

Preservation and promotion of the Sagalassos quarry and town landscape, Turkey

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At the Hellenistic–Roman town of Sagalassos most natural building stones used in the ashlar architecture originate from local lithological units, both in the immediate vicinity of the city and on its territory. Imported white limestone and white and coloured marbles represent only a small fraction of the total amount of building stones used. The proximity of the stone quarries supplying Sagalassos to the monumental centre of the town, offers great potential of contextualising this quarry landscape as part of the extended urban landscape. When the quarries of the city of Sagalassos are seen as an integral part of the monumental town, their significance can be easily demonstrated to the public and the need for their conservation becomes evident. As Sagalassos is an archaeological site where guided tours are offered and where the excavation and reconstruction of the town and its environs can be directly observed, the local quarries and their history can be disclosed to the broader audience. Although the number of people reached is moderate, such a model may hopefully serve as an example for making other similar monumental cities and their associated quarries accessible to a wider public, hence ensuring their long-term preservation.

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Introduction

At the Hellenistic–Roman town of Sagalassos (near modern Ağlasun in SW Turkey, Figure 1), natural building stones used in ashlar architecture include limestone, conglomerate, breccias, travertine and sand- to siltstone of different qualities (Degryse et al. 2008). The provenance of this stone can be related to local lithological units, both in the immediate area of the city and on its territory. Throughout the history of the city, local beige and pink, good-quality limestone remained the most important building stone (Figure 2). However, high-quality white limestone from just outside the territory of Sagalassos, some 25 km away, and white and coloured marbles imported from a distance of at least 200 km away, represent a small fraction of the total amount of building stones used (Figure 2).

As for local extraction, the nature of the quarry evidence at Sagalassos allows a tentative chronology to be proposed

(Figure 1, Degryse et al. 2008). The first building stones of Sagalassos were quarried at the site proper. The quarrying of the local bedrock can be traced to the Mid-Hellenistic Period. This beige limestone from the limestone nappe near monumental Sagalassos continued to be extracted throughout the Julio–Claudian and Hadrianic to Severan Periods. The unique (single occurrence of radiolarian mudstone) limestone of the Sarıkaya quarry (Figure 1c), four kilometres to the west of the city, seems to have been used only in Late Hellenistic buildings. This quarry may have been one of the main suppliers of building stone during that period. The local pink limestone was only identified in the Ağlasun Dağları quarry (Figure 1), two kilometres northwest of the monumental town. This quarry was at least contemporary to the Sarıkaya quarry, and was still supplying building stone to Sagalassos during the 1st and 2nd centuries AD. Some of the beige and possibly pink limestone used at Sagalassos was likely brought in

from just outside the southwestern territory of the town, along with the high-quality white limestone. This import can be considered a trend from the Trajanic Period (AD 98–117) onwards, at the same time as Pamphylian monuments gave up the high-quality Pisidian limestone of the 1st century AD in favour of the now massively imported cheap white (and grey veined) Proconnesian building marbles. Yet, this cheap stone never seems to have reached the Sagalassian construction sites. A keyword for quarrying the local limestone in the city area seems to be proximity. In the immediate vicinity of important stone-consuming activities, there are quarries which in size fit the required volumes. This view is also supported by the integration of possible quarries in buildings, where the (older) quarry walls or steps are used as an integral part of a (new) construction. Another interesting aspect of the quarries is the lack of well-organised quarries and systematic channelling typical of the Greek and Roman Periods. This relates



Figure 1. (a) Outline of the central part of the territory of Sagalassos in southwestern Turkey (the modern-day village of Ağlasun is indicated). Main quarry locations are 1: monumental Sagalassos, 2: the Ağlasun Dağları quarry, 3: the Sarıkaya quarry. (b) The northern/western quarries near Sagalassos, next to the stadium. (c) The quarry face and spoil heaps at Sarıkaya, triangular quarry face is 30 m high.

to the stone quality, as the abundance of natural fractures in the limestone deposits forced the quarrymen to follow the natural features as best they could.

