

Spanish tin-glazed tiles from Woking Palace and other sites in south-east England

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with a contribution by
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Woking Palace has produced the largest assemblage of Valencian tiles found anywhere in Britain. Brought in during the mid–late 15th or early years of the 16th century, they are among the earliest tin-glazed tiles known to have been used in this country. They are decorated with six different designs, four of which can be paralleled on Valencian tiles known from Spain. Other Valencian tiles, many with the same designs, are known from two sites in Guildford, Surrey, Billericay, Essex and Dartford, Kent.

Introduction

There are fourteen hand-painted Spanish tin-glazed floor tiles from the site of Woking Palace, Surrey in the care of Woking Museum. A further three tiles found in the locality are currently in the hands of private individuals. Another tile was found at Monument Hill, close to Hoe Place, Surrey. Sir Edward Zouch built himself a new manor house at Hoe Bridge Place in the 1620s supposedly with materials from the now abandoned Woking Palace (Colvin & Summerson 1982, 345–8), so this too is likely to have come from the palace. It is also decorated with the same design as that found on many of the palace tiles. A further Woking Palace design has recently been found in Guildford Museum (Mary Alexander, pers comm). This is thought to have come from Newark Priory situated just to the east of Woking Palace. Other tiles belonging to the same series have been found at Guildford, Billericay and Dartford (fig 1).

These tiles were made in the Valencian region of eastern Spain, but their precise place of manufacture is uncertain, hence the general term ‘Valencian’. Tiles were made in several places in Valencia, most notably Manises and Paterna, and also in other places in the Kingdom such as Gandía (Ray 2000, 41, 314).

The development of the painted tile in the 15th century led to a flourishing industry and lucrative market and it is to this period that the Woking Palace tiles belong. The tiles were made by specialist craftsmen called *mestres de fer rajoles pintades* (makers of painted tiles), rather than potters (Ray 2000, 314). The majority of 15th century Valencian tiles were painted in blue on white. The same is true of the tiles brought into Britain, with the exception of a heraldic design where certain parts of the pattern are painted in purple. Purple was used in particular on heraldic tiles to indicate a coloured ground.

The route taken to distribute Valencian tiles in southern England is uncertain, although it is known that similar tiles were also exported to Italy, France and Flanders. Flemish painter Jan van Eyck includes Spanish tiles in his compositions (van Leemen 1993, 9). Van Eyck travelled to Spain and may well have seen the tiles, which he includes in his paintings.

The export of tiles was presumably linked in some way to the more widespread import of Valencian lustreware pottery into Britain during the 15th century. So-called ‘mature Valencian lustreware’ has a uniform distribution across southern England with a more easterly distribution in the Midlands, the north and Scotland, reflecting North Sea trading networks (Gerrard *et al* 1995, 287). Wendy Childs has shown from documents that Genoese ships bringing Spanish ceramics to north-west Europe called at Southampton, London and Bruges (Childs 1995, 28–30). It was not until the late 15th and early 16th century that there was a direct trade in ceramics between British ports and southern Spain (Hurst 1995, 367).

