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Medieval well on Climping Beach by courtesy of John Mills

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Dear Members

We as a Society have returned to all our activities this year. We have excavated at both Bignor and Sompting, and have assisted the enthusiastic students of Lancing Preparatory School with a dig in their grounds in Broadwater. The resultant finds from these sites are being processed by the Finds Team at our headquarters in Slindon during the quieter months of winter. Lectures in person, study days and an excellent course covering all aspects of excavation and post-excavation work are all up and running.

And Alan Beazley, a new member, has written an article about his experiences in his first year with us. He has been a great asset and we hope his enthusiasm extends far into the future. After all, we all know how addictive getting down into a trench with a small trowel (or a mattock in his case) can be, and it is nice to be reminded of it. Thank you Alan.

Alex Vincent has been examining the re-use of Bronze-Age barrows for later windmills and has written an article on this subject.

Bill Watkins, a volunteer at Littlehampton Museum, has written an article on his finds from Atherington Beach, Climping, following devastating winter storms which have exposed centuries-long archaeology. And I have used a photograph by John Mills of one of several medieval/post-medieval wells from one of the long lost to the sea village houses on the front cover.

Anthony Brook has written on the spread of Roman Villas in our area and suggests that a standard criteria is drawn up in order to help with our understanding and comparison of them.

The Medieval Pottery and Tile Industry at Church Farm, Binsted by Keith Bolton covers the Society's work in the 1960s and 2005 on the site of both pottery and tile kilns, work which to date has not been written up. The 14,000 pottery sherds from the 60's were washed and marked by members of that time, and have now been sorted by current members working under Dr Ben Jervis of Cardiff University and we hope this will be published in the not-too-distant future.

I wish you a happy New Year and hope you all enjoy this year's Journal. And, once again, I must thank all the contributors for their energy and time in pursuing their research.

Cheryl Hutchins
Editor

— My first year with The Worthing Archaeological Society

By Alan Beazley



Retirement arrived and I wondered what I could do to occupy my time and those “little grey cells”. I started searching the internet on what a retired gentlemen could do in Worthing. I must say that some activities and interests I came across made me blush! After days of research, I came across The Worthing Archaeological Society which piqued my interest as I’d always had a love of history and had been fortunate enough to visit Pompeii, Herculaneum, The Pyramids of Giza, The Valley of The Kings & Luxor. I visited the Society’s excellent website and proceeded to send an enquiry to see if I was a suitable candidate to join the Society. My enquiry was answered very quickly and positively so I was in.

So, one cold night in January I went along to St Botolph’s Church, where The Worthing Archaeological Society’s Field Unit meeting was taking place. On entering that room for the first time, I was faced with an eclectic group of people who welcomed me very warmly. As I sat listening to the proceedings it became very obvious that I was sat with a very knowledgeable group of people who were totally committed to the Society. During the early part of the year, I attended these meetings and lectures at Worthing College which helped me to bond with my fellow members and increase my understanding of what archaeology in this area is all about. I also joined the “Finds Team” meeting at the Society’s shed at Slindon College where every item that one of the members had found at digs over the years has to be marked and recorded, some people might find this boring but I find it quite therapeutic.

To help me increase my knowledge I purchased relevant books and I watched all the documentaries I could find on archaeology like Digging for Britain, The Detectorists, documentaries on Egypt and Rome.

I received the society’s newsletter and as I had a lot of experience in producing newsletters and presentations in my work life I thought it could look a little better, so I approached Liz very carefully and suggested that I could help the look of the newsletter which she agreed I could have a go at. Now Liz and I team up to produce the newsletter which has received a lot of positive comments from the members.

Spring turned to summer and we found that we were going to be digging at Bignor Roman Villa. This prospect really excited me as I’ve always been interested in Roman history and having the chance to dig at a Roman site was incredible. Now, when you see documentaries on the television showing you a variety of digs around the world, they never show the hard bits! Ferrying the tools and equipment to and from the storage building was tiring in itself, then there was gazebo erection which was an art form and I managed to become the “expert” in such matters. The site director set tasks for the team and I was fortunate to be teamed up with John Mills, one of the loveliest people you could ever meet. He was very patient with me as the novice on his first dig and he imparted so much of his knowledge and experience. I nicknamed John my Jedi Master and I was his apprentice, the team found this very amusing.

Digging hard ground which had been baked dry by our hot summer was hard and tiring work and on day two I thought I was going to die, my back was complaining. I visited my chiropractor to check that I hadn't done any damage and he said, "don't be such a wuss", apparently not being used to manual work is where my problem lies and so I persevered under John's watchful eye. We found a variety of artefacts and the best thing I came across was two large parts of a Roman pot which our experts dated back to the fourth century. At the end of the dig at Bignor, drawings and photographs had to be taken and I volunteered to help with the trench section drawings. I never thought my training as an automotive engineer and specifically in technical drawing would ever come in handy in archaeology. I came home each evening to my lovely wife, tired and dirty but on a high and very happy.

After a brief rest we started the dig at The Malt-house in Sompting. First thing to do was ship the tools and equipment from Bignor. We also erected a permanent tent for the duration of the dig. The site director set tasks for the team and I was

fortunate to team up with my Jedi Master again. Once again, our trench revealed a lot of interesting artefacts despite the baked hard ground. The comradery was great, we sat together for a quick tea break morning and afternoon and a slightly longer lunch break to share stories and bond with each other.

The society holds study days at Worthing Museum, where it works with their management and supports them in recording finds and producing drawings of pottery and other artefacts. Once again, I am so pleased that my technical drawing skills have been used to help the team.

My first year with The Worthing Archaeological Society has been so much more than I ever could have imagined. If someone had told me last year I'd be digging holes in a field looking for buried treasure I'd have thought they were mad, but here I am really looking forward to our next digs in the summer of 2023. Thank you to the The Worthing Archaeological Society and its members for your kindness and warmth.

Recovery of a suspected Iron Age/Bronze Age Pottery Assemblage from Atherton Beach

By Bill Watkins



Photo 1 - Atherington Beach located between Bailiffs Court and Poole Place, West Sussex (OS Explorer map 121 Grid Ref: SU 997005) on Saturday 9th March 2019

On Friday 8th March 2019, whilst walking my dogs at Clymping Beach and undertaking my regular pastime of beachcombing, I spoke with Darren, one of the other local regular beachcombers, who reported that the current erosion of the beach, (*Photo 1*), had uncovered a patch of beach near to Poole Place which was producing Iron Age artefacts, including coins. He said that the area comprised of a section of burnt residue brickearth which was being rapidly eroded by successive tides.

Consequently, on Saturday 9th March 2019, I decided to investigate the area between Atherington and Poole Place to search for any artefacts that may have been exposed. In the vicinity of Poole Place I discovered the line of burnt brickearth in the exposed cliff face, which had the appearance of being an ancient ditch backfilled with a thin layer (approx. 2" in depth) of burnt soil and debris, (*Photo 2*). Examination by sight of the cliff face and burnt section yielded no artefacts nor were there any objects present in the nearby beach area of any date earlier than the Victorian period. It was noted that several of the WW2 Tank Trap concrete blocks had been undermined and had toppled down the beach.

Taking a line of the level of the burnt residue, I continued with a search of the beach eastwards back towards Atherington noting that several low cliffs of brickearth were exposed from the shingle covering. Approximately, mid-way between Poole Place and Bailiffs Court, Atherington, I saw on the edge of one of the exposed areas of brickearth a circular pattern and the jutting edges of what I

initially believed had the appearance of an object made of wood. My initial belief was that the object was an old wooden barrel or bucket. Carefully excavating the loose sand and brickearth from around the circumference of the object, which, from the texture and fragility of the jutting edges, I still believed I was dealing with an object made of wood, I began to expose the object to a depth of several inches. I noted that the tops of the exposed edges had been burnt and that it was apparent the object was in a very fragile condition with several cracks around the circumference. Only when the disturbance of the surrounding sand resulted in a piece of the object falling away did closer examination of the item reveal that it was made of coarse pottery with a texture of burnt, damp papier mâché.

Having identified that the object was in fact a pot, I continued excavating around the circumference to a depth of approximately 10" and found that the pot was embedded to a still greater depth. At this point with another 5 pieces of the fragile material having been dislodged from their position, I realised that the dislodged pieces had revealed a secondary pot inside. My interpretation was that I was dealing with two pots stacked one inside the other and from examination of the loose sherds of pot I suspected that they maybe of Iron Age dating. With the realisation that this was an important find and also being acutely aware that the Climping Hoard was found in the nearby local area, I decided to stop excavating and seek expert guidance. However, I was also keenly aware that with the rising tide there was a chance



Photo 2

that the site may be overtopped by waves within the next 3 hours with high tide due at 12.49 hrs that afternoon. I therefore re-buried the object in the sand and covered the area with shingle and pebbles and marked the location with obvious markers in the hope that the site would remain intact from the incoming sea.

