



Adaptive reuse in Barcelona

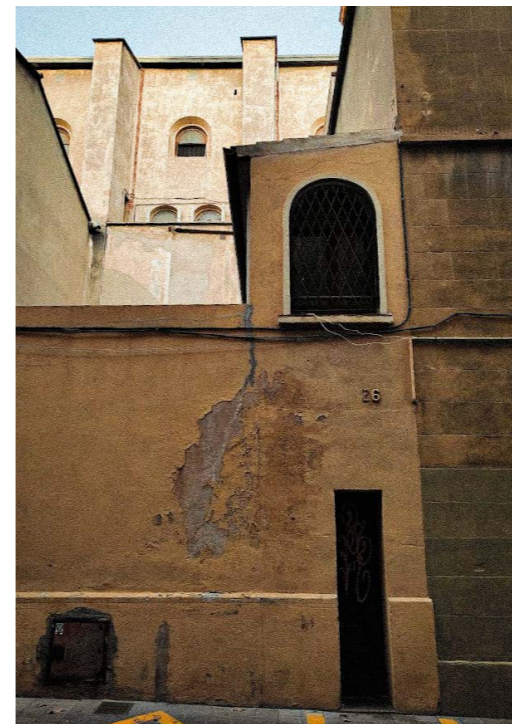
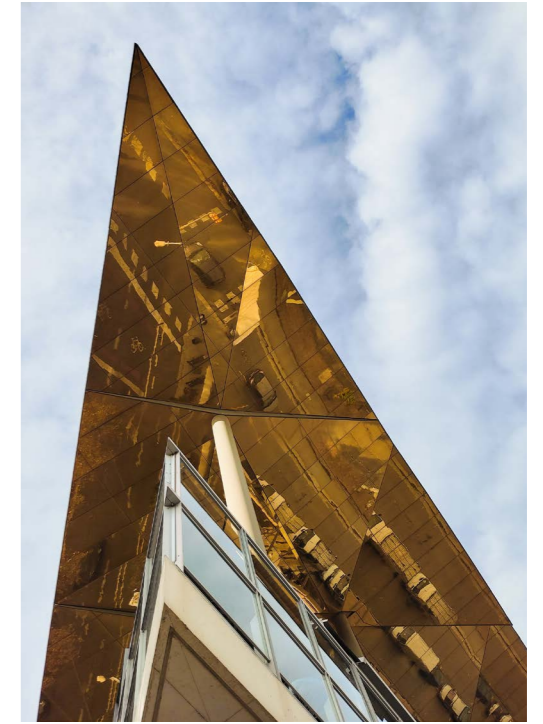
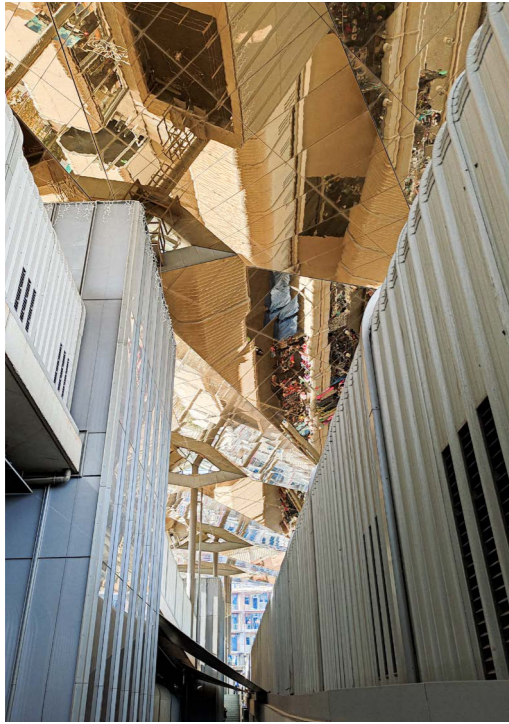
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Adaptive Reuse in Barcelona

Due to the current climate emergency, the building sector has had to re-evaluate its values and practices in order to become more sustainable. Aside from minimizing the climate impact of new buildings, it is relevant to adapt a circular-economy lens and to look to adapting or re-purposing existing structures rather than demolishing and constructing anew. Adaptive reuse is an approach that involves modifying a built structure to allow it to accommodate a new function. This practice conserves resources as well as the cultural and historical value of the building in question. Adaptive reuse often requires thoughtful design solutions to address the unique challenges presented by existing structures, such as integrating modern technologies while respecting the original architectural character. It also calls for a thorough understanding of the built environment from both a technical, cultural and social point of view.

