An interim report of volunteer fieldwork conducted at the Valdoe Wood By the 'Secrets of the High Woods' project

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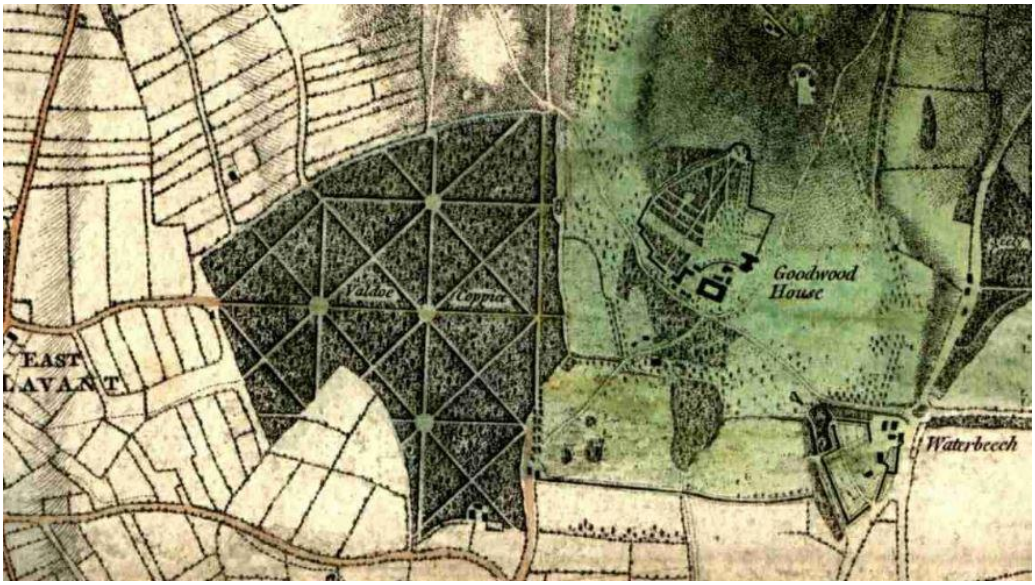
By Michael Pengelly and Alice Thorne



The Valdoe as it appears on the Yeakell and Gardner's map of Sussex (1778–1783)

Project background

The Secrets of the High Woods (SHW) project is an HLF funded project, hosted by the South Downs National Park Authority. The project seeks to identify, map and explore the archaeological heritage of a large swathe of the wooded western downs, using airborne laser scanning (LiDAR) technology.

A high resolution lidar survey of a 305 km^2 area of the wooded western downland region of the South Downs National Park was undertaken in March 2014, and a range of lidar visualisations have been processed from the resultant digital terrain model. A National Mapping Programme (NMP) transcription project, combining both aerial photography and lidar has been commissioned, to provide a full and detailed desk-based record of the archaeological resource in the area.

A series of fieldwork programmes have been devised by SHW project staff working with project volunteers to investigate, explore and record the archaeological resource. The aims of the fieldwork have been as follows:

- To introduce project volunteers to a range of upstanding archaeological features which characterise the historic environment of the South Downs National Park.
- To explore the representation of these features using a range of different visualisation techniques.
- To make a rapid record of these features to enhance our understanding of the lidar visualisations.

Given limitations imposed by differing patterns of landownership, land management, vegetation growth and the time scale of the project, total field verification of the archaeological resource has not been attempted. Rather than a traditional transect survey, the programme of fieldwork has been targeted in areas agreed by project partners, and has been designed to explore specific questions, including:

- investigation of a sample of the different feature types captured by lidar to provide and confirm interpretations;
- investigation of the impact of vegetation and landuse on the representation of archaeological relief;
- investigation of specific questions generated by the NMP programme of desk-top transcription;
- investigation of physical relationships between features, to facilitate understanding of relative dating; and
- identification of sites and themes which can benefit from further field observations or desk based research by volunteers.

