

Contents

1. Introduction - The circumstances of the survey....	.... 4
2. The Scope and Methodology of the Recording Programme....	.... 6
3. The Lady Chapel - The historical background....	.... 8
3.1. Introduction....	.... 8
3.2. The <i>Vetusta Ecclesia</i>....	.... 8
3.3. The great fire and its aftermath....	.... 10
3.3.1. The destruction of the abbey in 1184....	.... 10
3.3.2. The Reconstruction....	.... 11
3.4. The date of the painted decoration of the Lady Chapel....	.... 13
4. The Painted decoration of the Lady Chapel: (1) The interlacing arches of the arcade	
4.1. Introduction....	.... 16
4.2. Survival....	.... 16
4.3. The form of the decoration....	.... 18
4.3.1. Introduction....	.... 18
4.4. The architecture and its decoration - a summary....	.... 18
4.5. Detailed description....	.... 20
4.5.1. Introduction....	.... 20

4.5.2. The tympana....	.... 20
4.5.2.1. Introduction....	.... 20
4.5.2.2. The red/blue alternation and an alternative scheme....	.... 20
4.5.2.3. The cusping band....	.... 21
4.5.2.4. The applied motifs....	.... 22
4.5.2.5. The sun-burst....	.... 22
4.5.2.6. The crescent....	.... 23
4.5.2.7. The groups of three white dots....	.... 24
4.5.3. The inner roll moulding....	.... 25
4.5.4. The carved chevrons....	.... 27
4.5.5. The outer roll moulding....	.... 30
4.5.6. The foliage trail....	.... 30
4.5.6.1. Introduction....	.... 30
4.5.6.2. Borders....	.... 31
4.5.6.3. The stem....	.... 31
4.5.6.4. The colour-scheme....	.... 33
4.5.6.5. Additional pattern or decorative motifs....	.... 33
4.5.7. The foliate bosses....	.... 34
4.5.8. The upper spandrels....	.... 36
5. The Painted Decoration of the Lady Chapel: (2) The niches of the arcade	
5.1. Introduction....	.... 38
5.2. Early accounts of the painted decoration....	.... 38
5.3. The extant paint traces of the lower register....	.... 40
5.4. The possible form of the paintings in the niches....	.... 41
6. The painted decoration of the Lady Chapel: (3) the windows and the upper register of the chapel	
6.1. Introduction....	.... 44
6.2. Survival....	.... 44

6.3. The form of the decoration....	.... 45
6.3.1. Introduction....	.... 45
6.3.2. Window head 1S....	.... 46
6.3.3. Window head 2S....	.... 46
6.3.4. Window head 3S....	.... 46
6.3.5. Window head 4S....	.... 46
6.3.6. Window head W1....	.... 47
6.3.7. Window head W2....	.... 47
6.3.8. Window head W3....	.... 48
6.3.9. Window head 4N....	.... 48
6.3.10. Window head 3N....	.... 49
6.3.11. Window head 2N....	.... 49
6.3.12. Window head 1N....	.... 50
6.4. Summary....	.... 51
7. Traces of polychromy observed during previous seasons of conservation	
7.1. Introduction....	.... 53
7.2. 1986 - the Lady Chapel doors....	.... 53
7.3. 1988 - the southern crossing pier and transept....	.... 56
7.3.1. Introduction....	.... 56
7.3.2. South choir aisle/crossing arch....	.... 56
7.3.3. South choir aisle/transept arch....	.... 57
7.3.4. The triforium opening....	.... 57
7.3.5. The mouldings of the super-arch....	.... 58
7.4. 1989 - the south nave aisle....	.... 58
7.5. 1990 - the south choir aisle....	.... 58
7.6. 1991 - the north choir aisle, crossing pier and transeptal chapel....	.... 59
7.7. 1993 - the Galilee....	.... 61

Glastonbury Abbey: The Painted Decoration of the Lady Chapel

1. Introduction - The circumstances of the survey

1.1. In the autumn of 1984 the author of this section of the report was commissioned by the Trustees of the Abbey to assess and report upon the condition of the north and south sculptured doorways of the Lady Chapel. During the course of this work it was necessary for comparative purposes to briefly inspect the foliage bosses which adorn the interior arcade running around the remaining south, west and north walls, and in the process it became clear that considerable traces of early painted decoration survived, particularly in the south-western corner. These survivals were brought to the attention of the then custodian.

1.2. In 1986 the door sculptures were conserved by Wells Conservation Centre, and the issue of the painted decoration raised again with the new custodian, Cdr. Malcolm Scadding. Shortly after this conservators from Nimbus Conservation Ltd. working on the painted heraldic decoration on the High Street frontage of the George and Pilgrims Inn were shown the paint on the Lady Chapel and wrote to the Abbey Trustees suggesting that a recording programme be instituted.

1.3. The conservation of the Lady Chapel doors proved to be the first step in a general programme of conservation of the ruins of the great church, which, during the later 1980s and early 90s, saw the whole remaining fabric of the church lightly cleaned, repaired and conserved. The final part of this programme was directed towards the surviving fragment of the west end of the nave, the Galilee, and the Lady Chapel.

1.4. In 1993 the Galilee and the eastern bay of the Lady Chapel were scaffolded for conservation. Initial inspection of the Lady Chapel confirmed that fragments of the original decorative scheme were present also at the east end (this area not being readily visible since at this end there is no walkway above the crypt which was excavated beneath in the 15th century). As a result the Abbey Trustees requested a report on the polychromy from Eddie Sinclair, and in the light of her findings that season's conservation was restricted to the masonry of the Galilee.

1.5. With conservation of the Lady Chapel pending, and the importance of the traces of medieval decoration clearly set out, a detailed survey of the remaining paint was requested, and the results of that survey are presented in this report. The written, drawn and photographic recording of the physical remains was undertaken between 3rd and 18th July 1995 by Jerry Sampson, assisted by Sue and Lawrence Kelland, while sampling and analysis of the paint films was carried out by Eddie Sinclair; the architectural survey of the upper parts of the interior elevations was undertaken by Annie Evans R.I.B.A., and the drafting of the results was the work of Annie Evans, Andrew Treverton and Jerry Sampson.

1.6. While the quality of the surviving fragments of polychromy had never been in doubt, their extent was much greater than had been anticipated from the rather meagre remains visible from the walkway at the western end, and as a result much more time than had been anticipated was required for the adequate recording of the traces. The scaffolding was only available for a fortnight (though in the event two more working days were possible during the erection of the base of the scaffolding for the conservation of the exterior of the chapel), and had it not been for the assistance of the Kellands the record would not have been completed. The services of the Kellands and of Annie Evans were given free of charge.

1.7. Most importantly thanks are due to the trustees of Glastonbury Abbey for providing the opportunity for reconstructing the appearance of the original decoration of one of the most important late 12th century buildings in northern Europe.

2. **The Scope and Methodology of the Recording Programme**

2.1 There were two overall objectives outlined in the original brief:

- (i). direct recording work to be undertaken from the scaffolding
- (ii). and secondly, the presentation of this and previous recording of polychrome traces from previous seasons' work

2.2. For the first, there were three main aspects of the programme of work to be undertaken from the scaffolding:

- (i). the drawn and written documentation of the surviving paint
- (ii). the photographic record
- (iii). the sampling and analysis of grounds, pigments and media

In the event so much evidence of the original form of the chapel and its furnishings was observed from the temporary scaffolding that a fourth objective was instituted, that of recording evidence for a full reconstruction of the appearance of the chapel in the late 12th century.

2.3. The drawn record of the polychromy covered two main areas:

- (i). the polychromy of the arcades was plotted onto standard template drawings at a scale of 1:5 based on the westernmost arcade head of the south wall (S4d). Since the arcade-heads are quite variable these templates were only truly accurate for the eastern and western bays of the chapel. The time available for the survey prohibited the drawing of individual arcade-heads, so the west end and the two middle bays were drawn with measurements taken in a consistent fashion explained below (see p.) so that the drawings may be corrected at a later date if so desired. Two individual templates had to be drawn, however, for the east and west end arcade-heads of the centre-west bays (N3a and d, and S3a and d), which are stilted on their outer jambs in order to accommodate the doorways beneath.
- (ii). the polychromy of the clerestory window heads was plotted onto tracings made from photographs of the window heads, looking up into

the soffits. This was necessary both from the point of view of preparing recording pro-formae in advance of the commencement of the work (therefore photographs had to be taken from the ground rather than from the scaffolding), and also in order to obtain a view which showed as much of the angled face of the arch as possible, since preservation was more likely here.

In both instances the surviving paint traces were plotted onto the recording forms using fine coloured pens approximating as far as possible to the colours of the original pigments, using solid diagonal hatching for solid paint films and broken hatching for fragmentary ones. In only one instance was a pigment used which did not approximate to the original: where white (usually as a ground or limewash) occurred it was represented by light blue. Where traces were too small to be indicated by hatching solid colour was used.

2.4. The photographic survey entailed detailed photographic recording of the polychromy of the Lady Chapel in 35mm format using both colour print and colour transparency media. Black and white photography was not undertaken since the object of the exercise was the recording of colour traces.

Experimental use of infra-red monochrome film has proved disappointing.

2.5. Sampling and analysis were carried out by Eddie Sinclair and form the subject of a second report which forms the twin to this.

2.6. The second objective, the presentation of this and previous recording of polychrome traces from previous seasons' work, entailed:

- (i). the assembling of information recorded by conservators and archaeologists during past seasons of conservation
- (ii). the preparation of a coloured reconstruction of the Lady Chapel in its heyday
- (iii). the assembling and editing of the information from the polychromy survey into the present report.

3. The Lady Chapel - The historical background

3.1. Introduction

The Lady Chapel of Glastonbury Abbey is adorned with a rich tapestry of legend which delights the imagination but obscures forever the reality of its true origins (though in a sense all that is necessary to reconstruct the motives of the monks and the appearance of the building is to know what was **believed** to be true in the late 12th century). What is certain is that the present structure dates from after the great fire which destroyed the abbey church and large parts of the conventual buildings on St Urban's day, the 25th May, 1184.

3.2. The '*Vetusta Ecclesia*'

3.2.1. Prior to 1184 the building which occupied this site was also known as the '*vetusta ecclesia*', the old church, being the wooden chapel associated in popular late medieval belief with the supposed visit of St Joseph of Arimathea in the mid first century AD. Whatever its actual date this building must already have been old in the early 8th century when the first reliable records of religious occupation on the site begin. The Old Church was held to have been built originally of wattles, and subsequently covered with planking and lead.¹

3.2.2. William of Malmesbury, writing in the 1120's, was an eye-witness of both the Old Church and the church of St. Dunstan, still standing in his day to the west of Herlewin's incomplete Romanesque abbey church and to the east of the *vetusta ecclesia*.² He says of what he calls 'the wooden church' that

¹ William of Malmesbury claims that Paulinus of York "...so saith the tradition of the fathers, improved the shell of the church (for a long time, as we have said, composed of rushes) by covering it with wooden panelling and with lead from top to bottom". [Lomax transl. p.33-4]

² see Radford, 1981, p.125.

"This church then is certainly the oldest I am acquainted with in England, and from this circumstance derives its name. In it are preserved the mortal remains of many saints, some of whom we shall notice in our progress, nor is any corner of the church destitute of the ashes of the holy. The very floor, inlaid with polished stone, and the sides of the altar, and even the altar itself above and beneath are laden with the multitude of relics. Moreover in the pavement may be seen on every side stones designedly interlaid in triangles and squares, and figured with lead, under which, if I believe some sacred enigma to be contained, I do no injustice to religion."³

3.2.3. William's description of this floor suggests that it was of opus sectile, a complex patterning of shaped and polished stones (not true mosaic since it does not use tesserae) developed in Italy during the Carolingian period and re-popularised in the late eleventh century.⁴ Its most famous exponents were the Cosmati family who worked at Westminster Abbey for Henry III in the 1260s.⁵

3.2.4. Three main features of the sanctuary of the Old Church were the altar and the two 'pyramidal stones' (or high crosses) flanking it to north and south which marked or contained the burials of St. Patrick (to the south) and St. Indracht (to the north). There may also have been some form of monument over the site of the burial of St. Gildas before the altar. William records that Patrick's cross '*...out of veneration for this saint, was afterwards nobly clothed in gold and silver by the diligence of the housemates.*'⁶

³ Translation in Lomax, 1908, p.141. Text taken from 'Acts of the Kings' Book I, c:2.

⁴ Given the dating parameters for opus sectile floors this floor must have been either quite new (say, post-1070) or very ancient when William saw it. Opus signinum flooring was found in excavations on the site of the Anglo-Saxon great church to the east (see Taylor, and Peers, Horne and Clapham, 1928). Opus signinum is a red mortar and tile mix, the tile acting as a pozzolanic additive to produce a very hard floor.

⁵ For a recent popular account of this pavement and the meanings which its patterns may encapsulate see Richard Foster, "*Patterns of Thought: The hidden meaning of the Great Pavement of Westminster Abbey*", 1991, - especially p.111-5 for the history of opus sectile.

⁶ Lomax transl., p.23. William also notes that the monument was made ten years after the saints purported death in 472 (aged 111), following a fire.

3.2.5. A tantalising glimpse of the decoration of the Old Church in the tenth century is also provided by William of Malmesbury, who notes that 'Sigeric' (c.970-975, or Sigar, later Bishop of Wells)

"...gave seven palls to Glastonbury with white lions, with which the Old Church was completely decorated at its anniversary."

3.2.6. Under Henry of Blois (1129-1170) a pension of 50 shillings from the church of Pucklechurch was assigned to keep a candle perpetually burning before the statue of the Blessed Virgin in the Old Church, and the principal feasts of the Virgin were celebrated with more devotion and solemnity than previously - perhaps indicating also a refitting of the liturgical furnishings of the ancient structure. There is also evidence for repair work to the Old Church at this time in the tale of the finding of the 'sapphire altar', originally given to the church by St David -

"When the oft-mentioned stone, which had been hidden through fear in time of war, had lain lost for a long time in the old days, Henry, Bishop of Winchester, of pious memory, who was also abbot of Glastonbury, found it in a certain doorway of the Church of St. Mary, and adorned it magnificently with gold and silver and precious stones as it now is."⁷

3.3. The great fire and its aftermath

3.3.1. The destruction of the abbey in 1184

3.3.1.1. In 1927, Theodore Fyfe, excavating on the site of the western nave, recorded that

⁷transl. Lomax, 1908, p.56-7.

"At a depth of 5ft. 3in. were found the remains of a stone paved floor, showing evident signs of burning, and having melted lead at the joints."⁸

3.3.1.2. This he interpreted as being the remains of the pavement of Herlewin's church destroyed in the fire which swept through the monastery on 25th May 1184, and which is recorded in Adam of Domesday's chronicle:

"...on St Urban's day, fire destroyed the whole Abbey except the chamber built by Abbot Robert with its chapel (here the monks took refuge), and the bell-tower built by Abbot Henry. The glorious buildings lately built by Abbot Henry, the world-famous shrine, the Church, the resting place of Saints - all were reduced to a heap of ashes. Only those who have witnessed a similar disaster can imagine the desolation of the monks: and even at this distance of time one can hardly hear of the destruction of the relics, treasures, vestments and books and remain unmoved."⁹

3.3.1.3. An interpolated passage in the Chronicle of William Malmesbury, quoted by Willis tells of the fire that

"...it consumed not only the church and the rest of the buildings, but its ornaments, its treasures, and, what was more valuable, the greater part of the relics."

and Willis adds that,

"The writer declines to dwell upon the affliction thereby occasioned, but adds, that the monks sought consolation by employing themselves in gathering together the few fragments, principally of relics, which had escaped the flames."¹⁰

3.3.1.4. A large proportion of the pre-1184 stone recovered from excavations at the abbey between 1904 and the present show signs of the intensity of this fire - certainly much of the known Dundry stone corpus is calcined in some degree. In

⁸Glastonbury Abbey Excavations 1928', C.R. Peers, A.W. Clapham and Dom Ethelbert Horne, *P.S.A.N.H.S.* vol. (1928), p. .

