







Aerial view











Section 1.5000













GREEN AXIS

URBAN AXIS

URBAN PLACES

- LANDSCAPED EDGE
- ••• REGIONAL TRAFFIC

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Analysis Scheme





zero emmission comunity









zero emmission community

"Real Estate accounts for 40 percent of the global primary energy consumption. It is the greatest single source of energy consumption." Additionally, it produces one third of all greenhouse emmisions.

Minas de Alquife, which has been used for centuries as a site for extracting raw materials, currently stands as an empty monument in the landscape which is currently undergoing a unique metamorphosis.

The mine and the surrounding workers village operated and grew until 1966. It will now be revitaliyed and transformed into an innovative community planned around the most advanced criteria for sustainability. It will be an exemplary settlement where housing, green manufacturing, and the quality of working and living build directly upon one another.

The design in Alquife is based on three important goals:

- To conserve and reuse the historical buildings of the village where possible, and to preserve the qualitites of the urban pattern.
 To complement the traditional buildings and urban spaces with state of the art architecture
 - addressing the unique situation of Minas de Alquife
- To implement a wholistic urban design agenda with three fundamental mutually dependent parameters: Economic, Ecological, Social.





energy

Heat energy will be channeled to buildings through a centralized underground network. Approximately 2000 m² of solar collectors will be used to centrally collect, store and then be distribute to individual buildings.

area of photovoltaics

solar collector

















Drinking water in the Minas de Alquife will come directly out of the earth from the villages own wells. The water posesses an extraordinary quality and is directly suitable for consumption by the village and even has the potential for commerical exploitation.















biological clarification plant

















passive cooling

The conception and design of the new buildings is not only a matter of applying the newest technological advances, but also a matter of consciously building upon traditional technologies and typologies. This provides the village with an historical depth and at the same time builds upon simple techniques of dealing with the local climate which been have proved efficient for over centuries.

Thus are private housing complexes built around slightly sunken courtyards which are protected from the sun through textile roofing materials during the day and used to help store the evening coolness. This simple process suggests that the cool evening air can be preserved and used to cool the spaces throughout the next day.













P1_VILLAGE P2_ 5 STAR HOTEL P3_ SPORT AREA P4_GREEN ENERGY P5_CHALETS / GOLF







P1_Village aerial view









Land use diagram







P1_Village















Sport Hotel









Kneissl Hotel 5*







