

ST ANTHONY'S CHURCH

Cape of Rodon

Conservation design for wall paintings



Tiranë, Mars 2022

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Location

At the Cape of Rodon, known as Muzhli of Skënderbey, in between two hillsides on the northern portion of the Cape one can find the St Anthony's Church.¹ (fig.2,3).



¹ A. MEKSI, *Medieval architecture of Albania (VII-XV century)*, Tirana, 8th November, 1983, p. 135; M. W. E. PETERS, *Katholische Kirchenbauten in Albanien vom Mittelalter bis zur Gegenwart - Symbolik, Geschichte, Hintergründe*, in W. RAUNIG, *Albanien: Reichtum und Vielfalt alter Kultur*, München, Staatliches Museum für Volkerkunde, 2001, pp. 90-104.

The church together with a protection buffer is occupying the territory of 208.205.00 m^2 . The portion of the church itself is: 13.6x6.2 m or 84 m^2 while the height of the church is 4m.

Historical description

This church is one of the oldest Fransiscan seats. The church is also connected to a popular belief that it was built by the sister of Skëndërbeut to serve the nuns of St Clara. The church was vastly damaged in the earthquake in the mid 19th century².

The church is known as the church of St Anthony (dedicated to St Mary through antiquity) and its plan is a regular rectangle. The architectural composition of the church is made of narthex, nave and presbytery. (fig. 4)³.

The scholar I. Vitaliotis informs that from a technical point of view St. Anthony's church is the only church of paleological origin existing in northern Albania. He claims this basing it in content of frescoes, and while he dates them to the middle of the fifteenth century.⁴

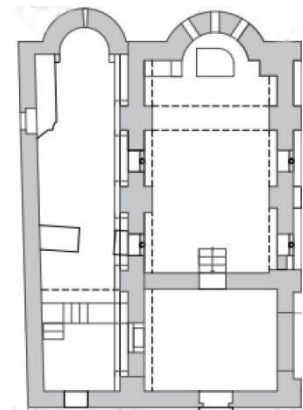


fig. 4

Architecture

In the architectural concept, the monument resembles the typology of roman-gothic style (fig.3) which is testified not only from the shape of its plan and from the presented volume but also from the presence of pilasters in the walls coupled with arches in the walls. Interesting is the usage of opus mixtum technique evidenced in walls.

The church walls are constructed with pumice stone masonry with lime mortar. In between joints and on sections of walls pieces of bricks and tiles are inserted, without any particular nor regular manner. Above the arches, two rows of masonry are evidenced to be built with the opus mixtum technique using pumice stones and large bricks.⁵

² A. Meksi, vep. Cit. f. 104

³ A. Di Giuseppe, *SU UN VELARIO CON AQUILA BICEFALA, CAVALIERE, AIRONI SHËN ANDONI, KEPI I RODONIT (SANT'ANTONIO A CAPO RODONE, ALBANIA*; A. Meksi, po aty vep.cit. f. 104

⁴ [I. VITALIOTIS, *De l'Adriatique venitienne au monde post byzantin. Les fresques de l'église latine Sainte-Paraskeve/Shen e Prende dans le village de Balldren, Albanie du Nord*, in «*Deltion of the Christian Archaeological Society*», p. 228]; ID., *Albania, at the cross road of cultural influences from medieval west and Byzant: some examples of mural paintings of the XV-XVI century*, in *Albania between east and the west* «*Albanological studies, History*», XIV(2014)], pp. 101-114

⁵ A. Meksi, vep.cit. f. 105

During the restoration works in the year 2000, specialists of National Institute for Cultural Heritage identified 3 construction phases: 1. Paleochristian phase (IV-VI century); 2. Roman – Gothic phase (14th century) and the latest phase pertaining the period of XV century⁶.