Ground verification is, by necessity, non-invasive and the results cannot be seen to provide definitive statements on interpretation or period. The following interpretations are therefore proposals only, based upon observation of the physical topography and relationships observed at the time of the site visit informed by knowledge of the context and analogous features observed elsewhere, alongside any existing associated historic environment records.

This document is intended to summarise the main results of the programme of field verification. This document is also intended to be a working document, which will be updated and developed, as background research undertaken by our archival and oral history volunteers becomes available, or as further fieldwork takes place.

Location

The Valdoe is a wooded area set within the bounds of Grade 1 Registered Goodwood Park, within the Goodwood estate. It is located in the southern part of the Secrets of the High Woods study area (Figure 1). Fieldwork within the Valdoe was conducted during November and December 2014.

Of the five site visits made, two were afternoon training sessions, and three were full survey days. Volunteers contributing to fieldwork were: Ian Brooker, John Grimster, Alison Newell, James Dodd, Dick Cole, Mark Seaman, Neil Stevenson, Mark Allen, Robin Barnes, Mike Bracey, Sue Brown , John Forwood, John Green, John B Green, Michael Lee, James Searle, Alan Stott, Fran Stutley, Henry Wakeford, Sue Webber, Hilary King, Yvonne Heaton, Peter King, Tim Pullan, Laurence Booth, Mike Pengelly and Stuart Watson.

Permission to conduct field work was kindly granted by Darren Norris, (Forestry Manager, Goodwood Estate) and Mark Roberts (Archaeological Advisor to the Goodwood Estate).

Site topography and geology

Valdoe Wood is situated on the south facing dipslope of the South Downs which is on the northern margins of the Sussex Coastal Plain at the foot of the South Downs. The wood contains established hazel and chestnut plantations with evidence of coppicing. The underlying geology is Tarrant Chalk which contains widely spaced but large flint seams[1], although this changes to the Newhaven Chalk foundation in the northern section which contains numerous marl seams. This is covered by heads of clay, silt, sand and gravel including various alluvium channels which pass through the survey area.

Archaeological background

The National Archives note that it is difficult to ascertain with any accuracy the early history of the owners of Goodwood. The name is thought to be Saxon in derivation, and is mentioned in the Doomsday Book. Originally the most important house and estate in the Goodwood area was Halnaker (whose park is immediately adjacent) and in 1540 Goodwood formed part of the Halnaker Estate[2]. English Heritage record that the earliest record of a park at Goodwood dates from 1597[3].

Goodwood House (English Heritage Listing 1216953) is a Grade I listed building. English Heritage record that the house was constructed on the site of an Elizabethan building, purchased by the first Duke of Richmond, son of Charles II in 1720 (there is some conflict in accounts on this issue however, as the Goodwood Estate Archives state that the First Duke of Richmond bought the house in 1695–97, at which time the estate consisted of little more than the immediate park and farmland in Boxgrove and East and West Hampnett[2]). The original building was used as a hunting lodge, before being pulled down, with the present house built by James Wyatt for the third Duke of Richmond around 1787[4].

Following the purchase of the original property by the first Duke of Richmond, a semi-formal landscape around the Jacobean house was established. The park was extended after the current house was constructed in the cmid-18th century, with pleasure grounds and a landscape park developed. The park is now set within a much larger country estate[3].

The Valdoe wood is located to the west of the house, separated from the rest of the park by Kennel Hill road, and abutted to the south by a gravel quarry. English Heritage records that the Valdoe wood

[1] http://www.bgs.ac.uk/lexicon/lexicon.cfm?pub=TACH Accessed 2 March 2015

[2] http://discovery.nationalarchives.gov.uk/details/rd/fbba1ba4-6c87-41e3-a346-b54e7ce6a50c Accessed 15 Jan 2015

[3] http://list.english-heritage.org.uk/resultsingle.aspx?uid=1000157 Accessed 14 Jan 2015

[4] http://list.english-heritage.org.uk/resultsingle.aspx?uid=1216953 Accessed 14 Jan 2015

was originally much bigger, having been reduced to its present size in the mid 20th century. The main reason for this appears to be clearance of the lower southern section of the woods in the period 1961 to 1977 prior to the development of the gravel extraction quarry shown in the Local Relief Model (LRM) image in Figure 2. The remaining areas of the woods contain vestiges of the formal walks shown established by 1770 (Figure 1).

