



Northamptonshire Archaeology

Archaeological Geophysical Survey in the north-west
compartment of the Tiltyard Gardens,
Hampton Court Palace, KT8 9AU, June 2012



Northamptonshire Archaeology

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QUALITY CONTROL

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HAMPTON COURT PALACE

OASIS REPORT FORM 130217

PROJECT DETAILS	
Project name	Archaeological Geophysical Survey in the north-west compartment of the Tiltyard Gardens, Hampton Court Palace, KT8 9AU, June 2012
Short description	Northamptonshire Archaeology was commissioned to carry out earth resistance survey in the north-west compartment of the Tiltyard Gardens at Hampton Court Palace. The layout of a perimeter path together with remains of a cross-path were detected from previous use as a kitchen garden and nursery.
Project type	Geophysical survey
Site status	Scheduled Monument No: LO83
Previous work	NA Geophysics (Butler and Dix 2011)
Current Land use	Gardens
Future work	Unknown
Monument type/ period	Post-Medieval Gardens
Significant finds	Layout of paths
PROJECT LOCATION	
County	Greater London / Surrey
Site address	Hampton Court Palace
Study area	c 0.5ha
OS Easting & Northing	TQ 157 687
Height OD	c 12-13 m AOD
PROJECT CREATORS	
Organisation	Northamptonshire Archaeology (NA)
Project brief originator	Brian Dix
Project Design originator	NA
Director/Supervisor	Ian Fisher
Project Manager	Adam Yates
Sponsor or funding body	Historic Royal Palaces
PROJECT DATE	
Start date	12 June 2012
End date	12 June 2012
ARCHIVES	
	Location Content
Physical	N/A
Paper	NA Site survey records
Digital	NA Geophysical survey & GIS data
BIBLIOGRAPHY	
	Journal/monograph, published or forthcoming, or unpublished client report
Title	Archaeological Geophysical Survey in the north-west compartment of the Tiltyard Gardens, Hampton Court Palace, KT8 9AU, June 2012
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Front Cover Extract of 1736 map of Hampton Court Palace and grounds

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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY IN THE
NORTH-WEST COMPARTMENT OF THE TILTYARD GARDENS,
HAMPTON COURT PALACE, KT8 9AU
JUNE 2012**

ABSTRACT

Northamptonshire Archaeology was commissioned to carry out earth resistance survey in the north-west compartment of the Tiltyard Gardens at Hampton Court Palace. The layout of a perimeter path together with remains of a cross-path were detected from previous use as a kitchen garden and nursery.

1 INTRODUCTION

Historic Royal Palaces commissioned Northamptonshire Archaeology (NA) in association with Brian Dix to carry out a geophysical survey in the north-west compartment of the Tiltyard Gardens at Hampton Court Palace (NGR TQ 157 687) in order to assist the development of proposals for redisplaying the area to the public. An earth-resistance survey was undertaken on 12 June 2012 in accordance with a licence (Case No. SL00031152) granted for that purpose by English Heritage under Section 42 of the 1979 Ancient Monuments and Archaeological Areas Act (as amended by the National Heritage Act 1983). The results revealed sufficient evidence of the former layout to be used in conjunction with historical mapping to identify what further archaeological investigation may be required to inform detailed planning and management concerning future use of the area. In consequence, the provision that was made for a ground-penetrating radar survey was not acted upon.

2 TOPOGRAPHY AND GEOLOGY

The Tiltyard Gardens form the north-western part of the palace grounds and the present survey area lies in the furthest corner where it is bounded by the modern A308 Hampton Court Road as it turns alongside Vrow Walk (Fig 1). The site currently comprises a largely flat grass lawn, but part of it is covered by the tarmac of a former

sports area. It sits upon drift geology of First Terrace Kempton Park gravels above Thames Group London Clay (BGS 2011).

3 HISTORY AND PREVIOUS ARCHAEOLOGY

The Tiltyard was created by King Henry VIII on the western part of the Great Orchard in 1537 and whilst its earliest recorded use for a tournament does not occur for another twenty years, he presumably hosted such events there in addition to using the space for training and other exercise (Gregory 2011, 14-16). A series of towers, comprising two along the eastern edge and three others located more centrally within the Tiltyard, may have provided guest or staff accommodation as well as being used for banquets and related entertainments (ibid 16-18). They were shown in Wyngaerde's view of the north side of Hampton Court *circa* 1558 (ibid fig 02) and further illustrated for Cosimo III de Medici in 1669 (ibid fig 05), by which time the Tiltyard had been turned into pasture. Most of the towers had disappeared by the end of the century (ibid 19-21). Remains of the north-east tower have been located by archaeological trial excavation together with the partially robbed-out east wall of the one at the southern end of the central group, suggesting that those in the middle probably lay to the east of the spine wall of the later gardens (Sykes and Ford 2010: trenches 4 and 6, especially discussion on pages 26 and 28).

