



## Arched residencies on Santorini island

### Description

# Jury Prize winner in the Unbuilt hospitality category at A+AWARDS 2022 organized by Architizer

June 30, 2022

The **Arched Residencies** are four autonomous summer houses designed by architectural studio **Iraisynn attinom** for a rocky plot in the area of Oia, on the island of Santorini in Greece. Also called Thira, it is the largest island of a small, circular archipelago in the southern Aegean sea, a remnant of a volcanic caldera.



## Design principles

The main objectives of the design are the protection from the northwest winds, the view towards the sea and the Mediterranean volcanic landscape, and the accomplishment of privacy among residents. The rocky plot faces north and is exposed to strong northwest winds that dominate the area. The goal of the design was, through the division of the main building volume into smaller ones, to create a number of outdoor spaces protected from the winds, but presenting views of the sea and the Cycladic landscape.

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The cubical houses follow the slope of the plot, creating a settlement resembling traditional ones located in the countryside of the island. The complex consists of 8 monolithic volumes of rectangular shape with arched ceilings, private yards, swimming pools, and semi-open spaces. The residential unit consists of two main volumes, one housing the living room and the kitchen, and the other housing one master bedroom, a bathroom, and a secondary bedroom on the upper floor.



## Sustainable construction

Another important objective of the design proposal is the sustainability of the construction. The structure is made from local stone masonry and arched ceilings. The goal is to use as many building materials of local origin as possible. The thick stone exterior walls of the buildings have a large heat capacity. For the wall covering, an ecological natural plaster, “Kourasani”, discovered in ancient Greece, is proposed in light shades. The off-white colour reflects solar radiation and prevents the overheating of the building. The *kourasani* plaster contains two ingredients: processed Santorini volcanic ash (Terra Pozzuolana) and Ceramic / natural stone powder, both known for their excellent hydraulic properties.



The main openings are placed on the east facade of the building. To the north, small openings contribute to the cooling of the houses during the hot months of the year. In the highest position, in the attic, a skylight facilitates the evacuation of hot air concentrated on the upper floor during summer nights. Additionally, wooden and reed pergolas and vegetation, such as climbing plants and trees, are used for shading.

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The dense structure of this new settlement of diverse volumes, enclosed courtyards, shaded passages, pergolas, etc. creates a cool microclimate for the inhabitants. The orientation based on summer winds, as well as water pools that accompany the cubical houses, contribute to the natural ventilation and cooling of the housing complex.



Terraces contribute to the collection and storage of rainwater, an issue of major importance in areas with water scarcity such as the Cyclades. In the rest area of the plot, local low-height Mediterranean vegetation, as well as some palm trees, will be planted.

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Architectural firm: **Iraisynn attinom studio**

Architect: **Maggie Gkika**



## About Iraisynn attinom

Based in Athens, Greece, the **Iraisynn attinom architectural studio** was founded in 2010. The studio's team has designed and implemented small and large-scale projects in both urban and rural areas of Greece, France, Belgium, and Cyprus. Their fields of expertise include architecture, restoration, urban planning, topography, scenic design, graphic design, industrial design, photorealism, and the creation of virtual reality experiences. The team believes that architecture must be in harmony with the surrounding landscape and human well-being.

*Images: iraisynn attinom*

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