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LANDSCAPE PROJECT
KING BARROW RIDGE

ARCHAEOLOGICAL SURVEY REPORT

Sharon Bishop



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SUMMARY

A rapid field investigation (Level 1 survey) along the King Barrow Ridge has identified previously unrecorded earthworks relating to the post-medieval aesthetic development of the landscape and 20th century military activity. The survey complements earlier more detailed analytical Level 3 surveys of the barrows and other Level 1 surveys around the Stonehenge World Heritage Site.

CONTRIBUTORS

The Level 1 survey of King Barrow Ridge was conducted by Mark Bowden, David Field and Sharon Bishop. The Level 3 survey of the New King Barrows was conducted by Hazel Riley, David Field and Deborah Cunliffe of the Royal Commission on the Historic Monuments of England (RCHME) and the Level 3 survey of Amesbury 42 was conducted by David Field and Deborah Cunliffe of English Heritage. This report was produced by Sharon Bishop, incorporating comments from David Field and Mark Bowden.

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The aerial photograph on the front cover was taken from the east. It shows the New King Barrows and soilmarks of the re-routed Amesbury to Market Lavington public road. Image: SU 1342/89 NMR 21917/21 19th December 2002 © English Heritage.

ARCHIVE LOCATION

The project archive is held at:
English Heritage
The Engine House
Firefly Avenue
Swindon
SN2 2EH

DATE OF SURVEYS

The New King Barrows were surveyed by the RCHME in September 1990. Amesbury 42 was surveyed by English Heritage in January and February 2010 and the rapid field investigation along the Ridge took place on 21st April 2011 and 10th August 2011.

CONTACT DETAILS

Tel: 01793 414600

Email: nmrinfo@english-heritage.org.uk

The Engine House, Firefly Avenue, Swindon, SN2 2EH

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INTRODUCTION

Level 1 surveys were conducted over several areas within the Stonehenge World Heritage Site (WHS) during the spring and summer of 2011 (Bishop 2011). They complement the more detailed surveys conducted by the Stonehenge WHS Landscape Project, which is designed to provide fresh information and up to date mapping for the planned new Stonehenge visitor centre; to improve understanding of the WHS necessary for its appropriate management (Young *et al* 2009, Aim 6), and to supplement information from recent university interventions in the area.

The Level 1 survey, or rapid field investigation (Ainsworth *et al* 2007, 23), described in this report was conducted in areas of woodland and pasture along the King Barrow Ridge, Amesbury, Wiltshire. The results are combined here with those from more detailed Level 3 analytical surveys of the New King Barrows and the Neolithic long barrow known as Amesbury 42. The A303 crosses the Ridge, forming an artificial division of the landform that is nevertheless useful in defining the southern extent of features described in this report.

All of the barrows are Scheduled Ancient Monuments and are referred to here by their Grinsell numbers (1957), which are generally accepted in the literature. Table 1 provides a concordance of the various numbering systems applied to each monument. It includes the National Monuments Record's (NMR's) archaeological database, the Wiltshire Historic Environment Record (HER) and the Register of Scheduled Monuments (RSM) number for each barrow. The appendix presents the measurements of the surveyed features (Table 3).

Table 1: A concordance for the monuments recorded

Monument Type	NMR's archaeological database		Wiltshire HER	Scheduled Monument			Name	Blair <i>et al</i> (1995)
	Monument Number	NMR Number		Monument Number (RSM)	Goddard's Number (1912)	Grinsell's Number (1957)		
BARROW CEMETERY	219753	SU 14 SW 111					NEW KING BARROWS	
BOWL BARROW	932555	SU 14 SW 362	SU14SW769	10465	AMESBURY 26	AMESBURY 26		829
BELL BARROW	932559	SU 14 SW 363	SU14SW768	10447	AMESBURY 27	AMESBURY 27		830
BELL BARROW	932566	SU 14 SW 364	SU14SW767	10447	AMESBURY 28	AMESBURY 28		831
BOWL BARROW	932576	SU 14 SW 365	SU14SW766	10447	AMESBURY 29	AMESBURY 29		832
WOOD BANK	1541258	SU 14 SW 759						
BOWL BARROW	932589	SU 14 SW 366	SU14SW765	10447	AMESBURY 30	AMESBURY 30		833
BOWL BARROW	932595	SU 14 SW 367	SU14SW770	10447	AMESBURY 31	AMESBURY 31		834
BOWL BARROW	932642	SU 14 SW 368	SU14SW771	10447	AMESBURY 32	AMESBURY 32		835
WOOD BANK	1541467	SU 14 SW 760						
BARROW CEMETERY	219756	SU 14 SW 112					OLD KING BARROWS	
BOWL BARROW	932650	SU 14 SW 369	SU14SW772	10305	AMESBURY 33	AMESBURY 33		836
BOWL BARROW	932662	SU 14 SW 370	SU14SW773	10444	AMESBURY 34	AMESBURY 34		837
BOWL BARROW	932665	SU 14 SW 371	SU14SW774	10445	AMESBURY 35	AMESBURY 35		850
BOWL BARROW	932672	SU 14 SW 373	SU14SW776	10445	AMESBURY 36	AMESBURY 36		855
BOWL BARROW	932675	SU 14 SW 374	SU14SW777	10446	AMESBURY 37	AMESBURY 37		859
GUNPOST	1542657	SU 14 SW 761						
LONG BARROW	219431	SU 14 SW 3	SU14SW102	10324	AMESBURY 42	AMESBURY 42		892

The survey area extends for about 1.25km along a north to south plateau of Cretaceous Upper Chalk which is overlain with shallow well drained calcareous silty soils of the Andover soil association (SSEW 1983). The Ridge is part of the characteristic convex, smoothly rounded downland landforms common across southern England. It extends between the Upper Stonehenge Bottom dry valley in the west and the slopes of the River Avon valley in the east. It is one of the ridgelines and horizons that visually enclose Stonehenge itself (Young *et al* 2009, map 9). Amesbury **26** is the southernmost barrow, next to the A303, and the long barrow of Amesbury **42** is the northernmost (Fig 2).

The barrows occupy the summit of the Ridge at about 110m above sea level, with a slight saddle between Amesbury **32** and Amesbury **33** where the Stonehenge Avenue crosses the Ridge. Most of the Ridge is owned and managed by the National Trust, with the field immediately north of the A303 and east of the New King Barrows forming part of West Amesbury Farms. The Ridge marks the eastern limit of open access grassland immediately around Stonehenge, east of which much of the land is arable.



