

WATER AS PART OF THE SITE

Site & Water Concept near Kerames, Crete

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Site overview: largely undisturbed Mediterranean vegetation, irregular slopes and natural drainage structures shaped the early concept.

The site near Kerames on the south coast of Crete lies on a moderately sloping hillside, but its internal topography is far from uniform. Gentle areas alternate with a pronounced side slope, natural depressions and short level changes. A small surface watercourse enters the property from above; a lower-lying, naturally wetter area was intended to become a biotope.

The central question was not how to reshape the site for a standard development, but how a small-scale use could grow out of the site's existing topography, water and vegetation.

01 · READING THE SITE

Topography as a design parameter

The property has an overall medium slope, yet one side drops much more distinctly and the ground is locally rugged. This mattered from the outset: a continuous, smooth water route could not simply be drawn across the site, and large-scale levelling would have removed precisely the terrain character the concept sought to preserve.



A steeper section within the property. The uneven relief makes a completely gravity-fed water route unrealistic without either major earthworks or selective technical support.

LAYOUT

Smaller, staggered building positions were considered more compatible with the existing relief than a single flattened platform.

WATER

Gravity could be used where the terrain allows it; short adverse level changes would require pump-assisted lifts.

DISTURBANCE

Existing vegetation, drainage lines and access should guide interventions rather than be cleared first and reconstructed later.

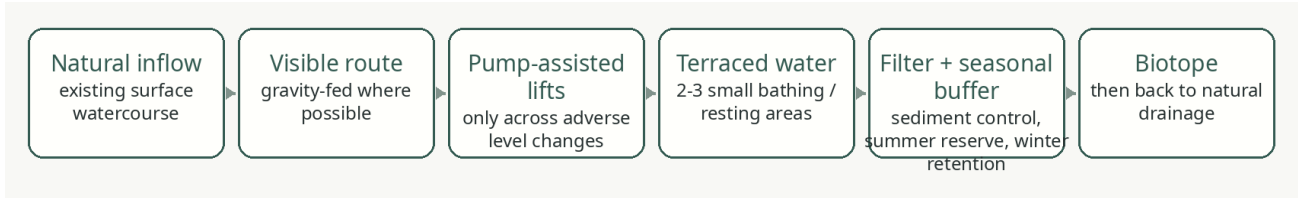
The watercourse as part of the site

The concept did not involve withdrawing water from the natural system. Instead, part of the existing surface flow was to be diverted visibly through the development and then returned to the lower biotope and onward natural drainage. The objective was to make water perceptible - visually and acoustically - while keeping it within the same local system.

02 · MAKING WATER VISIBLE

Natural flow, selective pumping and terraced water spaces

Where the topography permits, water would move by gravity. Where the rugged ground creates short counter-slopes or level changes, pumps were intended to lift the flow locally rather than forcing a smooth artificial gradient through major excavation. This selective use of technology was a key interface between the natural site and the desired spatial experience.



Along the accommodation units, the visible water route was intended to create a soft, continuous sound and a small pedestrian path. Two or three terraced mini-pools were considered as landscape-integrated bathing and resting areas rather than conventional swimming pools. Small cascades could use the existing level differences and help aerate the water.



A lower, more vegetated area of the site. Natural depressions and moisture patterns informed the thinking about buffering, filtration and the eventual biotope.

Nature determines the route; technology intervenes only where the terrain makes it necessary.

03 · DESIGNING FOR TWO SEASONS

Holding water in summer - holding back water in winter

South Crete presents two very different seasonal conditions. Summers are hot and dry, so available water is valuable and evaporation becomes a design issue. During the wetter winter months, by contrast, the system must be able to accept substantially higher inflows and short-term peaks.

SUMMER

A small permanently shaded technical water area was intended to keep water cooler, reduce evaporation losses and provide a protected reserve within the visible water system.

WINTER

The same area was intended to provide additional retention volume, receiving larger inflows and releasing them more gradually towards the biotope and natural drainage.

Sediment and water quality

Because the source is an unlined natural watercourse, rain events can bring sand, soil and suspended material into the flow. Sediment management therefore belonged to the concept from the beginning: coarse screening at the inlet, a slower-flowing settling area and mechanical protection before pump intakes were considered necessary to reduce wear, blockage and deposition in the downstream water features.

The aim was not to turn the natural flow into a highly engineered water-treatment system. Filtration was conceived as a practical safeguard for pumps and terraced water spaces and as a way of reducing unnecessary solids entering the biotope.



Rugged ground and loose material make sediment and maintenance considerations tangible.



The site remained largely unmodified; natural vegetation and surface structure were treated as assets to preserve.

04 · MINIMAL DISTURBANCE

Using the site before making new ground

The largely undisturbed landscape was both the main quality of the property and a practical constraint. Large-scale cut-and-fill, new construction roads and unrestricted heavy machinery would have changed the very character the development was meant to use. Limiting disturbance therefore became part of the concept rather than an afterthought.



Existing site access with a view towards the coast. Using available routes was an important consideration in reducing additional disturbance to the sloping terrain.

Use the existing access structure wherever feasible instead of cutting independent new routes through the landscape. Place smaller accommodation units in response to the terrain and minimise large, continuous building platforms. Keep earth movements local and preserve established vegetation and natural drainage paths wherever possible. Consider construction logistics early: access for machines, services and materials directly influences the ecological footprint of a hillside project.

From concept to first intervention



First accommodation unit during construction.

The first built unit made the trade-off visible.

Even a single building requires earthworks, service connections and working space immediately next to existing vegetation.

That observation reinforced a core idea of the concept: landscape-sensitive development begins with the location of buildings, access, services and construction areas - not only with later planting or exterior design.

05 · PROJECT LOGIC

Landscape, use and technology as one system

The most interesting aspect of the project was not any single technical component, but the need to connect different requirements at one real site. The concept evolved around interfaces: between slope and access, water and seasonal climate, ecological continuity and tourist use, gravity and pumping, experience and maintenance.

TOPOGRAPHY

Use the existing relief to organise building positions, paths, gravity-fed water sections and terraces rather than treating slope as a defect to be removed.

ECOLOGY

Protect the lower biotope, existing vegetation and drainage patterns and minimise the amount of disturbed ground needed to make the development function.

WATER

Keep the existing surface flow within the local system; make it visible, bridge selected level changes technically, filter solids and accommodate seasonal variability.

USE & EXPERIENCE

Let the qualities of the site - water sound, terraces, path, shade, vegetation and views - become part of the experience instead of adding a separate decorative landscape afterwards.

My contribution

I was involved in the early concept development between 2022 and 2024, particularly in the site analysis, the overall use concept and the water-and-landscape logic. My contribution included the visible routing of the existing surface flow, selective pump use, terracing and small water areas, seasonal storage and retention, sediment and filter considerations, the relationship with the lower biotope and the objective of limiting disturbance to the largely unmodified terrain.

Scope and unresolved questions

This was an early concept study, not detailed hydraulic or engineering design. Further implementation would have required specialist assessment of seasonal flow volumes and water quality, hydraulic and pump sizing, sediment behaviour, soil and erosion conditions, construction logistics and the relevant Greek planning and water-law framework.

A useful site concept does not remove complexity. It identifies which parts can be shaped conceptually - and which questions must be handed on to specialist planning.