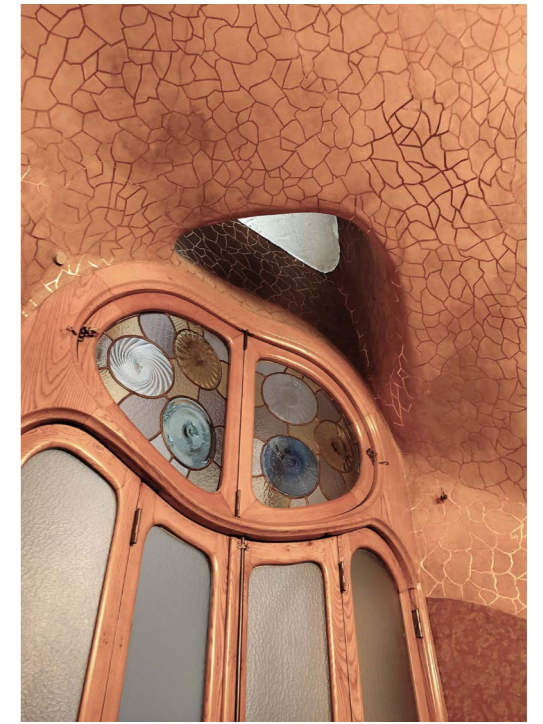
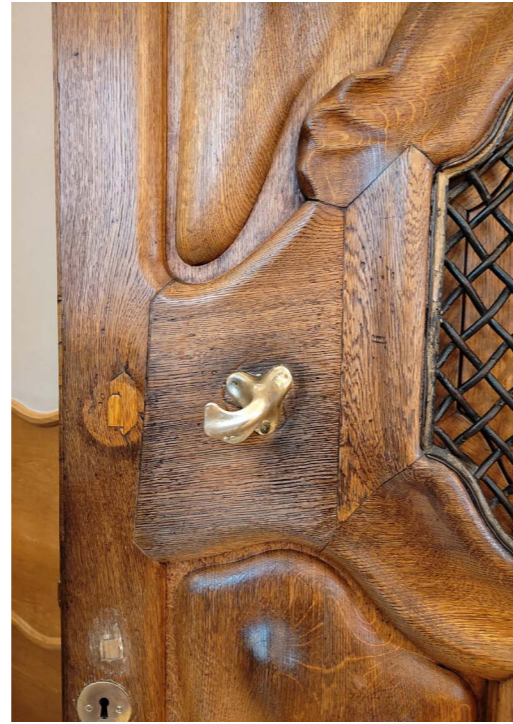
In Barcelona, adaptive reuse in the built environment takes on a distinctive significance. The city is known for its rich architectural history, and the idea of re-purposing an existing structure to suit new modern needs is not a new phenomenon here. Barcelona's extensive industrial legacy has offered plenty of opportunities for reuse in the past, and continues to do so today. The practice of adaptive reuse is a means to honor the local culture and history, as well as the Catalan identity. Exploring some of these projects in Barcelona reveals both an architectural craftsmanship and technique that is noteworthy, but also how a city works to meet modern urban demands, including those related to sustainability, while holding true to its rich history. Learning from these examples contributes to the appreciation of Barcelona's built environment and also opens up for a broader understanding of the relevance of adaptive reuse as a strategy for more sustainable cities.





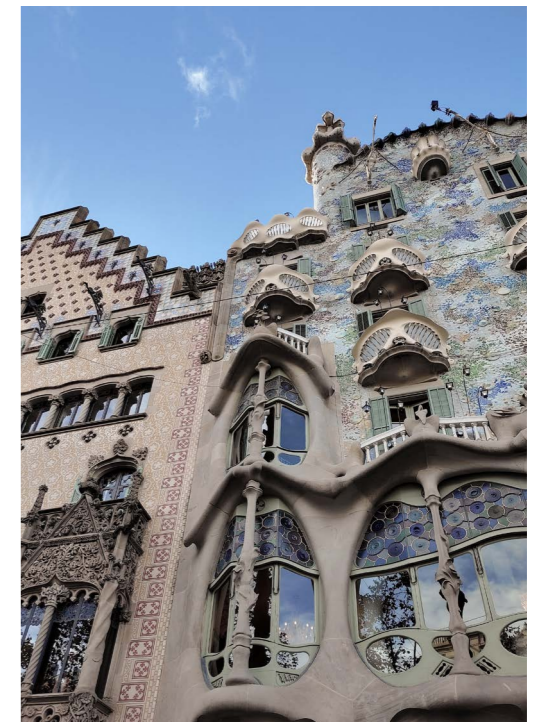
First Impressions

One of the first things to strike me about Barcelona is how buildings from different times interplay and blend together to create a diverse urban texture. The city has a lot to offer, from roman ruins to gothic cathedrals to Catalan modernism and contemporary highrises. The layering of all these juxtaposed architectural styles makes the city feel like a live artwork.



Casa Batlló - Antoni Gaudí

Casa Batlló is an example Catalan Modernisme, an architectural movement pioneered by Antoni Gaudí in the late 1800s and early 1900s. The unique style disregards conventional norms and instead opts for organic forms and intricate details. Gaudí's focus on regional craftsmanship and artistic innovation has left a substantial impression on Barcelona and on the global architectural landscape. His legacy today stands for both architectural marvel and as tribute to the Catalan identity.



Dipòsit de les Aigües

Completed 1999

University of Pompeu Fabra library, Barcelona

Architects: Lluís Clotet and Ignacio Paricio

My first visit of this trip was to the Dipòsit de les Aigües university library. As the weather was good and I happened to arrive around lunchtime, and many students were in the garden outside the library enjoying their lunch break. It looked very peaceful. While asking some of the students for directions to the main entrance, I could sense some pride in the fact that this beautiful architecture belongs to them.

