

Ancient Monuments Laboratory
Report 25/97

WALL PAINTING CONDITION AUDIT,
LONGTHORPE TOWER,
CAMBRIDGESHIRE

J Davies
T Manning

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Summary

This condition audit of wall paintings at Longthorpe Tower 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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1 Wall Painting Record

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location of painting	Great Chamber		
Orientation	EAST WALL INCLUDING VAULT		
Century 14 th	Date	1320	Height (cm) 520 Width (cm) 458
Subjects included			
Figurative			
Four evangelists			
Musicians			
Three Living and Three Dead			
Wheel of the Five Senses			

Description

The tower at Longthorpe is the only substantial survival of a fortified manor house owned by the de Thorpe family. In 1226 William de Thorpe was confirmed in his landholding by the Abbot of Peterborough. Sir William de Thorpe, his son, obtained permission in 1263-64 from Robert, Abbot of Peterborough, to rebuild the parochial chapel of St. Botolph at Thorpe, which survives nearby. It is likely that the tower was built at the same time by Sir William de Thorpe, as many architectural details correspond to the church.

The son of Sir William, Robert de Thorpe, was appointed Steward of the Abbey in 1310-11, a post which he held until 1329. He was released from villein service in 1323-4. His son, also Robert, was appointed Steward in 1330 and still held Thorpe in 1346. Either could be responsible for commissioning the paintings.

The Thorpe estates passed into the family of Wytilbury of Milton and Marholm when, in 1391, John Wytilbury assumed the arms of William Thorpe. At the end of the 15th century they were acquired by the Fitzwilliams of Milton, and they still belong to their descendant. The tower was placed under the care of the Ministry of Works in 1947.

The house at Longthorpe consists of the original 13th-century north-south wing which probably contained the hall, the 14th-century Great Tower (which houses the paintings), and an east-west wing of the 17th century. The tower retains most of its 14th-century detail, relatively unaltered. The walls are 1.8 to 2.1 metres thick, built almost entirely of small stone rubble. The ground floor houses a vaulted undercroft which is inaccessible from the rest of the tower. The top floor retains a garderobe and the original window-recesses and seats. However, the area of primary concern is the first floor, which houses the Great Chamber, or the lord's private apartment. It is vaulted, and retains an aumbry, various window recesses, two niches, an original fireplace opening, and a small chamber (possibly a garderobe) inserted into the thickness of the wall. The original early 14th-century tower (c.1300) would have only had access from the Great Hall, but later in the 14th century (c.1320-30?) the room was altered for different use: the window on the east wall was blocked and a door was inserted in this area. The arched recess of the north wall (which originally appeared as the west wall does now) was filled in, perhaps for structural reasons. It was after these alterations to the room that the scheme was painted.

The paintings comprise the most complete and important scheme of medieval secular painting in Britain. It is a combination of biblical, moral, didactic and secular subjects, probably based on contemporary literary sources.

The east wall recess shows two Apostles on the north side, part of a series starting on the north wall, each holding his appropriate sentence from the Apostles' Creed. Below these figures is another teaching subject in the recess, where an old man addresses three youths. The south wall of the recess and part of the east depict The Three Living and the Three Dead.

The lower section of the east wall contains a Wheel of the Five Senses, showing a monkey, vulture, spider's web, boar and cockerel, possibly meant to represent taste, smell, touch, hearing and sight. Above this is an unidentified scene of a young man with a dog, facing another male figure. Traces of a long inscription in the centre of the scene would probably aid in deciphering the image, but has not yet been interpreted.

The vault space directly above the east wall contains the remains of a musician on the north side, and traces of the pierced quatrefoil which is believed to have contained one of the evangelists.

Photographic Record

29/6/94 EH 'current' contact photo files;

June 1988, J880239, J880240, J880241, J880242, J880243, J880244. April 1989, wall painting conservation record, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633. April 1989, wall painting conservation record, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649.

EH photo library, computer keyword search;

May 1989, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649. June 1988, wall painting, J880242 (cross-refs; E880399). September 1988, wall painting, E880399 (cross-refs; A881518, J880242). February 1993, East wall mural depicting the Wheel of Five Senses, A921500 (cross-refs; J920873), J920873 (cross-refs; A921500).

Prints in Plans Room guard books

In M2b (or 26?) Longthorpe

A1439/6; Exterior view from the NW, 19/19/51
A1439/2; Interior, N.wall, before KB (guidebook?)
A1439/9; Interior, E.wall, before KB (guidebook?)
A1439/7; Interior, W.wall, before KB (guidebook?)
A1439/1; Interior, S.wall, before KB (guidebook?)
A1439/4; Interior, from SW corner, before KB (guidebook?)
A1439/3; Interior, from SE corner, before KB (guidebook?)

Copies in studio files

in Folder No. 25 (B/W) Set 1.

A10619/1 21/1/82.-E.wall, centre, detail monkey.
A10619/2 21/1/82.-E.wall, centre, detail cock.
A10619/3 21/1/82.-E.wall, entrance, N. niche, detail.
A10619/4 21/1/82.-E.wall, entrance, detail above door.
A10619/5 21/1/82.-S.wall, E.side, detail.
A10619/6 21/1/82.-S.wall, W.side, detail.
A10619/7 21/1/82.-E.wall, N.side entrance, detail.
A10619/8 21/1/82.-W.wall, S.side arch recess, detail.
A10619/9 21/1/82.-W.wall, S.side arch recess, detail.
A10619/10 21/1/82.-W.wall, N.side, detail above niche.
A10619/11 21/1/82.-W.wall, N.side, detail niche.
A10619/12 21/1/82.-W.wall, S.side of window recess, detail.
A10619/13 21/1/82.-W.wall, N.side, detail bird.
A10619/14 21/1/82.-W.wall, centre, detail owl.
A10619/15 21/1/82.-W.wall, S.side, detail animals.
A10619/16 21/1/82.-W.wall, S.side, detail animals.
A10619/17 21/1/82.-W.wall, S.side, detail animals.

A10619/18 21/1/82.-W.wall, S.side, detail animals.
A10619/19 21/1/82.-E.wall, centre, detail boar.
A10619/20 21/1/82.-E.wall, centre, detail vulture.
A10619/21 21/1/82.-E.wall, centre, detail spider.
A10619/22 21/1/82.-E.wall, N.side centre, detail King.
A10619/23 21/1/82.-E.wall, N.side, detail.
A10619/24 21/1/82.-E.wall, S.side, detail.
A10619/25 21/1/82.-S.wall, E.side, detail.
A10619/26 21/1/82.-S.wall, W.side, detail.
A10619/27 21/1/82.-S.wall, W.side, 'Bonnacon', detail.
A10619/28 21/1/82.-N.wall, W.rebate window recess, detail.
A10619/29 21/1/82.-E.wall, N.side, detail inscription.
A10619/30 21/1/82.-Roof vaults, overall view.

in Folder No. 25 (B/W) Set 2.

As set 1.

in Folder No. 25 (Colour).

A/CN/10583/1 21/1/82.-E.wall, entrance, N.niche, detail.
A/CN/10583/2 21/1/82.-E.wall, centre, detail monkey.
A/CN/10583/3 21/1/82.-E.wall, centre, detail cock.
A/CN/10583/4 21/1/82.-E.wall, entrance, N.niche, detail.
A/CN/10583/5 21/1/82.-E.wall, entrance, detail above door.
A/CN/10583/6 21/1/82.-S.wall, E.side, detail.
A/CN/10583/7 21/1/82.-S.wall, W.side, detail.
A/CN/10583/8 21/1/82.-E.wall, entrance, N.side, detail.
A/CN/10583/9 21/1/82.-W.wall, S.side arch recess, detail.
A/CN/10583/11 21/1/82.-W.wall, N.side, detail above niche.
A/CN/10583/12 21/1/82.-W.wall, N.side, detail niche.
A/CN/10583/13 21/1/82.-W.wall, S.side, window recess, detail.
A/CN/10583/14 21/1/82.-W.wall, centre, detail bird.
A/CN/10583/15 21/1/82.-W.wall, centre, detail owl.
A/CN/10583/16 21/1/82.-W.wall, S.side, detail bird.
A/CN/10583/17 21/1/82.-W.wall, S.side, detail animals.
A/CN/10583/18 21/1/82.-W.wall, S.side, detail animals.
A/CN/10583/19 21/1/82.-E.wall, centre, detail boar.
A/CN/10583/20 21/1/82.-E.wall, centre, detail vulture.
A/CN/10583/21 21/1/82.-E.wall, centre, detail spider.
A/CN/10583/22 21/1/82.-E.wall, centre, detail King.
A/CN/10583/23 21/1/82.-E.wall, centre, detail.
A/CN/10583/24 21/1/82.-E.wall, S.side, detail.
A/CN/10583/25 21/1/82.-S.wall, E.side, detail.
A/CN/10583/26 21/1/82.-S.wall, W.side, detail.
A/CN/10583/27 21/1/82.-S.wall, W.side, detail 'Bonnacon'.
A/CN/10583/28 21/1/82.-N.wall, W.side window recess, detail.
A/CN/10583/29 21/1/82.-N.wall, E.side window recess, detail.
A/CN/10583/31 21/1/82.-W.wall, S.side arch recess, detail.

A10582/1 21/1/82.-Overall view E.wall.
A10582/2 21/1/82.-Overall view S.wall.
A10582/3 21/1/82.-Overall view N.wall.
A10582/4 21/1/82.-Overall view N.wall.
A10582/5 21/1/82.-Overall view W.wall.
A10582/6 21/1/82.-Overall view ceiling vault.
A10582/7 21/1/82.-Overall view ceiling vault.

A890617 01/5/89.-Detail inscription.
A890618 01/5/89.-Detail inscription.