Retaining the 6 pieces of dislodged pottery sherds I went immediately to Littlehampton Museum where I spoke with Jonathan one of the members of staff and informed him of the find. On examination of the sherds he opined that he also suspected that the pottery was of Iron Age dating. I expressed my concerns regarding the safety of the site and enquired if there was an emergency contact within the County Archaeological services that could be informed of the find with a view to undertaking an immediate rescue recovery excavation of the site as the current weather reports for the following 24 hours predicted high winds and stormy conditions which would imperil the site and result in the loss of the objects. Unfortunately, the only available contact number held by the museum was that of the Finds Liaison Officer at the Portable Antiquities Scheme and when contacted resulted in an answer machine message response. I am aware that Sussex currently does not have a designated FLO and the woeful cuts to County Archaeological budgets have left Sussex badly under-represented in those Archaeological Services. The additional concern I had was that whilst returning from the beach, I had observed a number of Metal Detectorists scouring the beach areas. Although the vast majority of local detectorists abide by the rules governing their activities, I have over the years

encountered visiting detectorists from outside the county from as far afield as Dorset & Kent and their rule-abiding may be open to concern.

Therefore, with those concerns for safety of the site and with time of the essence in relation to the forecasted deteriorating weather conditions, I made the decision to return to the site later that afternoon after the high tide. On my return I was pleased to find that, although at the height of the tide the waves had been breaking at the foot of the low cliff edge and some of those breaking waves had splashed over the site soaking the area, the site had not been scoured by those waves. I knew though, with the forecasted deteriorating weather conditions on the next high tide this would not be the case.

Over the next 4 hours with the assistance of two of the local Metal Detectorists, Andy and Dan, whom I see regularly at the beach, I was able to excavate a narrow trench around the circumference of the pots leaving the latter entombed in their casing of mixed sandy loam soil and brick-earth deposit. The diameter of the encasement was approximately 18" and had a depth of approximately 24" when I was satisfied I had reached the bottom layer of the entombed pots. Having excavated around the entombed pots it was apparent that the sandy deposit encasing the assemblage was very unstable and before we even had the chance to attempt to extract the assemblage a top section of the West side of the deposit fell away. I recovered this section and all the loose pottery sherds. In an ideal situation the use of Plaster of Paris bandaging would have provided stability to the assemblage.



Photo 3

During the course of the excavation my interpretation of visible pottery sides and layers of burnt material indicated that there were possibly 3 pots stacked inside one another and inverted, (*Photo 3*). It was also apparent that there was much more intense burning to one side (South side) of the assemblage than the other sides. Having ascertained that there were no further loose sherds in the trench, with the use of an old piece of wire fencing used as a cheese wire cutter the assemblage mound was cut from the trench and with a two man lift, (the mound weighed about as much as 2 bags of cement), we were able to extricate the mound to the side of the trench in a near complete state. Unfortunately, prior to lifting the mound my mobile phone ran out of power and I was unable to record any further photos of the excavation process.

Having extricated the mound, Andy and Dan ran their metal detectors over the bottom of the trench and the spoil heaps which did not yield any indication of metal objects. There was a slight indication on Dan's detector, when run over the west side wall of the trench, on the all metal setting, which he interpreted as indicating possibly ferrous material at a greater depth than the trench already dug. However, with time pressing on, this indication was not pursued. Our attention then moved to the best way in which to transport the assemblage mound from the site to my car a distance of approximately 1½ km over undulating shingle terrain. Due to the

weight and the instability of the mound I decided to segment it into manageable lumps which I carefully packed into my Bergen. Although the weight in my Bergen tested my physical stamina and I thought I was back in the Army undertaking a yomp, the site was successfully cleared of all the apparent remains of the assemblage and encasing earth deposit. The trench was closed down, covered and left to the ravages of the sea.

On Sunday 10th March, I began the process of sorting the segments of the recovered assemblage, (*Photo 4*). Wishing to preserve the recovered segmented lumps of the mound in as near condition as possible to which they were found, retaining the encrusted and enclosed earth deposits, I wrapped the larger lumps in tinfoil. These foil wrapped lumps contain visible burnt edges of pottery sherds and may also possibly contain additional finds. It was apparent however that under transportation from the beach the fragile stability of the encasing soil had suffered and much of it had crumbled releasing the pottery sherds and burnt residue of pot. From the crumbled earth deposits I recovered 130 individual pottery sherds (all above 25mm in size). In addition to the pottery sherds I also found that contained within the soil which was held inside the assemblage there were several flint and stone deposits which may possibly have been deposited naturally over time but at least one of the flint pebbles appears to be polished.



Photo 4

In addition there is a piece which has the appearance of being fossilised brickearth which is curved on one side and what looks like half the remains of a hole on the other side. The object is broken in half and shattered longitudinally and my interpretation is that it has an appearance of a broken piece of spindle whorl. Furthermore, I also recovered another piece of pottery which appears to be of a later date than the main pottery assemblage. This piece is of orange colour and is tapered on one edge which may possibly be a tapered rim of a small diameter pot or possibly part of a handle. The tapered rim edge of the item is heavily sooted.

With the use of a medium mesh garden sieve, I sieved the remaining crumbled earth deposits and collected an amount of burnt pottery and debris (all below 25mm in size) which I have placed in a container. I have retained all the sieved earth deposits which were contained within the pots when they were in situ at the site. Having sieved all the loose soil samples I then carefully cleaned all 130 sherds with a soft toothbrush and artist's paintbrush again retaining all the loosened soil samples. Once I had removed the soil from each sherd, I then washed them in a bowl of water. On completion of washing the sherds I drained the water through fine mesh (a pair of women's tights) retaining any micro samples such as grasses, seeds, foodstuffs etc., which may have been present on the pottery sherds. It is hoped that the retained soil samples may present an opportunity for desktop laboratory micro analysis to be undertaken to establish an environmental context at the time of when the assemblage was deposited into the ground.

Examination of the pottery sherds identified that they are composed of a coarse sandy ware with crushed shell, flint and sand inclusions and range in colour from buff, mottled brown and red shades. A number of sherds have thumbnail impression decoration on them and at least one piece has a cross hatch pattern design. From comparison checks with similar objects on the Portable Antiquities Scheme database, the sherds bearing the thumbnail impressions are similar in appearance to Object Reference ID SOMDOR – 7EEA46 which dates the object as being late Bronze Age – early Iron Age (*Photo 5*).

Where possible the sherds were laid out in the position in which they were found. Several of the sherds have sooting to both interior and exterior sides and several pieces which, when they were originally positioned *in situ* within the assemblage mound, have severe fire damage to them. In particular several of the sherds have been grouped and can be refitted together. From this various grouping it has been identified that six sherds appear to be from the base of the third pot which was located at the bottom of the assemblage mound but enclosed within the other two larger pots. This group of base sherds have an incised decoration running along the bottom edge of the base. From the grouping of the sherds of the two larger pots, both of which have the thumbnail impressions which appear to border the shoulder of the curved aspect of the pots leading up to the curved beginnings of what is presumed was the missing neck rims, these decorated shoulder sherds were located at the lower end of the mound. From this positioning of the sherds it is my interpretation that the original



Photo 5

laid down position of the pots was thus; the smaller basal pot was stood upright, whilst the larger two pots placed one inside the other were positioned inverted over the top of the smaller pot. At some point in their history the pots have been subjected to a ferocious fire on one side with the rims of the larger pots and the base of the smaller pot disintegrating into the burnt debris at the bottom of the assemblage. Then later on in history

probably during the course of ploughing in what at the time would have been a field environment, the bases of the larger pots have been ploughed away leaving the ragged jutting edges.

Arrangements will now be made in liaison with the staff of Littlehampton Museum for the assemblage to be expertly examined, identified and catalogued.

Barrow Mills on Bury Hill — Bronze Age barrows used as Windmill-Steads

By Alex Vincent

A number of Bronze Age barrows were later reused as mill mounds or windmill-steads mainly in the medieval period. The roundness of barrows was adequate for a windmill to be placed upon them. There are a number of examples in Britain, but the Bronze Age barrows at Mill Barrows at Beauworth in Hampshire may not have been associated with a windmill. The name could have derived either from the Anglo-Saxon “mylen beorh” (mill barrow) or an Anglo-Saxon name Maegla. It seems that only the bowl barrows were used as windmill-steads. These windmills would have been open trestle and sunken post mills.

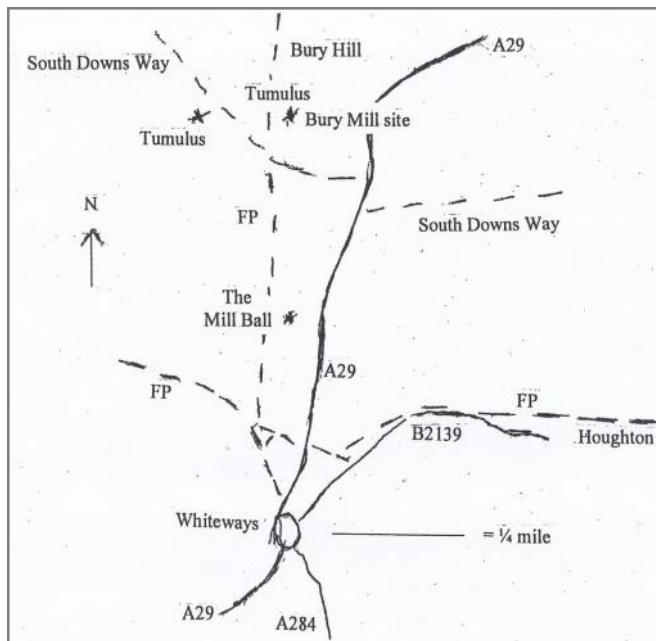
Some examples in Sussex are at Houghton, Piddinghoe, Beddingham Hill and on Rookery Hill at Bishopstone. In the case of the latter, the windmill is one of the earliest recorded in Sussex. In the 18th and 19th centuries during excavations of some barrows, stone foundations and timber

structure remains of post mills were found. These were not identified as mill remains until the early 20th century. Charles Monkman was one of the first to discuss some of these cruciform structures found in East Yorkshire. Grinsell studied some 10,000 barrows during the 20th century and has stated which ones were later reused as windmill-steads and some possible cases.