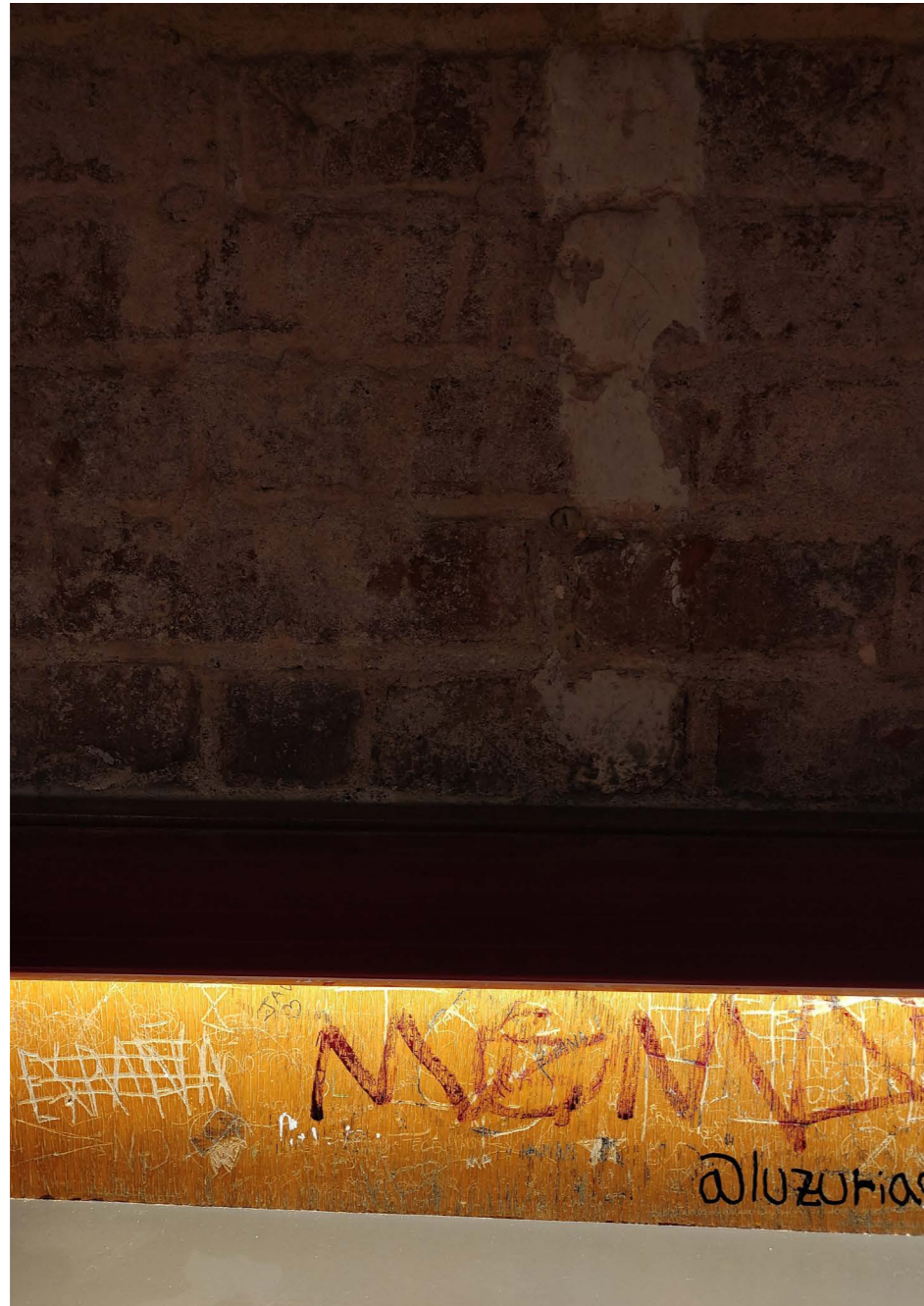


The Dipòsit de les Aigües was built in 1874 as a water reservoir for the purpose of controlling the water flow in the nearby Parc de la Ciutadella. It was designed by Josep Fronserè, with inspiration clearly taken from Roman prototypes. At that time Antoni Guadí was an architecture student and was employed to do calculations on the structure. Since its completion, the building has served multiple purposes, including an archive, storage space for the local fire brigade and a home for the elderly. It was finally taken over by the Pompeu Fabra University in 1992 and refurbished by architects Lluís Clotet and Ignacio Paricio.