A890619 01/5/89.-Detail inscription.
A890620 01/5/89.-Detail inscription.
A890621 01/5/89.-Detail inscription.
A890622 01/5/89.-N.wall,centre, detail Nativity and inscription.
A890623 01/5/89.-Detail inscription.
A890624 01/5/89.-N.wall,centre, detail Nativity and inscription.
A890625 01/5/89.-N.wall,centre, detail Ages of Man and inscription.
A890626 01/5/89.-W.wall,centre, detail inscription.
A890627 01/5/89.-Ceiling vault, detail inscription.
A890628 01/5/89.-Detail inscription.
A890629 01/5/89.-Detail inscription.
A890630 01/5/89.-Detail inscription.
A890631 01/5/89.-Detail inscription.
A890632 01/5/89.-Detail inscription.
A890633 01/5/89.-Detail inscription.
A890634 01/5/89.-Detail inscription.
A890635 01/5/89.-Detail inscription.
A890636 01/5/89.-Detail inscription.
A890637 01/5/89.-Detail inscription.
A890638 01/5/89.-Detail inscription.
A890639 01/5/89.-N.wall,centre, detail Nativity and inscription.
A890640 01/5/89.-N.wall,centre, detail Nativity and inscription.
A890641 01/5/89.-N.wall,centre, detail Nativity and inscription.
A890642 01/5/89.-Detail inscription.
A890643 01/5/89.-Detail inscription.
A890644 01/5/89.-Detail inscription.
A890645 01/5/89.-Detail inscription.
A890646 01/5/89.-Detail inscription.
A890647 01/5/89.-Detail inscription.
A890648 01/5/89.-Detail inscription.
A890649 01/5/89.-Detail inscription.

EH rectified photography: survey 95/107/1R (Feb. 1995)

(Camera type; Toyo monorail 5x4)

With measures

95/107/1R; 01; East wall; overall view.
95/107/1R; 02; East wall; detail paintings.
95/107/1R; 03; East wall; detail paintings.
95/107/1R; 04; East wall; detail entrance passage.
95/107/1R; 05; East wall; entrance passage, north niche.
95/107/1R; 06; East wall; entrance, detail north niche.
95/107/1R; 07; East wall; entrance passage, north side.
95/107/1R; 08; East wall; entrance passage, south side.
95/107/1R; 09; East wall; entrance passage, south side.
95/107/1R; 10; South wall; overall view.
95/107/1R; 11; South wall; east side, detail.
95/107/1R; 12; South wall; west side, detail.
95/107/1R; 13; South wall; upper wall, detail..
95/107/1R; 14; West wall; upper wall, detail.
95/107/1R; 15; West wall; detail.
95/107/1R; 16; West wall; window recess, niche, north side, detail.
95/107/1R; 17; West wall; arch soffit, south side detail.
95/107/1R; 18; West wall; arch soffit, south side detail.
95/107/1R; 19; West wall; window, north side, detail.
95/107/1R; 20; West wall; south side,detail.
95/107/1R; 21; North wall; upper wall, detail.
95/107/1R; 22; North wall; overall view.
95/107/1R; 23; North wall; west side, detail.
95/107/1R; 24; North wall; east side, detail.
95/107/1R; 25; North wall; window recess, west side, detail.
95/107/1R; 26; North wall; window recess, west side, upper area, detail.

95/107/1R; 27; North wall; window recess, east side, detail.
95/107/1R; 28; North wall; window recess, west side, upper area, detail.
95/107/1R; 29; Ceiling; south west corner, viewed from west.
95/107/1R; 30; Ceiling; north west corner, viewed from west.
95/107/1R; 31; Ceiling; south east corner, viewed from south.
95/107/1R; 32; Ceiling; south west corner, viewed from south.
95/107/1R; 33; Ceiling; south east corner, viewed from east.
95/107/1R; 34; Ceiling; north east corner, viewed from east.
95/107/1R; 35; Ceiling; north section, from below west.
95/107/1R; 36; Ceiling; north section, from below east.

Longthorpe Tower, Cambridgeshire.

EH photography: survey 95/107/1R; (Feb. 1995)

With measures.

95/107/1R; View north west corner - general not recified.

95/107/1R; View north east corner - general not recified.

95/107/1R; View south east corner - general not recified.

95/107/1R; View south west corner - general not recified.

HPLT 211194(43) C 26 [TM/JD]

Photograph search, DOE files, EH photo library (JD24/03/95)

19/9/51

A1439/1 'Interior, south wall, showing a King, perhaps Edward III.'

A1439/2 'Interior, north wall, showing the nativity and the seven ages of man.'

A1439/3 'Interior, west wall, showing St Antony and the Basket-maker, above, and the Philosopher and Pupil, below.'

A1439/4 'Interior, north-east corner, with modern entrance door.'

A1439/6 'Exterior, view from north-west.'

A1439/7 'Interior, west wall, showing St Antony and the Basket-maker, above, and the Philosopher and Pupil, below.'

A1439/8 'Interior, second floor room.'

A1439/9 'Interior, east wall, showing the Wheel of the Senses.'

30-4-54

A3161/1-2 exterior views

1976

A(TR)9635/1 west wall

A(TR)9683/6 north-east corner

4-81

A(TR)10476/1-3 interior views

A(CN)10477/1-3 interior views

A10478/1-3 interior views

8/11-12-81

A(CN)10563/1-26 wall paintings

A10576/1-22 wall paintings

A105/1-5 'wall painting, general views'

21-1-82

A(CN)10582/1-7 'general views (wall paintings)'

A(CN)10583/1-29 'details'

A/BW10619/1-30 'details of wall paintings'

Bibliography

Caiger-Smith, English Medieval Mural Painting, 162-3.

Camille, M., *Image on the Edge: the Margins of Medieval Art*, London, 1992. [for bestiaries]

Dixon, P., 'From hall to tower: the change in seigneurial houses on the Anglo-Scottish border after c.1250,' in *Thirteenth Century England IV*, Woodbridge, 1992, 93. [gives some comparative architectural evidence for a solar tower]

Rickert, M., *Painting in Britain: the Middle Ages*, 1954, 155,157, and plate 143b.

Rouse, E., and Baker, A., 'The wall-paintings at Longthorpe Tower near Peterborough, Northants,' *Archaeologia*, XCVI, Oxford, 1955, 1-57.[the most thorough study to date, although not completely dependable, as it pre-dates much conservation work]

Rouse, E., *Longthorpe Tower*, EH guidebook, HMSO, London, 1964.[mainly gleaned from the above, but with more accurate and recent information]

Rouse, E., 'Mediaeval paintings at Longthorpe Tower, *Country Life*, 4 April 1947, 604. [mainly publicity]

Sears, E.L., *The Ages of Man in Medieval Art*, University Microfilms International, Ann Arbor, 1984. [see photocopy in file -- discusses the iconography and secular use of the Seven Ages of Man]

Tristram, E.W., *English Wall Painting of the 14th Century*, London, 1955, 6 (King David),13 (heraldry),15, 26 (apostles),27(King David, 7 ages of man) ,31,86,92-94 and 107-108 (Wheel of the Senses),114 (3 Living and 3 Dead),219-221(King David), plates 41a,41b, and 64b.

Wood, M.E., 'Thirteenth-Century Domestic Architecture in England, *Architectural Journal*, CV, Supplement, 1950, 48. [brief entry on Longthorpe]

Yapp, W.B., 'The birds and other animals of Longthorpe Tower,' *Antiquaries Journal*, LVIII, 1978, 355-358. [deals specifically with this subject matter]

Illustrated London News, XI, 1949 [early photograph?]

Journal of the Courtauld and Warburg Institutes, XXII, 1959, 361-2.

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Region	Midlands	County	Cambridgeshire
Location of painting	Great Chamber		
Orientation	WEST WALL INCLUDING VAULT		
Century 14 th	Date	1320	Height (cm) 520 Width (cm) 460
Subjects included			
Bestiaries			
Four evangelists			
Heraldry			
Labours of the Months			
Musicians			
Saint(s)			

Description

The tower at Longthorpe is the only substantial survival of a fortified manor house owned by the de Thorpe family. In 1226 William de Thorpe, was confirmed in his landholding by the Abbot of Peterborough. Sir William de Thorpe, his son, obtained permission in 1263-64 from Robert, Abbot of Peterborough, to rebuild the parochial chapel of St. Botolph at Thorpe, which survives nearby. It is likely that the tower was built at the same time by Sir William de Thorpe, as many architectural details correspond to the church.

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The paintings comprise the most complete and important scheme of medieval secular painting in Britain. It is a combination of biblical, moral, didactic and secular subjects, probably based on contemporary literary sources.

The west wall contains painting on the outer face of the arch, its soffits and reveals, as well as the inner face of the wall and the west window splays. The inner wall, in the lower zone, contains a seated figure, possibly in a teaching position, facing a younger figure. They are separated by two inscription scrolls, but

the meaning of this scene has not yet been interpreted. Above this is depicted a hermit-like figure, standing in prayer, with birds, trees and animals behind him. A seated youth faces him, making a basket, and traces of another standing figure remain behind him. It has been suggested (Baker and Rouse, 1955) that this scene shows St. Anthony meeting an angel in secular dress.

Above this, on the face of the arch, is a depiction of the Twelve Labours of the Months, of which only January through April, and December, remain. In the lower zone of this arch are local birds and scrollwork, some depictions of local birds, and some derived from bestiaries.

The vault directly above the west wall contains only the remains of one musician on the south side.

Photographic Record

29/6/94 EH 'current' contact photo files;

June 1988, J880239, J880240, J880241, J880242, J880243, J880244. April 1989, wall painting conservation record, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633. April 1989, wall painting conservation record, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649.

