thermal mass (thermal inertia).





					Criteria	Alternative criteria	Fullfilled?[2]
	Treated floor area	m²	139,7				
Space heating	Heating demand	kWh/(m²a)	**4**	≤	15	-	**Yes**
	Heating load	W/m²	**8**	≤	-	10	
Space cooling	Cooling & dehum. demand	kWh/(m²a)	**-**	≤	-		**-**
	Frequency of overheating (> 25 °C)	%	**1**	≤	10		**Yes**
	Frequency of excessively high humidity (> 12 g/kg)	%	**9**	≤	20		**Yes**
Airtightness	Pressurisation test result n_{50}	1/h	**0,2**	≤	0,6		**Yes**
Non-renewable Primary Energy (PE)	PE demand	kWh/(m²a)	**70**	≤	-		**-**
Primary Energy Renewable (PER)	PER demand	kWh/(m²a)	**32**	≤	60	60	**Yes**
	Renew. energy generation (in rel. to projected building footprint area)	kWh/(m²a)	**19**	≥	-	-	

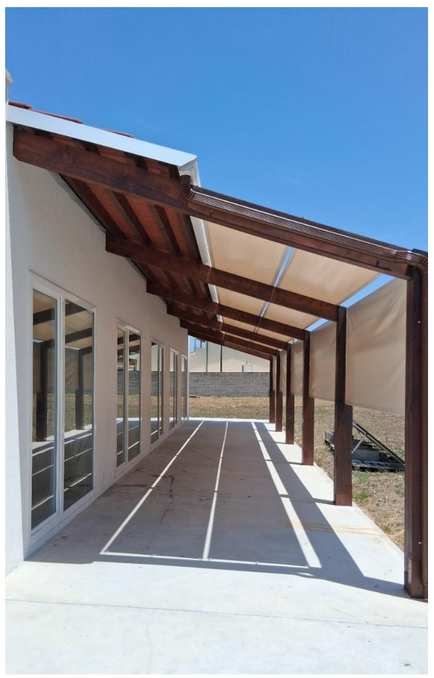














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