The Mill Ball at Houghton near Arundel centred at TQ 002 144 was once a Bronze Age bowl barrow, which dates from the Middle to Late Bronze Age period. It is situated on the crest of the South Downs just south of Bury Hill, east of a footpath and west of the A29 main road. This barrow comprises of a central mound 24 metres in diameter and 0.8 metres in height. A ditch surrounded it, which has since been infilled. Bronze Age, Roman and medieval pottery has been found on the site.



The Mill Ball at Houghton



Map of site of the Mill Ball and Bury Mill



Bury Mill site



Highdown Mill site

This bowl barrow was later reused as a mound for a windmill. This was probably during the Middle Ages. The medieval pottery may have been associated with it. SAC Vol 75 states, "upon which it is stated a windmill once stood, but no field name confirms it". The site today is marked on some maps as "The Mill Ball". It is Scheduled Ancient Monument.



*LiDAR map of the Mill Ball and Bury Mill
(from ARCHI MAPS LIDAR; Digital terrain Map (DTM).
<https://www.archiuk.com>.)*

Another Bronze Age bowl barrow, which became a windmill-stead, was further north on Bury Hill centred at TQ 002 122. It is situated on the hill west of the A29 and north of the South Downs Way. Medieval pottery was found on the site, which may be associated with the windmill. The barrow has since been completely ploughed out, but there is a very slight dip on the site today. Both sites are visible on LiDAR.

There could be other medieval windmills in Sussex, which have used Bronze Age barrows for their bases. One such case could be Highdown where the mill mound looks as if it may have once been a barrow. The mill dates from the 16th century, but the earlier medieval mills on the hill may have been on the same site. It could be that these medieval mills may have used other possible barrows on Highdown.

Other cases may have been at Broadwater which site is at the north-western end of Hill Barn Golf Course where a slight mound still marks it. The bowl barrow on Patching Hill may also be another case where the windmill at Clapham situated on the hill above Michelgrove (gone by 1595) may have been erected on it. Excavations by future archaeologists are needed to see if these sites were once barrow mills.

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Roman Villas in Sussex: a Cartographic Conundrum

By Anthony Brook

As a by-product of the research undertaken by Roger Cordiner and myself into Roman Building Stones, I assembled a consecutive series of maps showing the distribution of Roman villas in Sussex. These cartographic contributions to Roman research were published in various publications by Ernest Black in 1987 (1); by David Rudling in 1998 (2) and again in 2003 (3); and, finally, by Miles Russell in 2006 (4). We will examine each of these publications in turn, looking, in particular, for two aspects: the definition of the term Villa, and the search for common ground; and the classification of Villas used for the cartographic expression of their distribution, and the resultant variations.

The initial attempt to portray the distribution of Roman villas was published by Ernest Black in his 1987 magisterial monograph covering the whole of Southeast England. In his Introduction (pp.1-2) he immediately tackles the thorny issue of definition. His opening sentence reads: *'Writers in the 20th century have customarily recognised an obligation to say what they mean by the term villa', and decides that 'the definition adopted here will reflect my belief in the value of studying villas as the homes of the wealthy (in substantial country houses); to that extent, it will be arbitrary. It is also a local definition, applying to Southeast England. It is very broad, deliberately; nor have I used size to define different categories of villas'*. He then provides two specifications: *'To qualify as a villa in this study, a house must possess at least 3 rooms that have been conceived as a whole---an integrated house, or else a hall with at least one additional domestic room. A second stipulation is that the house must have stone foundations; building with stone foundations indicates permanence of the building. Walls with stone foundations generally encourage the use of*

durable flooring materials, not requiring constant renewal'.

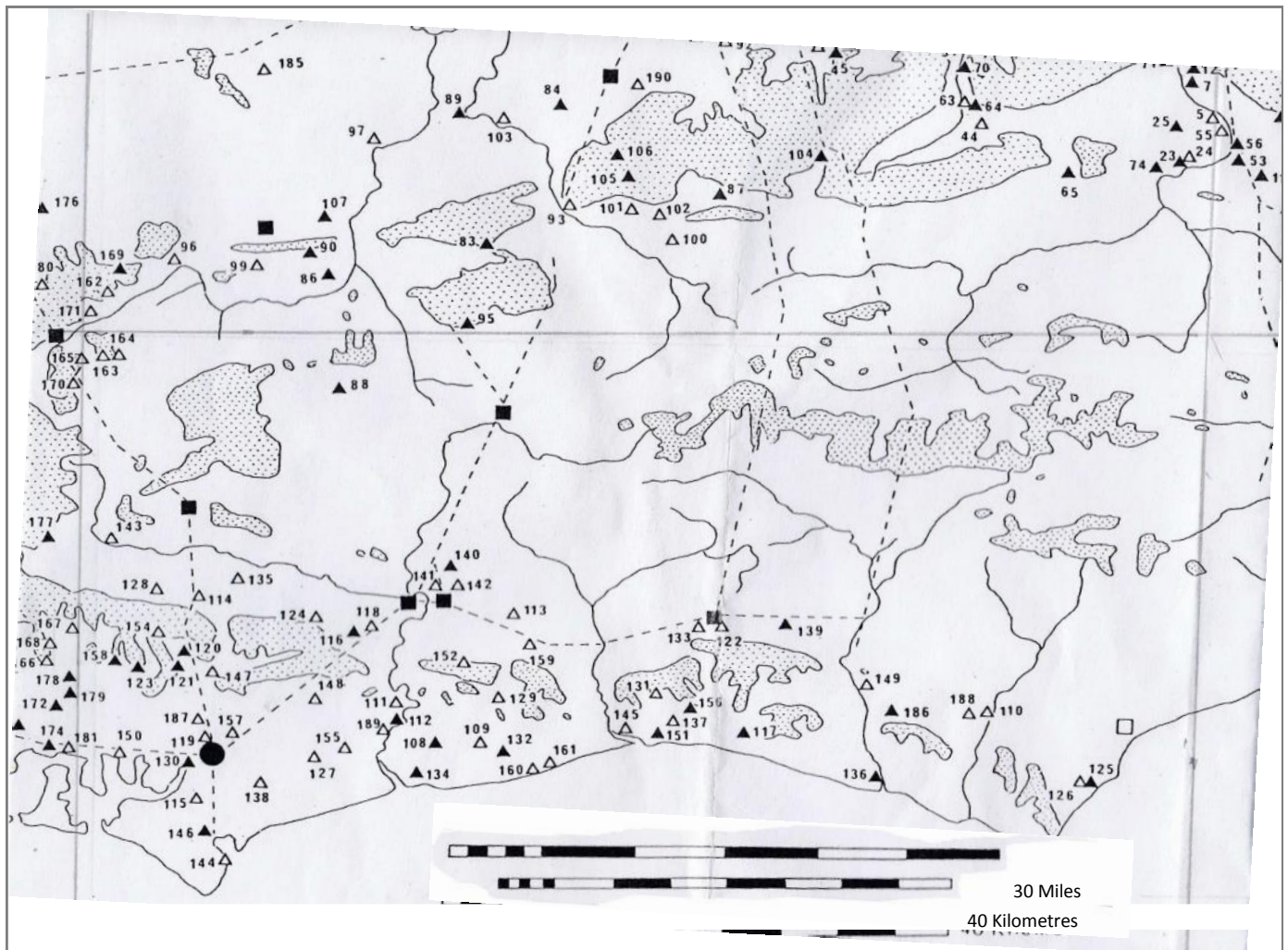
At the back of this substantial monograph is his Villa List (pp.144-60), with Sussex villas found on pp. 152-57 and 159. Black states that *'This List is confined, with a few exceptions, to sites for which some published reference exists, serving to establish the existence of a villa, or a possible villa. A site is included as a possible villa if it has produced bonding-tile or flue-tile fragments or tesserae from a Roman context'*. So, prior publication and specific Roman artefacts are his pre-requisites for inclusion.