⁹Scott Stokes, transl., p.19-20.

¹⁰Willis (1866), p.11.

1989 during the cataloguing of the abbey stone an early Anglo-Norman cross-base broken into eight fragments was found which was calcined to a considerable depth, and several of the capitals, which were until recently on show in the Gatehouse museum, (including a Purbeck marble piece with rudimentary stiff-leaf volutes which must have been almost new at the time of the fire) are similarly burnt.

3.3.2. The Reconstruction

3.3.2.1. As Adam of Domerham says, the Lady Chapel was the first part of the abbey church to be reconstructed, since Ralph FitzStephen

"...completed the church of St Mary in the place where from the beginning the *vetusta ecclesia* had stood, building it of squared stones of the most beautiful workmanship, omitting no possible ornament. It was dedicated by Reginald, Bishop of Bath, on St Barnabas' day (June 11), A.D. 1186 *circiter*."¹¹

3.3.2.2. Willis argues that the reconstruction of the Lady Chapel is likely to have taken longer than the two years and one month between the date of the fire and June of 1186:

"The date of the dedication of St Mary's church (1186 *circiter*) is recorded in a manner which shews that the document from which it was taken, probably the bishop's register, did not furnish the last figure precisely, but only inferentially. Probably it was entered between two other events that were accurately dated: 1186 would give barely two years for the building of St Mary's church, and we are at liberty to suppose that rather a longer time was actually occupied."¹²

It is worth noting that the sentence referring to the date of the dedication is an addition to Domerham's chronicle by John of Glaston, who has presumably collated the information from the bishop's register or a similar document.

¹¹According to Willis the date of the dedication is added by John of Glaston, probably from the Bishop's register.

¹²Willis (1866), p.13.

3.3.2.3. More will be said about the duration and the sequence of reconstruction in a subsequent report, since new information regarding the way in which the rebuilding is likely to have taken place has emerged from this season's conservation work and the polychromy survey. For the purposes of this report, however, it may be better to concentrate upon the historical documentation of the building of the new church.

3.3.2.4. Since the death of Abbot Robert of Winchester in 1180 the abbacy had remained vacant, and the king had diverted the revenues of the church (which were the property of the sovereign when there was no abbot) to help finance his wars in France¹³. Since the king was nominally in the position of abbot he provided (at least some) assistance in the rebuilding. The amount of this assistance is still a matter of debate. Henry II appointed Ralph FitzStephen, his own chamberlain, *in loco abbatis* with permission to spend the revenues of the abbey on the rebuilding, but whether he provided money over and above this is in doubt. The chronicler is in no doubt - Domesday says that,

"Persevering the work continually he [Ralph] spared no expense, for the king supplied the means when the resources of Glastonbury failed."¹⁴

However, W.H. St. John Hope has pointed out that the charter of Henry II in which the king promises to ensure that the church should be "*magnificently completed by me, or by my heirs*" is a monastic fabrication¹⁵, and he adds that

"I have myself been through all the Pipe Rolls of the reign of Henry II, and am able to say positively that from 1184 onward they do not contain anything to show that the Abbey of Glastonbury received any help from the Royal Exchequer."¹⁶

¹³Carley 1988, p.22.

¹⁴Domesday, quoted in Willis (1866), p.22.

¹⁵As shown by Rev. R.W. Eyton, '*Court, Household, and Itinerary of King Henry II*' (London 1878), 262, note 3.

¹⁶W.H. St. John Hope, 'Notes on the Abbey Church of Glastonbury', *Archaeological Journal*, lxi (1904), p.187.

3.3.2.5. Whatever the source of the income it is evident that reconstruction began very quickly. In addition to the Old Church, Ralph

"...repaired all the offices of the monastery, and lastly, laid the foundations of the *ecclesia major*, 400 feet in length, and 80 feet in breadth.

"In the foundations of the church were placed the stones, not only of the great palace, built by Bishop Henry, but of the entire wall which surrounded the court of the monastery.

"Great part of the *ecclesia major* having been built, the rest would have been beautifully completed had the Lord prolonged the king's life. But alas, covetous death snatched him away too hastily and the monks, just recovering breath from their last misfortune, were smitten with a heavier wound, for he died on the 6th of July, 1189, after reigning for 35 years.

"He was succeeded by his son Richard, whose war-like tastes diverted his attention from the building of Glastonbury church. Wherefore the work stopped, because no funds were forthcoming to pay the wages of the workmen."

3.3.2.6. Thus the evidence of the chronicles renders it likely that for five years an intensive building campaign under the King's chamberlain completed the reconstruction of the Lady Chapel (by 1186 or 1187), rendered the conventual buildings serviceable, laid the circuit of the foundations for a larger abbey church, and erected a significant proportion of its eastern arm.

It also appears likely that the work of rebuilding the great church ground to a halt in 1189 or 1190, and while it may have continued sporadically during the mid-1190s, the seizure of the Abbey by Bishop Savaric of Wells, and its incorporation into the new diocese of Bath and Glastonbury in 1199, probably caused major disruption to the building programme.

3.4. The date of the painted decoration of the Lady Chapel

3.4.1. Since the fabric of the building itself is so closely dated, its dedication taking place in the summer of 1186 (or 1187), can the paintings be safely regarded as having been finished before the hiatus caused by the death of King Henry II in 1189, or may they have been postponed until the following century?

3.4.2. Art historical received wisdom has it that the doorways of the chapel were not carved until the second or third decade of the 13th century, and if the carvings were not executed until later it is likely that the internal painting may also have been postponed. Lawrence Stone says of the carving of the doorways

'the whole style of the sculpture precludes a date in the 1180s... Both the figure style and the decorative elements are...closely linked to work of the 1220s...'¹⁷

However, it has recently been shown that the carving could only have been executed in the first phase of the post-fire reconstruction, between 1184 and 1189, since the doors bear both archaic and stiff-leaf foliage in exactly the same way that they are found together in the rest of the Lady Chapel carving (and in the choir aisles which are also of the 1180s).¹⁸

Dating the doors to the later 1180s also allows the forced break in the carving of the south doorway to be attributed to the hiatus in construction on the death of Henry II, '*Wherefore the work stopped, because no funds were forthcoming to pay the wages of the workmen*'.

3.4.3. One continuing problem in the history of the doorways is why it was that the south door was never completed. A campaign, even if it is interrupted, should have been brought to completion, yet the two figural orders of the door bear no more than two of the incomplete historiated panels, with the setting out lines for two others. One possible explanation is that no sculptor of the same calibre as the original could be found, but it is also conceivable that the remainder of the decoration was temporarily executed in paint, and that this sufficed for so long that completing the carving of the door became irrelevant.

3.4.4. If the decoration of the door were finished in polychrome it has left no trace, and it is interesting that only the outer order of the door bears significant amounts of red paint, as if only it were painted in the original scheme of decoration. The apparent abandoning of both carved and painted decoration would point to an interrupted campaign of work, rather than the death of the

¹⁷Lawrence Stone, '*Sculpture in Britain: The Middle Ages*', *The Pelican History of Art* (London 1972 (2nd.ed.)), p.106.

¹⁸J. Sampson, 'Glastonbury Abbey: The Lady Chapel Doors and their dating in the light of the 1986 Conservation Programme', in '*The Conservator as Art Historian*', U.K.I.C., 1992, p.3-6.

carver, as has also been suggested as a reason for the incomplete state of the door.

3.4.5. These considerations on the dating of the portal carvings and their abandonment are of vital importance in dating the internal painting. If it can be shown that the door carvings date from 1184-9, and that the carving and painting of the south door was abandoned in or immediately after the 1189 season, then it becomes almost certain that the interior decoration was finished by the end of the 1180s. It is highly likely that in order to have the chapel ready to fulfil its liturgical functions the internal ordering and decoration would be completed as a priority, and while the external decoration of the doorways might continue in parallel with it, the clearing away of the scaffolding from the interior would be the primary objective.

3.4.6. The speed of erection in both the Lady Chapel and the great church is obvious - plans have been drawn up without thinking through their implications for the elevation, so that the transepts' eastern chapels block the choir aisle windows, and the Lady Chapel window openings do not line up on interior and exterior. In building the Lady Chapel the carved work all seems to have been executed on the banker and then fixed in the arcade and the window heads, except that the five orders of the doors were fixed blank and executed subsequently. It would seem logical that as soon as the building was weatherproof the interior scaffolding which had been erected for the construction would be handed over to the painters, and that the dedication would only take place when the painting was complete and the scaffolding cleared away.

3.4.7. The carving of the doors would only require temporary scaffolding of two lifts at most, whereas the interior painting would need the construction scaffolding to still be in place - thus the doors need not have been worked from the initial scaffold, but could equally well have been carved from a small temporary work platform after the builders' scaffolding had been struck.

3.4.8. The north door seems to have been carved within the first two to three years of the start of the rebuilding work, almost certainly by or before the dedication; but the south door, carved in two different hands, bears only developed stiff-leaf foliage and would fit well with a date at the end of the first campaign. Indeed the evidence that two sculptors worked successively on the south door suggests that work may have stopped in 1189 when the first carver departed, restarted at some date after 1193 (when the 'invention' of King Arthur and the relic tours may have brought in sufficient funds to restart the building), and then been finally abandoned in 1199 when Savaric locked the doors of the abbey so tight that it took the monks two years to get a letter of complaint to the Pope.

3.4.9. It seems highly likely therefore that the interior decoration, taking priority over the finishing of the exterior, was executed prior to the abandoning of work on the south door probably in 1189, but at the worst case no more than a decade later.

3.4.10. Evidence from the interior suggests that only the attachment of the metal or wooden fixings (probably sunbursts) in the upper spandrels of the arcade took place any later than the main painting campaign, since the distribution of their fixing holes shows that they were not fixed until after the erection of the screen or reredos behind the altar.

3.4.11. There is certainly no reason to view the painted decoration as anything other than the original late 12th century scheme, and its use of expensive pigments places it firmly in the first period when the new Lady Chapel was built '*of the most beautiful workmanship, omitting no possible ornament*' and sparing no expense. Its pigments and the techniques of applying them are the same as those in the eastern arm of the church (also of 1184-9), so that both have the same rich blue applied on an ochre ground.

3.4.12. Certainly the treatment of the Lady Chapel is so different from that of the Galilee that there is no question of the decoration belonging to the period when the building was linked to the great church.

3.4.13. At some point after the Galilee was built and the east wall of the Lady Chapel demolished the whole rich scheme of the late 12th century was painted over with white limewash, and at least two further limewashings (one in yellow and one in pale pink) were carried out before the dissolution.

4. **The painted decoration of Lady Chapel:** (1) The interlacing arches of the arcade

4.1. Introduction

4.1.1. Much the greater part of the extant polychromy of the Lady Chapel is concentrated in the one metre high band of intersecting arches which crown the arcade of the lower register of the interior elevation; therefore the greater part of the effort of recording was concentrated in this area, generating some 40 record drawings, with attendant pages of written notes, and over 1000 photographic negatives and transparencies.

4.1.2. The eastern three bays of the chapel on each side were surveyed by Jerry Sampson, the west wall and the western bay on each side were surveyed by Sue Kelland.

4.2. Survival

4.2.1. The mechanisms are obscure whereby so much paint has survived in such a restricted area, while little or none remains on the walls below. There are probably two factors contributing to the general retention of paint on the exposed wall-faces:

- firstly that the building may have been roofed for a century or more longer than the rest of the abbey;

- and secondly that the rich polychromy of the earliest period seems to have been protected by the application of at least three coats of later medieval limewash.

4.2.2. While the lead was almost certainly stripped from the Lady Chapel roof very rapidly, probably within the same year as the dissolution, the vault may have been allowed to stand for a considerable time. The state of preservation of the building in general suggests that either it was respected by the local populace and not demolished at the same rate as clearly applied to the rest of the abbey buildings, or that it was pressed into secular service. If the latter were the case it is likely that a roof of some sort would have been substituted for the original lead, and that the building would have been rendered relatively weatherproof. Certainly in 1723 Stukeley records the Lady Chapel as functioning as a stable with a thatched roof, though whether this use was continuous from the dissolution is not at all clear.

4.2.3. The other likely factor in the survival of paint on the intersecting arches of the arcade (and the Lady Chapel in general) is the limewashing which covered the rich 12th century polychromy in the later middle ages. At least two, and probably more than three layers of limewash were applied to the arcades and the window heads (and presumably also the more exposed ashlar from which it has subsequently been lost) in and/or subsequently to the 14th century; either at the point in time where the original scheme had become sufficiently damaged to require tidying up - or tidying 'away' (the cheaper option) - or when the aesthetics of the age had sufficiently altered to require the removal of the older scheme of decoration.

4.2.4. It is certain that water running over the paint is inimical to its survival. Some measure of protection from rainwater run-off has, in earlier times, been afforded by the projecting lias string-course immediately above the intersecting arches, and in recent years this has been partly substituted for by a projecting lead flashing. Wherever the string course and the flashing have been damaged or (in the latter instance) bent so that they cannot perform their intended function there is a denuding of all paint traces beneath.

4.2.5. The projecting elements of the arcade have certainly suffered more than the recessed parts, so that the faces of the intersecting arches are more often free of paint, than are, say, the tympana or the foliate bosses in their deep arches. It is also likely that much colour is concealed beneath the layer of carbon pollution bound by calcium salts which accumulates on upward facing protected areas.

4.2.6. Large areas, particularly on the north side (see, for instance, Bay 2N) are presently subject to salt attack, possibly the result of steam-cleaning in the 1930s or of over enthusiastic use of weed-killers on the wall tops. This salt attack is causing rapid deterioration of the painted cusping in several areas (see, for instance, 1Sa).

4.2.7. Given the detailed record of the drawn and photographic material generated by the polychromy survey it would be possible to further assess and refine the view of how different factors are affecting the survival of the painted and carved decoration of the building. However, this is not part of the remit of the present report.

4.3. The Form of the Decoration

4.3.1. Introduction

4.3.1.1 The quality and complexity of the surviving pigment, and the nature of the evidence for the original decorative scheme are sufficiently complex to warrant an extensive description and analysis in addition to the record sheets for the individual arches. Therefore, a short summary of the form of the decoration will be followed by a more detailed description.

4.4. The architecture and its decoration, a summary

4.4.1. Since the loss of the east wall of the Lady Chapel in the later 13th century the apex of the arcading around the lower register of the chapel has consisted of some 40 arches containing 85 foliate bosses. Whereas in the windows of the upper register the decoration of the carved order of the window heads is highly varied, in the architecture of the arcade it is only in the design of the foliate bosses that variation is possible, thus almost every arch head conforms to a rigid pattern.

