House in Limassol

Hunting the Light

Project Overview

This House in Limassol is a semi-detached nZEB home that reinterprets bioclimatic design in a dense urban context. Located on a small urban plot and sharing its southern façade with an adjacent building, the project's main architectural gesture revolves around a central atrium that functions as a source of natural light, passive ventilation, and spatial cohesion. This inward-looking configuration enables the integration of greenery into the core of the home, enhancing permeability and user comfort.

Morphologically, the project is shaped by a minimal design vocabulary with clean lines and earthy tones that offer a moment of calm amidst the city's intensity. The layout separates communal and private zones efficiently while the spatial design maximizes daylight, cross-ventilation, and thermal comfort. Through a thoughtful balance of passive strategies and active energy systems, the residence achieves nearly zero energy status, setting an example of how performance and aesthetics can co-exist harmoniously within the limits of a compact Mediterranean plot.

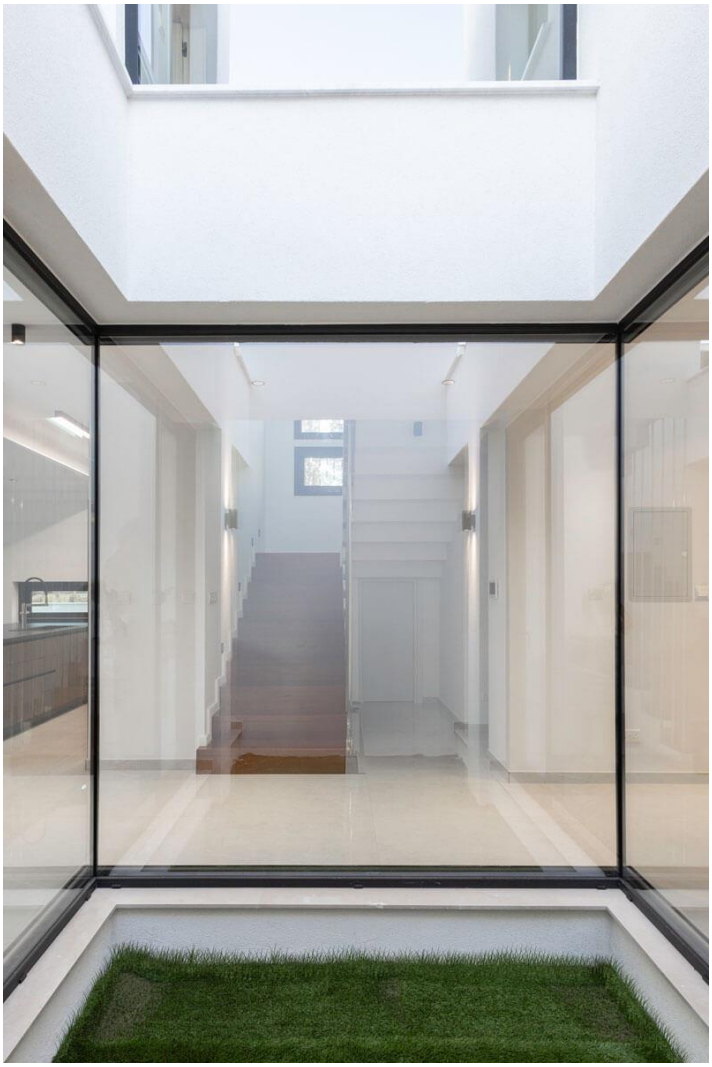