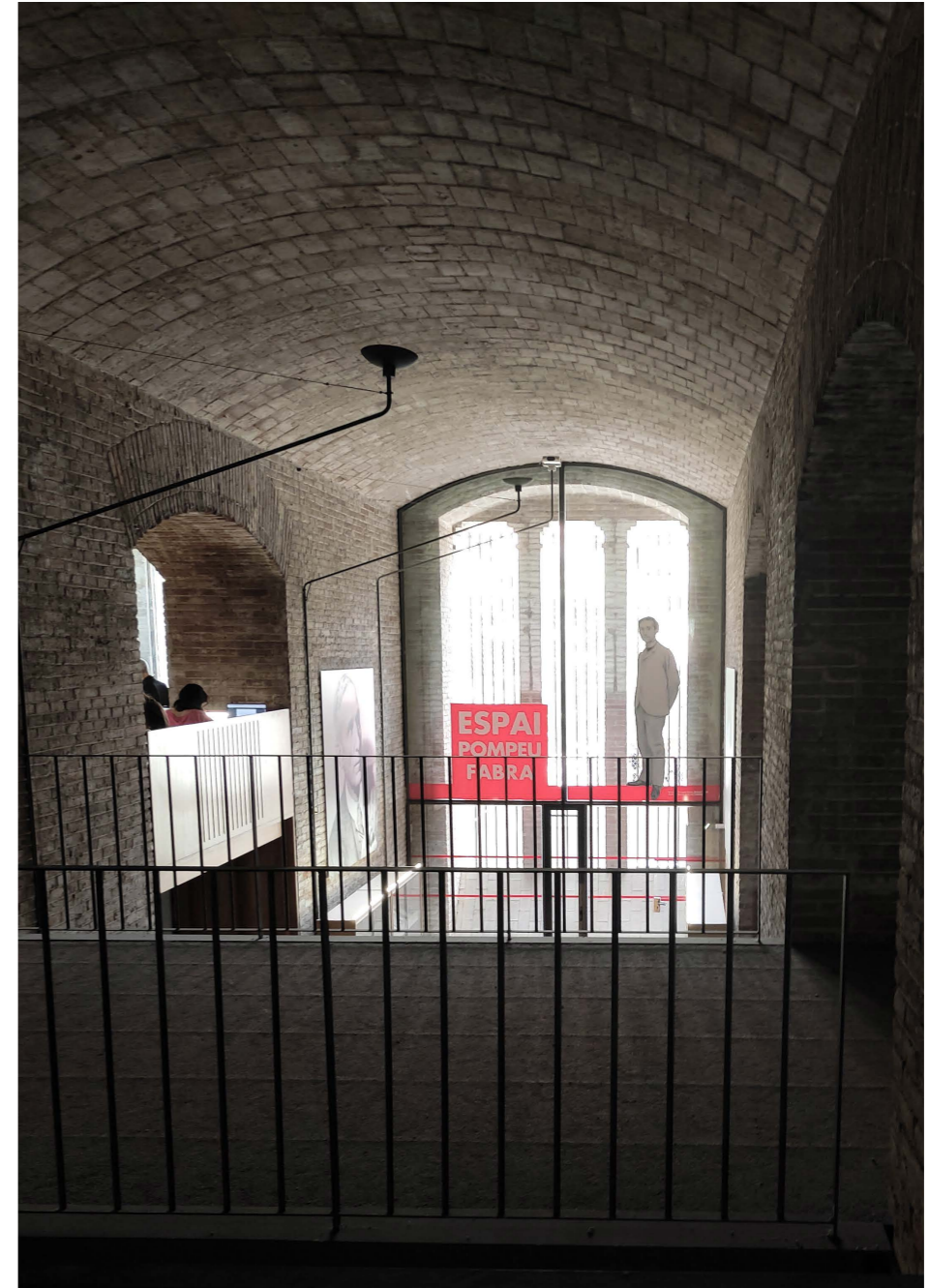
The library today is comprised of a large open space with several mezzanine levels. The interior is further divided by several imposing brick arches. These arches resemble pillars, but are in fact openings in the meter thick walls that provide structural support to the building. The arches extend around 14 meters, from the floor to ceiling height, and contribute to creating a steady and regular rhythm in the large space. The main room is connected to the rest of the university by an underground passage, which enhances the feeling of being in a space somewhat separate from the outside world. Together with the heaviness created by the thick walls, there is a heavy atmosphere, but not altogether overwhelming. The skylight in the ceiling, as well as the openings in the facade walls provide natural light and a much needed connection to the outdoors. Thanks to the regular alignment of the arches and windows, there is a line of vision from almost every place in the room to the outdoors.

During the refurbishment, a number of intermediate levels were added, thereby increasing the floor area. This layout creates many spaces for studying, that are adapted to different needs. There are large tables for bigger groups as well as individual desks nestled into nooks between the arches. The building feels well suited to its function while still allowing the original structure to dictate the atmosphere. Following this concept, the mezzanine levels are made out of prefabricated elements that make a minimal impact on the existing structure. This respectful intervention allows the space to speak for itself to a great extent and makes it a very unique setting. The silence and the serenity make it exceptionally well suited to its purpose as a place for deep concentration.

