International Symposium on the Conservation of Monuments in the Mediterranean Basin

(2024)

Proceedings of the 11th MONUBASIN (2024)

Restoration Study of late Ottoman Terzakis House in Nafplion

Georgios P. Antoniou

doi: 10.12681/monubasin.8176

Restoration Study of late Ottoman Terzakis House in Nafplion

Georgios P. Antoniou, Buildings restorer MSc UoYork UK, PhD candidate NTUA, Athens, Greece
antonioug@tee.gr

Abstract. The position of the "Terzakis house" in the town of Nafplion supports scientific findings that is probably a converted pre-revolutionary building, according to Ottoman construction and morphological standards[5]. On the Ground Floor in the western space, a HEA 200 metal beam will be supported under the floor wall with beam support with cross intermediate elements. All the interior walls of the main floor are reconstructed as light construction with visible coating as the existing ones, and according to the static proposal. Reconstruction of doors and windows of the west courtyard. The flooring of all areas of the Floor will be done with a double wooden element. It is planned to reconstruct a wall of light structure at the western boundary of the hall. To improve the static, a reconstructed section of a wall of a built structure corresponds to the surviving traces on the ground floor. Maintenance and repainting of floor and ground floor openings and the addition of double-glazing are needed. Repair and reinforcement in the SW corner of the building due to the (arbitrary) foundation here of a column of an adjacent building! The attic is very critical for the reconstruction of roof support elements of the small flat roof and of the surfaces of the construction. A fully reconstructed wall of lightweight structure at the roof boundary was also proposed. It is planned to reconstruct all parts of the wall at the staircase. Light walls defining the eastern zone will be aligned for static reasons. For the roof completion of its western edge and its protruding underlying wooden cover.

Keywords: Roof reconstruction, light structure wall, static improvement, alignement

1 Generalities

1.1 General Details - Description

The so-called Terzakis building is located in the middle of the street of the same name in the core of the city of Nafplio (Napoli di Romania) inside the former Venetian walls. A characteristic feature of the street in question is that it leads -transversely- from the usually busy coastal zone in IN Ag. Spyridon, where the first Governor of the Greek State Ioannis Kapodistrias was assassinated..

It is also noted that on the same route from the coastal zone, there is the Folklore Foundation of Peloponnese as well as the War Museum - Nafplio Annex, which is housed in the first building of the Evelpidon Military School. These two are together with the great historical site of I.N. Saint Spyridon.

It was the residence of the lawyer by training, writer, and essayist Angelos Terzakis.

Unfortunately, from the relevant research in the given time frame of the present study, it was not possible to find a historical depiction of the building during the 19th century. However, the bending construction of a wooden wall (split wall) can be seen in the corner, as is also the case in the SE corner of the Terzakis building.

The building is located approximately in the middle of the northern side of the building block there, i.e. on the southern side of Terzaki Street.

From the contrast of the historical maps (Fig 1 a and b) with the present-day zoning, it is documented that it is located on a main historical transverse road from the sea gate of the 2nd Venetian period of the Lower city to the area between the eastern outer fortifications and the eastern wall of the Upper city (Akronaflia)

Proceedings of the 11th International Symposium on the Conservation of Monuments in the Mediterranean Basin, 17-19 of June 2024, Athens, Greece
https://doi.org/10.12681/monubasin.8176

Fig 1a. Historical map of Nafplion after the new blocks (in South) and in red mark the position of Terzaki mansion [1] **Fig 1b** "Terzaki" mansion at Nafplion traditional town grid red circle (the blue cycle indicates the site of Kapodistrias murder! The yellow line indicates the position of the early Venetian *South* coastal wall. Yellow arc indicates the area of Nafplion central square!