The area was turned into a kitchen garden and divided into six compartments as a result of partitioning early on in the reign of King William III and Queen Mary. It continued to supply food for the royal household until the mid-eighteenth century but only intermittently thereafter, following the lease of the ground to local market gardeners. This rental arrangement continued until the 1920s when the ground was converted into recreational and flower garden areas for visitors to enjoy (Longstaffe-Gowan 2005, 136-45; Gregory 2011, 22-9). The layout of the individual gardens up to that time can be traced through a series of historical maps and views, which show an evolving pattern of perimeter and cross paths, borders, and variously worked or dug-over areas (cf Gregory 2011, figs 06-15).

Limited archaeological excavation within some of the kitchen garden compartments indicates that modern levelling together with the activity of two centuries of prolonged

tillage and manuring have resulted in a depth of cultivated and built-up soil that is over a metre thick (Sykes and Ford 2010, 33-6: descriptions of trenches 6-8). In places the base of former bedding trenches have been located beneath the more mixed deposits, each generally between 0.70-0.85m wide and up to 0.30m deep; some contained eighteenth-century pottery (ibid trenches 6-8: paras 3.1.30 and 3.1.37 with figs 7 and 9 respectively). At one point the rows appear to terminate, possibly associated with a change of planting or other horticulture (ibid trench 7: paras 3.1.33-34 and fig 8). Contiguous blocks cultivated in different directions with rows running at right angles are shown in some of the historical plans (cf Gregory 2011, figs 12 and 14). A corresponding break in the method of digging in the individual plots may be denoted by a geophysical anomaly detected previously in the central west compartment adjacent to the present survey area (Butler and Dix 2011, 4-5 and fig 8).

4 METHODOLOGY

The current geophysical survey covers an area of 0.5ha in the north-west compartment of the Tiltyard Gardens. It previously contained a series of hard surface tennis courts that were opened to the public in spring 1925 (Gregory 2011, 61 and figs 17-19). Whilst most of these were removed in 2003 and the area subsequently laid to grass, a wide strip of hardstanding still remains within the northern half of the garden and a contemporary timber pavilion extends along part of the eastern wall (Gregory 2011, 73 and fig 20).

The survey was conducted using Geoscan Instruments RM15 resistance meters, set in 0.5m 'twin-probe' electrode array. These are standard instruments for archaeological earth resistance survey. A tape measure and optical square were used to divide the survey area into a grid of 20m squares, which was tied into the Ordnance Survey National Grid with a Leica Systems 1200 dGPS. Survey then progressed through each grid square, collecting data along 1.0m spaced traverse lines at 1.0m intervals.

All fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011).

The survey data was processed using Geoplot 3.00v software. Where necessary the background levels of adjacent grids were balanced arithmetically.

The processed data is presented in this report in the form of a grey-tone plot at a scale in ohms of +/-2.0 standard deviations (black/white). The plot has been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Figs 2 and 3). Interpretative diagrams have been produced and are shown in Figure 3.

5 SURVEY RESULTS

A series of high resistance linear anomalies detected around the edges of the garden denotes the location of a former perimeter path, which has also been observed previously as a parchmark along the southern side (Butler and Dix 2011, 5). Together with accompanying borders beside the south and east walls it appears to have been a constant feature from at least 1736 until the 1920s (cf Gregory 2011, figs 12-14). The raised levels of earth resistance suggest that it comprises a hard or compact surface, which has been partly destroyed or more completely removed in places since the anomaly is not continuous.

It is significant that no evidence survives within the undisturbed parts of the garden for a central or axial north-south path. Its absence is particularly noticeable in the middle where the line of a former cross-path can be traced until truncated by the former tennis court. Whilst the mottled appearance in this part of the survey plot is probably due largely to the nature of the made-up ground and recent landscaping, the possibility that earlier features might survive cannot be entirely discounted; indeed, a weak trace of the alignment of the perimeter path may be preserved towards the western end of the previous tennis court. Despite the likelihood that the towers of the Tudor Tiltyard lay further to the east, it is conceivable that some remains could also be from that period.

6 CONCLUSION

Whilst the creation of the tennis courts in the 1920s may have destroyed parts of the preceding layout, it is also likely that continuous cultivation had already removed some earlier paths and other garden features, as indicated by later alterations shown in the 1851 map (Gregory 2011, fig 14). Selective archaeological trial excavation is the best way to investigate the nature of such disturbance and the extent of surviving path and associated remains.

