

2695

Ancient Monuments Laboratory
Report 66/97

WALL PAINTING CONDITION AUDIT,
OKEHAMPTON CASTLE, DEVON

J Davies
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Summary

This condition audit of wall paintings at Okehampton Castle includes a wall painting record, general audit information, documentation of original materials and execution of the painting, and deterioration and damage including previously used materials and treatment, as well as proposals for treatment and monitoring strategies.

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Okehampton Castle Devon

The following report has been generated by the Wall Painting Section database. This archival system provides a computerised record of all wall paintings in English Heritage Historic Properties and is intended to comprehensively document the collection. Each report has been subdivided into four sections to present the data in a clear format. These include:

1 Wall Painting Record:

Includes a description of the site and paintings, as well as archival information, such as bibliographic references and photographic records.

2 General Audit Information:

Describes any monitoring undertaken and a synopsis of future conservation requirements.

3 Technique:

Documents the nature and condition of the original materials and execution of the painting which is described according to its stratigraphy and any related analysis.

4 Deterioration and damage, added materials, treatment:

Deterioration and damage lists the types of alterations which may have occurred, that is either deterioration (natural alterations such as cracking or delamination) or mechanical damage (such as graffiti).

Added Materials documents all non-original materials present on or within a painting. These may include naturally occurring substances (accretions, such as dirt and dust) or deliberately added materials (coatings, coverings and repairs).

Treatment documents previous interventions and proposed treatment and monitoring strategies.

Throughout each section, an area of painting is assigned a number between 1 and 4 which is intended as a general indication of present condition. These are: 1 good, 2 fair, 3 poor, 4 unacceptable.

This report is based on information gathered prior to March 1996 and does not include any changes in condition, further research or treatment undertaken after this date. Amended editions will be produced as necessary.

1 Wall Painting Record

Property name	OKEHAMPTON CASTLE		
Region	South West	County	Devon
Location of painting	Chapel		
Orientation	SOUTH WALL		
Century 14th	Date	Height (cm) 48	Width (cm) 53
Subjects included			
Chevron pattern			
Masonry pattern			

Description

Okehampton Castle was first mentioned in the Domesday Book at which time it was owned by Baldwin de Brionne, Sheriff of Devon. However, its origins are probably earlier, dating to shortly after the Norman Conquest, as in 1193-94 the castle was in the hands of the Crown. In 1240 the castle chapel was ceded (with the parish church) to Cowick Priory, Exeter. From 1292-97 the castle was again in royal hands. In 1422 various additions to the basic motte with hall, chamber and kitchen were made. The majority of the structure, including the walls of the Chapel, are thought to date from the early fourteenth-century. The castle is now a ruin and the chapel has lost its roof and east wall.

Fragments of red and white paint survive in patches over the south wall of the chapel and there are traces of red, black, yellow and white on the window splay. The scheme comprises a simple double red line masonry pattern on the walls, with a black chevron pattern against traces of red and yellow within the window splay.

Note: The height and width given above refer to the dimensions of the south wall as the painting itself was too fragmentary to measure.

Photographic Record

29/6/94 EH 'current' contact photo files; no images of wall paintings.
27/09/94 JD/TM audit photography (colour slide) [several more needed]

DOE negative search;
Okehampton Castle; no relevant DOE negatives found.

Bibliography

Higham, R. A. 'Okehampton castle, Devon', English Heritage Guide Book, London, 1st Edition HMSO 1984, English Heritage 1st Edition 1988, reprinted 1991 and 1994. (Good general info.)

Higham, R. A., Allan, J. P. and Blaylock, S.R., 'Excavations at Okehampton Castle, Devon. Part 2: The Bailey', Proceedings of Devon Archaeology Society, 1982, 40, 19-151.

Hinton, D. A., 'Archaeology, Economy and Society : England from the fifth to the fifteenth century', London, 1990.

Kenyon, J. R. 'Medieval Fortifications, Leicester, 1990.

Cooper, N. H. ed., 'The Exeter Area', Proceedings of the 136th Summer Meeting of the R.A. I., 1990, 1990.

2 General Audit Information

Property name	OKEHAMPTON CASTLE	County	Devon
Region	South West		
Location	Chapel		
Orientation	SOUTH WALL		
Century 14th	Date	Height (cm) 48	Width (cm) 53
Auditor(s)	TM/JD	Start date	27/09/94

Overall condition score **3**

Recommendations

The most significant damage to the plaster - and the paint only survives in a fragmentary condition over the surface - is the white crust probably formed by the cycles of dissolution and crystallisation of calcium carbonate which is possibly being leached out of the lime-based repair mortars which have now become susceptible to infiltration. Unfortunately, however, given the exposed location of the painted plaster, treatment to remove this crust and associated biodeterioration would not be an appropriate intervention.