1.2 Brief Initial Description

The "Terzaki building" is built in a continuous dense building system on the now homonymous street. It consists of a Ground Floor with shop uses (now?), while the First Floor has a residential function. The attic obviously served auxiliary uses of the residence, while its small (flat) roof is probably an element of post-revolutionary remodeling. A small courtyard to the west had access from the ground floor, and a sun porch was later installed in it. However, for more details about the spaces, see below.
Until the recent purchase of it by the Ministry of Culture by Mr. G. Didaskalos, it was owned by the heirs of Kalkounos, together with the corner property to the south border – a 3-storey flat-roofed building

2 Ground Floor Description and Pathology

2.1 Description

There is a large oblong space on the north side without communication with the rest of the section, with masonry walls, and access from the east side with glass windows partially restored. The wide area of the rest of the ground floor consists of the central part and the elongated southern part which has been fully integrated with the central part by the removal (1950's?) of the stone partition but with openings (?) in the wall.
[4] The linear staircase to the floor is also included in this section.

There is also a crudely constructed oblong room tangential to the SW corner - not maintainable - which probably functioned as a latrine (??) of the ground floor

The courtyard uncovered area in the western part of the plot is currently filled with a lot of building materials from the familiar building or the neighbors.

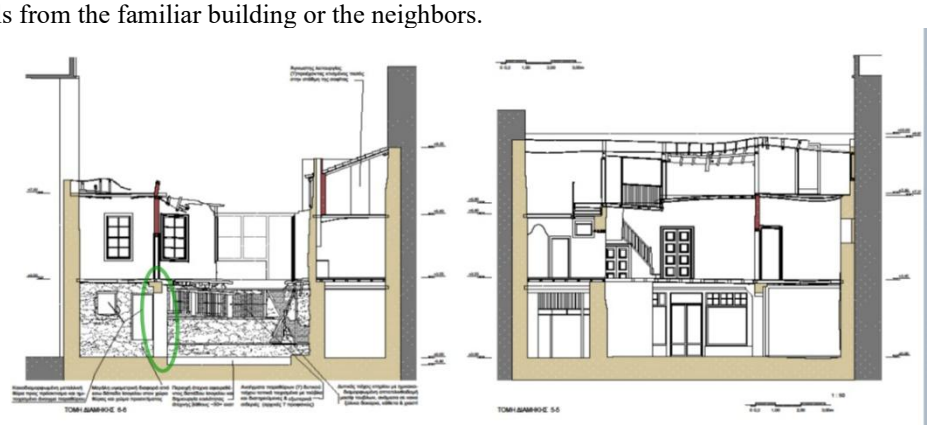

Fig 2. Longitudinal Sections of Terzaki, showing Ground floor, 1st floor, and Attic floor (B)
(the green ellipse, on where the newer reinforced concrete beam and pillars had been put)

2.2 Pathology

Important is the ill-formed wall of the north boundary to the property of Kalkounou to the south. The adjacent area of the courtyard area is full of ruins from the western part of the building and lots of rubble. Possible by initial floor at ±0.00 ??

The floor of the extension area is also earthen but unformed (probably with embankments). But the **B** (phase?) wall of the extension is also poorly formed with unskilled light construction, while the area west of it is completely unformed. The metal door to the annex and the half-walled opening of the window there are badly designed.

The western wall of the building is semi-poorly shaped brickwork of massive bricks between bad wooden beams, vertical & crosswise. Probably the same structure continued above. The openings of the windows (?) of the west wall are locally bricked and retain external ironwork (original ? apparently). There is a big difference in height from the ground floor to the door area and the construction ground! In addition, in the western central area of the ground floor, there is an artificially removed area of the floor, creating a cavity!? shallow depth ~ 30+ m.

The North-South internal wall to the south now has newer (pre-war or immediately post-war) concrete beams with a connection insert that apparently replaced an original load-bearing wall there. Support of the newer concrete beams apparently replaced most of the stone-built (?) wall there.

At the eastern boundary of the precinct, there is an artificially shaped metal glass window opening with a local widening of its original built boundary without possible skylights, with iron bars above. The central double (original?) entrance door is semi-well-preserved, as are the fixtures on either side of the case, as well as the wooden door to the floor, painted light gray. High skylights everywhere with iron bars and wooden cornices. Correspondingly, they also apply to the eastern opening of the **B** (phase?) oblong space, which is very difficult to access. In the middle of it there is a partition of a light structure made of metal (?) elements (artless), while the retreat of the wall to the S is possible for a future opening to the central space!