Fig 1: The location of the survey areas within the Stonehenge World Heritage Site (WHS)
The Level 3 survey areas are darker blue. Height Data: Licensed to English Heritage for PGA,
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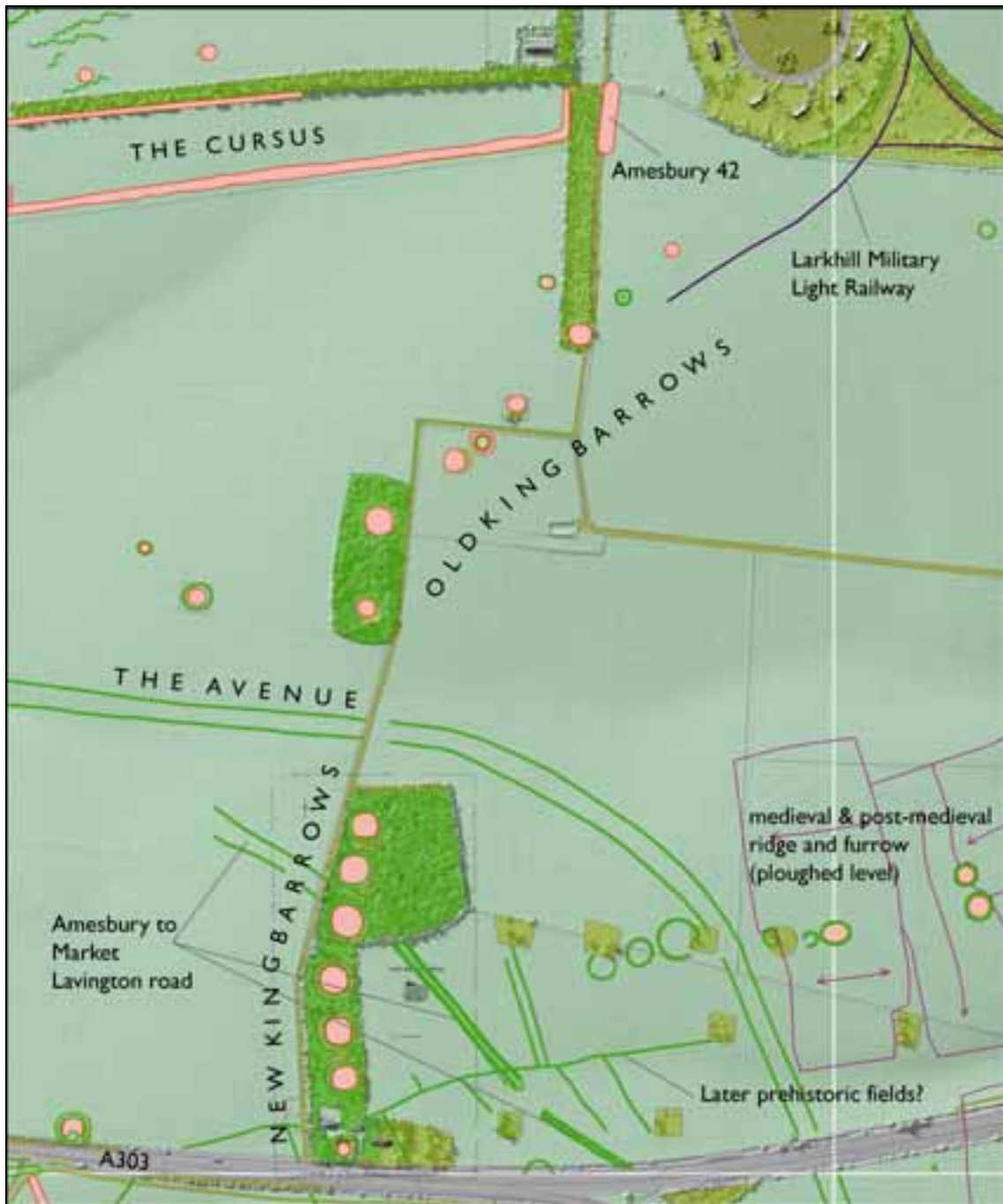


Fig 2: The King Barrow Ridge

NMP mapping of the Ridge is shown at 1:7500 against a lidar hillshade background. Ditches are shown in green and banks in red. The base map is © Crown Copyright 2011. All rights reserved. Ordnance Survey Licence number 100024900. Lidar © Environment Agency (December 2001).

LANDSCAPE HISTORY

Environmental evidence suggests that large natural clearings or glades of grassland, scrub and some trees were a natural part of an extensive open forest which stretched across the southern English chalklands in the early post-glacial period (Allen & Scaife 2007, 25). This openness, with the opportunities for hunting and gathering it provided, attracted Mesolithic communities who constructed what is perhaps the first monument in the Stonehenge landscape: the post holes in what was later to become the Stonehenge car park (Vatcher & Vatcher 1973; Young *et al* 2009, 155).

It may also be a contributing factor to the density of later, Neolithic and Bronze Age monuments. Soils buried beneath Amesbury 42 probably supported grassland for some time prior to construction of the long barrow (Richards 1990, 98). The buried soils along the Ridge indicate a predominantly open landscape by the later Neolithic, probably lightly grazed or browsed and including some shrubs (Cleal & Allen 1994, 82). Some shade or woodland is also suggested by molluscan evidence from the Coneybury henge (Richards 1990, 157). The large number of round barrows constructed in an open established downland landscape indicates that any remaining woodland was probably cleared by around 2000BC (Allen & Scaife 2007). The degree of land-use on the Ridge appears to have intensified during the Early Bronze Age, when molluscan evidence suggests more control of stock within a managed grazing regime (Cleal & Allen 1994, 82).

More diverse activities are visible in the Stonehenge landscape by the Middle Bronze Age. Large areas of Salisbury Plain were converted to agriculture and 'Celtic' fields became widespread over large areas of Salisbury Plain (McOmish *et al* 2002, 52; Allen & Scaife 2007). The early soils were fertile and easily tilled but subject to erosion through rainsplash, soil creep and occasional but recurrent mass erosion events (Allen & Scaife 2007, 29). Erosion changes the soil and the shape of the landscape, eroding hilltops and infilling valleys. Dry valleys usually act as environmental catchment areas and have a high potential for buried prehistoric sites, however, test pits excavated in the centre of the Upper Stonehenge Bottom dry valley found a profile only 35cm deep over a Pleistocene coombe deposit (Richards 1990, 210).

Throughout the Iron Age farming based on the Till and Avon valleys appears to have been the predominant activity in the Stonehenge landscape (Young *et al* 2009, 156), although it has left little evidence other than perhaps re-use and modification of the Celtic fields (Yates 2007). The impressive hillfort known as Vespasian's Camp was constructed near the River Avon but tree cover has prevented its full archaeological investigation (Young *et al* 2009, 156). Roman period farmsteads and small unenclosed villages, which also reused earlier fields, are known across Salisbury Plain (McOmish *et al* 2002, 88-104). The nearest are those to the west along the Till, on High Down and Winterbourne Stoke Down (Freeman 1995, 276). Corresponding activity along the Avon valley in this period is poorly represented although Amesbury itself might be expected to mask traces of Roman settlement.

Little is known of how the landscape was used in the early medieval period, although Amesbury had become the centre for a widespread royal estate (Young *et al* 2009, 156). During the medieval period settlement continued to focus on the two rivers, the Till and the Avon, which flow north to south. Extensive meadows, some of which were watered, were located beside the rivers, arable was concentrated on the lower slopes and extensive pasture covered the downs further to the east and west (Crowley 1995, 13; Freeman 1995, 275; Stevenson 1995). This pattern of strip tithings, which provided each community with access to water and a range of soil types, is typical of chalkland areas where open field sheep and corn husbandry, with common meadows and pasture, dominated the landscape well into the post-medieval period.

The growth of the cloth trade associated with the sheep's wool helped to maintain the lords of the manors' income during the medieval period. According to Hare (1981, 146), examination of the rental agreements and court rolls reveals the growing scale of chalkland agriculture during the 15th and 16th centuries, with some consolidation of holdings and the emergence of large-scale gentlemen farmers. Later documents show how provision was made for penning sheep to manure various parts of the land; the costs of digging a sheep pond were defrayed, and a Hayward appointed with responsibility for the common flock (Tankins 1975).

Cultivation east of the King Barrow Ridge was intensive, with even Vespasian's Camp under the plough by the late 14th century (RCHME 1979, xvi). The Old and New King Barrows appear to have formed the western boundary to the medieval fields of Amesbury Countess and West Amesbury Manors, with open down to their west until blocks were taken as bumbake in the early 18th century (*ibid*; Bond 1991, fig H2). The acquisition of these two manors in the mid-18th century allowed the 3rd Duke of Queensbury to extend Amesbury Park to include the New King Barrows: they were probably planted with Scots Firs around this time. The full extent of the Park was short-lived: after the Duke's death in 1778 land was disparted and returned to arable. In 1823 the two blocks of land immediately west of the New and Old King Barrows were again cultivated (WHC 283/202) and by 1846 beeches and yews had been added to form plantations around the New King Barrows and the southernmost two of the Old King Barrows, with a 'Keeper's house' inserted between Amesbury **26** and Amesbury **27** (WHC TA Amesbury).