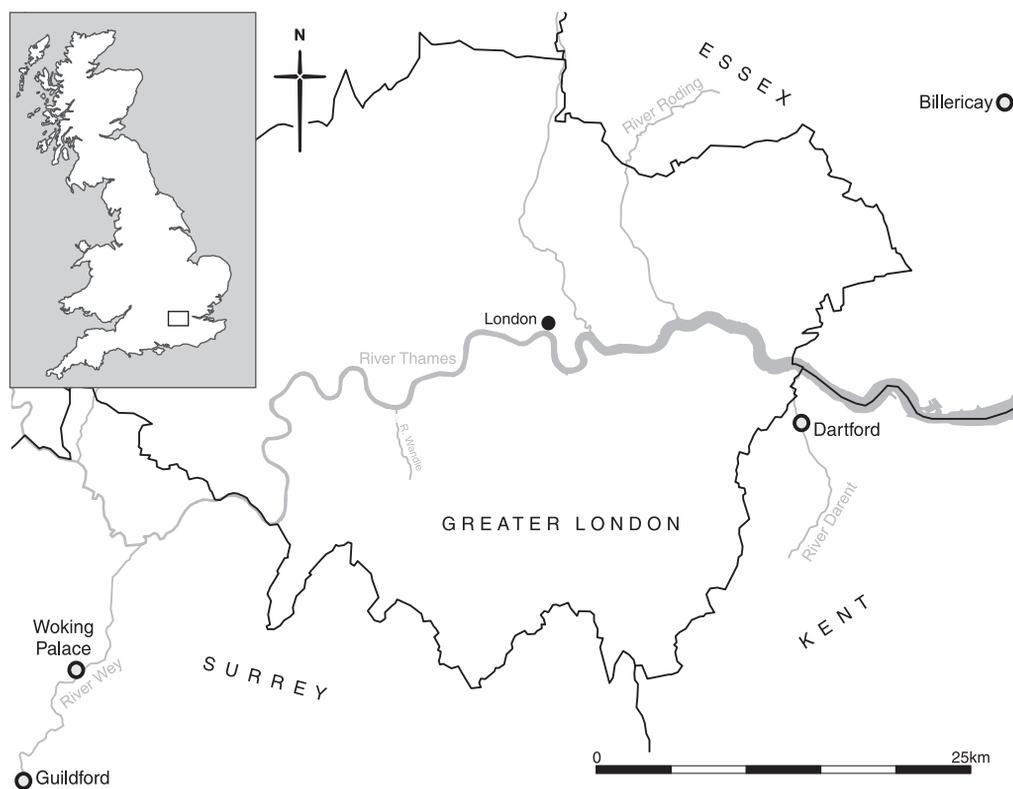


Fig 1 Spanish tin-glazed tiles. Distribution of Spanish Valencian tiles in south-east England. (Newark Priory is adjacent to Woking Palace)

There is no way of knowing whether the Valencian tiles found at Woking Palace and elsewhere in south-east England are the result of direct contact with southern Spain, but it seems reasonable to suppose they were first brought by ship into the port of London and distributed from there. If so, it is a little puzzling that such tiles have not been found in London itself. Perhaps they had been ordered by individuals rather than traders based in the capital.

Another puzzle concerns the much smaller distribution of Valencian tiles in comparison with Valencian pottery of similar date. It is possible a few tiles could lie unrecognised in museum collections; the only example in Guildford Museum was believed to be from Antwerp until identification by the author. But the total absence of Valencian tiles in the Midlands and northern Britain suggests that the use of such tiles may have always been restricted to buildings in south-east England.

SITES WITH VALENCIAN TILES

Woking Palace, Surrey

Woking Manor was held by Edward the Confessor before the Norman Conquest and in 1086 by William I. There is mention of a manor house on the site by 1272, and by the 15th century the manor belonged to the Beaufort Dukes of Somerset. The property was confiscated by Edward IV, but in 1485 Margaret Beaufort, daughter of the first duke and mother of Henry VII, resumed possession of the estate. In 1503 Henry VII decided to transform Margaret's manor house into a royal palace. From the summer of 1503 until the end of his reign works were continually in progress at Woking (Colvin & Summerson 1982, 344).

Henry VIII was a frequent visitor to Woking Palace after his accession to the throne in 1509. It was Henry VIII who undertook extensive building work at the palace during the period 1532–42. Further considerable alterations and reconstruction were undertaken between 1576 and 1580 but in 1620 James I granted the estate to Sir Edward Zouch who abandoned it and built a new manor house at Hoe Bridge Place 1km (0.62 mile) to the north-west (Colvin & Summerson 1982, 345–8).

Woking Palace was surrounded by a moat on three sides with the river Wey forming a natural boundary on the other, southern, edge. The tiles in Woking Museum were recovered as a result of diving operations in the Wey adjoining the palace site in 1996.

Newark Priory, Surrey

Among a group of medieval floor tiles found at Newark Priory in 1948 is a Valencian tile with 'Newark' on the side (possibly added by museum staff). This may originally have come from Woking Palace, which lies 1.1km (0.67 mile) to the south-west; alternatively there could have been a pavement of Valencian tiles installed in part of the priory.

