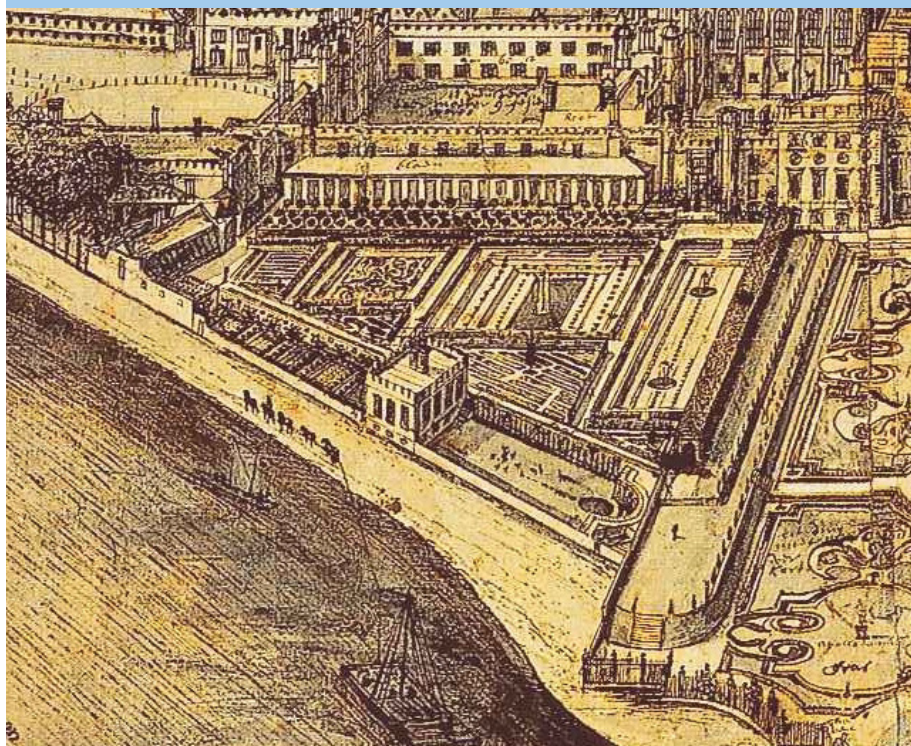




# Northamptonshire Archaeology

Archaeological geophysical survey in the  
gardens beside the Banqueting House,  
Hampton Court Palace, Richmond, Greater London  
November 2012



## Northamptonshire Archaeology

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Northamptonshire  
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Brian Dix and John Walford  
Report 12/216  
December 2012



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**QUALITY CONTROL**

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Checked by	Pat Chapman	<i>PC</i>	14/12/2012
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BANQUETING HOUSE, HAMPTON COURT

**OASIS REPORT FORM 139339**

PROJECT DETAILS		
Project name	Archaeological geophysical survey in the gardens beside the Banqueting House, Hampton Court Palace, Richmond, Greater London	
Short description	Northamptonshire Archaeology was commissioned to carry out earth resistance survey in the gardens at either side of the Banqueting House at Hampton Court Palace. The results indicate that while some parts of the early eighteenth-century layout survive other details are ambiguous.	
Project type	Geophysical survey – earth resistance	
Site status	Scheduled monument (LON 83)	
Previous work	Unknown	
Current Land use	Gardens	
Future work	Excavation	
Monument type/ period	Post-medieval gardens	
Significant finds	None	
PROJECT LOCATION		
County	Greater London	
Site address	Hampton Court Palace	
Study area	c 0.3ha	
OS grid reference	TQ 1566 6834	
Height OD	c 38m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Brian Dix, Historic Royal Palaces	
Project Design originator	NA	
Director/Supervisor	John Walford	
Project Manager	Adam Yates	
Sponsor or funding body	Historic Royal Palaces	
PROJECT DATE		
Start date	22 November 2012	
End date	14 December 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	Journal/monograph, published or forthcoming, or unpublished client report	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 gardens beside the Banqueting House, Hampton Court Palace, Richmond, Greater London, November 2012	
Serial title & volume	Northamptonshire Archaeology Reports 12/216	
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Cover Detail from the drawing by Leonard Knyff of the gardens at Hampton Court from the south, c. 1702