4.4.2. Each bay contains four tall arches bounded at the sides by slightly recessed seatings for detached blue lias shafts with central annuli. Above the lias capitals and abaci the semi-circular arches intersect in true Romanesque form, with foliate bosses in the spandrels and the tympana thus formed.

4.4.3. The outer faces of the arches consist of a flat upper face with hollow chamfer below forming the upper boundary of a roll moulding. Beneath this is an order of chevrons emerging diagonally from the wall-face, and beneath this is another roll moulding which frames the tympanum. Structurally the individual arch is made up of two large blocks, the springer and the keystone (both almost always of Doulting, though occasionally of Bath stone), with much smaller

voussoirs between (cut from Dundry stone). The apex of the arches lies just below the blue lias string-course which separates the elevation into upper and lower registers.

4.4.4. Upon these architectural forms a rich painted decoration in white, yellow ochre, red, blue, black, green and gold was applied.

4.4.5. Within each tympanum a line of cusping with trefoil terminals rises from the lias abaci, and the panel formed above it is painted in red or blue, arranged alternately. The inner framing roll bore (in a number of bays at least) red chevrons on a white background, and the outer roll above it was dark red. The carved chevrons between the rolls had their flat faces painted alternately red and blue (though in some instances green substitutes for the blue), the edges were outlined in black, and ochre (or another pigment which is lost) or red were used on the curved edges. The upper flat moulding seems to have borne the richest decoration in the form of a running foliage trail, with red, green, ochre and gilding. In the recessed spandrels between the arches the backgrounds were uniformly red, and the spandrels above the arches were counter-coloured red and blue, alternating with the arch colour beneath. Upon the latter spandrels were fixed applied decorations, probably in the form of gilt stars or sunbursts, attached to the stone with iron pins.

4.4.6. The carved foliage of the bosses was decorated with the full range of the palette, and occasional well-preserved traces show the subtlety with which this was carried out. The tympana show further evidence of the finely detailed quality of the painting in the survival of sunbursts and crescent moons placed in the dexter and sinister spandrels (respectively) above the trefoil cusping, these being interspersed with groups of three round white dots.

4.4.7. The quality and expense of the decoration is also indicated by the pigments used, not only does there seem to have been extensive use of gold (now almost all lost thanks to the action of damp on the medium), but the rich blue is ultramarine made from lapis lazuli imported from the mines of Afghanistan.

4.5. Detailed description

4.5.1. Introduction

4.5.1.1. Where the hallmark of the decoration of the upper register of the chapel is its variation, the painting of the arcade seems to have been much more standard in form, though variations do occur and may originally have been more extensive than appears to be the case now. It is necessary therefore, rather than rushing to reconstruct a standard design from several of the best preserved arches to consider not only their similarities but also all the evidence for variations within the scheme, otherwise there is a danger that we may underestimate the complexity of the design. For this reason what follows is a careful presentation of as much of the significant detail of the record as is commensurate with retaining the interest of the reader.

4.5.2. The tympana

4.5.2.1. Introduction

4.5.2.1.1. The foliate bosses enclosed within the tympana are treated separately at the end of this section, but even without their rich complexity the surviving decoration of this part of the arcade is amongst the most detailed on the building.

4.5.2.2. The red/blue alternation and an alternative scheme

4.5.2.2.1. Each bay (and also the 'double bay' of the west wall) begins on the dexter with a red background to the tympanum and then alternates red and blue.¹⁹ The first and third arch of the west wall, which should be red, have lost all traces of their pigment (except for the survivals on the background of the foliate bosses, which appears to have been primed red as a matter of course), but the red-blue alternation holds good over the northern half of the wall, and the same may be safely assumed for the south.

4.5.2.2.2. However, the third bay on the south elevation may possibly be a variation in this otherwise rigid system. Here the second and fourth arch are blue as usual, but the first and third arches, rather than showing the clear traces of red which would be expected in what is an otherwise very well preserved bay, have red only on the upper course of the tympanum area, while the lower blocks, despite retaining the cusping and much of the other decoration which is normal here, seem only to bear white ground with no overlying pigment. The more protected paint beneath the ochre of the sunburst and moon on 3Sa and 3Sc is also white; furthermore the triple-dot decoration [see 4.5.2.7. below] is normally found to be slightly tinted by the base colour of the spandrel, yet here it is solely white. This decoration was originally applied over the base colour of the spandrel, thus it should seal and preserve the red if it ever existed; however, there is no discernible trace of it, suggesting that the base colour was indeed originally intended to be white.

4.5.2.2.3. The survival of red on the upper part of the tympana does not necessarily imply that these two were originally parti-coloured red and white, since it seems to have been normal for the foliate boss (and often the stone around it) to be given an undercoat of red very early in the painting process. Thus one of the blue tympana on the opposite wall (3Nb) is treated in exactly the same way, with the top block painted red and blue on the lower stone - however, in this instance the red is covered near the top with the rich blue of the rest of the tympanum. Therefore, it is entirely probable that the red upper parts of 3Sa and 3Sc were covered by white which has since been lost.

4.5.2.2.4. Some form of variation in this bay is also suggested by the treatment of the cusping-band, which appears to have been red (as on 3Sa and b) or red over ochre (as in 3Sc and d) [though see 4.5.2.3.2. below]. Furthermore, there are indications that rather than bearing red chevrons on a white ground, the inner roll moulding had a ground coat of yellow ochre, perhaps to provide greater contrast with the white of the tympanum.

¹⁹Red is placed at dexter on both north and south walls, so the system is repeated bay by bay around the building, rather than symmetrically across the chapel where blue would face blue, etc..

4.5.2.2.5. On 1Sb there is an area of red 'smear' just above the finial of the dexter cusp which has subsequently been overlaid with the blue which is the base colour for the tympanum. This may be an error in the initial laying in of the paint which was then corrected by the painter, and has now been exposed by the erosion of the blue layer.

4.5.2.3. The cusping band

4.5.2.3.1. The linear trefoil which forms the lower margin of the painted tympanum is generally about 3 cm. wide and yellow-brown ochre in colour. The terminal of each cusp ends in a trefoil which usually has round ends, but occasionally the central knob runs to a slight point. It springs from immediately above the abacus, and generally has its upper-side apex about 28 cm. higher.

4.5.2.3.2. As has already been mentioned above, the third bay on the south side has red paint applied over the normal ochre, perhaps to better articulate the white-blue alternation which appears to exist in this bay. There are other instances of red used as a top layer on the cusping band, however, most notably in the eastern bay on the south side, where traces of red are found on tympana whose background colour is red, and where all colour contrast would therefore have been lost if this were the intended pigment of the finish-coat.

4.5.2.3.3. The likeliest reason for this apparent contradiction in the decorative scheme is also to be found in bay 3S, since near the centre of the cusping-band on 3Sd several tiny fragments of gilding were located. The leaf was very thin and the surviving fragments were very small, but this does prove that gilding was used in the chapel. The building is so richly decorated in all other respects that it was almost inconceivable that gilding was not used extensively, but, probably because of the failure of the adhesive used for fixing it, almost all of it has been lost and only three definite sites where it survives have been identified. This particular area also appears to retain paint layers on top of the leaf - perhaps a red [?lake] and black - which may indicate additional patterning (and conceivably script) laid in over the gilding.

4.5.2.3.4. This same arch shows a well-preserved black line bordering the lower margin of the cusping-band, a feature which is commonly found occurring on both upper and lower edges, and indicating that a continuous black border about 2-3mm wide was normal on the cusping throughout the scheme.

4.5.2.4. The applied motifs

4.5.2.4.1. Onto the red or blue background of the tympana were painted several other standard motifs:

- an eight pointed star or sun-burst
- a crescent moon, its points upwards
- several (usually five) groups of three white dots

4.5.2.5. The sun-burst

4.5.2.5.1. The eight-pointed device found in the tympana could be either a star or a sunburst - both are iconographically associated with the Blessed Virgin. However, the fact that it is accompanied by a crescent moon makes it much more likely that it was intended for a sunburst. The sun was represented in heraldry from earliest times as rayed or 'in splendour', and was adopted in that form as a badge (with eight rays) by the House of York. Similar eight-rayed suns appear on the veil over the brow of the Virgin in numerous paintings - for instance, at least two of Duccio's Madonnas, and the Virgin in the scene of the Visitation at Sigena - and are common in 12th and 13th century portrayals.

4.5.2.5.2. Seventeen tympana retain traces of this eight-pointed star or sunburst in the dexter spandrel, in states of preservation ranging from a mere shadow on the stone to a complete portrayal. They are far more common in the eastern three bays of the chapel (14 out of 17), though this is merely a reflection of the general state of preservation of the polychromy. It seems that only 38 of the 40 arches originally bore them, in that the stilted arches of bay 3, north and south, (which are conditioned by the doorway beneath) were not wide enough to accommodate both sun and moon, and thus at the dexter ends of the bays the sun was omitted. Therefore, with nearly half (45%) the original number surviving, we can be certain that this feature was present on all the tympana.

4.5.2.5.3. There is a tendency for the paint layers of the various decorative features on the tympana to survive better on the blue than on the red variety - hence 13 of the sunbursts are on blue, and only 3 on red²⁰ - possibly this reflects

²⁰The 17th example is on a white background in 3Sc.

a more careful technique on the part of the painters with regard to the base-colour of the blue tympana, greater care being taken with the more expensive ultramarine.

4.5.2.5.4. In several of the best preserved examples a central dot from which the rays radiate is visible, the rays being petal shaped and straight rather than wavy. Very occasionally there are traces of red paint on the yellow ochre, and since this system is also found on the cusping band of 3Sd where it is overlaid by gold it makes it the more likely that the sunbursts were originally gilded.

4.5.2.5.5. One of the more interesting parallels for the association of the Virgin with the sun and moon occurs at nearby Wells Cathedral. The recent cleaning of the west front at Wells revealed much new information about the decoration of the exterior of the great image screen which forms the western termination of that church, and amongst the discoveries was an area of the canopy above the Coronation of the Virgin sculpture over west door and beneath the west windows which bears sun and moon conjoined. Here a series of fixing holes define what appears to be a sunburst with two longer rays reaching down into the spandrels of the canopy of the niche, while around the main set of fixings is a 'shadow' left by a lost painted area which is in the shape of a crescent. Thus it would appear that the canopy surmounting the niche once bore an applied metal sun-burst resting within the curve of a painted crescent moon.

4.5.2.6. The crescent

4.5.2.6.1. In the sinister spandrels of thirteen of the tympana, balancing the sun burst, are traces of a crescent moon, its horns pointing upwards. The initial assumption, before the erection of the inspection scaffolding, had been that a star was present in both spandrels, since in general the sinister spandrels are less well preserved, and the ochre on the sinister side was generally amorphous in the tympana visible from the walkway. However, it soon became apparent that the shapes to be found in this area of the tympana would not resolve into eight-pointed sunbursts, and a search of the rest of the chapel showed two very well preserved examples of the crescent (the best being Wh), leaving no doubt that all the arches bore such a celestial pair.

4.5.2.6.2. Like the sunburst the majority of the examples are in the eastern three bays of the chapel (11 out of 13), and their survival is more likely on the blue rather than the red backgrounds (9 on blue, 2 on red, 2 on white). Since the sun and moon form a pair which is unlikely to be 'broken', and since either a sun or a

moon occur on 21 of the 40 tympana it is certain that these formed a standard element of the decoration of the chapel.

4.5.2.6.3. There are three instances (3Sb, 3Sc and Wh - and possibly 3Sa) where a small dot appears between the horns; on 3Sb and 3Sc the dot is red, and in the former instance there are traces of red on the body of the crescent also. As mentioned above in the context of the sunburst, this layer structure resembles the layering on the cusping where gold is found and suggests that the crescent was also gilded or finished with some other metal leaf such as silver or tin.²¹ Further evidence for the application of metal leaf to this feature is suggested by Wh, where the final surface of the ochre paint appears to be preserved and is so smooth that it seems to have been burnished, presumably the result of the application of leaf over it.

4.5.2.6.4. Sun and moon are often found together - almost always occurring in scenes of the crucifixion for instances - and were often associated with the Virgin when she was identified with the woman of the Apocalypse, the "woman clothed with the sun, and the moon under her feet" [Revelation 12:1] (e.g. Gaddi's altarpiece in the Rinucini Chapel of Sta. Croce in Florence). The sun and moon were also symbols of Christ and the Church²², the identification with Christ being based on the prophecy of Malachi 4:2, "But unto you that fear my name shall the Sun of righteousness arise with healing in his wings". Later the sun and moon, by being associated with the crucifixion scenes on the side of Ecclesia and Synagoga respectively, came to assume a meaning corresponding to the symbolism of the latter two.²³

4.5.2.7. The groups of three white dots

²¹ Indeed it might be more reasonable that silver or tin were the leaf used for the moon, in order to give a more 'correct' colour.

²² 'Eleganter autem per lunam figuratur Ecclesia; quia, sicut luna mendicat lumen a sole, ita Ecclesia lumen justitiae a vero sole, scilicet Christo', Alan of Lille, *Liber in distinctionibus dictionum theologialium*; P.L., ccx, col. 842. Quoted in A.Katzenellenbogen, *The Sculptural Programs of Chartres Cathedral*, 1959, p.132, note 86 - see also p.72.

²³ see Lotte Brand Philip, *The Ghent Altarpiece and the Art of Jan van Eyck*, 1971, p.145-6.

4.5.2.7.1. These are the rarest of the applied decorative features on the tympana, presently occurring on only ten examples - all but one in the two middle bays of the side elevations. Eight examples are found on blue tympana, one on red, and one on white.

4.5.2.7.2. They generally consist of thin spots of white, each about 5mm in diameter, arranged in groups of three. The thinness of the paint is probably responsible for the poor rate of survival, but the consistency of their arrangement suggests that like the sunburst and crescents they were standard features of each of the tympana.

4.5.2.7.3. Each tympanum would seem originally to have possessed a set of five groups, one at the base of each spandrel, one in each of the two similarly shaped spaces immediately below and to the sides of the foliate boss, and one placed centrally above the cusping band between the sunburst and crescent. In all but one instance the triangular groups of dots are arranged in a standard disposition, so that the lower pair have the apex of their triangle pointing downwards and the upper two and the middle set have their apices pointing upwards. Only on 3Nd do the extant lower set point up, and on Wh the middle set point down.

4.5.2.7.4. Groups of three dots or circles are found as semee decoration in 13th century manuscript illumination, for example in the very rich Trinity Apocalypse [c.1255-60 but dated by Rickert to c.1230]²⁴, or Matthew Paris' head of Christ in the '*Chronica Minora*'.²⁵

4.5.3. The inner roll moulding

4.5.3.1. With the exception of one (or possibly two) bays this would appear to have been always painted white, which would have provided a foil for the rich colour of the tympana that it enclosed. In Bay 3S, however, where the red tympana were apparently replaced by white, such a contrast would have been lost, and the evidence suggests that the normally white roll-moulding was here painted ochre. In 3Sb there is a clear trace of ochre on the central area of the dexter roll, and another just beneath the underside of the chevrons on the sinister

²⁴illustrated in '*Age of Chivalry*', p.350 (Cat. No. 349), and M.Rickert '*Painting in Britain: The Middle Ages*', pl.111.