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Bibliography

Caiger-Smith, English Medieval Mural Painting, 162-3.

Camille, M., *Image on the Edge: the Margins of Medieval Art*, London, 1992. [for bestiaries]

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Illustrated London News, XI, 1949 [early photograph?]

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Region	Midlands	County	Cambridgeshire
Location of painting	Great Chamber		
Orientation	NORTH WALL INCLUDING VAULT		
Century 14 th	Date	Height (cm) 520	Width (cm) 475
Subjects included			
Apostle(s)			
Bestiaries			
Four evangelists			
Musicians			
Seven Ages of Man			
The Nativity			

Description

The tower at Longthorpe is the only substantial survival of a fortified manor house owned by the de Thorpe family. In 1226 William de Thorpe was confirmed in his landholding by the Abbot of Peterborough. Sir William de Thorpe, his son, obtained permission in 1263-64 from Robert, Abbot of Peterborough, to rebuild the parochial chapel of St. Botolph at Thorpe, which survives nearby. It is likely that the tower was built at the same time by Sir William de Thorpe, as many architectural details correspond to the church.

The son of Sir William, Robert de Thorpe, was appointed Steward of the Abbey in 1310-11, a post which he held until 1329. He was released from villein service in 1323-4. His son, also Robert, was appointed Steward in 1330 and still held Thorpe in 1346. Either could be responsible for commissioning the paintings.

The Thorpe estates passed into the family of Wyttilbury of Milton and Marholm when, in 1391, John Wyttilbury assumed the arms of William Thorpe. At the end of the 15th century they were acquired by the Fitzwilliams of Milton, and they still belong to their descendant. The tower was placed under the care of the Ministry of Works in 1947.

The house at Longthorpe consists of the original 13th-century north-south wing which probably contained the hall, the 14th-century Great Tower (which houses the paintings), and an east-west wing of the 17th century. The tower retains most of its 14th-century detail, relatively unaltered. The walls are 1.8 to 2.1 metres thick, built almost entirely of small stone rubble. The ground floor houses a vaulted undercroft which is inaccessible from the rest of the tower. The top floor retains a garderobe and the original window-recesses and seats. However, the area of primary concern is the first floor, which houses the Great Chamber, or the lord's private apartment. It is vaulted, and retains an aumbry, various window recesses, two niches, an original fireplace opening, and a small chamber (possibly a garderobe) inserted into the thickness of the wall. The original early 14th-century tower (c.1300) would have only had access from the Great Hall, but later in the 14th century (c.1320-30?) the room was altered for different use: the window on the east wall was blocked and a door was inserted in this area. The arched recess of the north wall (which originally appeared as the west wall does now) was filled in, perhaps for structural reasons. It was after these alterations to the room that the scheme was painted.

The paintings comprise the most complete and important scheme of medieval secular painting in Britain. It is a combination of biblical, moral, didactic and secular subjects, probably based on contemporary literary sources.

The north wall contains a scene of the Nativity above the window arch. The Virgin reclines on a cushion, and Joseph sits at her feet; only a fragment of the ox and the ass is left in the centre. Above this is the Seven Ages of Man, including the Infant in its cradle, the Boy with the ball and whip, Youth, Manhood with

a hawk and lure, Middle Age, Old Age carrying a bag full of savings, and Decrepitude on crutches. Each is labelled below in Lombardic script.

In the lower zone are two more pairs of the Apostles with their Creed inscriptions (fragments of another two pairs remain within the window reveals). An unusual aspect of the eastern pair is that one appears to be a woman, possibly representing the Church (Ecclesia). At dado level are various types of birds within scrollwork. Some are local fenland birds, and some are probably derived from bestiaries.

The vault directly above the north wall contains a significant portion of musician figures on the east and west sides -- one, on the west side, specifically depicts King David with his harp. Much of the pierced quatrefoil, containing traces of an evangelist figure, remains on the west side.

Photographic Record

29/6/94 EH 'current' contact photo files;

June 1988, J880239, J880240, J880241, J880242, J880243, J880244. April 1989, wall painting conservation record, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633. April 1989, wall painting conservation record, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649.

EH photo library, computer keyword search;

May 1989, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649. June 1988, wall painting, J880242 (cross-refs; E880399). September 1988, wall painting, E880399 (cross-refs; A881518, J880242). February 1993, East wall mural depicting the Wheel of Five Senses, A921500 (cross-refs; J920873), J920873 (cross-refs; A921500).

Bibliography

Caiger-Smith, English Medieval Mural Painting, 162-3.

Camille, M., *Image on the Edge: the Margins of Medieval Art*, London, 1992. [for bestiaries]

Dixon, P., 'From hall to tower: the change in seigneurial houses on the Anglo-Scottish border after c.1250,' in *Thirteenth Century England IV*, Woodbridge, 1992, 93. [gives some comparative architectural evidence for a solar tower]

Rickert, M., *Painting in Britain: the Middle Ages*, 1954, 155,157, and plate 143b.

Rouse, E., and Baker, A., 'The wall-paintings at Longthorpe Tower near Peterborough, Northants,' *Archaeologia*, XCVI, Oxford, 1955, 1-57. [the most thorough study to date, although not completely dependable, as it pre-dates much conservation work]

Rouse, E., *Longthorpe Tower*, EH guidebook, HMSO, London, 1964. [mainly gleaned from the above, but with more accurate and recent information]

Rouse, E., 'Mediaeval paintings at Longthorpe Tower,' *Country Life*, 4 April 1947, 604. [mainly publicity]

Sears, E.L., *The Ages of Man in Medieval Art*, University Microfilms International, Ann Arbor, 1984. [see photocopy in file -- discusses the iconography and secular use of the Seven Ages of Man]

Tristram, E.W., *English Wall Painting of the 14th Century*, London, 1955, 6 (King David),13 (heraldry),15, 26 (apostles),27(King David, 7 ages of man) ,31,86,92-94 and 107-108 (Wheel of the Senses),114 (3 Living and 3 Dead),219-221(King David), plates 41a,41b, and 64b.

Wood, M.E., *Thirteenth-Century Domestic Architecture in England*, *Architectural Journal*, CV, Supplement, 1950, 48. [brief entry on Longthorpe]

Yapp, W.B., 'The birds and other animals of Longthorpe Tower,' *Antiquaries Journal*, LVIII, 1978, 355-358. [deals specifically with this subject matter]

Illustrated London News, XI, 1949 [early photograph?]

1 Wall Painting Record

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location of painting	Great Chamber		
Orientation	SOUTH WALL INCLUDING VAULT		
Century 14 th	Date	Height (cm) 520	Width (cm) 478
Subjects included			
Bestiaries			
Chevron pattern			
Figurative			
Four evangelists			
Heraldry			
Musicians			

Description

The tower at Longthorpe is the only substantial survival of a fortified manor house owned by the de Thorpe family. In 1226 William de Thorpe was confirmed in his landholding by the Abbot of Peterborough. Sir William de Thorpe, his son, obtained permission in 1263-64 from Robert, Abbot of Peterborough, to rebuild the parochial chapel of St. Botolph at Thorpe, which survives nearby. It is likely that the tower was built at the same time by Sir William de Thorpe, as many architectural details correspond to the church.

The son of Sir William, Robert de Thorpe, was appointed Steward of the Abbey in 1310-11, a post which he held until 1329. He was released from villein service in 1323-4. His son, also Robert, was appointed Steward in 1330 and still held Thorpe in 1346. Either could be responsible for commissioning the paintings.

The Thorpe estates passed into the family of Wyttilbury of Milton and Marholm when, in 1391, John Wyttilbury assumed the arms of William Thorpe. At the end of the 15th century they were acquired by the Fitzwilliams of Milton, and they still belong to their descendant. The tower was placed under the care of the Ministry of Works in 1947.

The house at Longthorpe consists of the original 13th-century north-south wing which probably contained the hall, the 14th-century Great Tower (which houses the paintings), and an east-west wing of the 17th century. The tower retains most of its 14th-century detail, relatively unaltered. The walls are 1.8 to 2.1 metres thick, built almost entirely of small stone rubble. The ground floor houses a vaulted undercroft which is inaccessible from the rest of the tower. The top floor retains a garderobe and the original window-recesses and seats. However, the area of primary concern is the first floor, which houses the Great Chamber, or the lord's private apartment. It is vaulted, and retains an aumbry, various window recesses, two niches, an original fireplace opening, and a small chamber (possibly a garderobe) inserted into the thickness of the wall. The original early 14th-century tower (c.1300) would have only had access from the Great Hall, but later in the 14th century (c.1320-30?) the room was altered for different use: the window on the east wall was blocked and a door was inserted in this area. The arched recess of the north wall (which originally appeared as the west wall does now) was filled in, perhaps for structural reasons. It was after these alterations to the room that the scheme was painted.

The paintings comprise the most complete and important scheme of medieval secular painting in Britain. It is a combination of biblical, moral, didactic and secular subjects, probably based on contemporary literary sources.

The south wall contains a heraldic diaper pattern within a decorative border in the lower zone. Above are two throned figures with shields bearing leopards. A small fragment of a long inscription remains beneath these figures. However, this scene has never been definitively interpreted.

The vault directly above the south wall contains the remains of musicians on the east and south sides, and part of a pierced quatrefoil in which one of the evangelists was depicted.

Photographic Record

29/6/94 EH 'current' contact photo files;

June 1988, J880239, J880240, J880241, J880242, J880243, J880244. April 1989, wall painting conservation record, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633. April 1989, wall painting conservation record, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649.