Guildford Manor Farm, Surrey

The tiles were found on the site of a moated manor house used as a hunting lodge in a royal park established by Henry II. In the 1360s the building was improved to replace the accommodation at Guildford Castle, which had fallen into disrepair and was abandoned. The manor underwent considerable repairs in 1514, but there is no mention of installing any tiled floors at this date. The house, which appears to have been demolished shortly before 1607, was located approximately 2.5km (1.5 miles) west of the town of Guildford (Crocker 2003, 211–12).

Two Valencian tiles, found during excavations in 1973 and 1975, are currently in the possession of the excavator Alan Crocker. A full report on the excavations is currently in preparation (Crocker in prep).

15 Tunsgate, Guildford, Surrey

The name Tunsgate refers to an alley leading from the High Street to the town ditch, 15 Tunsgate being the site of a garden of a property on the High Street. The Valencian tile, which was excavated in 1993, may have come from a house on the High Street or from a building, which became the Three Tuns inn. The inn could have been in existence by the early 16th century; it was certainly present by 1535 (Corke 1997, 148).

The use of decorated flooring in the inn is indicated by the presence of Antwerp tin-glazed tiles dating to the mid-16th to early 17th century found on the adjacent sites of 16 and 17 Tunsgate (Betts 2005; Fryer & Selley 1997, 142). Whether more prestigious Spanish floor tiles would have paved an inn is open to question. It seems more likely they would have paved the floor of a more important earlier town house on the same site or similar building located nearby.

Billericay, Essex

Six tiles are set above the west doorway in St Mary Magdalene church facing on to Billericay High Street (Anon 1997). Three design types are present, all of which are represented at Woking Palace.

St Mary's church was originally a chantry chapel, becoming a parish church only in 1844. The building was extensively remodelled in the late 18th century: all that remains of the previous church is a fine brick tower dated to *c* 1496 (Ryan 1996, 113). The doorway with the Valencian tiles is part of this late 15th century brick tower. The dating of the tower is significant, as the tiles may be an original feature of the building.

Dartford, Kent

A complete tile was found by the Borough Surveyor during the demolition of Gibson's ironmonger's on Dartford High Street in 1955. The building was of timber-framed construction dating to the 15th–16th century (C Baker, pers comm). It seems highly unlikely that the building ever had an elaborate tiled floor, so the tile presumably derives from a building located elsewhere or was used for some other purpose.

Fabric type

The tiles are generally cream in colour with a pink coloured core, although one tile with part of a heraldic pattern is light grey. The fabric has common quartz grains up to 0.2mm with occasional larger grains (up to 0.5mm). The pink interior shows frequent small yellow clay inclusions (up to 0.2mm) with occasional larger yellow silty lenses (up to 5mm). Occasional black and red iron oxide is also present (up to 0.4mm).

Design type

DESIGN 1: HERALDIC DESIGN

Woking Museum no: 21A; Guildford Museum no: 1993 25; St Mary's Church Billericay (2 tiles); Margaret Broomfield (ultimately Woking Museum)
Size: 113–116mm square x 14–16mm

Only two small areas of this heraldic design have been found at Woking Palace (colour plate 1) but there is a further fragment from 15 Tunsgate, Guildford (colour plate 2) and two complete tiles with the same design from Billericay (colour plate 3). Part of this heraldic design is painted in purple as well as blue. All other Valencian tile designs found in Britain are blue on white.

The coat of arms depicted has not been identified but there is no record of any Valencian tiles with English armorials. The heraldry depicted must be those of a Spanish family and as such indicate a chance import, unless they are in some way connected with Spaniards living in England (A Ray, pers comm).

These tiles, which measure 14–15mm thick, are slightly thinner than the other tiles from Woking, as is the Guildford tile with the same design, which measures 16mm.

The Billericay, Guildford and Woking tiles would seem to represent separate tile batches as they show various detailed differences in decoration. For example, the bottom corners of the Billericay tiles have trefoils set in circular borders, while in the surviving bottom left corner of the Guildford tile this has been replaced by a flower petal. Similarly, the best-preserved Woking Palace tile has different shaped birds' claws and more spots in the upper right corner in comparison to the Billericay examples.