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**ARCHAEOLOGICAL GEOPHYSICAL SURVEY IN THE GARDENS  
BESIDE THE BANQUETING HOUSE, HAMPTON COURT PALACE,  
RICHMOND, GREATER LONDON  
NOVEMBER 2012**

**ABSTRACT**

*Northamptonshire Archaeology was commissioned to carry out earth resistance survey in the gardens at either side of the Banqueting House at Hampton Court Palace. The results indicate that while some parts of the early eighteenth-century layout survive other details are ambiguous.*

**1 INTRODUCTION**

Archaeological earth resistance survey was undertaken in the gardens north-west and south-east of the Banqueting House at Hampton Court Palace on 22 November 2012 (centred approximately upon NGR TQ 1566 6834; Fig 1). The work forms part of a continuing programme of research by Historic Royal Palaces, who commissioned Northamptonshire Archaeology to carry out the investigation. The survey was authorised by licence, case no. SL00041278 issued under section 42 of the 1979 Ancient Monuments and Archaeological Areas Act (as amended by the National Heritage Act 1983).

**2 TOPOGRAPHY AND GEOLOGY**

The walled gardens at either side of the Banqueting House separate the Pond Yard to the north from the former Barge Walk towpath alongside the River Thames (Fig 1). The underlying geology is First Terrace Kempton Park Gravels.

Both garden areas are now predominantly grass-covered lawns containing occasional trees. A series of flowerbeds and an electricity substation occupy one end of the north-western, or Housekeeper's Garden, around the edge of the Banqueting House (Fig 2). An extension of the original basement on the opposite side of the building protrudes into the other garden, which was formerly the King's Aviary. It coincides with a change in ground level that may have been lowered as part of the alterations. The most conspicuous feature in this garden, however, is a large roughly oval mound, approximately 1.5m high, which occurs towards the southern end. It is partly covered by trees and shrubs, which together with its built-up nature reduce the effectiveness of the geophysical technique; the mound is therefore excluded from the present survey.

**3 HISTORICAL BACKGROUND**

The present Banqueting House was built in 1700 and incorporates the foundations of a Tudor building that was associated with Henry VIII's development of the Pond Yard. A small parcel of land next to the river appears to have been enclosed at about the same time, possibly due to the construction of an adjacent bowling alley (Jacques 2003, 5-8; cf Thurley 2003, 95 and 191). The narrow strip of ground to the north, on the far side of the former building may have been walled-in later (Jacques 2003, 8).



Together with the nearby alteration of the Privy Garden, the construction of the Banqueting House provided the opportunity to redevelop the area of the earlier bowling alley and adjoining slip. Following demolition works, a new boundary was established nearer to the river and the space between the Banqueting House and the enlarged Privy Garden was fitted out with a series of oak-framed birdcages within an ornamental parterre (Thurley 2003, 193; Longstaffe-Gowan 2005, 59).

Contemporary drawings and prints show the 'Bird Cage' in the form of an *exedra*, comprising a largely free-standing semicircle around the far side of a basin or pond located towards the southern end of the garden. The rest of the area appears to have been laid out with borders and paths around a series of decorative panels, with trees growing up frames or trelliswork attached to the side walls (cf Thurley 2003, figs 205 and 225; Jacques 2003, fig 6. See also cover illustration, this report).

Whilst building work seems to have been largely completed by March 1701/2 (cf. Jacques 2003, 15-17), later surveys and maps indicate that the arrangement of panels or compartments was subsequently modified (eg Thurley 2003, figs 211 and 340). The Aviary was dismantled in 1746 (London, The National Archives: Work 4/9 8 January 1746).

The layout of the garden on the north-west side of the Banqueting House may have been removed at about the same time (Jacques 2003, 30). It appears to have been divided previously into four hedged compartments, which decreased in size as the garden became narrower towards the far end (ibid, 21).