Wall painting, iconography

The wall painting which still exists at the interior of St Anthony's church is of a relatively small surface when compared to overall surface of the walls of the interior where we see it applied. However and since the church did not have a roof until the year 2000, the wall paintings must have suffered from exposure to elements, and therefore were badly damaged. Majority of the walls of the interior do not show any longer any traces of earlier existing wall paintings.(fig.5).



fig. 5

Among the best preserved paintings are the portions in the lower section of the apse below the level of the floor. The wall painting was never analyzed to draw conclusions regarding the composition of its iconography. Only the partial sections of images are available from quite trustworthy sketches developed by Theodor A. Ippen, who developed them over a 100 years ago.

⁶ See technical reports, 2001. National Institute for Cultural Heritage archive

Three different phases of the paintings are identified, but the one that we will take into consideration for analysis for is the latest portion of the painting, dated to XV⁷ century.

On the surface area of the apse one can evidence a portion painted containing a not usual composition of three different decoration motifs. On the left hand side, we can see a double headed eagle with open wings which resembles the motifs of heraldics and the whole composition is painted with red ochre pigment on the base colored in dark brown color. (fig.6). In the center of the semicircle of the apse we can see a figure of a rider. The rider does not have neither the beard nor the armaments. It is drawn in red color, with a touch of black as to distinguish the horse reins of a clucking horse advancing boldly from the right side, with a difficulty of restraining itself (fig. 6).

On the other side, we can see a group of birds which are occupying the right hand side of the composition. The birds are drawn having long hindlimbs and very hollow necks. The bird on the left is drawn in the grazing position, hence its head is lowered, the central one is drawn straight on its legs, however this portion of the painting is very damaged. (fig. 7). Located on the southern side of the apse, the bird is shown with open wings ready to take the flight. (fig. 8). The background is quite complex, with thick yellow and green lines depicting a drapery folded on the wall, and framed on its upper and lower side with yellow twisted belt suggesting the drapery brought together with red rings.⁸.



fig. 6



fig.7



fig. 8

The northern section still safeguards the fragments from the original painting, where on the major part of it, the typology of used motifs is not discernible. Located primarily in the corners of the lower sections (fig.9), we can easily observe two phases of the wall painting in fresco technique and which are applied one above the other (fig.10). The motifs shown contain the three crosses of the cavalry. (fig.11).

⁷ I. Vitalioti, *Les Albanais et la dernière phase de la période byzantine (xive- xve siècle). Quelques témoignages provenant de la peinture murale* in Byzance et ses voisins, xiiie –xv e siècle*, PETER LANG Bruxelles, Bern, Berlin, New York, Oxford, Wien. F.63-88

⁸ A. Di Giuseppe, *vep.cit.* f. 7



fig. 9



fig. 10



fig.11

The same approach is also observed on the southern side, where the fragmented and surviving painting makes it difficult to distinguish the decoration, but the trace of St. Francis' stigma remains also difficult to distinguish.

All the decorations from the western side have disappeared in time.

Technique and materials

Independently that the remains of the wall painting in the Church of St Anthony are few, the technique of application is easily identified. The wall paintings evidenced in site belong to the third phase of the painting that church used to have throughout the time.⁹ One or the other of the phases can as well be evidenced, however the remains of them can only be seen in portions where the surfaces of the third phase are damaged and reveal the traces of other phases below. (fig. 12,13). As we see the paintings, we immediately can identify them to be made in fresco technique. The painted layer are well connected to the base layer, even in the cases of earlier phases, no matter that in some segments they seem to be mechanically damaged (the damage is a result of their abrasion as to secure the final layer of painting to sit securely on the surface) (fig.14). The base layers seem solid. Seen with the portable microscope, one can discern the lime as a connecting material. Lime is mixed with sand of a differing granulation. (fig. 15).



fig. 12



fig. 13

⁹ I. Vitalioti, *Les Albanais et la dernière phase de la période byzantine (xive- xve siècle). Quelques témoignages provenant de la peinture murale** in *Byzance et ses voisins, xiii^e –xv^e siècle*, PETER LANG Bruxelles, Bern, Berlin, Neë York, Oxford, Wien. f.63-88

