

# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



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Le Corbusier's "**Chapel of our lady of the height**" **on a hill above the village of Ronchamp (1950-55)** is a pilgrimage chapel, though on most days more frequented by architectural pilgrims than the intended variety. It is the latest of a long history of chapels on the site. Its predecessor was destroyed in fighting in the Second World War, though much of its stone is used in the walls of Le Corbusier's building.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



The thick, curved walls - especially the buttress-shaped **south wall** - and the vast shell of **the concrete roof** give the building a massive, sculptural form. Small, brightly painted and apparently irregular windows punched in these thick walls give a dim but exciting light within the cool building, enhanced by **further indirect light** coming down the three light towers.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



Ronchamps, the effects of indirect light in the lateral chapels.



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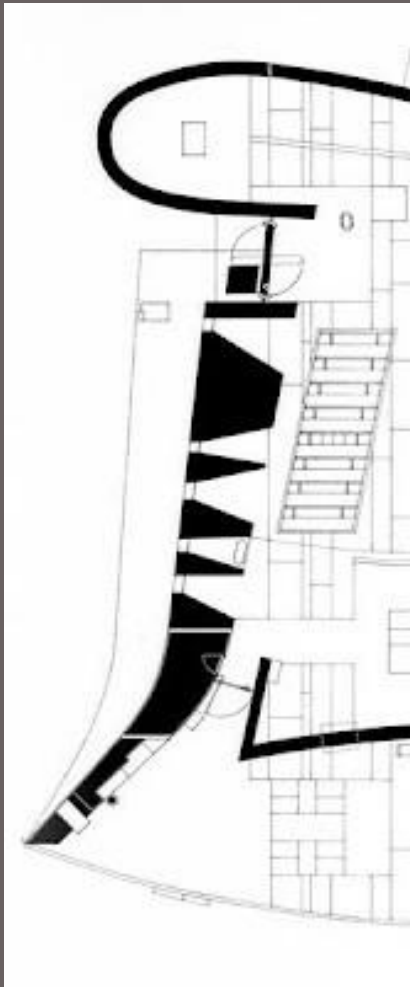
The walls curve, the roof curves, and even the floor curves down towards the altar, following the shape of the hill.



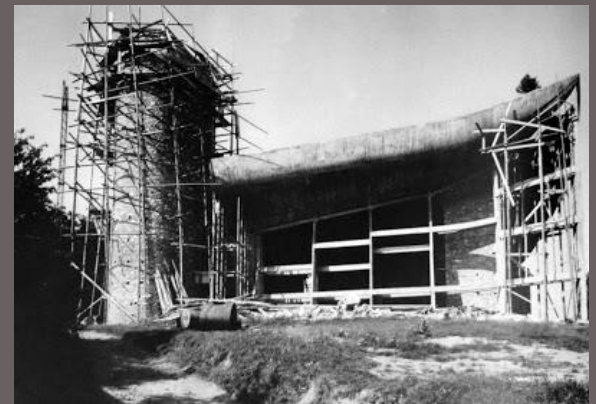
Above the plain altar, the east wall is punctuated by several pinhole-windows and by a single substantial window with the Madonna and Child in silhouette; through the window this image also serves the outside altar used during pilgrimages.