#### **4 METHODOLOGY**

The survey was conducted under a Section 42 licence (SL00041278), and in accordance with guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; IfA 2011).

Each survey area was divided into 20m grid squares, which formed the basic units of survey. These grids were established with a tape measure and optical square, and their locations were recorded relative to fixed landmarks depicted on the Ordnance Survey mapping of the area. Within each square, readings were taken at 1.0m intervals along 1.0m spaced traverse lines.

Data were collected with a Geoscan Instruments RM15 resistance meter connected to a 0.5m 'twin-probe' electrode array. Such an instrument and probe configuration are standard for archaeological earth resistance survey (EH 2008, 25).

The weather had been damp in the days leading up to the survey, and was dull and windy on the day itself. The ground was consequently moist and soft, without being excessively wet. Hence there were no problems with high contact resistance or with surface shorting.

The survey data were downloaded, viewed and processed with Geoplot 3.00v software. Only one processing step was necessary: edge-matching adjacent grids to remove the offsets caused by relocation of the remote probes.

The processed data are presented in this report in the form of grey-tone plots, with the areas of highest resistance shaded black and the areas of lowest resistance shaded

white. A different display range has been chosen for each data set, so that each is displayed to best advantage.

The grey-tone plots have been scaled, rotated and resampled (georectified) for display against Ordnance Survey base mapping (Fig 2). An interpretative diagram is presented in Figure 3.

## **5 SURVEY RESULTS**

### **5.1 General comments**

The most significant factor in determining the electrical resistance of sediments is their water content. Under most circumstances it can be assumed that sediments exhibiting high resistance are stony, compacted, or free draining, and therefore relatively dry, and that those exhibiting low resistance are more fine-textured and water-retentive. Where the underlying geology is stony or gravelly, low resistance anomalies may also be indicative of cut features or other soil-filled hollows.

High resistance anomalies are sometimes observed to occur around the base of trees. This is due partly to the roots drawing moisture out of the soil, and partly to the increased evaporation which will occur from any bare earth beneath the tree's canopy.

### **5.2 King's Aviary**

The data set from this garden contains a narrow, high resistance, linear anomaly which runs in a northerly direction, almost parallel to the eastern wall, before turning to the west and describing a semicircular arc. This probably represents a former garden feature, such as a path.

The other anomalies in this data set are fairly undiagnostic, and can only be interpreted in accordance with the broad principles outlined above. The zone of higher resistance around the mound at the southern end of the garden may indicate a spread of rubble or an area where tree roots are causing localised de-watering of the soil. The broad band of lower resistance in the northern half of the garden, along the western wall, probably indicates an area of fine grained (silty or clayey) sediment, possibly an old watercourse or some other infilled depression.

### **5.3 Housekeeper's Garden**

The data set from this garden contains three high resistance linear anomalies lying perpendicular to the long-axis of the garden, and two others lying close to the eastern and western walls. These may indicate the remains of paths surrounding previous garden panels.

Immediately alongside the eastern wall there is a narrow, low resistance, linear anomaly, which could represent either an old border bed or a modern service trench. It is interrupted near its northern end by a small high resistance anomaly which coincides with a modern manhole cover.

A zone of high resistance near the centre of the garden, and zones of low resistance at its northern and southern ends, do not have any obvious specific cause. They can only be interpreted in general terms as an area of drier or stonier sediment and two areas where there is damper sediment or a greater depth of soil above the underlying river gravels.

## 6 CONCLUSION

The results of archaeological earth resistance survey in the gardens at either side of the Banqueting House indicate the potential survival of remains connected with their historical use.

A curvilinear anomaly within the King's Aviary may be part of the former arrangement of compartments which provided an ornamental setting for the birdcages and pond built in 1701-1702. A more widespread area of high resistance surrounding the prominent mound towards the southern end of the garden could represent rubble backfill and other demolished material, of which the mound itself might also be composed. Archaeological excavation will be needed to test this suggestion, however.

The cause of the band of low resistance along the western edge of the garden should likewise be investigated. Whilst it could result from previous disturbance, such as the digging out of earlier wall footings for example, it might equally be associated with a former outflow from the Pond Yard or relate to something entirely different.