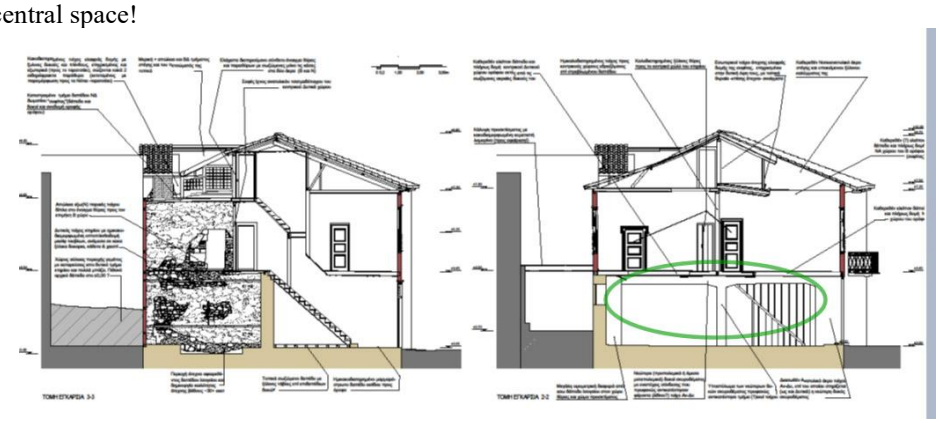

Fig 3 Tansverse Sections of Terzaki, showing Ground floor, 1st floor, and Attic floor (B) (the green ellipse, on where the newer reinforced concrete beam and pillars had been put, to expand ! ground floor shops area !!!)

3 First Floor Description and Pathology

3.1 Description

The listing, in this case, does not show the original structure of the building as estimated by the Architectural study, and the spaces are listed as they could potentially be provided after the restoration.

- The Central zone of the floor consists of a central "corridor - hall" and two rooms on either side (East and West). The one to the East leads to a balcony and the West to a completely destroyed exterior (or loggia? sunroom?) In the central corridor goes the staircase from the Ground Floor and it starts to the Attic (2nd floor) higher up.

- The North zone of the level in question has a room of main use in the NE, a middle space of small rooms next to it, one of which is a toilet and a laundry and kitchen array in the NW part. These spaces communicate with each other and with the aforementioned central corridor.

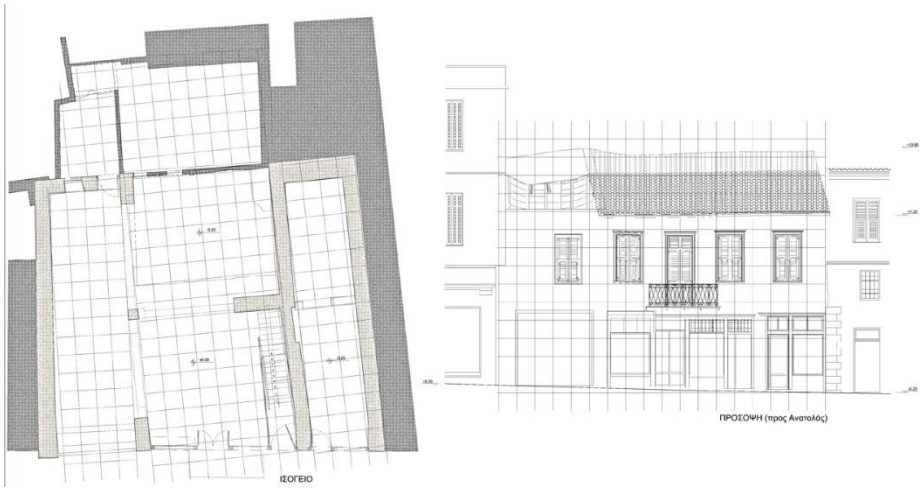

Fig 4. Metrological Analysis–Study according to Ottoman cubit *(zira)* of 75,8 cm valid in the late 18th century [5] © G. Antoniou

- The south zone consists of two rooms that communicate with the central corridor and each other. They used to have three windows to the South (it seems that there were on the ground floor)