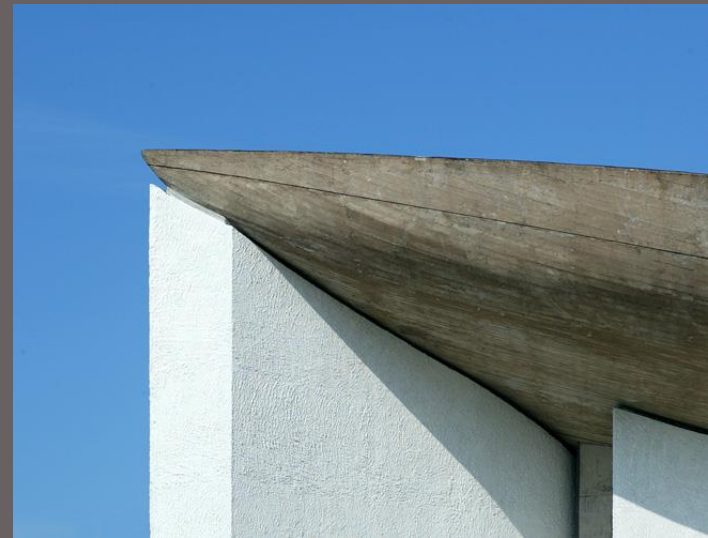
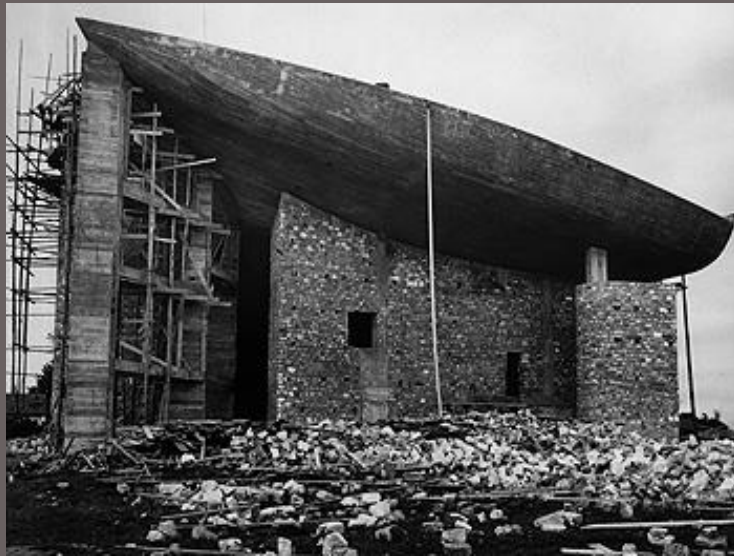
# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



"[The] south wall provokes astonishment. Vertical triangular frames of reinforced concrete 16cm thick varying, at the base, from a width of 3,70m. to 1,40m to 50cm at the top, carrying the immense, spreading shell of the roof; the rest, the bays, embrasures and splays which break up the interior wall is a membrane of concrete 4cm thick sprayed on to expanded metal by cement gun».



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



The main part of the structure consists of **two concrete membranes** separated by a space of 2.26 m. forming a shell which constitutes the roof of the building. This roof, both insulating and water-tight, rests on top of short struts which form part of a vertical surface of concrete covered with "gunnite" and which, in addition, brace the walls of old Vosges stone provided by the former Chapel which was destroyed by the war-time bombings.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



A **space of several centimeters** between the **shell of the roof** and the vertical envelope of the walls furnishes a significant **entry for daylight**. The concrete shell of the roof is left **rough**, just as it comes from the formwork.

