

Remodeling the waterfront public areas of Sissi and Paralia Milatou, Eastern Crete.

Skoutelis Nikolaos¹

¹Assistant Professor, Technical University of Crete (T.U.C.),
Department of Architectural Engineering, Chania, E. Venizelou 127, 73100 Chania,
nskoutelis@isc.tuc.gr

ABSTRACT

The two modern settlements of Sissi and Milatos are located on the north-east coast of Crete, in the region of Lassithi, and form part of the development model of the Chersonissos – Malia area, to the west, in the direction of Iraklion. During the last twenty years tourist development has created low-profile hotel installations inside the settlements and small restaurants, constructed on limited-scale landfill, on the coast. Strangely, during the same period, the outermost coastal areas were abandoned.

The geological, water mechanics and flora analysis data of that straight area between the built and the sea were used as a basis of landscape information and dictated the elements of the architectural project. The proposal for the sustainable development of the two sites has been incorporated in our work. This proposal focuses on actions to rehabilitate and protect the coast and constructions that synergize with the concrete physical elements, aiming to enhance the presence of nature. The interventions are designed in accordance with the natural slope of the sites as well, on a second level, with the current economic activities.

In conclusion, the totality of the interventions focuses on boundary delineation and imposition of the public character and the aesthetic improvement of the waterfront landscape in the two settlements. It is crucial to achieve this target before the settlements reach building saturation levels, as has already happened in other seafront towns in the Mediterranean. The interventions consist of: **A.** removing the waste materials and illegal pergolas from the coast, freeing the natural rocks, **B.** remodelling of the coastal area through the introduction of a network of cycling paths, pedestrian areas and raised paths over sensitive sites, **C.** addition of new tavern pergolas in order to create a continuous and recognizable town profile along the waterfronts.

The totality of the interventions follow the principles of the geological movement and use materials from the site, in an effort to strengthen the sense of the open horizon with pathways and bridges, while intensifying the sense of inwardness and depth. The project's final goal is to design less construction, or minimize the new interferences as the result of more ethics. In the contemporary situation this is the only way to act and to receive multiple benefits, arriving at a new kind of economic progress as well.

Keywords: waterfront landscape – pedestrian walkway - local materials - development.

1. INTRODUCTION - THE SITE

The two modern settlements of Sissi and Milatos Paralia are located on the north-east coast of Crete, in the region of Lassithi, bordered to the west by the archaeological site of Malia and to the east by the archaeological site of the Hellenistic city of Milatos. The whole area is the last part of the brutally developed coast of the Chersonissos – Malia, based mostly on tourism. During the last twenty years, this tourist development has created low-profile hotel installations and small restaurants inside the settlements, constructed on limited-scale landfill on the coast.



Figures 1-2. Views of the seaside settlements of Sissi and Paralia Milatou.

Outside the two small centres two big hotels are isolated between unbuilt and uncultivated lands. Strangely, during the same period, the outermost coastal areas were abandoned. Everyday life involves the internal areas of the settlements, while construction debris and arbitrary accommodation in tavernas has invaded the seashore. In the last twenty years the authorities have succeeded in creating two moles: one in Sissi, in order to protect the natural port (geological fault) and another much bigger one in Milatos, as part of a new fishing shelter.

The difficulties of access on this inhospitable coast combined with the preference of mass tourism for sandy beaches have led to the degradation of the waterfront. After examining these conditions, the local authorities have tried to study the problem of the coast, in two ways. First, a study of the coastal mechanics led by Professor Fokion Matsoukis (Democriton University of Thrace) has stressed the huge difficulties in the construction of coastal protective boundaries. Secondly, the research carried out by the Department of Architectural Engineering (Technical University of Crete) to study the environmental and morphological conditions has highlighted the need for intervention in order to amplify the public character and strengthen the real inclinations of the site in these waterfronts.

2. RESEARCH ON SITE DATA

The architectural research has focused first on the geological background, as presence which conditions the history of the place, led by Professor Manolis Manoutsoglou, and then on the flora analysis data, led by Professor Zacharias Kypriotakis. These two aspects and information relative to them have been considered as factors which could condition the quality of the new interventions in contrast to the diffuse and arbitrary nature of the modern constructions, both public and private.

The object of the present research has been, first, the identification of all the elements which compose the specific character of the site and, secondly, the conditions and the dynamics of each individual spatial section. On a second level, thorough evaluation of these data has generated the specific protection measures and new architectural configurations which will enable remodelling and enhancement of that minimum natural soil which has become the coastal area. The whole proposal is based on the certainty that this new relation between the urbanized land and the sea will give rise to sustainable perspectives in the future life of the inhabitants.