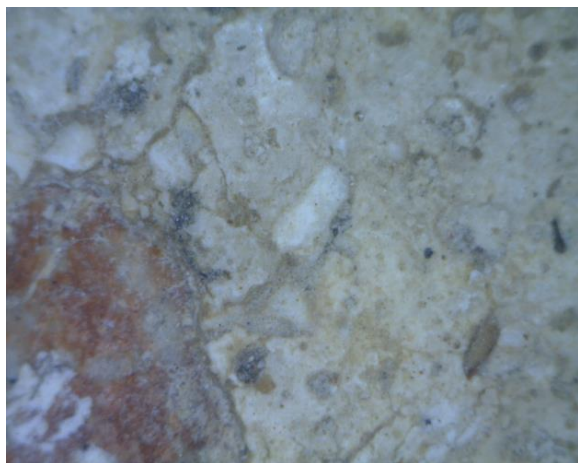


fig. 14



fig. 15

Former conservation interventions

St Anthony's Church has undergone several restoration interventions. The interventions were primarily aimed at the building itself, and were undertaken in the years 1978, 1983 and 1986¹⁰. The latest and more complete intervention was undertaken during the years 2000-2001. The church underwent holistic reconstruction which included the consolidation of walls as well as addition of the missing roof. The wall painting as well underwent conservation intervention. Given the church was in a ruin, and exposed to elements with no roof to that point, the paintings have suffered severe and irreversible damage. Therefore the immediate conservation process consisted in: - removal of the lime deposited on the surface of the painting; removal of the plaster added above the painting, cleaning of deposited salts, cleaning of the dirt accumulated on the surface and consolidation of the edges of the remaining lacunas of painting.¹¹.

Problems and pathology/damage

The wall painting in the interior of the Church of St Anthony reveals complex problems to be taken into consideration for its conservation. Darkening of the painted surfaces is limited to the northern section of the apse. The abrasion of the painted layer is widely spread across all the painted remaining surfaces. The reason for this are the elements to which the painting was exposed while the roof was missing. Abrasion of the painted layers is a pathology that is evidenced in the

¹⁰ Arkivi IKTM (dosja kisha e Shna Ndout, Kepi i Rodonit)

¹¹ Relacion dhe projekt propozim për restaurimin e pikturës murale Arkivi i IKTM nr prot 223, 17-04-2001 dhe informacion mbi të i datës 15-10-2001

sublayers, meaning in the base layers for the latest painting phase. The missing roof over a long period of time has as well affected the partial detachment of the base layer from the masonry.

The presence of capillary humidity has as well resulted in creation of layers of stains of moss which is still active and which can be easily observed on the remaining painted surfaces and especially on eastern and northern portions. The painted layer appears fragile, and in several of the zones of the apse as well as on the northern sections of the walls is risking to detach from the base layers. The presence of salts is also one of the problems that have affected the painted layers in the Church of Rodon, where approximately 70% of the painting is affected. Additionally, on the surface of painted layers the layers of overlapped plastering from earlier maintenance interventions are as well present and visible.

The voids in between the base and masonry are as well present. The superficial deposits are as well evidenced on the painted surface, and those deposits are of different nature. (some are solid while some are not). Mechanical damages are as well evidenced on the painted layers below the layers of the 3rd phase. The new plastering made in 2000-2001 is still preserved as well as consolidations of the edges of the remaining portions of painting. The consolidated edges however are often found not to carry on with its function, since plastering together with painted layers are detached and have fallen off. There are very few repaintings evidenced and are primarily in the area of the apse (Annex 1 – showcases pathologies and damages)

Conservation proposal

Consolidation

In the case of the paintings of Church of St Anthony, the consolidation of the remaining painting should be considered in 3 following aspects:

- 1.The stabilization of painted layer
- 2.The consolidation of the base layer against mechanical damage and abrasion
- 3.Establishing cohesion among the base layer while being extra cautious in the areas where there are layers of former periods.