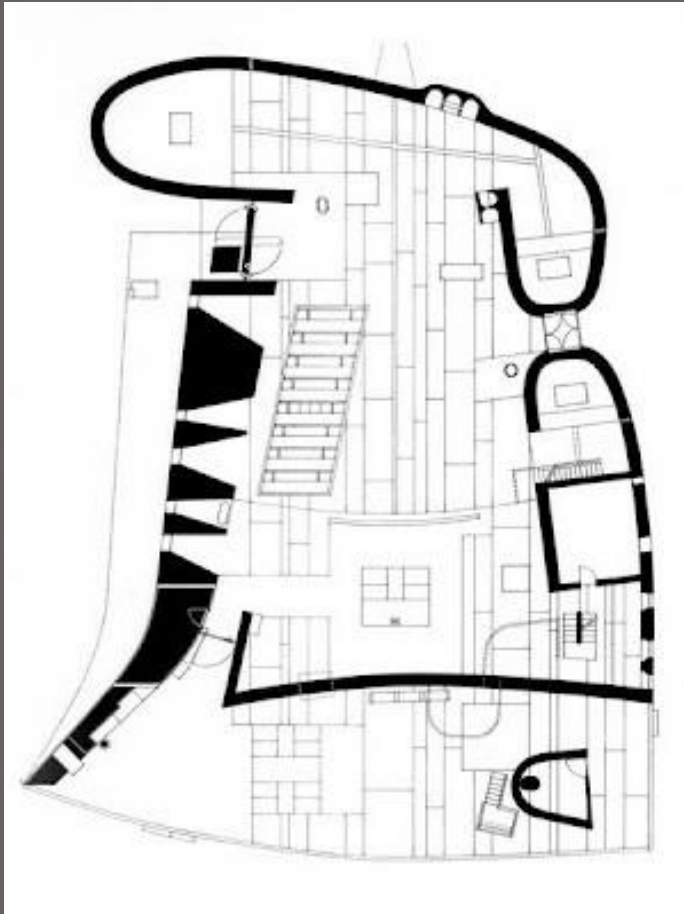


The heaviness of the walls and roof is misleading. In Le Corbusier's words: "The shell has been put on walls which are absurdly but practically thick. Inside them however are reinforced concrete columns. The shell will rest on these columns but it will not touch the wall. A horizontal crack of light 10cm wide will amaze."





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



The floor of the Chapel follows the natural slope of the hill crown towards the altar. This floor is constructed of a **cement paving poured in place**, the design of which is dictated by the **Modulor**.

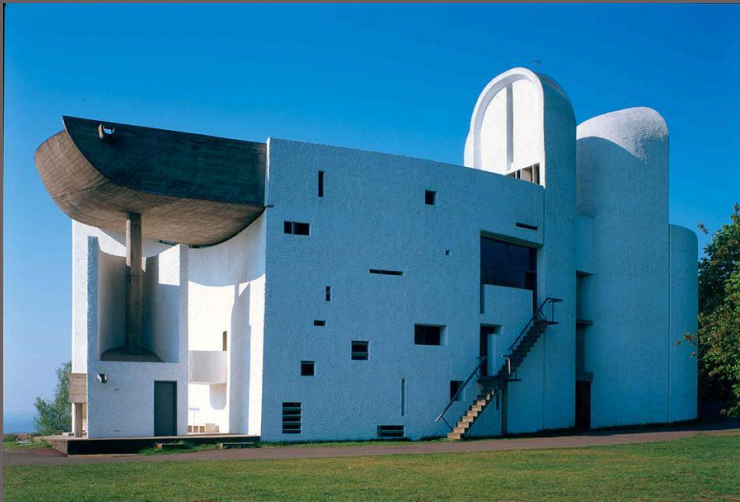
Certain parts, in particular those upon which the interior and exterior altars rest, are of beautiful white stones from Bourgogne, as are the altars themselves. The towers are constructed of **stone masonry** and are capped by cement domes.



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Simple, geometric shapes from Le Corbusier's earlier buildings have given way to more subtle, fractal, "natural" shapes here, leading to the description of Ronchamp as the first Post-Modern building.



The complex shapes at Ronchamp start from a theme of **acoustic parabolas**, playing a practical role on the east wall to reflect the sound from the outside altar for the pilgrims gathered on the hill.



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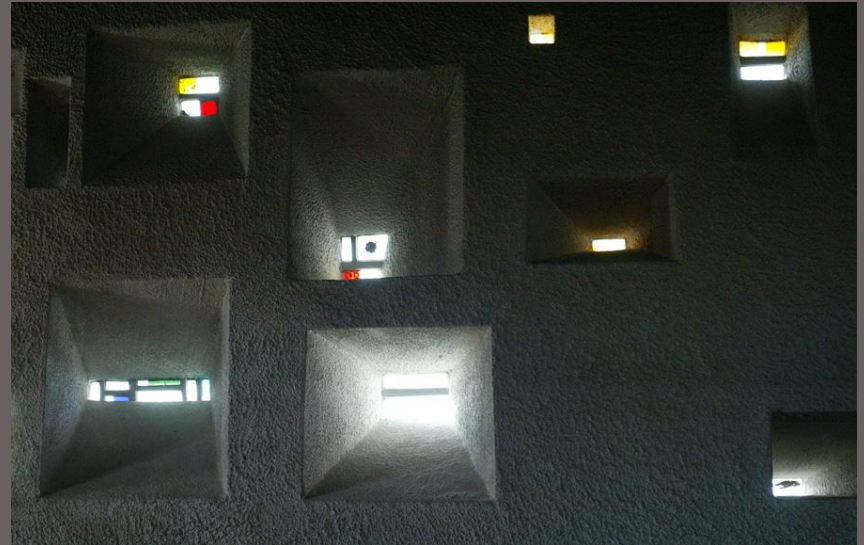


