

# **Report of volunteer fieldwork conducted in and around Kingley Vale National Nature Reserve, West Sussex, by the ‘Secrets of the High Woods’ project, March 2015 & February 2016**

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Figure 1: View of bowl barrow, HER record #24396 / NMR 584, overlooking West Stoke, Fisbourne and Chichester Harbour (Photo: J. Dodd)



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**Abstract:**

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As part of the multi-disciplinary project 'Secrets of the High Woods' field survey has been conducted to investigate features requiring further on-site investigation through an extensive programme of volunteer based fieldwork, led under the guidance and support of professional archaeologists. This report outlines the 2014-15 and 2016 programmes of fieldwork carried out within and around Kingley Vale, West Sussex, UK. Although the area was already known for the exceptional preservation of features from a range of periods, the LiDAR survey and site visits have expanded and widened our understanding of the extent of the Prehistoric landscape, including field systems, land divisions, access routes and settlements. Later use of the area for flint extraction and as a military training ground, including firing range, and location of a Auxilliary Unit Operation Base is also evidenced. From a technical standpoint, it is worthy to note that this high resolution LiDAR survey, with an average of 10.5 points per metre, was not challenged by the presence of extensive, dense yew tree cover, that constitutes the largest yew forest in Western Europe. 'Secrets of the High Woods' is Lottery Funded.

## **1.0 Introduction**

This report aims to present and discuss the results of field verification of LiDAR data undertaken by the 'Secrets of the High Woods' project within and around Kingley Vale National Nature Reserve, in West Sussex. We will begin by providing a short generic background to the project and description of the area covered within this report. This will be followed by a brief summary of features previously identified by previous research recorded in the Historic England National Monument Record (NMR) and Chichester District Council Historic Environment Record (HER). Given the richness of archaeological findings within the area, the scope of this report will be limited in its consideration of this subject to a list of features and directions for readers to pursue, should they wish to read more widely. This will be followed by an extended section discussing the results of fieldwork and questions suitable for future research. Finally, a short section evaluating and drawing conclusions from the findings will be presented.

## **2.0 Project background**

The Secrets of the High Woods (SHW) project is an HLF funded project hosted by the South Downs National Park. 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<sup>2</sup> area of the wooded western downland region of the South Downs National Park was undertaken in March 2014, and range of LiDAR visualizations 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 characterize the historic environment of the South Downs National Park.
- To explore the representation of these features using a range of different visualization techniques.
- To make a rapid record of these features to enhance our understanding of the LiDAR visualizations.

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 within areas agreed by project partners, and has been designed to explore specific questions. These include:

- Investigation of a sample of the different feature types captured by LiDAR to provide and confirm interpretations;
- Investigation of the impact of vegetation and land use 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 explore potential for 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 non-invasive and the results cannot be seen to provide definitive statements on interpretation or period. The following interpretations are, therefore, proposals only, and this interim report is intended to summarize the main results of the fieldwork. This is intended to be a working document, which will be updated and developed as research undertaken by our archival and oral history volunteers becomes available, or as further fieldwork takes place.

### **3.0 Location, topography and geology**

Kingley Vale and its environs are located within the rolling chalk upland of the South Downs National Park. This area forms part of a wider area of high ground that protrudes southward from the main chalk ridge, affording a commanding view across the coastal plain, Chichester harbour, the open sea and the Isle of Wight, as well as to other high points in the landscape located inland to the North. The area is very prominent from both terrestrial and maritime perspectives, as no other area rising to above 200m is closer to the sea than Bow Hill and The Devils Humps. The foothills of this upland area, around Funtington, lie only a little over 2 miles from the sea, at Cutmill Creek, Chidham. Consequently, the area can be clearly distinguished from a great distance across the coastal plain.

The geological setting of the survey area is chalk, with occasional superficial deposits of clay with flints at the top of Walderton Down and Bow Hill, with head deposits (silts, sands, gravels and clays) located in the dry valleys and at lower elevations lying to the South, at the borders of the coastal plain (Source: British Geological Survey).

The area surveyed during the 2014-15 and 2016 field season was dictated by the boundaries of open access areas, namely the Kingley Vale National Nature Reserve (Natural England), and the Forestry Commission. Permission to conduct fieldwork was kindly granted by Natural England, The Forestry Commission and West Dean Estate. The locality is situated in the Western half of the 'Secrets of the High Woods' study area.

Seven full day site visits were made: five in 2015 and two in 2016. The project volunteers that participated during the surveys were as follows: Stephen Allberry, Sue Brown, Russel Cleaver, Steven Cleverly, Dick Cole, John Crane, James Dodd, Dominic Escott, Kay Gilmore, John Green, Mary Iden, Mike Kallaway, Hilary King, Peter King, James Searle, Mark Seeman, Mark Taylor, Brian Tomkinson, Henry Wakeford and Colin Wheeler. The volunteers were accompanied variously by Alice Thorne, Kimberley Briscoe and Vivienne Blandford.

### **4.0 Outline summary of previous findings**

The following subsections detail a short summary of known archaeological features in the area. These are principally drawn from the Historic England NMR and Chichester HER. For additional information, the reader is referred to freely available period summaries prepared by The Sussex Archaeological Society for a general overview (Drewett 2007; Dunkin & Yates 2007; Kenny et al. 2007a; Kenny et al. 2007b; Gardiner 2007). The aforementioned society's Journal, Sussex Archaeological Collections provides more in-depth specific knowledge on various subjects.

Reference is also made to ArchSearch, hosted by the Archaeology Data Service (ADS). The ADS also hosts freely available copies of volumes 1999-2014 of Sussex Archaeological Collections, with the electronic records due to be added on an ongoing basis.

#### **4.1 Prehistoric**

The survey area is known on a national scale for the variety and extent of its well-preserved Prehistoric features. Neolithic and Bronze Age barrows, cross dykes, field systems, enclosures and settlements are recorded across the landscape. Scheduled Monument status protects many of these features.

#### **4.2 Post Medieval and Modern**

Extraction of chalk, flint and marl is widely attested within the landscape. Several large disused quarries are known in the area from historic mapping, including at Adsdean around Walderton Down.

The presence of a large rabbit warren covers part of the study area in the area immediately down slope of Goosehill Camp. The previous existence of such a feature prepared us to expect the presence of pillow mounds.

The presence of four Auxillary Unit underground installations are known. It is understood from Richard Williamson (former warden of the Kingley Vale National Nature Reserve) and military historians (Kallaway 2016) that the largest underground dugout was an operation base, with the other features having ancillary uses.

As the alert level concerning imminent seaborne and paratroop attack began to lower after September and October 1940, Kingley Bottom began to be used increasingly as a live firing range, making use of the comparative safety offered by the high elevation of the head of thecombe. The area has a long-standing history of use in this capacity, with target shields and a butt being shown on the 1<sup>st</sup> edition Ordnance Survey.

#### **5.0 New discoveries: results of fieldwork**

The results of fieldwork will be discussed according to the periods ascribed to them during field survey. The periods used in this report follow those used by Historic England.

##### **5.1 Late Prehistoric**

The knowledge and distribution of the Prehistoric features identified during fieldwork have been considerable. On a general level, as has been the case within several areas across the project, the extent of field systems is more extensive than was previously understood (Figure 35). Visibility was not adversely affected by vegetation cover, including brambles (records #192 and #215, Kingley Bottom) and established yew forest (record #217). The faintness of the features themselves proved more problematic, such as record #287, that notes that whilst the LiDAR identified the traces of a lynchet, the feature could not be identified during survey.

Hollow ways and track ways provide access to the fields and routes to move across the landscape. In the Eastern area of Kingley Vale, record #283, samples the multitude of braided track ways leading up over higher ground and continuing (#229) to Stoughton Down and points northward (Figure 2; Figure 35).



Figure 2: Deep, braided trackways running up the Eastern arm of Kingley Vale

Others approach from different directions, such as #273 and #293 approach from different directions. Chronologically, it is possible that these access routes are contemporary with the field systems or that they are later additions. The prominent example of #293, to the North of The Devils Humps cuts a Cross Dyke (Figure 3). The outer ditch of Goosehill Camp cuts a faint remnant of a hollow way (record #269; Figure 6). Conversely, track way, record #222, respects an opening in a Cross Dyke (Figure 7-8). The line of an even older track, record #218, whose course respects that of the field system around it, indicates that this access point has considerable continuity of use that extends to the present. Although not inspected during fieldwork, a well preserved linear lynchet trackway system spreading out within a surrounding scheduled field system is also clearly visible on the LiDAR imagery within Down Copse and Walderton Hill Plantation (Figure 9).