DESIGN 2: CENTRAL ROSE DESIGN

Woking Museum no: 10; Guildford Museum no: G.6394; Guildford Manor Farm no: GPM (Fc), square HC
Size: 115mm square x 21–23mm

One tile of this type was found at Woking Palace (colour plate 4); a bigger fragment from Guildford Manor Farm shows more of the original pattern (colour plate 5), as does the tile from Newark Priory.

González Martí (1952a, 413, fig 567) illustrates a Valencian tile from Spain painted with a very similar design. A much cruder version of the same central rose motif is also shown on a Valencian tile in Ray (2000, 319, no 630), datable to 1475–1500. Tiles with this central



Colour plate 1 Spanish tin-glazed tiles. Design 1: heraldic design from Woking Palace, Surrey. Tile is 53mm wide across centre x 60mm high. (Photograph by MoLAS)



Colour plate 2 Spanish tin-glazed tiles. Design 1: heraldic design from 15 Tunsgate, Guildford, Surrey. Tile is 78mm wide x 68mm high. (Photograph by Guildford Museum)



Colour plate 3 Spanish tin-glazed tiles. Design 1: heraldic design from above the west doorway, St Mary's church, Billericay, Essex. Tile is 133mm wide x 116mm high. (Photograph by Ian Betts)



Colour plate 4 Spanish tin-glazed tiles. Design 2: central rose pattern from Woking Palace, Surrey. Tile is 75mm wide x 72mm high. (Photograph by MoLAS)



Colour plate 5 Spanish tin-glazed tiles. Design 2: central rose pattern from Guildford Manor Farm, Surrey. Tile is 88mm wide x 117mm high. (Photograph by MoLAS)



Colour plate 6 Spanish tin-glazed tiles. Design 3: radiating naturalistic leaf pattern with square corner decoration from Woking Palace, Surrey. Tile is 112mm wide x 45mm high. (Photograph by MoLAS)



Colour plate 7 Spanish tin-glazed tiles. Design 3: radiating naturalistic leaf pattern with square corner decoration from above the west doorway, St Mary's church, Billericay, Essex. Tile is 111mm square. (Photograph by Ian Betts)



Colour plate 8 Spanish tin-glazed tiles. Design 4: geometric pattern with foliate elements from Woking Palace, Surrey. Tile is 66mm wide x 59mm high. (Photograph by MoLAS)



Colour plate 9 Spanish tin-glazed tiles. Design 5: border tile with naturalistic leaf pattern from Woking Palace, Surrey. Tile is 110mm wide x 113mm high (right edge). (Photograph by MoLAS)



Colour plate 10 Spanish tin-glazed tiles. Design 5: border tile with naturalistic leaf pattern from above the west doorway, St Mary's church, Billericay, Essex. Tile is 110mm wide x 164mm high. (Photograph by Ian Betts)



Colour plate 11 Spanish tin-glazed tiles. Design 6: uncertain pattern from Woking Palace, Surrey. Tile is 97mm wide x 49mm high. (Photograph by MoLAS)



Colour plate 12 Spanish tin-glazed tiles. Design 7: shield surrounded by barred acanthus leaves from Dartford High Street. Tile is 196mm x 200mm high. (Photograph by Dartford Museum)

rose design were produced in large numbers from around 1425 until the early 16th century. They were one of the common designs for *olambrellas* – small tiles set in brick or plain tile floors (A Ray, pers comm). No Valencian *olambrellas* have been found in England, but they were exported into Britain from Seville during the 16th century. There are two examples from Hurstpierpoint, Sussex in the Museum of London (MoL nos 16027, 16028).

DESIGN 3: RADIATING NATURALISTIC LEAF PATTERN WITH SQUARE CORNER DECORATION

Woking Museum no: 33B; St Mary's Church Billericay (3 tiles)

Size: 111mm square x 19–21mm

Again only one Woking Palace tile is decorated with this design (colour plate 6), but three complete tiles with the same design are present at Billericay (colour plate 7). A similar Spanish tile, although with plain blue corner motifs, is illustrated by González Martí (1952a, 452, fig 629).