The excavations at Sagalassos have also generated tens of tons of *crustae* and *sham architecture* fragments in different imported coloured stones and marbles. Very expensive white marbles from Dokimeion (near Afyon) for sculpture were imported into the city already in Augustan times. From the 2nd century AD onwards also high-quality white marble from Aphrodisias was brought in for the same purpose. Apparently the high expense of both marbles, which could be more easily transported towards Sagalassos despite a distance of several hundreds of kilometres, formed a smaller obstacle than the transport towards the site of cheap white Proconnesian marble through the Pamphylian coast. From at least the 2nd century AD onwards, Docimian white to yellowish and purple veined (*pavonazetto*) marble also reached Sagalassos as wall veneer and floor coverings. The second most common stone type is green *cipollino* from Euboea in Greece, also used as wall veneer and floor pavements. Other marbles and coloured stones positively identified at Sagalassos include *rosso antico* (quarried in Peloponnesus, Greece), *verde antico* (quarried in Thessaly, Greece), *porfido rosso* and *porfido verde* (quarried in Mons Porphyrites, Egypt), *bianco e nero tigrato* (probably quarried in Asia Minor), *granito del foro* (quarried in Mons Claudianus, Egypt) and *giallo antico* (quarried in Simitthus, Tunisia). As most of these exotic marbles only occur in very small quantities, they probably reached Sagalassos not directly but as leftovers from building projects in the larger cities, where the shaping of architectural elements must have produced such smaller fragments as used in the Sagalassos *opus sectile* floors and wall veneer.

The Sagalassos story

The Sagalassos quarry landscape has a large potential of contextualising the quarries as being a part of the extended 'urban

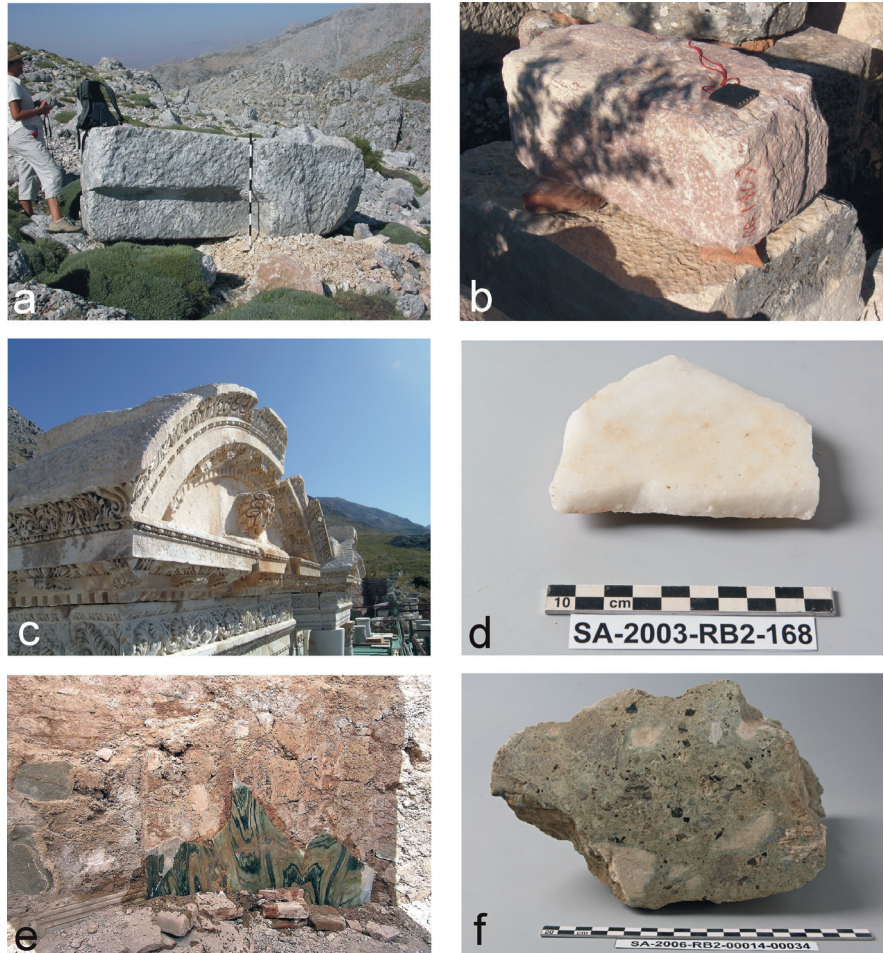


Figure 2. Photographs of the natural building stone used at Sagalassos. (a) Local beige limestone ashlar. (b) Local pink limestone ashlar. (c) White recrystallised limestone cornice block. (d) White marble wall veneer. (e) Euboian cipollino wall veneer. (f) Verde antico column part.

landscape' of Sagalassos. It illustrates the use of predominantly local stone for large building activities in antiquity. The selective exploitation of usable local stone in a natural landscape differs from ancient 'industrial' quarry landscapes, which significantly reshaped the natural landscape. At Sagalassos, we are confronted with a landscape consisting of many small quarries which are often hard to recognise. It is important not to see these smaller extraction locations only as individual 'dots' in this cultural landscape.