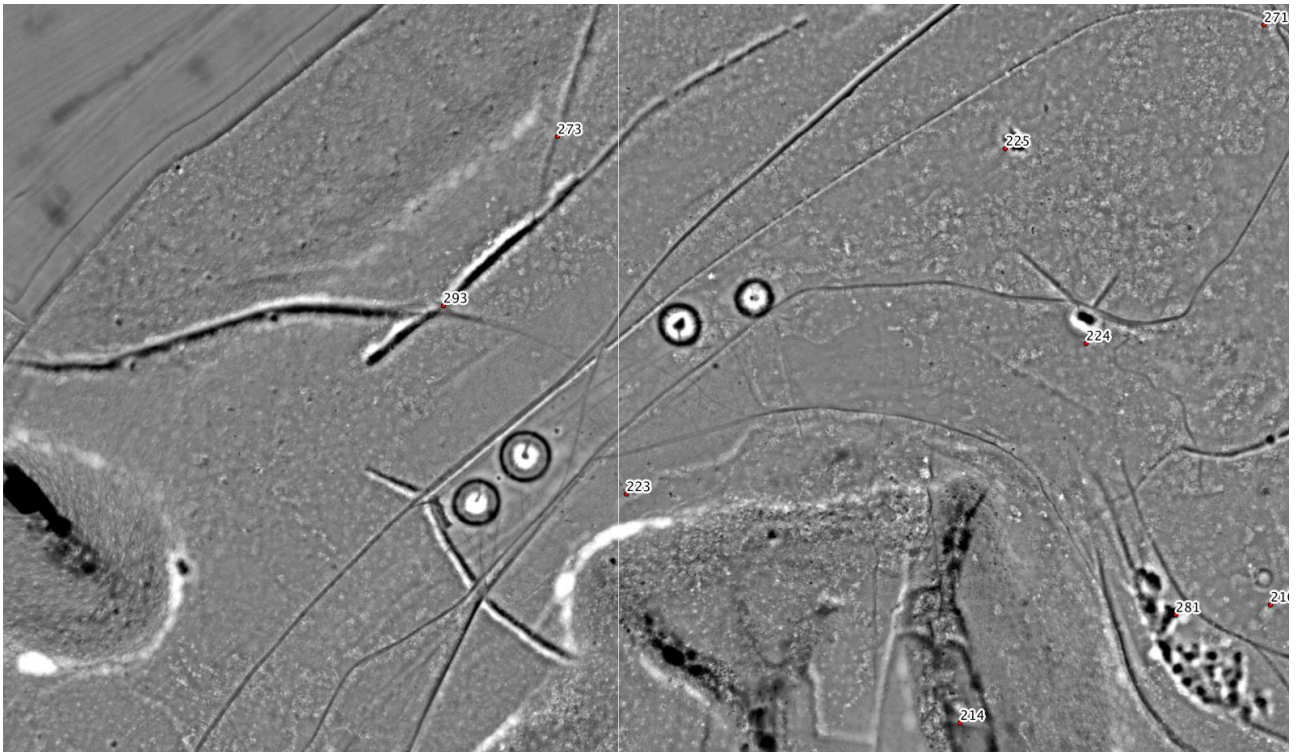


Figure 3: Area of The Devils Jumps, showing barrows, cross dykes and hollow ways



Figure 4: View of trackway seen in left of Figure 2 (photo: J. Dodd)



Figure 5: This deep hollow way continues to be used today as a footpath through Yew Tree Grove (photo: J. Dodd)

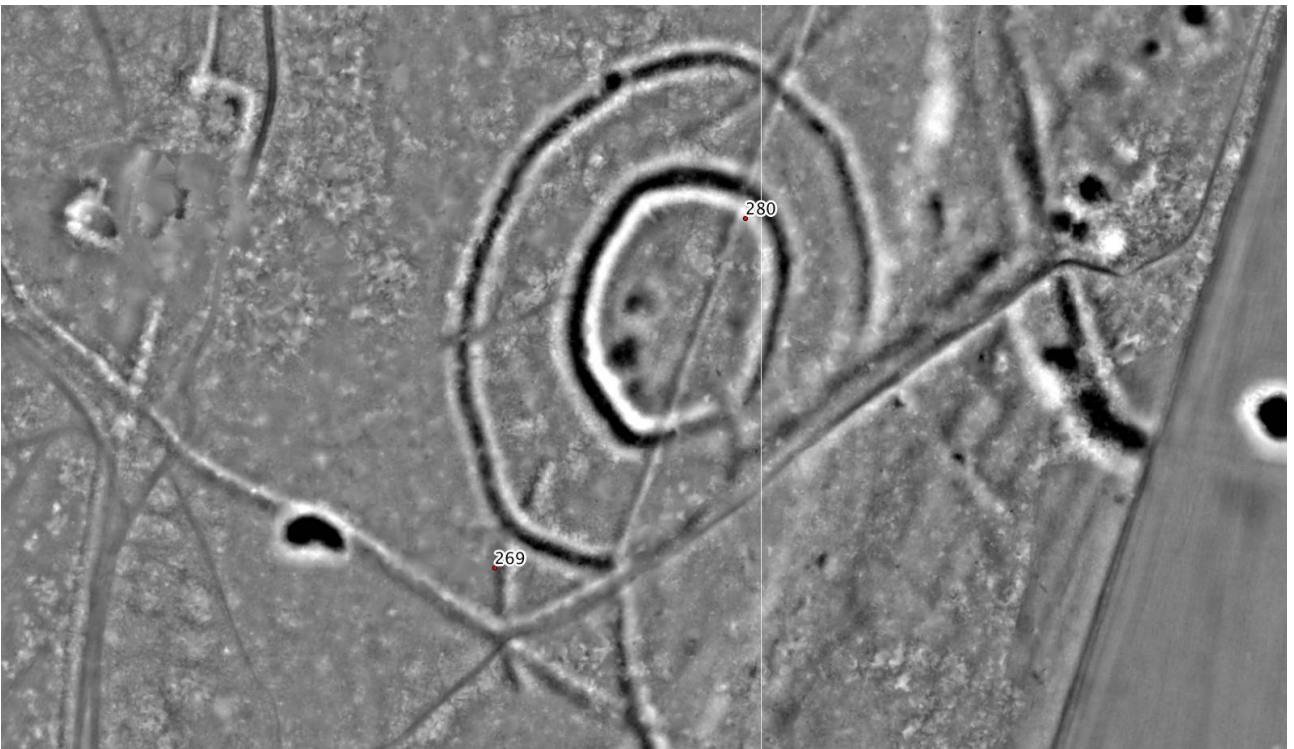


Figure 6: Goosehill Camp

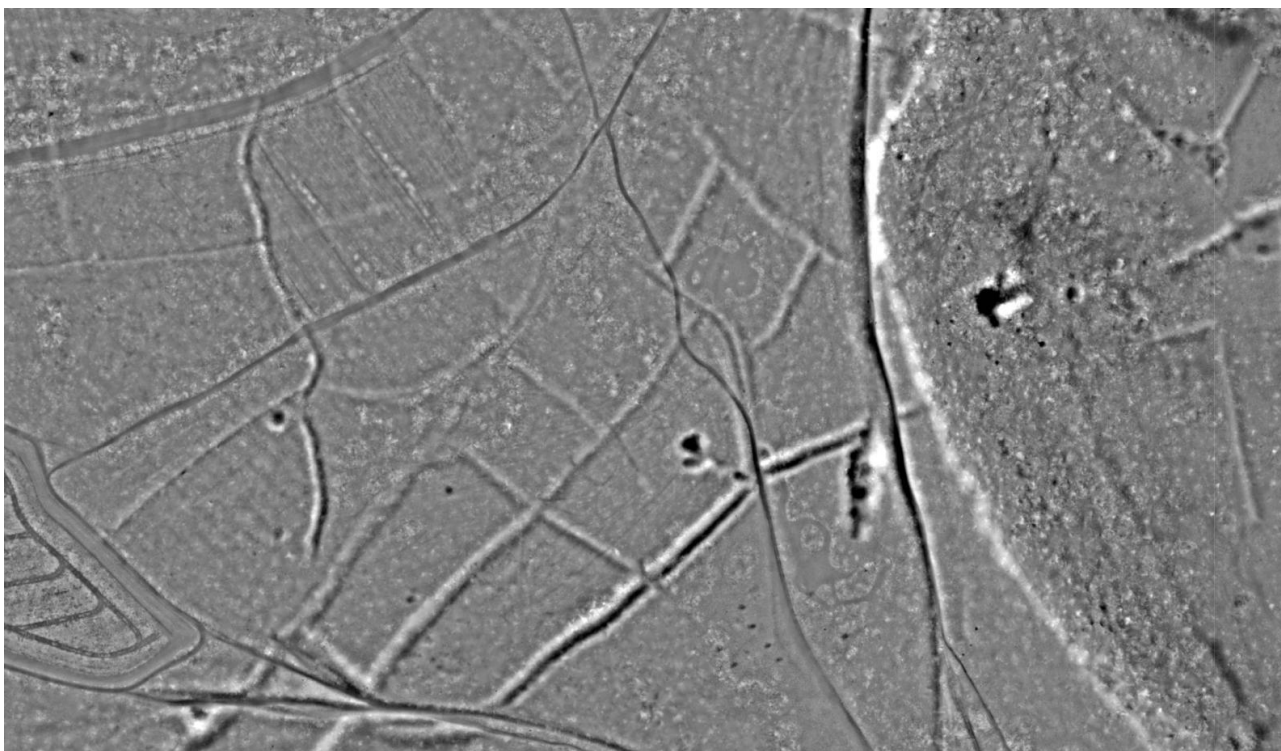


Figure 7: The course of the trackways respecting the entrance through the cross dyke on the Western arm of Kingley Vale.



Figure 8: View of trackway , record #218 (photo: J. Dodd)

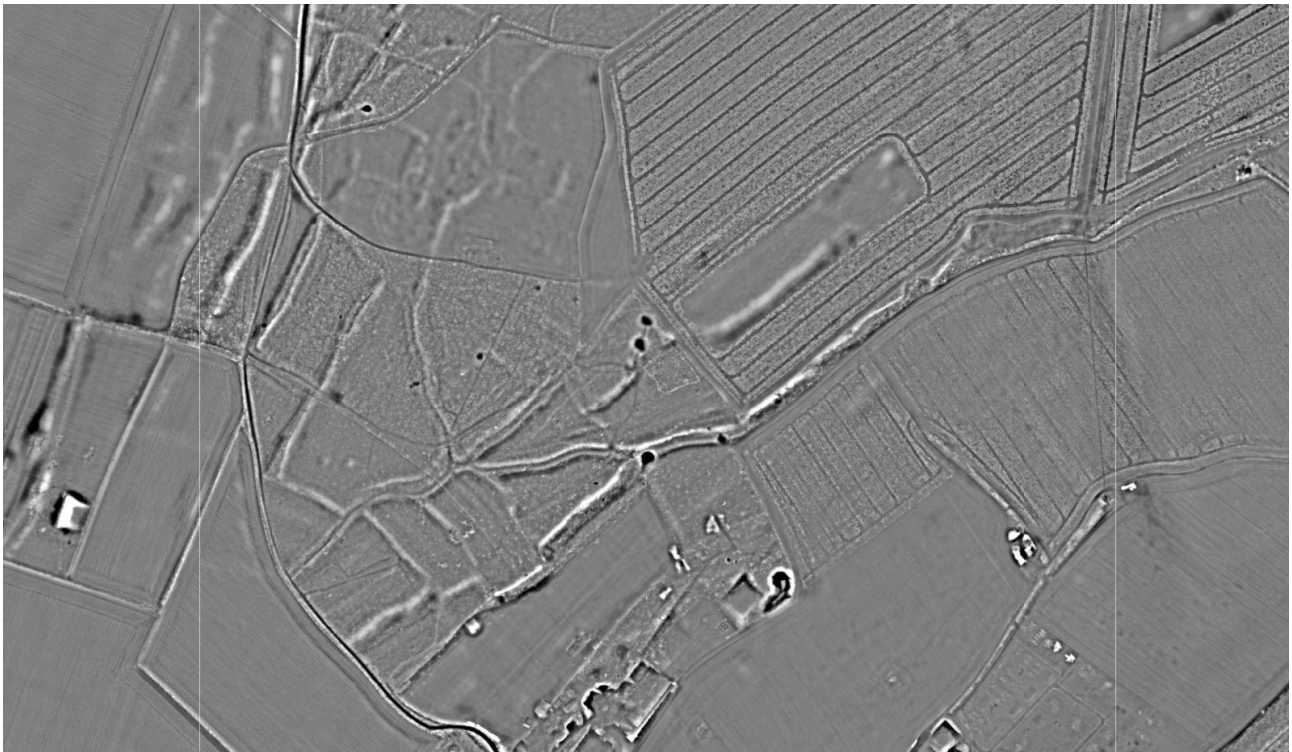


Figure 9: Trackways on Walderton Hill. The location of a possible settlement is also visible toward the top of the image. In the West, two positive anomalies could conceivably be barrows.