DESIGN 4: GEOMETRIC DESIGN WITH CROSS-HATCHING, BLUE BARS AND FOLIATE ELEMENTS

Woking Museum nos: 11, 21, 16 (2 tiles), W14; St Peter's Church Old Woking; Phillip Arnold (ultimately Woking Museum); Margaret Smith (ultimately Woking Museum)

Size: *c* 170mm square x 20–25mm

There are at least nine tiles of this design. Complete tiles with an almost identical design are illustrated by González Martí (1952a, 372, fig 485) so it is possible to reconstruct the full pattern on the Woking Palace examples from the surviving fragments (colour plate 8; figs 2 and 3).

The cross-hatching and blue bars are a common motif on Valencian tiles datable to the middle years of the 15th century (González Martí 1952a, fig 485). Anthony Ray (pers comm) notes that similar decorative elements were used on a Dutch tin-glazed design of 1890–1910 (Pluis 1997, 334, A.01.70.21; van Lemmen 1993, 9).

One tile of design 4 has a slightly blackened area on the top surface suggesting it was set near a hearth or similar heat source.

DESIGN 5: BORDER TILE WITH NATURALISTIC LEAF PATTERN

Woking Museum nos: 14, 33A, 40, W14A, W33; St Mary's Church Billericay

Size: 162–164 x 107–110 x 19–21mm

There are five rectangular tiles from Woking Palace which when set end to end would have formed an attractive running leaf scroll border (colour plate 9). An almost complete tile with the same design is found at Billericay (colour plate 10). González Martí (1952a, 446, fig 621) illustrated a comparable Spanish tile with the same border of small circles and leaves twisting round a central stem, but painted in reverse.

DESIGN 6: UNCERTAIN PATTERN

Woking Museum, no number

Size: ? x ? x 24mm

The small surviving area of top surface shows an uncertain design in blue on white (colour plate 11).

DESIGN 7: SHIELD WITH 7 SHAPE SURROUNDED BY BARRED ACANTHUS LEAF DECORATION

Dartford Museum

Size: 200 x 196 x 20mm

Similar barred acanthus leaves with the same central veining are present on a Valencian tile of 1450–1500 illustrated by Ray (2000, 318–19, no 628). The design on the Dartford tile (colour plate 12) has been examined by Anthony Ray (pers comm), who says that this is a Valencian tile of the second half of the 15th century and that ‘this kind of feathery leaf is wholly typical of that period’. González Martí (1952b, 246, fig 342) illustrates a tile with the badge of the Haberdashers set in a very similar border. Valencian guilds had their emblems and devices painted on tiles for use in their chapels (Ray 2000, 314).

The emblem on the tile may show a simplified version of a carpenter’s adze, which appears on Spanish tiles, along with a saw, as emblems of the carpenters’ guild (González Martí 1952b, 231, fig 320). Alternatively, it could be a set square, and indeed in heraldry is often called a carpenter’s square, although it was also used by other craftsmen. It appears on one (though not the official) version of the arms of the Carpenters’ Company of the City of London and is also held in the left hand of the (unauthorised) naked boy supporters of the arms of the Joiners’ Company (Bromley & Child 1960, 42, 154).

It seems highly probable that the design on the Dartford tile is some kind of trade or guild symbol. There is no indication as to how the tile was used, but it is possible that it was attached to the walls of the building as a house-sign to indicate the premises of a carpenter or joiner, which may account for its unusually large size. If this is correct then the building on Dartford High Street may have had some connection with a building craftsmen’s guild during the second part of the 15th century.



Fig 2 Spanish tin-glazed tiles. Reconstruction of design 4 based on complete Spanish examples illustrated by González Martí (1952a, 372, fig 485). Areas of the design found on tiles at Woking Palace are shown in black (scale 1:2). (Drawing by Faith Vardy)

Tile use

The tiles found at Woking Palace have clearly been used for flooring as almost all show evidence of wear on their top surface. Evidently the tiles were used for a considerable period before they were stripped out and discarded since the most complete tile has virtually all its upper surface removed by wear.

