

**Summary of English Heritage research reports relating to Silbury Hill
Version 01: spring 2013**

**21/2001 - SILBURY HILL, WILTSHIRE: REPORT ON GEOPHYSICAL SURVEY,
FEBRUARY 2001**

N T Linford and L Martin

Number of Pages: 18 Figures: 7

A geophysical survey using magnetic, earth resistance and ground penetrating radar (GPR) techniques was conducted on the summit of Silbury Hill, Wiltshire, to investigate the area surrounding the recently collapsed remains of an antiquarian excavation shaft sunk by the Duke of Northumberland in 1776. It was hoped that the survey would reveal evidence for any near-surface archaeological remains threatened by the continued collapse of the shaft and identify unstable areas of ground where further subsidence might be likely. Given the limited area available the results proved quite encouraging, with anomalies of interest identified in both the earth resistance and GPR data. However, these latter pit- and ditch-type anomalies do not appear to be related to the walled features recorded during the 1968 excavation on the summit of the monument. Results from the immediate vicinity of the collapse confirm the area of slumped ground to the S is highly unstable and liable to further subsidence at any time.

Internet Version(s)

Keywords	Project Numbers
Earth Resistance	661
Geophysical Survey	936
Ground Penetrating Radar	
Magnetic	

**65/2001 - SILBURY HILL, WILTSHIRE: REPORT ON GEOPHYSICAL SURVEY,
JUNE 2001**

P K Linford

Number of Pages: 20 Figures: 9

An electrical imaging survey was conducted on the summit of Silbury Hill, Wiltshire, to investigate the area surrounding the recently collapsed remains of an antiquarian excavation shaft sunk by the Duke of Northumberland in 1776. It was hoped that the survey would reveal evidence for any near-surface archaeological remains threatened by the continued collapse of the shaft and identify unstable areas of ground where further subsidence might occur. Three trial profiles were also carried out on the flank of the hill. This work was intended to augment previous geophysical survey carried out at Silbury Hill by the Centre for Archaeology in February 2001. The survey detected a number of anomalies on the summit of the hill, two of which corresponded to features detected in trial trenches dug in April 2001. However, the interpretation of other anomalies is equivocal, and the suggestion of a further possible shaft is very tentative. One of the profiles on the flanks of the hill was impaired by wire mesh that had been inserted into the turf to protect it from erosion. However, the profile over the top of the

Merewether tunnel did suggest a less homogenous structure to the chalk, possibly due to the tunnelling.

Internet Version(s)

Keywords	Project Numbers
Electrical Imaging	661
Geophysical Survey	3292

61/2004 - Site Formation, Preservation and Remedial Measures at Silbury Hill

M Robinson, M Canti, D Robinson and G Campbell

Number of Pages: 17 Figures: 10

The recent internal collapses at Silbury Hill have necessitated a consideration of the impact on environmental remains of the different possible remedial options, as well as providing an opportunity to examine material arising from exploratory interventions. This report brings together the results of these investigations, including material from the recent coring exercise, and from the 1960s excavations. The preservation state of different types of material is discussed, along with evidence for the taphonomic mechanisms that can be deduced from all the available data. Finally, the report attempts to provide a framework for understanding the likely effects of any works carried out.

Internet Version(s)

061-2004.pdf

Keywords	Project Numbers
Geoarchaeology	661
Insect	
Neolithic	
Plant Remains	
Pollen	
Prehistoric	

19/2006 - SILBURY HILL ENVIRONS, AVEBURY, WILTSHIRE. Report on Geophysical Survey, February 2005

P K Linford, A W Payne, N T Linford and L Martin

Number of Pages: 21 Figures: 10

A geophysical survey was carried out immediately east of Silbury Hill in an attempt to identify any significant archaeological activity in this area and assist the wider interpretation of the monument within a landscape context, in advance of ongoing conservation works to stabilise the mound. An extensive caesium magnetometer survey was conducted and successfully recorded a wide range of anomalies. Many of these anomalies appear to result from the variable geology of the river valley location on the floodplain of the Winterbourne stream (or river Kennet). However, immediately east of Silbury Hill a series of linear magnetic anomalies indicate the presence of a complex of ditched enclosures and associated occupation activity. More weakly defined anomalies suggest the presence of further enclosures extending under deposits of alluvium running up to the present course of the