Another hollow way, record #2262, Figure 7 & 35, located towards the West of the Kingley Vale survey area, at the top of Walderton Down, cuts across a field system. It is possible that this feature is recent in origin, perhaps Post-Medieval, but it is conceivable that the hollow way became established after the field system that it cuts through went out of use.

Human occupation is not only one characterized by movement. In the area of Kingley Bottom, a large area of scheduling covers an area of settlement, with the HER noting evidence from Prehistoric to Saxon periods. Four clusters of circular platforms were identified, surrounded by enclosures. The sites of three small terraced areas, record #195, were noted as highly probable hut platforms. These in particular are known from the excavations of the Brighton Bypass (Rudling 2000) but are very ephemeral in the archaeological record. It is therefore particularly pleasing to single out these more prominent examples and to distinguish them from larger roundhouse dwellings. There is a high likelihood, that most of the depressions observed on the ground and mapped by the NMP are associated with settlement.

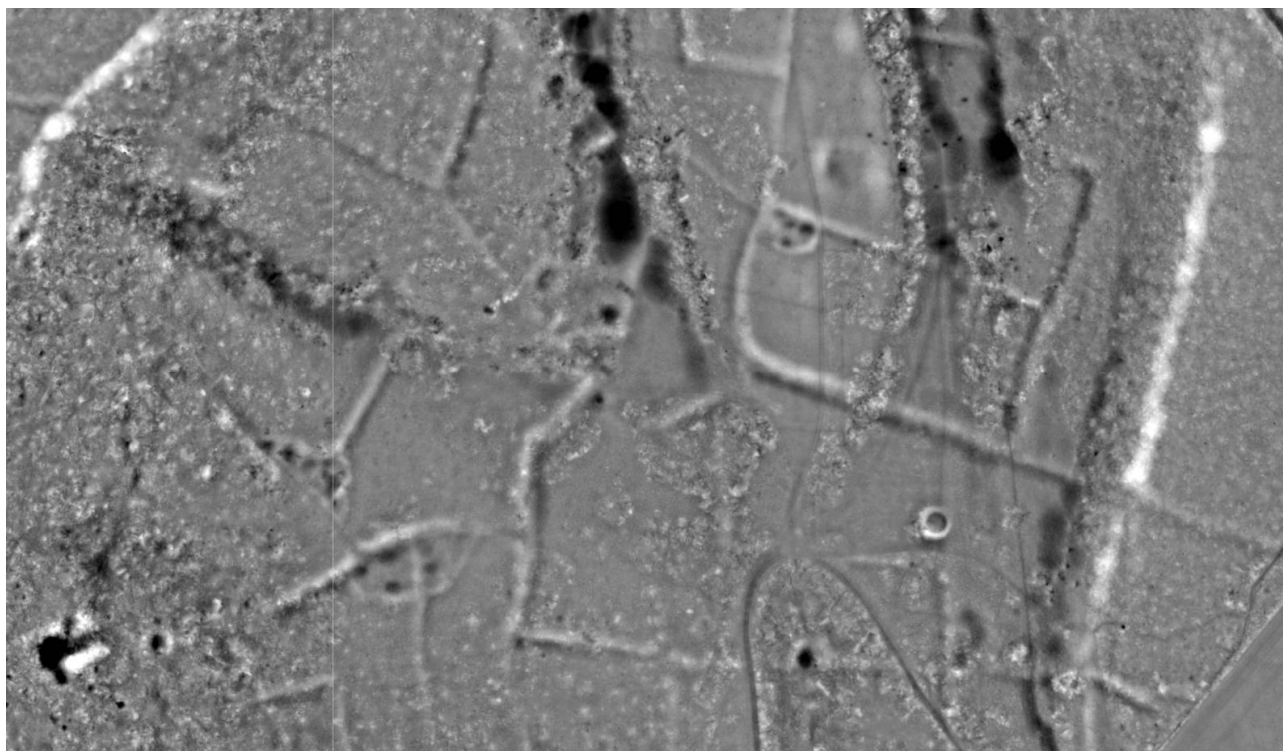


Figure 10: Settlement sites toward the head of Kingley Bottom

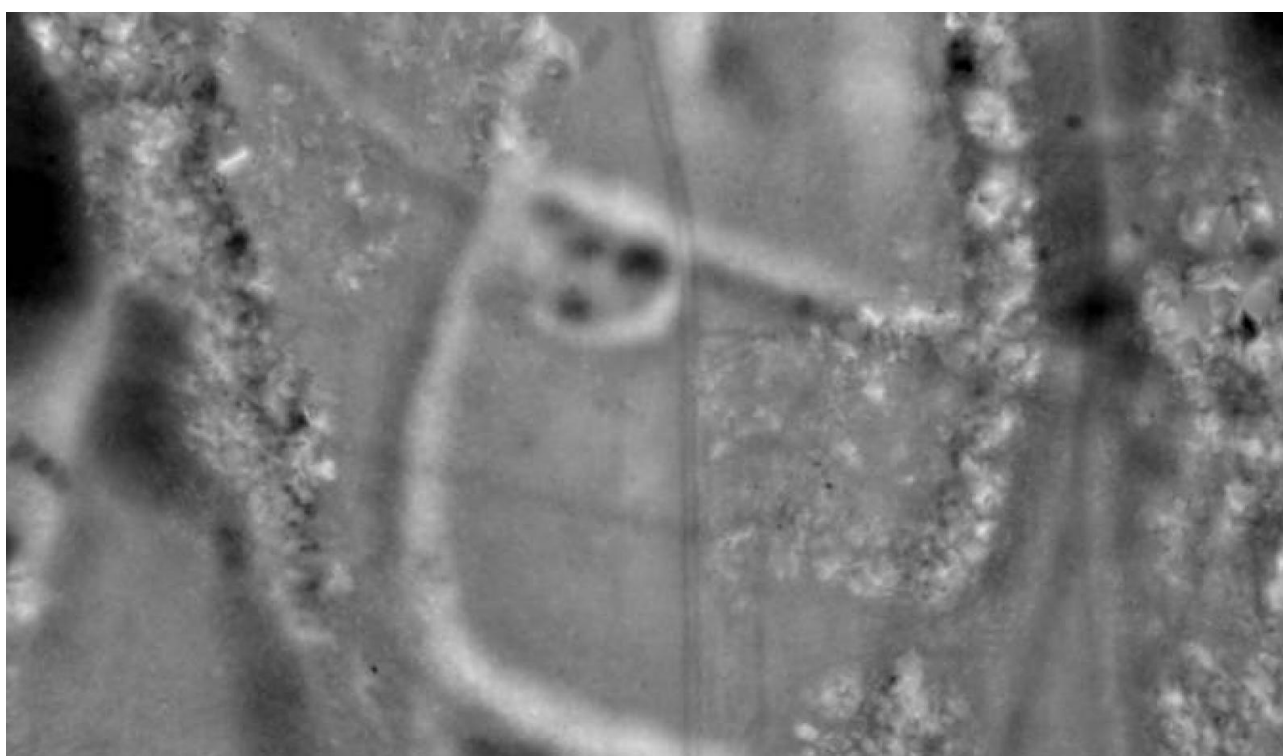


Figure 11: Detail of hut sized platforms at the head of Kingley Bottom



Figure 12: Site photograph of features shown within Figure 7 (photo: J. Dodd)



Figure 13: Rows of lynchets running across the chalk spur at the head of Kingley Bottom (photo: J. Dodd)

However, in the North Western area of the survey area, amongst several, later, deep extraction pits (records #276, #407), a clearly cut ditch (#231) with associated cut platform (#277) are nestled within a surrounding field system located on a chalk spur. This probably represents a previously unknown small settlement site that has been disturbed by Post-Medieval extractive work. Further, subtle terraced areas were also observed and visited on the chalk spur (see Figure 14), but were not recorded due difficulty in distinguishing between further settlement and later forestry activity.



Figure 14: Great Dean Bottom. Traces of possible dwellings are located in the centre of the image.