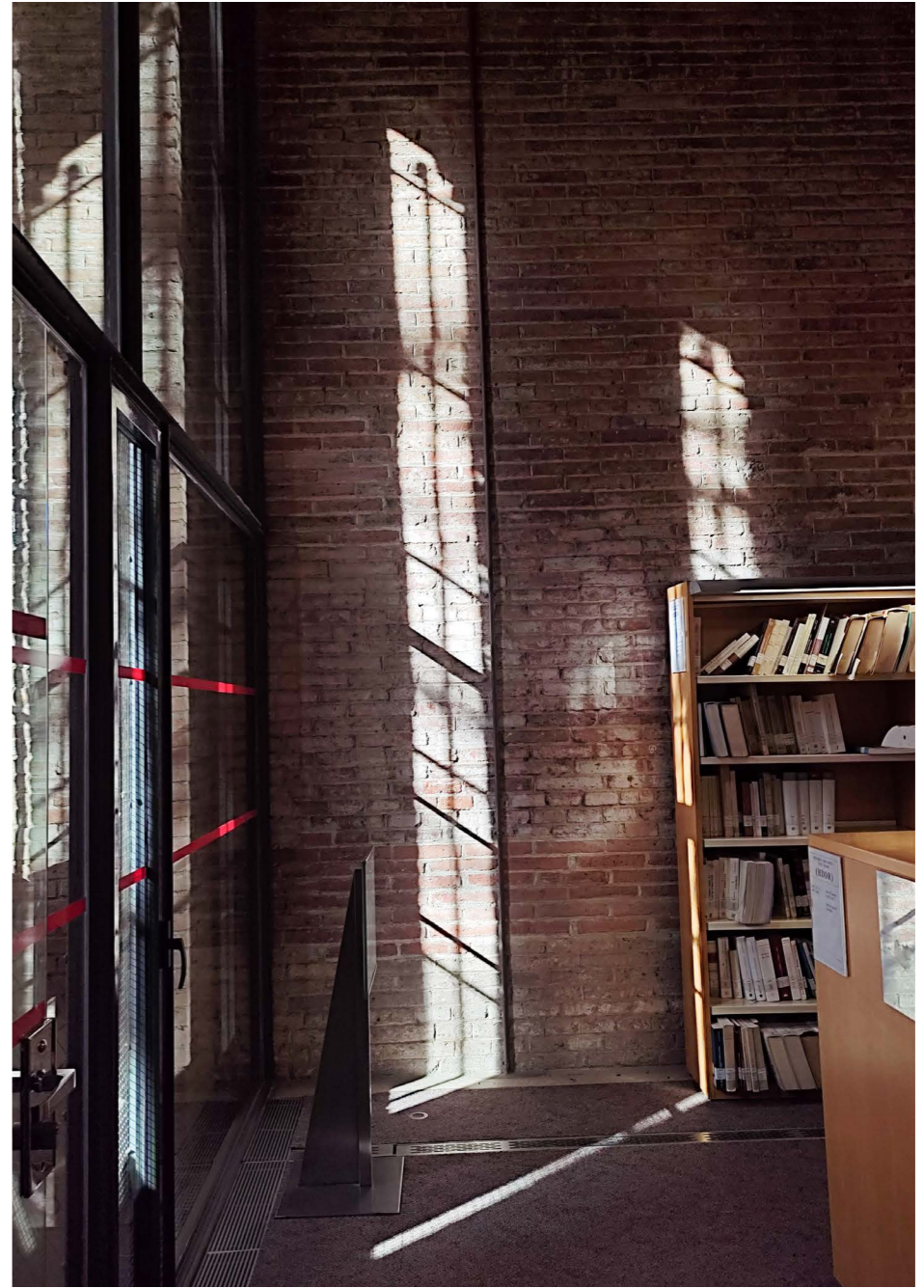
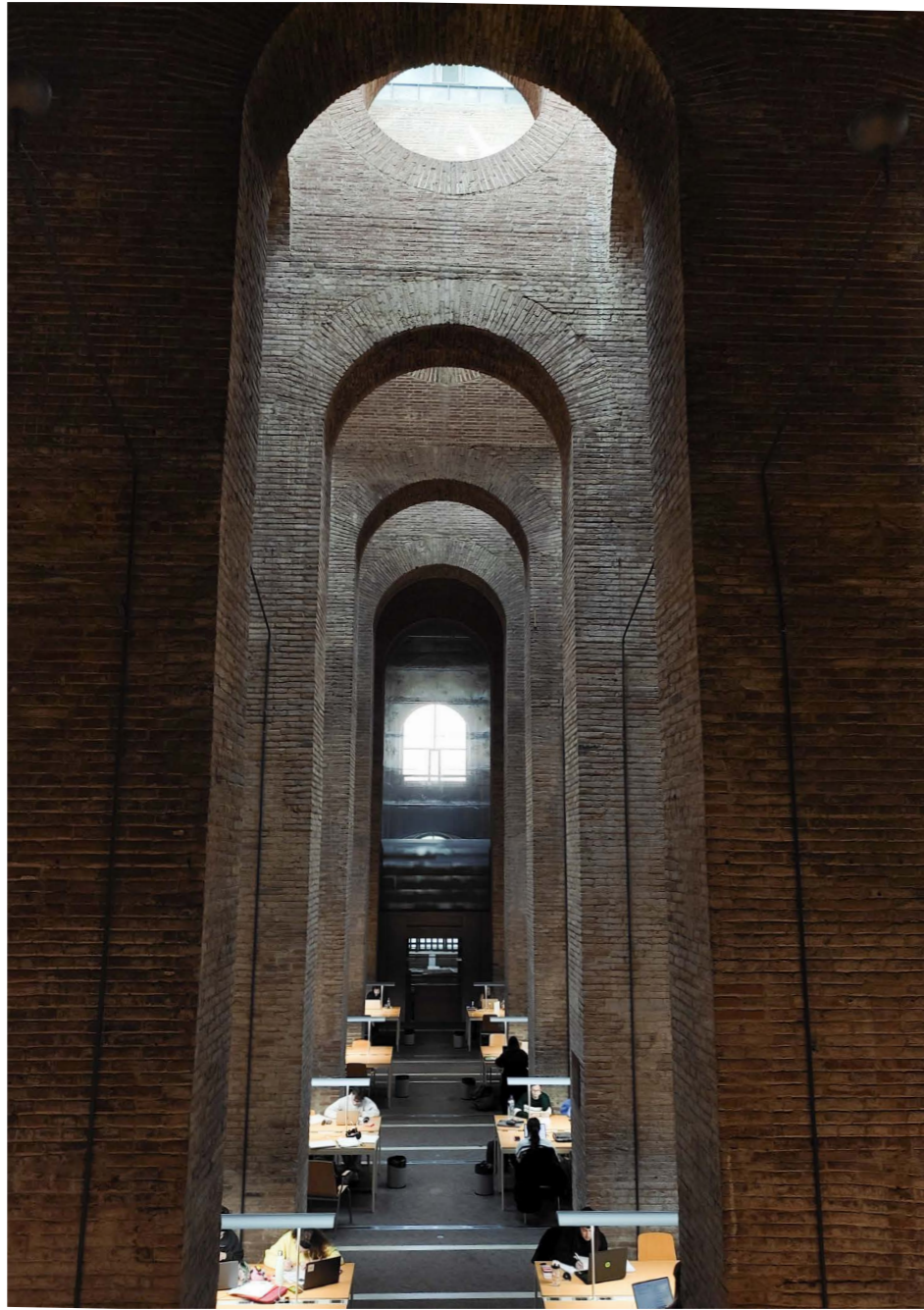




There is a something appealing about preserving significant buildings for reasons unrelated to tourism. It is not only sustainable but it also allows the citizens, in this case the university students to interact with the history of their city.