Project history

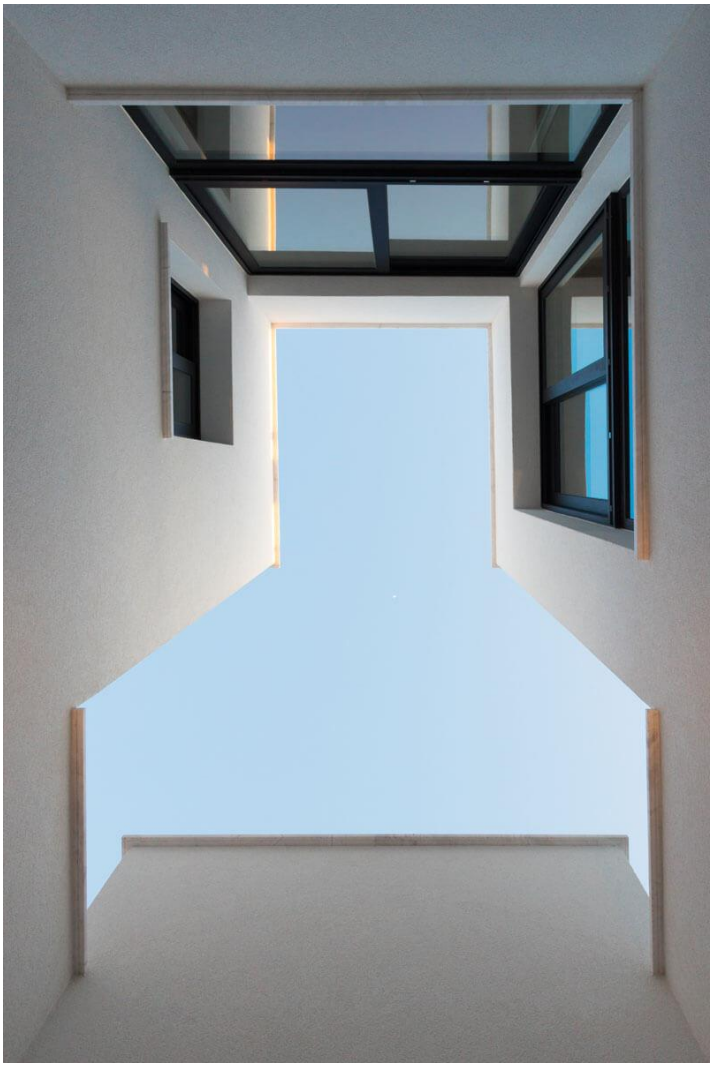
The project began as a response to a client's request for a compact, energy-efficient, and light-filled home on a complex plot in Limassol. The initial brief required full functionality while maintaining thermal comfort and low energy use, with special attention to daylight access despite the southern contact wall.

The architectural strategy aimed to turn this constraint into an opportunity, developing a spatial system anchored around a vertical void – the atrium – that channels light, fresh air, and spatial flow across all levels.

The design team, already experienced in sustainable building, used this project to push the boundaries of dense bioclimatic living, introducing refined passive and active energy strategies. The integration of the atrium as a solar chimney and the opening up of southern bedrooms through volume manipulation reflect the project's conceptual clarity and commitment to human-centric sustainability.

The project has been received with enthusiasm, showcasing a holistic and contextually sensitive approach to residential architecture in the Mediterranean climate.