Winterbourne stream. These results suggest that the Romano-British activity previously recorded beyond the survey area, directly east of the Winterbourne, may extend up to the external quarry ditch around Silbury Hill. A more limited earth resistance survey provides additional evidence for possible structural features within the enclosures identified by the magnetic survey.

Internet Version(s)

Keywords Project Numbers

Caesium Vapour

Earth Resistance

Fluxgate

Geophysical Survey

Gradiometer

Magnetometer

89/2008 - Piggledene, North Farm, Overton, Wiltshire: Report on Geophysical Survey, September 2008

N T Linford

Number of Pages: 7 Figures: 6

A geophysical survey was conducted at Piggledene, North Farm, Overton, Wilts., over the proposed site of a field experiment to determine a model for the formation of the old land surface layer observed during recent excavation at Silbury Hill. Soils at the site match parent material underlying the old land surface layer at Silbury and the current geophysical survey was requested to select an area with a minimal likelihood of disturbing any existing archaeological remains. Magnetic survey undertaken with fluxgate gradiometers revealed a number of linear anomalies, possibly associated with a late-prehistoric field system or, more probably, medieval ridge and furrow. Other discrete pit-type responses and negative linear anomalies were recorded, but these are probably related to field clearance activities. The survey has identified a suitable area for establishing the field test site and confirmed, through a topographic survey, that the slope of the terrain falls within the desired range for the experiment.

Internet Version(s)

89_2008web.pdf

Keywords

Project Numbers

Geophysical Survey

Magnetometer

5689

105/2009 - Silbury Hill, Wiltshire : Report on Geophysical Surveys, 2005-2008

P K Linford, A W Payne, N T Linford and L Martin

Number of Pages: 56 Figures: 27

A series of geophysical survey visits were made between February 2005 and February 2008, to investigate the immediate environs of Silbury Hill, Wiltshire. The impetus for the survey was to assist with the location of a works compound required for remedial repairs to the monument, begun in 2007, following the partial collapse of earlier investigative tunnels dug into the hill. The survey area initially covered with a high-sensitivity caesium magnetometer array was subsequently expanded and successfully revealed a wealth of anomalies, including what appears to be a larger Roman settlement at the site than had previously been recognised. Additional areas of earth resistance and ground penetrating radar were also conducted to investigate specific anomalies, some thought to be masonry building structures. Finally, an

attempt was made to profile sections through the ditch surrounding the monument with a combination of earth resistance tomography and radar transects.

Internet Version(s)

105_2009WEBp1.pdf

105_2009WEBp2.pdf

Keywords Project Numbers

Caesium Vapour

Earth Resistance

Electrical Imaging

Geophysical Survey

Ground Penetrating Radar

5/2011 - Silbury Hill, Wiltshire: Insect Remains from the 2007-08 Tunnelling

M Robinson

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

16/2011 - Silbury Hill, Wiltshire: The Animal Bone Assemblage Excavated from Silbury Hill in 2007-8

F Worley

Number of Pages: 18 Figures: 1

Zooarchaeological report on Neolithic, Medieval and later animal bones recovered during remedial works to Silbury Hill in 2007-2008. The antler fragments recovered during 2007-8 works are reported in RDRS report 17/2011. Both the antler and animal bone assemblages are summarised in the project monograph (Leary et al forthcoming). The animal bone assemblage was predominantly recovered from the summit of Silbury Hill, with very little identified from the works within the tunnel. The bones from the summit comprise a range of domestic and wild species, and include evidence for intrusive material. However the assemblage is poorly stratified and therefore very little can be concluded about animal husbandry or utilisation in any period.