The present coping tiles - slate tiles along the top of the walls - appear to be a sensible protective measure against weathering but several slates have fallen off. The tiles were fixed with countersunk screws, causing cracking and breaking away of the slate. The position and condition of the chapel (missing the roof and east wall) create a 'wind-tunnel' effect which further exacerbates the situation. It is planned that these tiles are to be replaced by the end of 1994, which will hopefully halt the damage being done to the plaster underneath.

Some edge repairs are required, but because of the situation described above, perhaps a naturally hydraulic or manufactured hydraulic mortar should be used. [Time required: 1 conservator, 1 week maximum within 2 years].

3 Audit Information: Technique

Property name	OKEHAMPTON CASTLE		
Region	South West	County	Devon
Location	Chapel		
Orientation	SOUTH WALL		
Century 14 th	Date	Height (cm)48	Width (cm) 53
Auditor(s)	TM/JD	Start date	27/09/94

Overall Condition Score 3

Stratigraphy

Layer type	Support Layer	Specific condition Score	2
Thickness	73 cm		

Comments

The castle is now ruined. However, structurally its condition appears to be reasonably stable following remedial conservation. Rough dressed rubble support may include granite, sandstone, beerstone and slate. Stone quoins around the window have diagonal tooling. The rubble is rough dressed only.

Layer type	Render Layer 1	Specific condition Score	2
Thickness	1 cm		

Comments

Lime mortar applied over rough dressed rubble support and therefore varies in thickness. The aggregate contains sand and a mixture of coarser aggregate which appears to be comprised of quartz, slate and brick?/ local stone? which has a very red colour.

Layer type	Render Layer 2	Specific condition Score	2
Thickness			

Comments

Render 2 has a lighter colour than render 1, possibly containing a higher proportion of lime than the lower layer and less aggregate. The aggregate present is fine sand.

Layer type	Ground Layer 1	Specific condition Score	3
Thickness			

Comments

Scanty remains only visible under surviving red paint. Appears to be a limewash ground. Has a mineralised sheen.

Identified pigments	Colours
lime white	white

Layer type	Paint Layer 1	Specific condition Score	3
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Thickness

Comments

Black and red chevron pattern in window, with patches of yellow. Red masonry pattern on wall.
The red and yellow pigments are probably ochres.

Identified pigments Colours

lime white	white
---	red
---	black
---	yellow

4 Audit Information: deterioration and damage, added materials, treatment

Property name	OKEHAMPTON CASTLE		
Region	South West	County	Devon
Location	Chapel		
Orientation	SOUTH WALL		
Century 14th	Date	Height (cm)48	Width (cm) 53

DETERIORATION AND DAMAGE

Deterioration phenomena

Type losses (paint layer)
Location extensive and general
Comments Few limited fragments of the paint layer remain.

Type losses (render layer)
Location patches over surface
Comments Loss of all plaster layers.

Type pitting (surface)
Location general
Comments Small holes through surface into render layers which appear like pin holes and 'worm channel' losses which undercut the surface layers. Damage may possibly be the result of vegetation growth which has now been removed.

Type general erosion
Location general
Comments General deterioration of surface layer.

Type cracking
Location upper walls
Comments Appears to be associated with previous building conservation treatment. Possibly the result of pushing back bulging plaster during consolidation work.

Mechanical damage

Type substantial losses
Location several areas
Comments Damage and loss are extensive therefore conclusive evidence of mechanical damage has been lost. Several triangular indentations may be mechanical.

ADDED MATERIALS

Accretions

Type biodeterioration

Location general

Comments Fine black deposits in pits over painting surface.

Type biodeterioration

Location general

Comments Green MBG which appears to be related to the broken 'coping' tiles which allow water to run over the painting surface.

Type salt efflorescences

Location upper centre south wall, south corner of east wall and small areas elsewhere

Comments Thick crusts of stalactyte-type deposits, probably calcium carbonate. The site is extremely damp, and it appears that calcium hydroxide from recent lime-based repairs has leached through to the surface of the walls and carbonated over the surface into a thick crust.

Coatings/Coverings

Type limewash

Location general

Comments Very few remains of this limewash left overlying paint layer 1. Thickly applied by brush, striations visible.

Repairs

Type lime:sand

Location edges and other small repairs, centre south wall above window

Comments Appears to be lime and fine sand aggregate, and has been limewashed over.

