



Drenov Grič black limestone as a heritage stone from Slovenia

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The limestone known as Drenov Grič black limestone is considered one of the most beautiful Slovenian natural stones due to its homogenous black colour interwoven with white veins. Over the centuries it has been exploited from three major quarries west of Ljubljana, with the main quarry at Drenov Grič playing the primary role in supplying building material for the central parts of Slovenia. All the quarries are currently not active. In the area of Drenov grič, one locality of black limestone is protected - Kuclerjev kamnolom quarry. It has the status of 'valuable natural feature of national importance' and is protected as a natural monument. This well-stratified micritic limestone of Triassic (Carnian) age occurs in 10–80 cm thick beds, with thin marl interlayers. The stone contains abundant fossil bivalves and ostracods. Apart from calcite as the main component, dolomite, quartz, illite/muscovite and pyrite are also present. The limestone is relatively rich in carbonaceous and bituminous organic matter, which is responsible for the black colour of the stone. This component does not have any adverse effect on mechanical and physical characteristics. As the limestone is dense, thus facilitating a good polish, it has been commercially considered as marble. The stone has been widely used in Slovenian monuments, not only in Ljubljana but also in other regions of Slovenia. Many inner and outdoor architectural elements were made of this limestone, particularly in the baroque period, which was known for the extensive use of black limestones also in other European countries. The most significant use of this limestone has been recorded in sculptured portals and altars. Some of the important buildings decorated utilising this stone, are the Ljubljana Cathedral, the St. James's Parish Church, and the Franciscan Church of the Annunciation, all of which are located in Ljubljana, some of them having been declared as cultural monuments of local or national importance. When exposed to climatic influences, chromatic weathering and salt weathering are recognized as the main deterioration phenomena of this limestone on monuments.