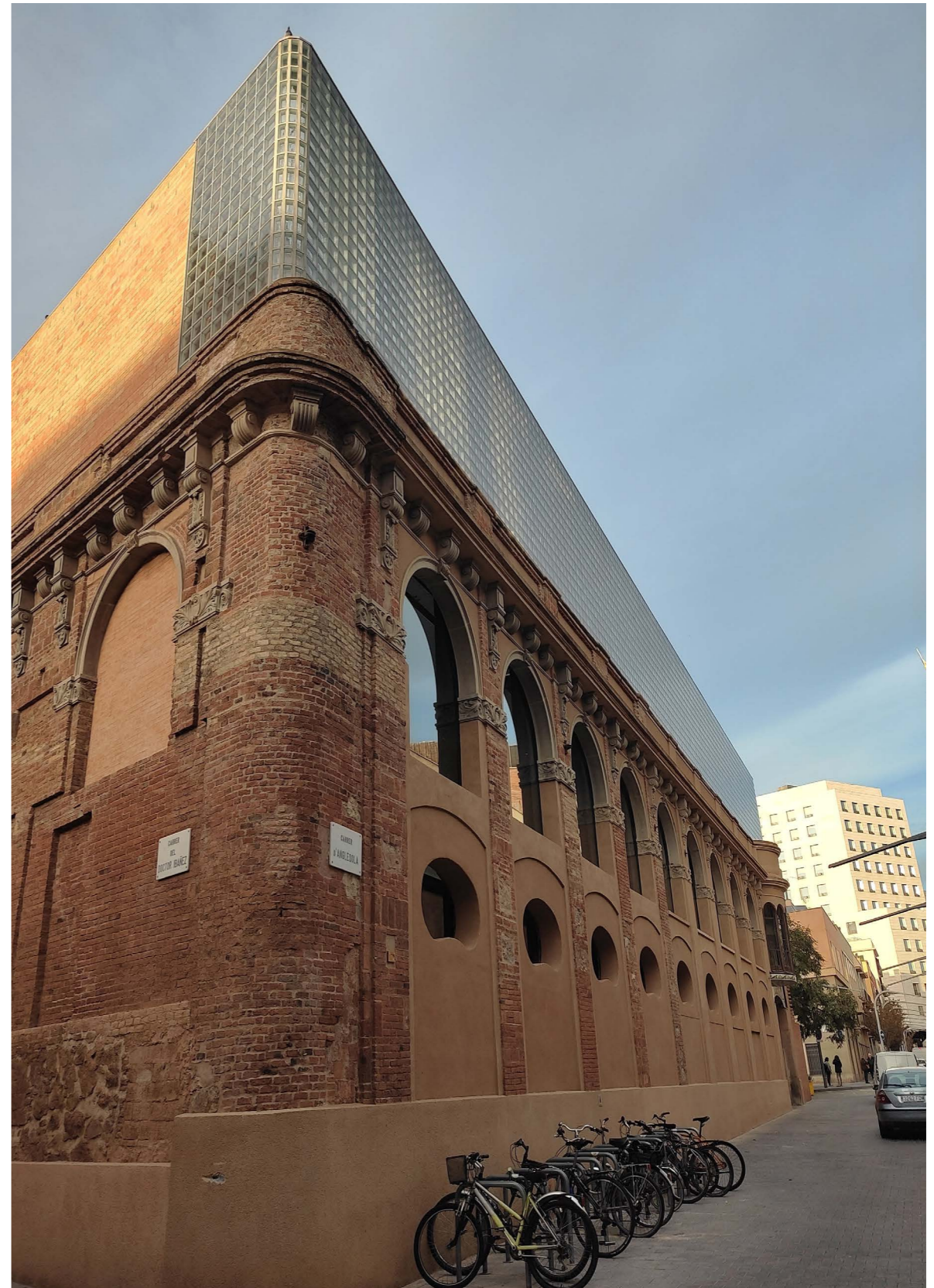
Structural interventions in the building are generally made out of steel or pre-cast concrete, and minimize the impact on the original structure. This also allows for the intervention to be easily disassembled in the future.