Very similar blue and white tiles have been excavated in the Cartuja de Vall de Christ in Altura and are still found *in situ* in the Cathedral of Segorbe in Spain (Bordon Ferrer & Soler Ferrer 1997, 668–70). In both locations they were set into the floor with small size tiles (50mm square by 15mm thick) known as *olambrillas* and larger plain hexagonal tiles. In addition one of the tiled floors at Vall de Christ had a border of rectangular shaped tiles (200 x 90 x 15mm). These have a different decorative design to the Woking Palace tiles but are set end to end in a single row to produce a similar repeating pattern.

It is difficult to know how the Woking Palace tiles were originally arranged. There is no evidence for the use of plain floor tiles, although these could easily have been dismissed as 19th century or later and not retained. Nor have any smaller *olambrillas* yet been recovered. The rectangular tiles certainly formed some sort of decorative border. In one area they seem to have been adjacent to some sort of fireplace or hearth as part of the glazed surface has been discoloured black due to the effects of heat. The geometric tiles with cross-hatching and blue bars (design 4, fig 2) were clearly meant to be laid together in a block to form an elaborate

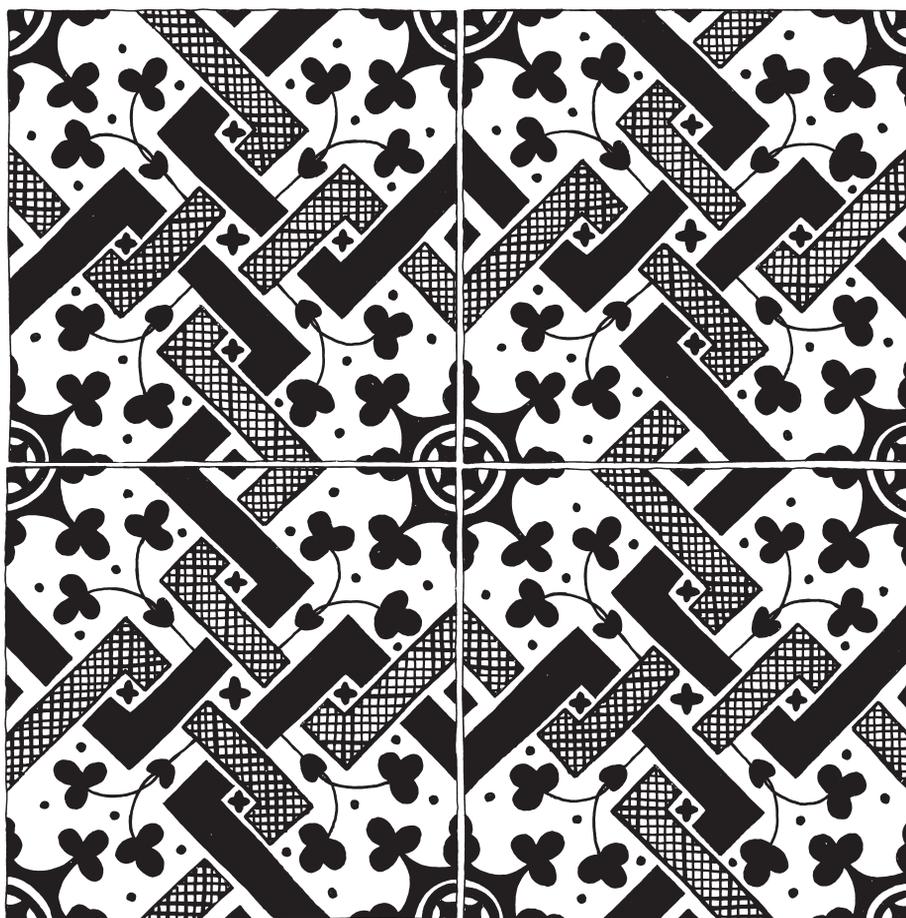


Fig 3 Spanish tin-glazed tiles. Decorative floor pattern created with tiles of design 4. (Drawing by Faith Vardy)

repeating pattern (fig 3). They are also larger than the other square tile designs, which would have prevented them being used together in the same area of floor.

