

WP4

Platy limestone as cultural heritage

Supplement 3.II

Cross-border issues in conservation and restoration of platy limestone

Appendix 3.II.3

Final report for the project area in Croatia (North Dalmatia)

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PRESERVATION OF BUILDINGS WITH PLATY LIMESTONE IN THE ZADAR COUNTY

Summary

Platy limestone is used in a representative architecture (sacral and public buildings and fortifications) and especially in the traditional profane building. Sacral buildings with stone plate are protected, while the rural architecture is without any protection.

Introduction

The analysis of the monument, further processed for the project *Roof of Rock*, has led to following conclusion. In the Zadar County, as in whole Croatia, two clearly opposed approaches in the protection of monuments took effect. Religious buildings enjoy good protection while communal infrastructure and rural housing architecture enjoy the minimal level of protection or none at all. In the case of protected monuments of religious architecture most of the roofs were restored in the second half of the 20th century. During renovation the same old methods of stacking plates (as before the renovation) was employed, repeating the method of processing (splitting or cutting) stone slabs, as well as the thickness, size, shape and colour of stone. For the conservation of roofing on cultural monuments the Benkovac platy limestone was most used. This relatively inexpensive and ubiquitous material is the only kind of platy limestone still exploited in the Zadar area. Separated from the rock mass, it has a reddish-yellowish colour; due to weathering it soon gets its greyish patina. Therefore, conservators selected surface plates in quarries or old plates from collapsed buildings and re-used them.

Legal background of monument preservation

For the issue of the protection and maintenance of architectural monuments in Croatia the Ministry of Culture is responsible. The entire work is performed over the network of restoration departments and conservation institutes. Among other things, the Ministry oversees protected buildings made of platy stone (defined as immovable cultural property). Unfortunately, the rural architecture, mostly focused on by the *Roof of Rock* project, is generally not registered and does not enjoy any form of protection. However, the law clearly lays down the conditions which must be fulfilled in order to bestow the status of protected cultural property upon individual buildings. The main founder of reconstruction of cultural monuments, the Ministry of Culture, publishes the call for the nomination of public needs in the Croatian culture on yearly basis: the corpus of applicants compiled a program of protection and preservation of cultural property. Considering the type of cultural monuments listed in the Cultural Heritage Register of the Republic of Croatia, it can be applied: the program of protection and

conservation of immovable cultural property, a program of protection and preservation of archaeological heritage, a program of protection and conservation of movable cultural property and program protection and preservation of intangible cultural heritage. The owners and rights-holders and other holders of cultural goods, municipalities, cities and counties, in whose territory the cultural property is, submit an application for inclusion of cultural property in the program of protection and preservation of cultural assets. All programs for the protection and preservation of cultural property verified Croatian Council for Cultural Property. At the proposal of the Croatian Council for Cultural Heritage, the final decision for the annual program of protection and preservation of cultural property is granted by the Minister. The main document on the protection of cultural heritage is the Law on the Protection and Preservation of Cultural Heritage (*Narodne Novine* no. 69/1999, issued on June 18, 1999). The law governs all rights and obligations of owners of cultural property, protection and preservation of cultural heritage, performing for the Protection and Preservation of Cultural Heritage, administrative and inspection activities, financing the protection and conservation of cultural property, the establishment of protection against cultural property. Architecture with platy limestone falls into the category of immovable cultural heritage. Immovable cultural property can be: settlements or parts thereof, buildings or parts of them, buildings with their surroundings, elements of historic villages or equipment, area, place, monument and features related to historical events and people, archaeological sites and archaeological zones, including underwater sites and zones, area and location with ethnological and toponymic amenities, landscape, or its part which containing historical characteristic structures, which testify human presence in space. The main body of the Ministry of Culture for the monitoring and improvement of the status of cultural goods is the Croatian Council for Cultural Property. Besides working on the general issues of protection and preservation of cultural property issues recommendations, it monitors the implementation of the protection of cultural property, it proposes to the Minister of Culture the proclamation of the endangered cultural property, it gives its opinion on the Elimination of immovable cultural property, discussing controversial issues in the field of protection and preservation of cultural assets and proposes solutions. For goods that are presumed to have the status of cultural goods a temporary decision on preventive care can be issued. The decision on preventive protection is issued by the local authority where the cultural property is. The term of determining preventive care is calculated up to the decision referred to in the Article 12 of this Act, but can't be longer than 3 years, except for archaeological and underwater archaeological sites in the event that it can't be longer than six years from the date of issue. It is then entered in the list of preventive protected goods that is a special part of the Register of Cultural Goods of the Republic. The register is a public document and kept by the Ministry of Culture. It consists of three lists as follows: List of protected cultural monuments, List of cultural property of national significance and List of preventive protected resources. When it comes to traditional architecture it is mainly about local sights that require the involvement of local authorities for the registration of monuments (Article 17). A final decision, based on the collected documents is brought by the Croatian Council for Cultural Property. It is therefore necessary to achieve recognition of the value of