EH photo library, computer keyword search;

May 1989, infrared record, A890617, A890618, A890619, A890620, A890621, A890622, A890623, A890624, A890625, A890626, A890627, A890628, A890629, A890630, A890631, A890632, A890633, A890634, A890635, A890636, A890637, A890638, A890639, A890640, A890641, A890642, A890643, A890644, A890645, A890646, A890647, A890648, A890649. June 1988, wall painting, J880242 (cross-refs; E880399). September 1988, wall painting, E880399 (cross-refs; A881518, J880242). February 1993, East wall mural depicting the Wheel of Five Senses, A921500 (cross-refs; J920873), J920873 (cross-refs; A921500).

Bibliography

Caiger-Smith, English Medieval Mural Painting, 162-3.

Camille, M., *Image on the Edge: the Margins of Medieval Art*, London, 1992. [for bestiaries]

Dixon, P., 'From hall to tower: the change in seigneurial houses on the Anglo-Scottish border after c.1250,' in *Thirteenth Century England IV*, Woodbridge, 1992, 93. [gives some comparative architectural evidence for a solar tower]

Rickert, M., *Painting in Britain: the Middle Ages*, 1954, 155,157, and plate 143b.

Rouse, E., and Baker, A., 'The wall-paintings at Longthorpe Tower near Peterborough, Northants,' *Archaeologia*, XCVI, Oxford, 1955, 1-57. [the most thorough study to date, although not completely dependable, as it pre-dates much conservation work]

Rouse, E., *Longthorpe Tower*, EH guidebook, HMSO, London, 1964. [mainly gleaned from the above, but with more accurate and recent information]

Rouse, E., 'Mediaeval paintings at Longthorpe Tower, *Country Life*, 4 April 1947, 604. [mainly publicity]

Sears, E.L., *The Ages of Man in Medieval Art*, University Microfilms International, Ann Arbor, 1984. [see photocopy in file -- discusses the iconography and secular use of the Seven Ages of Man]

Tristram, E.W., *English Wall Painting of the 14th Century*, London, 1955, 6 (King David),13 (heraldry),15, 26 (apostles),27(King David, 7 ages of man) ,31,86,92-94 and 107-108 (Wheel of the Senses),114 (3 Living and 3 Dead),219-221(King David), plates 41a,41b, and 64b.

Wood, M.E., *Thirteenth-Century Domestic Architecture in England*, *Architectural Journal*, CV, Supplement, 1950, 48. [brief entry on Longthorpe]

Yapp, W.B., 'The birds and other animals of Longthorpe Tower,' *Antiquaries Journal*, LVIII, 1978, 355-358. [deals specifically with this subject matter]

Illustrated London News, XI, 1949 [early photograph?]

Journal of the Courtauld and Warburg Institutes, XXII, 1959, 361-2.

2 General Audit Information

Property name	LONGTHORPE TOWER	County	Cambridgeshire
Region	Midlands		
Location	Great Chamber		
Orientation	EAST WALL INCLUDING VAULT		
Century 14 th	Date 1320	Height (cm) 520	Width (cm) 458
Auditor(s)	TM/JD	Start date	21/11/94

Overall condition score 3

Recommendations

The paintings comprise the most complete and important scheme of medieval secular painting in Britain. The treatment of the east wall appears to have been completed by the time conservation work was halted in 1991.

The tower has a history of structural movement, and the plaster throughout the painted chamber shows evidence of this movement. There are numerous cracks which are disfiguring. The vulnerable area over the east door is cracking severely and requires urgent repair if repair plaster and original painted plaster is not to be lost. Repairs might also serve to monitor these cracks if inspected annually.

(Time scale: 2 people, 1 week, within the next year.)

NOTE: On the basis of this audit a three week investigation was carried out during March and April 1995 as part of the collaborative training programme with the Courtauld Institute of Art, supervised by Stephen Rickerby. This offered the opportunity to thoroughly document the paintings and to undertake some of the minor emergency treatment recommended in this report. The results of this project are outlined in a subsequent report 'Longthorpe Tower: A report on the examination of the wall paintings' March-April 1995.

2 General Audit Information

Property name	LONGTHORPE TOWER	County	Cambridgeshire
Region	Midlands		
Location	Great Chamber		
Orientation	WEST WALL INCLUDING VAULT		
Century 14 th	Date 1320	Height (cm) 520	Width (cm) 460
Auditor(s)	JD, TM	Start date	22/11/94

Overall condition score 3

Recommendations

The paintings comprise the most complete and important scheme of medieval secular painting in Britain, and their present appearance is felt to be unacceptable. The treatment of the west wall was completed by the time conservation work was halted in 1991.

There is some limited (recent) flaking of the paint layer to the inner wall, at low level which will require fixing especially as this area is vulnerable to mechanical damage.

The vault should be inspected from a scaffold to establish the stability of plaster layers.

NOTE: On the basis of this audit a three week investigation was carried out during March and April 1995 as part of the collaborative training programme with the Courtauld Institute of Art, supervised by Stephen Rickerby. This offered the opportunity to thoroughly document the paintings and to undertake some of the minor emergency treatment recommended in this report. The results of this project are outlined in a subsequent report 'Longthorpe Tower: A report on the examination of the wall paintings' March-April 1995.

2 General Audit Information

Property name	LONGTHORPE TOWER	County	Cambridgeshire
Region	Midlands		
Location	Great Chamber		
Orientation	NORTH WALL INCLUDING VAULT		
Century 14th	Date	Height (cm) 520	Width (cm) 475
Auditor(s)	JD, TM	Start date	21/11/94

Overall condition score **4**

Recommendations

The paintings comprise the most complete and important scheme of medieval secular painting in Britain, and their present appearance is felt to be unacceptable. The conservation of the paintings was prematurely halted in 1991 due to the retirement of the conservator in charge. This has left the 1946 wax coating intact on the upper west side of the north wall (and the entire south wall); in other areas the coating (along with large areas of retouching) has only been partially removed. The boundaries between cleaned and uncleaned areas present disturbingly hard outlines.

The tower has a history of structural movement, and the plaster throughout the painted chamber shows evidence of this movement. There are numerous cracks which are disfiguring. These have led to the delamination and bulging of the plaster. On the north wall, a gaping hole at the apex of the arch regularly deposits sand and dirt onto the custodian's desk below. Previously (Barakan 1991) this was thought to be due to masonry bees. However, it is now known that masonry bees have been treated and were active elsewhere in the building. This hole, and the surrounding area, require urgent consolidation and repair.

The present position of the custodian's desk is controversial because it is situated in a window niche within the north wall, the surfaces of which bear traces of original painted decoration. However, there may not be a suitable alternative location within the room, and it is felt that the constant presence of a custodian can only be beneficial to the paintings.

NOTE: On the basis of this audit a three week investigation was carried out during March and April 1995 as part of the collaborative training programme with the Courtauld Institute of Art, supervised by Stephen Rickerby. This offered the opportunity to thoroughly document the paintings and to undertake some of the minor emergency treatment recommended in this report. The results of this project are outlined in a subsequent report 'Longthorpe Tower: A report on the examination of the wall paintings' March-April 1995.

2 General Audit Information

Property name	LONGTHORPE TOWER	County	Cambridgeshire
Region	Midlands		
Location	Great Chamber		
Orientation	SOUTH WALL INCLUDING VAULT		

Orientation	SOUTH WALL INCLUDING VAULT		
Century 14th	Date	Height (cm) 520	Width (cm) 478
Auditor(s)	JD, TM	Start date 22/11/94	

Overall condition score **3**

Recommendations

The paintings comprise the most complete and important scheme of medieval secular painting in Britain, and their present appearance is felt to be unacceptable. The conservation of the paintings was prematurely halted in 1991 due to the retirement of the conservator in charge. This has left the 1946 wax coating intact on the entire south wall (and the upper west side of the north wall). Several areas of cleaning tests are visible.

The tower has a history of structural movement, and the plaster throughout the painted chamber shows evidence of this movement. There are numerous severe cracks on the south wall which run through both original and repair plasters, indicating recent damage. Delamination of the plaster may have occurred as a consequence of the cracking. Minor repairs to the cracks are required.

There are also small losses over the surface of the plaster, indicating deterioration of the plaster itself. This may be the result of the continued presence of the wax coating, as this phenomenon has not been observed elsewhere in the chamber. This should be examined further (from scaffolding) and consolidation may be required.

NOTE: On the basis of this audit a three week investigation was carried out during March and April 1995 as part of the collaborative training programme with the Courtauld Institute of Art, supervised by Stephen Rickerby. This offered the opportunity to thoroughly document the paintings and to undertake some of the minor emergency treatment recommended in this report. The results of this project are outlined in a subsequent report 'Longthorpe Tower: A report on the examination of the wall paintings' March-April 1995.

3 Audit Information: Technique

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	EAST WALL INCLUDING VAULT		
Century 14th	Date	1320	Height (cm) 520 Width (cm) 458
Auditor(s)	TM/JD	Start date	21/11/94

Overall Condition Score 3

Stratigraphy

Layer type	Support Layer	Specific condition Score	3
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Thickness

Comments

The support is comprised of small stone rubble with ashlar quoins. There are obvious signs of past structural movement - repaired external cracks are visible - however active cracking of the internal plaster may indicate continued instability. The quoins are only partially visible in areas and the pointing has been heavily repaired.

Layer type	Render Layer 1	Specific condition Score	3
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Thickness

Comments

Lime/sand render with coarse and fine aggregate. The surface has been damaged and extensively repaired, therefore only tentative conclusions were made. Aggregate size varies from fine to 0.5 cm. The render is spread thinly onto the quoins.

Layer type	Render Layer 2	Specific condition Score	2
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Thickness

Comments

The surface has been heavily abraded, damaged and repaired, however from existing damage some tentative conclusions were drawn. Render 2 appears to be a lime/sand render similar to render 1, with slightly finer aggregate.