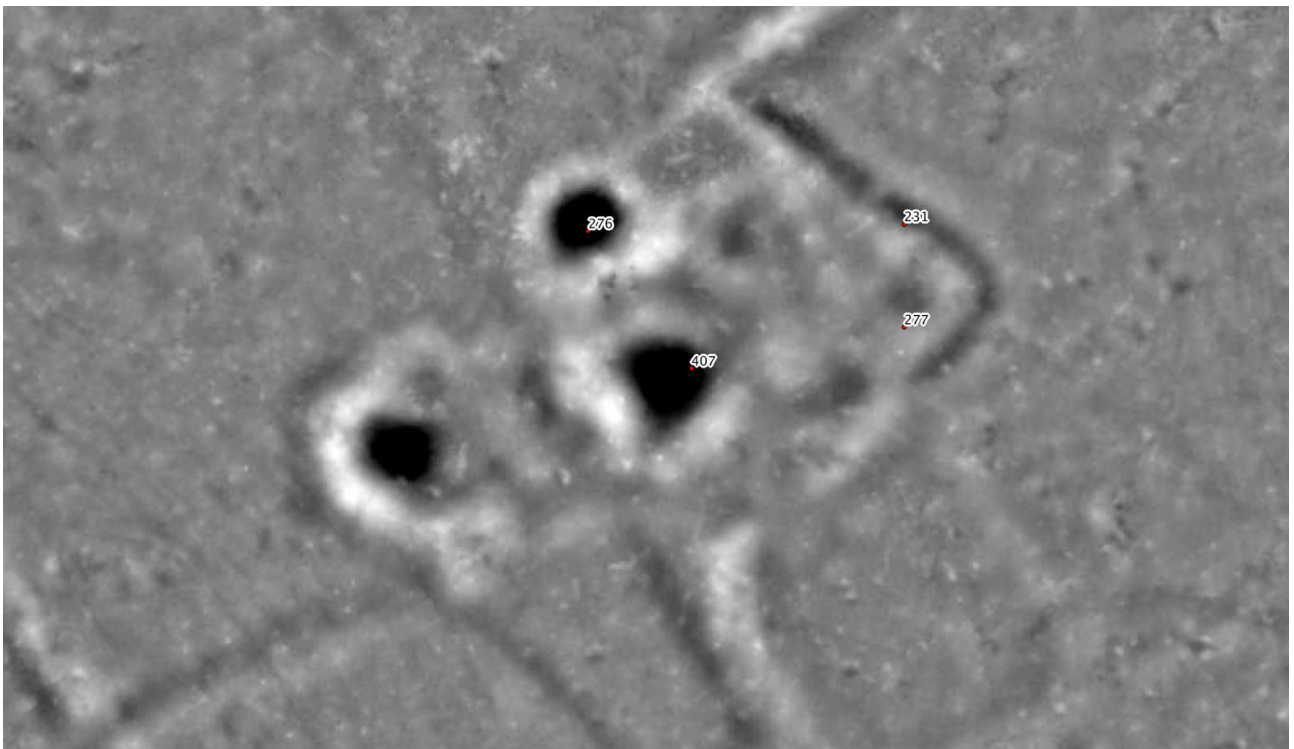


Figure 15: Detail view of possible new settlement discovered near Great Dean Bottom.



Figure 16: Site photograph. The hut platforms and boundary ditch are very subtle, almost invisible in the flat light of the field visit

Evidence concerning the relationship between cross dykes and settlement was noted in the vicinity Bow Hill Camp, which is believed to date to the Late Bronze Age, around 800BC, following from the finds recovered by excavations conducted by Roberts (2013, forthcoming) of UCL. The alignment of cross dyke, record #275, intersects the alignment of the linear enclosure. Conceivably, the cross dyke made use of this during the Iron Age, which was then, in turn breached, or cut by a hollow way, record #229.

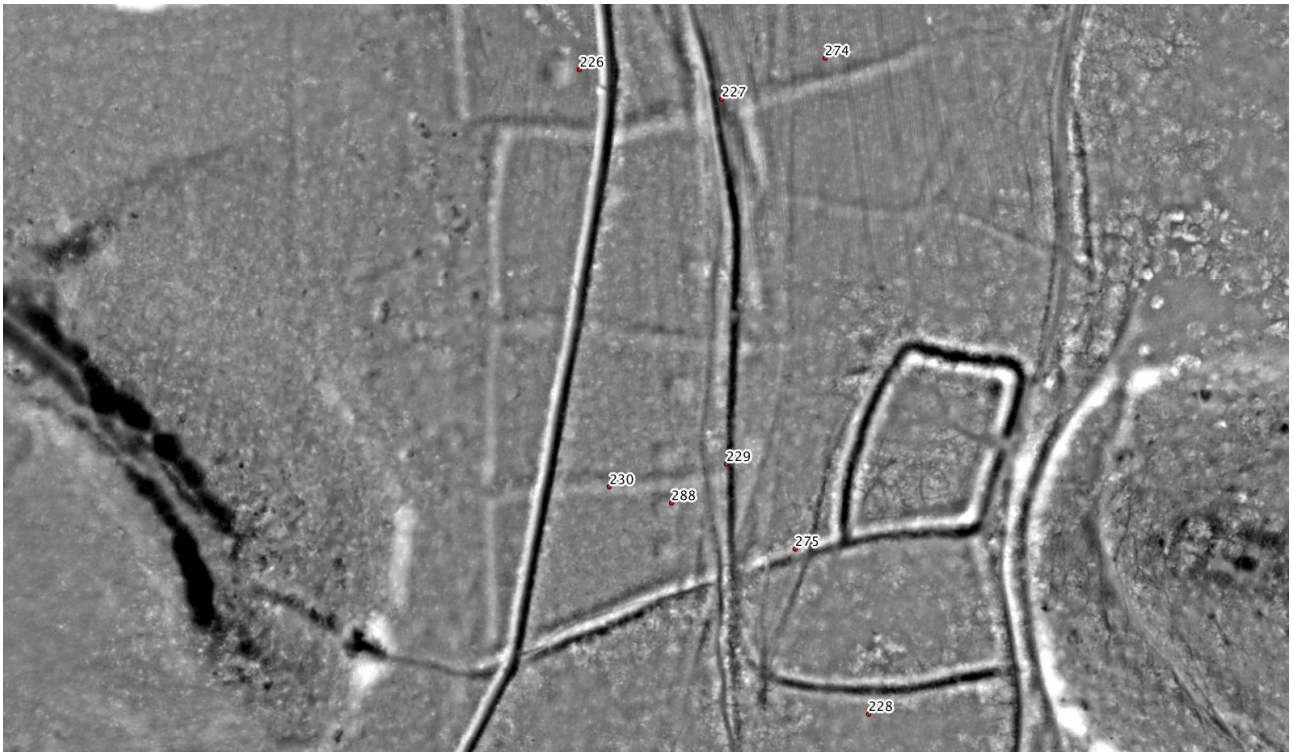


Figure 17: Detail of Bow Hill camp, cross dykes and field systems in the surrounding area

With regard to funerary monuments in the area, modification to the HER will be necessary in the area of HER record #611, #584 and #583. Duplicate records are found here, and only one barrow, seen on the front cover of this report, is found at this location.

Further to the North, on Bow Hill, the NMP indentified the site of a possible barrow. The low round mound was visited (record #2306) and confirmed as the site of a possible barrow, or alternatively field clearance, although on small quantities of flint were visible on the surface.



Figure 18: Possible barrow on Bow Hill. As seen on the LiDAR, record #2306. Note linear bank with ditch feature to South, record #2318, which will be discussed within a subsequent section. See Figure 35 for map of features showing all record numbers.



Figure 19: The same feature as Figure 11, seen in a site photograph (J. Dodd)

Toward the summit of Walderton Down, at the edge of a scarp slope overlooking the upper Ems valley and Stoughton, a number of barrows are located and the results of site visit are worthy of discussion. Historic England record twin bell barrows and one possible barrow. Twin barrows enclosed by a ditch are extremely rare in the archaeological record, with circa half a dozen examples currently known across the UK. It is not possible without intrusive excavation to establish whether the barrows, which are connected by a low ridge running between them and surrounded by a deep enclosing ditch are contemporary with one another. The size of the features and the LiDAR representation proposes that they are.

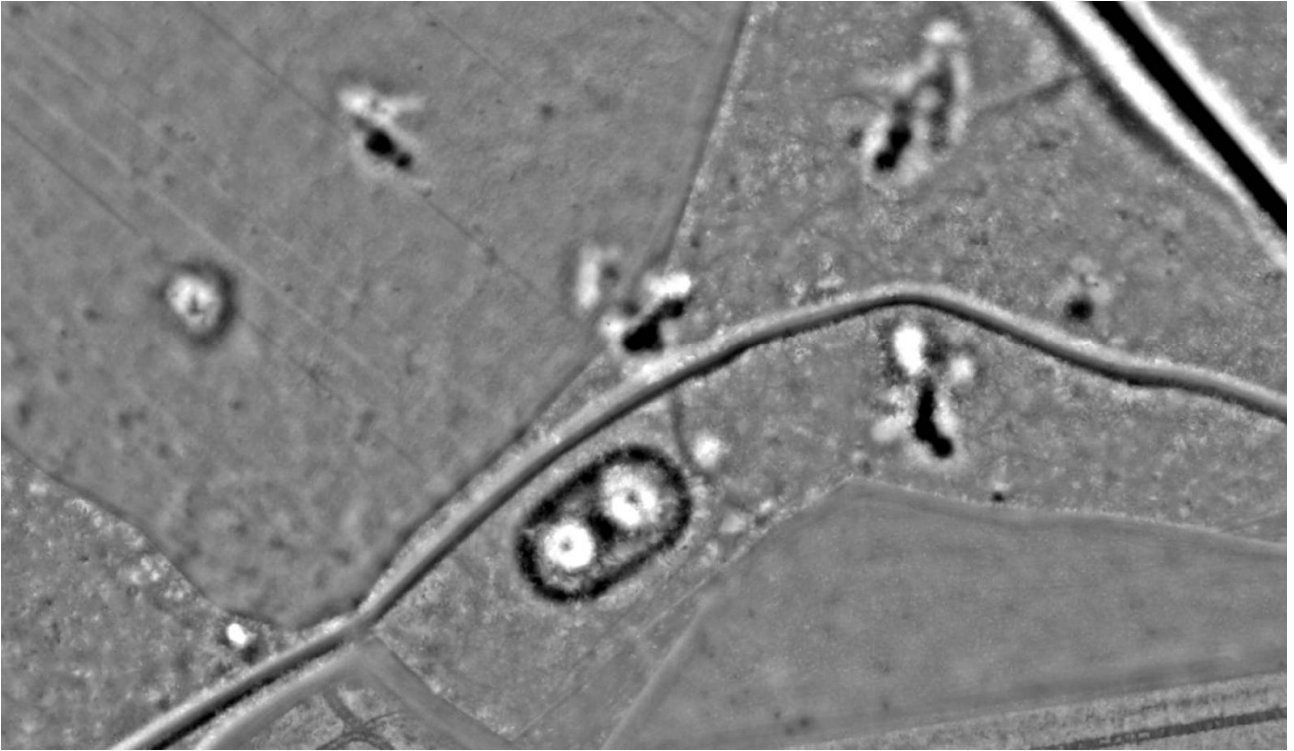


Figure 20: Barrows near the top of Walderton Down



Figure 21: Site photograph of twin barrows which are obscured by dense brambles. The deep enclosing ditch is in the foreground (photo: J. Dodd).