Aerial photographs show that the area west of the Ridge was cultivated for much of the 20th century although only a strip immediately south of the eastern half of the *Cursus* was available for field walking in the early 1980s (Richards 1990, fig 8). By the end of the 20th century the area west of the Ridge was open access grassland owned and managed by the National Trust whilst land to the east continued as arable. An additional area covering part of the Stonehenge Avenue was restored to grassland in 2000 (Young *et al* 2009, map 3).

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The King Barrow Ridge has long received the notice and interest of antiquarians and archaeologists. In the 17th century the barrows on the Ridge were simply but confusingly known as 'seven barrows' (Aubrey *et al* 1980, 708). Aubrey was sceptical of accounts that one was called 'Pan Barrow' and that chronicles recorded names for the other barrows. He suggested that these barrows were not erected on account of any great person slain in battle, but were for members of the same family, likening the arrangement to that of kings in Westminster Abbey (*ibid*, 704). Aubrey noted that there was a place called 'the King's Graves' where stones from the end of the graves had recently [about 1650] been removed (*ibid*, 698), however, these were located further south in West Amesbury Penning (RCHME 1979, xxi).

The idea of the mounds marking the graves of kings clearly stuck and William Stukeley, recognising two groups of seven barrows 'as wings' to the Stonehenge Avenue, divided them between the 'Old' and 'New Kings' (1740, 38). He excavated one of the barrows, Amesbury **28** (Burl & Mortimer 2005, 104), and noted a 'long bank' [Amesbury **42**] east of the Cursus, which he suggested was for the judges and chief spectators (*ibid* 90; Long 1876, 90). These ideas were subsequently adopted by Sir Richard Colt Hoare, who did not open any of the round barrows because they were already covered with Scots Firs (1812, 157). John Thurnam was the first to consider the long mound as a real long barrow but regarded his excavations of 1866 as unsuccessful because he found only secondary interments (Thurnam 1868, table 1).

The various barrows were listed by the Reverend E H Goddard (1913) with comments on the physical condition of the barrows added by Maud Cunnington, who also compiled the appendix list of long barrows published the following year (Cunnington 1914). These lists were later revised by Leslie Grinsell (1957). The barrows were inspected for Ordnance Survey mapping revision in 1969 and 1970 and were included in the Royal Commission on the Historical Monuments of England's survey of the Stonehenge environs (RCHME 1979) and the subsequent archaeological assessment of the WHS (Blore *et al* 1995).

An extensive Neolithic surface flint industry was identified through pioneering surface collection survey of the Ridge carried out in the 1930s (Laidler & Young 1938). Conversion of several fields back to pasture meant that extensive surface collection for the Stonehenge Environs Project in the early 1980s was more restricted and mostly confined to the fields east of the Ridge (Richards 1990, fig 8). The density of a flint scatter [W59] on the Ridge immediately north of the Stonehenge Avenue prompted a more intensive surface collection survey, magnetometry and sampling by excavation (*ibid*, figs 74 & 75). Part of the eastern ditch of Amesbury **42** was also excavated (*ibid*, W58 fig 64). An electricity cable trench had been cut across the Ridge in 1968 (Vatcher & Vatcher 1969) and a water pipe cut through the ditch of Amesbury **26** in 1980 (Pitts 1981).

Winter storms uprooted a large number of trees along the Ridge in 1987 and 1990, providing an unprecedented opportunity for detailed analysis of environmental data. Tree-throw holes on ten of the round barrows were examined (Anon 1992) although only nine made it to publication (Cleal & Allen 1994). These were the New King Barrows; Amesbury 34 of the Old King Barrows, and Amesbury 18 and 19 in Luxenborough Plantation to the south (see Bishop 2011). Amesbury 33 was also examined. The National Trust requested a survey of the storm damaged barrows and the New King Barrows were therefore surveyed by the Royal Commission on the Historical Monuments of England (RCHME) in 1990 (Fig 3; Cleal & Allen 1994, 57).

The Ridge provided three potential sites for the new Stonehenge Visitor Centre. Accordingly geophysical surveys were conducted along the eastern side of the barrows, over Amesbury 42 and the eastern end of the Cursus (Payne & White 1988; Darvill 2005, map Q). The Ridge also falls within the area of the Stonehenge Riverside Project and magnetometry and resistivity surveys were carried out at the east end of the Greater Cursus in 2007, in preparation for excavations planned the following year (SRP 2007, excavation VI). An analytical survey of the surviving earthworks of Amesbury 42 was conducted in early 2010 as part of the Stonehenge WHS Landscape Project (Fig 5). Further geophysical surveys form part of recent university projects, including the Stonehenge Hidden Landscapes Project (Howarth 2010).

The wider landscape was mapped from aerial photographs at 1:10,000 scale as part of the RCHME Salisbury Plain Training Area National Mapping Project (NMP; Crutchley 2000), and the mapping subsequently revised at 1:2500 scale for the English Heritage Stonehenge WHS Mapping Project (Crutchley 2002). Prior interpretation of archaeological features from aerial photographs was piecemeal (eg RCHME 1979) and the NMP mapping is currently being enhanced further from Lidar data captured in 2001 (Simon Crutchley, pers comm). The NMP projects mapped the round barrows, Avenue and former road but any other details such as the wood banks and Second World War gunpost were obscured by trees. A desk based assessment of military installations was conducted by Wessex Archaeology (1998) but is far from comprehensive.

The excavations

Despite the prominence of these barrows in the landscape there are only four accounts of antiquarian excavation. In 1649 Aubrey was told of an excavation of one of the Seven Barrows in which coals [presumably charcoal], pieces of goat's horns and stag's horns were found (Aubrey *et al* 1980, 698), and that the Duke of Buckingham's men had found a 'bugle horn tipt with silver at both ends' in another (Hoare 1812, 155). In neither case is it clear which barrow was opened. In 1723 Stukeley's excavation of Amesbury 28 revealed a large course of flints at the top 'a good yard deep' and 'conformable to the external curve of the barrow' (Atkinson 1985, 246; Burl & Mortimer 2005, 104). Below the flints they found the scattered and burnt bones of oxen and dogs in 'good earth'. They dug to about 6ft [1.8m] and found nothing more, perhaps because the mound

stands 4.4m high and they were still some distance off the floor. Amesbury **42**, the long barrow, was excavated by Thurnam in 1866, who found the secondary inhumations of two infants and a crouched adult, as well as animal bones including an ox skull (Thurnam 1868, table 1; Cunnington 1914).

More recently, the only excavations of the round barrows have been associated with utility pipelines and storm damage. Two Neolithic post holes, between King Barrow Wood and Amesbury 39, were located during digging of an electric cable trench (Vatcher & Vatcher 1969; Cleal & Allen 1994, fig 1), near a pit containing Neolithic or Bronze Age carved chalk plaques (Harding 1988). Further south along the Ridge an early Neolithic pit, colloquially known as the 'Coneybury anomaly', was excavated in 1980 and 1981 (Richards 1990, 40) and the nearby henge evaluated by excavation in the autumn of 1980 (*ibid*, 123). Some of the internal pits may have pre-dated the henge enclosure and pottery suggests activity at the site spanned the early Neolithic to Middle Bronze Age periods. No finds were recovered from the water pipe cut through the ditch of Amesbury **26**, but the ditch appeared to be of two distinct phases: one with a flat bottomed ditch, the other with more sloping sides (Pitts 1981, 183).

Thirty-nine tree-throw holes were examined following storm damage in October 1987 and January 1990 (Cleal & Allen 1994). The exposed deposits were recorded, any artefacts they contained recovered and environmental samples taken. Traces of buried soil horizons were identified beneath six of the barrows, which provided valuable molluscan samples. Few finds were recorded: from Amesbury **30** a range of Late Neolithic and Early Bronze Age pottery sherds and worked flint; from Amesbury **31** three sherds of Peterborough Ware plus some flints, mostly flakes, blades and cores; from Amesbury **32** a few sherds of Peterborough Ware and Grooved Ware, plus a small collection of flints, mainly flakes and blades, and in Amesbury **34** some Grooved Ware sherds. The tree-throw holes provided some insight into the construction of the barrows and located a possible pre-barrow hollow beneath Amesbury **32**.