On the interior the walls are white; the ceiling gray, of unfinished concrete; the flooring of cement and stone; the benches of African wood created by Savina; the communion bench is of cast iron made by the Foundries of the Lure.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



Daylighting is furnished by a system of openings covered with **clear glass**, and, in places, with **colored glass**. This has no connection to **stained glass**; Le Corbusier considers that this form of illumination is too closely bound to old architectural notions, particularly to Romanesque and Gothic art. Therefore here there is no stained glass, but **glazing** through which one can see the clouds, or the movements of the foliage and even passers-by.



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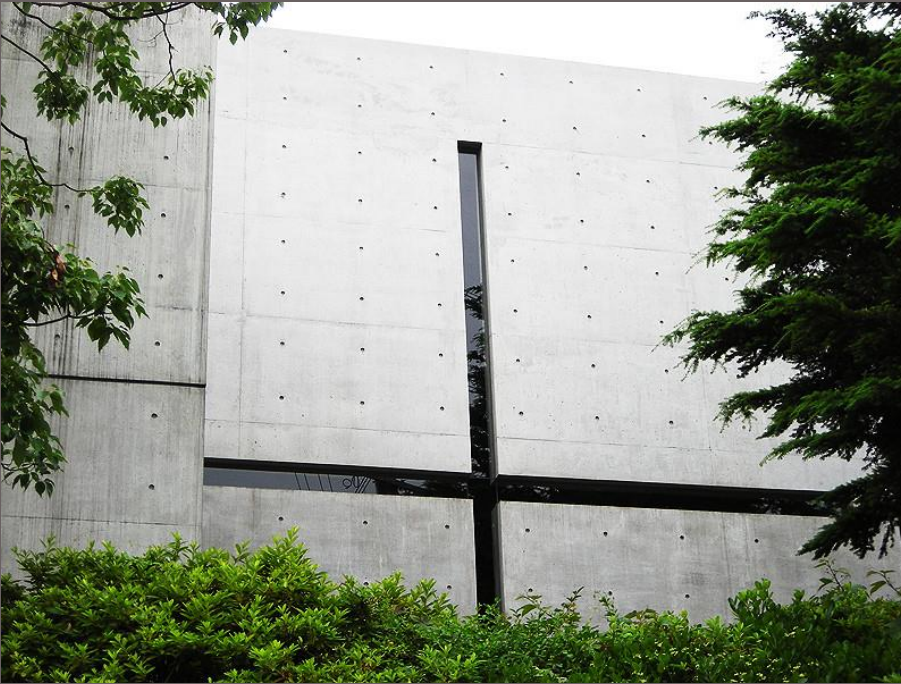


In the small town of Ibaraki, 25km outside of Osaka, Japan, stands one of Tadao Ando's signature architectural works, the **Church of the Light** (1987-1989).

The Church of the Light embraces Ando's philosophical framework between nature and architecture through the way in which light can define and create new spatial perceptions equally, if not more so, as that of his concrete structures.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



As a modern, minimalist structure the **Church of the Light** emits an architectural purity that is found in the details. The reinforced concrete volume is void of any and all ornament that is not part of the construction process.

The seams and joints of the concrete are built with precision and care by master Japanese carpenters, along with Ando, that have worked to create an immaculately smooth surface and accurately aligned joints.