Black's cartography was a marvellous first attempt to show the distribution of villas in the whole of Southeast England: only the Sussex section of the primary map concerns us here. He indicates, on all his series of maps of Roman sites in Southeast England, the river systems and higher ground (over 122 metres, 403 feet), and Roman roads, which are shown by a broken line. Every Roman site has a number for his Villa List. He employs a simple dual classification: black triangles identify 'Villas', of which there are 19, but that includes Fishbourne (no.130) which should be excluded as a special case, giving a total of 18; and white triangles represent the site of 'Possible Villas', of which there are 39, making a total of 57 in Sussex. Later still (pp.214-15), he states that *'the distribution of villas is very important; they are concentrated in certain areas, e. g. the coastal plain of West Sussex, and on the Greensand Ridge just to the north of the South Downs [the Scarpfoot Zone]. In all areas river valleys, or locations with easy access to major roads, were particularly popular locations'*. He points out that *'the large early villas of the Sussex coast plain are exceptional and clearly derived from Italianate-style villas: they represent a deliberate policy of encouraging aspects of Roman culture [during*

Roman Villas in Sussex 1

Black 1987 map

Black triangles - villas White triangles - possible villas



the Roman protectorate of the client kingdom]’ He emphasises that the ‘economic basis of most villas was mixed farming: many were situated at places suitable for the exploitation of several environments, including good arable and pastoral lands. Various villa complexes have revealed ancillary farm buildings-----barns, granaries and corn-drying ovens. Some villas were involved in other economic activities’. In addition, the prosperity, significance and relative longevity of the various Roman villas in Sussex-----and Southeast England, for that matter, were related to their general location and specific site, as illustrated by Black’s series of chronological maps.

In his 1998 publication, David Rudling states (p.46): ‘There are many definitions of the term ‘villa’, but most would probably agree that it refers to a rural house which significantly reflects the Roman style of life. In practical archaeological terms this assessment is usually determined by the finding of masonry footings; clay tiles/bricks; window glass; painted wall-plaster, and sometimes

hypocaust heating systems and bath-suites. One or more of these criteria have been used to select the sites of Roman villas and probable villas in Fig.2. Most of these establishments are presumed to have been the centres of farms, but other [economic] functions are occasionally possible, e. g. iron-working at Hartfield [in the High Weald]’. His criteria would seem to be a rural property showing the Roman way of life that was the centre of a farming estate, plus numerous Roman artefacts.

The base map of Fig.2 (page 14) shows the outline of the geological strata and the river valleys of West Sussex and part of East Sussex; and, also, the ‘various Roman sites, including all villas and probable villas’. He presents a three-fold classification: 1st century Large Villas, of which there are 7, but that includes Fishbourne Palace, so it should really be only 6 (Pulborough; West Hampnett; Tarrant St., Arundel; Angmering; Southwick; and Eastbourne); Villas, 17 with numbers and 12 without, making a total of 29; and 27 Probable Villas, giving a grand total of 62 in that area.

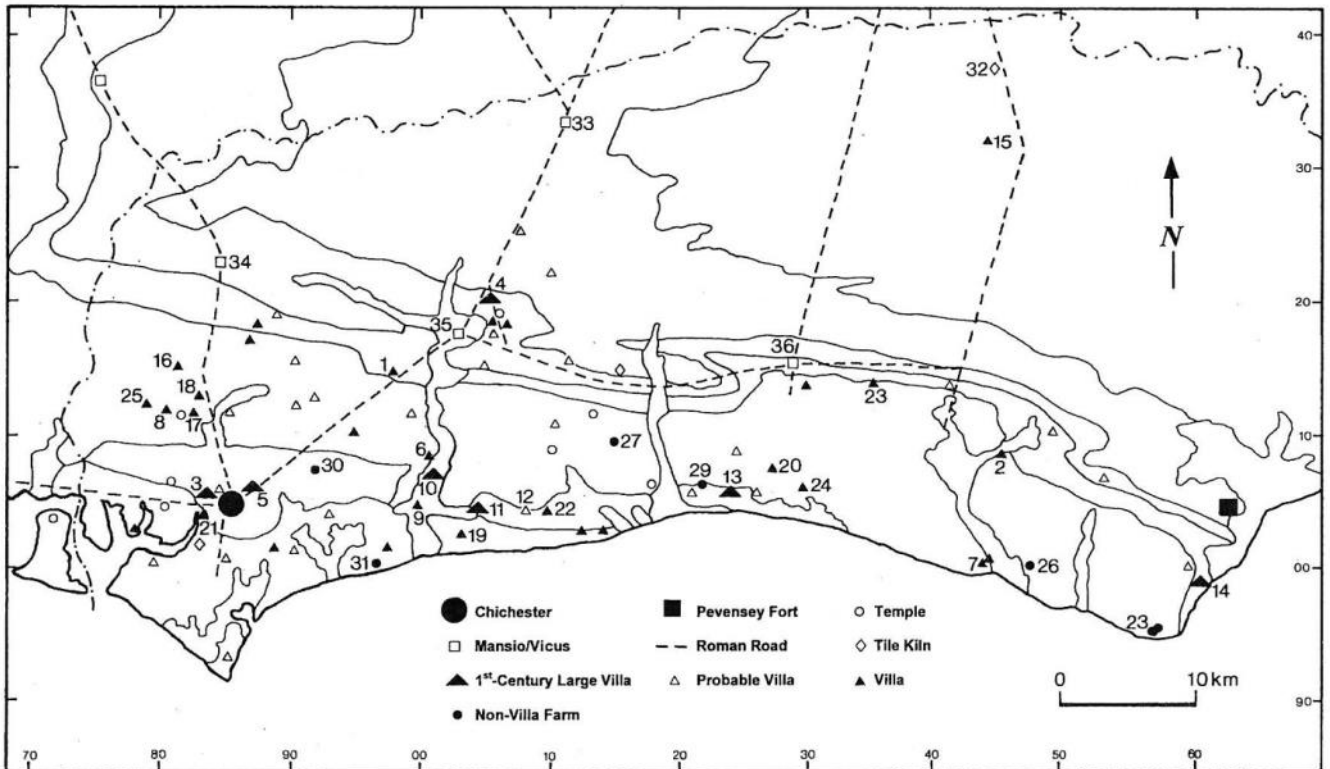
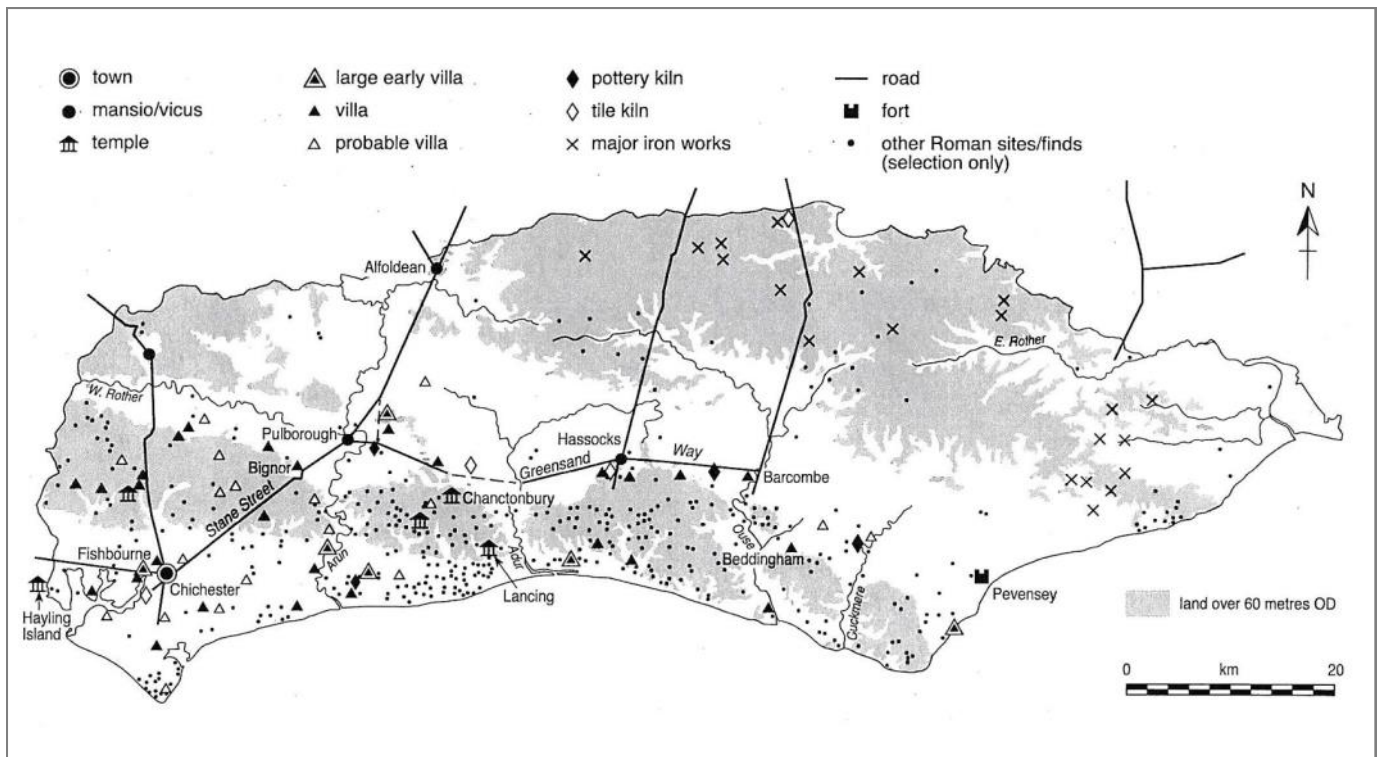
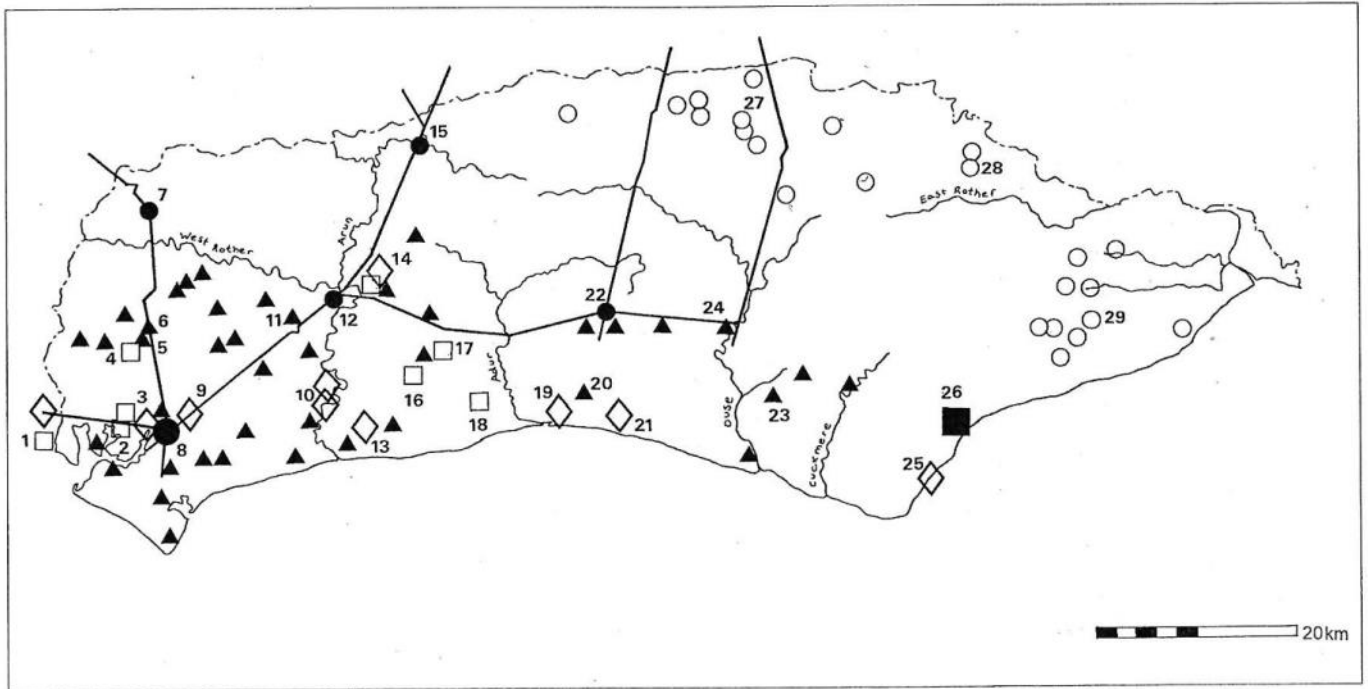