Cristalleries Planell civic center

Completed 2017
Civic center, Barcelona
Architects: H Arquitects,

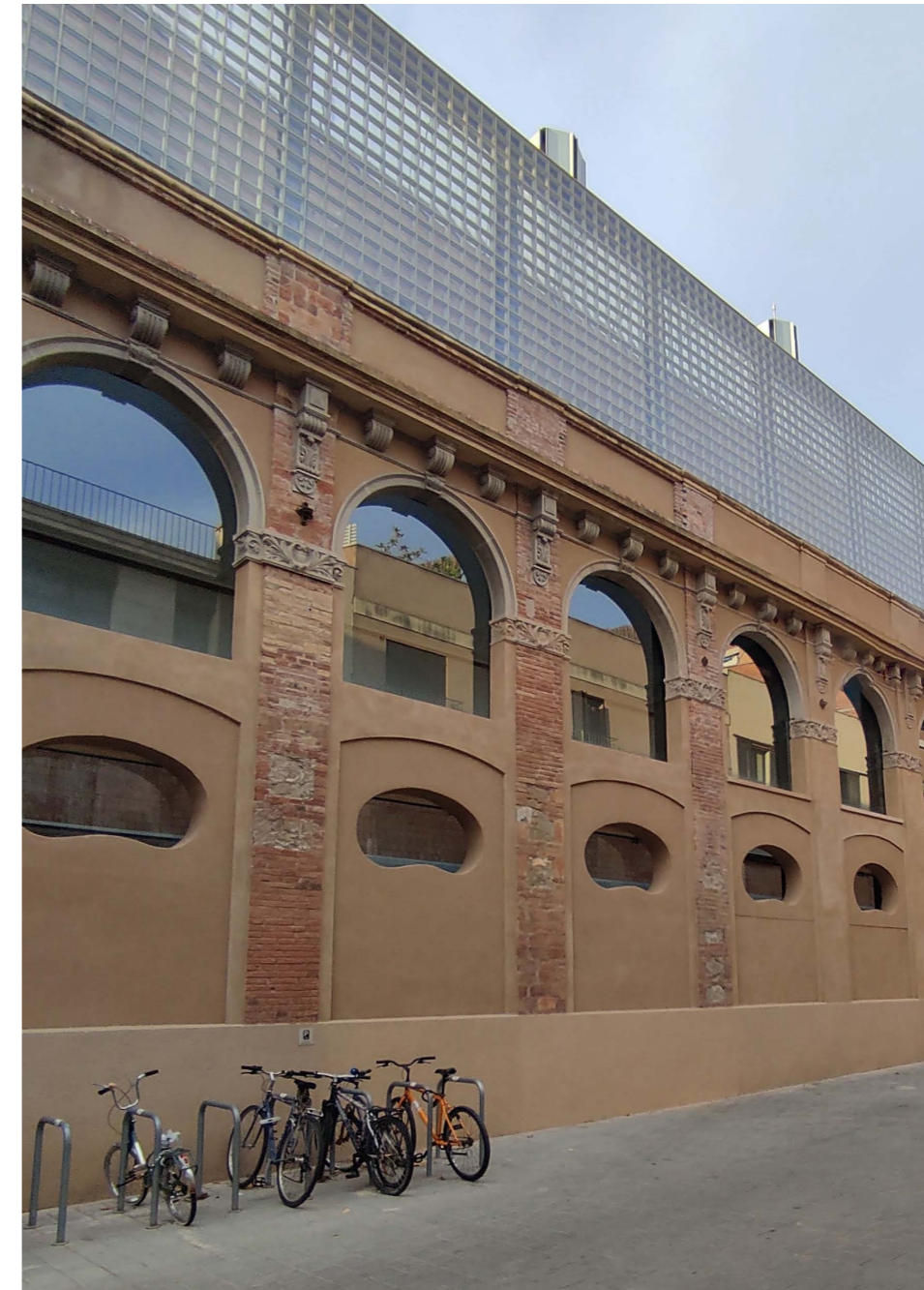
I reach the criastalleries Planell civic center at the end of my journey (and unfortunately after their closing time). But I did have a chance to admire the building in the light of the setting sun, and to experience the way it fits into its context. By combining facades from the early 1900s with modern elements, the building mirrors the urban patchwork of different time periods in the surrounding neighborhood.



The Planell glass factory was established in 1913 and was the production site of fine glasswork up until its closure in 1957. The building underwent a major refurbishment that was completed in 2016 and in the beginning of 2017 the Cristalleries Planell civic center was inaugurated. Today it houses an adult education center and other municipal facilities.

Two of the three elevations retain elements from the original facades, including traditional mosaic from the Catalan modernism on the south facing side. The same is also listed as heritage. In order to maintain the facade intact, but still allow for natural light, ventilation and interior acoustics in line with modern standards, the interior wall is propped up a distance away from the facade, creating a narrow atrium that keeps sound and heat out. This is just one example of a smart system that helps to maintain a good interior environment while preserving the buildings aesthetic integrity. An additional atrium in the center of the building helps to regulate the ventilation and to maintain thermal comfort, especially during the hot summer months. The four solar chimneys see air heated by the sun, and then rise, creating a non-mechanical air flow. These, together with the glazed portion of the facade create a link to the buildings original function and impose a sense of lightness atop the heavy masonry.

The Cristalleries Planell civic center is a good example of a building that is many things at once, and this fusion is reflected in its exterior. Advanced technology systems help create a building that provides an internal environment of high quality and that is sustainable. The way the historic facades are carefully integrated into the building shows that an appreciation for the local history and culture of the place will not be lost despite the modern standards. The way the newer brickwork matches the older facade, without copying it or overpowering it demonstrates an ability to weave modern touches together with cultural heritage that turns an old glass factory into a point of interest in the local neighbourhood.





The south facade is listed and has been preserved in its original state.



The air inside the solar chimney is heated by the sun and rises, resulting in a draft that moves hot air from the building without the use of energy-costing systems.



Sala Beckett

Performing arts center, Barcelona
Completed 2014
Architects: Flores & Prats

I visited Sala Beckett during the day and there were no performances going on in the theater. The adjacent café and restaurant however, was full of people and more than a place for nourishment, it felt like a meeting place. Walking through the foyer I realized that this is my favorite project so far. The colors and shapes are bold and the architecture feels honest and welcoming.



The building that today houses the Sala Beckett performing arts center started out as workers cooperative “Cooperative Paz y Justicia”. Located in the initially industrial neighborhood Poble Nou, this was a place for workers to meet and to host events. The building was, however abandoned for a number of years until 2011 when a competition for a complete refurbishment into a theatre was hosted.

A great amount of care has been taken to maintain the original atmosphere of the building, and to preserve as much as possible of the original decor. This includes everything from the mosaic wall tiles to the decorative floors. The design never tries to hide the history of its building, including the period of disuse. Instead uses the layering of different materials, textures and colors to create a space that embraces the passing of time and that feels open-minded and welcoming. There are also references to the original cooperative, and according to the architects several locals who used to frequent the space in earlier days recognized the atmosphere.

The main entrance leads directly into the foyer, which is the meeting place, and the start of the theatre visit. From here visitors are pulled up the stairs, or along the curved corridor. Playful hints of adjacent rooms are given through openings in wall and ceiling, as well as glances around corners and curved walls. More often than not these lead to unexpected spaces and colors. There is a clear sense of movement and activity in the foyer, and curved hallways, half-hidden nooks, and sweeping openings create a drama that is a sort of prelude to that which the visitors will experience in the auditorium itself. It is clear that the building's atmosphere has been matched to the new function with great precision and that utmost care has been taken to make sure that this pairing resonates harmoniously. Sala Beckett is a good example of adaptive reuse, combining the environmental benefits (compared to complete demolition and rebuilding) with those of preserving a piece of history and creating a local landmark.