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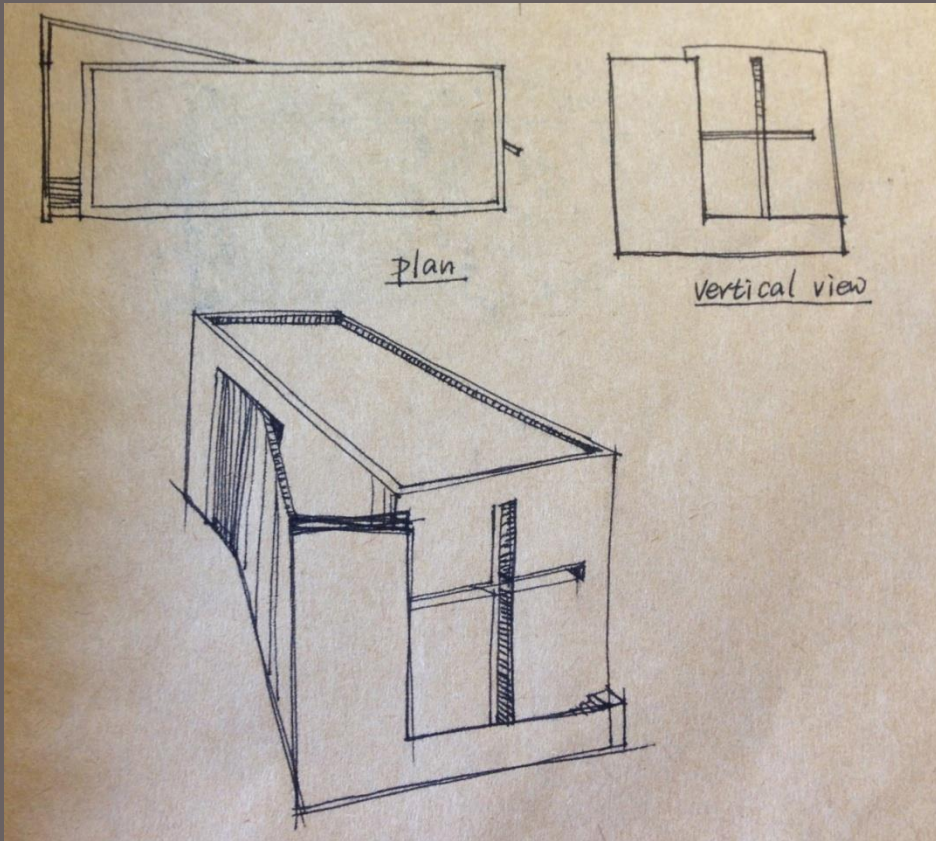


The **concrete construction** is a reinforcement of Ando's principal focus on simplicity and minimalist aesthetic; however, the way in which the concrete is poured and formed gives the **concrete a luminous quality** when exposed to natural light.

Ando's decision to place the **cross on the east façade** allows for light to pour into the space throughout the early morning and into the day, which has a dematerializing effect on the interior concrete walls, transforming the dark volume into an illuminated box.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



The Chapel consists of a rectangular volume of three cubes that are punctured by a wall at a fifteen degree angle that never actually touches the other walls or ceiling of the chapel.

The geometry is nothing more than six walls and a roof, a minimalist end point that requires a thoughtful process that is able to eliminate anything else that is not relevant.

This church is a simple building that makes the most of what it can, a testament to the phrase “less is more”.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



Found sloping down towards a small river in a clearing of beech trees, the element of nature apparent in all the architecture of Tadao Ando initiates subliminal experiences in this **Church on the Water** in Tomamu, Japan (1985-88).

To the west, the church is surrounded by hills and trees, and a resort hotel lies to the east. The church, with a form of two overlapping cubes, faces a large pond which steps down towards the small natural river.