Fig. 2. Distribution map of various Roman sites, including all villas and probable villas, in West Sussex and part of East Sussex. The numbered sites are - villas: Bignor (1); Beddingham (2); Fishbourne (3); Pulborough (4); Westhampnett (5); The Shepherds Garden, Arundel (6); Newhaven (7); Up Marden (8); Tortington (9); Tarrant Street, Arundel (10); Angmering (11); High Down, Angmering (12); Southwick (13); Eastbourne (14); Garden Hill, Hartfield (15); Batten Hanger (16); Chilgrove 1 (17); Chilgrove 2 (18); Littlehampton (19); West Blatchington (20); Fishbourne Creek (21); Goring (22); Plumpton (23); Brighton (24); Watergate (25); - 'non-villas': Bishopstone (26); Park Brow (27); Bullock Down (28); Slonk Hill (29); Boxgrove (30); Middleton-on-Sea (31); - other sites: Hartfield Tile Kiln (32); Alfoldean (33); Iping (34); Hardham (35); and Hassocks (36).

Roman Villas in Sussex 2

Rudling 2003





4 Roman Sussex: distribution of major sites. Blocked circles represent roadside settlements, open circles represent ironworking sites, squares are temples, diamonds are early villas/palaces, triangles are villas: 1 = Hayling Island (Hampshire); 2 = Bosham; 3 = Fishbourne; 4 = Bow Hill; 5 = Chilgrove 1; 6 = Chilgrove 2; 7 = Iping; 8 = Chichester; 9 = Westhampnett; 10 = Arundel; 11 = Bignor; 12 = Hardham; 13 = Angmering; 14 = Pulborough; 15 = Alfoldean; 16 = Muntham Court; 17 = Chanctonbury; 18 = Lancing; 19 = Southwick; 20 = West Blatchington; 21 = Brighton; 22 = Hassocks; 23 = Beddingham; 24 = Barcombe; 25 = Eastbourne; 26 = Pevensey; 27 = Garden Hill; 28 = Bardown; 29 = Beauport Park

Rudling also provides a geographical commentary on the cartography, by stating, on p.51, that 'the distribution of villas is very important. In Sussex, they concentrate in three main areas: the very fertile Coast Plain, the chalk Downs, and on or near the Greensand Ridge to the north of the Downs [the Scarpfoot Zone]. In all areas, river valleys, or sites with easy access to major [Roman] roads, were particularly popular locations. Communication by road or water, and access to suitable markets, were clearly major considerations, and more important than the quality of land upon which they were built'. He emphasises that 'the economic basis of most of the villas was mixed farming; many villas were situated at places chosen for the exploitation of several environments'. Evidence for farming at the villas comes in the form of corn-drying ovens and farm buildings.

In his 2003 chapter, Rudling states, on p.118, that 'the term Villa is often used to refer to a domestic house or complex which significantly reflects the Roman style of rural life. In terms of archaeological evidence, this assessment is usually determined by the discovery of one or more of such features as masonry footings, multiple rooms, clay tiles;

mosaic or tessellated floors, painted wall plaster, window glass, hypocaust (underfloor) heating systems and bath-suites. Most of these sites are assumed to have been the centres of farm estates, although other [economic] functions are also possible'.

There is no reference to his map of the 'various Roman sites in Sussex' in the text, which is unfortunate, because this map is the most effective cartography of the whole series. It clearly shows the fundamental topography of Sussex, by shading land over 60 metres (c.200 feet), thus emphasising the Chalk Downs and the High Weald. He employs the same three-fold classification of Villas as previously used, so this map and his 1998 map are comparable, in what they indicate about the number and distribution of Roman villas in Sussex. This time there are only 5 Large Early Villas: that at West Hampnett, east of Chichester, has gone completely, and Fishbourne Palace should be omitted, as it is a special case. There are also 28 Villas and 17 Probable Villas, making a total of 50. It will be noticed that there were 27 'Probable Villas' in 1998, but only 17 in 2003, which means that 10 'Probable Villas' were downgraded in only 5 years. Was this due to re-assessment using a tighter definition of what constitutes a Villa.

In his 2006 book on Roman Sussex, Russell makes the general statement, on p.164, that *'the majority of [Roman] villas in Britain were at the centre of a working, successful agricultural estate, the profits generated from selling farm surplus presumably providing the necessary funds for home improvements'*. He continues, with a most interesting analogy: *'Villas possessed elaborate bathing suites, ornate dining rooms, and a generally high level of internal décor. The Roman villas of Sussex can perhaps be better compared with the grand estates, country houses and stately homes of the landed gentry of England, Scotland and Wales [in Victorian and Edwardian times]. These houses represented monumental statements of power designed to dominate the land and impress all passers-by. As the home of a successful landowner wishing to attain a certain level of social status and recognition, the stately home or country house was the grand, architectural centrepiece of a great agricultural estate. The Roman villa was probably little different'*.

His next paragraph provides specific criteria: *'The Roman villa is an easy enough type-site to identify archaeologically in Britain. Villas were high-status, Romanised houses.....[they] possessed a broadly-rectangular plan, comprising a range of rooms connected by a corridor or veranda. Walls, especially those in public areas, were often decorated, whilst the provision of solid floors allowed the opportunity to invest in mosaic pavements. Architectural details, such as ornate columns, glazed windows and tiled roofs embellished the whole, whilst major structural additions, such as integrated bathing suites and underfloor heating, were often brought in as and when funds allowed'*.

As well as this historical analogy, Russell also supplies another revealing concept in the form of an evolutionary sequence for Roman villas in Sussex (p.166). He proposes that *'four basic types of villa building are identifiable from Sussex: Cottage House; Corridor House; Aisled Building; and Courtyard House.....which represents the final evolutionary phase of the Romanised rural building map of Roman Sussex'*.