Small trenches have been dug at Amesbury **42** for two important recent research projects. A trench over its eastern ditch was dug as part of the Stonehenge Environs Project and produced evidence of two phases: an earlier round bottomed and causewayed ditch superseded by a considerably larger flat bottomed ditch just beyond it. Finds included in-situ flint knapping debris and pottery sherds representing Beakers, Collared Urns and Late Bronze Age vessels, plus some Roman period sherds (Richards 1990, 99). Removal of the ploughsoil of the sampled flint scatter W59 nearby revealed several pits and stakeholes. They were interpreted as representing sedentary activity in the Neolithic, with a range of domestic tasks indicated by the flint tools, pottery and animal bones from the ploughsoil and sealed deposits (*ibid*, 116).

A subsequent excavation of the long barrow's eastern side by the Stonehenge Riverside Project revealed the sequence was actually the opposite (Thomas 2008, 87). The large causewayed pits had been cut into the inside lip of the long barrow's ditch once

secondary silts were forming there. An augur survey was conducted at the same time and revealed remarkably well-preserved mound material up to 27cm deep over a buried soil up to 37cm deep. This is almost unprecedented in the Stonehenge area and has a high potential for paleoenvironmental evidence and information on the structure and dating of the long barrow, with minimal intrusion (Allen 2008, 92).

THE EARTHWORKS

The earthworks comprise the Neolithic long barrow of Amesbury **42**, the New and Old King Barrows, post-medieval wood banks and a probable Second World War gunpost. They are described from south to north.

The New King Barrows

Amesbury 26

Amesbury **26** comprises a roughly circular mound of at least two phases which stands about 1.9 metres high. There is no sign of any surrounding ditch or bank and the earthworks are usually listed as a bowl barrow (Grinsell 1957, 150). The base of the mound measures 20m in diameter and the summit is about 6m across. A break in slope was observed around the mound at around 5m from its approximate centre [SU 13449 42033]: at 5m to the north; 5m to the east; 4.6m to the south, and 5.3m to the west. The upper mound is 0.6m high and the break is berm-like in places. There are hints of another break in slope at a lower level, together with animal and tree disturbance.

Amesbury 27

The surviving earthworks of Amesbury **27** measure 47m in overall diameter and take a bell form. The barrow comprises a circular mound of two phases that stands about 4.2m high and sits on a circular platform defined by a partly filled in ditch. The summit of the mound measures 10m and the base 31m in diameter; a berm, about 3m wide, is visible to the north-east and south-west of the mound, which sits on a platform about 35m in diameter. The ditch is 0.3m deep to the south of the mound and 0.2m deep to its north; it measures between 6 and 7m wide but is truncated by the edge of the post-medieval plantation to the east. There is also a break in the ditch to the north-north-west. The barrow suffered just one tree-throw in 1987 and 1990, at the south-eastern foot of the mound.

Amesbury 28

The surviving earthworks of Amesbury **28** measure 49m in overall diameter but are truncated to the east by the edge of the overlying post-medieval plantation. They take a bell form, comprising a roughly circular mound of two phases which stands 4.4m high and sits on a platform of between 35m and 39m in diameter, defined by an incomplete ditch 0.6m deep and measuring between 8m and 10m wide. A berm of between 3.5m and 4.5m separates the foot of the mound from the ditch. The summit of the mound measures 9.5m and the base about 32m in diameter. It suffered at least four areas of damage from wind-blown trees in 1987 and 1990.

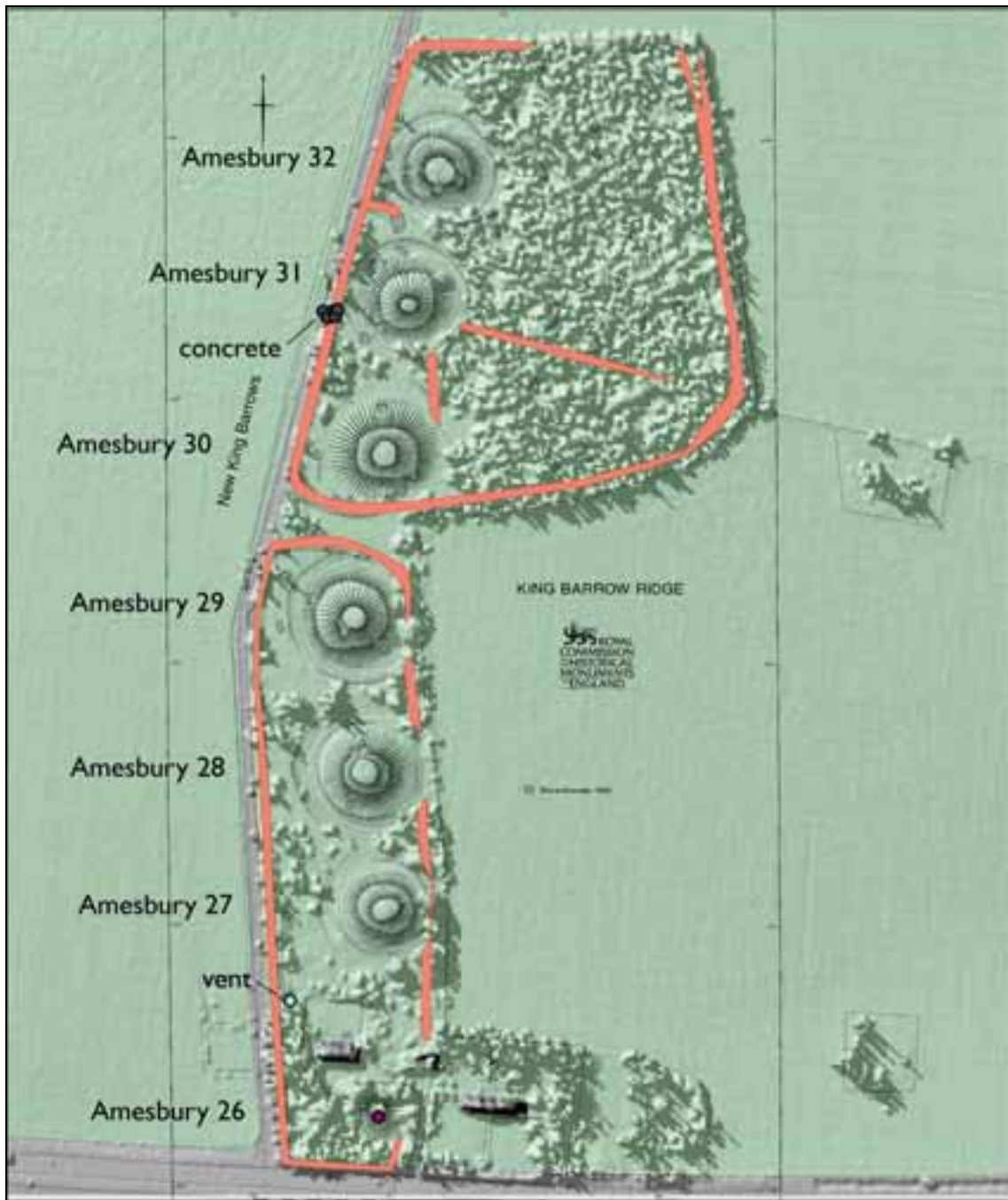


Fig 3: Combined surveys of the New King Barrows.
The surveys are shown at 1:2500 against a lidar hillshade background, which includes trees.
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number 100024900. Lidar © Environment Agency (December 2001).