rural architecture by local authorities (municipalities, cities, counties). Put under legal protection, registration of private buildings also brings a number of limitations (Article 27-36) and responsibilities. It is therefore a common problem distrust of potential owners of protected buildings (residential and farm buildings). Maintenance of mostly derelict buildings with unresolved property relations (number of claimants to inheritance) is expensive and often impossible job. The law stipulates the obligation of the owner to maintain the cultural property (Article 20). When it comes to the roofs of abandoned residential and commercial complex, it can be expensive business and by law it is required that it is financed by the owner (Art. 22). But when extraordinary costs exceed regular maintenance costs and revenues or other benefits that the owner has from cultural property, the owner has the right to apply for reimbursement of additional costs. However, if the owner does not fulfil his/her obligations, expropriation proceedings may be initiated in which the owner becomes the State (Article 41). Minor problem but also present is the obligation of the public availability of monuments (Article 33).). For certain owners each invasion of privacy is unacceptable. The advantage of registration is permanent, free, technical and legal assistance of the competent authorities of the Ministry of Culture, as well as the right to compensation in order to limit property rights (Art. 24, 25, 26). The abandoned rural buildings have a number of practical problems such as dilapidated and inadequate infrastructure that does not meet modern standards of modern living. There is also the problem of social and economic degradation in rural areas.

The use of platy limestone in conservation, examples of bad and good practice

It has been said that the lack of concern for "minor" rural architecture, but also a failure to recognize the value of utility infrastructure as part of the culture heritage, is the main problem in the protection of monuments with platy limestone. When it comes to the sacral monuments of Zadar region, then we can talk about examples of good practice in the use of platy limestone in conservation. Because the Zadar region is historically divided on city, coast and the islands and the hinterland, which is why I have stated a representative monuments from all three geographical and historical micro region in Zadar county.

The sidewalks in the old town, Zadar:

Closing the historical quarries created the problem in the maintenance of cultural monuments in the historic centre of Zadar. This is a particular problem in maintaining the street pavements. The last few years have seen permanent destruction of the original paving of several busiest streets of Zadar. The hard, wear-and-tear resistant, reddish Lavdara platy limestone, thicker than 10 cm, has been replaced by white limestone from Brač (with the thickness of 3 cm). This new kind of building stone has no historical basis in Zadar's architectural practice, due to its insufficient thickness and lesser resistance; its lifespan is nowhere near the one from Lavdara. With a functional, it is also violated aesthetic component. White limestone (mostly *sivac* or *veselje*) from heavy pedestrian traffic, absorbs dirt and leaves a lasting impression of

sloppiness. Unlike him, Lavdara pavement retains its original reddish-gray colour.

Acknowledging the problem restarting stone exploitation on Lavdara, could be to find a third solution using the most similar stone paved streets of Zadar. Natural stone carving panel processing is necessary to adapt the existing preserved parts Lavdara stone, and not insist on contemporary paving with regular, cut plates. Stone pavements are a typical decoration of the old city centre of Dalmatian towns on the coast. Zadar are special due to its reddish colour. Although they emerged from ancient times through the Middle Ages until the early 20th St. do not enjoy special protection. Although the town of Zadar complete protection on sidewalks is unfortunately often not seen as an integral part of a protected cultural property. Like all public spaces in the city sidewalks are owned by the city and held them communal service. Therefore it would be very easy to protect and maintain. Yet when it comes to the sacred monuments of the Zadar region, there is a row can talk about examples of good practice in the use of composite stone conservation.

Church of St. Nicholas, Prahulje, Nin:

The church was built on site of prehistoric tumulus Prahulje near Nin. It was built in the early Romanesque style in the early 12th century. Floor plan is a trefoil with vaulted conches. In the centre of floor plan is the dome, carried by cross-ribbed vault.

The Church has the status of protected cultural property (Z-1336). Because of its unique architecture and its location is one of the most visited monuments of Zadar County.

Church of St. Peregrine at Savar, Long Island:

It

was built on a small island connected by a causeway with Long Island. This is the most valuable early medieval monument on Zadar islands. The church is made up of the nave and sanctuary. Formerly the sanctuary stood smallish sacristy, but was demolished in 1958. Square presbytery (2 x 3.35) is domed, and represents the core of the church. This is actually the original, small Romanesque church, to which were later rebuilt the nave and sacristy. The dome is covered with a roof with the platy limestone, and the nave roof has half-round tiles cover. The church extends into the 15th c. In that time it was built on a rectangular vessel (6.7 x 5.8 m). The last major restoration dates back to 1747 year. Smallish bell tower above the entrance to the church was raised and also sacristy is added. The Church has the status of protected cultural property (Z-1568). Due to the occasional religious purposes church is regularly and well maintained (Parish of Our Lady of Mount Carmel, Savar, 23285 Bribinj). Like most sacral objects with stone roofs, in conservation in mid-20th century it was given a new cover of Benkovac platy limestone. But it should be noted that the in practice of the roof covering is that old, healthy, plates preserve and re-use as a cover. So the new limestone is mixed with old stone slabs from island. Otherwise, on Dugi otok are numerous sites of platy stone, but also on other nearby islands (Sestrunj). Over time, plates are covered by gray patina so it is almost impossible to determine the difference.