For the stabilization of the painted layer, the intervention would consist in treatment of it with acrylic resin Acryl 33 distilled with water. Mowital B 60HH as well is suggested, since its responsive to reversibility, it endures the aging, and its application secures minimal shrinking. It can be applied as distilled in alcohol in differing % as per application surface, and it's reversible since it can be removed both by using alcohol or acetone. It can as well be used when distilled in water, depending on the application. Melinex is applied further and supports the stabilization of adhesion of the painted layer.

Regarding the consolidation of the base layer, abrasion and the damage to base layer and the painted layer, the Nanorestore shall be used. It is important that the materials used in the consolidation operation do not change the chemical and physical characteristics of the original materials and constitute a cause of chemical degradation of the original material, neither at the time of injection nor in the subsequent stages. Based on the conversion of hydroxide to calcium carbonated by the action of atmospheric carbon dioxide, Nanorestor is the "par excellence" consolidator compatible with frescoes but also with other materials with a carbonate based material mixture. As such, Nanorestor has excellent permeability to water vapor, does not imply chromatic variations or glossy effects, and maintains hydrophilicity and the absence of hydrophobic surface films.

This process should continue with the appropriate fixing and adhesion of the base layers to the support. In this case, the adhesion between the base layers must be evaluated with a non-invasive study (acoustic survey) which allows the assessment and localization of the "gaps" corresponding to the points of detachment both between the base layers and the masonry. Consolidation consists of performing localized micro-injections of a consolidator selected on the basis of compatibility with the component materials of the wall structure. For this we suggest PLM, a consolidator based on natural lime without salts and additives with selected aggregates and other additives that modify the rheological (structural and mechanical) properties.

Cleaning of the painted surface

The cleaning intervention consists of a series of operations aimed at removing foreign substances from the surface of the painting, which cause additional layers of impurity (such as recent surface deposits, stains, chromatic changes, biological deterioration and unsuitable materials) and therefore affect the aesthetic appearance of the painting. The cleaning needs to be undertaken and to remove the remains of lime currently observed at the painted layers.

For the paintings of the Church of St Anthony, careful test pits should be conducted on the north sections and south sections adjacent to the apse where we can see many layers of lime and plaster.

The layers of painting from different undefined periods can be identified on both sides of the walls, and those are recommended to be evaluated and studied carefully.

Cleaning is a very special and delicate process as it is an irreversible intervention, and must be evaluated very carefully on a case-by-case basis. The cleaning intervention shall be directed at removing the foreign substances, without affecting the original material and while respecting the historical patina of the painting. Therefore, the removal of unstable inadequate surface materials will be done with soft brushes.

The removal of materials firmly attached to the surface (layers of lime or superimposed plaster) will be carried out mechanically using spatulas and scalpels. Darkening of painting surfaces will

be treated with Tween 20 - neutral non-ionic surfactant derived from ethylene oxide. Tween 20 is soluble in water, alcohol (ethyl, methyl, isopropyl), ethylene and propylene glycol.

Biological deposits as well as numerous salt deposits evident on the surface are meant to be treated with the solid homogenized gel obtained from the double baking of AgarArt (Nevek) usually used for cleaning of the surface of the fresco in this case. Nevek in this case can also be mixed with suitable solutions such as ammonium carbonate in different percentages (according to the situation on site). Nevek strongly retains water and can be used to absorb dirt even from moisture-sensitive surfaces.

The layers of paintings of different and undefined phases can be found on both sides of the walls. Those shall be carefully observed and analyzed. Careful surveys and subsequent stripping of the walls from the new superimposed plaster will reveal the remaining painted surfaces on both walls, which will then be subject to scientific analysis for the identification of pigments and base layers.

Plastering/filling of missing plaster surfaces

After stabilizing the surface through consolidation, as well as after cleaning of the surface, the necessary filling of lacunae and voids shall be undertaken. As currently observed the different stages of restoration have brought a number of different interventions and materials to appear on the surface. The removal of old plasters and the infills of gaps and surfaces with a new plaster similar to the original plaster shall be undertaken. Removing the old infills shall secure the structural stability of remains of the wall painting and will make the surface more readable.