Since quarries may be difficult to promote to a lay audience (Storemyr 2006), in the QuarryScapes case-study areas (see other contributions in this volume) each of the studied landscapes has, for example, been characterised according to the special 'stories' they may convey (Bloxam et al. 2007, Bloxam and Heldal 2007). The obvious relationship between quarrying and nearby use of the

stone in a monumental city can be considered as the theme in the 'Sagalassos story', to be used for promotion of the significance of this quarry landscape to the wider public. It is a story about life in and development of the town. Moreover, it illustrates the importance of local building materials in Hellenistic–Roman times to construct a monumental centre, even if the raw material is not of excellent quality (like granite or marble), is not of an exceptional aesthetic importance (like multicoloured stones or marbles) or does not serve the purpose of regional use or even trade and export.

When the quarries of the city of Sagalassos are seen as an integral part of the monumental town, their conservation becomes self-evident and their significance, through a 'story', as argued here, can be demonstrated to the public. Also, the use of more distant quarries is an important issue. For instance, the significance of the

Sarıkaya and Ağlasun Dağları quarries in the territory of Sagalassos is inseparably connected to the city. They are providers of special stone types for building projects throughout several periods of construction. Even when in the case of the regional quarries (e.g., Yarışlı) the obvious connection to the ancient city of Sagalassos is lost, such quarry sites are of socio-economic importance as the stone was transported over long distances. Moreover, this is certainly true for stone from remote sources at Sagalassos, like marbles and granites, based on the sheer number of occurrences known throughout the world. However, in such cases, the quarry sites of these types of stone are more easily seen as important through their impact on so many sites, and the industrial nature of their 'quarry landscapes'.

Man-made risks and their mitigation

In practice, the local quarries in and close to the centre of the city of Sagalassos are part of the archaeological site and town, and are not only protected by law but also by guards present throughout the year. This is not the case for the quarries situated farther away from the monumental centre. It can hence be stated that the greatest danger posed to the quarry sites in the territory lies in not being identified as ancient quarry sites, and thus of value.

Therefore, recognition of an archaeological quarry as a cultural resource associated with the local cultural heritage is a key aspect to the conservation and promotion of such sites. Local inhabitants may be the natural and most evident custodians of the cultural resources at hand when engaged in the history (and story) of their own town, region or general background. At Sagalassos, a considerable local workforce (up to 100 workmen) is engaged in the annual excavations, having a significant impact on local life. The relationship between the foreign excavation team and the local community has been very good since the beginning of the scientific research at Sagalassos, 20 years

ago. However, this relationship has so far not allowed to share its aims and results with the local public and to get feedback from it. For that reason a community archaeology project is being prepared by the Sagalassos team in order to reach the wider public of Ağlasun and even of the province of Burdur.

The latter project aims to activate the potential for development in rural areas by making the local youth aware of their natural/cultural heritage, thus ensuring the long-term conservation of these resources. The target group is the youth of Ağlasun and the students that come to the town from different parts of Turkey, to study at the Vocational High School. Using active learning and involvement methods, the local youth will be encouraged to discover the natural/cultural values at hand, and the need for their preservation and sustainable use as resources for development. This not only means creative ways of education and dissemination of information, but also aims at encouraging the young people to start an NGO (non-governmental organisation) that would work as a cultural 'portal' for Ağlasun, not only over the web but also physically by running a heritage centre in town. We also plan to integrate this 'heritage consciousness' into the education programme of the secondary schools and the High School, creating a cycle of learning among the students, where older ones 'teach' the younger classes. In the experience of the excavations at Sagalassos, local people could become custodians of their cultural heritage, and would therefore participate in its protection. During this process, incorporating quarries into a 'common heritage awareness' for local inhabitants rather than knowledge being exclusively focussed on its monumental aspects, can significantly enhance the protection and promotion of quarry landscapes.