Amesbury 29

The surviving earthworks of Amesbury **29** measure 51m in overall diameter but are overlain to the north and east by part of the post-medieval plantation wood bank and truncated to the east at the edge of the plantation. The round barrow takes a bowl form, comprising a circular mound of two phases which stands 4.2m high and is surrounded by a ditch. The summit of the mound measures 8.5m and the base 40m in diameter; the ditch is 0.7m deep north of the mound but only 0.4m deep to its south and measures between 6m and 8m wide. The mound suffered at least four areas of damage from wind-blown trees in 1987 and 1990.

Wood bank

A post-medieval wood bank survives as earthworks delineating four sides of a roughly rectangular tree plantation. It comprises a linear bank, about 0.3m high and between 4m and 5m wide, which encloses an area centred at SU 1344 4215 that extends north / south for at least 170m and is about 60m wide. It is more fragmentary along the eastern side and its southern end has been damaged by the widening of the A303 road. The wood bank encloses four of the New King Barrows round barrows (Amesbury **26** to **29**).

Amesbury 30

The surviving earthworks of Amesbury **30** measure 54m in diameter. They take a bowl form, comprising a roughly circular mound of two phases which stands 3.2m high; its summit measures about 9.5m and its base 41m in diameter. Several slight scarps, facing the mound, suggest it was surrounded by a shallow ditch [0.2m deep], however, this appears to be overlain to the south by part of the post-medieval wood bank. The ditch cannot be traced east of the mound. The mound suffered at least three areas of damage from wind-blown trees in 1987 and 1990.

Amesbury 31

Amesbury **31** is a bowl barrow measuring 47m in diameter. It comprises a circular mound, 3.7 metres high and of two phases, surrounded by a ditch. The summit of the mound measures 6m and the base 35m in diameter. The ditch is 0.3m deep and measures between 6m and 8.5m wide, with a gap to the south-west. The mound suffered at least 3 areas of storm damage in 1987 and 1990, with three more tree-throw holes in the ditch.

Amesbury 32

Amesbury **32** is a bowl barrow measuring 44m in diameter. It comprises a roughly circular mound, 2.6m high and of two phases, surrounded by a ditch measuring up to 8m wide. The summit of the mound measures 11m and the base 33m is in diameter. The

ditch is 0.2m deep to the north of the mound and 0.4m deep to its south. The mound suffered at least five areas of storm damage in 1987 and 1990.

Wood bank

A post-medieval wood bank survives as earthworks defining an irregular polygonal tree plantation containing the northernmost three of the New King Barrows (Amesbury **30** to **32**). A linear bank also extends west-north-west to east-south-east through the plantation, to its eastern edge, and may represent an earlier boundary. The wood banks each comprise a linear bank, about 0.3m high and between 4m and 5m wide.

The Old King Barrows

Amesbury 33

The bowl barrow known as Amesbury **33** comprises a roughly circular mound of three phases; the lower mound is about 0.6m high, the middle 0.3m and the upper mound 0.3m high, giving a combined height of 1.2m. The approximate centre of the barrow is at SU 13474 42636: the summit measures about 9.5m and its base about 32m in diameter. There is a wide berm between phases on the north-western side. Beyond the mound on this side is a dump of relatively recent domestic debris.

Amesbury 34

Amesbury **34** is also a bowl barrow, comprising a roughly circular mound of two phases; the upper mound stands 1m high and the lower mound is 1m high, giving a combined height of 2m. Its approximate centre is at SU 13482 42739: the summit measures about 10.5m and its base 36m in diameter. There is no sign of any surrounding ditch or bank, which was presumably ploughed away.

Amesbury 35

A low bowl or platform barrow, Amesbury **35** comprises a roughly circular mound which stands about 1.1m high; its summit measures about 14.5m and its base 27m in diameter. The approximate centre of the barrow is at SU 13572 42803. There is no sign of any surrounding ditch or bank, which was presumably ploughed away.

Amesbury 36

Amesbury **36** comprises a roughly circular mound which stands about 1.8m high; its summit measures about 10m and its base 21m in diameter. The approximate centre of this bowl barrow is at SU 13643 42861. The mid-20th century water tank has been removed leaving a slight divot on the summit in which bluebells have been planted.

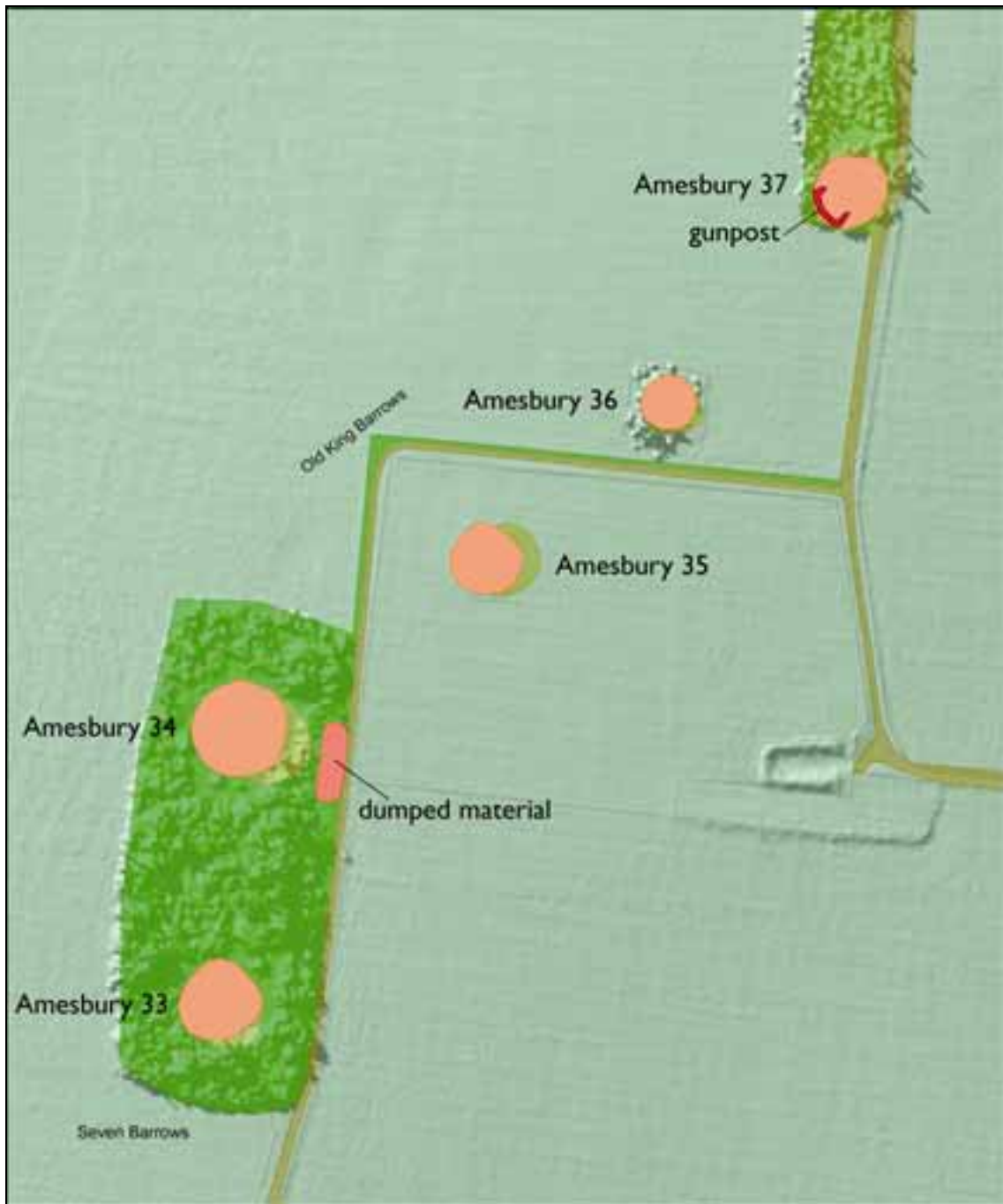


Fig 4: The Old King Barrows.