Layer type	Ground Layer 1	Specific condition Score	2
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Thickness

Comments

Coarsely applied limewash ground, striations of brushstrokes visible.

Layer type	Ground Layer 2	Specific condition Score	2
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Thickness

Comments

Coarsely brushed limewash, continues over quoins. Thought to have been applied using a hog's bristle brush (Rouse, 1964:19). Circular and straight incisions to assist the execution of the 'Wheel of the Five Senses' are visible in raking light to the centre of the wheel hub.

Layer type Paint Layer 1 **Specific condition Score** 2

Thickness

Comments

The range of pigments identified in the paintings suggests an organic binding medium was employed - at least in part - by the artist. Lead white (now altered) was confirmed by P. Welford (Courtauld Institute of Art, final diss.1991). E. C. Rouse noted vermilion following UV and IR examinations (Rouse, 1964:19). From simple visual assessment earth pigments (red and yellow iron oxide) and lime white were also identified (Rouse, 1964:19). Black is also present.

Identified pigments Colours

white lead	white
vermilion	red
lime white	white
---	black
yellow earth	yellow
red earth	red

Analysis undertaken

Method POLARIZING LIGHT MICROSCOPY

Person P. Welford **Date** 01/01/91

Comments Lead white (now altered) was confirmed by P. Welford (Courtauld Institute of Art, final diss.1991).

Analysis undertaken

Method ULTRA VIOLET LIGHT MICROSCOPY (U.V.L.M.)

Person E.C. Rouse **Date** 01/01/64

Comments E. C. Rouse noted vermilion following UV and IR examinations (Rouse, 1964:19). From simple visual assessment earth pigments (red and yellow iron oxide) and lime white were also identified (Rouse, 1964:19).

3 Audit Information: Technique

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	WEST WALL INCLUDING VAULT		
Century 14 th	Date 1320	Height (cm) 520	Width (cm) 460
Auditor(s)	JD, TM	Start date	22/11/94

Overall Condition Score 3

Stratigraphy

Layer type	Support Layer	Specific condition Score	3
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Thickness

Comments

The support is comprised of small stone rubble with ashlar quoins. There are obvious signs of past structural movement - repaired external cracks are visible - however, active cracking of the internal plaster may indicate continued instability. The quoins are only partially visible in areas and the pointing has been heavily repaired.

Layer type	Render Layer 1	Specific condition Score	3
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Thickness

Comments

Lime/sand render with coarse and fine aggregate. The surface has been damaged and extensively repaired, therefore only tentative conclusions were made. Aggregate size varies from fine to 0.5 cm. The render is spread thinly onto the quoins.

Layer type	Render Layer 2	Specific condition Score	2
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Thickness

Comments

The surface has been heavily abraded, damaged and repaired, however, from existing damage some tentative conclusions were drawn. Render 2 appears to be a lime/sand render similar to render 1, with slightly finer aggregate.

Layer type	Ground Layer 1	Specific condition Score	2
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Thickness

Comments

Coarsely applied limewash ground, striations of brushstrokes visible.

Layer type	Ground Layer 2	Specific condition Score	2
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Thickness

Comments

Coarsely brushed limewash, continues over quoins. Thought to have been applied using a hog's bristle brush (Rouse, 1964:19).

Layer type Paint Layer 1 **Specific condition Score** 2

Thickness

Comments

The range of pigments identified in the paintings suggests an organic binding medium was employed - at least in part - by the artist. lead white (now altered) was confirmed by P.Welford (Courtauld Institute of Art, final diss. 1991). E.C. Rouse noted vermilion following UV and IR examinations (Rouse, 1964:19). From simple visual assessment earth pigments (red and yellow iron oxide) and lime white were also identified (Rouse, 1964:19).

Identified pigments **Colours**

vermillion	red
white lead	white
lime white	white
---	black
red earth	red
yellow earth	yellow

Analysis undertaken

Method POLARIZING LIGHT MICROSCOPY

Person P.Welford **Date** 01/01/91

Comments Lead white (now altered) was confirmed by P.Welford (Courtauld Institute of Art, final diss. 1991).

Analysis undertaken

Method ULTRA VIOLET LIGHT MICROSCOPY (U.V.L.M.)

Person E.C. Rouse **Date** 01/01/64

Comments E.C. Rouse noted vermilion following UV and IR examinations (Rouse, 1964:19). From simple visual assessment earth pigments (red and yellow iron oxide) and lime white were also identified (Rouse, 1964:19).

3 Audit Information: Technique

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	NORTH WALL INCLUDING VAULT		
Century 14 th	Date	Height (cm) 520	Width (cm) 475
Auditor(s)	JD, TM	Start date	21/11/94

Overall Condition Score **4**

Stratigraphy

Layer type	Support Layer	Specific condition Score	3
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Thickness

Comments

Support is of small stone rubble with ashlar quoins. The north wall was substantially altered in the fourteenth century, by blocking the recessed arch, perhaps for structural reasons (it originally appeared as the west wall does now). There are obvious signs of past structural movement, and external cracks have been repaired. However, internal plaster cracks may indicate continued instability. On the north wall, the cracks appear to be worse than in c.1964 photographs. The quoins are only partly visible in areas, and the pointing has been heavily repaired.

Layer type	Render Layer 1	Specific condition Score	3
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Thickness

Comments

Lime/sand render with coarse and fine aggregate. The surface has been heavily abraded and repaired, however from existing damage some tentative conclusions were made. Aggregate varies from very fine to 0.5 cm size. This render thins out over stone quoins.

Layer type	Render Layer 2	Specific condition Score	3
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Thickness

Comments

The surface has been heavily abraded and repaired, however from existing damage some tentative conclusions were made. This render layer appears to be a lime/sand render similar to render layer 1, with slightly finer aggregate. Cracking and pockets of delamination, as well as previous loss, accounts for poor condition score.

Layer type	Ground Layer 1	Specific condition Score	2
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Thickness

Comments

Coarsely brushed limewash ground, striations visible.

Layer type	Ground Layer 2	Specific condition Score	3
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Thickness

Comments

Coarsely brushed limewash, continuing over stone quoins. Applied with hog's bristle brush (Rouse, 1964:19).

Layer type	Paint Layer 1	Specific condition Score	2
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Thickness

Comments

Due to the types of pigments present,, presumably an organic medium was employed. P. Welford (Courtauld Institute of Art, final diss., 1991) confirmed the use of (altered) lead white. E. Rouse noted the use of vermilion in 1964 using UV and IR techniques (Rouse, 1964:19). From simple visual examination red and yellow iron oxides were identified (Rouse, 1964:19). Black is also present.

Identified pigments	Colours
lime white	white
white lead	white
---	black
vermillion	red
red earth	red
yellow earth	yellow

Analysis undertaken

Method POLARIZING LIGHT MICROSCOPY

Person P.Welford **Date** 01/01/91

Comments P. Welford (Courtauld Institute of Art, final diss., 1991) confirmed the use of (altered) lead white.

Analysis undertaken

Method ULTRA VIOLET LIGHT MICROSCOPY (U.V.L.M.)

Person E.C. Rouse **Date** 01/01/64

Comments E. Rouse noted the use of vermilion in 1964 using UV and IR techniques (Rouse, 1964:19). From simple visual examination red and yellow iron oxides were identified (Rouse, 1964:19).

3 Audit Information: Technique

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	SOUTH WALL INCLUDING VAULT		
Century 14 th	Date	Height (cm) 520	Width (cm) 478
Auditor(s)	JD, TM	Start date	22/11/94

Overall Condition Score 3

Stratigraphy

Layer type	Support Layer	Specific condition Score	3
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Thickness

Comments

The support is of small stone rubble with ashlar quoins. There are obvious signs of past structural movement, and external cracks have been repaired. However, internal plaster cracks may indicate continued instability.

The quoins are only partly visible in areas, and the pointing has been heavily repaired.

Layer type	Render Layer 1	Specific condition Score	3
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Thickness

Comments

Lime/sand render with coarse and fine aggregate. The surface has been heavily abraded and repaired, however from existing damage some tentative conclusions were made. Aggregate varies from very fine to 0.5 cm size. This render thins out over stone quoins.

Layer type	Render Layer 2	Specific condition Score	3
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Thickness

Comments

The surface has been heavily abraded and repaired, however from existing damage some tentative conclusions were made. This lime/sand render is similar to render layer 1, with slightly finer aggregate. Cracking and pockets of delamination, as well as previous loss, accounts for the poor condition score.

Layer type	Ground Layer 1	Specific condition Score	2
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Thickness

Comments

Coarsely brushed limewash ground, striations visible.

Layer type	Ground Layer 2	Specific condition Score	3
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Thickness

Comments

Coarsely brushed limewash, continuing over stone quoins. Applied with hog's bristle brush (Rouse, 1964:19).

Layer type	Paint Layer 1	Specific condition Score	2
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Thickness

Comments

Due to the types of pigments present, presumably an organic medium was employed. P. Welford (Courtauld Institute of Art, final diss, 1991) confirmed the use of (altered) lead white. E. Rouse noted the use of vermilion in 1964 using UV and IR techniques (Rouse, 1964:19). From simple visual examination red and yellow iron oxide pigments were identified (Rouse, 1964:19). Black is also present.

Identified pigments	Colours
lime white	white
---	black
white lead	white
vermilion	red
red earth	red
yellow earth	yellow

Analysis undertaken

Method ULTRA VIOLET LIGHT MICROSCOPY (U.V.L.M.)

Person E.C. Rouse **Date** 01/01/64

Comments E. C. Rouse noted vermilion following UV and IR examinations (Rouse, 1964:19). From simple visual assessment earth pigments (red and yellow iron oxide) and lime white were also identified (Rouse, 1964:19).