Archaeological features and finds within the Valdoe date from the Palaeolithic to the modern era. The following are of particular note: The main visible archaeological feature within the woods is a 1km section of earthworks denoted by a bank about 2m high with a ditch up to 6m wide. Known as the Devil's Ditch, it runs WSW for 490m from the edge of the Valdoe then turns WNW near the centre of the wood, continues for about 100m, before resuming a broadly WSW course for the remaining 410m towards East Lavant Lodge. The earthwork becomes slight towards the western end near East Lavant Lodge. The Devil's Ditch in Sussex has been documented by antiquarians since at least the 18th century. It is part of a group of linear earthworks on the gravel plain between the foot of the South Downs and Chichester Harbour. The entrenchments run from Lavant to Boxgrove and appear to enclose the area of the coastal plain to the south. It has been suggested that these marked out a high status, proto-urban tribal settlement (or '*oppidum*') preceding the Roman invasion (Cunliffe, 1991: 153). A settlement excavated at the terminus of Devil's Ditch in Boxgrove in 1983 was suggested to pre-date, or be contemporary with the construction of the Devil's Ditch (Bedwin, 1995: 64). This excavation produced large quantities of pottery, gravelled surfaces, and evidence of the production of coinage, in the form of coin moulds (Bedwin 1995). The Devil's Ditch is thought to date to the Late Iron Age (about 100 BC–AD 43) but was recut and extended in places during the medieval period. The name of the entrenchment is derived from a local tradition, which holds that the ditch was the work of the devil in an attempt to channel the sea and flood the churches of Sussex[5].

Also of note is the gravel quarry at the southern edge of the Valdoe where a programme of archaeological assessment, funded through the Aggregates Levy Sustainability Fund, was undertaken ahead of a renewed and final stage of gravel extraction at the site. The subsequent analysis revealed archaeology relating to the transport and modification of Palaeolithic bifaces. These signatures formed part of wider patterns of land use operated by the same hominin groups found at Boxgrove, within a single, developing palaeo-landscape. It was concluded that further activity sites remain to be discovered within the general environs of the Valdoe and the parish of East Lavant where historically there have been surface finds of bifaces (Pope *et al,* 2009).

[5] http://list.english-heritage.org.uk/resultsingle.aspx?uid=1005875 Accessed 14 Jan 2015

Fieldwork results

A range of features of archaeological and historic interest were investigated during the programme of fieldwork. A summary of the principal feature types are summarised in proposed period order below. Locations are shown overlying the LRM lidar visualisation on Figure 2.

Lynchets: Probable Prehistoric


Feature 63. Facing North. NGR 487350 108850

A number of lynchets were observed during the process of field survey. These were often quite slight in profile, with Feature 27, for example, measuring approximately 5.8m wide and about 20 to 30 cm high. Feature 63 was thought to be cut by the Devil's Ditch (see below), suggesting that the lynchet system is an earlier feature.

These features are thought to represent field systems, and appear to be part of a wider network extending to the north of the site, currently being mapped by the NMP programme. The preservation of these features within the Valdoe is testimony to the protection offered by the woodland, which has protected them from later ploughing.

Dating these networks of morphology alone is difficult, and in this case all examples recorded by volunteers were attributed a broad 'prehistoric' date. These features appear to predate the Devil's Ditch, and certainly predate the woodland structure.

It is interesting to note that there is evidence of prehistoric settlement within the vicinity of these field systems. The NMP is working on mapping cropmark remains of a probable later prehistoric or Roman settlement complex to the north of the Valdoe, where an excavation in 1993 found evidence of both Later Neolithic/Bronze Age pits and pits and postholes of a small, unenclosed Iron Age settlement (Kenny, 1993).