That straight area between the buildings and the sea is rich in information to be used as the basis for landscape design and capable of dictating the elements of the architectural project. The interventions are designed in accordance with the natural slopes of the sites and, at a second level, with the economic activities currently present on the sites. A different use of the local resources has been considered for the sustainable development of tourism in the two sites. The architectural proposals have incorporated these aims, in order to create stability in the seaside landscape and in the various kinds of social intercourse that take place in it. At the same time, they focus on actions to rehabilitate and protect the coast by constructions that synergize with the concrete physical elements, in order to enhance the presence of nature.

3. ARCHITECTURAL DESIGN

For the architectural interventions in the two waterfronts the rotational fault fragments in Sissi and a more controlled confinement of the waves in Milatos suggested a different approach to the development of an architectural solution. It sought to give value to the geological background and link this with the dynamics of space in new equilibria.

To summarise, the purpose of the project is to delineate the state land to protect it from future extreme interventions and to assert the public character and a defined aesthetics for the waterfronts of the whole settlements. The authorities and the projects stake are in this way seeking to prevent what has usually happened in other touristic areas all over the country.

In the case of Sissi, the results of the beach mechanics research have justified the initial decision that no intervention should be made in limiting the seashore. The huge difficulties in the construction of any sea wall to protect the beach confirm the architects' thesis that here the relation with the beach is reduced to simply viewing the movement of the sea, with no direct relation. With this limited use the waterfront becomes more urban and at the same time very closed to its inner nature.

In the case of Milatos Paralia, two kilometres east of Sissi, the existing mole of the small fishing shelter should become part of the pedestrian walkway and the new interventions should demonstrate a soft relation with the existing situation.

To recapitulate, in both areas the architectural design proposes:

- **Removal of the wasted materials** from the beach in order to set free the natural soil, as terrain which is more closely linked to the sea than to the urbanized land.

- **Remodeling the waterfront as a predominantly pedestrian area**, as proposed by the initial urbanism project.

- **Incorporation of recreation and restaurant functions**, always bearing in mind the limits of tolerance of the natural area. These constructions will replace the existing ones, further back from the seashore. These wooden constructions will have half the area of existing buildings and uniformity will be given to them, in accordance with the total front.

- **Construction of different catwalks**, as extreme points for viewing the wild beach, trying to consolidate an alternative relation with the sea, not so widely used in the Mediterranean.



Figure 3. Sketch of the pedestrian area in Sissi, running along the beach.

In Sissi, the pedestrian walkways are designed as slabs, similar to the geological background materials, oblique in the same way, as if falling towards the sea. The slabs are large, bounded by iron lanes, containing the same or related materials as those of the geological support.

New pergolas for tavernas are designed to replace the existing ones, creating a uniform filter between the oldest part of the settlement and the sea. They will be wooden rectangular boxes elevated from the natural ground, open on all sides, leaving free the area for material brought up by the sea's movement.

In the inner part of the natural port, where the walkway becomes narrow, uniformity will again be given by iron pergolas and new hand rails, inspired by the native spontaneous constructions. Where the road which connects the eastern with the western side of the settlement passes over the stream, the walkway becomes a half-covered bridge, aligned with the main direction of the geological fault, dividing the whole intervention in two.

In Milatos Paralia, the architectural proposal envisages the two residential areas as denser around the old church Analipsis and the settlement where the port has been built. Two unbuilt areas rotate between them, where the design aims only at delineating the public street and protecting the seashore. The inclusion of the ugly view of the mole in the general scheme is solved by positioning a raised wooden path on it, in front of the new pergolas of the tavernas.

Even here, among the intentions of the project is the creation of a dense and recognizable profile for the built area in front of the shore.

The seawater mechanics demonstrated that a strong bend must be built in order to avoid pebble invasion during the winter period. Thus the grey pebble beach is bordered by large blocks of the local grey stone, in an irregular grid, combined with strips of iron, in order to create a barrier against the pebble movement. Coast protection and bathers' seats are combined for the continuity of the local character.



Figure 4. Sketch of the pedestrian area in Milatos bordered by natural blocks of local stone.