Regarding the edges, those are added during the restoration interventions of 2000-2001 and they are added to all remaining portions of painting. Independently from the fact that sometimes they appear to be very thick and not very well aesthetically integrated they did perform their protective role. And the ones we can evidence are well connected with the masonry base, while the layers added on top of them have degraded in time.

Regarding the stucco, those are limited and only evidenced on the eastern portions. The application of stucco for filling the lacuna of painted surfaces shall be undertaken as well as their unification with each other. The removal of the edges of the remaining painted layers shall be considered, especially in cases where they are resulting to be too hard and too wide.

It is evident that some of the edges are not having a protective role, as part of the preparatory layers they were carrying has fallen and no longer exists. On the other hand, they are not suitable from an aesthetic point of view, attracting more attention than the very part of the remaining painting for which they were created.

As for the edges or the remaining painted layers, those would be consolidated using the same mortar composed of lime and aggregate, while respecting the materials and ratios of the original plaster.

Aesthetical integration

With the completion of the plastering process, and the integration of the missing plaster, stage of aesthetic (pictorial) reintegration shall commence with the aim to restore and allow for adequate reading of the artwork. This will be done by creating a chromatic connection while adding light layers of neutral color on portions of gaps in the painted composition and in portions where the painting has eroded beyond recuperation.

The methodology and technique of reintegration shall be evaluated case by case, keeping in mind the fundamental criterion of conservation intervention, the one of reversibility. In this particular case, special care shall be given to this operation/intervention considering the extent of the damage observed on the painted surface and the observed abrasions of color. The Windsor&Newton watercolors and brushes with natural bristles shall be used for this intervention

Recommendations

Before the conservation intervention starts, following analyzes shall be conducted:

- Stratigraphic analysis with preliminary description of the sample observed in a stereomicroscope, cross-section preparation and study under a polarizing microscope in reflected light, with a full photographic documentation.
- Identification and chemical microanalysis of inorganic pigment with an energy dispersive electron microprobe (EDS).
- Liquid chromatography analysis (HPLC) with UV detector for the identification of organic pigments.
- Analysis of composition of degrading elements (dust, copper dust – to understand whether they are still affecting and adding to deterioration)
- Biological analysis
- Segregation of plaster ratio - Preliminary description under a stereomicroscope, thin cross-section preparation and study of plasters and plasters under a polarized transmitted light microscope including a full photographic documentation.

The results from the aforementioned set of analysis shall be checked once again against the materials suggested for conservation, as to draw a final list of conservation materials. (No major changes are expected given that none of the proposed conservation materials have a compromising impact on fresco painting we are dealing with in the case of St Anthony' s Church in Rodon

Annex 1 Photos of wall paintings as well as as layers:








The cost estimate does not include the costs of analysis.