Analysis undertaken

Method POLARIZING LIGHT MICROSCOPY

Person P. Welford **Date** 01/01/91

Comments P. Welford (Courtauld Institute of Art, final diss, 1991) confirmed the use of (altered) lead white.

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

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	EAST WALL INCLUDING VAULT		
Century 14th	Date	1320	Height (cm) 520
			Width (cm) 458

DETERIORATION AND DAMAGE

Deterioration phenomena

Type flaking

Location To arm of monkey, left above fireplace, also some general.

Comments It is clear that much flaking and loss of the paint and ground layers has previously occurred. During the 1994 audit it appeared that these areas had been treated. Letters in the EH file records treatment by M. Keevil during 1965 and infer treatment by K. Barakan c. 1981.

Type cracking

Location Above door (repair and original), north side of door and door recess.

Comments Three timbers are present which lie horizontally through the wall from the exterior to the interior. Their external surfaces are exposed and therefore may be susceptible to movement in response to environmental changes. Movement of these timbers may exacerbate the cracking phenomenon, however previous (and current ?) structural instability of the building are also likely to be contributory factors.

Type loss

Location Repair above door lintel.

Comments Differential movement of the timber lintel and the plaster repair may be the cause of this loss, in addition it may be affected by vibrations caused by opening and closing of the door.

Type delamination (render layer)

Location Repair above door.

Comments Delamination is occurring following weakening of the plaster structures caused by cracking.

Type pigment alteration

Location Face and hand of King 'Reason' in wheel of senses, three living and three dead, plus scholars in recess.

Comments Alteration of lead white pigment to dark brown-black lead compounds (probably plattnerite) has occurred in several areas.

Mechanical damage

Type nail holes

Location Above door.

Comments Several nail holes visible. Apparently these date from the mid-twentieth century when the building was occupied by the Home Guard (Rouse, 1955:1).

Type insertions

Location North reveal of door recess, west of niche.

Comments A white rubber 'door stop' has been fixed into the plaster with a large screw.

Type minor losses

Location Door recess, above door, north side, high level.

Comments Removal of original material (probably plaster only) to expose early window tracery. The reveals to the new opening have been neatly repaired.

ADDED MATERIALS

Accretions

Type dirt

Location Surfaces.

Comments Light soiling, appears to adhere well to remnants of wax coating (partially removed).

Type dust

Location Surfaces.

Comments Light soiling, appears to adhere well to remnants of wax coating (partially removed).

Type cobwebs

Location Window reveal and niche corners.

Comments Light accumulation of cobwebs.

Coatings/Coverings

Type wax

Location Surfaces.

Comments A wax preservative coating was applied, following uncovering, in c. 1946. The wax coating was partially removed during the 1980's by K. Barakan.

Type limewash

Location Surfaces.

Comments Limewash was removed c. 1946 by Tristram and E. C. Rouse. A few remnants remain.

Type plaster

Location Surfaces.

Comments Barakan (1982) infers that a hair plaster was present overlying areas of paint.

Repairs

Type hair plaster

Location Upper north side, vault, and door recess

Comments Pinkish hair plaster, probably 17th century. This may be the plaster which was removed in order to reveal the painted scheme.

Type lime:sand

Location Vault and small patches on wall

Comments Lime/sand repairs made by K. Barakan in 1982.

Type modern plaster

Location Several, wall, door recess and ceiling

Comments Tristram and Rouse's lime-based repairs, flush with original plaster, toned to match surrounding areas. A rough sketch (see file) made by K. Barakan identify these as part of the Tristram/Rouse campaign.

Type lime:sand

Location Monkey on Wheel of Senses and various cracks and losses

Comments M. Keevil's lime/sand repairs of 1965, made to localized areas as part of an emergency treatment.

TREATMENT

Past Treatment

Type UNCOVERING **Date** 01/01/45

Person Hugh Horrell (then tenant)

Comments 'When the Home Guard finally vacated the tower, Mr. Horrell set about redecorating the room for his own use. In the course of his rough scraping down of the walls, he detached large flakes of distemper and limewash and saw that the underlying colour was extensive. He therefore proceeded with greater caution, and laboriously worked away until a number of figures had been revealed. He wisely stopped when any fragile or difficult part was reached. The discovery was reported to the owner... [who] authorized the work of full uncovering, repair and preservation... in 1946.' (Rouse 1955:1)

Past Treatment

Type APPLICATION OF COATING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31). There are no direct references to the application of a wax preservative but this clearly relates to Tristram, as it was his standard method of treatment at the time. Barakan (in her report, 1981) states that the wax was applied, following consolidation with limewater, but it also could have contained any of a number of organic additives.

Type CLEANING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31).

Type CONSOLIDATION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31). It is thought the consolidation was carried out with limewater (see Barakan letter, 1981)

Type FILLS/REPAIRS INSERTION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it. At the same time plaster repairs were executed. In many cases, where there were serious settlement cracks or failures or unsuitable previous patching, this amounted almost to structural work. In the wheel subject, for instance, parts of the plaster were actually loose from the wall, and the number of repairs, large and small, amounted to over sixty.' (Rouse 1955:31)

Type PRESENTATION/REINTEGRATION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'Plaster repairs were toned down so as not to distract the eye, and in a few cases broken lines or areas were suggested by a light toning. Areas of completely perished plaster or miscellaneous patching (as in the vault) were colour-washed.' (Rouse 1955:31)

Type UNCOVERING Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Past Treatment

Type STRUCTURAL REPAIRS Date 01/01/47

Person M.O.W.

Comments According to Rouse (1955:31) '...a comprehensive programme of repair and conservation has been carried out. This work included the filling up by a method of tamping, with tile stitches, of the several alarming settlement cracks, and the placing of a concealed concrete beam round the top of the whole building to tie it together. The lower portion, where no complications of painting hindered operations, was able to be grouted. Excavation of the base of the walls revealed a chamfered plinth round the whole structure.'

Past Treatment

Type CLEANING Date 25/10/65

Person M. Keevil

Comments '[The Wheel of the Senses]...After these fillings were dry the whole surface of the wall was cleaned with putty rubber. This treatment made a considerable difference to the general appearance of the painting, by removing a layer of grime, the painting was silhouetted more strongly against the light coloured background...
[on the south wall] the painted surface was then cleaned with putty rubber with very good result.'

Type FILLS/REPAIRS INSERTION Date 25/10/65

Person M. Keevil

Comments 'The Wheel of the Senses. A damage had occurred on the monkey, bottom left hand corner of the painting [sic] this involved slight loss of the painted surface together with the lime putty support. The damage was filled with lime putty and sand and toned to harmonize with the surrounding colour. Other old damages and cracks on this wall were treated in the same way...
[on the south wall] many old cracks and holes in the wall surface were filled with lime putty and sand.'

Past Treatment

Type FLAKE FIXING Date 10/02/81

Person Unknown/K. Barakan?

Comments 'The small area of flaking paint on the left hand side above the fireplace has now been fixed and consolidated. During this process the opportunity was taken to carry out de-waxing and cleaning tests. These were more successful than I initially thought they would be. I, therefore, think we should de-wax and clean together with the necessary consolidation work already suggested.'

Past Treatment

Type CLEANING Date 01/04/82
Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... wax was removed partially with trichloroethane and mechanically... There are areas of original painting covered by plaster which was mechanically removed.'
There are also notes in the files which indicate that a carbon tetrachloride poultice was used, stating: 'Carbon tetrachloride poultice: clear white greasy [..?] which disappears after poulticing and washing off with carbon tetrachloride'

Type CONSOLIDATION Date 01/04/82
Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein...'

Type FILLS/REPAIRS INSERTION Date 01/04/82
Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein, wax was removed partially with trichloroethane and mechanically. Large cracks and cavities were filled with lime and yellow sand putty. This quarter of the ceiling is now completed. The areas of new plaster will be toned with lime casein wash and toned with colour when conservation of the ceiling area will be completed.'

Proposed Treatment

Type FILLS/REPAIRS INSERTION Date 12/11/94
Person JD, TM

Comments The area over the door is cracking and delaminating; although this is 17th-century plaster it is adjacent to fragments of original painted plaster. It is especially vulnerable to vibration caused by use of the heavy wooden door. A number of other cracks and small losses also require treatment.

Past Treatment

Type MONITORING CONDITION Date 01/04/95
Person Courtauld Institute/English Heritage

Comments Longthorpe Tower was chosen as a project for the collaborative fieldwork undertaken by the Conservation of Wall Painting Department, Courtauld Institute of Art and English Heritage every year. A team of four students was supervised by Stephen Rickerby. Full graphic and photographic documentation was undertaken, and the Survey Department at English Heritage has produced rectified photography for the entire chamber. Recommendations were made for treatment and further monitoring of the paintings.

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

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	WEST WALL INCLUDING VAULT		
Century 14 th	Date	1320	Height (cm) 520
			Width (cm) 460

DETERIORATION AND DAMAGE

Deterioration phenomena

Type pigment alteration

Location Birds, St. Anthony's robe, flesh tones

Comments Partial conversion of lead white to plattnerite (see P. Welford, 1991)

Type cracking

Location Throughout; large one from apex of vault down north side of arch

Comments The cracks may be the result of past structural movement, however they are not repairs and so may also indicate continuing movement of the structure.

Type loss

Location Numerous-- see diagram

Comments Significant amount of render loss, mostly repaired. See diagram for a mapping of the various repairs.

Type delamination (render layer)

Location Several areas at low level

Comments Possibly due to incomplete grouting, or caused by various cracks. Hollow pockets appear to be stable.

Type flaking

Location Lower wall (figures)

Comments Possibly recent damage. Lighter (unwaxed) areas are revealed by the loss and therefore post-dates the wax coating which was partially removed by Barakan (1982).