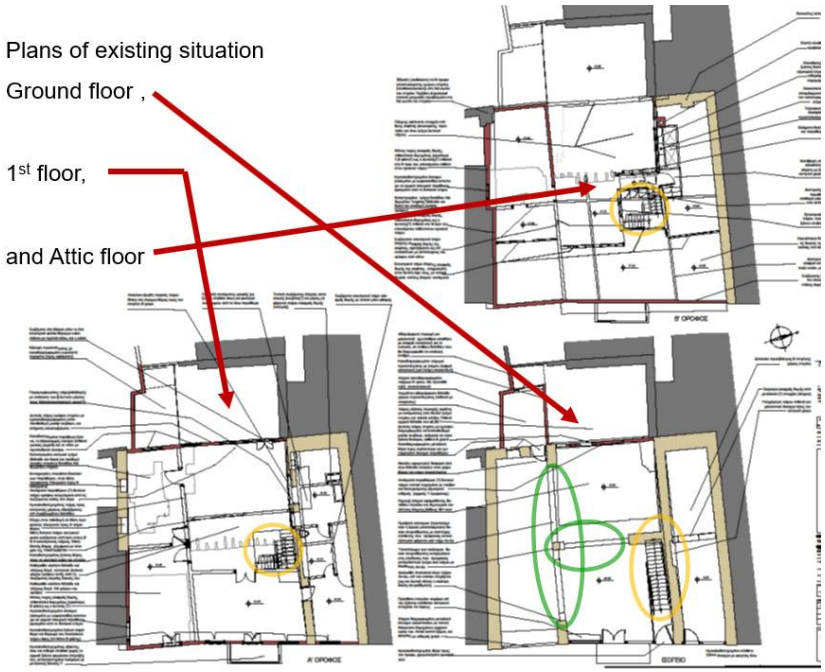

Fig 5 Plans of existing situation Ground floor , 1st floor, and Attic floor

3.2 Pathology

Starting again from the SW, the addition is covered with badly formed corrugated sheet metal! The west floor wall is ~ as level as the structure! The wooden windows are badly preserved, the northern one without blinds (probably originally louvered) and the southern one with paneled blinds! The window openings (?) of the west story wall are estimated from the surviving casements at the end. Only the one(!!) internal leaf-door window with a panel below is preserved in the north and the neighboring casement!

In the SW area, there are 2 niches in the stonework in place of an obvious lateral window to the S. The central part of the SW room of the building is damaged (floor and beams and ground floor ceiling structure are missing). The wall to the central areas is half-preserved but rests on a warped floor. Well-preserved wooden doors of the D area to the central area & hall of the building

The position of the (now missing) west wall of the central hall is defined by traces on the N & N interior walls. The position of the double door is according to data from the Service of Newer Monuments of Peloponnese and West Greece

A Removed - *missing* the floor and complete structure of the central Western floor area except for its preserved end beams, but also completely the counterpart of the SE room, the southern wall of the light structure, probably built (? later, phase B) as the Western (?). It has a semi-well-preserved opening (covered with plasterboard) which corresponds to an original side window, blocked by the adjacent building.

Half-preserved are the wooden windows and door of the Eastern wall (the South B phase?). It is in a semi-well-preserved condition, both the outer (upper) and the iron parapet, but without its original wooden supports, roughly replaced with metal cross-section upright P beams!.

The stone wall towards the central areas is deformed, with a deviation of 2/3 of its Western part to the South!. There is a loss of the outer (N) side of the wall next to the clear door opening to the elongated B space!

On the roof, there is an opening (with a wooden upper parapet) for lighting the space from the upper attic windows. In the elongated (eventually) B floor area, there are locally preserved unskilled constructions (kitchen?) and part of a (now) non-load-bearing wall of a light structure (a fragment). In addition, there are preserved internal walls of a light WC structure and a storage room, with only localized damage. Their doors are well preserved!

4 Attic (second floor) Description and Pathology

4.1 Description

In the North zone, there is an elongated northern space at a lower level with an elongated light opening for the kitchen on the floor below. The NorthEast end is not in use (it is within the Structural Element and ceiling suspension beams of the Floor). The central space (kind type of hall) next to the staircase also has access to the other parts of the attic (and the roof light is visible there)

The small (earlier–mid 19th?). terrace (which is completely missing!) was in continuation of the width of the stairwell space. The semi-used space to the east of the central one - towards Terzaki Street -facade- is essentially inside structural elements of the roof

The three spaces that make up the South zone are distinguished in the largest SW and in the rest of the part that had normal use. The only part with a ceiling was separated from its SouthEast part (and here effectively inside the roof's Structural Element) by a crude wooden wall. These used to have openings to the South, which are now walled up due to the adjacent three-story building. -The central part of the attic is a small 'isolation' hall.