²⁵Cambridge, Corpus Christi College Library MS16, illustrated in Rickert, pl.110a.

side; 3Sc also has ochre in the same angle in three places. However, as will be seen below, this may not indicate that the whole roll was ochre, since applied decoration over the moulding seems to have been common.

4.5.3.2. The clearest instance of this is to be found in Bay 2N, where all four (though 2Nc is very fragmentary) of the arch heads bear red chevrons on the roll. At least six were painted on each side, all with their apices pointing upwards, the upper ones almost touching. 2Na retains four chevrons, 2Nb has five with traces of two others, 2Nd has seven and traces of two others, while 2Nc has just one patch of red midway down the sinister side - a similar state of survival to other arches elsewhere.

4.5.3.3. The remarkable state of preservation of the chevron decoration in this bay when compared to other bays does raise the question of whether such decoration was unique to this part of the chapel, but while there are no further examples in such a good state of preservation there are faint traces of paint and shadows which suggest that either this or a similar form of decoration existed elsewhere in the building. This evidence takes the form of both patches (almost always amorphous) of paint on the otherwise white roll moulding, and of shadows of the sort which are often produced by the unequal deposition of carbon pollution where a paint layer has existed and then been lost.

4.5.3.4. This last mechanism relies upon the fact that when two layers of paint exist on a discrete area of stone they are often lost at a different rate to the surrounding single layer. This means that while a background colour can be completely erased, fragments of a thicker multi-layer system of paint may still adhere to the adjacent stone; the thicker paints prevent carbon pollution being deposited, while this builds up on the adjacent denuded stone. When the last of the paint is lost and carbon starts to accumulate over the whole surface, the protected areas are cleaner and retain a 'shadow' of the shape of the more heavily painted area. This can often be seen even on 19th century buildings where painted lettering can sometimes read off the cleaner stone (such as the facade of the University building at the top of Park Row in Bristol, and some street name stones in Bath), but at Wells Cathedral even 13th century lettering was found to be 'preserved' in this way.

4.5.3.5. Such shadows showing diagonal lines on the inner roll moulding survive on 1Sb, 2Sa, 2Sb, 2Sd, 3Na, and possibly 1Nd, where there is a diagonal line at the edge of the late medieval limewash, as if the substrate has broken away cleanly along the edge of a chevron.

4.5.3.6. Patches of red also survive on 1Sc, 2Sa, 2Sb (where they are distributed in such a way as to strongly suggest patterning of either chevron or barber's poling) and Wf, Wg, 4Nb, 4Nd (where they are isolated or amorphous),

but must nonetheless originate from a system of decoration in red on the white background of the moulding. On 2Sa there is, in addition to several well-spaced red patches, a patch of ochre, suggesting the possibility of a more complex decorative scheme here.

4.5.3.7. On 2Sb the shadows suggest the possibility that the pattern consisted of barber's-poling rather than chevrons. While the pattern of distribution of the shadows or the red pigment on the niches to either side seem likely to indicate chevrons, this possible use of barber's poling could indicate an element of variability similar to that found in the windows above.

4.5.3.8. The trace of shadowing on 3Na, where it is likely that ochre was used on the roll to create a contrast with the white of the tympanum, suggests that the rolls in this bay may have been decorated with stripes or chevrons - possibly in one of the pigments which was commonly used over ochre, that is, blue, green or even gold.

4.5.3.9. It is certain that more survives beneath the later medieval limewashes. It may be that traces of patterning on the upper part of the inner roll where it crosses between keystones are concealed here - only in one or two places is there any suggestion of anything other than white here: for instance, on 4Na (dexter) there is red in the angle between the chevrons and the roll, though this could equally derive from the painting of the undersides of the chevrons.

4.5.3.10. The underside of the inner roll moulding of the keystone of 1Sb has a groove cut into it, which may be associated with the screen/reredos. It was filled with late medieval limewash.

4.5.4. The carved chevrons

4.5.4.1. Except in the most general terms it is difficult to be certain of the finished appearance of the chevrons, and there are a number of anomalies in their treatment. Particularly difficult to establish - largely because of the amount of discolouration from pollution products - is the colour of the curved sides, which variously appear as dull red, ochre, and perhaps a pigment discoloured to grey.

4.5.4.2. Paint films often survive in the deep angle between the outer roll and the body of the chevrons (definite pigment identified on 93 out of 645), and normally these show an alternation between red (48) and blue; though often the blue is lost and only the under-paint - the yellow ochre - can be seen. In a number of instances, however, the blue is replaced by a rich green (18 definite instances,

as against 27 certain blue examples). The majority of the green chevrons occur in the western part of the chapel (6 on the west wall, 3 in the western bay, 6 in Bay 3, 3 in Bay 2 (N only), and 1 in the eastern bay, but they do fall into discrete groups: wherever they occur in an arch the whole arch head is treated thus, so that nowhere are blue and green chevrons found in the same arch head. This is true only of the pointed arch heads, but not of the overall line of the semi-circular interlacing arches - so that the dexter side of 3Sc has blue chevrons, as has the continuation of the curve between 3Sc and 3Sd, but the sinister side of 3Sd (where the curve descends) has green chevrons.

4.5.4.3. The distribution of arch heads containing blue and green chevrons does not suggest a deliberate regular alternation between the two colours from arch to arch, though this is true of 3S, and could be true of 1S, 4S, 3N and 1N (though bear in mind that the paint traces of the western bays are too fragmentary for this to be particularly helpful) - it could not have been true in 2N, 2S or 4N.

4.5.4.4. It would appear, therefore, that blue and green were being used interchangeably, while recognising their individuality to the extent that they were not being mixed in a discrete architectural entity. Elsewhere green seems only to have been used on the foliate bosses and the foliage trail.

4.5.4.5. While the main triangular faces of the chevrons appear to have borne a single undifferentiated colour, the edges seem to have been given a much more detailed treatment. Each chevron has a rebate at the edge of the triangular face, and below this the edge is curved outwards, returning to another rebate at the edge of the underside.

4.5.4.6. The upper part of the rebate bore colour, while the lower part, together with a section of the curved face beneath bore a black line which outlined the colour on the rest of the curved face. Checking this narrow edge line against chevrons where the colour of the front face is known shows that (in this, albeit restricted, sample at least) the blue chevrons had a red strip (1Sc and 1Nd), the green chevrons had a green strip (Wh and 4Nd - assuming that the ochre on 4Nd was the underpaint for green), and of the red chevrons 4 were red (1Sc, 3Sb, 1Nc and 1Nd, the latter being dull red) and one (3Sa) was white. This last example may be explainable by this being the bay where white replaces red in the tympana.

4.5.4.7. Given these correspondences between the face and edge colours, it might be expected that the colour of the curved face would also be standardised - being either the same as the flat front face, its counter-colour, or a standard colour different from either. However, the pigments in this position turn out to be remarkably variable.

Table 1 - pigments on curved faces of chevrons:

blue chevrons	red chevrons	green chevrons	uncertain (blue or green)
1Sc - dull red	1Sc - ochre or red	3Sd - red (top)	1Sd - red
1Sd (sin) - ochre	2Sc/d - red	3Sd red & dull red	2Sc - red
2Sa - ?ochre	3Sb - red	Wh - ochre	3Sb - red
3Sa - red/dull red	3Sa red & ochre/ dull red	Wh (dex) - ochre strip and red point	1Nd - red
3Sc - red	3Sc - red	3Nd - dull red	
3Nc - ochre	3Nc - ochre	2Na - red	
1Nc - ochre	1Nc - ochre		
1Na - red	3Sd - ochre (top)		
	3Sd - ochre (dex)		
	4Sb - ochre		
	4Sd - ochre		
	4Nd - ochre		
	3Na - ochre		
	3Nd - ochre		
	2Na - red		
	2Nc - ochre		

This analysis gives the following results - for blue chevrons:

- 45% ochre
- 22% dull red
- 33% red

For green chevrons:

- 25% ochre
- 25% dull red
- 50% red

For those chevrons which cannot be certainly identified as either green or blue:

- 100% red
For red chevrons:

- 70½% ochre
- 6% dull red
- 23½ red

1.1.1.1. As they stand the figures suggest that almost any of the three colours could be used in almost any position, but if green and blue chevrons are taken together, and if the two species of red are also counted together a slightly clearer picture emerges, where for blue-green chevrons there is:

- 28½% ochre
- 71½% red

which very closely reciprocates the proportions for the similarly adjusted colours on the red chevrons:

- 70½% ochre
- 29½% red

1.1.1.2. Thus there would seem to have been some considerable variation in the treatment of the curved faces of the chevrons, but the greater proportion (in a ratio of approximately 7:3) of the blue and green chevrons bore red on the curved face, and similarly the red chevrons tended to bear ochre (presumably originally bearing blue or green) in the same proportions.

1.1.1.3. It is, of course, entirely possible that the chevrons bearing the same colour on face and curved edge were simply painted with the overall pigment as a first stage in the process of decoration, and that the upper layer of the counter-colour has all been stripped away subsequently. This would appear to be the case in such instances as 1Sb, where the 2nd chevron down on the sinister side has red on the top and edge, the latter being overlaid by a general blue-black layer. In some instances it is possible that fire reddening has been mistaken for red pigment.

1.1.1.4. It is certainly the case that the black lining was often applied over a general coating of the base-colour, since where parts of the black-lining are lost the ground-pigment can sometimes be seen showing beneath [as on 2Na and 1Nb - perhaps also 1Nd]. The black line is usually between 5 and 7mm wide, and generally extends about a third to halfway up the flat rebate at the top of the curved edge; a second black line similarly terminates the lower face of the curved edge.

1.1.1.5. It is most likely that the effect is accidental, but the sinister chevron on the high part of the arch to dexter of 2Na has traces of diagonal stripes in black surviving on the sinister side of the curved edge. If these are real it suggests a very detailed treatment of the chevrons which has been entirely erased elsewhere. There is a greater proportion of pollution encrustation on the chevrons than any other part of the arcade, and it is possible that similar traces may survive beneath this - however, such cleaning should be avoided unless the paint can be protected from the effects of weathering since this layer is probably performing a protective function.

1.1.1.6. The undersides of the chevrons are generally either free of paint or are too discoloured to make certain identifications, but on 2Sc they are red, while on 3Na they alternate red and white. 3Nd also has red on some of the undersides, but those so treated are disposed in such a way that they could also have alternated red and white - this treatment would echo the red and white of the chevrons on the roll moulding beneath.

1.1.2. The outer roll moulding

1.1.2.1. This element of the arches appears to have been the simplest in decorative terms, being painted a rich red, apparently with no additional patterning. Considerable areas of the red pigment survive - as, for instance, on 1Sc, 1Sd, and Wa - but there is no evidence of other pigments having been applied over it. It is probable that lying as it does between the rich alternation of red and white on the inner roll with the red-blue alternation of the chevrons beneath, and the complex multi-coloured foliage trail above, that a plain anchoring colour would have been necessary to act as a visually unifying binding, linking the arches and reunifying the flow of their semi-circles which might be in danger of breaking down under the fragmenting influence of the rest of the decoration.

1.1.2.2. The painting of this roll appears to have taken place relatively early in the campaign, since in several instances (e.g. 1Sc) the red from it has been laid in over parts of the top surfaces of the chevrons below, and this has then been painted over with ochre and blue. It is likely that the background colours were all laid in as a single operation, and then the detailing put on - thus the finished surface of the outer roll moulding would have been finished well before almost all the rest of the painting.

1.1.2.3. The outer roll and the flat moulding which bears the foliage trail are separated by a hollow. This, being well protected, has retained much of the later medieval limewashes, which obscure the 12th century scheme; nonetheless, enough can be seen to distinguish the brighter white of the original paint. This white line, like the red of the roll would have had a unifying function, tying together the sections of the intersecting arch, and softening the contrast between the roll and the foliage trail.

1.1.3. The foliage trail

1.1.3.1. Introduction

1.1.3.1.1. Much of the flat outer face of the uppermost moulding of the arches is now quite blank, showing how susceptible to water attack is the medium of the paint, but in several places, most notably 2Sd, 3Sd, Wa, and 1Nb,²⁶ there are clear traces of an undulating curve running along its line. The remaining evidence is highly fragmentary, and in no instance does a section of this feature survive in its original state, but what is left does allow us to begin a general reconstruction of its form, even though the original complexity of the design may escape us.

1.1.3.2. The borders

1.1.3.2.1. It is evident that the undulating line, which we may take to represent the remains of a foliage trail, was originally contained within a border. Several areas suggesting this survive - on 2Sa, 2Sd, 3Sd, Wa, 2Nd and 1Nb. On 1Nb the ochre background of the foliage trail is relatively complete, but does not extend to the edges of the moulding. A very similar paint-free band framing the moulding is also present on Wa, where it is most clear on the underside.

1.1.3.2.2. 2Sa shows traces of paint surviving in this position, and the area where it is preserved gives significant information about the way in which the foliage trail was organised. Here there are definite, but very fragmentary, traces of a black line forming a border to the foliage band at the apex of the arch immediately above the centre of the intersection. These clearly show that the arch rising from dexter to sinister had precedence over that rising from sinister to dexter, since the border belongs to the former and crosses over the foliage trail on the latter. An analogous survival exists on 2Nd, where

²⁶In three of these four instances of good preservation the areas are tucked into leeward corners of the architecture: 2Sd and 3Sd are against bay divisions, forming NE facing corners, and Wa is a corner of the building facing NE - thus all three face in the opposite direction to the prevailing winds and weather.

once again a fragment of the narrow black band exists separating the lower edge of the foliage on the dexter rising arch from its pair to sinister.

1.1.3.2.3. This lower border appears to have been quite narrow, 2Sa is not more than 3mm in its present condition, but there may have been a wider border at the top 'closing off' the decoration of the whole arch and extending off the edge of the voussoir blocks onto the mortar joint and perhaps onto the stones of the spandrel above. This is suggested by the remains of 1.2 cm. wide black line at the top of the foliage trail on 2Sd at the sinister side of the intersection block. 3Sd also possesses suggestions of a wider border along the top margin, since, in the same position as that on 2Sa, there is a band of discoloured stone 2.2 cm. wide. This greater width could indicate a two-coloured border, with the 1.2 cm. black line being edged with a second colour.

1.1.3.3. The stem

1.1.3.3.1. The stem consists of a pale undulating line up to about 1 cm. wide, whose curves are generally restricted to the middle 2" or so of the moulding, thus leaving the space for the framing borders at top and bottom. Each undulation is about 10 cm long. The stem is often discoloured, as if it retains traces of a dark pigment which looks dark blue-grey. In one instance - 1Sb - very fragmentary traces of gilding were located on the stem.

1.1.3.3.2. The discovery of the black painted border crossing the line of the subsidiary sinister moulding serves to confirm what is suggested by the disposition of the foliage trail itself. In all instances where it can be seen clearly the trails at the lower end of the top arch, and on the arch rising from sinister to dexter, are broken at the intersection, while the gentle undulations of the trail on the arch rising from dexter to sinister continue through the intersection unabated.