Internet Version(s)

016_2011WEB.pdf

Keywords Project Numbers

Animal Bone

Animal Remains

Medieval

Neolithic

17/2011 - The Antler Assemblage Excavated from Silbury Hill in 2007-8

F Worley

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

18/2011 - A Reanalysis of the Antler Assemblage Excavated from Silbury Hill in 1969-70

F Worley

Number of Pages: 10 Figures: 4

This report presents a reanalysis of the antler assemblage recovered from Silbury Hill during excavations between 1968 and 1970. No antler survives from the 1968 season. The assemblage, originally analysed by Neville Gardner (Gardner 1987 ; Gardner 1997), includes at least three shed antlers, which probably represent tools used in the construction of the monument.

Internet Version(s)

018_2011WEB.pdf

Keywords Project Numbers

Antler

Neolithic

19/2011 - A Reanalysis of the Animal Bone Assemblage Excavated from Silbury Hill Summit and Tunnel in 1969-70

F Worley

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

58/2011 - Silbury Hill, Wiltshire: Geoarchaeological Analysis from Silbury Hill Excavations 2007/2008

M Canti

Number of Pages: 43 Figures: 56

The archaeological recording carried out at Silbury Hill during the repair works in 2007/8 is reported in Leary (2009). The results left four main geoarchaeological research questions - the formation process of the old land surface, the origin of the gravel mound, the possible turf line or topsoil band on the north wall of the East Lateral and the nature of the dark layer on top of the gravel mound. These are examined individually in this report, utilising micromorphology and particle size analysis as the main analytical techniques.

Internet Version(s)

058_2011WEB.pdf

Keywords

Project Numbers

Burial Environments

Geoarchaeology

Soil/Sediment

661

60/2011 - Cellular and ultrastructural preservation of organic material within organic mound deposits recovered from Silbury Hill 2007-8 excavations

G Campbell, M Collinson and T Brain

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

61/2011 - Green plant material recovered from the early phases of Silbury Hill (2007-08 Excavations): an explanation for the unusual preservation?

G Campbell, M Collinson and T Brain
Number of Pages: 0 Figures: 0
Forthcoming.
Internet Version(s)

Keywords Project Numbers

67/2011 - Analysis of Macroscopic Remains from Silbury Hill Excavations 2007-8

G Campbell
Number of Pages: 0 Figures: 0
Forthcoming.
Internet Version(s)

Keywords Project Numbers

101/2011 - Later Silbury Project (internal project no 5980; NHPP project no 3A4.306) Evaluation of the Romano-British settlement in the Fields South of Silbury Hill (NGR SU101682) Integrated Assessment Report

N Hembrey and V Crosby
Number of Pages: 116 Figures: 11

Geophysical survey in 2006, part of the Silbury Hill Conservation Project, revealed extensive settlement in two fields south of Silbury Hill. The Later Silbury project consisted of an archaeological evaluation in 2010 and reassessment of surviving material from earlier excavations in the immediate area. The project aimed to characterise the Romano-British settlement, and to elucidate this poorly understood phase of activity around the monument and within the Stonehenge and Avebury World Heritage Site, contributing to future management and presentation.

Roman Silbury was probably a roadside settlement or small town along the London to Bath road (the modern A4). Immediately south of the road, any surviving features were masked in the magnetic survey by pipelines. In the arable field sloping down to the Kennet, the surveys indicated an extensive settlement, including a minor road or trackway running south from the road with three large subdivided rectangular enclosures to its west. Five evaluation trenches were opened here, concentrating on one of the enclosures and avoiding the large stone buildings identified by ground penetrating radar. Three trenches were opened in the water meadow to investigate geophysical anomalies and alluvial deposits near the river.

This report assesses the results of the 2010 evaluation.