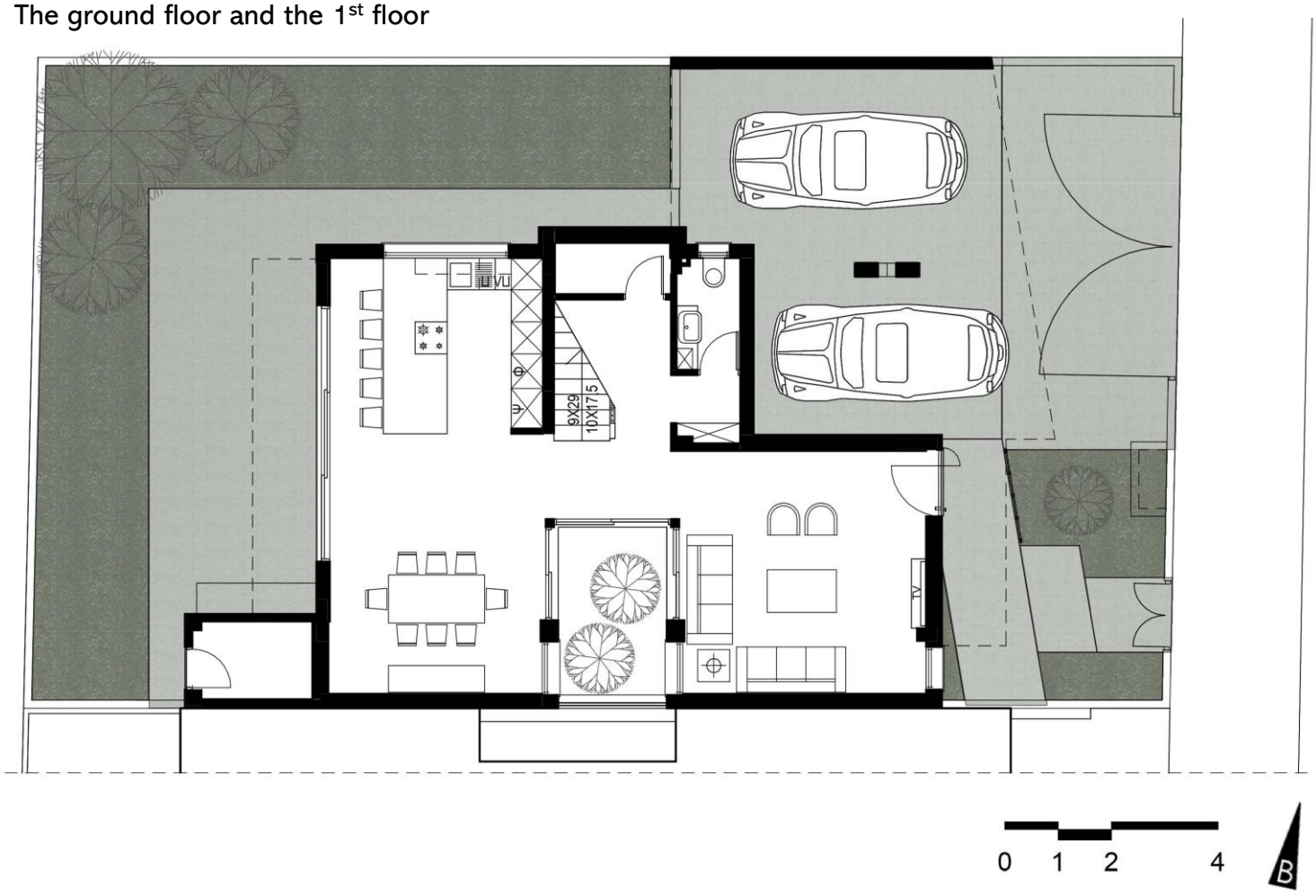


Interior Design & Materiality

The use of white and wood creates a bright and warm atmosphere. The wood enhances the natural feel, while the white adds freshness and clarity, achieving a balance between modern aesthetics and natural materials.