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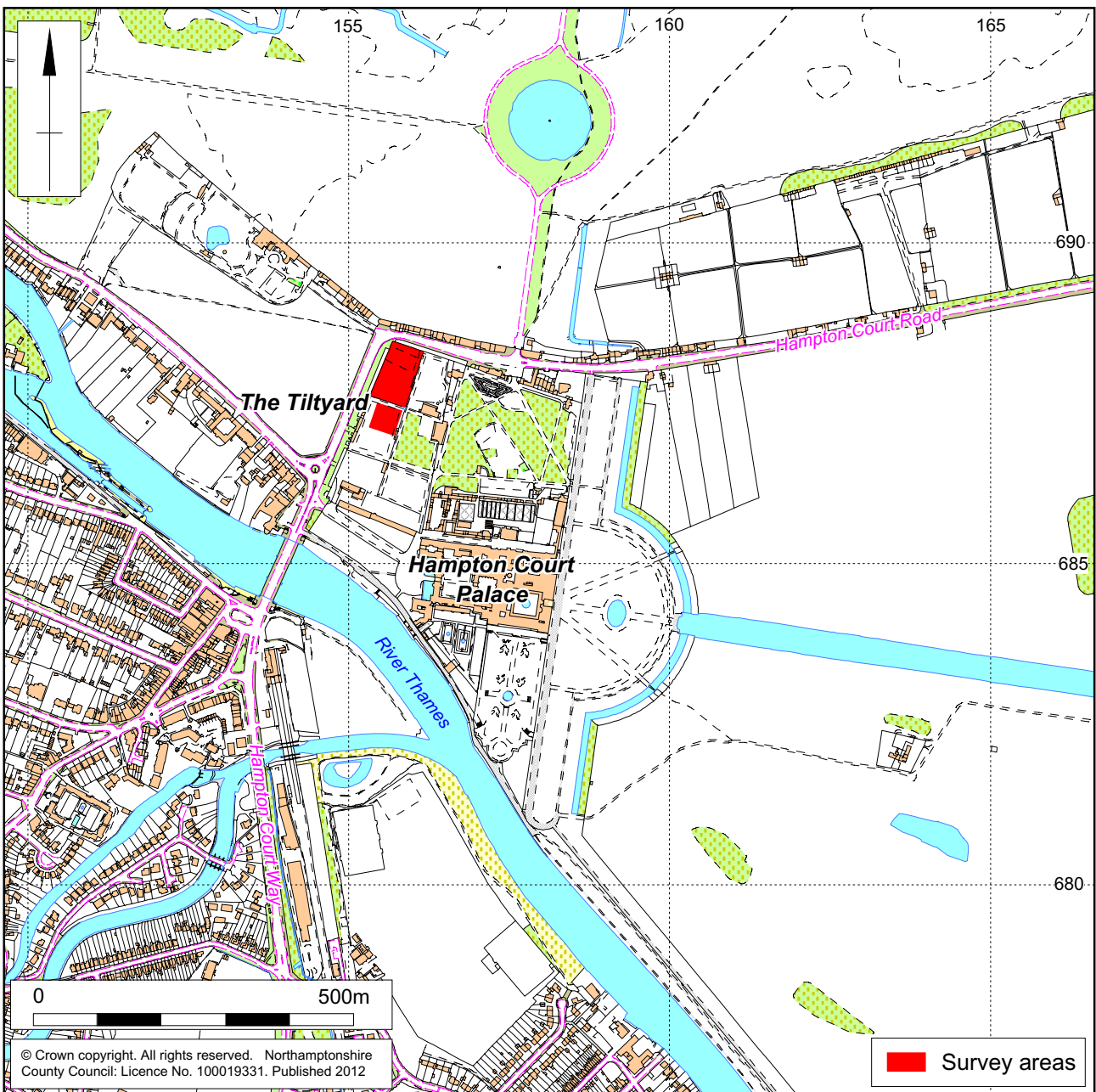
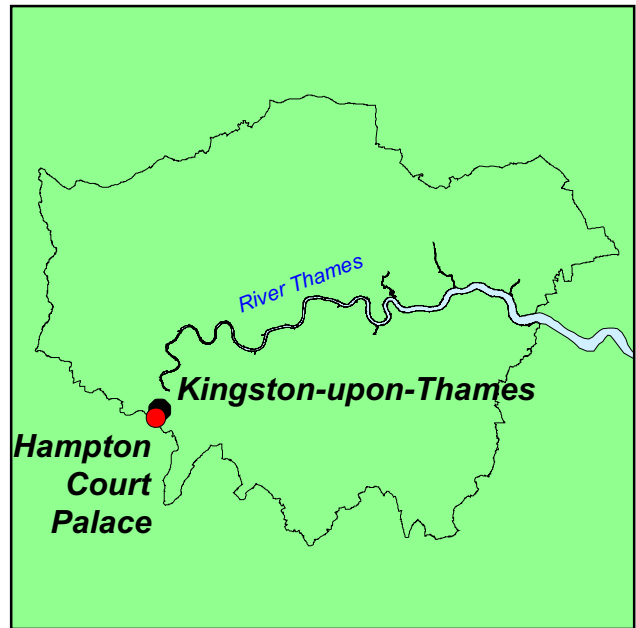
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Scale 1:10,000 (A4)

Site Location Fig 1



Scale 1:1000 (A4)

Earth Resistance Survey Results: The Tiltyard Fig 2



Scale 1:1000 (A4)

Earth Resistance Survey Interpretation: The Tiltyard Fig 3



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