Devil's Ditch: Probable Late Iron Age


Feature 24. NGR 487472 108861

Devil's Ditch is a well-known feature, and has a significant footprint on the lidar visualisations, particularly the Local Relief and Single Hillshade models. Although the lidar data is not conclusive, in a couple of places the Devil's Ditch appears to 'cut' some lynchet systems. The Devil's Ditch was also found to have been 'cut by' a number of later banks, ditches and quarry pits. For example at NGR 487457 108855, the feature is cut by a forest ride and by a possible pond or pit feature (Feature 32).

The investigation also revealed that there was considerable variation in the height, width and condition of the Devil's Ditch. For example, at Feature 24, the profile measured approximately 8m wide (bank to bank) and approximately 1.6m deep. However, another alignment, Feature 25, measured approximately 18m wide (bank to bank) and was only approximately 30cm deep.

It is unclear why the feature has such a considerable change in topography along its length, but it is likely that some sections of the dykes may have been maintained, re-cut, backfilled or re-modified during later periods. While the Chichester entrenchments are believed to be Late Iron Age in origin (Bradley, 1971: 33) (Bedwin, 1984: 69). However, other excavations, particularly within the vicinity of Halnaker Park, have shown that some sections appear to date from the medieval period (Holmes, 1968; Bedwin, 1982).

Some re-modification of the ditch and bank may have occurred during the medieval period, but it is also possible of course that post-medieval landscaping and woodland practise within the Valdoe may also have resulted in some modification of the topography of the feature.

Earthwork Feature Adjacent to Devil's Ditch: Unknown Date.

Feature 29. NGR 487527 108792

An unusual earthwork feature was also noted adjacent to The Devil's Ditch, close to the point at which it deviates from its straight alignment, forming a 'kink' in its orientation. This earthwork was found to be very feint, but identifiable as a slight ditch in some places.

The function and significance of this monument is unknown. Its location so close to The Devil's Ditch, and at a break in its alignment appears significant, although whether The Devil's Ditch respects the feature or vice versa is unknown.

Its character is unclear – it is located on a slight rise, and could represent the trace of a small enclosure. Further non-invasive archaeological survey such as geo-physics (vegetation permitting) could help to characterise the nature of these earthworks further.

Bank and Ditch: Parish Boundary

Feature 22. NGR 487620 108850

As mentioned above, some sections of The Devil's Ditch retained a purpose into later historic periods, well after its original purpose had been forgotten. Within the Valdoe, it is possible to see how The Devil's Ditch was in part re-used as a parish boundary between East Lavant and Westhampnett. From approximately NGR 487620 108850 the parish boundary deviates from the line of The Devil's Ditch, heading south, and is defined by another, smaller, bank and ditch alignment (Feature 22).

It is very difficult to generalise about the age of parish boundaries. In some cases, some parts of the parochial structure could have its origins in the Anglo-Saxon period. The majority of parish churches are thought to have originated during the 10th to 12th centuries and the patterns of parish structure is thought to have been fairly stable since the 13th century (Winchester, 2000: 12–13).

However, while on the whole boundaries can often remain a stable element of the historic landscape, there are many mechanisms by which the territories of parishes could change over the years. These include the creation of new churches from rural chapels, the amalgamation of small parishes into one, or the enclosure of common land, resulting in the definition of territory which had previously lacked formal boundaries. A particularly significant period of change occurred during the late 19th century, following the creation of civil parishes from 1889 (Winchester, 2000: 8).

It is also important to remember that formal boundaries, such as those identified at the Valdoe, can also be later than the actual parish itself. It is possible that some parish boundaries were first defined in respect to significant features (significant trees or pre-existing monuments for example), only later becoming defined by especially constructed ditches and banks.