The three parallel, high resistance linear anomalies that cross the Housekeeper's Garden seem to reflect the divisions recorded in historical images. Some of the other areas of contrasting resistance may also be connected, possibly denoting differences in use or intended effect. Their nature and character need to be demonstrated by archaeological excavation.

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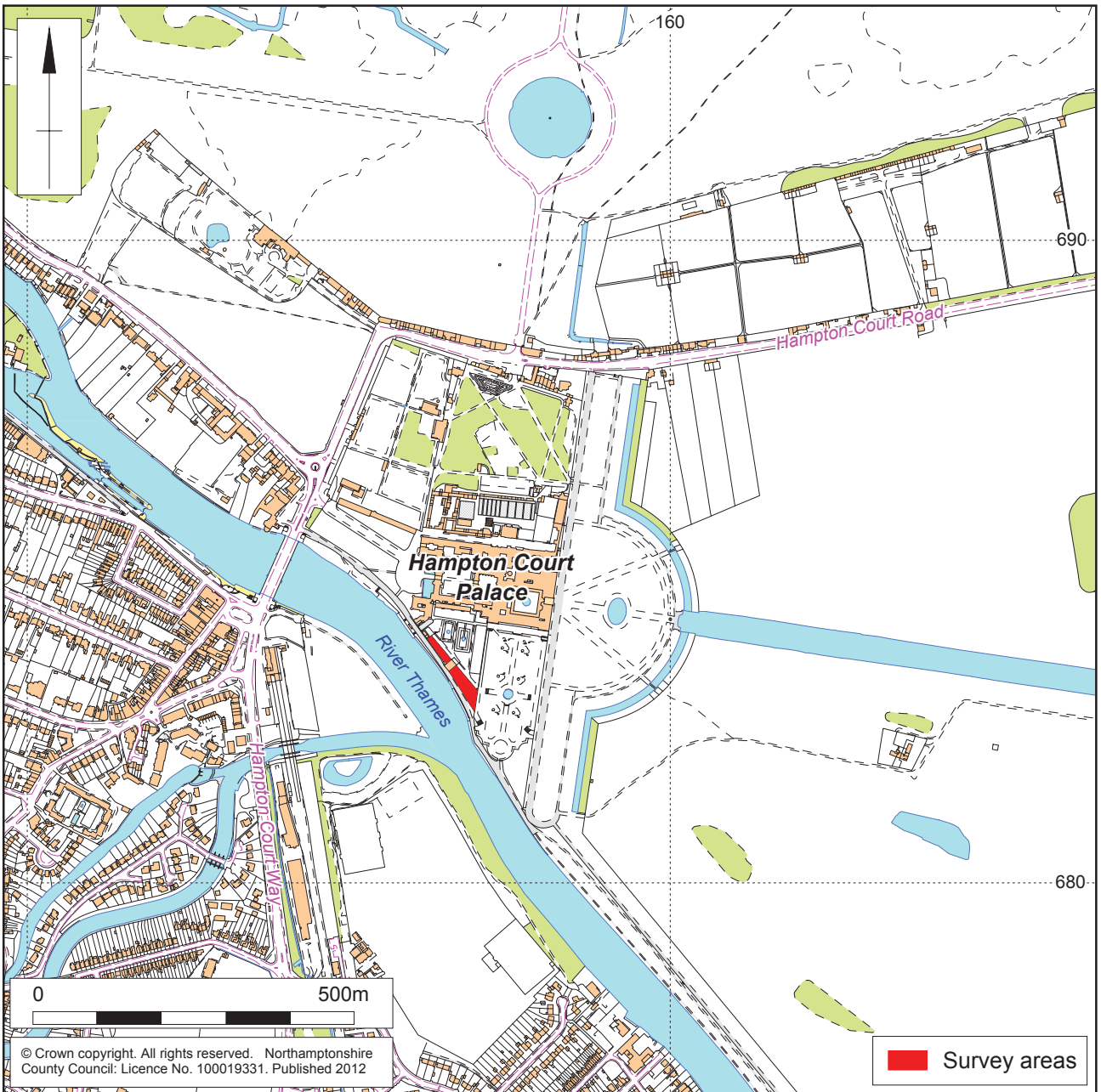
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