The survey is shown at 1:2500 against a lidar hillshade background, which includes trees. The base map is © Crown Copyright 2011. All rights reserved. Ordnance Survey Licence number 100024900. Lidar © Environment Agency (December 2001).

Amesbury 37

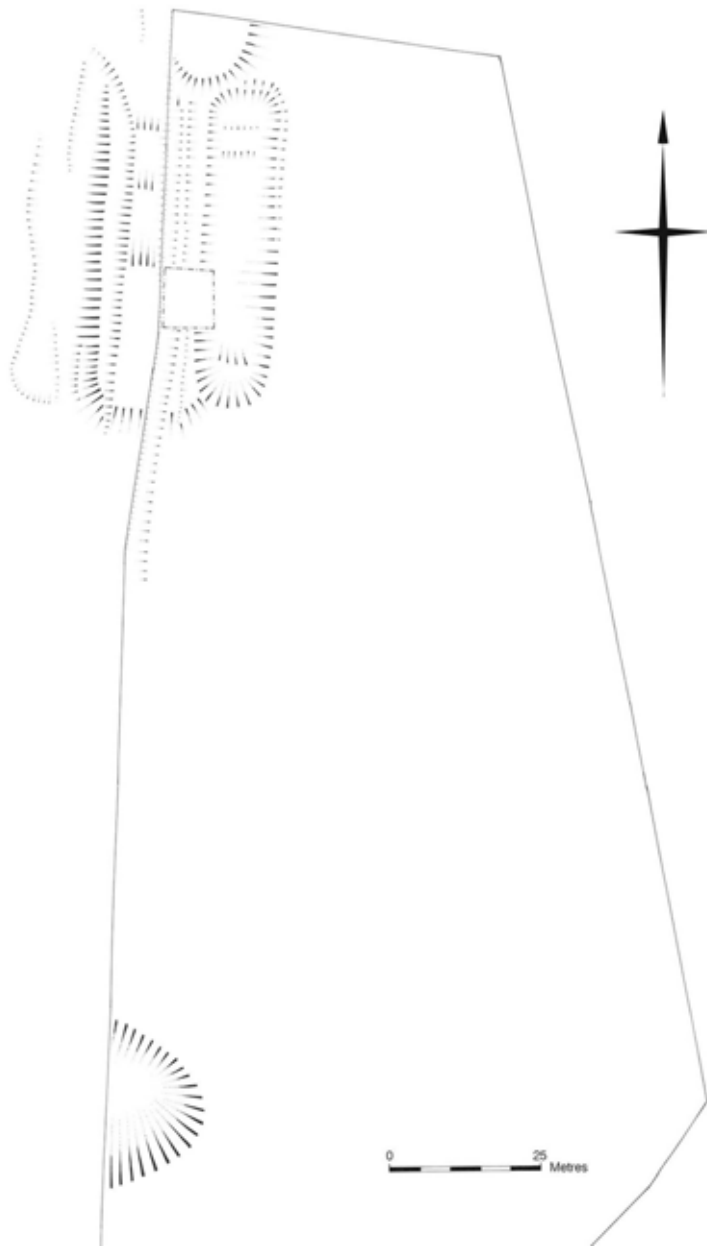
Amesbury **37** is a large bowl barrow comprising a roughly circular mound with only very slight traces of a surrounding ditch. Its approximate centre is at SU 13710 42941. The mound stands about 2.2m high, with an additional 0.2m of spoil from a hole dug on the summit. The summit of the mound measures about 11m and the base between 22.5m and 28m in diameter. The ditch is 0.3m deep and about 6m wide. The lower slopes around the northern half of the mound are mutilated by trees, including one hollow trunk used as a geocache site. An early to mid-20th century gunpost has been constructed on the south-western quadrant, near the top of the mound.

Gunpost

An early to mid-20th century gunpost survives as earthworks, centred at SU 1370 4293, constructed on Amesbury **37**. It comprises a narrow bank which extends in an arc around the south-western quadrant of the mound, about two-thirds of the way up. At each end the bank turns a sharp right angle and returns to the mound. The bank defines three sides of a hollow about 0.3m deep and 10m long, between it and the barrow mound (Fig 7).

Amesbury 42

The Neolithic long barrow known as Amesbury **42** survives only as very slight earthworks; it has been nearly flattened by ploughing and is overlain by a byway. It comprises a linear bank that extends roughly north to south for about 62m and is flanked by a ditch to either side. The bank measures 20m wide and the ditches about 11m wide. The southernmost 30m of the mound is most prominent at barely 0.3m high. The western ditch is very shallow and overgrown with trees. The eastern ditch is 0.2m deep: a causeway and breaks in slope near its northern end hint at its being recut (Fig 5). Immediately north of the long barrow is the southern rounded end of a low mound, possibly the remnant of another barrow although more probably the result of backfilling of the ditch around Larkhill Camp, which extended to this point (RCHME 1979, plate 11).



*Fig 5: The survey of Amesbury 42
The survey is shown at 1:1250*

DISCUSSION

The prehistoric landscape

The cluster of late Mesolithic worked flints found on King Barrow Ridge (Darvill 2005, map F) imply that this location was already being visited repeatedly by the end of the Mesolithic period. The soil buried beneath Amesbury 42 shows that the long barrow was constructed in a landscape that was being opened up with blocks of grassland (Richards 1990, 98) and the re-cutting of the ditch and presence of several secondary interments shows that construction and use of the long barrow was not a single one-off event. This was a place that people came back to, to bury their dead and modify the earth; a place of lasting significance.

Amesbury 42 has an interesting spatial relationship with the eastern portion of the Stonehenge Cursus, which appears to be aligned on it (Fig 2; Pearson forthcoming). The western end of the Cursus extends east to west, apparently aligned on a notch in Beacon Hill, but after about 600m a kink directs it slightly further north, onto Amesbury 42. This change in direction is most noticeable along the southern side of the Cursus, which is generally the best preserved. Long barrows are usually ascribed to the early Neolithic (eg Richards 1990, 263; Darvill 1997, fig 4) and it is therefore assumed that Amesbury 42 predates the Cursus, however, radiocarbon dates from the eastern end of the Cursus and the primary fill of the long barrow ditch are very similar, at around 3630 to 3375 BC (Mike Parker Pearson, pers comm).

Some form of monument was probably present on the Ridge in the mid-4th Millennium BC when the Cursus was constructed, although perhaps it was only the earlier form of the long barrow (Thomas *et al* 2009, 49). Causewayed ditches around long barrows are relatively rare (Field 2006, 70) although another potential example has been mapped from cropmarks near Woodhenge (Bishop 2011, fig 8). The causewayed pits were deliberately dug into fresh chalk which may have been used to resurface the mound and enhance its visibility. This activity may form part of wider changes in the landscape around the time of the first stone settings at Stonehenge (Thomas 2008, 90).

Stukeley and later Hoare observed that a long bank extended across the full width of the Cursus. Stukeley described the bank as terminating the eastern end of the Cursus (Burl & Mortimer 2005, 90) and some of his original sketches appear to show small ditches almost connecting the two earthworks (Bodleian Library: MS Gough Maps 229, Folio 128) although Stukeley generally drew them as two completely separate features (*ibid*, Folio 125). Hoare also described the bank as marking the head of the Cursus but recognised that it stopped short, stating that the course was rounded off 55yds [49.5m] away (1812, 158). Much of the eastern end of the Cursus is virtually obliterated as an earthwork, largely as a result of post-medieval and subsequent cultivation: it was bumbake in 1726 (Bond 1991, fig H2). The survival of some of the chalk mound of Amesbury 42 suggests that it served as a plough headland and this is confirmed by the tithe award which shows

the long barrow marking the boundary between arable plots (Thomas 2008, 82; WHC TA Amesbury). The eastern end of the Cursus and its physical relationship with Amesbury 42 can now only be traced as cropmarks on historic aerial photographs and by geophysical survey, which show both ends of the Cursus to be squared off with rounded corners (see RCHME 1979, plate 11).