Internet Version(s)
101_2011WEB.pdf

Keywords

Project Numbers

Animal Bone
Ceramic Building Material
Clay, Fired
Copper Alloy
Excavation
Flint
Glass
Grain
Human Bone

Iron
Lead
Medieval
Mesolithic
Metal Working-Fe
Mollusca
Optically Stimulated Luminescence
Plant Remains
Post Medieval
Pottery
Roman
Settlement
Stone

5980

102/2011 - The Coins from the Roman Settlement at Silbury Hill

S Moorhead

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

121/2011 - Silbury Hill, Wiltshire: Luminescence Sampling

H M Roberts and G A T Duller

Number of Pages: 14 Figures: 12

Five locations which may potentially be suitable for luminescence dating in the future were sampled within Silbury Hill during the remediation and preservation works which took place at the site in July 2007. This report describes the samples taken, their locations within the mound, and reports the field gamma spectrometry and water content measurements.

Internet Version(s)

121_2011WEB.pdf

Keywords Project Numbers

Luminescence Dating

122/2011 - Comparison of Clay with Flints from Silbury Hill and Local Neolithic Pottery Fabrics

M Canti and H White

Number of Pages: 5 Figures: 4

The excavations at Silbury Hill in 2007-2008 raised questions concerning the truncated nature of the old ground surface (Canti, 2011), leading to a consideration of whether clay had been removed to make ceramics. This study investigates whether or not the Silbury Hill clay-with-flints was a potential raw material for Neolithic ceramic manufacture, by comparing modern clay-with-flints and thin-sectioned examples of suitable local pottery.

The results demonstrate that some coarse flint-containing fabrics were manufactured from naturally gritty clays. Although a direct link cannot be made between the Silbury clay and local ceramic examples, it could, nevertheless, have been a viable material for pottery manufacture.

Internet Version(s)

122_2011WEB.pdf

Keywords Project Numbers
Flint
Pottery

12/2012 - Silbury Hill, Wiltshire: Palaeohydrology of the Kennet, Swallowhead Springs and the Siting of Silbury Hill

P Whitehead and M Edmunds

Number of Pages: 35 Figures: 3

The aim of the project has been to assess the palaeohydrology of the Silbury Hill area and determine the flow rates, groundwater levels and hydrological conditions in 4500BP. This has been undertaken using hydrogeological mapping techniques and hydrological modelling techniques, making use of outputs from the historical runs of a Global Circulation Model to recreate past flows and groundwater levels in the Upper Kennet at Silbury. The modelling results have recreated a palaeohydrology for the Avebury and Silbury area and indicate that there was a wetter climate in the area. This would have generated higher river flows and most importantly higher groundwater levels, which would have sustained the local populations through dry summers. Also, the raised water table would have ensured waterlogged ground in places, which when coupled with increased vegetation and tree cover would have provided a more sustainable environment and better soils for crops in the area. Thus the study indicates that there would have been wetter and warmer conditions in 4000-4500BP and this could have sustained a large population needed to construct Silbury Hill. In addition, the generally wetter nature of the area, compared to the current dry environment, could have given people the impression that the area was the source of the Kennet and a major source of the River Thames

Internet Version(s)

012_2012WEB.pdf

Keywords Project Numbers

42/2012 - Water Meadows, Silbury, Wiltshire: Optical Stimulated Luminescence Dating

H M Roberts

Number of Pages: 27 Figures: 13

Five OSL samples were taken from the palaeochannel deposits located in the Water Meadows south of Silbury Hill, Wiltshire. The depositional nature of the sediments sampled requires coarse (ie sand-sized) grains to be used for OSL dating, to ensure that the De distribution can be examined and hence that an assessment can be made whether the sediments were incompletely bleached at deposition. However, the palaeochannel sediments were all heavily dominated by clay. The coarsest of the five OSL samples taken was therefore selected to investigate the feasibility of isolating sufficient pure coarse-grained quartz for OSL dating from these clay-rich samples. Only 0.02% of the initial very large [~1kg] initial sample mass was found to be coarse-grained quartz of between 90–250µm diameter. Nevertheless, the luminescence characteristics of this material indicated that this coarse-grained quartz was suitable for dating using small aliquots. The coarse-grained quartz proved sufficiently sensitive to enable well-resolved dating using the Single-Aliquot Regenerative dose (SAR) measurement protocol applied to small multiple-grain single-aliquots. The final OSL age generated for sample 183/SR6 places the time of deposition for this material at 9770 ± 580 years ago (datum 2011), during the early Holocene.