Figure 22: View looking West over Stoughton Village from the twin barrows at the top of Walderton Down. Amongst the places visible in the distance within this zoomed view are Compton Down, Butser Hill, Beacon Hill (Harting) and Telegraph Hill (Compton) (photo: K. Petersen).

However, mixing and modification of monuments to create a seemingly homogenous, contemporary whole can be misleading. The personal experience of one of the author, from Vasagård (BMR 2932), Bornholm, Denmark illustrates this. Here, a dolmen was first constructed around 3600-3400 BC. Between 3400-3300 BC, a passage grave was constructed a short distance away to the West. During the Bronze Age, around 1000 BC the features were further modified to level the ground between the two monuments. Thus today, the monument presents the appearance of an elongated mound (Nielsen et al. 2014). Only excavation in 2008 established the stratigraphy and dating of these changes.

Returning from Bornholm to West Sussex, the so-called 'possible' barrow recorded in the HER is clearly evidenced on the ground, and appears topographically similar to other scheduled and unscheduled examples seen by the author within the project area. Within the vicinity of an extraction pit located to the East of the scheduled monuments, roundness was noted in the case of two mounds located just a very short distance away from the excavated area. Both have been truncated slightly by the pit. Conceivably, these are more likely to be the result of a coincidence of deposition during the extraction of raw material, or perhaps the remains of low, round barrows, as are evidenced to the West. Further down the steep slope, to the North West, an additional possible barrow is located. Unfortunately, it was not possible to visit this location during the fieldwork. Figure 23 is a view taken with zoom from the opposite side of the valley at the edge of Inholmes Wood.



Figure 23: Possible barrow in field, centre, right of photo (J. Dodd)

Flint extraction was evidenced in the case of records #278, #279. A large pit with associated mound of burnt flint was noted in the area of NMR record #8378. This area was dug as part of UCL's IoA Excavation Training Course for undergraduate students and in fact is believed to date the Bronze Age, due to the composition of the pottery and burnt flint recovered (Roberts 2013, forthcoming). Although most of the extraction of raw materials is traditionally associated with the Post Medieval period, and will be discussed within a following subsection, the results of this excavation have challenged this and proposed a new site type for the period.

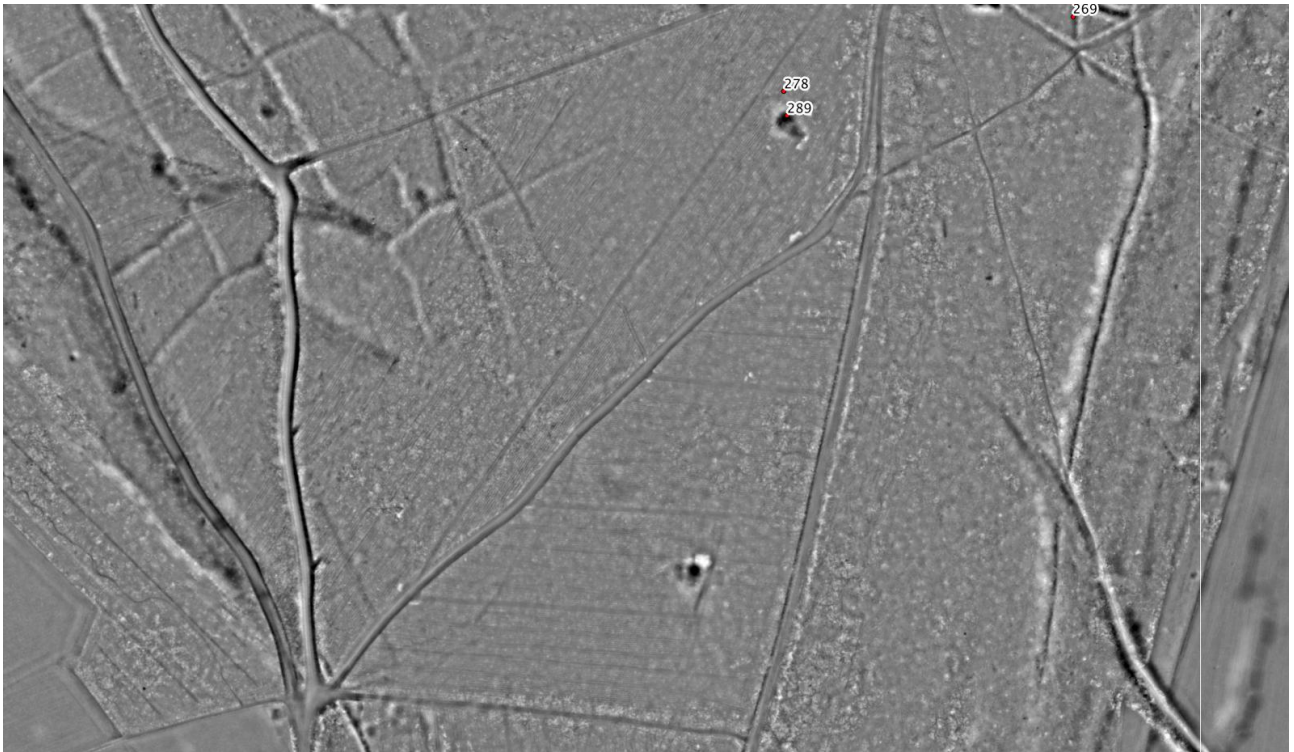


Figure 24: View of features excavated by UCL. The records mark the site of a pit (see Figure 14#). The features to the South show a pit and associated mound, that was found in the field to be comprised entirely of heated flint fractured by contact with water.



Figure 25: View of large pit that was subject to investigation by IoA, UCL (photo: J. Dodd)



Figure 26: Site photographs of pit and associated mound located to South (photo: J. Dodd)

## 5.2 Roman

Whilst recording a World War II Auxilliary Unit dugout dug into an earlier Post-Medieval extraction pit, Dominic Escott observed a large rim sherd of pottery lying on the ground surface, near the in situ corrugated iron of the dugout. The colour and fabric of the pottery may propose some similarity with Roman Greyware vessels manufactured at Rowlands Castle (Portable Antiquities Scheme), where a pottery manufactured prodigious numbers of vessels that are found across the area. During a subsequent site visit on 01/04/16 in the company of Chichester District Archaeologist, James Kenny, dating was attributed to the 1<sup>st</sup> Century AD (pers. comm., 01/04/16). During the second visit Thorne observed a base sherd, of similar dating. The finds were photographed and left in situ. Although the finds are loose and out of context, it nevertheless indicates people were continuing to work the landscape beyond the Prehistoric periods that we traditionally associate this area with.



Figure 27: Rim sherd of 1<sup>st</sup> Century AD Roman pottery observed during field survey (illustration & photo: J. Dodd)

## 5.3 Post Medieval

The landscapes of the past to some extent continued to act as a point of reference in later periods. At Goosehill Camp, a boundary bank (record #280, Figure 6) runs through the camp, that served as a prominent marker in the landscape. In the East of Kingley Vale, an extraction pit made use of the depression and access offered by an earlier braided trackway.

This extraction of raw materials is evidenced in a number of locations across the survey area of the SHW project area as a whole. The shape and frequency of them varies across the survey area. Most are round, with either: a gentler slope at one end (#225); or a ridge in the middle providing access (#222).

In one instance, record #281, visible on the LiDAR within Figure 2, records that an area believed to be a Prehistoric flint mine is in fact a nucleated cluster of extraction pits. This interpretation was informed on the experience of the project volunteers and staff concerning the topography of extraction pits seen across the SHW study area.

Efforts were also made to identify if any traces of rabbit warrening were evidenced in the area to the North and West of Goosehill Camp. Part of the rabbit warren covering part of the survey area is documented in Tittensor & Ruth (1985). This warren covered an extensive area, from Goosehill Camp, in the West, to the boundary of Venus Woods, in the North, and Warren Hanger, near West Dean, in the East. One record, #2318, was made of an elongated mound identified by the LiDAR survey. However, the opinion of Blandford was that the feature lacked the necessary drainage ditch that would be expected to surround such a mound. Furthermore, the profile of the negative feature and the associated spoil features more closely resemble a series of extraction pits cut into one another.



Figure 28: Site photograph of extraction pit that was proposed by the NMP as a possible pillow mound. For view of feature as represented on the LiDAR, refer Figure 18 (photo: J. Dodd).

## 5.4 Modern

The most numerous of evidence activity during the modern period is from military use.

The 1<sup>st</sup> Edition OS Map shows that the head of Kingley Bottom was used a range at this time. Use of the area of a range continued periodically over subsequent decades. Several .303 cartridge cases were noted in one area of Kingley Bottom (record #214), perhaps marking the location of a firing position. The Oral History Team have been successful in elucidating further detail from the long-standing former ranger of the reserve, Richard Williamson. Extracts of the interview in the public domain on the SDNPA website (URL: <https://www.southdowns.gov.uk/discover/heritage/secrets-of-the-high-woods/your-woodland-stories-oral-histories-of-the-high-woods/oral-histories-reveal-fascinating-story-of-kingley-vale/>) tell of the widespread nature of live firing in Kingley Bottom, encompassing small arms, light artillery, tanks, grenades, mortars and air-to-ground fire from aircraft.

Two localities constructed by World War II Auxiliary Units were identified and recorded during the project (records #219 and #2257). Information concerning the locations of the positions was gathered and located on a 1955 OS map by Richard Williamson (pers. comm., Richard Williamson, 01/04/2016). A total of up to four locations have been suggested as Auxiliary Unit positions. The largest, believed to be the operating base, was filled in by Williamson between 20 and 30 years ago due to the safety hazard posed by the trap door entrance (ibid). The remaining three were reported as smaller, rectangular features, shallow dug into the ground and lined with sheets of flat corrugated iron (ibid). Two, numbered 1. and 4. on the plan, Figure 29, were not located. It is of note that in the case of both features that were located, there was significant variance between the recorded positions and those derived from the sketch maps and textual descriptions.