Annex 2

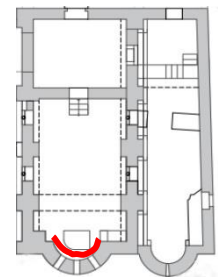
St Anthony Church in Rodon

Conservation of wall paintings - documentation of the apse 2022

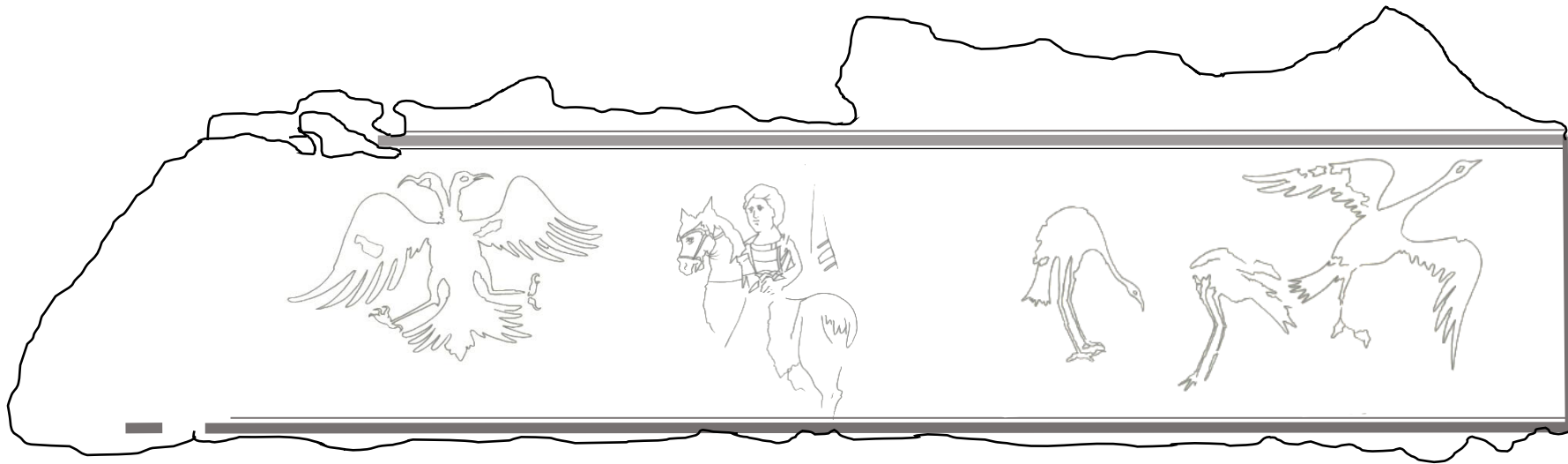


 Fallen base layers

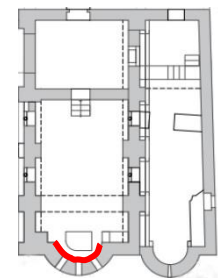
 new plastering



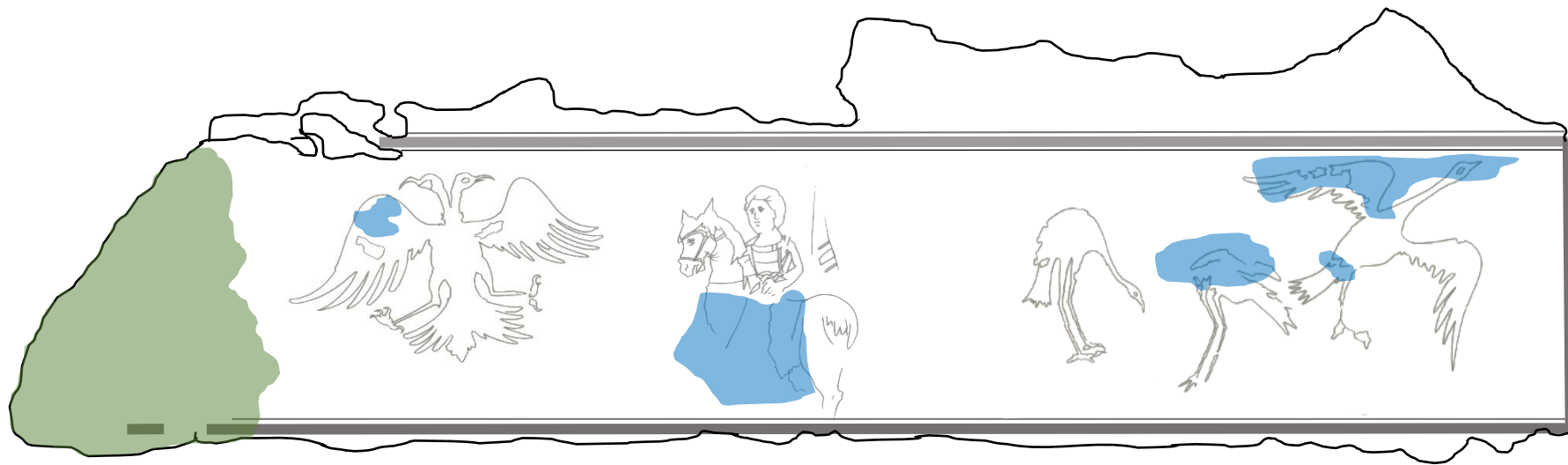
**St Anthony Church in Rodon Conservation of wall paintings,
Documentation 2022**