Russell's map of Roman Sussex has a base map of the county of Sussex, upon which he has shown the rivers and the Roman roads, and a series of symbols to identify the different major sites. Diamonds indicate the location of 'early villas/palaces', of which there are 9, minus the special case of Fishbourne, equals 8; and Triangles, which indicate the site of 'Villas', 6 of which are numbered---3 east of the Adur valley (Beddingham, Barcombe and West Blatchington) and 3 north of Chichester (Bow Hill, Chilgrove 1 and Chilgrove 2); and 34 without a number, making a total of 40 Villas; and a grand total of 48. What is clearly evident from this distribution pattern is the clustering of Roman Villas in the

southwest sector of Sussex, west of the Arun valley and south of the West Rother, within the accessible hinterland of the Roman civitas of Noviomagus Reginorum, otherwise Chichester.

Only Rudling (1998) makes a textual reference to the accompanying map. Otherwise, the cartography is incidental to the text, standing on its own merits or faults. Three different classifications for the cartographic portrayal of the Roman Villas in Sussex are used, providing results that vary from 48 to 62, which is quite a disparity (see Table 2). Of these 4 maps, Rudling (2003) is probably the best: his archaeological criteria for inclusion are very specific, and the uplands of Sussex clearly demarcated. Also, his triplicate classification of Roman Villas in Sussex most accurately reflects historical circumstances. Unfortunately, his map is crowded out by so many other symbols for other types of Roman sites in Sussex that 'Roman villas' are overwhelmed, and not easily discernible. That is a pity, but only to be expected, since the cartographic objective was to show the location of all Roman sites in Sussex, not just villas. Rudling's eight archaeological specifications for defining a Roman villa suggest a bipartite division of Roman villas in Sussex into Basic and Elaborate, those with hypocaust heating systems and bath suites, which would be constructed as and when funds and circumstances permitted, by the larger and more prosperous villas in the most propitious locations. This inherently involves a temporal dimension.

It would seem that the spatial pattern of Roman villas in Sussex relates to the personal definition of a Roman villa employed by each author, as also does their cartographic classification: so, although the maps are very similar, they are not strictly comparable. One of the principles of scientific enquiry is general agreement on the terms of reference, hence Standard Units of Measurement, e. g. the meter, the volt and even the light-year. If Archaeology wishes to be considered a Science, it should apply the same principle on what constitutes a 'Roman Villa', with clear and easily-recognisable criteria in terms of its socio-economic status and archaeological specifications. Rudling (2003) comes the closest.

General agreement on specific criteria for a Roman villa, and a standard cartographic classification, would enable definitive maps to be produced, which would be comparable for different times during the Roman overlordship of Sussex, thereby enabling their evolving distribution pattern to be accurately analysed. New sites will, undoubtedly, be discovered, and old ones re-interpreted, producing only minor variations in the general pattern, as the geographical environment and historical events interacted during Roman times in Sussex.

Table A Criteria for a Roman Villa in Sussex

Author	Socio-Economic	Archaeological	Other
Black 1987	Substantial country house. Farmhouse of profitable estate. Home of the wealthy socio-economic elite.	Minimum of 3 integrated rooms. Stone foundations Durable flooring materials – mosaics Specific artefacts: Bonding-tile Flue-tile fragments Tesserae from Roman context	Often at intersection of different environments. Prior published reference.
Rudling 1998	Rural House, with Roman style of life. Centre of Farm estate.	Specific features: 1. Masonry footings 2. Clay/tiles/brick 3. Window glass 4. Painted wall plaster 5. Hypocaust heading systems 6. Bath-suites	Sites for the exploitation of several different environments.
Rudling 2003	Domestic house/complex. Roman style of rural life. Centre of successful Farm estate.	As above, plus 7. Multiple rooms 8. Mosaic/tessellated floor.	
Russell 2006	High-status, rural Romanised house. Centre of successful Farm estate.	1. Rectangular plan, with range of inter-connected rooms 2. Decorated walls 3. Solid floors/mosaic pavements 4. Ornate columns, glazed windows and tiled roofs 5. Bathing suites and underfloor heating	

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- 1.E.W.Black 'The Roman Villas of Southeast England'
British Archaeological Reports, British Series 171, 1987 (Map: Fig.5, 199)
2. David Rudling 'The Development of Roman Villas in Sussex'
Sussex Archaeological Collections 136 (1998) 41-65, especially 49-51. (Map: Fig.2, 43)
3. David Rudling 'Roman rural settlement in Sussex: continuity and change' in The Archaeology of Sussex to AD2000: Edited by David Rudling.
Published by Heritage Marketing and Publications on behalf of the Centre for Continuing Education at the University of Sussex, 2003 Chapter 9, 111-26, especially 118 (Map Fig.9.1, 112)
4. Miles Russell Roman Sussex Stroud, Glos., Tempus Publishing, 2006
Chapter 8 Villas and Rural Settlement, 163-206 (Map: Roman Sussex: distribution of major sites, 13)

Table B Classifications of Roman Villas in Sussex

Black		1987	
	1. Villa (black triangle)	18	
	2. Possible Villa (white triangle)	39	
		Total 57	
Rudling		1998	2003
	1. Large Early Villa	6	5
	2. Villa	29	28
	3. Probable Villa	27	17
		Total 62	50
Russell		2006	
	1. Early Villa	8	
	2. Villa	40	
		Total 48	

The Medieval Pottery and Tile Industry at Church Farm, Binsted

By Keith Bolton

Introduction

The aim of this article is to provide an overview of the known pottery and tile production sites in the vicinity of Church Farm, Binsted together with a view on the operations and markets of these sites. A part of the article also includes details of the 1966 and 2005 excavations of two known kilns in Binsted.

The two kiln sites are in the parish of Binsted and their location is shown below in figure 1. The pottery and tile kiln site excavated in 1966 is located in the garden of a property at grid reference SU 978065 and the tile kiln excavated in 2005 is located in Green field to the east of the 1966 site at grid reference SU 98037 06611.

Both sites are situated on an outcrop of Eocene clays of the Reading beds which can be used for ceramic production (Streeten, 1980, 108) and together with nearby streams and woods provide all the raw materials necessary for a ceramic industry.

Information in Public Domain

Neither the 1966 or 2005 excavations at Binsted have been fully published and whilst a significant amount of work has been undertaken recently on the finds from the 1966 excavation, it is unlikely whether a full excavation report will be produced. In terms of the 2005 excavation a report is in progress and will hopefully see the light of day in the not-too-distant future.

For the 1966 excavation the best sources of information are K.J. Barton's (1979) *Medieval Sussex Pottery* and the short article in *Medieval Archaeology* vol XI (1967, 316-8). Worthing museum holds the archive from this excavation including a large collection of photographs.

For the 2005 excavation the current sources are three WAS Journal articles (vol. 3 no. 7, vol. 3 no 5 and vol. 3 no 11). These provide an overview of the fieldwork undertaken in the period 1999-2003, a summary of the 2005 excavation and a detailed article conjecturing why the 2005 tile kiln was built and attempts to put the kiln into a geographical and historical perspective.

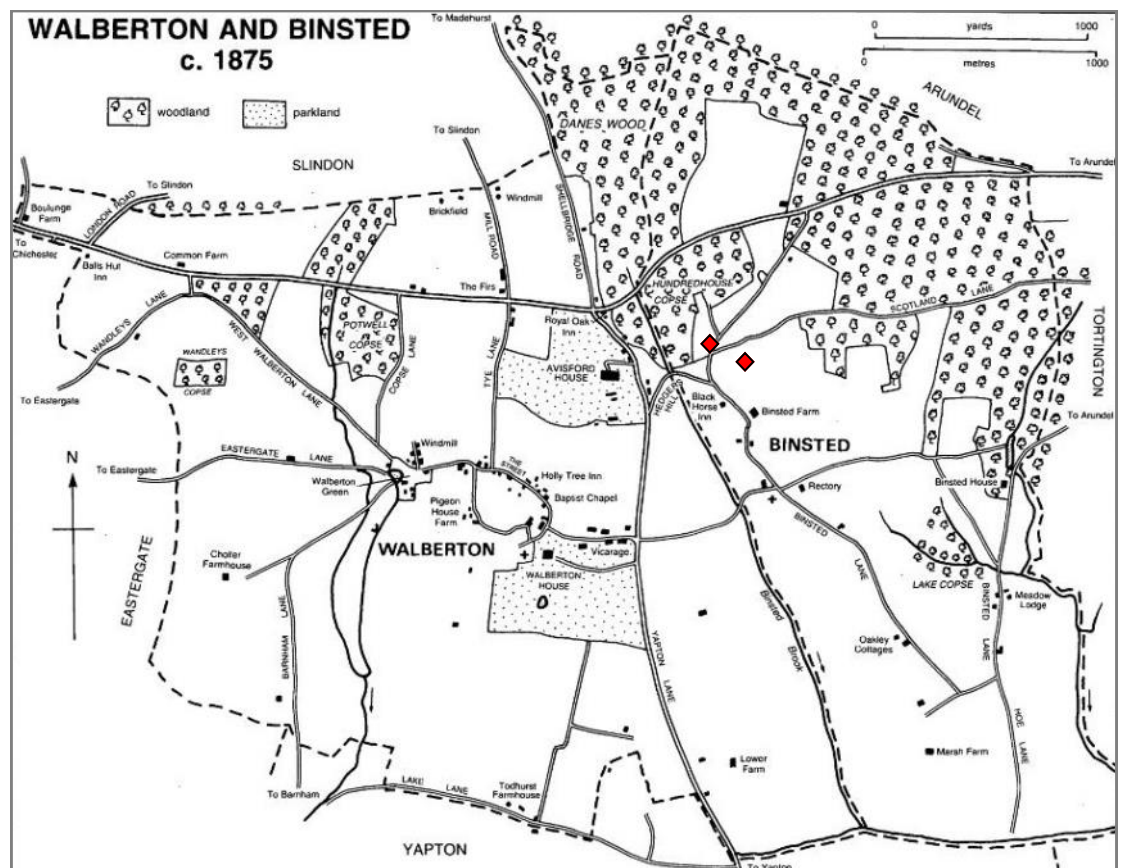


Figure 1 1875 map of Binsted from VCH Sussex vol 5 part 1

Summary of 1966 and 2005 Excavations

This section provides a summary of the features found in both excavations.

