

RENÉ
CONSERVATION
RICE
EX. DIR. D.E. CO-ORDINATOR



CLEANING & REPAIR
OF HISTORIC
STONE & PLASTER

DAY: 07802 217771 EVENING: 01761 432904

3, RADSTOCK LODGES, AMMERDOWN PARK, BA3 5SW

2 November 2013.

Report on completion of BF Grant Funded project : BF13/15 - Placing of telltales across structural cracks within Butrint and extramurally (Triangular Fortress and Ali Pasha's Castle)

1. Introduction.

I had planned to visit Butrint earlier in 2013 but was prevented by unexpected family health problems. The project was finally undertaken over a long weekend later in October.

The project was attended by Smirald Kola (BHC), Erjona Qilla (BNP), Valbona Hysa (Institute of Monuments), Velta Dalanaj (Regional Directory of National Culture, Saranda) Liri Sheehaj (Institute of Monuments) and Gentian Shori, a long-standing worker at Butrint National Park.



The object of the project was to teach the use of fixed telltales in the monitoring of structural movement.

2.Day One.

The first day was split into three sections: the first a perambulation around Butrint pointing out and discussing the various types and causes of cracking in masonry structures.



Fig 2. Crack in wall from Lake Gate to Lion Gate possibly caused by pressure of supported earth potentially worsened after periods of heavy rainfall.

The second section took the form a round the table examination and discussion of the various types of tell tale I had brought with me to Butrint. These included fixed, **pre-calibrated plastic**

(Avongard Plus-<http://www.avongard.co.uk/products/category/1/tell-tales/P-00003/plus-tell-tale>),

User positioned (GeoStandard-http://www.surveyexpress.co.uk/product.asp?P_ID=715&strPageHistory=related) and a

Moiré telltale made by Bill Harvey Associates (<http://www.moiretelltale.com/>).

We also discussed fixing methods and how we should check available adhesives. I had only been able to bring a small quantity of the recommended adhesive owing to airline baggage restrictions so we needed to source materials locally.

A type of marble adhesive (two part polyester resin) was found to be most suitable and reasonably priced and readily available. For obvious reasons fixing using screws was discounted as being detrimental to the historic fabric.

Monitoring and documentation were also discussed and a format for the recording of each telltale positioned was drawn up and these records are included as addenda to this report.

The last part of the day was devoted to placing telltales in 3 positions on the Triangular Fortress. (See record sheets 1-3)



Fig 3: Telltale fixed to interior of Triangular Fortress South East Tower.

3.Day Two.

The second day was devoted to the placing of telltales within Butrint at sites chosen through discussion with the group. 14 different sites were chosen ranging in scope from cracks in individual Hellenistic era stones to large iron cramp induced cracks in the masonry of the Lion Gate. Each was recorded photographically and members of the group took turns in fixing the telltales in place. (See record sheets 4 to 18)



Fig 4. Valbona Hysa affixes a telltale to an internal wall in the Great Basilica

Day Three

Day three saw a similar exercise in the placing of a further four telltales in various positions on the masonry of Ali pasha's castle.



Fig 5. A Moiré telltale in position

4. Conclusion.

A small but influential group of Albanians involved in the fields of archeology and monuments learnt about the nature of structural movement and the placing of telltales to monitor and document any movement. In the process telltales were emplaced in key positions and these will provide the basis of an ability to monitor for movement and possibly prevent future collapse and loss and increase understanding of the processes which contribute to crack formation and structural failure. I feel that we achieved the stated aims and intentions of the application.

René Rice November 2013.