Floorplans

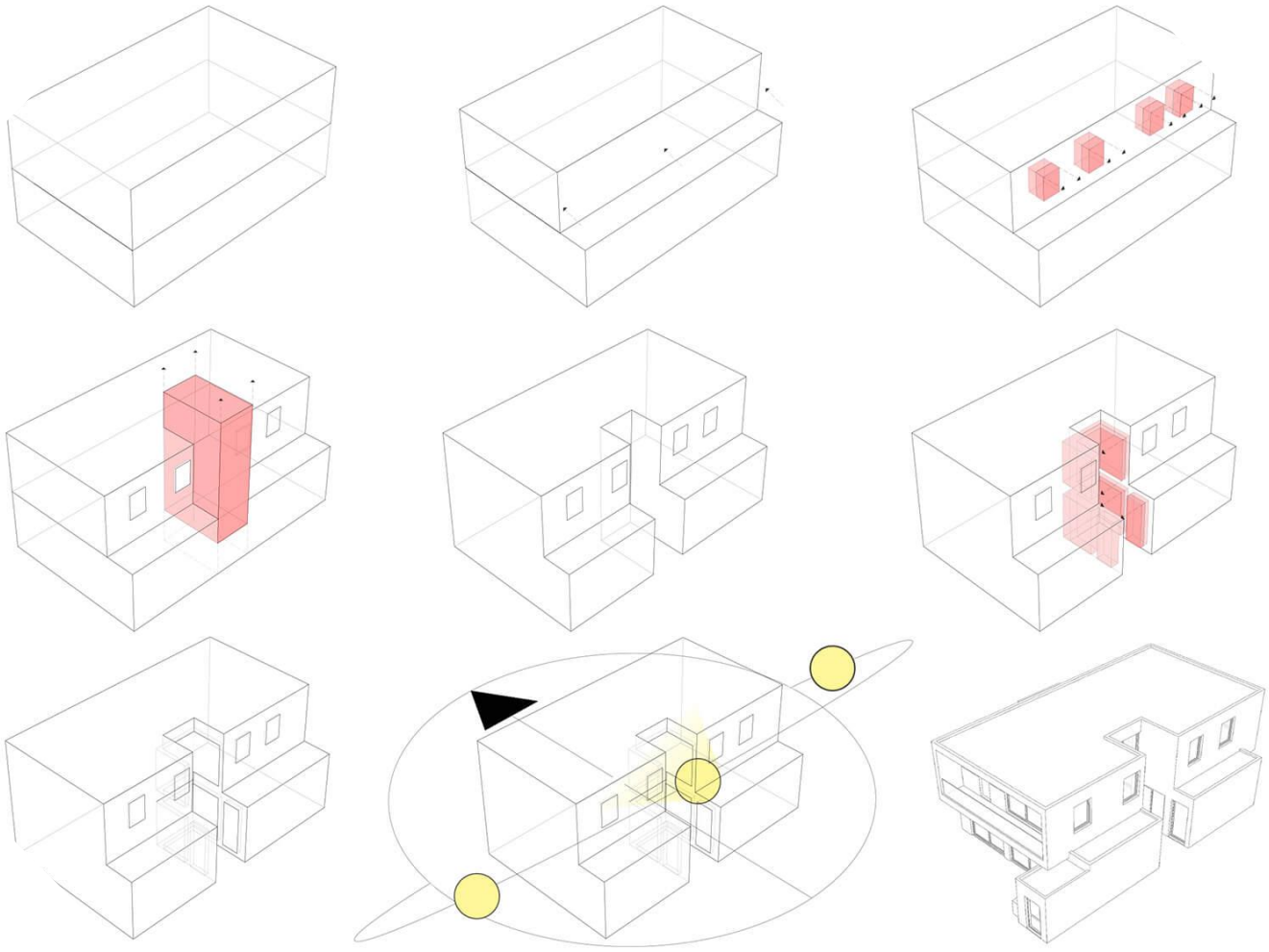
The ground floor and the 1st floor



Bioclimatic & Energy Approach

Beyond specific systems and technologies, the bioclimatic strategy of the residence is rooted in a broader architectural philosophy that values light, air, and spatial fluidity. The detached configuration of the upper floor enabled openings on the southern elevation—otherwise obstructed by the adjacent structure—allowing for full solar access in the bedrooms. The central courtyard acts as the spatial and environmental heart of the house, channeling natural light deep into the layout and facilitating cross-ventilation across multiple rooms.

This open void, rich in natural planting, balances privacy with permeability, while simultaneously functioning as a passive thermal element—helping regulate temperature throughout the year. Every design decision, from orientation and massing to the sizing of openings and material selection, reflects a deliberate attempt to harmonize indoor comfort with outdoor conditions. The result is a compact urban home that embodies the essence of bioclimatic design: responsive, efficient, and deeply connected to its context. Notably, this commitment to climate-conscious architecture yields measurable results—the fact that a building with an entirely obstructed south façade achieves just 63 kWh/m² in primary energy use and 19 $kgCO_2/m^2$ in annual emissions places it well within Cyprus's nZEB standards, demonstrating a balanced synthesis of passive strategies and precise mechanical interventions.



Bioclimatic & Energy Approach

The residence incorporates a multi-layered energy strategy with passive design at its core. The central atrium not only distributes daylight and integrates greenery but also acts as a solar chimney, supporting stack ventilation and summer cooling. Principal living areas are oriented to the south where possible, while service spaces create a thermal buffer to the north. Cross-ventilation is ensured through spatial layout and operable openings.