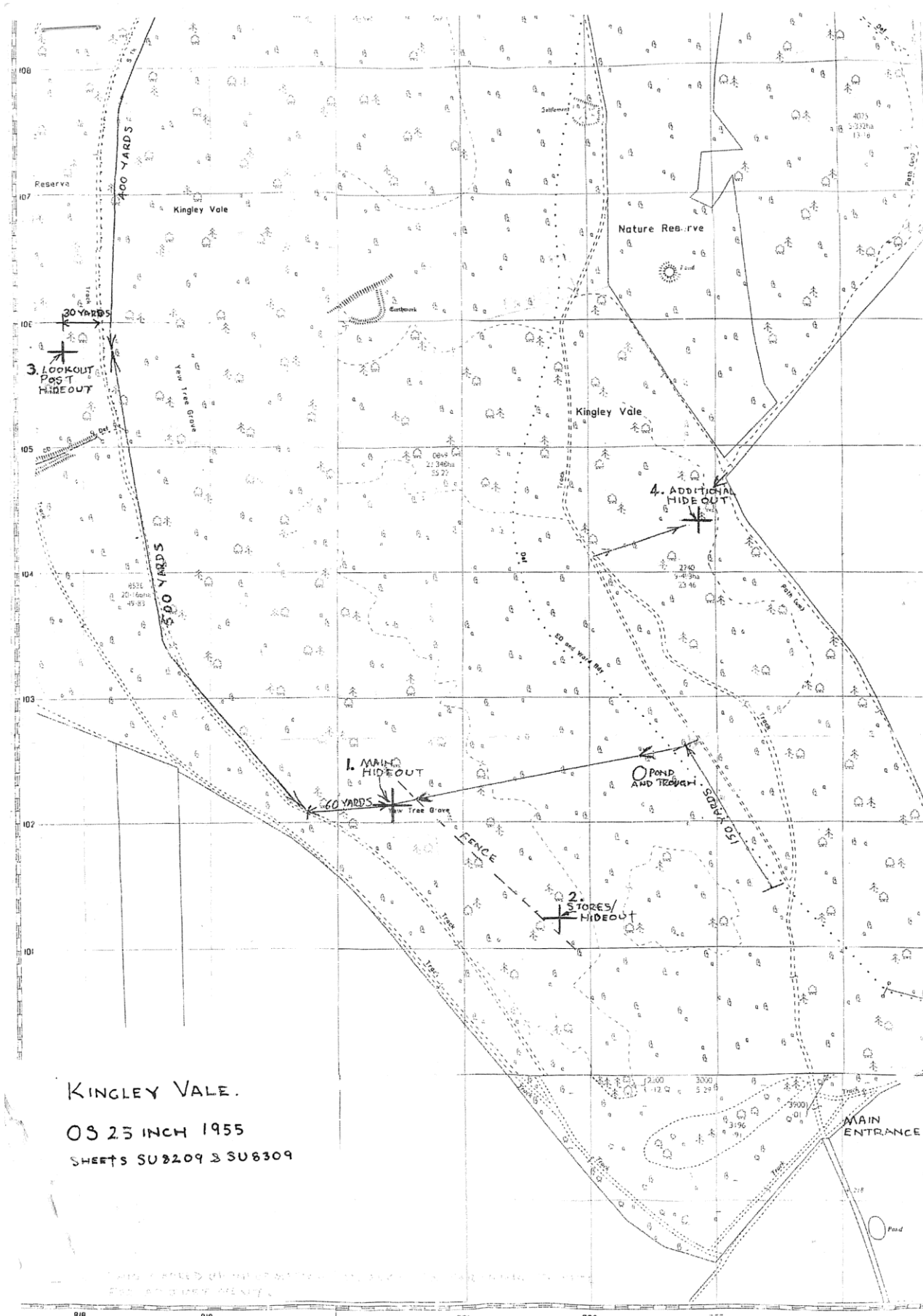


Figure 29: Sketch map drawn by Williamson to indicate Auxiliary Unit positions (M. Kallaway)

Two features in the West of the Survey area were located during field survey. The first, reportedly an observation post, record #219, is located on the chalk spur forming the Western boundary of the Vale. Luftwaffe and RAF aerial photography (Kallaway 2016, in prep.) proposes that the position would have had a view at the edge of scattered yew tress at the edge of the yew forest to the South West, over Thorney Island, the Solent Channel and the Eastern approaches to Portsmouth. The other, located in the vale itself, appears to have been larger. Only a small amount of corrugated is iron visible on site. Both locations were camouflaged by being dug into Post-Medieval extraction pits. The observation post also made use of the cover offered by an Iron Age cross dyke. It is believed that such a complex of buildings was unusual in the wider context of Auxiliary Units in Southern England. One dugout only, such as inspected by SHW at Stanstead, was the norm. Perhaps the ancillary structures were storage facilities for weapons, explosives and equipment.

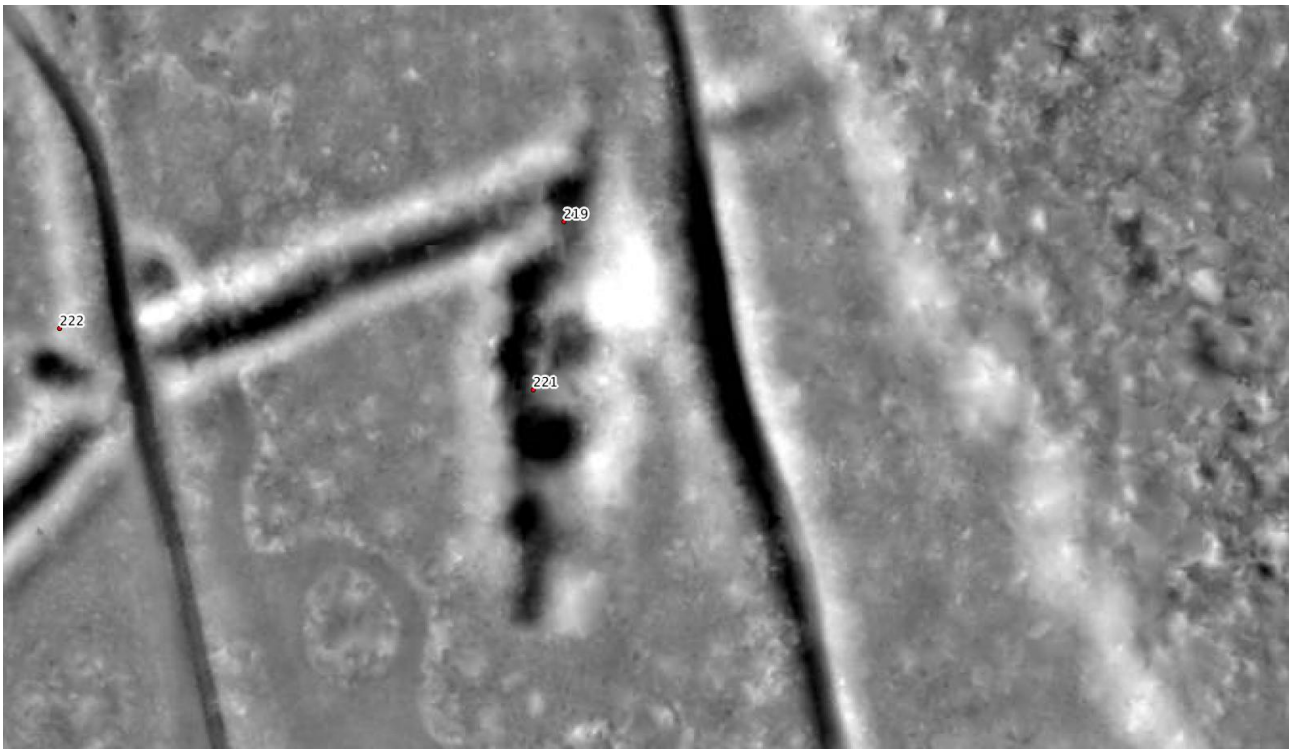


Figure 30: The Observation Post. This is a detailed view of part of the area shown within Figure 7.



Figure 31: Site photograph of observation post looking NE (photo M. Kallaway after Kallaway 2016:)



Figure 32: The Store / Hideout



Figure 33: Site photograph of stores or hideout feature (photo: J. Dodd)

Efforts by Williamson to conserve the Nature Reserve during his time as Ranger are also evident. Three dew-ponds were created and lined as part of Williamson's initiative to provide a source of water for wildlife. These are visible on the LiDAR, and were noted as modern additions / restorations (records: #193, #224 and #2261).

### 5.5 Uncertain and other features

A small number of features were of uncertain origin, including a terraced area on the steep, East facing slope of the Western arm of Kingley Vale (records #270, #191, visible left of Figure 10). Both authors feel that there remains a possibility that this feature is in fact one of the Auxiliary Unit positions, but has been incorrectly located on the map seen in Figure 29.

The high resolution of the LiDAR data highlighted a number of features that turned out to be the product of more significant examples of animal activity, principally burrowing (records #223 and #272). These were recorded following investigation.

Other features of the natural environment manifest themselves as prominent ancient yew trees. Select examples were recorded to exhibit the environmental context of the survey (records, #194 and #292) and show how successful LiDAR has been at penetrating the tree cover, despite the apparent low light levels.

Where encountered, modern modifications to the landscape were noted in order to eliminate confusion at a later date, including the bike jumps near Stoughton Down public car park.

A group of four round, sub circular terrace features (record #288, shown in Figure 17) to the West of the bridleway leading down from The Devils Humps to Stoughton Down. Whilst the NMP proposed they resembled round mounds as barrows, the situation on the ground suggests otherwise. The function of these terraces, and whether they had any role or relationship with the surrounding field system is uncertain.

## **6.0 Conclusions**

Fieldwork at Kingley Vale and its environs has significantly advanced the understanding of all periods of archaeology within the area. The extent, range and chronology of features have been elaborated upon and the LiDAR has completed the most extensive topographic non-intrusive survey of the area to date. This has provided one of the complete insights into the character of the Prehistoric landscape in the context of this area of the South Downs with settlement, enclosures, funerary monuments, field systems and extensive networks of land division all represented. The results of the survey have not been adversely affected by the presence of one of the largest areas of Yew forest in Western Europe.