The combined flint and ceramic assemblages suggest that the Ridge was the focus of various intermittent activities over perhaps two millennia (Cleal & Allen 1994, 81). The resulting palimpsest contains higher proportions of later Neolithic implements and such extensive scatters, with denser clusters, characterise the later Neolithic occupation of many areas. Together with the excavated pits the picture is one of frequent relocation of domestic activity within a relatively restricted area (Richards 1990, 116; Cleal & Allen 1994, 75). The domestic interpretation of surface flint scatters and pits on the Ridge contrast with features on its western flank such as the chalk plaque pit (Harding 1988), nearby early Neolithic post holes (Cleal & Allen 1994, 60) and the conspicuously 'clean' and massive enclosed open place of the Cursus (Thomas *et al* 2009, 52).

The comparability of material recovered from the mounds and from surface collection nearby [W59] indicates that domestic material along the Ridge was incorporated with the turf and topsoil when the round barrows were built (Cleal & Allen 1994, 74). With at least 1ha of topsoil and turf required for each round barrow, large surface areas of the Ridge would have been stripped over a period of generations (*ibid*, 82): each of the newly formed barrows and surrounding stripped areas perhaps glaring white until recolonised.

On analogy with excavated barrow cemeteries elsewhere within the WHS it is reasonable to assume that the round barrows were finally constructed during the Early Bronze Age, despite the lack of firm dating evidence (Richards 1990, 273; Cleal & Allen 1994, 72). Beaker sherds only occur in Amesbury 30 and are not closely datable. The soils buried beneath them indicate that established long term grassland existed when the barrows were constructed. Slight differences in the samples may indicate some temporal and spatial variation concerning levels of grazing, with patches of scrub and taller vegetation. Contemporary occupation no longer focussed on the Ridge itself and there was probably some formalised land management system in operation (*ibid*, 82).

As with the long barrow, the round barrows along King Barrow Ridge are probably the product of multiple phases of activity. This is most evident in the earthworks as changes in the gradient of the central mound displayed by all of the New King Barrows and some of the Old King Barrows (Fig 3; Table 3). Round barrows are often observed to cluster near earlier monuments (eg Exon *et al* 2000, 76). The eastern end of the Cursus, Amesbury 42 and further south the Coneybury henge may have provided monumental foci, although the round barrows are slightly removed.

The topography may have provided the most important setting. Unusually, these round barrows actually occupy the summit of the Ridge: they are strategically placed either side of the Stonehenge Avenue in a zone of high visibility to be as prominent as possible from

Stonehenge (Peters 2000, fig 1; Tilley *et al* 2007, 198) and the Avon valley. The Old King Barrows veer north-eastwards, mimicking the course of a natural valley to their west on which the initial Stonehenge Avenue is almost aligned. It is unlikely that there has been any substantial alteration of the valley's topography and it may have been seen as a significant element of the landscape in its own right (Parker Pearson & Teather 2008, 100).

Hoare commented that the Old King Barrows are lower and flatter and that the New King Barrows increase in height towards the south (1812, 157). This is not quite correct: Amesbury 28 is the highest at 4.4m but the Old King Barrows are indeed lower, further apart and less strictly in alignment. Amesbury 27 to 32 are unique in the Stonehenge landscape as a group of massive and regularly spaced barrows which would have appeared in silhouette on the near horizon, perhaps mimicking the form of the Beacon Hill ridge and Sidbury Hill in the distance (Cleal *et al* 1995, fig 22; Tilley *et al* 2007, 198).

Although excavation has been very limited, examination of the tree-throw holes provides some insight into the construction of the barrows (Cleal & Allen 1994, 57). Most of the ditches had flat bottoms and steep sides, with few finds. The only evidence of potential re-cutting comes from Amesbury 26 (Pitts 1981, 183), although further south a localised recut was observed in Amesbury 19 (Cleal & Allen 1994, 57). The mounds were constructed as a stack of turves and soil and most were capped with a thick layer of homogenous chalk rubble, probably from the ditch. Amesbury 30 completely lacked this chalk capping and only a very thin layer was observed in Amesbury 34. Stukeley's description implies a flint capping for Amesbury 28 (Burl & Mortimer 2005, 104) but despite several tree-throw holes near its summit it is barely mentioned in the published analysis (Cleal & Allen 1994). The lack of variation throughout the mound of Amesbury 32 suggests that the turves were all taken from the same place. The only suggestion of more than one phase of construction from the mound material was found in Amesbury 31, where a layer of mixed loam and chalk was suggested to represent the addition of soil from the de-turfed area after the initial phase of construction (*ibid*, 57).

The arrangement of the round barrows on the Ridge has a strong linear element. The New King Barrows form a slight arc which extends south to north whereas the Old King Barrows are slightly more dispersed and aligned south-west to north-east, following the Ridge (Fig 2). This linear trend is particularly common around Stonehenge and may imply territoriality, with barrows placed along a boundary on land that is marginal to any settlement. These boundaries may have had a range of physical and spiritual meanings (Field 1998).

A linear barrow cemetery (Amesbury 100 to 102 and 130 to 133) extends roughly perpendicularly to the east of the New King Barrows but is largely ploughed out. To the west of the Ridge are several more dispersed barrows (Amesbury 39 to 41 and 125 to 128). A group of 6 circular marks immediately west of King Barrow Wood, initially identified as potential barrows (RCHME 1979, 2), have since been reinterpreted as

agricultural marks. Other features may yet be identified: initial results from recent geophysical surveys suggest the presence of several potential hengiforms immediately west of the Ridge (Henry Chapman, pers comm; Tim Darvill, pers comm). South of the A303, on West Amesbury Down, the round barrows sit more on the flanks of the Ridge, those to the west overlooking Stonehenge Bottom (Bishop 2011).

Perhaps the next change in the prehistoric landscape is the imposition of a linear boundary or field system. This is indicated by cropmarks of a long ditch with perpendicular off-shoots which extends in a broad arc across the Ridge, from just beyond Luxenborough Plantation to the south-west, passing between Amesbury 26 and Amesbury 27 and continuing eastwards for about 400m (Fig 2).

The designed landscape

In 1725 Charles Douglas, the 3rd Duke of Queensberry, inherited the Amesbury estate from his uncle. This marks the beginning of a period of improvement and expansion lasting until his death in 1778 (RCHME 1979, xx; Darvill 2005, 88). Henry Flitcroft's survey of 1726 shows the Abbey house with enclosed formal gardens to the north-east, all surrounded by a Park of about 30 acres (WHC 944/1, 2). A double avenue extended between the house and the church, east of which were plantations in geometric blocks. The Park was bounded to the north-west by an earlier, perhaps medieval, canal which cut off a meander in the River Avon. The new symmetrical blocks either side of the house have also been attributed to Flitcroft (Crowley 1995, 33).

New gates to the east were erected between 1720 and 1725, beyond which a new entrance avenue, later named 'Lord's Walk', was planted to provide private access from the London road. The formal gardens were removed and a ha-ha around the house constructed in 1733. His purchase of West Amesbury manor in 1735 allowed the Duke to expand the Park west across the river into Vespasian's Camp. Charles Bridgeman's plan of 1738 (Bodleian Library: MS Gough Drawings a3* Folio 32) accordingly shows a larger scheme which included clearings for pavilions, grottos and terraces but it does not appear to have been carried out in its entirety: perhaps because Bridgeman died in the same year (RCHME 1979, xx). The grotto, known as 'Gay's Cave', was constructed into the eastern side of the hillfort's ramparts, a formal garden laid out in front and a Chinese pavilion erected spanning one of the watercourses through the Park (Lane 2011, 28). Andrews and Dury's map of 1773 (WAHNS 1952) shows formal rides and avenues in Vespasian's Camp in a similar arrangement to Bridgeman's plan, but features such as the kite-shaped kitchen garden were not completed by 1748 and were left unexecuted (Crowley 1995, 33).