Caixa Forum

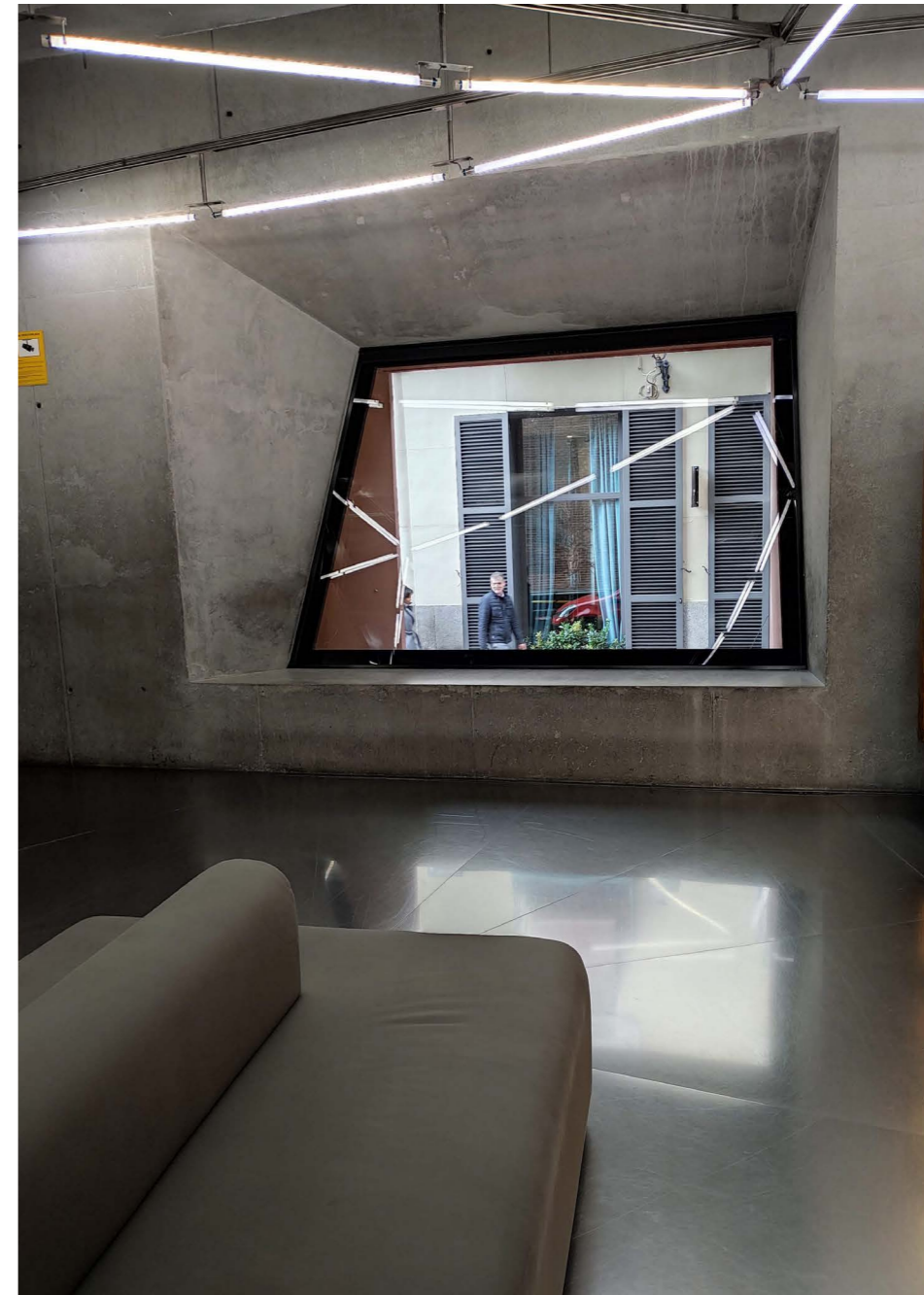
Madrid
Herzog & de Mueron
2003-2008

Visiting Madrid, I knew I wanted to make a trip to the Caixa Forum arts center. The former power station from 1899 has been given an extensive renovation and transformed into exhibition spaces, auditorium and restaurant spaces. It is also an architectural point of interest that blends old and new in a unique way, creating a building that stands out.





The facade seems to hover over the ground, playing with the heaviness of the bricks and the illusion of weightlessness. The metal panels allude to the industrial background of the building, while the shape provides a very modern touch.



The original facades are maintained, while the interior has been stripped out and rebuilt, allowing it to cater to every requirement set by the program. This may not be the most sustainable course of action, as the demolition entails a great deal of embodied energy, but in some cases an interior refurbishment is not an option.

Other projects visited



The Maritime Museum, Barcelona, Terradas Architects, 2014

The museum is housed in the former Drassane shipyards that date back to the 13th century. Since then several expansions and restorations have been carried out, but the style has remained true to the original Gothic arches.



San Fernando Library, Madrid, Jose Ignacio Linazasoro, 2001

The temple "Templo de Nuestra Señora del Pilar" was built in 1763, but severely damaged during the Spanish civil war. In 1999 it was refurbished to house the Escuelas Pias de San Fernando library, preserving much of the original temple.

Thank you to Ernst Hawermans stipendiefond for making this journey possible!