Scientific analysis, by Michael J Hughes

INTRODUCTION

Five decorated tin-glazed floor tiles from Woking Palace (designs 1–5) were analysed by inductively coupled plasma-atomic emission (ICP-AES) and -mass spectrometry (ICP-MS) to determine their sources. These two techniques provide a comprehensive chemical ‘fingerprint’, namely the concentrations of many chemical elements in the fabric of the tile. Chemical analysis measures the overall chemistry of clay fabric plus inclusions in the ceramic. Spanish sources were suspected for the Woking Palace tiles, including Valencia and Seville. It was therefore necessary to compare the analyses on the Woking tiles with previously obtained analyses on Spanish ceramics.

A Spanish *arista* tile from Seville was also included in the ICP analysis together with a suspected Victorian copy. These were found during excavations at 32–35 Botolph Lane (BPL95 [361] <361>) and Vine Lane (VIN88 [+] <37>) in London. Also included for comparison were the results from previous analyses of the Tunsgate Guildford tile (design 1) (Hughes 2002), a late Valencian bowl from Southampton and three sherds of Seville tin-glazed wares from the shipwreck in Studland Bay, Dorset (Gutiérrez *et al* 2003).

In addition, the results were compared with those obtained from a much larger programme of neutron activation analysis (NAA) which was carried out in the 1980s and 1990s at the British Museum, when substantial numbers of Spanish ceramics from Valencia, Seville and Malaga were analysed (Hughes 1991; 1995; Hughes & Vince 1986). A full discussion of the scientific technique used and the results of the analysis of the Woking Palace tiles can be found in Hughes (2005; reproduced in the supplement, see *Endnote*).

DISCUSSION AND CONCLUSIONS

The scientific analysis confirms that the tiles from Old Woking were indeed Valencian. What is more interesting is that they would appear to represent different batches, suggesting they may be the products of different kilns or are from the same source but were made at different dates.

In particular, the lesser thickness of the heraldic tiles (design 1) suggests that these are from a separate batch or location, or are of a different date. The scientific analysis would seem to confirm this, as the tile analysis has the lowest amounts of lime and higher amounts of other elements generally, in comparison with the other Woking Palace tiles. It is similar in chemistry to a tile from Manises in the Victoria and Albert Museum (Ray 2000, 315, no 613) and to high-quality Valencia lustreware including pieces in the Godman collection at the British Museum previously analysed by NAA (Gaimster *et al* 1991, table 3, Valencia cluster A).

It is also of interest that the heraldic tile from Tunsgate, Guildford (Hughes 2005, sample C4) is not identical in chemistry either. Again this may relate to the differences in tile source, location or chronology. This would also explain the design differences between the heraldic tiles present at each location (see *Sites with Valencian tiles*, above).

The other tile that shows slight chemical differences is the rectangular border tile (design 5), which has higher amounts of most elements compared with the other four Woking Palace designs. It is possible this may represent a chronological difference as there is some evidence that tiles of this design may be slightly later in date (see discussion below).

The analysis also shows that designs 2 and 4 form a closely matching pair suggesting they were made at the same production site and are probably contemporary. They are similar to two blue on white ceramic pieces in the Victoria and Albert Museum from Manises (Gaimster *et al* 1991, table 3, Valencia cluster B), a bowl with a shield in a circular medallion and a tile with a bird of prey amid rough foliage (Ray 2000, 48–9, no 103; 315, no 614). The analysis

also confirmed that the Spanish tile from Botolph Lane, London is a Seville product, whilst the Vine Lane tile is, as suspected, a Victorian copy made in London during the late Victorian period (Hughes 2005, 14).

Dating

There is no direct dating evidence for the Valencian tiles used in Woking Palace, or those found at Guildford and Dartford. In Spain a date of around 1425–75 has been suggested for designs 2 and 4. Tiles of design 5 have been dated to the early 15th century, while design 1 has a decorative pattern typical of the first half of the 15th century (A Ray, pers comm).

The only dating evidence in England concerns the tiles in the brick tower at St Mary's church Billericay. The tower has been dated to *c* 1496 (Ryan 1996, 111–13), which agrees with the early Tudor date suggested to the author by historical brick specialist Terence Paul Smith. If the tiles were installed when the tower was originally constructed then this would imply that such tiles were brought into England towards the very end of the 15th century. But it is also possible they may have been brought from elsewhere, possibly from inside the church.