1.1.3.3.3. The broken lines of the stem on the subsidiary arches were probably woven back onto the main stem, passing under the border and joining it as branches - there are no surviving certain examples of this, though it is suggested by the distribution of the white on the main branch of 3Sd, where specks of white which do not appear to belong to the dominant trail are found on the line of the upper subsidiary one, and the line of the upper subsidiary stem drops, rather than curving back upwards as it would if the undulating line were being continued to die against the border of the main stem.

1.1.3.3.4. There is, however, another possible explanation for this in the apparent 'braiding' of some of the stems, since in several instances a second undulating stem appears to interlace with the main one, probably forming small symmetrical oval medallions. This occurs in a very fragmentary form on 2Sa, but is somewhat clearer on

2Sd and 4Nd. In all but one instance (the lower section on 2Sd) these areas occur very close to the intersection and could represent intertwining of the two stems rather than continuous braiding - though the primary stem on 2Sd apparently had braiding over a length of approximately 35 cm.

1.1.3.3.5. If braiding were a feature of the foliage trail it was certainly not a universal one, since there are numerous instances where a well preserved trail shows no sign whatever of a second interlacing stem. Thus the stems on 3Sd with a cumulative length of over a metre, Wa, continuous for about 70 cm., and the 45 cm. of 1Nb, show no traces of braiding either as paint-film or shadow. It seems, therefore, that while some stems were doubled and interlaced, as with 2Sd, in most cases a single undulating trail was normal, and that this possibility serves as another instance in the variability of detail in which the painters' workshop seems to have delighted.

1.1.3.3.6. Having dealt with the way in which the stems were arranged where they met at the intersection of the arch, it is also necessary to consider how they were disposed where they met at the springing of the arch. This area is much more exposed to weathering except at the extreme edges of the bay where there is only one springer, so the evidence for this is almost lacking.

1.1.3.3.7. There is, however, one fairly well preserved instance where the arches of 2Nb and 2Nc meet and the fragmentary curves of both trails can just be seen. Here the curves are synchronised so that their apices almost touch just below where the tops of the mouldings separate, so that if the curves are projected to the base of the moulding they would have joined. Next to the sinister end of 3Sc there is no corresponding trace on 3Sd, but here again the curve falls in exactly the same position, its apex lying just below the separation of the top edge of the mouldings. Also, if the line of the fragments of stem on 3Sd is projected downwards this too would fall in the same place, allowing the two stems to join at the base of the moulding and making the trail continuous from arch to arch.

1.1.3.4. The colour-scheme

1.1.3.4.1. Mention has already been made of black serving as the frame of the band, together with blue-grey and gilding on the white underpaint of the stem; but surrounding the stem are traces of most of the remaining pigments in the workshop's palette except for the rich ultramarine. The commonest pigment is ochre, which appears on every arch bearing a trace of the foliage trail except 4Sd and Wa (where it may exist as an underpaint for the green); next comes red, which is found on 9 of the 17 arches with this decoration; and finally, green occurs twice and the duller red just once.

1.1.3.4.2. Ochre occurs both above and below the line of the stem. In four instances it is definitely present above and below on the same arch, suggesting that the whole moulding was given a base-coat of this colour before the detailed painting was laid in. This is confirmed on 1Sd, 2Sa and (probably) 2Na, where ochre is present in areas where the line of the stem would have passed. In five instances ochre is found above the line of the stem with red below, and in another four places ochre is present above the stem, but there are no paint traces below which can be identified. Only once is it found below with no other pigment identifiable above.

1.1.3.4.3. Red is more than twice as common below the stem as above: five times below ochre, twice below no identifiable pigment, and once below itself. In addition to the example of red above and below the stem (on 1Sd), it is found above green once (Wa) and with no identifiable lower pigment on 4Sd.

1.1.3.4.4. Thus the percentages of surviving traces of red and ochre in their relative positions are very nearly precisely reciprocal: in survivals of red the pigment occurs below the stem 73% of the time, traces of ochre occur above the stem in 72% of instances. Therefore it seems to have been commoner for an arch to be decorated with ochre above and red below, but in about a quarter of instances this was reversed. It is likely that in some instances where ochre occurs below the stem it was serving as the underpaint for green - and it is likely that this was its main use both above and below. Green is certainly found in association with ochre on 3Sd.

1.1.3.5. Additional pattern or decorative motifs

1.1.3.5.1. Once the ochre underpaint with its white stem laid over it was completed, and the red put on over one half of the moulding, it is likely that foliage or some other pattern was painted onto the background colours. Seven centuries of attrition have erased all but the very faintest traces of this, but in the two areas where green survives there are very slight suggestions of leaf forms still remaining.

1.1.3.5.2. On 3Sd, where the top moulding meets the dominant stem at the intersection, there are good traces of green in the lower curve, whose disposition suggest a trilobe leaf shape viewed from the side, the tip of the leaf to dexter (where the green gives way to red), and the single lobe defined by a curved shape in the sinister half of the background. Above the stem, immediately to dexter, there is only ochre paint, but there is also an area of loss to this which is circular, suggesting a dot or bud may have recently spalled away taking most of the underpaint with it.

1.1.3.5.3. Wa, which bears the most extensive traces of green surviving, also has suggestions of leaf forms in the curves which the fragmentary paint films and shadows of

discolouration appear to betray. This is particularly true for the lower half of the trail immediately above and below the lower dexter end of the intersecting arch's keystone.

1.1.3.5.4. A similar form to that mentioned on 3Sd also occurs on 1Nb, where a bud, apparently forming an approximate circle, is clearly visible coming off the lower side of the stem of the subsidiary branch nearly 20 cm below the intersection, and there is a slight suggestion of form in a central-dexter position in the lower curve of the stem nearest to the intersection.

1.1.3.5.5. On this moulding the richness of the palette alone is sufficient to indicate that the area was richly decorated, but the extent of the detailing has to remain undetermined. It is tempting to suggest a final appearance like that of the rich acanthus foliage trails at Sigena or the in Durham Galilee, but we cannot be sure. All that can be said is that the use of green as an upper layer, and the shadows of form remaining, taken together with the form of the undulating (and in places interlacing) curve which must be intended for a stem, make leaf forms in the curved spaces which it defines almost a certainty. If leaves were painted they would almost certainly have been given as much delicacy of treatment as the carved work of the foliate bosses, and by analogy with them all manner of outlining and shading becomes possible.

1.1.4. The foliate bosses

1.1.4.1. In moving from the formal more-or-less repetitive geometrical patterning of the mouldings and tympana to the organic forms of the foliage it is no longer possible to build up a composite picture of the whole by comparing like with like. Each piece of foliage (except for some of the Worcester-type 'plantain' leaf bosses) is different, and it is likely that each was painted differently. All that is really possible is to develop a picture of the level of complexity of decoration which the workshop was willing to expend upon them.

1.1.4.2. Firstly it is evident that many of the bosses bore the whole range of colours available to the workshop. It was tempting early in the survey to suggest that a simple counter-colouring was used on the bosses, so that on a blue tympanum the foliage would be 'mostly red', and on a red tympanum, 'mostly blue'. While it is possible that the colour of the tympanum influenced the choice of colours used on the foliage, in that less of the base colour may have been used, such a simple correspondence is not generally helpful.

1.1.4.3. The first process in the painting of the bosses was the application of an overall coat of red. In most instances this seems to have covered the entire front surface of the block (and in one or two cases, those next to it as well). This is very easily visible on most of the bosses, especially those in the spandrels between the arches, where there has been no painting over with another pigment as happened in half the tympana below. On the tympana in 3S the loss of the upper paint layer shows that the whole upper course of

the arch head containing the boss was painted red, and the same is true of the blue tympanum 3Nb, where the blue paint is almost all gone from the red apex block. That the red covered the carved surfaces as well as just the background can be shown on such bosses as 2Nb, where the green on white ground overlays a general red layer on the stem of the upper leaf.

1.1.4.4. The foliage consists of a mixture of archaic Romanesque-derived and stiff-leaf forms, with occasional hybrids in which both leaf types are found on the same carving - this is the same arrangement as is found both on the Lady Chapel doorways and the choir aisles. In general the innermost recesses of the foliage on the boss is flush with the surface of the wall block, but in one instance (3Na) the boss is surrounded by a narrow chamfer and its rear surface is slightly recessed behind the wall-plane. This boss is the only one which suggests anything approaching a zoomorphic form, but it is too damaged to be certain whether the object at bottom dexter is really intended for a dragon or bird.

1.1.4.5. The entire range of colours in their palette is used by the painters on the foliage, so that both bright and dull red, ochre, blue, green, black and (possibly) gold are all present; furthermore, it is often the case that most, if not all of these pigments are found together on the same boss - almost always red, blue and ochre occur, with green and black appearing amongst them less often. There also occasional instances where one colour will gradually shade into another, as on 2Nd, where on the upper sinister leaf ochre deepens in tone to red towards the edge of the leaf. On two similar 'wheel-shaped' bosses, 2Sb and 1Nc, where a series of leaves spring from a central junction covered by a small flower, each leaf appears to have alternated so that opposite leaves are the same colour on 2Sb, and on 1Nb the sequence seems to be green, ochre, blue, ochre, red, blue, with the last one not identifiable.

1.1.4.6. Even where the colour of a leaf is readily identifiable it seems unlikely that it was of a single tint. Not only (as we have seen above) do colours shade into one another, but several distinct colours can occur on the same leaf. Most obviously the top and undersides of the same leaf are often different colours - so that on 1Na the top sinister leaf is green with a red underside. Not only do ochre and blue or green occur together because the first is used as the undercoat for the second, but different parts of the upper surface of the leaf can also be deliberately painted different colours. On 3Sb, for instance, the red leaves are outlined in white, and on 2Sd the leaf edges are black.

1.1.4.7. Stems are often red (sometimes treated in considerable detail as shown below) and thus contrast with the body of the leaf, since in stiff-leaf foliage the stem is run high into the leaf. Thus, for instance on 4Sb red stems run up into green leaves, and into both green and blue leaves on 2Nb. On 3Nb only the angles of the stems appear to be red, with the flat face of the lower leaf's stem being blue - though the stiff stem running up onto the top leaf is only red.

1.1.4.8. The delicacy of the treatment of the stems is perhaps the most evident sign of the wealth of detail which once graced these foliate bosses. Where large areas of the paint is lost from the leaves the overall patterning and detail is difficult to read, but on the more restricted areas of the stems enough area of the finish-coat of the 12th century paint sometimes survives to show how richly decorated they were. The simplest treatment, similar to that already mentioned where red and blue are used together on the stem of 3Nb, is the use of narrow black lines running up the stems, as is found on 2Sd (central cross-stem) where the rest of the stem seems to have been dull red. On 1Nb the outer dexter stem bears parallel red lines with the rest of the stem being white.

1.1.4.9. The sadly damaged boss at the centre of Wc is similar but even richer. Here the dexter side of the upper sinister stem is treated in an identical fashion, with narrow red lines drawn on a white ground, and there is a trace of what was presumably a similar scheme on the sinister face of the upper dexter stem. This boss is one of the group bearing archaic sub-Romanesque leaves in the form of tightly curled trilobes on broad stems which are often decorated with rows of carved projecting dots, but here the central stem, rather than having the dots carved has had them painted in red on a white ground.

1.1.4.10. Another of these wide stemmed archaic-style bosses, at the centre of 4Sd, has plantain-like ridges in the 'stems' of the four broken leaves, and here the central ridges are blue, and the recesses flanking them are red.

1.1.4.11. The plantain leaf bosses in the spandrels above the springing also show different colours on the ridges of the leaves. There is double lining in red on the ridge of the body of the leaf on 3Sa/b, and there is ochre red alternation on ridges and hollows of the upper dexter leaf on the same boss. On the almost identical boss in 1Na/b ochre bearing blue is found on the 'flesh' of the leaves, with red on the linear 'folds'. On these 'plantain-leaf' bosses, apparently alone, there are individual leaves which seem to be wholly black - as on 1Nb/c and 3Sa/b.

1.1.4.12. The amount of gilding which the foliage once bore cannot be estimated, since only in one place (on 1Sb) does any fragment of gold leaf appear to survive. Nonetheless, with gilding known to have existed on the cusping band and the painted foliage trail, it is highly unlikely that it would have been generally absent from the rich carved decoration of the bosses, especially when they so fully utilise the rest of the palette available to the workshop.

1.1.5. The upper spandrels

1.1.5.1. The one remaining area of the arcade, the blank spandrels over the intersection of the arches, framed on the upper edge by the line of the blue lias

string-course, was also painted. It has already been shown that the lower margin of this part of the elevation was bounded by a heavy 1.2 cm wide black line which framed the top edge of the foliage trail, and that there may have been a second parallel line extending out to 2.2 cm from the edge of the stems.

1.1.5.2. There are in addition, however, five spandrels which bear significant traces of pigment: four with red (1Sb, 2Sd, 4Nd, and 1Nb), and one with blue (1Sc), though rather than ultramarine this may be a cheaper pigment. In each case the spandrel is counter-coloured with the base-colour of the tympanum beneath, and it may safely be assumed that this was the general pattern throughout the chapel.

1.1.5.3. Fixed onto the spandrels appear to have been a series of metal decorations, since each (with one or two interesting exceptions) bears a hole or the remains of an iron pin at its centre. These will be discussed in the context of the other fixing points recorded during the survey in a separate report.

2. **The Painted Decoration of the Lady Chapel:** (2) The niches of the arcade

2.1. Introduction

2.1.1. In order to fully understand how the decoration of the lower register of the Lady Chapel may have appeared in the 12th century it is now necessary to consider the testimony of two of the post-medieval visitors to Glastonbury, whose eye-witness accounts of the building have been left until now because of their specific relevance to the niches of the arcade.

2.2. Early accounts of the painted decoration

2.2.1. The earliest reference to painted decoration on the Lady Chapel of which I am aware is that of the antiquary Samuel Gale quoted by Browne Willis in a work published in 1718-19:

"A little westward from the great Church stands the Chapel of St *Joseph of Arimathea*, which hath somewhat better escaped. The Fabrick being still entire, excepting the Roof, and the great Arch, which seperated the Chapel from the spacious Portico that led to it, which are broke down, as well as the Pavement, quite into the Vault underneath. 'Tis an Oblong curiously wrought and **painted after the *Gothick style***; at each Angle was a Tower, terminating in a lofty Pyramid of Stone, having a Staircase within. One of them is fallen down as far as the Roof of the Chapel."²⁷

For an early 18th century antiquary to remark upon the painting of the chapel in so short an account implies that it was significantly more complete at that date,

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Browne Willis, "A History of the mitred parliamentary Abbies...", 2 vols. (London, 1718-19), 2.197-98; quoted in Carley (1988).

a conclusion which much also be drawn from the later 18th century visit of Collinson.

2.2.2. In 1723 William Stukeley visited the ruins, but his descriptions concentrate more upon the destruction of the site, noting the frequent sale of abbey stone by the then tenant:

"...whilst I was there they were excoriating St Joseph's chapel for that purpose, and the squared stones were laid up by lots in the abbot's kitchen..."²⁸

It appears that local superstition may have been a braking factor on the destruction and sale of the fabric, since Stukeley says that he

"...observed frequent instances of the townsmen being generally afraid to make such purchase, as thinking an unlucky fate attends the family where these materials are used; and they told me many stories and particular instances of it: others, that are but half religious, will venture to build stables and outhouses therewith, but by no means any part of the dwelling-house."