Bringing the story forward —the quarries and the tourist

Independent of the framework of protection, physical preservation and pro-

motion, it is usually the quality of the site itself, practical presentation and visitor management that will determine whether people want to come back to a site (Storemyr 2006). In extension, the presentation of a site will also determine the success of any attempt to raise awareness on quarries and quarry landscapes to the public.

Sagalassos presents an archaeological site where excavations and reconstruction of the town and its environs can be observed. Although Sagalassos attracts about 10,000 tourists per year and constitutes a place where these activities can be seen 'in action', this number is not impressive compared to other Turkish archaeological sites. Due to the mountainous location of the ancient city, it is covered by snow for at least four months per year and due to the oro-Mediterranean climate, weather conditions are harsh (frost, rain, wind and storms) for about seven to eight months of the year. This leaves the site realistically accessible to visitors for a maximum of six months per year, between May and October, with most of the tourists coming in July and August. Yet, taking into account the distance of 110 km to the nearest tourist resort at Antalya, and the lack of promotion of the ancient city as a tourist attraction, the aforementioned number of visitors to Sagalassos is considerable.

To accommodate the people who take the effort to visit the site during the excavation season in July and August, members of the Belgian excavation team offer free guided tours to groups and even to individuals in multiple languages. The guides active in Sagalassos are volunteers, mainly teachers and pensioners, who come with the excavation team to the ancient city during their summer holidays and spend four to six weeks on the site. Hence, thousands of people every year visiting Sagalassos in the summer get professional first-hand explanations about the history and evolution of the town, the scientific work in progress and the facts and figures of the ongoing excavations and surveys. The response to these guided tours is massive and the evaluations are extremely positive, main-

ly thanks to three factors. Firstly, the information provided is correct and up to date, provided by (volunteer) members of the team, active in the excavations for years on end. Moreover, during the months of July and August, the tourists can witness the excavations in progress from a few metres away. Secondly, the information is offered for free. Thirdly, the visitors have a personal choice which part of the city or excavations they want to visit and how much time they want to spend for this visit. The duration of the tours offered may vary from 1 hour to a full day. In this way, everyone coming to the site, from individual visitor to tour operator has custom-made access to all information regarding every aspect of the city, its environs and the ongoing activity. The financial investment made by the Belgian scientific team to offer this information and service is minimal (travel and subsistence for four to six guides for on average four weeks), but still cannot be neglected.

Another service offered by the Turkish government, through the guards present year round at the site, is the sale of affordable brochures that explain the

city and its history. The information in these brochures is written by the Belgian excavation team in cooperation with the museum authorities of the province of Burdur, responsible for the excavation at Sagalassos. This provides information available to anyone visiting the site on an individual basis, in addition to the possibility of guided tours during the excavation months.

The relationship between quarrying of local stone and nearby use of it in the monumental city provides opportunities for the promotion of the Sagalassos quarry landscape as an integral part of the Sagalassos cultural landscape. Although visually obscure and often perceived as dots in the landscape, the quarries can come into focus when presented as an integral part of the extended 'town landscape' of antique Sagalassos. The guided tours are an enormous asset in this regard. When tourists are willing, on the suggestion of the guides present, selected quarries can be visited and an explanation given.

An ideal location for a guided quarry tour, easily accessible to any group, is the eastern quarries (Figure 3, Degryse et al. 2008). This area of Sagalassos is already

visited by guided tourist groups because the industrial quarter or potters' quarter of Sagalassos is situated there. At this location, an explanation on the exploitation of the natural resources in the territory of Sagalassos is offered. This has so far mainly focussed on the extraction of ores and clays. However, it is easy to include the extraction of stone for building and funerary purposes in this story. In the eastern part of Sagalassos, the extraction of local stone is obvious from quarry faces, spoil heaps and from quarry marks and trenches. These can be visited and on-site customised explanations can be offered. Moreover, the importance of these extraction sites in the cultural (monumental) landscape of Sagalassos can be immediately demonstrated in the nearby necropolis ashlar architecture.