Taken together the dating evidence suggests that Valencian tiles were probably imported into England in the mid–late 15th or the early years of the 16th century. It is very unlikely that they arrived any later than the early 16th century. By this date the Valencian tile industry was being eclipsed by the *arista* tiles of Seville and Toledo which now dominated the market (Ray 2000, 314). Spanish tile imports into Britain during the first half of the 16th century were predominantly of *arista* type from Seville (Betts & Weinstein in prep; Williams 1995, 335).

From the 1520s the demand for hand-painted blue on white tin glazed tiles, as well as those of polychrome type, was met by imports from Antwerp in what is now Belgium. The best-known tiles of this period are to be found in the chapel of The Vyne near Basingstoke, Hampshire. Although these are not in their original position it is believed they were probably installed somewhere in the manor house by Sir William Sandys around 1522 (Hurst 1999, 97).

There is still one puzzle regarding the dating of Spanish tiles from Woking Palace. This concerns the reference to the use of 'Portyngale tyle', probably around the hearths or fireplaces, in 1534. Six 'half-paces' of tiles were laid in the king's bedchamber, the king's raying chamber, the queen's raying chamber, Mr Norris's chamber and the chamber of the queen's vice-chamberlain.

These tiles have been assumed to be painted tiles from the Iberian peninsula (Archer 1997, 45; Colvin & Summerson 1982, 346) but the date of 1534 is too late for the Valencian tiles discussed here. The other alternative is that the building accounts for 1534 refer to the purchase of Spanish tiles from Seville, which would have been available at this date. Unfortunately, no such floor tiles have yet been found at Woking Palace, nor have similar floor tiles from Antwerp, which would have been available during the same period. So the question as to the type of floor tile referred to in the 1534 building accounts has yet to be resolved.

Discussion

The Spanish floor tiles from Woking Palace are part of a small group of Valencian tiles known from Surrey, Essex and Kent. They were brought into the country after the major centres of decorated floor tile manufacture in south-east England, such as Penn in Buckinghamshire, Chertsey in Surrey and Tyler Hill in Kent, had ceased production. Floor tiles were still used in south-east England during the 15th century and early 16th century, but the vast majority were plain lead-glazed examples brought in from the Low Countries.

Decorated tin-glazed floor tiles were almost certainly an expensive high-status item, hence their use in the royal palace at Woking and in the manor house in the royal park at Guildford. Their presence at Billericay church may be explained by their more limited use as external wall decoration, although it is possible they were originally set in a tile floored inside the church.

The occurrence of the same designs on different sites is unlikely to be a coincidence. It would suggest that many, if not all, of the Valencian tiles currently known were imported into England around the same time. The evidence from the more widespread distribution of Valencian pottery suggests that the tiles would have arrived in London by boat before being transhipped for distribution to the neighbouring counties of Surrey, Essex and Kent.

The date when Valencian tiles were brought into England is still uncertain. The current evidence suggests the Woking Palace tiles were first installed in the mid-late 15th or early years of the 16th century. If so then it is possible that they were ordered as part of Henry VII's major building works which commenced in the summer of 1503. It seems less likely that they are the Spanish floor tiles referred to in the building accounts for 1534.

An unexpected finding from the scientific analysis of the Woking Palace material and the single tile from Tunsgate, Guildford is that different batches of tiles are present. It is not clear what these differences represent, although one possibility is that old tile stock was being brought to England along with newly made tiles. If true, this may explain some of the discrepancies in dating between individual Valencian tile designs.

Endnote

The analysis by inductively coupled plasma-atomic emission analysis (ICP-AES) and -mass spectrometry analysis (ICP-MS) of tiles from Woking Palace, by M Hughes (2005) is available on the Archaeology Data Service website (<http://ads.ahds.ac.uk/catalogue/library/syac/v94.cfm>). Copies of this material will also be deposited with the Society's library, Guildford and the Historic Environment Record, Woking. Photocopies can also be supplied by post – enquiries should be addressed to the Hon Editors, Surrey Archaeological Society, Castle Arch, Guildford GU1 3SX.

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