Stukeley speaking of the Lady Chapel describes

"...the roof beat down by violence, and a sorry wooden one in its place, thatched with stubble to make it serve as a stable: the manger lies upon the altar and niche where they put the holy water."

2.2.3. The third eyewitness, and the second to mention painted decoration, was John Collinson, writing in 1779:

"At the west end of the great church stands the chapel of St. Joseph of Arimathea, which has somewhat better escaped, the fabric being entire, except the roof, and the great arch which separated the chapel from the spacious portico that led to it, which are broke down, as well as the pavement quite into the vault underneath. The length of this chapel was one hundred and ten feet, its breadth thirty. Its roof was curiously arched with rib-work; and the sides of the walls were adorned with numerous

28

William Stukeley, 'Itinerarium Curiosum: Or, an Account of the Antiquities, and Remarkable Curiosities in Nature or Art, Observed in Travels Through Great Britain', London 1776, p.152 [quoted in Carley, 1988, p.172]

small pillars of grey marble; between them **were painted the pictures of saints, some traces of which are still discernible**. The outside walls are venerably overspread with ivy, which, with the shrubs sprouting from different parts of the ruins, exhibits a pleasing yet melancholy appearance."²⁹

Apart from quoting extensively from Gale's account (almost verbatim), Collinson is the first and only source for the information that figural painting existed in the chapel. Gale's account, as mentioned above suggests that more than the fragmentary arcade decoration existed at his time, since otherwise it would scarcely merit specific mention - for instance, very few of the modern commentators refer to the painting in their much more exhaustive accounts of the chapel. Collinson's description is much more specific, and is difficult to account for in terms of the presently surviving paint traces. Thus, unless Collinson was confused by the shape of the cusping in the arches of the arcade into thinking that he was seeing the tops of haloes, it seems likely that the greater part of the decorative system has been lost in the last two hundred years.

2.3. The extant paint traces of the lower register below the intersecting arches

2.3.1. Careful examination of the wall below the intersecting arches produced almost no evidence of surviving pigments. All that was located was:

- a trace of red ashlar-lining on the back of the curved recess for the easternmost shaft on the south wall (east bay) at the top of the fifth course below the capital

- a line of rich green bearing a glaze immediately behind the position of the southern spandrel of the screen, and probably a 'spill' from the painting of that feature of the chapel

- a fleck of red immediately beneath the position of the southern spandrel of the screen, and likewise either a 'spill' from the soffit of its spandrel, or from red ashlar lining running through the opening

29

John Collinson, 'The Beauties of British Antiquity', London, 1779, p.226.

- some traces of red and ochre on the stones between the capitals of S2a, beneath mortar probably associated with the second phase screen
- one fleck of dark red paint in a rather deep hole in the stone which may not be part of the original scheme, or may derive from ashlar-lining
- patches of a dark deposit on a white mortar skim on both north and south walls in the western half of the second bay from the east - this did not have the appearance of a paint film.
- lines of red on the mortar joints immediately beneath the lias capitals in several places in bays 2S and 3S

Overall this area of the wall was startlingly free of paint, particularly by comparison to the arch-heads above, to the extent that the recording team doubted whether it had even been painted until the ashlar-lining mentioned above was located.

2.3.2. One other phenomenon allows us to suggest that red ashlar-lines were applied generally to the wall of the arcade prior to any other decoration being added. In a number of instances the rich paint of the arcade tympana was disrupted by the loss of narrow vertical strips of pigment about 3mm wide - on 3Sa, 3Sb, 3Sd, Wg, and 2Nd. On 3Sd below the cusping band this line bears a thin strip of white ground, while on 2Nd there are two lines spaced symmetrically on the painted tympanum, while below and between them there is a trace of a central red line below the cusping. 2Nd also possess a small area of lime ?ground with ochre paint over it a little way below the central line. This is the niche in which the screen stood, so all of this could be derived from decoration associated with one or other phase of its existence.

2.3.3. Stukeley's account may give the reason why it could be that so much more of the decoration may have survived in Collinson's day. Stukeley refers to the lady chapel having its "...roof beat down by violence, and a sorry wooden one in its place, thatched with stubble to make it serve as a stable...", showing that the interior was at least partially protected from rain in the 1720s. Gale says that the [original] roof was lost in his time, but does not mention any temporary structure such as that alluded to by Stukeley, nonetheless the building could have retained its roof or had a light weatherproof structure erected on it for at least part of the period since the dissolution.³⁰ Had such weather-proofing existed, or even had portions of the vault webs survived, enough protection from the rain might have existed to preserve much more of the decoration into the late 18th century, and

³⁰It is noteworthy, however, that none of the engravings of the abbey show any form of roof over the lady chapel - perhaps Stukeley is referring to the crypt beneath?

the more complete destruction of the paint on the lower register of the walls only later have been destroyed by the weather.

2.3.4. It is evident from the present state of the paint traces that wetting will destroy the paint films. This can be seen wherever the lias string course allows rain water run-off to course over the stone beneath, and even in places where the lead membrane has been bent in such a way as to fail in its function paint appears to have been lost recently.

2.3.5. Furthermore, the extent of the steam cleaning to which the chapel was subjected in the 1930s is not known. While cleaning of the spandrels and arch heads with their obvious paint survivals may have been avoided at that time, large areas of the wall surfaces beneath could have been subjected to such treatment if the bulk of the paint which Collinson and Gale saw had already been lost.³¹

2.4. The possible form of the paintings in the niches of the arcade

2.4.1. The existence of figural paintings within the niches formed by the freestanding shafts of the arcading raises several questions.

2.4.2. The wealth of decoration on the arches of the arcade imply some further decorative treatment of the niches beneath. It is unlikely that such rich effects would have been so restricted to a single register of the wall, especially when the architecture itself defined niches capable of housing representational decoration, and the cusped niche-heads were so suitable for the human form.

2.4.3. However, the proportions of the niches are such that representations of the human figure could never have extended from the bench top to the arch - the niches are over 3 metres high, but only 60 cm. wide. This probably means that only the upper 1.6 metres of the wall bore figural painting, unless the figures were presented in two registers, one above the other, itself a rather ungainly solution to the problem.

2.4.4. A tentative reconstruction of the painting of the wall beneath the interlacing arches would perhaps show the register from the annulus to the arch head containing a figure of a saint (as described by Collinson), perhaps with a

31

Is it possible that the line of the salt efflorescence represents the upper limit of the steam cleaning? Or have the salts gradually moved up the wall over the past half century or so, destroying any paint films in their path?

decorative band corresponding to the annulus course, and fictive cloth hangings or geometrical patterns beneath. This would be perfectly in keeping with 12th century practice, where the lower register of the wall, more liable to damage from congregations and accidental knocks, was left plain or bore simple non-figurative decoration.³² E.W. Tristram says of this type of decoration

"In many twelfth century schemes of decoration painted hangings occupied the lower part of the wall to a height of about six feet from the floor. It is obvious that in this position they were much exposed to damage, with the result that the majority have either perished entirely or survived, as far as they survive, usually in a very fragmentary state. Such survivals, whether well or ill preserved, are sufficiently numerous to provide evidence upon which a good idea may be formed of their general character. They were possibly based on actual hangings, either woven in this country or imported from the East, which may have been hung around the walls on special occasions;³³ or they may simply have been executed in pursuance of a long-established tradition...

"In English twelfth century work they are sometimes covered with elaborate patterning, but more frequently they are plain, a patterned quality being achieved solely by the manner of depicting the folds. The hanging is generally represented as suspended at regular intervals, where it falls in vertical folds with strongly defined chevron-shaped swags between them. In most cases richly ornamented borders seem to have been shown, both at the top and at the base."³⁴

³² See, for example the set of watercolour drawings (the only extant record) of Barrestone, Kent, where the lowest zone of the wall under the string-course beneath the window sills "was a representation of a hanging of plain material, surmounted by a deep band of ornament...", see E.W. Tristram, 'English Medieval Wall Painting: The Twelfth Century', (1944), p.98, and pl. sup. 8b. Painted hangings topped by a band of ornament are also found at Christ Church Cathedral, Oxford its top about 4½ ft above the floor (Tristram, p.139, pl. sup.15c). At Kempeley, Glos., the lower 3½ feet of the wall is plain below a decorative band.

³³ In this context it is interesting to recall William of Malmesbury's reference to the gift of "seven palls...with white lions, with which the Old Church was completely decorated at its anniversary" by Sigar in the third quarter of the tenth century.

³⁴ E.W. Tristram, 'English Medieval Wall Painting: the twelfth century', p.75.

Such a decorative scheme would also work with the distribution of fixing holes in the chapel walls, which tend to be distributed on or below the annulus course.

2.4.5. There is, however, one major exception in the distribution of fixings being placed at low level, and that is the series of consecration cross plates [see forthcoming separate report on the findings relating to the structure of the chapel recorded during the polychrome survey]. These are positioned approximately mid way between the abacus and annulus level, at the centre of the niche, with one on each wall of the first, second and fourth side walls, as well as three on each of the end walls. Unless these could somehow be worked into the painted design (being held by angels?) these must have disrupted the figures behind them in a most distracting fashion.

2.4.6. Another possibility is that the distribution of the consecration crosses was used in some way to articulate the iconography, dividing up the figures into groups separated by niches containing the consecration crosses surrounded by some non-figurative painting.

3. The painted decoration of the Lady Chapel: (3) the windows and the upper register of the chapel

3.1. Introduction

3.1.1. The inspection scaffolding, being limited to the interior of the chapel, did not easily allow access into the deeper recesses of the windows, nonetheless numerous areas of painted surface could be inspected and a general picture of the likely decorative scheme may be suggested.

3.1.2. The drawn record of this part of the building was carried out by Lawrence and Sue Kelland. The necessity of carrying out the survey within the constraints of the time and finances available has meant that the record, particularly in this area, is not as complete as might be desired. Photographs of large areas of the remaining polychromy have been made which could be converted into accurate record drawings, but this is no real substitute for drawing the traces direct from the building, and it would be impossible by this method to 'open out' the roll mouldings and draw an acceptable two-dimensional record. Therefore when scaffolding is erected again on the interior elevation it would be desirable to make a set of archaeological drawings of the patterns on 3 and 4S, and 1, 2 and 3N.

3.2. Survival

3.2.1. In general the painted decoration appears more complete on the northern side of the chapel, with three of the four window heads retaining enough pigment on roll mouldings to either fully reconstruct the patterns or make a reasonable guess at its original form. On the south side only one pattern is clearly discernible on the roll mouldings, with a second having faint traces of the pigments; however by far the most complete inner soffit decoration at the plane of the window survives here on the western bay - indeed survival on the south elevation appears to increase markedly the further west one goes.

3.2.2. While several chamfered mouldings retain considerable areas of red paint (in at least one case showing patterning), there is remarkably little in the way of detailed patterning on the carved order of the window heads, which might have been expected to be the most richly treated.

As on the arcade below there are numerous instances of limewashes having been laid in over the painted decoration, indicating a general later medieval repainting in a much simpler (if not entirely plain) style. This overpainting has almost certainly provided considerable protection to the rich original polychromy, allowing it to survive to the present time.

3.2.3. The surviving paint is restricted almost entirely to the window heads and the deep central moulding of the vault ribs. Thus, no traces of ashlar lining or other decoration were encountered on the plain ashlar surrounding the windows. The absence of such evidence does not imply that it never existed, however, since the wall faces are entirely unprotected from weathering and condensation, and the surfaces of the ashlar blocks are sufficiently weathered that tool-marks are now generally absent, and even masons marks are seldom seen.

3.2.4. The pattern of survivals, with the best traces on the south side being on the innermost arch head of 4S and the outer W moulding of 3S, and the best traces on the north side being on inner roll mouldings and especially on the W half of the arch head, suggests rain being carried on the prevailing SW wind as one of the main agents of destruction.

3.3. The Form of the Decoration

3.3.1. Introduction

3.3.1.1. In comparison with the decoration of the arcade below two aspects of the painting of the window heads are distinctly at variance: firstly, there is a much more restricted palette, with no traces of blue or green having been found (and of the yellow ochre only dubious traces which may not be deliberately applied pigment); and secondly, whereas the arcade decoration in general follows a consistent and predictable form, the roll mouldings framing the window heads appear to be much more individual and non-repetitive.

3.3.1.2. This second aspect of the decoration is mirrored in the highly varied carved decoration of the window heads, where no two carved orders are the same on the side walls of the chapel - though the west windows do form an identical set.³⁵ Even where the painted patterns are similar, the individual colours or the amount of infill with solid colour are often varied. Indeed in one or two instances it appears that the form of the pattern on the vertical roll moulding shaft is different to that on the same moulding where it curves over the head of the window, and 2N may additionally have different patterns on dexter and sinister sides of the arch head. Of the three instances (1, 2 and 3N) where discernible patterns have been located on both inner and outer roll mouldings of the same window, only in one (3N) instance does the same pattern appear on both.

3.3.2. Window-head 1S

3.3.2.1. Less paint was recorded here than on any other window. There are good traces of a red band immediately below the hood moulding, particularly on the sinister side; there appears to be a second red band below this, just above the hollow which forms the top of the outer roll moulding. A duller red is found inside this hollow just above the outer roll moulding in the same general area. Restricted amorphous red patches exist on both the roll mouldings over the window head.

3.3.3. Window-head 2S

3.3.3.1. Traces of red are found generally beneath the hood-moulding, possibly in the same double band as is seen on 1S. Both roll mouldings retain amorphous areas of red, but on the outer roll this is seen to have alternated with black, though the precise form of the patterning cannot be made out. Here the carved decoration has plentiful traces of white ground/limewash, but only in one instance (the upper part of the middle chevron moulding) is there clear evidence of colour (red). Within the splay of the window head there are good traces of red on the edge of the reveal nearest to the roll moulding (cf.1N).

³⁵The framing arch over St Joseph's Well is of the same type as the west windows, which had led to the suggestion that it is a reused window head from the demolished east wall.

3.3.4. Window-head 3S

3.3.4.1. Once again there is a band of red beneath the hood-moulding, best preserved over the western half of the arch; and, in a similar position there is red in the hollow above the outer roll moulding.

3.3.4.2. Both roll mouldings retain traces of red, but the outer moulding at and around the western springing has clear traces of a lozenge pattern in red and black. This is preserved only on the inner half of the roll, but was presumably symmetrical. The demi-lozenges against the inner margin of the roll were black, with a white border between them and the intersecting lines of red which framed the central lozenges, the latter being red with a white border.

3.3.4.3. The carved order again retains much white paint (like 1S and others often over calcined stone), together with red found generally over the outer mouldings and the hollow framing them.

3.3.5. Window-head 4S

3.3.5.1. This has by far the best preserved example of decoration on the splay of the window-head, and (like the chevrons on 3N) is one of the areas of polychrome surviving on the upper register of the chapel which is clearly visible from the ground. Here the chamfer immediately above the glazing is bordered on the vertical face of the arch by a wide band of red³⁶, while the chamfer itself bears double (slightly curved) intersecting diagonal lines between double vertical lines which follow the lines (though not the actual positions) of the voussoir joints. A similar pattern may survive, in a very fragmentary form, on the chamfers of 4N, 3N, and (just possibly) 2N.