Type unidentified

Location edge repairs to medieval plaster noticeable to east side of south wall

Comments Appears to be a mixture of lime and fine sand aggregate. Repairs have become eroded.

Type modern plaster

Location edges repairs to medieval plaster, especially to lower west side of south wall

Comments Mortar appears to be rather lime-rich.

TREATMENT

Past Treatment

Type CONSOLIDATION **Date** 01/01/90
Person EH craftsmen
Comments Structural and plaster consolidation using lime-based techniques has been undertaken.

Type FILLS/REPAIRS INSERTION **Date** 01/01/90
Person EH craftsmen
Comments Structural and plaster consolidation using lime-based techniques has been undertaken.

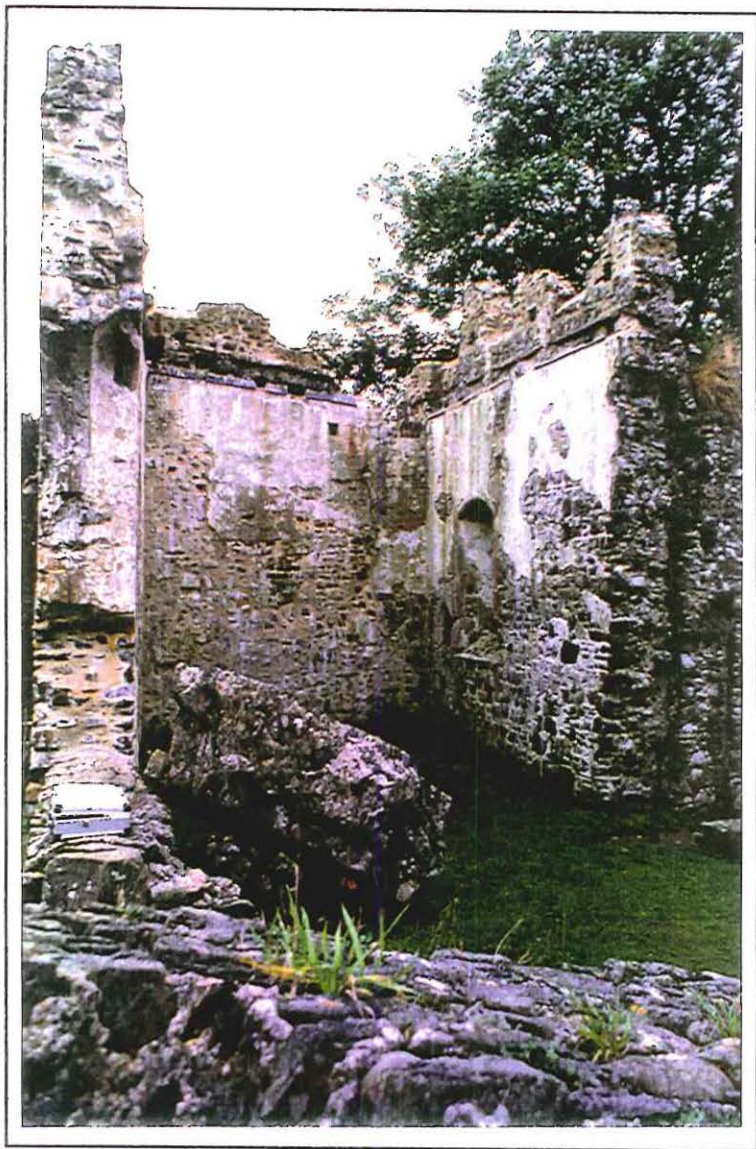
Past Treatment

Type UNSPECIFIED **Date** 01/01/92
Person EH craftsmen
Comments A coping of slate tiles embedded in lime mortar has been added to the apex of the wall to reduce water penetration.

Proposed Treatment

Type FILLS/REPAIRS INSERTION **Date** 27/09/94
Person TM/JD
Comments Few further edge repairs required. Care should be taken to avoid further leaching of calcium hydroxide from fresh repairs with consequent formation of calcium carbonate crusts. Due to the damp exposed situation a naturally hydraulic or manufactured hydraulic mortar should be used. [Timescale: 1 week maximum within 2 years].

Type UNSPECIFIED **Date** 27/09/94
Person TM/JD
Comments The tiled slate coping at the apex of the walls has been damaged by prevailing winds. When they are present and undamaged the tiles appear to usefully deflect water from the top of the wall. However where they are damaged the situation appears to be exacerbated. Some effective method of protection must be devised.



General view of chapel to southeast



Detail, south wall, double-line masonry pattern