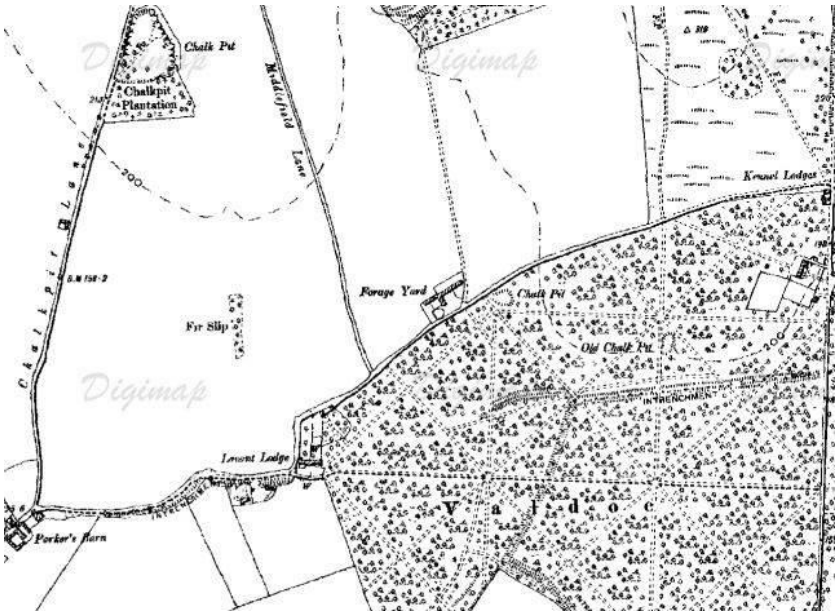
Pits: Probable Post-Medieval

Feature 31 NGR 487904 109065

The lidar depicts a number of large pits across the study area. Three of these were visited during the programme of field survey. Feature 31 was found to be oval in plan, measuring approximately 29m by 17m, with a depth of 3.5m. Feature 10 comprised two adjacent sub-oval pits each approximately 30m by 17m. These features were noted to cut an underlying lynchet.

These have been recorded as chalk extractive pits. Chalk and marl pits are ubiquitous features on the South Downs. Subsoil, dug up and added to the topsoil often produces a mixture more fertile than either would be by themselves (Rackham, 2003, 165). In the 19th century, the agricultural writer Young recorded that traditionally chalk was used either as rubble or burnt to produce lime and was generally used on meadow land, while marl, which consisted of clay and lime was spread on arable land (Young, 1808).

Pits for chalk and marl can date from many different periods. Some may have Roman origins, and by the 13th century disused marl pits are often documented. However, during the 18th and 19th centuries, there were increased levels of construction (roads, houses, agricultural buildings), and a renewed fashion for liming/marling of fields associated with the agricultural revolution (Rackham, 2003: 163). The presence of old chalk pits within the Valdoe woods in the 19th century is testified by the 1899 County Series Map which shows two large chalk pits within the woods and a lane to the west annotated "*Chalk Lane*" leading to "*Chalkpit plantation*" on which earlier maps[6] have indicated the presence of a lime kiln. Whether these features would have been worked within the managed woodland, or could perhaps originally date to the period before the Valdoe was formally established, is unknown, and documentary research into the historic economy of the Goodwood Estate may help provide further evidence in this respect.



Ordnance Survey County Series 1st revision 1899 Scale 1:2500

[6] 1875 COUNTY Series 1:2500 1st Edition. Accessed on line 8/2/2015 on http://digimap.edina.ac.uk/ancientroam/historic

Pits, Trenches: 20th Century


Feature 30. Zig-zag trenches and pit at NGR 487266 108950

Several pits and an unusual trench system was identified on a slight ridge within the vicinity of NGR 487266 108925. Here a short stretch of zig zag trenching associated with a sub rectangular pit was located by the side of a road (Feature 30). Nearby there was a second, steep-sided square pit around 3.5m wide and 1.6m deep, with corrugated iron sheeting at NGR 487268 108925 (Feature 28).