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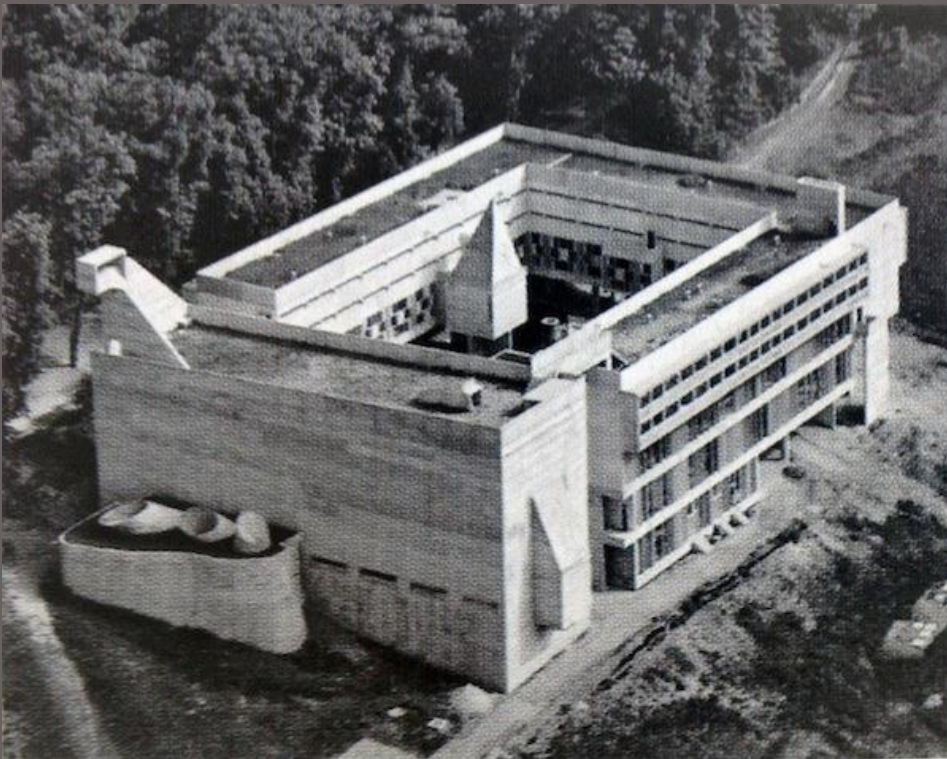
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It was under the instigation of Reverend Father Couturier (one of the men who have brought about the reawakening of sacred art in France) that the Dominicans of Lyon have charged Le Corbusier with the task of bringing into being at Eveux-sur-Arbresle, near Lyon, the **Convent of La Tourette (1952-60)**, in the midst of nature, located in a small vale that opens out onto the forest.



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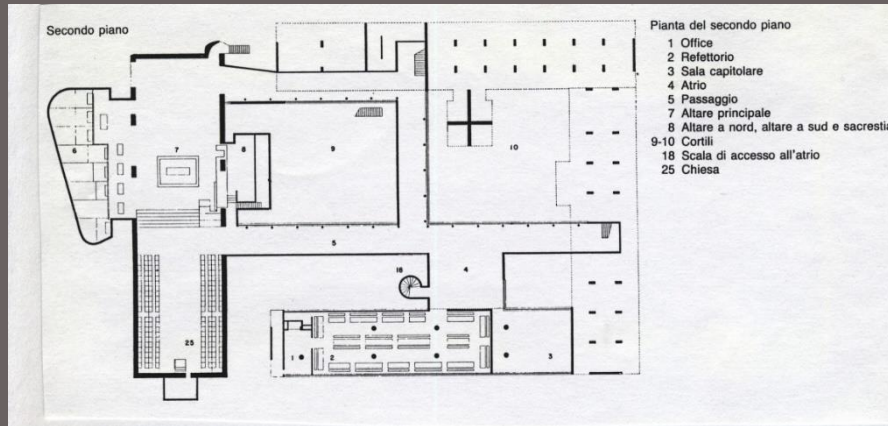
Just as for the Chapel of Ronchamp, Le Corbusier finds here a **program of human scale**, at the human scale. And it was his friend, the Reverend Father Couturier, who explained to him some of its profound resonances.

The buildings contain a hundred sleeping rooms for teachers and students, study halls, a hall for work and one for recreation, a library and a refectory.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



Finally the circulation connects all the parts, in particular those which appear in a new form (the achievement of the traditional cloister form is rendered impossible here by the slope of the terrain). On two levels, the **loggias** crowning the building form **brise-soleil**. The study halls, work and recreation halls, as well as the library occupy the upper level. Below are the **refectory and the cloister** in the form of a cross leading to the church. And then come the piles carrying the four convent buildings rising from the slope of the terrain left in its original condition, without terracing.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



The structural frame is of **rough reinforced concrete**. The panes of glass located on the three exterior faces achieve, for the first time, the system called: "the undulatory glass surface" (which is applied as well to the Secretariat at Chandigarh).