3.3.5.2. No red survives beneath the hood moulding, though there is some in the hollow above the outer roll moulding. Perhaps the most important area of surviving polychrome on the outer part of the window head is to be found between the outer roll moulding and the band of chevrons which comprises the carved order of this window. Here a 'scroll' moulding bears deliberately applied scalloping in red on its upper edge, the lobes towards the inner part of the

³⁶This broad red line can also be found further down on the jambs of the arch for two or three courses.

moulding having been painted white. The third narrow moulding above this may have traces of very fine black lines forming a pattern, while the moulding immediately below also has traces of black paint, perhaps forming a continuous band. [see Plate]

3.3.5.3. Little or nothing survives on either of the roll mouldings.

3.3.6. Window-head W1

3.3.6.1. Unlike the windows at the side of the chapel there appear to be traces of yellow ochre surviving on some of the mouldings of the western windows, though once again the commonest pigment (other than the white ground) is red. The paint here is generally restricted to the carved order of the window head, the roll mouldings either being water washed, decayed, or blackened. In all instances the carved order consists of open chevrons (formed of a triple roll) clasping a heavier central roll moulding which follows the line of the arch. This is framed by a hood moulding and a roll which frames the window recess.

3.3.6.2. The heavier middle roll of the openwork chevrons retains traces of red paint over white, as does the roll within the chevrons. Brownish pigment is found in the hollows flanking the central arch-roll, and is also found on the inner subsidiary roll of chevrons. There are possible traces of black outlining between the chevron mouldings.

3.3.6.3. Dividing the carved order from the inner roll framing the window recess are two narrow mouldings which, like the rolls comprising the chevrons, appear to have alternated red and ochre (the inner being red).

3.3.7. Window-head W2

3.3.7.1. Being generally more exposed less paint survives here, though there are many traces of white in the grooves and sheltered areas. Some, at least, of this white is from the later medieval limewashing of the chapel, since in places it is seen to overlie red. Unlike W1, where no paint was noted on either of the roll mouldings, there are traces of dark red inside the outer roll mould here (with later limewash over the top).

3.3.8. Window-head W3

3.3.8.1. Of the three western windows this bears the most significant paint traces, which, taken together with the more scattered traces on the other two window heads can probably be used to reconstruct the scheme for this set of similarly decorated arches. Here there is dark red (with ?later white over it) in the hollow beneath the hood moulding, and a similar red (under limewash) in the hollow above the roll framing the window recess. As with W1 the central roll of the carved order following the line of the arch also bears red paint.

3.3.8.2. White limewash is found on the remainder of the carved order, often overlying yellow ochre, which appears to be the original colour (and is found elsewhere on the subsidiary rolls of the chevrons).

3.3.8.3. Within the window recess, immediately beneath the framing roll moulding the white limewash again overlies yellow ochre, while the next moulding inwards has dark red and white, which is clearly a scalloped pattern on the southern side of the arch.

3.3.9. Window-head 4N

3.3.9.1. As on the south side there are traces of red in the lee of the hood moulding, though here it lacks a clear lower edge to be certain that it was a band rather than a general covering. The chamfer at the lower margin of this area is certainly red, and has a clear edge along the change of angle, suggesting that there was indeed a gap in the reds between a band under the hood moulding and the chamfer.

3.3.9.2. The outer roll moulding has clear evidence of a lozenge pattern in red at its eastern centre, and this may be repeated on the inner roll moulding, though the distribution of the red here looks more like barber's poling.

3.3.9.3. The carved order has plentiful traces of white (often over calcined stone), but little in the way of other pigments. Red is found on the central-eastern section of the outer flat which frames the chevrons, and a duller red on the same moulding at the centre-west.

3.3.9.4. On the window recess the inner chamfer may have a similar pattern to that found on 4S opposite, since on the fourth voussoir up from the western

springing there are faint traces of red - dots, and semi-lines - which after long examination resolved into the double vertical 'voussoir joint' and the ends of two sets of crossing diagonals. There is certainly a good trace to sinister of the framing red band on the reveal which also exists on 4S (and elsewhere).

3.3.9.5. There are also traces of red in the hollow above the wall plate of the vault (which might be expected given the red in the deep hollow between the vault ribs, and smaller traces of red on the ashlar beneath and parallel to the wall-plate, suggesting edging above general ashlar-lining.

3.3.10. Window-head 3N

3.3.10.1. Like 4S the pattern on the roll mouldings had already been noted from the ground, and is readily visible from the walkway beneath. Here red chevrons, outlined in black, and separated by the white background, run up both inner and outer rolls, the points of the chevrons being at the top on both sides, so that they must have met at the apex of the arch. The better preserved chevrons of the inner roll framing the window recess can also be found in the deep recess with the inner hollow running down the jamb of the arch on both sides (though these are best preserved on the west). On the east side the outer roll moulding has a wide band of red in the west face of the hollow, possibly indicating a different arrangement here.

3.3.10.2. The carved order bears much white paint, some (at least) of which is later medieval. There are occasional patches of what may be yellow ochre on the outer moulding and the flat above the carved band. Generally the only pigment on the carving is red, which is found on the outer moulding, and on the slightly recessed area of the lozenges which surround the foliate bosses at their centres. There are occasional 'spills' of the red from these lozenges towards the continuous roll at the centre of the design, suggesting that this (like the framing mouldings) may also have been red, though there are no definite identifications of the colour actually on the moulding.

3.3.10.3. On the inner reveal of the window there is a trace of a similar pattern to the zig-zag more clearly preserved on the reveal of 2N. Along the angle with the innermost chamfer there is a red band visible on both sides of the arch, while on the block forming the dexter springer of the reveal of the innermost arch there is a clear red diagonal. Just above the centre of the next voussoir up there is another red line, but this time at 90 degrees to the line of the arch, and presumably forming a fictive voussoir-joint line. The existence of this line - not found on 2N - suggests a further variation in the regularity of the patterns applied to the window

heads. Other red lines are visible on the reveal, including another angled line rising from a horizontal at the level of the sinister springing, and two more probable diagonals, each halfway up the arch.

3.3.11. Window-head 2N

3.3.11.1. The dexter area beneath the hood moulding has a run of the usual red band, but the inner red band on the chamfer, and the red in the upper hollow are absent.

3.3.11.2. The inner and outer roll mouldings appear to have had different patterns, that on the outer moulding (preserved at the springing) looking more like barber's poling in red white and black. The inner moulding appears to have a lozenge pattern in red black and white on its sinister jamb, but the sinister arch appears to have much more solid horizontal blocks of red and black, perhaps separated by narrower bars of white. At the dexter the arch springing may have triangles of alternating red and black. This area of the upper register requires more careful examination to check whether these observations are correct, and whether the isolated patches of red on the arch section of the inner moulding resolve into one or other pattern.

3.3.11.3. The carved order of the window head has black paint in the deep hollows framing the central lozenges and roll, except for two of the sections of the upper roll at lower dexter, where red paint is found. Whether this is part of a repaint, a corrected error, or an uncorrected error in the original scheme is not clear. The only other pigments here are the white which is general over the lozenges and central roll, and several traces of yellow which are found on the mouldings framing the lozenges.

3.3.11.4. On the innermost reveal and chamfer of the window opening there are relatively well-preserved areas of zig-zag in red on white, with enough surviving to show that here the lines were double and of the same general width as that acting as the border to the inner chamfer. If voussoir joint lines were painted, as on 3N, they do not appear to survive. There is a continuation of some of the lines onto the chamfer, suggesting that a lozenge pattern may have been the original intention, though the innermost lines do not support such a suggestion, since only one set form a continuation of the lines of the main zig-zags. More restricted traces survive on the second to fourth voussoirs above the sinister springing.

3.3.12. Window-head 1N

3.3.12.1. Whereas elsewhere much of the red found associated with the hood moulding is in its lee on the face of the ashlar, here there is red (with white over it) on the under side of the hood moulding itself.

3.3.12.2. The roll mouldings appear to have borne different patterns, or at least different coloured patterns, since the outer roll has partial diagonals in red, while the inner roll has lozenges exclusively in black lines on white. This lozenge pattern is similar in form to that found on 3N, but does not appear to have had the red demi-lozenges down the side of the roll - neither pattern retains colour on the central lozenges.

3.3.12.3. The carved order retains much white ground (or later limewash), with red found exclusively on the outer flank of the top order, and the joining sections of the central order (and not on the teeth which lie between them).

3.3.12.4 While there are no traces of pattern on the inner reveal or the inner chamfer of the window opening, there is a broad red band on the outer part of the window recess adjacent to the inner face of the inner roll moulding.

3.4. Summary

3.4.1. >From the remaining paint traces detailed above a general reconstruction is possible, though it must be borne in mind that one of the hall-marks of the carved and painted decoration of the upper register is its variation.

3.4.2. The hollow above the wall-plate, like that in the hollow between the rolls of the vault ribs, was dark red, and it seems likely from the traces surviving on 4N that there was ashlar lining on the plain tympanum beneath it. No paint was observed on the foliate bosses at the apex of the tympanum, but the scaffolding did not permit easy access to these features - white ground or limewash was noted beneath that on 3N.

3.4.3. Red paint was found on the roll of the hood moulding of 1N, and a red band beneath the hood seems to have been normal, with a ?white band separating it from the red chamfer above the hollow of the upper roll moulding.

3.4.4. The roll mouldings appear to have been (together with the reveal framing the windows) the most decorative elements of the painted embellishment, six of the eight side windows retain some traces of painting in at least two and usually three colours, and with four of these windows retaining enough paint to reconstruct at least one pattern. Only in one instance [3N] is it fairly certain that both outer and inner rolls bore the same pattern, while in three instances it is difficult to reconcile the surviving lines on the two rolls into a single pattern. In all cases the patterns were executed in white with one (black only) or two (red and black) other pigments. The bold forms of the patterns - lozenges, chevrons, and possibly barber's poling - both echo the form of the carved patterns, and present a much bolder and simpler aspect than the refined and detailed forms of the arcade, as well as being executed in a more restricted palette.

3.4.5. Having said this, however, it must be pointed out that in two instances [4S and W3] there is certain evidence of the refined treatment of mouldings by the painting of scalloped edges, and it may simply be that not enough of the paint has survived to be able to demonstrate its subtlety. It is perfectly possible, for instance, that the lozenge patterning was overlaid with shading, patterning and embellishment to produce something like the rich effect of the painted barley-sugar twist columns from St Nicholas Priory, Exeter.³⁷ The painted decoration does not necessarily reflect the form of the carved decoration, though it does imitate it in the sense of its variability. Thus although in 2N both the painted and the carved decoration has patterns of lozenges, the lozenge carving of 3N contrasts with the chevron patterning of the roll mouldings. Such rich treatment with polychrome is the painted equivalent of the carved roll-mouldings framing the clerestory windows of St David's cathedral nave - the two buildings are stylistically related, and the latter may have copied Glastonbury.

3.4.6. The carved order was clearly embellished with pigments, though in general little of this survives. The deep framing mouldings of 2N were black, but elsewhere the colour scheme seems to have consisted of red and white, with the mouldings being generally painted in red. 3N has clear evidence of mouldings being bi-coloured, with the inner section of the lozenge around the foliate centre being red, and the outer section of the same moulding being white. This arrangement is also found on the painted roll mouldings, where white 'borders' are used to articulate the lozenge patterns (as in 3S, for instance). 2S also suggests that this colour alternation on the lozenges may conceivably have been carried out in white and yellow.

³⁷ Illustrated in E.W. Tristram, 'English Medieval Wall Painting: The twelfth century', plate 90.

3.4.7. Broad red lines are often used to edge a change in angle of the wall-plane. It has already been noted that the chamfer between the flat below the hood-moulding and the outer roll-moulding is consistently painted red, but similar red bands are also used on the junction of the window recess and the inner roll moulding (1N and probably 2S), and between the innermost chamfer over the window and the reveal adjacent (4S, 4N, 3N).

3.4.8. In two cases (3N and 2N) the flat reveal above the window bears traces of zig-zag lines in red. On 2N these lines are doubled, while on 3N the apparently single lines may be separated out by fictive voussoir joints.

3.4.9. Fictive voussoir joints are also used (as double lines) on the innermost chamfer above the inner reveal of 4S where double intersecting red lines are painted onto the fictive voussoirs right around the head of the arch. It is possible that a similar pattern existed on 2N, though here the lines may be a continuation of the zig-zag pattern on the reveal. That some sort of similar pattern may have existed on 1S is suggested by the survival there of spots and patches of red, though there is not sufficient to reconstruct any form.

4. Traces of polychromy observed during previous seasons of conservation

4.1. Introduction

4.1.1. Previous surveys undertaken during the conservation of the remaining fabric of the great church have located traces of polychromy, and fragments of worked stone recovered from the excavations undertaken since 1908 also help to flesh out a picture of the richness of the decoration of the medieval building, a building which was so impressive that even Cromwell's commissioners, charged with its dissolution wrote:

"We assure your lordship it is the goodliest house of that sort that ever we have seen. We would that your lordship did know it as we do; then we doubt not but your lordship would judge it a house meet for the King's majesty, and for no man else..."³⁸

"The house is great, goodly, and so princely as we have not seen the like."³⁹

4.2. 1986 - the Lady Chapel doors

4.2.1. The most immediately relevant area of the church to the interior painting of the Lady Chapel is the carved decoration of the magnificent doorways which gave access to that chapel - the only instance so far recorded of the painting of the external surfaces of the building. The painting of external carved detail was by no means uncommon in the middle ages, and very often such

³⁸ Richard Pollard, Thomas Moyle and Richard Layton to Thomas Cromwell, September 1539 [L. & P. Hen. VIII, xiv(ii), 232], quoted in Bettey 1989, p.185.

³⁹ The Commissioners to Cromwell, 28 September 1539 [L. & P. Hen. VIII xiv(ii), 272], quoted in Bettey 1989, p.185.

painted decoration appears to have centred upon the doorways and porches of the church. Thus, for instance, at Salisbury Cathedral by far the most extensive traces of painted decoration so far located on the facade have been found in the central porch of the west front;⁴⁰ at Exeter Cathedral the image screen associated with the western doorways received magnificent painted enrichment;⁴¹ at Wells Cathedral the decorative scheme of the facade is concentrated on the central west door;⁴² and at Bath Abbey the only extensive traces of paint discovered during the 1990-2 conservation programme were on the spandrels of the central west doorway.⁴³ Thus the finding of paint on the carvings of the Lady Chapel doors in 1986 does not necessarily imply that the whole exterior of the chapel was also painted, though the richness of the treatment of the building allows us to speculate that it could have been.

4.2.2. In 1984 a minute examination of the carved surfaces of the Lady Chapel doors was undertaken to assess their condition as a preliminary move towards their conservation and repair. Considerable areas of paint were noted, and written and drawn records were made.⁴⁴ Following this, between 14th April and the end of August 1986, Hebe Alexander and Tish O'Connor of Wells Conservation Centre cleaned and conserved the fine exterior sculpture of this pair of doorways into the Lady Chapel and recorded any further paint traces which were found to survive beneath the carbon encrustation.⁴⁵

⁴⁰See: Eddie Sinclair, 'Salisbury Cathedral: West Front Polychromy - Preliminary report', June 1994, and 'Salisbury Cathedral: Current Assessment of Salisbury Cathedral West Front Polychromy', September 1995; also J. Sampson, 'Salisbury Cathedral: The West Front Phase 2 - Polychrome Survey', 29.9.95, unpublished reports for the Dean and Chapter of Salisbury Cathedral.