Mechanical damage

Type nail holes

Location Throughout

Comments Apparently date from when the tower was used by the Home Guard (Rouse, 1955:1)

ADDED MATERIALS

Accretions

Type dirt
Location Surface
Comments Not disfiguring

Type dust
Location Surface
Comments Not disfiguring

Type cobwebs
Location Surface, especially corners and recesses
Comments Not disfiguring

Coatings/Coverings

Type wax
Location Window splay
Comments Evidence of remains of wax coating. This was applied as a preservative by Tristram and Rouse in 1946.

Repairs

Type unidentified
Location Throughout
Comments There are several large repairs to the north side soffit of arch, arch and window splays, as well as the vault. The majority of the repairs are toned or retouched. They include a pinkish 17th-century hair plaster (which once probably covered the paintings), the extensive Tristram and Rouse repairs, Barakan repairs, and other unidentified smaller fills.

TREATMENT

Past Treatment

Type UNCOVERING Date 01/01/45

Person Hugh Horrell (then tenant)

Comments 'When the Home Guard finally vacated the tower, Mr. Horrell set about redecorating the room for his own use. In the course of his rough scraping down of the walls, he detached large flakes of distemper and limewash and saw that the underlying colour was extensive. He therefore proceeded with greater caution, and laboriously worked away until a number of figures had been revealed. He wisely stopped when any fragile or difficult part was reached. The discovery was reported to the owner... [who] authorized the work of full uncovering, repair and preservation... in 1946.' (Rouse 1955:1)

Past Treatment

Type APPLICATION OF COATING Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31) There are no direct references to the application of a wax preservative but this clearly relates to Tristram, as it was his standard method of treatment at the time. Barakan (in her report, 1981) states that the wax was applied following consolidation with limewater, but it also could have contained any of a number of organic additives.

Type CLEANING Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31) .

Type CONSOLIDATION Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31) It is thought that the consolidation was carried out with limewater (Barakan report, 1981).

Type FILLS/REPAIRS INSERTION Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Type UNCOVERING Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Past Treatment

Type STRUCTURAL REPAIRS **Date** 01/01/47

Person M.O.W.

Comments According to Rouse (1955:31) '... a comprehensive programme of repair and conservation has been carried out. This work included the filling up by a method of tamping, with tile stitches, of the several alarming settlement cracks, and the placing of a concealed concrete beam round the top of the whole building to tie it together. The lower portion, where no complications of painting hindered operations, was able to be grouted. Excavation of the base of the walls revealed a chamfered plinth round the whole structure.'

Past Treatment

Type CLEANING **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... wax was removed partially with trichloroethane and mechanically... There are areas of original painting covered by plaster which was mechanically removed.' (Barakan, 4/82)

There are also notes in the EH files which indicate that carbon tetrachloride poultices were used, stating: 'Carbon tetrachloride poultice: clear white greasy [..?] which disappears after poulticing and washing off with carbon tetrachloride'

Presumably between this date and the end of the programme in 1991 the west wall, and perhaps parts of other walls, were treated in the same way. However, there are no records of this treatment.

Type CONSOLIDATION **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein... (Barakan 4/82)

Presumably between this date and the end of the programme in 1991 the west wall, and perhaps parts of the south wall, were treated in the same way. However, there are no records of this treatment.

Type FILLS/REPAIRS INSERTION **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein, wax was removed partially with trichloroethane and mechanically. Large cracks and cavities were filled with lime and yellow sand putty. This quarter of the ceiling is now completed. The areas of new plaster will be toned with lime casein wash and toned with colour when conservation of the ceiling area will be completed.'(Barakan, 4/82)

Presumably between this date and the end of the programme in 1991 the west wall, and perhaps parts of other walls, were treated in the same way. However, there are no records of this treatment.

Past Treatment

Type PRESENTATION/REINTEGRATION **Date** 01/01/83

Person K. Barakan

Comments 1983? The west wall was worked on sometime between 1982 and 1991. There is evidence of tratteggio retouching to the repairs on this wall.

Proposed Treatment

Type FLAKE FIXING **Date** 22/11/94

Person JD, TM

Comments Some limited fixing may be required at low level, especially as this area is vulnerable to mechanical damage.

Type MONITORING CONDITION **Date** 22/11/94

Person JD, TM

Comments The vault should be inspected for stability. Several areas appear to be bulging, but a scaffold is required to fully assess its condition.

Past Treatment

Type MONITORING CONDITION **Date** 01/04/95

Person Courtauld Institute/English Heritage

Comments Longthorpe Tower was chosen as a project for the collaborative fieldwork undertaken by the Conservation of Wall Painting Department, Courtauld Institute of Art and English Heritage every year. A team of four students was supervised by Stephen Rickerby. Full graphic and photographic documentation was undertaken, and the Survey Department at English Heritage has produced rectified photography for the entire chamber. Recommendations were made for treatment and further monitoring of the paintings.

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

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	NORTH WALL INCLUDING VAULT		
Century 14th	Date	Height (cm)520	Width (cm) 475

DETERIORATION AND DAMAGE

Deterioration phenomena

Type delamination (render layer)

Location Apex of wall

Comments Delamination is so severe that a hole has occurred -- this gap appears to be c.9 cm wide and 2 cm deep. Air clearly blows through this hole, as an accumulation of dust and sand was noted on the desk below the loss. K. Barakan noted this phenomenon in 1991, when she assumed that masonry bees were the cause of such deterioration. In fact, there were masonry bees elsewhere in the building which were treated, but not in this area.

Type cracking

Location Render layer; from apex to above window and into window soffit and vault

Comments Clearly due to past structural movement. Some cracks extend through repairs. Has resulted in delamination of the render layer.

Type loss

Location East, central, and lower parts of the wall

Comments Loss of retouching has been caused by partial dewaxing carried out by K. Barakan. This has left obvious square outlines of edges where dewaxing has taken place.

Type pigment alteration

Location Throughout, especially flesh tones

Comments Lead white has partially altered to plattnerite.

Mechanical damage

Type nail holes

Location Throughout

Comments

ADDED MATERIALS

Accretions

Type dirt
Location Surface, especially corners
Comments As other walls -- not disfiguring

Type dust
Location Surface
Comments As other walls -- not disfiguring

Type cobwebs
Location Upper west side
Comments Hibernating moths. Several other moths noted in cupboard passage to house in south wall.

Coatings/Coverings

Type wax
Location Surface
Comments As other wall, traces of the wax preservative coating remain -- however, K. Barakan has not completed her de-waxing treatment. The full coating remains on the upper west side of the wall.

Repairs

Type unidentified
Location Throughout; see diagram
Comments There are numerous types and sizes of repairs. The upper wall and vault is extensively repaired.

TREATMENT

Past Treatment

Type UNCOVERING **Date** 01/01/45

Person Hugh Horrell (then tenant)

Comments 'When the Home Guard finally vacated the tower, Mr. Horrell set about redecorating the room for his own use. In the course of his rough scraping down of the walls, he detached large flakes of distemper and limewash and saw that the underlying colour was extensive. He therefore proceeded with greater caution, and laboriously worked away until a number of figures had been revealed. He wisely stopped when any fragile or difficult part was reached. The discovery was reported to the owner... [who] authorized the work of full uncovering, repair and preservation... in 1946.' (Rouse 1955:1)

Past Treatment

Type APPLICATION OF COATING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31) There are no direct references to the application of a wax preservative but this clearly relates to Tristram, as it was his standard method of treatment at the time. Barakan (in her report, 1981) states that the wax was applied in combination with limewater, but it also could have contained any of a number of organic additives.

Type CLEANING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Type CONSOLIDATION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31) It is thought that the consolidation was carried out with limewater (Barakan, 1981).

Type FILLS/REPAIRS INSERTION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it. At the same time plaster repairs were executed. In many cases, where there were serious settlement cracks or failures or unsuitable previous patching, this amounted almost to structural work. In the wheel subject, for instance, parts of the plaster were actually loose from the wall, and the number of repairs, large and small, amounted to over sixty.' (Rouse 1955:31)

Type PRESENTATION/REINTEGRATION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'Plaster repairs were toned down so as not to distract the eye, and in a few cases broken lines or areas were suggested by a light toning. Areas of completely perished plaster or miscellaneous patching (as in the vault) were colour-washed.' (Rouse 1955:31)

Type UNCOVERING Date 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Past Treatment

Type STRUCTURAL REPAIRS Date 01/01/47

Person M.O.W.

Comments According to Rouse (1955:31) '...a comprehensive programme of repair and conservation has been carried out. This work included the filling up by a method of tamping, with tile stitches, of the several alarming settlement cracks, and the placing of a concealed concrete beam round the top of the whole building to tie it together. The lower portion, where no complications of painting hindered operations, was able to be grouted. Excavation of the base of the walls revealed a chamfered plinth round the whole structure.'

Past Treatment

Type CLEANING Date 01/04/82

Person K. Barakan

Comments 'This wall is included in the next conservation programme which involves de-waxing the wall, cleaning, plaster consolidation and the repair of cavities... The work shall start as soon as the tourist season is over and will last, as every year, 6-8 weeks - i.e. from the end of October.' It is clear that cleaning did begin in this area (squared areas indicate the extent of cleaning), but there is no evidence of repairs or plaster consolidation. The yearly campaigns at Longthorpe ended after this season of treatment.
There are also notes in the files which indicate that a carbon tetrachloride poultices were used, stating: 'Carbon tetrachloride poultice: clear white greasy [..?] which disappears after poulticing and washing off with carbon tetrachloride'

Type CONSOLIDATION Date 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein...'