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



**Omotesando Hills** (1998-2006) is a large shopping and residential development that occupies much of one side of Omotesando Avenue, Tokyo's top fashion street. Any development on that scale in such a street is likely to be controversial, and **Ando's** Omotesando Hills has been much criticised - in part for turning its back on the Avenue and creating what its own developers describe as a 'second Omotesando' within its interior.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



Inside, the mall descends several stories beneath ground, but maintains a fair amount of daylight from a glazed roof over the triangular atrium. The strongest aspect of the design is the spiral arrangement of the floors.



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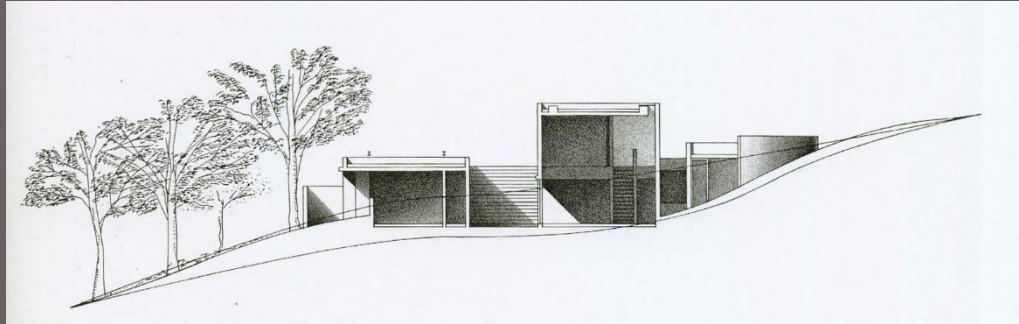
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Le Corbusier's collaborations in the late 1950s with **Iannis Xenakis and Edgard Varèse** on the La Tourette Monastery and the Phillips Pavilion in Brussels, concerned experimental investigations **of music, acoustics, and space in architecture**. But well before then Le Corbusier had already been exploring the relationship of architecture and acoustics in a metaphoric manner that he called '**visual acoustics**.' The main example is the Ronchamp's Chapel.



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Tadao Ando's design for the **Koshino House** (1984) features two **parallel concrete rectangular confines**. The forms are partially buried into the sloping ground of a national park and become a compositional addition to the landscape. Placed carefully as to not disrupt the pre-existing trees on the site, the structure responds to the adjacent ecosystem while the concrete forms address a more general nature through a playful **manipulation of light**.