Besides the guided tours, which can not be given outside of the excavation season, the quarries can be integrated into trekking tours that should be designed for the surroundings of the site. Trekking route maps can be produced where information about the flora and fauna of the area, the location of the natural springs, the distant necropolises

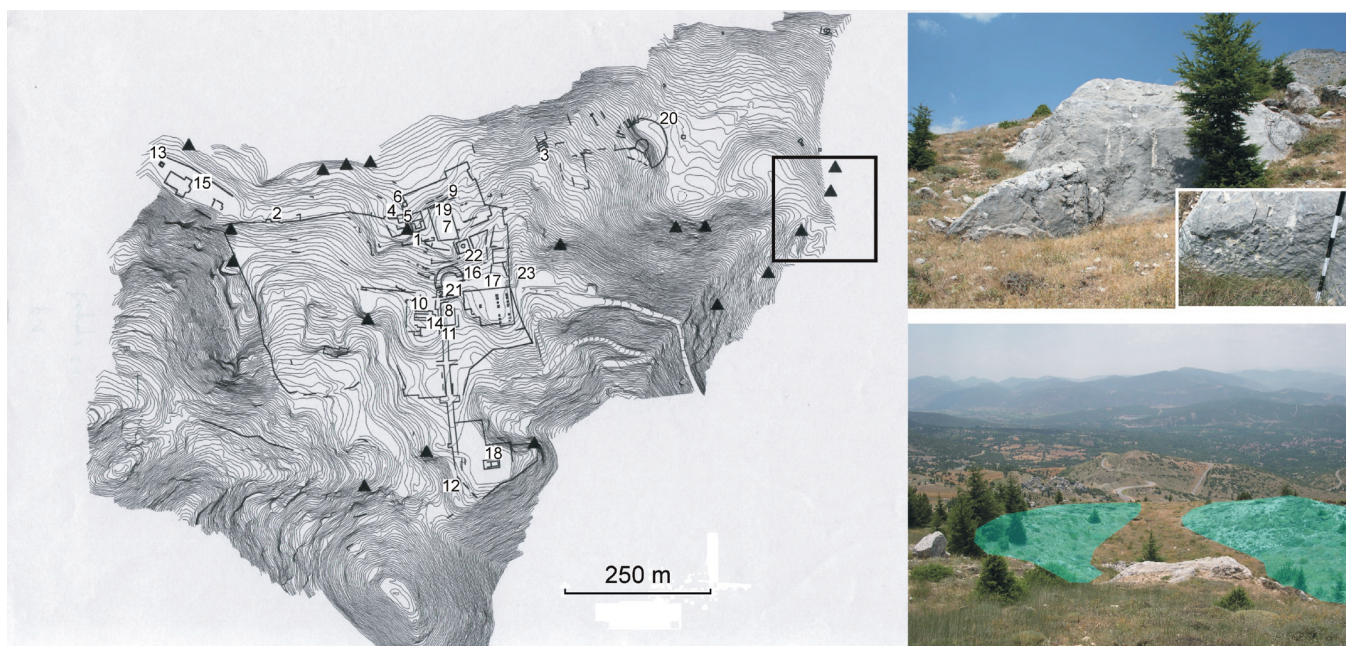


Figure 3. Map of Sagalassos (top is north) with the main buildings (numbered) and the quarries (triangles) located in the vicinity of the city, as defined by Degryse et al. (2008) (1: the bouleterion, 2: the late Hellenistic city wall, 3: the late Hellenistic fountain house, 4: the Doric temple, 5: the propylon of the Doric temple, 6: the Heroon, 7: the upper agora, 8: the lower agora, 9: the northeast building, 10: the temple of Apollo Klarios, 11: the gateway on the lower agora, 12: the south gate, 13: the monument of Claudia Severa, 14: the west portico of the lower agora, 15: the temple of Dionysos, 16: the odeion, 17: the bath building, 18: the temple for Antoninus Pius, 19: the nymphaeum on the upper agora, 20: the theatre, 21: the nymphaeum on the lower agora, 22: the macellum, 23: the gate near the bath building). To the east of the city lie the 'eastern quarries' (indicated by the square). Photographs show an example of the local quarries, with a quarry face (top) and the spoil heaps in front of the quarry (green, bottom).

and the quarries are indicated. A first effort to produce such a map was initiated within the community archaeology project (cf., supra).

Concluding remark

It is realised that the impact of the efforts made at Sagalassos to disclose the local quarries and their history to the broader audience and to demonstrate their importance as integral to the monumental town, will only reach a few thousand people per year. However, it shall certainly help create awareness among the local public about the significance of the quarries as related to the remains of the ancient city, and their potential as a cultural resource that can be a tool for the local development, e.g., with regards to tourism. This may hopefully serve as a model for making other similar monumental cities and their associated quarries, e.g., in the eastern Mediterranean in general and Turkey in particular, accessible to a wider audience, hence ensuring their long-term preservation.

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