This small complex of features may represent a small defended locality, a defensive site normally situated on roads and junctions, designed to slow down enemy progress in the event of invasion. Sites like these could be incorporated into a wider defence of barbed wire and observation posts. The complex could include weapons pits (overlooking the road), which could contain anything from men with rifles, to heavy machine guns (Vickers machine gun on a tripod, for example) or mortars. The larger pits or dug outs further back from the road may be for ammunition storage or observation, and it is possible that these could have had a covered roof which has collapsed. The men stationed here could have been a home guard or an army unit (Justin Russell, pers comm).

The site could also have an association with the WW2 military airfield of RAF Westhampnett, which was situated less than one kilometre south of the Valdoe woods and is now the site of the Goodwood racing circuit and airfield[7].

Further research into the military history of the Goodwood estate may help explore this range of features further.


Feature 62. Interconnecting pits at NGR 487362 108891

[7] https://www.goodwood.com/motorsport/history/history.aspx Accessed 9/02/2013.

Nearby at NGR 487362 108891 there is a series of irregular interconnected pits, spoil heaps and ditches (Feature 62). These appear to cut an underlying lynchet, and their function is unclear. It is possible that there may be some more military workings, especially given the proximity of Features 28 and 30 described above. Some background research into the history of Goodwood Estate and the use of the Valdoe may help to clarify the nature of these features.

Conclusions

The lidar data has proved to be an invaluable resource for revealing and exploring the historic landscape of the Valdoe.

A range of features, of different periods, have been identified, testifying to the depth and complexity of the historic landscape of the park.

The field surveys verified the existence of features invisible through tree cover and proved invaluable in showing relative dating sequence. They confirmed that the 18th century layout of the Valdoe wood survives largely intact. They also revealed that the condition and profile of the Devil's Ditch is variable, and has suffered some encroachment. Some unrecorded archaeological features have been revealed, which include possible WW2 trenches, prehistoric linear features, and later chalk pits – all of which have potential for further research.

Potential for further research

Fieldwork at the Valdoe has highlighted some areas/themes which may benefit from further documentary or cartographic research. These are outlined below.

Historic Economy of the Valdoe:

- Formal network of avenues/rides shown on the Yeakell and Garner map (1778–1783). These networks appear to owe much to the formal landscaping movement of the late 17th and early 18th centuries, when landscapes became dominated by a fashion for straight tree-lined avenues, walks and the creation of formal vistas through existing woodland (Rotherham, 2007: 91), rather than the naturalistic schemes preferred from the mid-18th century following the work of Brown or Repton. Are there any documentary records of the planting or establishment of this area of woodland? Who was it designed by, and what is the function of these avenues? Are they simply aesthetic, for visual inter-connectedness, for exercise, or hunting?
- When are they likely to have been established? Are these likely to have derived from the period of the first Duke of Richmond's purchase of the original property in the late 17th or early 18th century, or from the extension of the park following the construction of the current house in the mid-18th century? (Aesthetic traditions can continue, long after the wider fashions have changed.)
- Did the quarrying evident in the lidar imagery take place within a woodland context? Or does it pre-date the woodland structure?

20th Century Military Activity:

- Research into military activity revealed within Valdoe woods. What is the purpose of the zig-zag trench alignment and 'dug outs'? Are these WWII? Is this a small defended locality as suspected? How does this relate to the wider context of defence of the Sussex/Hampshire coastline?
- Can documentary evidence identify who was manning these features (Home guard/army)?
- Also, can any documentary or cartographic evidence help to explain the irregular pitting at NGR 487362 108891.

- The role of Goodwood Estate during the wars, and the historic role of the Goodwood Estate in military recruitment and training (ie 19th century county regiments, as suggested by the presence of 'Target Bottom' to the north of the Valdoe).