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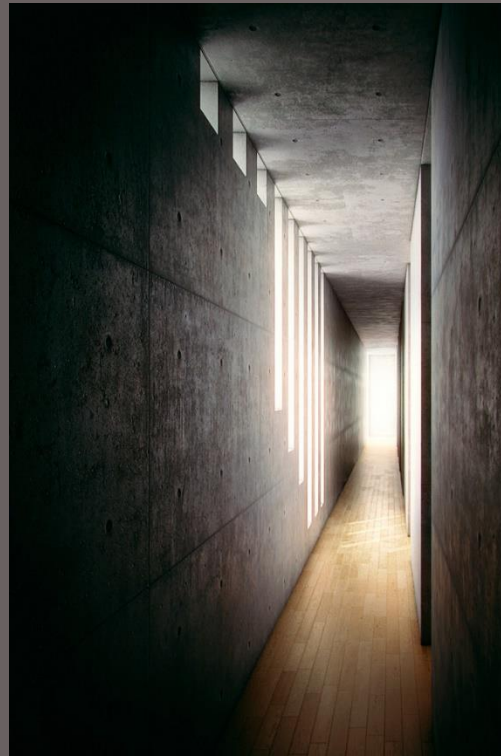
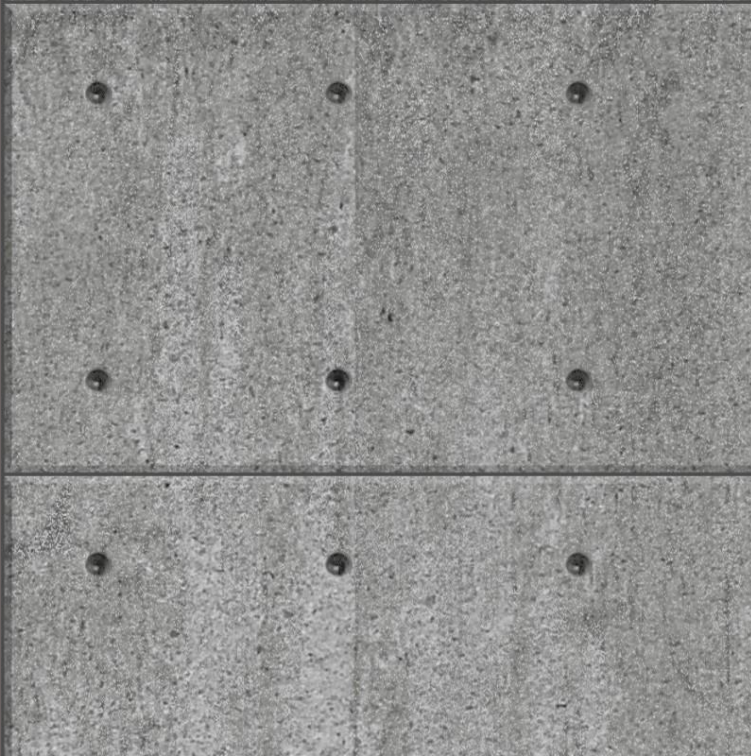


The **dimensions of the slabs** were specified to match **those of a tatami mat** - a traditional Japanese sleeping mat. These are made of rice straw and are the perfect size for a sleeping person.

They are often used in Japanese architecture as a **type of Modulor, or scale of proportions**, and Ando is also clearly influenced by this idea. Indeed, not only the concrete slabs, but the entire basic grid of the house takes design cues from these iconic mats.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



Narrow apertures have been punched through the façades adjacent to the exterior staircase and manipulate complex crossings of natural light and shadow into the interior spaces.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



House Azuma, 1975-76.

The exposed reinforced concrete used for this house is presented as the only ornamental structural element, both in the exterior covering and the interior walls, accompanied by some glass walls which look onto the patio and some wood finishes.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



As in the majority of his buildings, even in the **4x4 House** (2003-4) Tadao Ando used **reinforced concrete** for the structural system of the first construction and **exposed concrete** for the exterior walls and interior ceilings. He also used this material for the exterior ground surface. The frames of the windows are **aluminium and steel**. In the interior, the floors are oak and the walls are exposed concrete and painted sheets of plaster.



# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



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Ando was commissioned by developer Sumaida + Khurana to design 152 Elizabeth Street – a seven-storey, luxury condominium building in Manhattan's Nolita neighbourhood (2014-17).  
"I would like to make architecture that has that kind of subtle sensitivity."





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



The project features Ando's hallmarks, poured-in-place concrete, burnished, metal, voluminous glass, and a living green wall.



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Michael Gabellini the interior architect, enhances the sense of openness in each home, emphasizing the fluidity of spaces between the indoors and the outdoors, while still allowing for moments of privacy and separation.



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Tadao Ando has turned an old brick building in Chicago into an architecture-focused exhibition centre.

Located within a four-storey building, completed in 1929 in the city's Lincoln Park neighbourhood, **Wrightwood 659** is dedicated to exhibitions of architecture and socially engaged art. The inaugural exhibition, **Ando and Le Corbusier: Masters of Architecture**, held in Autumn 2018 explored the Swiss-French modernist architect's influence on his Japanese contemporary.





# LE CORBUSIER LANDSCAPE AND ARCHITECTURE



A concrete staircase that wraps around a pillar of the same material was added by Ando, and provides the primary circulation up the atrium.