4.2 Pathology

The placement (arbitrarily!) on the B floor (attic) of a single building column (brick construction) in the SW corner of the Terzakis building creates great static cracking problems in the SW corner of the building!

The South wall of the light structure was probably built (later?, B phase?) as the West(?), estimated at the S limit of the underlying stone boundary wall. The semi-well-preserved opening (covered with plasterboard) corresponds to an original side window, now blocked by the adjacent building. There is a damaged part of the SW floor of the "loft" room (floor and beams and floor ceiling structure)!

In the center of the N space, the surviving internal walls of the attic light structure are mostly related to those of the floor below. However, the internal walls of the light, unskilled structure of the attic towards the Eastern zone, have their western face plastered, with local doorways - also unskilled - openings.

What is preserved is the eastern wall in its upper part, where the load-bearing beams of the roof are located. The wall is structured with micro-bricks and a lot of mortar! Lower shaped is the NE floor with visible beams of the floor ceiling, as corresponding images on the other two higher floors to the S. It is separated from the N (central?) part by a ~60+ cm. and a lot of mortar

The composite opening of a door and 3 windows is partially preserved with only the lower fixed glazing bars and the wooden door also preserved, while the 3 opening elements above are missing.

From the arrival area of the staircase, there is a descent to the lower level (+6.40) with a well-preserved wooden staircase guarded by a wooden parapet with access to the central space of the attic through a paneled wooden door as well.

Minimally preserved is the complex opening of door and windows to the terrace, with only the casings at its two ends (B and N) preserved.

The wall of a light structure with wooden beams and plinths is poorly preserved, plastered on the outside (toward the terrace), 2 iron-barred windows are poorly preserved (also partially extended with

distortion towards the South - terrace). Behind (B) is a newly constructed (?) tubular gutter for the removal of debris collected from the now-destroyed tile roof battlement. He probably put it on the roof! . Built brick (newer?) chimney, projected independently in the space of the floor (but eventually also of the attic)

5 Proposed Intervention Works

5.1 Ground Floor – Intervention Proposals

Various interventions are suggested. Beginning with ND, we have:

Configuration of space for a canteen and proper construction of space for canteen service elements (sink, refrigerator, stoves, etc.) Configuration of background and movement level in the canteen and construction of 2 steps for access to the courtyard area. (±0.00) (see & Pr04 k Pr03). Configuration to the west of the low, covered space (~1.60) for semi-outdoor storage for the canteen at ±0.00 floor level with light construction.

The addition of 2 steps (2X17) is planned for access to the new enlarged door level and also to the canteen. The northern and southern parts of the canteen are made with a light metal structure and lightweight concrete on the roof on a trapezoidal sheet, with the addition of T131 reinforcement.

It is also proposed that the boundaries of the stonework openings there (ND) be repaired and the door and window/ironwork remodeled. More centrally, the reconstruction of the west courtyard wall (as on the Ground Floor) of light construction and reinforcements with tilting internal windows at a high level is proposed. Of the 4, 3, with the second from N to be represented colored (inside-out) as metal reinforcement, will be built internally with hollow beams and a cross configuration (see Static study).

In the western area, support for a metal beam HEA 200 will be placed under the floor wall with beam support with *X-shaped* intermediate elements (see static member)

For the entire floor of the ground floor, a configuration is planned with wooden longboards glued to a background of strong cement mortar with a gap of 8 cm for EM, on the Gross concrete placed on a layer of plaster for anti-moisture protection (see Pr06). In the elongated southern area, the construction of two WCs (men – women) is planned from walls with YTONG 7.5 million thick, with special glue, sanded, plastered, and painted.