A number of new discoveries have been made during fieldwork. Several new sites have been identified, including a new settlement near Great Dean Bottom. Topographic relationships between features, particularly track ways, indicate both continuity and change in this landscape over a long *durée* from the Later Prehistoric to Post Medieval Periods. Fresh nuances and details of known monuments, such as the ridge linking the twin barrows at the top of Walderton Down, have also been added. Within more recent history, the concentration of World War Two Auxilliary Unit positions, highlights a somewhat atypical example of multiple dugouts within a confined area.

## 7.0 Bibliography

- Anonymous, 2010a. *West Dean Archaeological Project. Burnt Mound 1: Survey and Excavation*. URL: <http://www.ucl.ac.uk/archaeology/research/projects/westdean>, Accessed 16/11/2013. Link subsequently removed., London.
- Anonymous, 2010b. *West Dean Archaeological Project. Bow Hill Camp: Survey and Excavation*. URL: <http://www.ucl.ac.uk/archaeology/research/projects/westdean>. Accessed 16/11/2013. Link subsequently removed., London: Institute of Archaeology, UCL.
- Drewett, P., (2007). 8. Period summary: the Neolithic, in *Fishbourne Research and Conservation Framework*, ed. J. Manley Sussex Past: The Sussex Archaeological Society, 31-4.
- Dunkin, D. & D. Yates, (2007). 9. Period summary: the Bronze Age, in *Fishbourne Research and Conservation Framework*, ed. J. Manley Sussex Past: The Sussex Archaeological Society, 35-26.
- Gardiner, M., (2007). 12. Period summary: the Anglo-Saxon period, in *Fishbourne Research and Conservation Framework*, ed. J. Manley Sussex Past: The Sussex Archaeological Society, 57-63.
- Haskins, N. J., 2009. Survey of the Bow Hill Camp, Stoughton, West Sussex. *Sussex Archaeological Collections*, 147, 19-23.
- Kallaway, M. (2016). Kingley Vale in World War 2 and the remaining evidence. Unpublished report for Secrets of the High Woods Project. Midhurst. SDNPA.
- Kenny, J., D. Rudkin & J. Manley, (2007a). 10. Period summary: the Iron Age, in *Fishbourne Research and Conservation Framework*, ed. J. Manley Sussex Past: The Sussex Archaeological Society, 41-5.
- Kenny, J., D. Rudkin & J. Manley, (2007b). 11. Period summary: the Roman period, in *Fishbourne Research and Conservation Framework*, ed. J. Manley Sussex Past: The Sussex Archaeological Society, 47-55.
- Nielsen, P. O., F. O. Nielsen, S. I. Hansen, T. Paulsen & M. S. Thorsen, 2014. *Solstensøen. På sporet af Bornholms bondestenalder*, Rønne: Bornholms Museum, Nationalmuseet & Wormianum.
- Roberts, M., 2013, forthcoming. Excavation and survey of a Middle Bronze Age Burnt Mound and Late Bronze Age rectangular enclosure, on Bow Hill, Stoughton, West Sussex, UK. *Antiquity*.
- Rudling, D. (2002). *Downland Settlement and Land Use: the archaeology of the Brighton Bypass*. Archetype Publications Ltd.
- Sussex Archaeological Collections 1999-2014, Sussex Archaeological Society
- Tittensor, A. M. & M. Ruth, 1985. The rabbit warren at West Dean near Chichester. *Sussex Archaeological Collections*, 123, 151-85.

### Webpages:

- Archaeology Data Service. [Online]. [Accessed 31/12/2015]. Available from: <http://archaeologydataservice.ac.uk/>
- British Geological Survey. *Geology of Britain Viewer*. [Online]. [Accessed 06/12/2015]. Available from: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- Historic England Pastscape. [Accessed 17/02/2016]. Available from: <http://pastscape.org.uk/default.aspx>
- Portable Antiquities Scheme [Accessed 17/02/2016]. [www.finds.org.uk](http://www.finds.org.uk)
- South Downs National Park Authority: "Oral History reveals fascinating story of Kingley Vale": URL: <https://www.southdowns.gov.uk/discover/heritage/secrets-of-the-high-woods/your-woodland-stories-oral-histories-of-the-high-woods/oral-histories-reveal-fascinating-story-of-kingley-vale/> . Accessed 04/04/16.

Personal communications:

James Kenny to James Dodd, 01/04/2016

Richard Williamson to James Dodd, 01/04/2016

## **9.0 Appendices:**

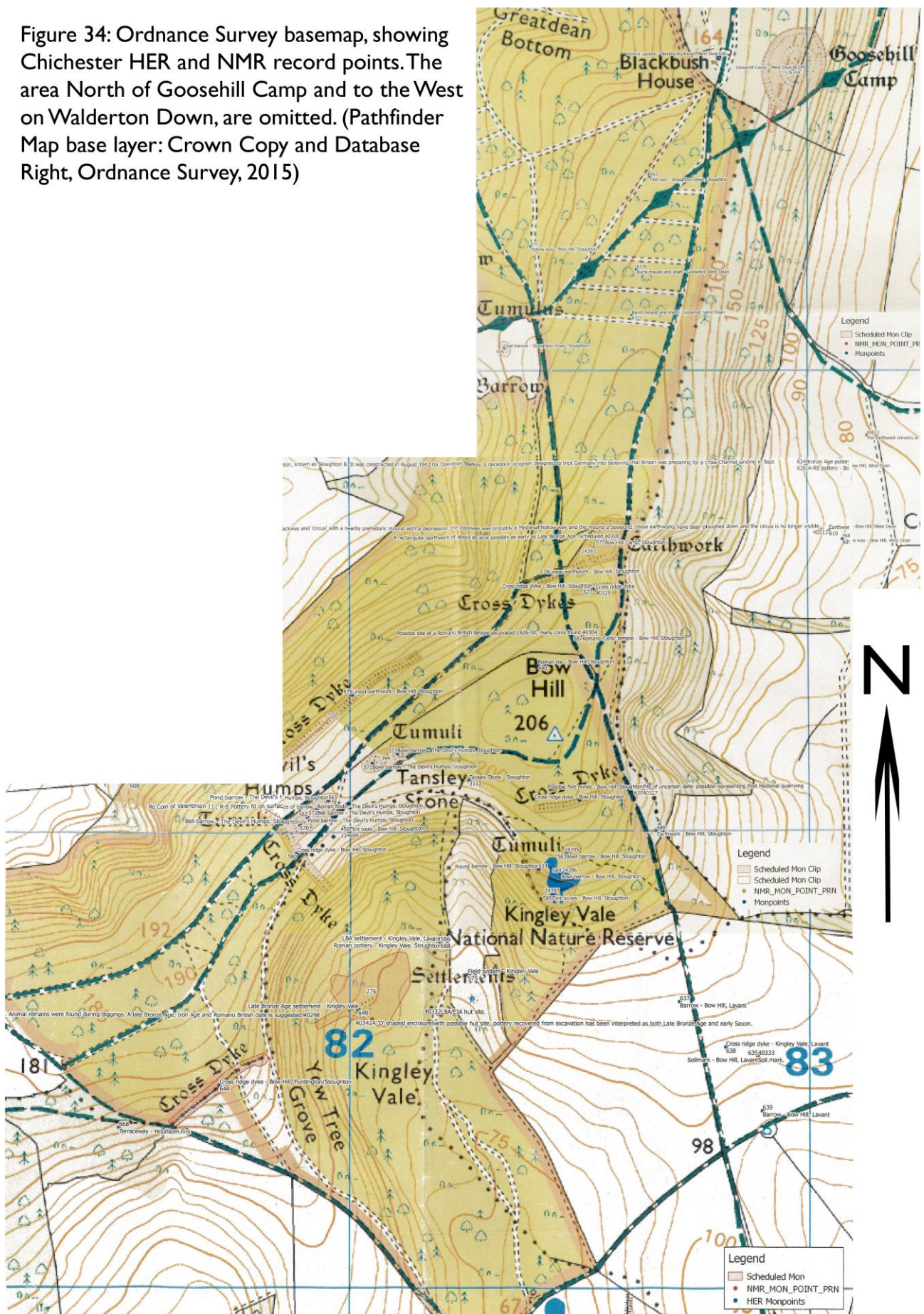
Figure 34: Ordnance Survey basemap, showing Chichester HER and NMR record points

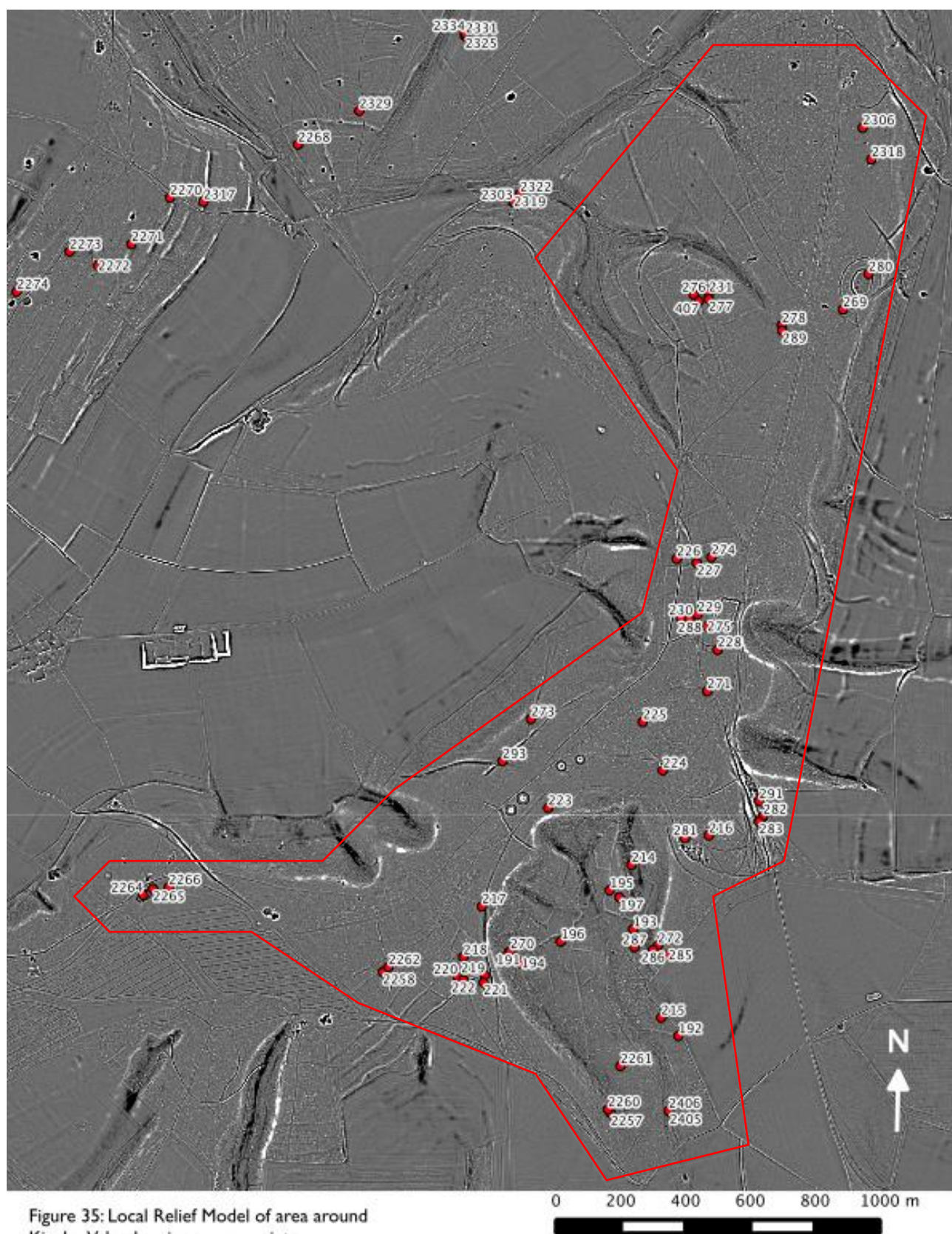
Figure 35: Local Relief Model of area around Kingley Vale, showing survey points