Church of Sts. John Baptist, Medvida:

This is a beautiful medieval monument because the roof longish nave and the sanctuary are covered with a platy limestone. It was built on cemetery in the 13th and 14th centuries. The specificity of the church is what is next to the cliff and there is no entrance on the western façade like most churches. There's only one, side entrance on the south wall of the ship. Because of the cliff, above the west wall was erected bell tower, awkwardly high in relation to the church. Interestingly, earlier in the church were two altars, one intended for the holding of the Catholic and the other Orthodox rite. Around the church there is a necropolis with forty monolith gravestones (slightly larger stone blocks and slabs). The Church has the status of preventive protected cultural property (P-4852). The last renovation of the roof was done in 2013. On this occasion the old thicker plates (2 to 3.5 cm) are replaced with much thinner (from 0.5 to 2 cm). This was done due to structural reasons. Because of the large load roof bent and cracks appeared on the side walls of the nave. The roof was supported by numerous wooden beams to avoid collapsed. Therefore, in the restoration of the roof it is given the new, massive timber and stone lighter cover. However, it should be noted that the old heavy roofing is also recent, from the 60s of the 20th century. Before that, the church was covered with tiles. This fact suggests that in less than a century the church has experienced three changes of the roof.

"Čerina dvori" Podgrade near Benkovac:

Like all villages with platy limestone buildings in the Zadar hinterland, this house complex has no legal protection. Residential house was abandoned, as well the economic part of the complex, and is now used for storage. As the owner built a modern house for housing, complex was kept almost all the qualities of the original rural architecture of northern Dalmatia (Bukovica type).

It is a type that has not changed for centuries. Buildings are unicellular and covered with gabled roof. The walls were built of rough rubble stone. Because of static, just a stone at the corners of the house is closer processed in larger stone blocks. The walls are with a minimum dissolved, with the door opening can be one or two small windows. Frames openings are closely carved. The only perforation of the interior walls was shallow niche called *ponara* that was used to store small supplies or candles.

The centre of the interior was open fireplace. The fireplace was built by stone and brick. It is situated at the centre of the room or in the corner of the walls. Smoke free comes and passed between the stone slabs, and to increase the draft, the plate at the top of the ridge is raised and propped stone. Sometimes they build primitive chimney opening, called *badža*. The roof is covered with stone slabs that overlap. This type of construction is typical for rural housing on entire eastern coast of the Adriatic Sea, and beyond. Today it is simply called the Mediterranean stone house. Residential areas are in relatively good condition. The interior is dry and without the presence of moisture. The roof has been recently renovated. All joints between the stone slabs were filled with cement mortar. In a much worse state are *vatrenica* ("black cuisine") and outbuildings (mainly for livestock barns, barns and various storerooms). Because of the rotten timber of *vatrenica* roofing partly started to crumble, and lime mortar

between stones has fallen from its place in the wall structure. Legally complex heritage largely Mr. Mile Čerina, however parts have been won by numerous of relatives. This is the emigrant and depopulation of the affected area so it is very difficult to enter into the ownership structure. And with the good will of the owner complex is impossible to maintain without the financial help of the wider community. In order to provide funds for rehabilitation, it need to enter the new facilities that will benefit the owner but also the wider community. Another advantage is the proximity of a large archaeological site of the ancient city *Asseria* and good road links to the municipal centre Benkovac. Since this is a wine-growing region there are natural conditions for developing rural tourism. This is what provides the ability for sustainable development of the Zadar hinterland.

Conclusion

Finally, we can summarize that the platy limestone is the main building material for covering residential and commercial buildings in rural hinterland of Zadar region (until the early 20th century). The reason is the availability and cheapness of the material. Today, many villages and hamlets are abandoned and left to decay. The reasons are complex, but are generally a combination of economic migration associated with mismatch of traditional architecture with the demands of the modern lifestyle. Because of the large number it is impossible to protect all the buildings, so focus should be placed on representative buildings. Instead of formal protection it is necessary to encourage the restoration through favourable credit terms, but under conservation supervision. Therefore, in addition to restoration, it is necessary to add new content in order to adapt buildings for tourism purposes. Only in this way it can create conditions for sustainable development of rural areas and permanent protection buildings with platy limestone.

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