

ROCHESTER CATHEDRAL CRYPT

INVESTIGATIONS TO ASSESS TO EFFECTS OF LASER CLEANING

(Notes on sampling strategy discussions – Feb. 2015)

1 Agreed sampling strategy

At the meeting with representatives of Rochester Cathedral FAC and the CFCE on 5th February it was agreed that one phase of sampling is required. The finding and conclusions to be presented in a stand-alone report. The aim is to obtain the following samples set from specific C13th century vault segments and arch soffits:

	Limewash ground	Red ochre masonry line paint
(A)	Untreated	untreated
(B)	TAC cleaned	TAC cleaned
(C)	TAC and laser cleaned	TAC cleaned (within area of laser cleaned limewash)

However, as discussed at the meeting, we are unlikely to find entirely untreated limewash or red paint on the laser cleaned vaults. In that event the (A) samples will be obtained from two untreated areas: Bay 19, north wall; recently revealed painted plaster on the arch soffit between Bays 13 and 20.

Similarly, we are unlikely to find TAC cleaned only limewash on the laser cleaned vaults and soffits, except for the Bay 13b and c (where the laser was used sparingly). In that case the (B) samples will be obtained from the discoloured lower part of the fragment of soffit plaster in Area L.

In all instances duplicate samples will be obtained for confirmatory purposes in case obvious anomalies are found during analysis.

Pre-existing surface variations will be discussed and taken into account when interpreting the findings of sample cross-section analysis.

2 Agreed sample locations

Sample Location	(A) Limewash	(A) Paint	(B) Limewash	(B) Paint	(C) Limewash	(C) Paint	Totals
Bay 19 (north wall)	2	2 (?)					4 (?)
Area b'twn Bays 13-20	2	2					4
Area L			2	2			4
Bay 13c			2	2	2	2	8
Bay 13 a			2	2	2	2	8
Area K					2	2	4
Total	4	4 (?)	6	6	6	6	Max. 32

Possible (A) sample locations:



Fig 1. Islands of plaster and unpainted early-limewash on **Bay 19**, north wall before dusting and plaster edge repairs. It has not been established if the red ochre masonry line paint exists on these fragments. (A) samples (2 x limewash, 2 x paint(?)) = **4 (A) samples (max)**.



Fig 2. Recently revealed painted plaster on the arch soffit between Bays 13 and 20. This area had been blocked in since 1776-78. The whole soffit is untreated but the discoloured patches more closely resemble pre-treatment Phase 1 surfaces. (A) samples (2 x limewash, 2 x paint) = 4 (A) samples.

Possible (B) sample location:



Fig 3. Island of plaster on Area L soffit before and after TAC cleaning. The discoloured lower part is the most suitable for (B) samples. (B) samples (2 x limewash, 2 x paint) = 4 (B) samples.

Possible (B) and (C) sample locations:

Fig 4. Detail of ingrained dirt along the edges of a crack in the **Bay 13c** vault plaster, before (*left*) and after (*right*) spot laser cleaning. Areas outlined in red are suitable for B samples but only for comparison with the adjacent (C) sample areas (outlined in blue) since, uniquely, the whole of Bay 13 was overpainted at an early stage with a plain red ochre layer. (B) samples (2 x limewash, 2 x paint) = **4 (B) samples**. (C) samples (2 x limewash, 2 x paint) = **4 (C) samples**.

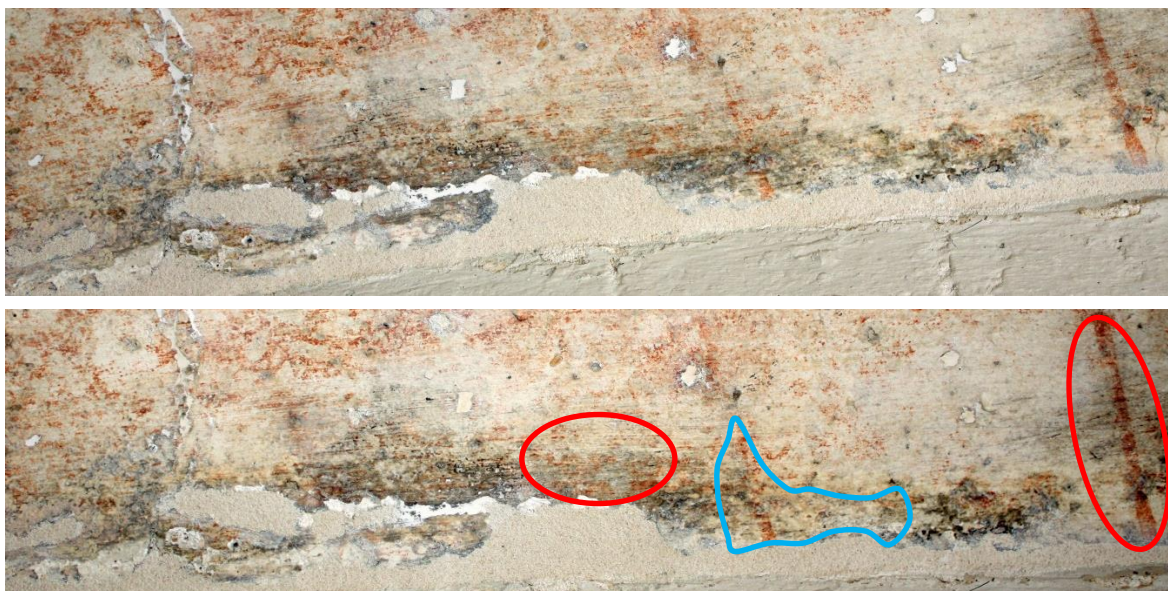


Fig 6. Details of **Bay 13a** before (*top*) and after (*bottom*) spot laser cleaning. . The areas outlined in red is suitable for (B) samples but only for comparison with the adjacent (C) sample areas (outlined in blue) since, uniquely, the whole of Bay 13 was overpainted at an early stage with a plain red ochre layer. (B) samples (2 x limewash, 2 x paint) = **4 (B) samples**. (C) samples (2 x limewash, 2 x paint) = **4 (C) samples**.



Fig 7. Details of **Area K** soffit plaster during (*left*) and after laser cleaning (*right*). It is unlikely (B) samples will be obtained from this arch soffit plaster. The area outlined in blue is suitable for (C) samples (2 x limewash, 2 x paint) = **4 (C) samples**.