1966 Excavation

The tile kiln excavated by Con Ainsworth was of a north facing twin parallel flued rectangular kiln. Three external sides were built in one piece and within this rectangle were placed eight arched walls supported by a central spine. Each wall was the width of one roof tile. The kiln was constructed of roof tiles bound in clay (Barton 1979, 171). The pottery kiln was positioned directly to the south of the tile kiln (see plan on right hand side of figure 2 below). The pottery kiln went through four phases of construction and use, with periods two and three were used to produce glazed West Sussex ware and period three used for coarse wares.

Malcolm Lyne (pers. comm) has dated the operation of the Binsted pottery kiln to between 1250-1450.

2005 Excavation

The excavation undertaken in 2005 was the result of four years of field work in Green field, which is the field immediately to the east of the pottery and tile kiln excavated in 1966.

The tile kiln uncovered in 2005 was of the same type as that from 1966, in that it was rectangular in shape consisting of eight parallel bars supported by a central spine with the stoking holes located at the northern end of the structure.

Both the bars and central spine, were constructed from tiles (both complete and fragments). The spine was slightly off-centre; on the west the distance from the wall to the spine was 1.15m and the corresponding distance on the eastern side was 0.99m. Apart from the spine, each kiln bar was supported by two arches (one either side of the spine). The gaps between the kiln bars varied between 90mm and 150mm. This gap would have allowed the hot gasses from the fire in the stoke hole to reach the tiles laid above the kiln bars.

In terms of the state of preservation, the first six bars (from southern end) were complete and nearly upright. Kiln bar number seven bowed out and the eastern arm had lost several tiles and had partially collapsed. For the eighth kiln bar the western arm was still present. There was little evidence of the tiles that formed the eastern arm. At this point there was no sign of the spine.

Figure 3 shows all eight kiln bars, note the poor state of preservation on bars seven and eight nearest the excavators.

The kiln bars were constructed from a mix of tiles and fired clay. Each bar was one tile in width. Figure 4 shows the width of each kiln bar and the gaps between them. The degree of vitrification compared to the southern wall (on right of photo) would indicate that the kiln had been fired several times.

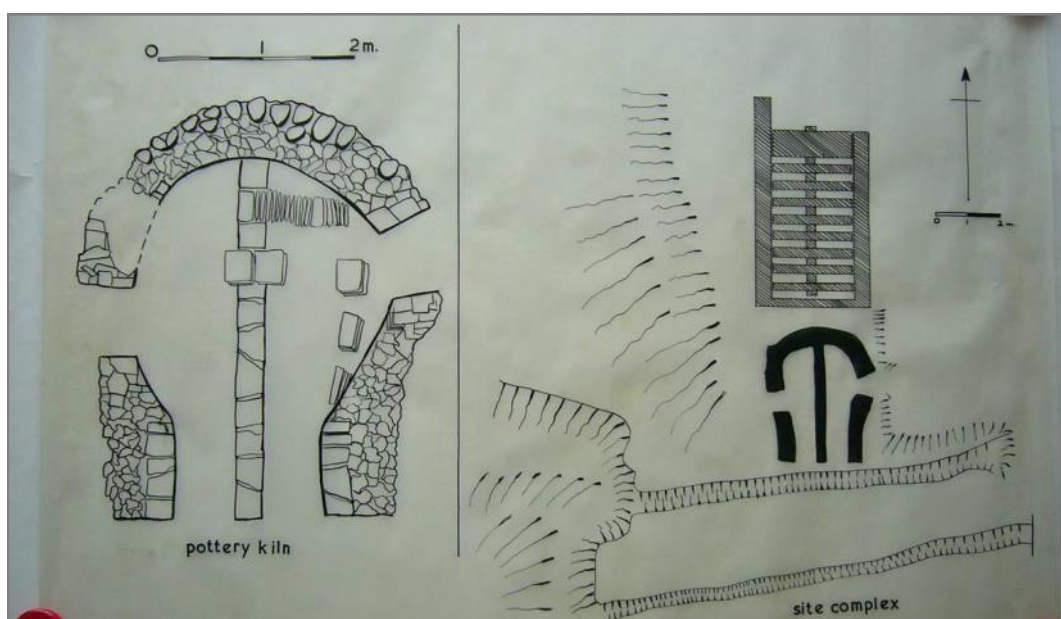


Figure 2 Site plans of pottery and tile kiln from the Roy Harper archive at Worthing Museum



Figure 3: View of tile bars from northern end of kiln



Figure 4: Kiln bars at southern end showing degree of vitrification

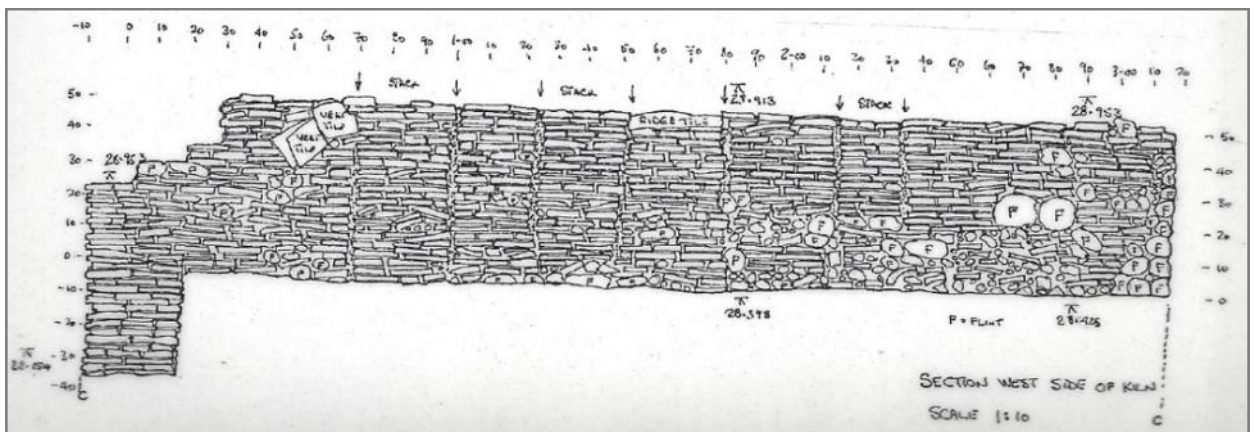


Figure 5: Section drawing of west wall

The west wall measured 3.2m in length and 0.5m high at the southern end. The wall appeared to be constructed of a series of tile stacks, with large flints inserted at the southern end of the wall (see figure 5).

There was slight evidence that the wall was constructed in a foundation trench with the gap between them filled with soil and tile fragments.

The south wall was constructed from a mix of tile wasters and fired clay. There was no evidence of a foundation trench associated with the building of this wall. See Figure 6 for view of the partially excavated southern wall.

The stoking area was located to the north of the tile kiln. The floor of the stoking area was covered in layers of dark friable soil, tile wasters and soil mixed with charcoal. It was in the stoking area that two dateable pots were found. Figure 7 shows the stoke holes and flues.

Unfortunately, there was no evidence of the super-structure or the material used in its construction. Therefore, this discussion is limited to what was possible, based on evidence from other contemporary sites.

The pottery kiln at Barnett's Mead Ringmer provided evidence of a semi-permanent wattle and daub dome, which was constructed using burnt clay (Hadfield 1981, 90).



Figure 6: Section of southern wall



Figure 7: View of Kiln from north showing east and west flues

Historical Information

Unlike the case in Hampshire (Hare, 1991), there appears to be no information in the historical record of any contracts or agreements relating to the Binsted pottery and tile industry. The only information available is the names of Willo atte Potte and John Le Tighelar, which appear in taxation returns for Tortiton and Binsted in 1332 (Hudson, 1910, 256). However, it is not known where they operated within these parishes.

Dates of Operation

The dates of operation for the Pottery and tile kiln are open to debate, Malcolm Lyne (pers. comm) has dated the operation of the Binsted pottery kiln to between 1250-1450, with Graffham pottery industry dominate in West Sussex by 1500.