Following the completion of the pilot analysis of Water Meadows sample 183/SR6 which is the subject of the main report, the remaining four OSL samples (183/SR1–4) were

prepared and analysed in an additional phase of the project. Again, using small multiplegrain aliquots of quartz, the samples studied proved sufficiently sensitive and responsive to facilitate well-resolved dating using OSL. The final OSL ages generated for the samples (reported in the Addendum) show that samples 183/SR1–4 are all significantly younger than sample 183/SR6 (discussed in the main report), giving ages that are in chronostratigraphic order (within errors) and ranging from 1200 ± 60 years ago for the lowermost clay-rich unit (sample 183/SR4) to ~

Internet Version(s)

042_2012WEB.pdf

Keywords Project Numbers

Excavation

Luminescence Dating

43/2012 - Archive Research on Silbury Hill

K Fielden

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

45/2012 - Silbury Hill, Wiltshire: The Pottery

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

46/2012 - Silbury Hill, Wiltshire: Project 661 Artefacts from the 2007/8 Excavations

N Hembrey and Q Mould

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords

Project Numbers

661

47/2012 - Silbury Hill, Wiltshire: Land Snail Analyses Carried Out on Samples Recovered from the 2007/8 Excavations

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

48/2012 - Silbury Hill, Wiltshire: Pollen Studies Undertaken as Part of the 2007/08 Intervention

D Robinson, G Campbell and E Forster

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

49/2012 - Silbury Hill, Wiltshire: Mosses from the 2007 Excavations

A R Hall

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

50/2012 - Silbury Hill, Wiltshire: Microbiological assessment of Cores <9444> and <9447> from Excavations 2007/8: phase 1

MC Lillie, R J Smith and I Douterelo-Soler

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

51/2012 - Silbury Hill, Wiltshire: Microbiological Assessment of Cores <9444> and <9447> from Excavations 2007/8: Phase 2

R J Smith

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

16/2013 - Fields South of Silbury Hill, Wiltshire: Evaluation of the Romano-British Settlement Site Stratigraphy

V Crosby

Number of Pages: 21 Figures: 6

Extensive geophysical surveys of the area around Silbury Hill were carried out in 2005-8 as part of the major project to conserve the Hill. Although the presence of a Roman settlement by the Hill had been known since the 19th century AD, the extent of the evidence in the field to its south was unexpected. The Later Silbury project was set up to evaluate the new results. In the late summer of 2010 seven evaluation trenches were excavated in the two fields south of the Hill. Part of an extensive Romano-British settlement consisting of large enclosures flanking a trackway was examined, as well as post-medieval water meadow features. Optically stimulated luminescence dates were obtained for a palaeochannel and alluvial deposits close to the Winterbourne.

This report presents the site matrices and interpretive context index, to support the published report in the Wiltshire Archaeological and Natural History Magazine for 2013

Internet Version(s)

016_2013WEB.pdf

Keywords	Project Numbers
Excavation	
Medieval	
Mesolithic	
Post Medieval	
Roman	5980

20/2013 - Silbury Hill, Wiltshire and Fields South of Silbury Hill: The Romano-British and Later Saxon Pottery From Excavations at Silbury Hill (1969) and the Romano-British Roadside Settlement (2010)

J Timby

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers

31/2013 - Later Silbury: The Archaeobotanical Samples

R Pelling

Number of Pages: 0 Figures: 0

Forthcoming.

Internet Version(s)

Keywords Project Numbers