⁴¹Eddie Sinclair, 'The West Front Polychromy', in *Medieval Art and Architecture at Exeter Cathedral*, B.A.A.C.T., 1991, p.116-33.

⁴²J. Sampson, *Wells Cathedral West Front*, 1998.

⁴³J. Sampson, 'Bath Abbey West Front: Report on the earlier restorations', 1992; David Odgers, report on the conservation programme, 1991-2; unpublished reports for English Heritage, Bath City Council and Bath Abbey.

⁴⁴ see J. Sampson, 'Glastonbury Abbey: Lady Chapel Doors', unpublished report for Glastonbury Abbey Trustees, 1985.

⁴⁵ These were added to the master drawings in the 1985 report already referred to.

4.2.3. On both doorways paint was only found on the more protected parts of the arch, with no survivals noted on the jambs. In part this is the result of the more protected position on the soffit of the arch, but it is also likely that the geology of the substrate - fine grained Dundry stone on the voussoirs, coarser Douling and Bath stone on the jambs - is a contributory factor.

4.2.4. Little of the original colour-scheme survives beyond the red ground which appears to have been applied generally over the stone, being found on both the backgrounds and the carved detail. This is best seen on the inner surviving order of the north door, but there are also extensive traces of what appears to be a different red on the outer order of the south door. In two places on the south door it is possible that the red has been applied over a white ground.

4.2.5. During the cleaning of the north door it was observed that

'Much unsuspected red paint was uncovered generally on more protected surfaces. Especially, thickened layers of carbon, bound in calcium salts, and red paint had accumulated in the innermost angles of horizontal surfaces... During later repairs, the use of fine water sprays revealed the solubility of some of the red paint, which had presumably accumulated on small ledges from elsewhere on the arch.'⁴⁶

4.2.6. The traces of more complex paint layers which give a clue to the actual colour-scheme are very few. On the set of three vesicas depicting the Magi riding away, the central king retains traces of red and blue (possibly ultramarine) on the background, the blue being located (at least in part) on the frame of the vesica suggesting that this may have been the general colouration of this feature. The sword of the third knight in the series of vesicas depicting the Massacre of the Innocents retains a paint film consisting of three distinct layers which appear to be the red ground, overlain by a bright yellow layer (perhaps a bole), and on top of this a metallic layer which may be silver or tin leaf for the blade of the sword.

4.2.7. Other examples on the north door of pigments other than the red ochre of the general ground include:

- a paler and less rich red on the cuff of the sinister sleeve of the seated figure to the sinister of the nativity scene

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Tish O'Connor, "Glastonbury Abbey, Lady Chapel: Conservation of the North Portal", in Sampson (1985).

- a green on the folds of King Herod's cloak where it crosses his lap in the lowest voussoir of the surviving inner order⁴⁷

- the seated King Herod of Vesica xii has traces of a possible orange brown pigment and of possible blue on white ground on his cloak - the finding of these two in relatively close proximity is of interest in view of their relationship on the interior of the building

- the shield carried by a lion on voussoir 14 of the outer order has a fine blue line on a white ground running around its inner border

- on voussoir 20 of the outer order the belt of the human figure has dull blue at extreme sinister

- there are occasional areas of brownish ochre, as on voussoir 24 of the outer order

4.2.8. On the architectural background of the doorway, framing the middle order of the arch, numerous traces of rich blue on a white ground were noted on the parallel mouldings above and below the band of narrative carving. The use of this pigment for the architectural framework of the carving may add further credence to the suggestion that the vesica's frames were also blue.

4.2.9. Thus, overall, the general range of pigments found on the exterior sculpture - red, blue, brown ochre and green - is the same as that on the interior with the possible addition of a metallic leaf on a yellow bole. This would suggest that the painted decoration of the interior of the chapel and the exterior of the north door are contemporary, though the slightly different red of the south door could indicate a later date for this - perhaps after the enforced hiatus (probably of 1189 onwards) which prevented the completion of the carving here. It is possible, however, that the painting of the outer order of the south door was done before the carving of the figural orders was abandoned, since it is difficult to account for the absence of paint on the inner orders of the arch on the basis only of later weathering - if any part of the door should have lost its paint it is that part which so richly retains it, while the more protected parts of the door have none. This would

47

There is also a purplish red which appears to be in part on the broken stone of his dexter hand - possibly indicating a repaint or a hiatus between carving and painting. This paint also occurs above on voussoir 18 (counting from the east) of the middle order, where it is found over eroded stone and in a very exposed position where it is unlikely to have survived for 800 years. It is perhaps more likely to be post-medieval red lead.

suggest that the hiatus began before the painting of the completed foliage of the inner orders could be carried out.

4.3. 1988 - the southern crossing pier and transept

4.3.1. Introduction

4.3.1.1. On 16th June 1988 a site meeting was held at Glastonbury Abbey attended by Commander Scadding (the custodian), Alan Rome (the Abbey architect), Peter Cooley and Richard Stokoe (director and manager respectively of the Wells Cathedral Conservation Centre). It was decided that work on the cleaning and consolidation of the southern crossing pier and the remaining fabric of the south transept should commence later in the summer, and the bulk of the work was accomplished between August and October that year.

4.3.1.2. During the course of the cleaning Jerry Sampson paid several visits to the scaffolding and made notes on the evidence of original painted decoration.

4.3.2. South choir aisle/crossing arch

4.3.2.1. The main area of interest, since it seems to provide material for reconstructing the colour scheme for a complete arch, is the arch from the south choir aisle into the crossing (the arch into the south transept retains considerable traces of white ground and limewash, but very little pigment).

4.3.2.2. The deepest areas of the moulding of the soffit of the arch is that where the chevrons of the two orders of decoration meet on the west face. Here a recessed lozenge shape exists between each pair of chevrons, and within these the most extensive areas of pigment survive. This pigment is largely restricted to alternate lozenges where green-blue (possibly verdigris) paint overlies a thick white ground. The lozenges between are almost devoid of paint, but two retain traces of red. It seems likely, therefore, that the lozenges alternated red and blue-green, and that for some reason the red has been more subject to decay and loss than has the blue-green.

4.3.2.3. The roll mouldings of the chevrons appear to have been painted blue-green, while the angles between them have been picked out in red. Thus we seem to have a scheme where the decorated arch was painted blue-green with red lines emphasising the angles between mouldings. Whether there was an alternation of colour on the mouldings corresponding to that in the deep lozenges is no longer certain.

4.3.2.4. The angles between mouldings on the soffit of the central order sometimes retain red paint, but there are no clear traces of blue-green on this area.

4.3.2.5. The decorative orders appear to have been separated by a thicker red line which also framed the angle between the plain soffit of the arch and decorated sector. Traces of ashlar lining on the plain soffit were located but were removed during cleaning - though two photographs of these have been found [see Plate].

4.3.2.6. There is evidence suggesting (at least one) repainting, since green and red overlay each other in places (usually green over red, which may represent merely the order of applying different paints in the course of the single campaign), and in one area the green is overlaid by a thick white ground or limewash. It is the lowest sequence which has been described here, since this would seem to correspond to the original late 12th century intention.

4.3.3. South choir aisle/transept arch

4.3.3.1. The southern arch leading into the transept has far less surviving colour - perhaps because the sequence of colours was reversed here with red rather than blue-green predominating, and with the red apparently surviving less well (as on the west arch) this has now been lost. Here, however, the lines framing the orders of the decoration do survive well, and the width of the line can be established at 12mm. on the plain soffit.

4.3.4. The triforium opening

4.3.4.1. Here there are traces of red visible on the foliage panel to the dexter cusp of the central opening. This, lacking a white substrate, is probably a ground

similar to that found on foliage carving elsewhere on the building (especially in the Lady Chapel, both within and without).

4.3.5. The mouldings of the super-arch

4.3.5.1. Both red and green are found here but the red in the mouldings of the super-arch looks more like lichens than paint, since it is found directly overlying the (weathered) stone. The genuine green paint traces on the joint between the hood mould and the arch moulding are applied over a ground or thin mortar smear.

4.4. 1989 - the south nave aisle

4.4.1. The three bays of the south wall of the south nave aisle represent the 4th, 5th and 6th bay of the nave counting from the west side of the crossing. The window heads of the 5th and 6th bays retained no traces of painting, but the 4th bay window head possessed extensive traces which, at the time they were inspected, were partly concealed beneath the conservators' sheltercoat.

4.4.2. Here there were extensive traces of red paint remaining on the arch head, together with red ashlar-lining over a white limewash on the west base of the moulding framing the inner face of the window. The red in the arch head, though very fragmentary, and partly overlaid by a later (but medieval) white limewash, shows strong evidence of having originally formed curving patterns - probably of curling foliage tendrils similar to those of the Wells Cathedral nave and transept vaulting.

4.4.3. Further traces of ashlar-lining were also observed adjacent to the eastern capital of Bay 4.

4.5. 1990 - the south choir aisle

4.5.1. Cleaning and conservation of the surviving masonry of the south choir aisle was carried out between July and October 1990 by Sue and Lawrence Kelland. This area consists of the greater part of the seven-bay southern wall of the south aisle, and is pierced by seven windows of which the fourth and seventh from the west exist only as fragments.

4.5.2. The conservators observed that

"Large amounts of original white limewash survive on both the carving [of the windows] and the ashlar. On the ashlar work, a great deal of the original red ochre lining survives, indicating that there was a system of red outlining on white all over the ashlar work, not following the actual courses.

"On the carving, much red ochre paint survives, together with a fragment of black on one of the lower capitals and some blue on window 4. On window 6, removal of some of the roughly-applied mediaeval mortar revealed traces of vermilion and signs that there is much more beneath the mortar. No more was uncovered, as this would expose it to the weather (and probable loss) for no reason."⁴⁸

4.6. 1991 - the north choir aisle, crossing pier and transeptal chapel

4.6.1. Cleaning and conservation was once more undertaken by Sue and Lawrence Kelland, between August 1991 and February 1992, on the surviving masonry of the junction of the north eastern angle of the choir with the transept. Work was divided into two phases beginning with the choir aisle and crossing arches, and being followed by the interior and exterior of the chapel of St. Thomas Becket (the southern chapel of the north transept).

48

S. & L. Kelland, 'Glastonbury Abbey - South Choir Aisle: Conservation report for work carried out July-December 1990', unpublished report for Glastonbury Abbey Trustees, February 1991.

4.6.2. Parts of the north choir aisle (certainly the south face of the arch into the transept) were cleaned (and apparently limewatered) in the 1930s or 40s under the supervision of W.A. Wheeler, the Clerk of Works of Wells Cathedral. The Kellands noted that

"...the blackening and sulphation which had formed since, although heavy, was easy to remove by washing with water in handsprays and scrubbing. Elsewhere, black crusts were thicker and required more lengthy mechanical cleaning with hand-tools such as scalpels and rifflers. Water-washing was not used, as there were considerable remains of medieval paint throughout and prolonged wetting would undoubtedly weaken this."⁴⁹

This observation suggested that much of the paint which survived into the present century may well have been lost during the earlier cleaning campaign,⁵⁰ a suspicion which was confirmed by the findings after the 1991 cleaning:

"Traces of polychrome survive throughout, although significantly less where water-washing was carried out in the 1930's, particularly the fine multiple capitals on the Crossing arch where paint could normally be expected to be found."⁵¹

4.6.3. Several major areas of polychromy survived, with the most important being that on the south wall of the Becket Chapel. Here not only is there an almost complete area of ashlar-lining within the piscina to the south of the position of the altar, but the upper parts of this wall bear substantial remains of wall plaster with the late 12th or 13th century pattern of red ashlar-lining rising to arched lines at the top,

49 Sue and Lawrence Kelland, 'Glastonbury Abbey: North Choir Aisle and Becket Chapel - Report on conservation work carried out August 1991 - February 1992', unpublished report for Glastonbury Abbey Trustees, 1992, p.1.

50 A similar reduction in the amount of surviving medieval polychrome has been noted on the central west door of Wells Cathedral's west front, cleaned by Bert Wheeler in the 1950s.

51 *ibid*, p.2.

"There are red patches which may be flowers, with one patch of blue on the east side... Much of the red has discoloured to black on the surface, indicating that it is vermilion."⁵²

The Becket Chapel had further traces of ashlar-lining on the capitals of the east window running onto the ashlar, and on the inner faces of the chevrons and the hood-mould over the east window. Behind the south east corner shaft of the chapel (running up beneath the vault rib) were found plentiful traces of dark red; and similar red lines and red 'striping' or ashlar-lining was located on all the vault wall-plates.

4.6.4. Further substantial areas of ashlar-lining, though apparently without flowers or other decoration, were found on the west wall of the choir aisle against the crossing, where it was preserved in the 'shadow' of the roll forming the wall plate of the choir vaulting. One capital on the north side, at the western end of the arch, was noted as having thick red paint on its upper flat moulding - this was very dirty and in poor condition, and was clearly not included in the general cleaning to which this area had been subject in the earlier part of this century.

4.6.5. Elsewhere in the north choir aisle paint was noted to exist

"...in several layers indicating several repaints."⁵³

The clearest recorded instance of this was on the west face of the arch giving access to the north choir aisle from the west, where the chevron mouldings at the centre of the southern side of the arch bore a yellow ochre which was overlaid with black or with black on white, red or blue - similar (though more restricted) traces were found on the east side. Elsewhere on this arch black (?discoloured vermilion) lining over white ground/limewash was observed.

4.6.6. The same western elevation bore further traces of the original decorative scheme higher up:

- firstly, the southern triforium arcade opening retained white on the soffit of its arch head, and blue on the angled chamfer immediately above the soffit.

52 *ibid*, p.2.

53 *ibid*, p.2.

- the super-arch enclosing the triforium, at a point roughly at the same height as the top of the triforium openings showed much evidence of red in the lower angle beneath the chevron ornament, and there were traces of red in the angle of the moulding beneath all the way down the arch.

- on the capitals supporting the vault springing at the SE corner of the transept's southern bay there was thick white limewash around the top mouldings.

- there were traces of blue paint in the arch head of the surviving clerestory opening (the southernmost of the east wall of the transept), within the roll moulding beneath foliate outer mouldings.

4.7. 1993 - the Galilee

4.7.1. In 1993 plans were drawn up for conserving the Galilee and Lady Chapel over a period of two years, with the former building plus one bay of the latter to be worked on in the same year, and the remaining three bays and western wall of the Lady Chapel being left until 1994. After the erection of the scaffolding and before cleaning commenced it became apparent that the amount of polychrome remaining in the eastern bay of the Lady Chapel prohibited the use of the fine water-mist washing which was being employed on the Galilee, and a report (which is reproduced here as Appendix No.) was requested from Eddie Sinclair.

4.7.2. Although not part of the remit of that report Eddie noted that,

"The work in progress on the Galilee stone-work has revealed mouldings covered with their original limewash. The Galilee is later than the Lady Chapel and the only evidence of colour is of iron-oxide red on top of the limewash found on the south arcade. On the west door these same layers of white limewash and red iron-oxide appear frequently."⁵⁴

54

E. Sinclair, 'Glastonbury Abbey: Lady Chapel Polychromy', unpublished report for Glastonbury Abbey Trustees, September 1993, p.1.