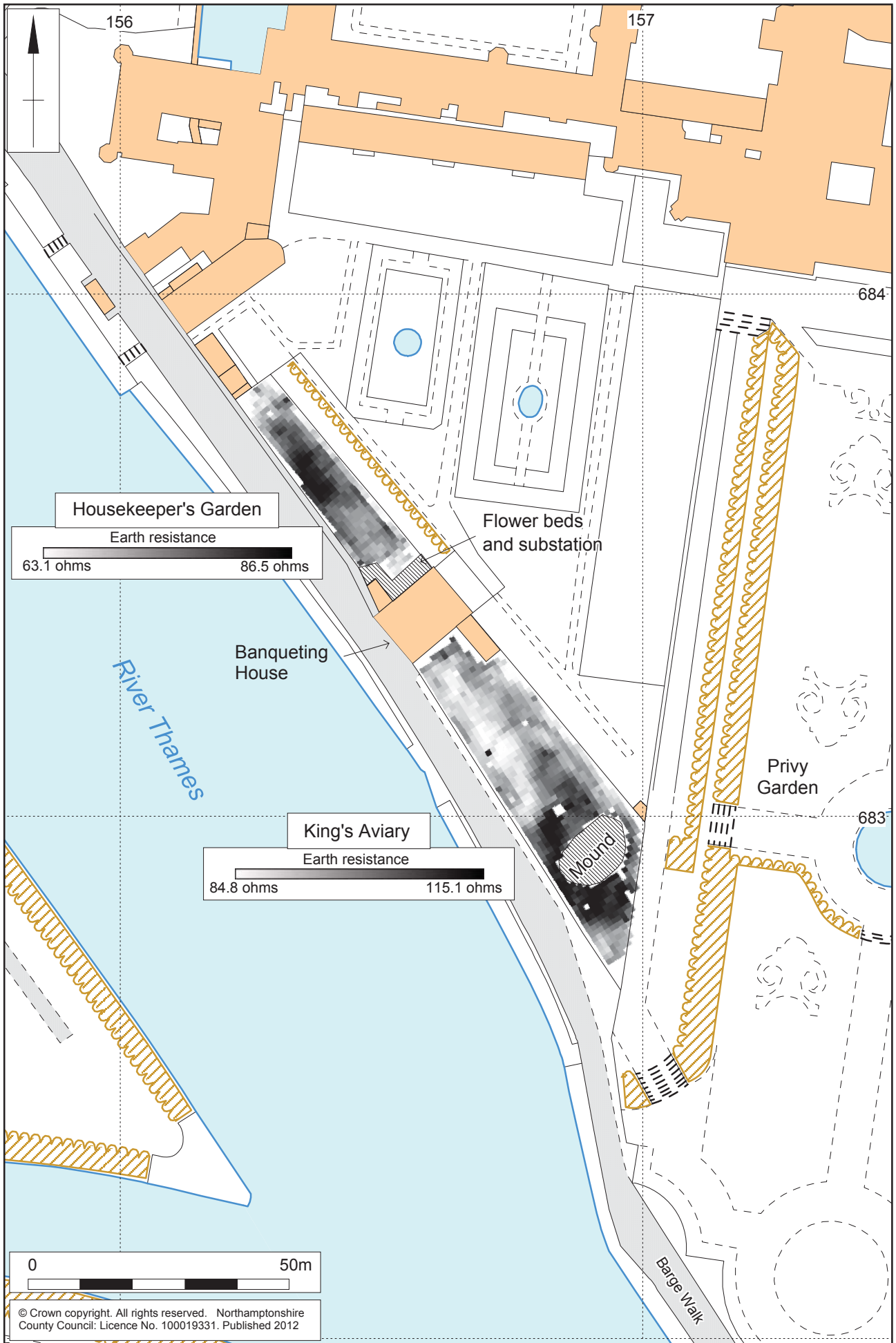
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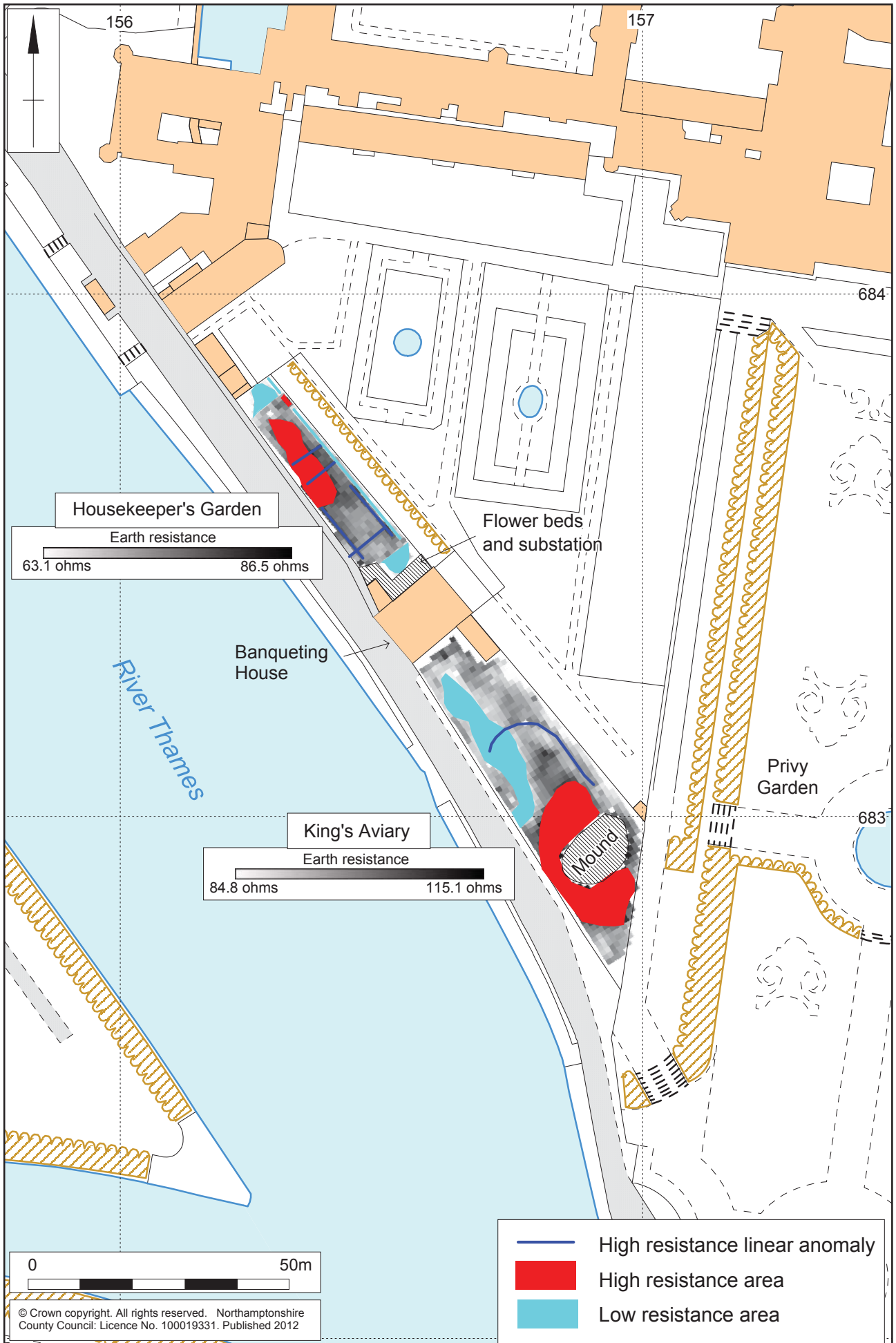




Scale 1:10,000 (A4)

Site Location Fig 1







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