The purchase of Countess Court manor in 1760 allowed further expansion and in 1773 the Park was about 360 acres (ibid). A field book of 1771 records the Park beyond the Pleasure Ground as pasture (WHC 944/3) and Andrews and Dury's map shows the Park extended to include the New King Barrows, which are shown as part of the wider

parkland dotted with trees (WANHS 1952). Some of these are presumably the Scots Firs planted on top of the barrows (Hoare 1812, 157). The pattern of trees east of the Ridge are popularly known as the 'Battle of the Nile' clumps, however, these too were probably planted within the Park by 1778, twenty years before the great naval battle took place (RCHME 1979, xxi; Crowley 1995, 15).



Fig 6: Mid-19th century land use. Land use mapping is based on the 1846 Tithes Award (WHC TA Amesbury) and shown at 1:20,000. The base map is © Crown Copyright 2011. All rights reserved. Ordnance Survey Licence number 100024900.

Extension of the Park necessitated the re-routing of the Amesbury to Market Lavington public road, which can now only be traced as a cropmark (Fig 2; RCHME 1979, 32). The Duke was the principal creditor of the Amesbury Turnpike Trust and in 1775 he built the Queensberry Bridge to carry the main London road (Chandler 1979, 2). A new course was dug for the River Avon at the same time and the ornamental Balluster Bridge to the north of the Park was constructed within the next few years. The earlier canal may have been filled in at the same time, although a watercourse through the Park is still marked on Hoare's map of the Stonehenge environs (1812).

The full extent of the Park was short-lived: on the death of the 3rd Duke in 1778 some land was disparked (Crowley 1995, 33). By 1823 much of this land had returned to arable although the barrows were still topped with trees (WHC 283/202). The sheer size of the barrows and the presence of established trees must have deterred any attempts to plough them flat (RCHME 1979, xviii). Twenty years later beeches, yews and other species had been added to create plantations and a Keeper's house built between Amesbury 26 and Amesbury 27 (WHC TA Amesbury).

The plantation banks were probably constructed in the third or fourth decade of the 19th century, around the same time as more trees were planted. The presence of banks aligned with the division of arable plots east of the plantations probably reflects a period of cultivation prior to their creation. The west-north-west to east-south-east alignment is approximately the same as a boundary marked in 1823 that probably reflects the division between the medieval manors of Countess Court and West Amesbury, both by then part of the Amesbury Estate (WHC 283/202). Several of the arable plots east of the plantations retained the name 'park land' in the Tithe Award (Fig 6; WHC TA Amesbury) and are still cultivated today.



Fig 7: The gunpost on Amesbury 37.

The military landscape

Even this relatively small area has not escaped the attention of the military based at Larkhill in the 20th century. Although the slight divot on top of Amesbury 37 could be the result of the removal of a concrete holdfast for a heavy anti-aircraft gun, the site was probably a temporary soft installation for one or more light machine guns used in anti-aircraft and ground defence (Lowry 1996, 61). The earthen bank may have been supplemented with sand bags to protect the gunners. The gunpost may have been constructed to defend the nearby siding of the Larkhill Military Light Railway (Fig 2), although a Second World War date is perhaps more likely given the presence of other gunposts, including that on Winterbourne Stoke 48, and lines of barbed wire forming a defensive circuit around Larkhill (Bishop 2010, fig 12; Bishop 2011). The round barrows provided convenient elevated defensive positions for the duration.

CONCLUSION

The rapid survey was most successful in adding post-medieval and later features to the archaeological record and defining their impact on the earlier round barrows. It complements other Level 1 surveys conducted across the WHS (Bishop 2011), providing an enhanced landscape context for the Level 3 surveys of specific monuments. The more detailed Level 3 surveys highlight that each of the barrows was probably constructed in at least two phases and record the location of the storm damage in the late 20th century.

METHODOLOGY

Rapid field investigations, or Level 1 surveys (Ainsworth *et al* 2007, 23), were conducted in areas of woodland and open access grassland along King Barrow Ridge. They comprised roughly parallel transects, about 20m apart. Field data was collected using a Trimble GeoXt mapping grade receiver using GPS and a differential measurement supplied in real time from EGNOS and transformed to OSTN02, giving an accuracy of 0.5m-1m. Attribute forms compiled in Korec's FastMap Workflow software were loaded on to the GeoXt and used to gather data on the features surveyed.

Additional observations and taped measurements were gathered in a field notebook and members of the survey team took photographs using digital cameras. The mapping and attribute data forms were downloaded from the GeoXt using Korec's FastMap Workflow software and converted to .shp file format for enhancement in AutoCAD Map 2011 prior to loading into the Stonehenge Landscape project GIS.

Monument records for each site surveyed have been added to the English Heritage National Monuments Record's archaeological database and existing records enhanced. The main elements of the monument record comprise location, indexed interpretation, textual description and main sources.

Table 2: NMR's archaeological database records.

Event:	UID: 1539451	English Heritage: Stonehenge WHS Landscape Project – Level 1 survey
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Event:	UID: 971712	RCHME: New King Barrows - Level 3 survey
Archive:	AF0884415	RCHME: King Barrow Ridge, Wiltshire

Monuments:	Existing	Amended	New	Revised total
King Barrow Ridge	13	13	3	16

In compliance with English Heritage guidelines (Dickinson 2008) the project archive has been deposited in English Heritage's public archive, at: The Engine House, Firefly Avenue, Swindon, SN2 2EH, where it can be consulted.

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Abbreviations used in this report

EGNOS	European geostationary navigation overlay service
GIS	Geographical Information System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
HBMC	Historic Buildings & Monuments Commission
NMR	National Monuments Record
RCHME	Royal Commission on the Historic Monuments of England
SPTA	Salisbury Plain Training Area
SRP	Stonehenge Riverside Project
SSEW	Soil Survey of England and Wales
WHC	Wiltshire & Swindon History Centre
WANHS	Wiltshire Archaeological & Natural History Society

APPENDIX

Table 3: Measurements of the surveyed barrows.

ROUND BARROWS												
Mound Number	Name	overall diameter	Quaffer	mound height	mound base (diameter)	summit (diameter)	base (diameter)	ditch (width)	ditch (depth)	ditch (diameter)	Type	Phase
93255	AMESBURY 26	20	EWK	19	20	6					BOWL	2
93258	AMESBURY 27	47	EWK	42	31	10	35	7	0.3	47	BELL	2
93246	AMESBURY 28	49	EWK	44	32	9.5	29	10	0.6	49	BELL	2
93276	AMESBURY 29	51	EWK	42	40	8.5		8	0.7	51	BOWL	2
93289	AMESBURY 30	54	EWK	32	41	9.5		7	0.2	54	BOWL	2
93295	AMESBURY 31	47	MON	37	35	6		8.5	0.3	47	BOWL	2
93242	AMESBURY 32	44	MON	24	33	11		8	0.4	44	BOWL	2
93250	AMESBURY 33	32	EWK	12	32	9.5					BOWL	3
93242	AMESBURY 34	36	EWK	2	36	10.5					BOWL	2
93245	AMESBURY 35	27	EWK	11	27	14.5					PLATFORM	1
93272	AMESBURY 36	18	EWK	1.8	21	10					BOWL	1
93275	AMESBURY 37	35	EWK	2.2	28	11		6	0.3		BOWL	1

LONG BARROW													
Mound Number	Name	overall length	overall width	quaffer	mound height	orientation	summit (length)	summit (width)	base (length)	base (width)	ditch (width)	ditch (depth)	Phase
21943	AMESBURY 42	62	42	EWK	0.3	N/S	55	16	62	20	11	0.2	2



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