Presumably between this date and the end of the programme in 1991 parts of the north wall, were treated in the same way. However, there are no records of this treatment.

Type FILLS/REPAIRS INSERTION **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein, wax was removed partially with trichloroethane and mechanically. Large cracks and cavities were filled with lime and yellow sand putty. This quarter of the ceiling is now completed. The areas of new plaster will be toned with lime casein wash and toned with colour when conservation of the ceiling area will be completed.'

Presumably between this date and the end of the programme in 1991 parts of the north wall, were treated in the same way. However, there are no records of this treatment.

Proposed Treatment

Type FILLS/REPAIRS INSERTION **Date** 22/11/94

Person JD, TM

Comments Repair of the hole at the apex of the wall appears urgent. However, this area must be investigated from a scaffold.

Type GROUTING **Date** 22/11/94

Person JD, TM

Comments After inspection of the upper wall and vault from scaffolding, it may be necessary to grout some areas.

Proposed Treatment

Type UNSPECIFIED **Date** 20/12/94

Person JD, TM

Comments A full assessment of conservation requirements should be made. The recommendations are merely urgent work required in the short term. The appearance of the paintings could be considerably improved by a limited cleaning campaign accompanied by repairs and consolidation.

Past Treatment

Type MONITORING CONDITION **Date** 01/04/95

Person Courtauld Institute/English Heritage

Comments Longthorpe Tower was chosen as a project for the collaborative fieldwork undertaken by the Conservation of Wall Painting Department, Courtauld Institute of Art and English Heritage every year. A team of four students was supervised by Stephen Rickerby. Full graphic and photographic documentation was undertaken, and the Survey Department at English Heritage has produced rectified photography for the entire chamber. Recommendations were made for treatment and further monitoring of the paintings.

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

Property name	LONGTHORPE TOWER		
Region	Midlands	County	Cambridgeshire
Location	Great Chamber		
Orientation	SOUTH WALL INCLUDING VAULT		
Century 14th	Date	Height (cm) 520	Width (cm) 478

DETERIORATION AND DAMAGE

Deterioration phenomena

Type pigment alteration
Location Throughout, especially flesh tones
Comments Lead white has partially altered to plattnerite.

Type cracking
Location Render layer, throughout
Comments Cracks extend into repairs, especially above door, east side, east door, where there are long-term cracking problems due to structural movement. This has exacerbated delamination of the render layer.

Type delamination (render layer)
Location Several areas, especially related to cracks
Comments Pockets of delamination related to cracks.

Type loss
Location Centre, 1m high
Comments Appears to be recent damage (loss approximately 3 cm long)

Type loss
Location Several areas
Comments Old loss, pre-1946 conservation

Type general erosion
Location Surface
Comments General abrasion of the surface

Type pitting (surface)
Location Upper west side
Comments Small losses, or pitting, unknown phenomenon. Possibly mechanical damage.

Mechanical damage

Type minor losses

Location Upper west side

Comments Small pits or losses, possibly an unknown deterioration phenomenon of the plaster or mechanical damage.

ADDED MATERIALS

Accretions

Type dirt

Location Surface

Comments Adheres to remains of wax coating, not too disfiguring

Type dust

Location Surface

Comments Adheres to remains of wax coating, not too disfiguring

Type cobwebs

Location Surface, especially corners

Comments Adheres to remains of wax coating, not too disfiguring

Coatings/Coverings

Type wax

Location Entire surface

Comments Preservative applied by Rouse and Tristram c. 1946, noted by K. Barakan as 'wax in turpentine'. Coating has darkened and has resulted in some deterioration of the surface. Cleaning test squares of partially de-waxed painting - probably undertaken by K. Barakan- are visible on the south wall.

Repairs

Type unidentified

Location Throughout; see diagram

Comments There are several types of repairs, varying from 17C pink hair plaster to the Rouse/Tristram repairs c.1946, and numerous smaller patches throughout.

TREATMENT

Past Treatment

Type UNCOVERING **Date** 01/01/45

Person Hugh Horrell (then tenant)

Comments 'When the Home Guard finally vacated the tower, Mr. Horrell set about redecorating the room for his own use. In the course of his rough scraping down of the walls, he detached large flakes of distemper and limewash and saw that the underlying colour was extensive. He therefore proceeded with greater caution, and laboriously worked away until a number of figures had been revealed. He wisely stopped when any fragile or difficult part was reached. The discovery was reported to the owner... [who] authorized the work of full uncovering, repair and preservation... in 1946.' (Rouse 1955:1)

Past Treatment

Type APPLICATION OF COATING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31). There are no direct references to the application of a wax preservative but this clearly relates to Tristram, as it was his standard method of treatment at the time. Barakan (in her report, 1981) states that the wax was applied following consolidation with limewater, but it also could have contained any of a number of organic additives.

Type CLEANING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Type CONSOLIDATION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31) It is thought that the consolidation was carried out with limewater (see Barakan report, 1981).

Type FILLS/REPAIRS INSERTION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it. At the same time plaster repairs were executed. In many cases, where there were serious settlement cracks or failures or unsuitable previous patching, this amounted almost to structural work. In the wheel subject, for instance, parts of the plaster were actually loose from the wall, and the number of repairs, large and small, amounted to over sixty.' (Rouse 1955:31)

Type PRESENTATION/REINTEGRATION **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'Plaster repairs were toned down so as not to distract the eye, and in a few cases broken lines or areas were suggested by a light toning. Areas of completely perished plaster or miscellaneous patching (as in the vault) were colour-washed.' (Rouse 1955:31)

Type UNCOVERING **Date** 01/01/46

Person E.W. Tristram, E.C. Rouse

Comments 'The policy pursued in dealing with the painting was to uncover every area where painting survived and to clean and fix it.' (Rouse 1955:31)

Past Treatment

Type STRUCTURAL REPAIRS **Date** 01/01/47

Person M.O.W.

Comments According to Rouse (1955:31) '...a comprehensive programme of repair and conservation has been carried out. This work included the filling up by a method of tamping, with tile stitches, of the several alarming settlement cracks, and the placing of a concealed concrete beam round the top of the whole building to tie it together. The lower portion, where no complications of painting hindered operations, was able to be grouted. Excavation of the base of the walls revealed a chamfered plinth round the whole structure.'

Past Treatment

Type CLEANING **Date** 25/10/65

Person M. Keevil

Comments '[The Wheel of the Senses]...After these fillings were dry the whole surface of the wall was cleaned with putty rubber. This treatment made a considerable difference to the general appearance of the painting, by removing a layer of grime, the painting was silhouetted more strongly against the light coloured background...
[on the south wall] the painted surface was then cleaned with putty rubber with very good result.'

Type FILLS/REPAIRS INSERTION **Date** 25/10/65

Person M. Keevil

Comments 'The Wheel of the Senses. A damage had occurred on the monkey, bottom left hand corner of the painting [sic] this involved slight loss of the painted surface together with the lime putty support. The damage was filled with lime putty and sand and toned to harmonize with the surrounding colour. Other old damages and cracks on this wall were treated in the same way...
[on the south wall] many old cracks and holes in the wall surface were filled with lime putty and sand.'

Past Treatment

Type CLEANING **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... wax was removed partially with trichloroethane and mechanically... There are areas of original painting covered by plaster which was mechanically removed..'

There are also notes in the files which indicate that a carbon tetrachloride poultice was used, stating: 'Carbon tetrachloride poultice: clear white greasy [..?] which disappears after poulticing and washing off with carbon tetrachloride'

Presumably between this date and the end of the programme in 1991 the west wall, and perhaps parts of other walls, were treated in the same way. However, there are no records of this treatment. Test de-waxing / cleaning squares are visible on the south wall.

Type CONSOLIDATION **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein...'

Presumably between this date and the end of the programme in 1991 the west wall, and perhaps parts of the south wall, were treated in the same way. However, there are no records of this treatment.

Type FILLS/REPAIRS INSERTION **Date** 01/04/82

Person K. Barakan

Comments 'The eastern quarter of the ceiling where the condition was worse was restored during March-April... Large areas are loose, the mortar underneath the plaster is decomposed and crumbling. There is very little adhesion of plaster to this mortar... During the conservation process the original plaster was separated from repairs, loose parts were injected with calcium casein, wax was removed partially with trichloroethane and mechanically. Large cracks and cavities were filled with lime and yellow sand putty. This quarter of the ceiling is now completed. The areas of new plaster will be toned with lime casein wash and toned with colour when conservation of the ceiling area will be completed.'

Presumably between this date and the end of the programme in 1991 the west wall, and perhaps parts of the south wall, were treated in the same way. However, there are no records of this treatment.

Proposed Treatment

Type FILLS/REPAIRS INSERTION **Date** 22/11/94

Person JD, TM

Comments Minor repairs of cracks and small losses desirable.

Type GROUTING **Date** 22/11/94

Person JD, TM

Comments Render may require consolidation. Small losses indicate weakness. Scaffolding is required to fully assess condition.

Proposed Treatment

Type UNSPECIFIED **Date** 20/12/94

Person JD, TM

Comments A full assessment of conservation requirements should be made. The recommendations are merely urgent work required in the short term. The appearance of the paintings could be considerably improved by a limited cleaning campaign accompanied by repairs and consolidation.

Past Treatment

Type MONITORING CONDITION **Date** 01/01/95

Person Courtauld Institute/English Heritage

Comments Longthorpe Tower was chosen as a project for the collaborative fieldwork undertaken by the Conservation of Wall Painting Department, Courtauld Institute of Art and English Heritage every year. A team of four students was supervised by Stephen Rickerby. Full graphic and photographic documentation was undertaken, and the Survey Department at English Heritage has produced rectified photography for the entire chamber. Recommendations were made for treatment and further monitoring of the paintings.