For the tile kiln located in Green field a single coin found during the excavation that can be dateable was located in the plough soil and was minted in 1280-1291. The pottery from the two stoke holes provide a date range of 1350 – 1425 AD (Luke Barber pers. comm.). The author's interpretation is that the pottery was placed in the stoke holes after operations had ceased, implies that the kiln stopped being used by the end of the first quarter of the 15th century.

By 1500 the Graffham pottery industry dominated West Sussex with production at Binsted probably having ceased by the end of the 15th century (Streeten 1980, 112). Whether this impacted the Green field tile kiln site is open to debate, but the pottery excavated from the bottom of the stoke holes, would suggest that the kiln was no longer operating by 1450.

Markets and Competition

During the middle-ages, there appears to be a close association between the location of kilns, the distribution of their products and the owners of the land on which both kilns and products are found (Clarke, 1984, 159).

Binsted ware has been found along the Sussex coast as far as the river Adur (Streeten 1980, 111) and the number of nearby manors and ecclesiastical sites would provide such a potential market. In Essex, the tillery at Danbury was within eight km of three market towns (Drury 1981, 134-5).

Based on its location the tile kiln was probably associated with the building of the Binsted Manor house. However, once this construction had been completed, it is possible that the kiln was associated with providing tiles for other local building projects.

Other local associations were with Tortington Priory, where the priory held the living at Binsted church (Blauuw, 1852, 233). Whilst the Augustinian priory was established between 1180-1200 (HE Listing) and so predates the tile kiln; it is possible that tile was manufactured to maintain the priory and associated agricultural buildings. Excavations in 1998 located a small patch of black and pale creamy yellow tiles in the north aisle (Taylor 2003, 167). Further excavations revealed a brick and ceramic tile fireplace, with the pottery evidence suggesting that the building was levelled prior to 1575 (Griffin, 2002). A watching brief undertaken by ASE in 2006 (Thorne 2007) recorded more features of the priory as well as floor, ridge, and peg tiles, which provided a date range of 13th to 15th centuries for the building. The section on building material finds (Thorne 2007, 16-19) notes that there is more than one fabric present for the ridge tiles, implying that they were supplied from more than one source and ends with the theory that the ridge and peg tiles were produced at the Binsted kiln site.

Another local site requiring a substantial volume of roof tiles was the Archbishops Palace at Slindon. The documentary evidence suggests that the house was built in the middle of the thirteenth century (VCH 1953, 234-7). Currently there is no evidence for a medieval tile production centre at or nearer to Slindon than Binsted. Another contemporary medieval site at Slindon was a building located in the middle of the deer park, probably the park keeper's residence.

Local manor houses at Avisford, Aldingbourne, Barnham, Bersted, Bilsham, Climping, Westergate, Woodgate, Slindon and Yapton are all within a six-mile radius and would have required the products created by the Binsted tile kiln. However, some of these sites had a close connection with Chichester i.e. Aldingbourne, so may have been supplied with products from the Chichester kilns.

Also, Arundel is two miles away with several ecclesiastical buildings being constructed in the 13th and 14th centuries and then requiring ongoing maintenance. However, not all were richly endowed so this may not have been an entirely lucrative market.

Competition

In order to understand the extent of the potential market, it is necessary to know the location of the 'competition', its size and the period that it was active.

Documentary and excavation evidence shows that kilns were operating at Boxgrove, Bignor and Clapham in the medieval period (Le Patourel 1968, 125). Unfortunately, there is no narrative to accompany the map showing the possible kiln sites. In addition, fieldwork undertaken by Con Ainsworth indicated that no kiln was located at Bignor (Barton 1979, 157). This, therefore only leaves the Chichester kilns at Orchard Street (Down & Rule 1971) and Whitehouse Farm (Nicholls & Regensberg 2021) as being contemporary competitors for Binsted in the markets outlined above.

The evidence from Hampshire suggests that most consuming centres were within a five-mile radius of the kilns with many in the five-to-ten-mile range. Some markets were further than this, probably reflecting the owner preferring to use his own distant kiln as opposed to a near more convenient one (Hare 1991, 97). However, whilst the evidence from Laverstock near Salisbury (Musty, 1969), Lyveden (Steane & Bryant 1975) suggests that the kiln served a single site or had a limited marketing area, the kiln 'factory' at Danbury, Essex produced floor and roof tiles for distribution throughout Essex (Drury & Pratt 1975). Therefore, it appears that size and scope of operations varied depending on opportunity, geology, and ownership (Streeten 1982, 29).

Operation and Ownership

Operating Model

The content in this section is mainly speculative on this author's part as whilst there is documentary evidence to support the options outlined below (Drury, 1981, 132) there is no such evidence for Binsted. There are three possible models for the running of the tile kiln.

1. Involves an itinerant craftsman who produced tile, possibly with the assistance of local labour at or near the site where his products were required.
2. The construction of large brick buildings could make it worthwhile to set up kilns on or near the site. This kiln would be set up by a major lay or ecclesiastical landowner to supply their own needs and be worked by men on daywork or taskwork, with the surplus being sold on.
3. A commercial enterprise, with the tiling set up either in the curtilage of a tenement or on a site acquired for the purpose.

Permanent tileries, such as the one at Binsted, tend to be sited near a supply of clay and sand (or brickearth), of water and a source of fuel, at Binsted this being wood. There would need to be easy access to road and possibly water transport, both being applicable at Binsted. The kiln site is located just to the south of Scotland Lane, which in the medieval period would have formed part of the east-west road system between Arundel and Chichester (Tristram 2017, 99).

Ownership

Given the lack of documentary evidence, it is unlikely that the ownership of the kiln sites will be resolved. However, the potential link between Tortington Priory and the Binsted tile kilns is worth further investigation.

Discussion

The original plan was to return in 2007 and excavate the area around the stoke holes and obtain a date for the last firing of the kiln by undertaking a Remanent Magnetic dating exercise. Unfortunately, due to several reasons this did not take place.

In terms of future research, there is work to be undertaken to compare the material found at the tile kiln site with tiles found at Slindon at the building in the deer park and at the recent excavations at Tortington Priory.

Whilst two kiln sites have been located at Binsted, it is possible that more sites have yet to be discovered. The example of Whitehouse Farm,

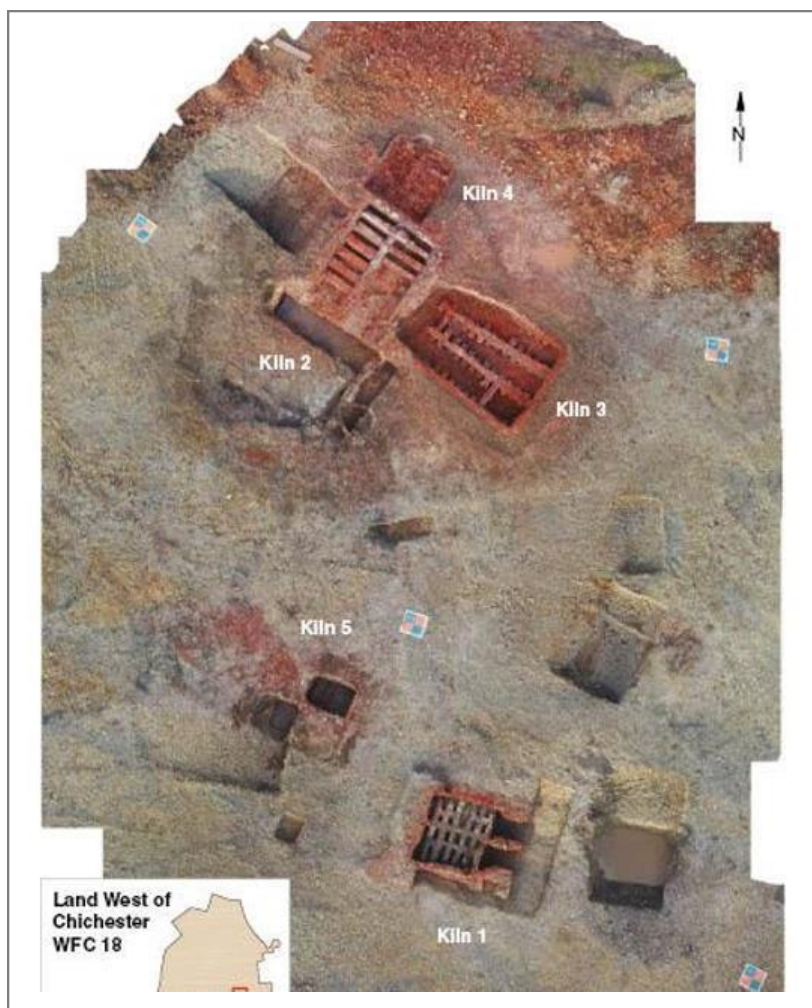


Figure 8 ASE Excavations at Whitehouse Farm, Chichester

Chichester (see figure 8 above) shows that a pottery and tile industry can last from the medieval to post-medieval period and spawn several kilns (Nicholls & Regensberg 2021, 139). It is interesting to note the two kilns abutting each other as per the 1966 site at Binsted and also the form of the two rectangular kilns showing a central spine with parallel bars is reminiscent of both tile kilns at Binsted.

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