Underneath the newest beton beams, additional wall thicknesses are planned with elements of plasterboard walls, 15 cm thick, with an internal galvanized metal frame. Between them, 22 million of space for storage, leaving access openings in the ground floor exhibition. Also, IT facilities for the future configuration of visitor entry control.

At the Eastern border, an entrance element with a fixed opening to the N will be formed, with a similar morphology to the preserved element at the N end of the long narrow space. Vertical HEA 200 probes will be inserted into the entire east wall (with horizontal elements high, see static study), they will not be covered with plasterboard around the visible parts.

Overall, on the East wall, repair and maintenance of existing doors and openings are proposed, as well as the addition of double glazing as well as the maintenance and repainting of the entrance door to the floor. In the elongated B space, a reconstructed transverse wall is planned in place of the light old one, with an opening and with YTONG elements 15cm & white thin coating.

Finally, in the NW corner of the central space, there will be a starting area for an elevator for the disabled to the Floor with a protective glass parapet of 2m! A layer of thin square semi-solid ceramic plates is suggested.

5.2 First Floor – Intervention Proposals

All internal walls of the floor are reconstructed as light construction with visible plastering as existing, and according to the static study

Configuration of upper canteen space level will be configured with thin square plates 30x30 and a thin garbiloid image on the roof-roof configuration mentioned on the ground floor.

Most important element!! Repair and reinforcement in the SW corner of the Terzakis building due to its (arbitrary) location on the second floor of a pillar of a neighboring building!

It is planned to reconstruct the exterior of the courtyard according to the surviving elements on the west wall cover it with a double wooden element of 2 cm (static), and build a simple wooden parapet of a mild gray color ~RAL 1012

Reconstruction of doors and windows of the west courtyard wall (light construction) according to surviving and imprinted elements and reconstruction of both dark ones with jambs (the surviving SW paneled repair) to the southernmost. Color ~ RAL1012

The central window (of the double section) will be represented in color internally and with simple nailing of its spiers externally.

The flooring of all floor areas will be made with a double wooden element that is 2 cm thick (see static study) on the floor beams. A reconstructed wall of a light structure is planned on the western boundary of the hall, with the reconstruction of its door in accordance with the same one as the East.

To improve stability, a reconstructed wall section (longitudinal at the southern end of the B area) of a masonry structure is planned in correspondence with the surviving traces on the ground floor counterpart.

Vertical HEA 200 surveying of the east wall (with horizontal elements high up, see static study) and covering the visible parts with plasterboard elements. (see reference to Ground Floor)

Maintenance and repainting (RAL1013 or 1012) of floor openings (and locally ground floor, see Ground Floor) and addition of double glazing. There will also be maintenance, repair & additions of wooden beams below, and recoloring (~ RAL1012, etc.) of exterior elements. Matt floor wood polishing at *Wooden parapet*

Fig. 6a Repair -reinforcement in SW corner (red cycle) in all floors due to the (arbitrary) placement of a pillar of a neighbor building! **6b** The formation of the 1st floor proves the relation with Ottoman similar layouts.

5.3 Second Floor – Intervention Proposals

Most important element!! Repair and reinforcement in the SW corner of the Terzakis building due to the (arbitrary) placement of a pillar of a similar building here!

Reconstruction of roof support elements and configuration of its surface as plans of Sections (P03) and Details (P06). There will also be a completely reconstructed light structure wall at the edge of the roof with a visible white coating on the outside (see Pr03 Pr04 & Pr06) Structure as provided in the static study.

The walls to the light structure terrace will be rebuilt with the reconstruction of their openings as a relative section (see Pr04& Pr5& Pr06 & statics)

It is also planned to reconstruct all the sections of the wall (staircase borders) according to the surviving elements in the wooden parts (&opening glazing in the opposite window to the south).

A newly constructed telephone service desk will be located in the central area of the attic. Center and CCTV surveillance unit (see PC). Also newly built small WC at the attic level in the small room to the N.