Figure 36: 1<sup>st</sup> Edition Ordnance Survey

Figure 37: Index to features identified during field survey, with selected supplementary information

Figure 34: Ordnance Survey basemap, showing Chichester HER and NMR record points. The area North of Goosehill Camp and to the West on Walderton Down, are omitted. (Pathfinder Map base layer: Crown Copy and Database Right, Ordnance Survey, 2015)





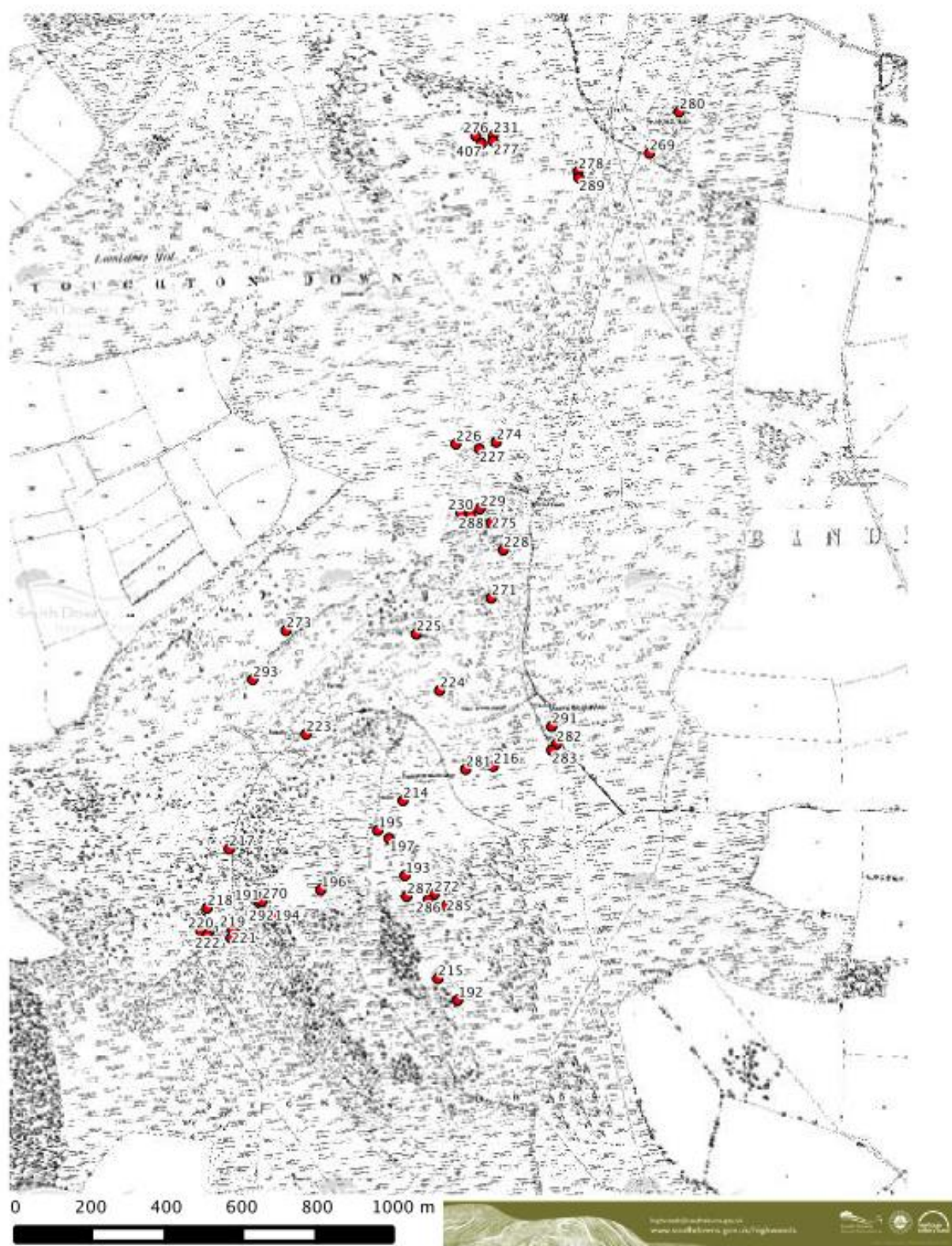


Figure 36: 1st Edition Ordnance Survey View shows central part of survey area only.

Figure 37: Index to features identified during field survey, with selected supplementary information

Record number	Interpretation		
191	Terrace feature (not quarry). function unknown	231	A clearly cut ditch, tentatively defining the edge of possible settlement, itself located within a surrounding network of field systems
192	Lynchet of field system, visible in fairly dense yew wood	269	Possible trackway
193	Dew pond known to be relined in modern times	270	Levelled feature. Not quarry. Military?
194	Ancient yew, with hollow aerial root visible inside. Girth approximately 5.4m	271	Possible boundary bank seen on historic map
195	Settlement enclosure	272	Pit
196	Late Bronze age settlement. Further research required. Locate any background information, published work, excavation records?	273	Trackway poss. v. old
197	Late Bronze Age field system. Possibly re-used as a target range. More research into the military use of Kingley Vale needed.	274	Forestry plantation ridges
214	.303 cartridge case found exposed on surface amongst animal burrow spoil amongst a group of small rectangular negative features, which are possibly associated with use as a firing range. flint and ceramic also observed generally in surrounding spoil heap	275	Cross dyke
215	Very faint lynchet	276	Pond or quarry
216	Factor affecting representation of lidar data due to shallow root plate of yew trees and bramble growth not stripped out by lidar processing. Not denuded barrows! (no sign of any additional barrows in this area, beyond the single example to the north!)	277	Possible hut platform
217	Lynchet, part of wider field system, still visible despite tree cover	278	Forestry ridge and furrow plantation with burnt flint along mounds
218	Lynchet trackway leading through cross dyke to contemporary field system?	280	Boundary bank, runs through Goosehill camp. Orientates across banks, but does not infill the ditches. Restarts on far side.
219	Probably 20th century military? further research?	281	Flint mines?
220	Extraction pit	282	Possible boundary marker with dr or db inscribed
221	Location of possible flint extraction? Possibly related to/ exploiting the dame seams as the flint quarries scheduled on the other side of the valley (at around the same contour line)	283	Ridge trackway open to elements
222	Possible chalk pit or flint pit (extraction pit)	285	Semi circular bank with pit at bank. landscape recreational seating feature? Not visible in lidar or maps.
407	Extraction pit? pond?. Possibly associated with settlement?	286	Lidar data shows field system, but difficult to see unless viewed from up slope looking back
223	Badger set with some subsidence giving circular depressions.	287	Lidar data shows remains traces for lynchet system, but on ground feature not recognised
224	Water capture ditch for dew pond	288	Not clearly defined feature compared to very clear LRM. Function unknown
225	Extraction pit	289	Possible flint excavation with associated burnt flint scattered around
226	Function unknown, possibly natural break of slope?	291	Quarry, making use of trackway for extraction
227	Lynchet	292	Ancient yew, with hollow aerial root visible inside
228	Cross ridge dyke	293	Terrace, trackway or possible droveway but no banks
229	Hollow way predates current track and has not been used for a long time	2257	Post med pit? With auxiliary post dug into east face
230	Lynchet	2258	Possible dew pond
		2260	Rim sherd of wheel thrown pottery. Dating probably Roman.
		2261	Dew pond. Reline in recent time. Possibly on site of earlier feature.
		2262	Hollow way cutting accross field system. Dating unknown, as possible that despite being later than the lynchets, the trackway could have been part of later modification.
		2264	Twin bell barrows standing upon an oval mound that joins both barrows. Oval ditch surrounds the barrows and mound they

- stand upon. One of several barrows in area. A possible example is reported by the NMP in the NW.
- 2265 Round barrow. Listed by the NMP and NMR as a possible barrow, it is very similar to others observed by the project.
- 2266 The roundness of the mound and the presence of 3-5 others in the vicinity proposes that this could be the site of a barrow that has been slightly truncated in the SE by the extraction pit. It could also be just part of the spoil heap of the extraction pit.
- 2306 Possible barrow or clearance cairn. Location toward to head of Bow Hill at
- Edge of the brow of the hill strengthens interpretation as a barrow.
- 2318 Possible pillow mound, history of rabbit husbandry in the area immediately to the east (west Dean)
- 2405 Possible dew pond or rain pond
- 2406 Dew pond