Parish structure:

- Look up any research into evolution of the parish structure of the western downland. Has any work been done for this area specifically? Can documentary research help explore this element of the landscape history? (For later, post-Medieval and modern developments, changes may be traced with cartographic regression. For historic changes, documentary sources, terriers, perambulations or even estate charters may exist?) Seek advice from archive specialist as to potential here.

Potential for non-intrusive archaeological research:

- Possible candidate for geophysical survey in enclosure?

Sources Consulted

Maps:

Ordnance Survey County Series 1st revision 1899 Scale 1:2500

Yeakell and Gardner's Sussex 1778–1783, 2inch to 1 Mile. [Online]. [Accessed 24 Jan 2015]. Available from: http://www.envf.port.ac.uk/geo/research/historical/webmap/sussexmap/Yeakell_36.htm

Internet resources:

British Geological Survey Geology of Britain Viewer. [Accessed 10 March 2015]
Available from: http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

British Geological Survey Lexicon. [Accessed 2/3/2015].
Available from: http://www.bgs.ac.uk/lexicon/lexicon.cfm?pub=TACH

English Heritage. The National Heritage List for England. Goodwood House, 1216953. [Online]. [Accessed 14 Jan 2015].
Available from: http://list.english-heritage.org.uk/resultsingle.aspx?uid=1216953

English Heritage. The National Heritage List for England. Goodwood House, Goodwood House, Park and Garden, 1000157. [Accessed 14 Jan 2015].
Available from: http://list.english-heritage.org.uk/resultsingle.aspx?uid=1000157

English Heritage. The National Heritage List for England. Devils Ditch, 1005875. [Online]. [Accessed 14 Jan 2015].
Available from: http://list.english-heritage.org.uk/resultsingle.aspx?uid=1005875

Goodwood Estate Archives. National Archives. [Accessed 15 Jan 2015].
Available from: http://discovery.nationalarchives.gov.uk/details/rd/fbba1ba4-6c87-41e3-a346-b54e7ce6a50c

Bibliography

Bedwin, O. (1982) 'Excavations at the Devil's Ditch, Boxgrove, West Sussex 1981', *Sussex Archaeological Collections* **120,** 37-43

Bedwin, O. (1984) 'Excavations at the Eastern Terminal of the Devil's Ditch (Chichester Dykes), Boxgrove, West Sussex 1984', *Sussex Archaeological Collections* **122,** 63-75

Bedwin, O. (1995) 'Late Iron Age and Romano-British occupation at Ounces Barn, Boxgrove, West Sussex; excavations 1982–1983', *Sussex Archaeological Collections* **133,** 45–101

Bradley, R. (1971) 'A field Survey of the Chichester Entrenchments' in Cunliffe, *Excavations at Fishbourne, Vol 1: The Site*. The Society of Antiquaries.

Cunliffe, B. (1991) *Iron Age Communities in Britain*. Third Edition. London: Routledge.

Holmes, J. (1968) 'The Chichester Dykes', *Sussex Archaeological Collections* **106** 63–73

Kenny, J. (1993) *Lavant: The Reservoir Site at Chalkpit Lane.* The Archaeology of Chichester and District

Pope, M., Roberts, M., Maxted, A. and Jones, P. (2009) 'The Valdoe: Archaeology of a Locality within the Boxgrove Palaeolandscape, West Sussex' in *Proceedings of the Prehistoric Society* **75** 239–263.

Rackham, O. (2003) *An Illustrated History of the Countryside*. Wiedenfield and Nicolson Ltd

Rotherham, I. (2007) 'The Historical Ecology of Medieval Parks and the Implications for Conservation' in Liddiard, R. (2007) *The Medieval Park: New Perspectives*. Windgather Press

Winchester, A. (2000) *Discovering Parish Boundaries.* Shire Publications

Young, A. (1808) *General View of the Agriculture of the County of Sussex.* London: Richard Phillips. 199–