Further repair & strengthening of the eastern wall (upper zone) and reconstruction of the southern section in conjunction with the installation of attic floor beams. In addition, the floor configuration of attic spaces with a single wooden element 2 cm thick (see static study)

According to the same study, the light walls that define the eastern zone will be aligned for static reasons (P02 and Static study)

All the internal walls & of the attic (2nd floor) are reconstructed as a light construction with visible coating as existing, and according to the static study

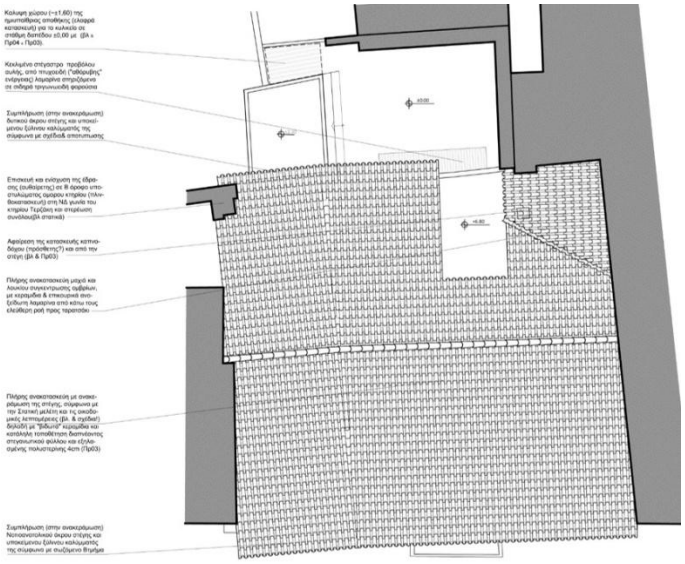

Fig 7. A full reconstruction with retiling of the roof planned, according to the Static study and the construction details i.e. with "screwed" tiles and proper placement of a breathable waterproofing sheet and 4cm extruded polystyrene

5.4 Roof Reconstruction - Proposals

A full reconstruction with retiling of the roof is planned, according to 7 of the Static study and the construction details (see & plans!) i.e. with "screwed" tiles and proper placement of a breathable waterproofing sheet and 4cm extruded polystyrene (P03 and P06)

Completion (in the brickwork) of the western edge of the roof and its underlying wooden covering according to drawings & impressions.

Completion (in the brickwork) of the Southeast end of the roof and its underlying wooden covering according to the preserved Northern part.

Complete reconstruction of rain gutters and hatches in the N NW section (see Pr02), with tiles & auxiliary stainless-steel sheet below them and free flow to the terrace

In addition, the sloped cantilever roof of the yard, made of pleated ("silent" energy) sheet metal supported on iron triangular trusses (P03), is mentioned

6 Conclusions - Evaluation

All the proposed interventions were made, taking into account the particularity of the building and the need to preserve its image as a preserved monument [2]. Also, all possible proposals were made to improve the energy footprint of the monument [3] by improving its thermal insulation capacity but also by integrating the strongest Electromechanical components, taking into account the provisions of the feasibility study for the integration of exhibition arrangements in the monument both on the ground floor and on the floor (of a different subject?) two exhibitions?

That probably elements of the building can be changed locally and on a very small scale due to the future Museological-Museographical study which is necessary,

References

1. F. Reinhold, König Otto Von Griechenland Die Bayerische Regentschaft in Nauplia 1833 – 34, Verlant Berlin 2015
2. Διεπιστημονικό εργαστήριο ΕΜΠ 2013, Α.Μοροπούλου, « Ολοκληρωμένη διαγνωστική έρευνα της Φθοράς και της Παθολογία, των Υλικών και των Κατασκευών. Ολοκληρωμένο, Σχεδιασμός Συνταξη Οδηγιών - Συμβατού και Επιτελεστικού Σχε/ιασμού Υλικών και Τεχνικών για τη Συντήρηση - Ενίσχυση Αποκατασταση των Κτηρίων."
3. J. Ochshorn, *"Designing Building Failures".* Cornell University.
4. D. Watkin. *Ιστορία της δυτικής αρχιτεκτονικής*. Εκδόσεις MIET, β΄έκδοση, Αθήνα 2007

5. A. Özdural , «*Sinan's arşin: a survey of ottoman architectural metrology*», 1988 Muqarnas XV: An annual on the visual culture of the Islamic world, Gülru Necipoglu(ed.), Leiden, E.J. Brill, 101-115.