Edges of the wall paintings



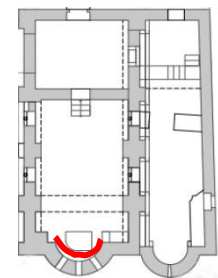
**St Anthony Church in Rodon Conservation of wall paintings,
Documentation of the apse 2022**



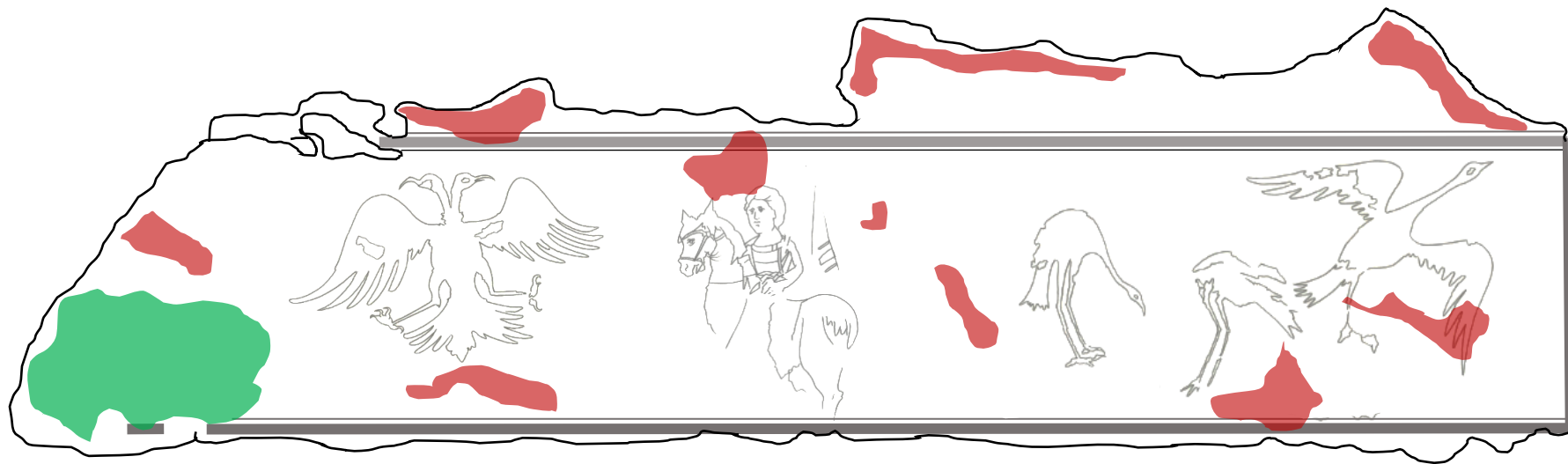
Darkening of the painted layer




Abrasion of the painted layer

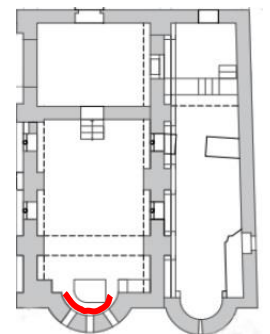


**St Anthony Church in Rodon Conservation of wall paintings -
documentation of the apse 2022**




 Biological patina

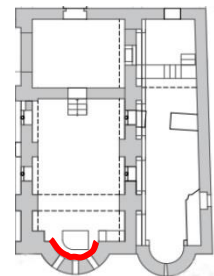
 Detachment of painted layers from the base