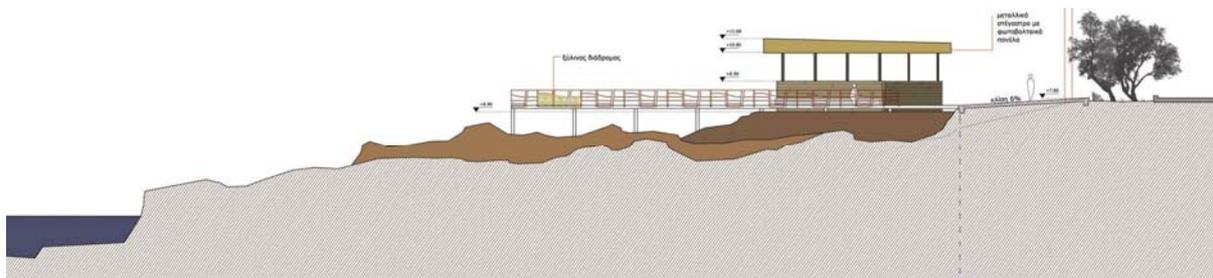


Figure 5. Section showing the pedestrian area, a pergola and viewing ramp in Sissi.

4. CONCLUSIONS

The desired protection of the natural environment and the upgrading of the aesthetics of the built part of the two settlements has been designed through an examination of the prospects given to the place by its natural elements. All the interventions follow the principles of the geological movement and use materials from the site, in an effort to strengthen the sense of an open horizon with pathways and bridges, while intensifying the sense of inwardness and depth.

Architecture tries to overcome the existing situation by using in a different manner the same materials that today degrade the quality of the site. Reinforced concrete and iron are used in the minimal quantities that enable a delineation to be made of that narrow part of the land

which belongs to the sea. Using as little architectural interference as possible, the result could serve to bring about a balanced relation between the built and the unbuilt, between sea and land, between man and nature.

Less architecture or, to put it better, less construction is the result of more ethics. In the contemporary situation this is the only way to act and to receive multiple benefits, arriving at a new kind of economic progress as well.

Collaborators: Em. Manoutsoglou, Professor, Technical University of Crete (T.U.C.)

Elias Gianniris, Assistant Professor, Technical University of Crete (T.U.C.)

Zacharias Kypriotakis, Associated Professor A.T.E.I. Crete

Students of the Architectural Engineering Department – T.U.C.

P.Athanailidi, N. Assimakis, E.Vlachiotis, E.Maistralis, Z. Frizi.

External collaborators: Flavio Zanon - architect, ENTEC E.– Environmental studies,
Maria Kampanou – Architect, Nikos Kampouroopoulos – Topographer.

REFERENCES

1. Angelier J. (1979) *‘Néotectonique de l’arc Égéen’* Thèse de Doctorat d’Etat, Soc. Geol. Nord.
2. Αγγελίδης Μ. (2002) *‘Οι πολιτικές της Ευρωπαϊκής Ένωσης για τη Χωρική Ανάπτυξη. Μια μεγάλη πρόκληση για την Ευρώπη και την Ελλάδα’* Πανεπιστημιακές εκδόσεις ΕΜΠ, Αθήνα.
3. ENVIREG (1994) *‘Οικονομική ανάπτυξη και προστασία του περιβάλλοντος σε παράκτιες περιοχές - οδηγός καλής πρακτικής’* Επιτροπή Ευρωπαϊκών Κοινοτήτων.
4. Θεώρημα Α.Ε. Σύμβουλοι Ανάπτυξης – Σ&Κ Φωτόπουλος και Συνεργάτες Ε.Ε. (2007) *‘Νομός Λασιθίου. Δήμος Νεάπολης & Κοινότητα Βραχασίου, Σ.Χ.Ο.Ο.Α.Π. Α΄ Φάση’* Β΄ Έκδοση.
5. Κλουτσινιώτη Ράνια (1998) *‘Περιφερειακά Χωροταξικά Σχέδια / Χωροταξικό Κρήτης’* (ΦΕΚ 1486/Β/10.10.03)
6. Μανούτσογλου Μανόλης and Νίκος Σκουτέλης (2010) *‘Ένταξη στοιχείων μορφοτεκτονικής έρευνας στον αρχιτεκτονικό σχεδιασμό’*, 9^ο Πανελλήνιο Γεωγραφικό Συνέδριο, Χαροκόπειο Πανεπιστήμιο, Τμήμα Γεωγραφίας, Αθήνα 4-6 Νοεμβρίου 2010.
7. McLeod Virginia (2008) *‘Detail in Contemporary Landscape Architecture’* London.
8. Moody J. and O. Rackham (1996) *‘The Making of the Cretan landscape’*, Manchester University Press.
9. Φιλίππιδης Δημήτρης (2004) *‘Φυσικό και δομημένο τοπίο’* in: *Η Ελλάδα της θάλασσας, επιμέλεια τόμου Δ.Κομίνη Διαλέτη*, εκ.Μέλισσα, Αθήνα.