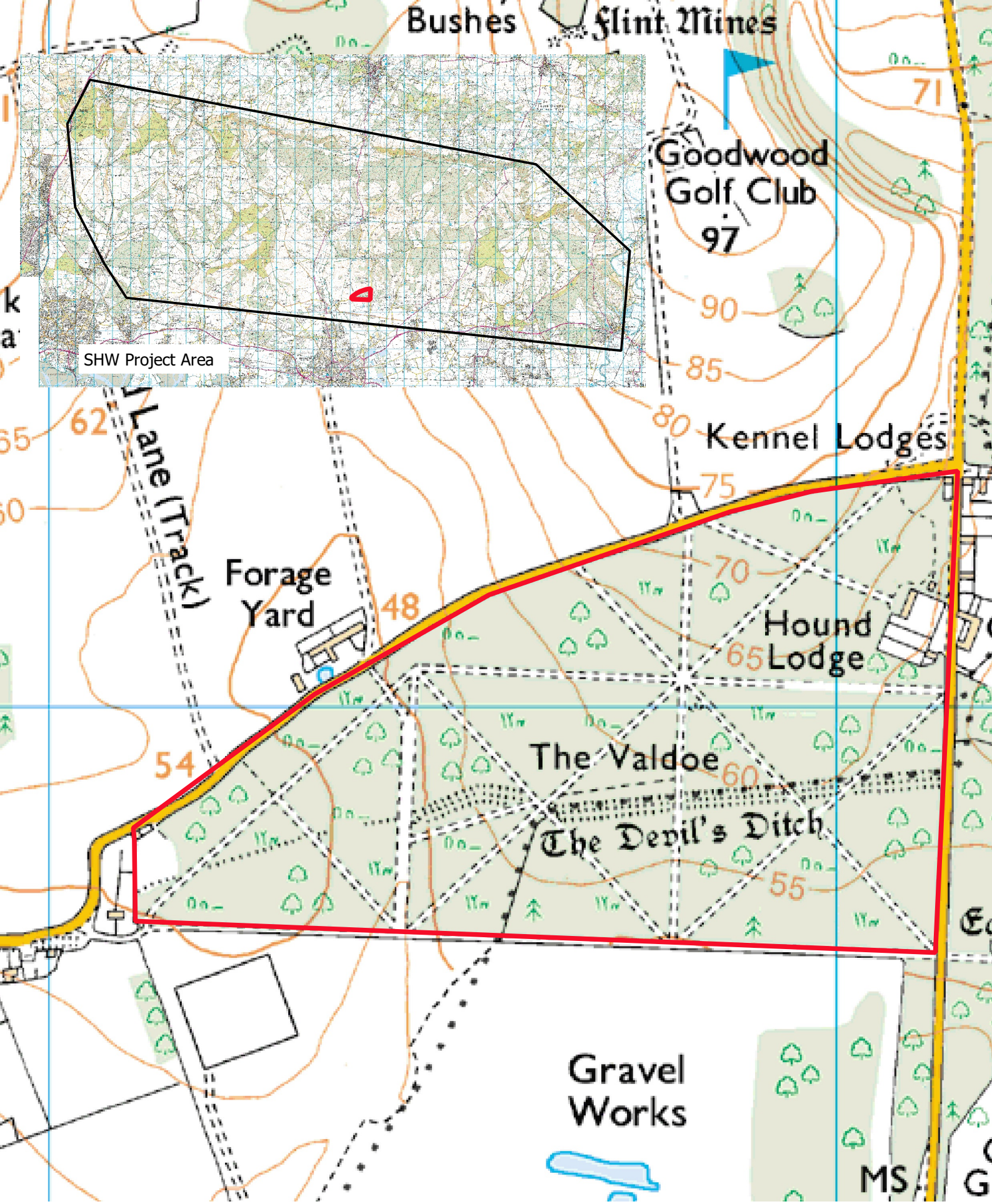


Figure 1

The Valdoe

Legend

Survey Area_Valdoe

Fig 2

Valdoe: Fieldwork Records

Site centred:NGR 487719 108953

0 100 200 300 400 m