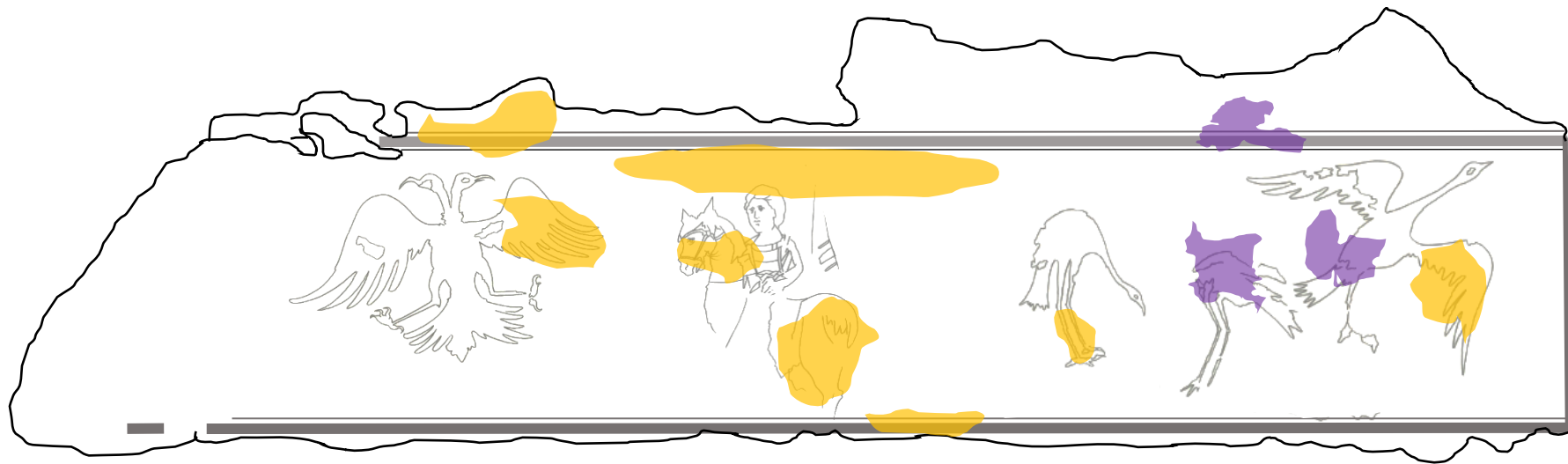
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Documentation of the apse 2022**



 Layers above the paintings (remains of lime wash and plaster)



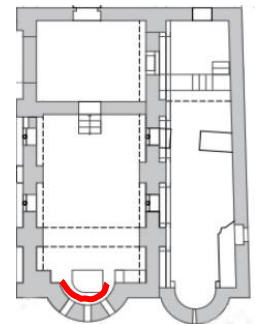
**St Anthony Church in Rodon Conservation of wall paintings,
Documentation of the apse 2022**



Presence of calcium salts



Detachment of painted layer













Anex 3.

THE ST ANTHONY'S CHURCH, RODON

Conservation of wall painting – documentation of apse – 2022

Legend of problems and damages

	Edges of the painted portions
	Fallen base layers
	New plaster
	Darkening of the painted layers
	Abrasion of the painted layers
	Presence of instable deposits (dust)
	Detachment of painted layers from the masonry and base layers
	Detachment of the painted layer
	Presence of biological patina
	Presence of calcium salts

Anex 4.

The surface of the remaining painted layers and surfaces with base layers without painted portions St Anthony's Church in Rodon – kisha e Shna'Ndoit, Rodon

Due to the fact that the roof was missing for a considerable period of time, the wall paintings have suffered irreversible damage. As a result the surface of the painted layers have changed.

Painted surface: **30.4 m²**

Surface with no painted layers **37 m²**

Approximate position of above mentioned surfaces:

Interior walls	Painted surface	Surface with painted layers
Apse and eastern wall	6.5 m ²	1.5 m ²
Vault	2 m ²	1 m ²
Northern wall	8.3 m ²	11.5 m ²
Western side	2 m ²	8 m ²
Southern side	11.6	7 m ²
Narthex		8 m ²

