Sevenoaks Greensand Commons Project Historic Review 9th February 2018













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1 Introduction

1.1 Background to the Project

The Sevenoaks Greensand Commons project is a community project developed to focus on a set of commons near Sevenoaks and Westerham in Kent (Fig. 1). The commons have very different histories but all have played a part in the lives of local people for centuries. They have an important role in the landscape and the community but are presently underused and underappreciated.

To address this, the Sevenoaks Greensand Project has been developed by a partnership of volunteer and community groups, landowners and managers, civic societies, wildlife groups, schools and countryside groups and is led by Sevenoaks District Council and the Kent Wildlife Trust. It has already secured Stage 1 support from the Heritage Lottery Fund and is currently preparing its Stage 2 application that will be submitted in February 2018.

The overall goal of the project is to join forces with local people to build capacity for the management, protection and promotion of the commons. The specific objectives are:

To have restored the natural heritage of the Commons & opened up public access through 26 km of improved footpaths & bridleways & clear signage throughout

To have developed the capacity of local people to take a lead role in the ongoing management of some 300ha of Commons, their conservation & promotion of their heritage

To have created opportunities for people (particularly under-represented groups) to engage with and use the Commons in ways they would like

To have significantly increased the knowledge people (particularly children and young people) have about the natural heritage of the Commons

A key principle of the Sevenoaks Greensand Project is to show the continuity of the commons with the past. The landscape in which the commons sit is the result of centuries of interaction between humans and the environment. The size and shape

of fields, the routes of tracks, paths and lanes, the vegetation, woodland and clearings are derived from historical processes over many centuries. Indeed, the commons themselves contain much evidence of past human exploitation and many of the techniques of their modern management have derived from traditional crafts and skills in the area.

To achieve this goal the Project must first gain a good understanding of the historical context of the commons – how the landscape of the commons themselves, and the wider area, has assumed the shape that it is today. This understanding must underpin the activities of the Project, whether heritage-focused as in the activities presented in the parallel document 'Sevenoaks Greensand Commons Project Community Heritage Activities' (Kent County Council 2018) or the wider activities of the Project, so that they contribute effectively to the restoration of the commons and their re-integration into local life.

1.2 Purpose of the document

As section 3 will demonstrate, there has been a significant amount of historical research about the general area of the Greensand Commons, carried out by a range of different researchers working in a variety of fields. There has, however, been relatively little synthesis of this research and few regional overviews. There has, in addition, been relatively little archaeological investigation in the area, and most of this has been within settlements. There has been much less archaeological investigation in the countryside or woodlands.

Despite the lack of synthesis it is apparent from the research that has been carried out that the landscape of north Sevenoaks shows considerable continuity through time. There has of course also been much change but many of the processes that affected life in the area in the distant past continued to be relevant throughout history and in some cases remain so today.

The location of the Sevenoaks Greensand Commons



Figure 1

To gain a better understanding of these requires additional research and synthesis. The need for limited resources to be focused by clear research priorities has long been recognised and the aim is for future research to contribute to wider regional and national assessments. The South East Regional Research Framework project was born out of that process and can be found at https://www.kent.gov.uk/leisure-and-community/history-and-heritage/south-east-research-framework

Within the period reviews in this text, key research questions have been identified that will help to better understand the area and its development. This document cannot be the means by which these questions are addressed, however. It is only intended to provide an overview of what is already known to underpin the proposed activities and identify fruitful areas of future research. It has not been possible as part of its writing to carry out original or detailed research. The research questions identified in this document can guide researchers, whether during the Sevenoaks Greensand Commons Project or elsewhere, to those subjects that have the potential to make the greatest contribution to our understanding of the region.

It has been possible, however to develop a suite of community activities that meet the goals of the Sevenoaks Greensand Commons project and, within the resources available, begin to address some of the outstanding research questions. It is to be hoped that in addition to these activities volunteers and local researchers will find the document interesting and act as a stimulant for further work.

2 Review of information sources for studies of the heritage of the Sevenoaks Greensand Commons area

2.1 Bibliographic Sources

There is a wealth of bibliographic sources for the Greensand Commons. These are presented in the References sections of the individual chapters and only some useful background sources are mentioned here.

Sevenoaks library holds a good collection of local history books which may be used in their Local Studies Collection room. Some of the best local history sources that have been used in this study include 'Seal: The History of a Parish' by J.Fox, D. Williams and P. Mountfield 2007, 'Sevenoaks Past with the villages of the Holmesdale' by C. Rayner 1997 and 'Sevenoaks A Historical Dictionary' by D. Killingray and E. Purves 2012. These all provide a solid basis from which to conduct further research into this region. A similar array of local history books area available to loan from Kent History Library Centre.

The most useful general source for the study of the Palaeolithic period in Kent is 'The Archaeology of Kent to AD 800' edited by J. Williams 2007. This includes a comprehensive chapter written by F. Wenban-Smith ('The Palaeolithic Archaeology of Kent' pp 25-67) on the Palaeolithic finds which have been made across the county as well as a discussion of how these sites fit into the wider context of Palaeolithic studies in Britain. This publication also includes useful and comprehensive studies of the later prehistoric, Roman and early medieval periods, again providing information from specific sites as well as placing the information into a wider context. A copy of this publication is available at Kent History Library Centre.

For information regarding specific excavations that have revealed archaeological information journal articles within *Archaeologia Cantiana*, and *Kent Archaeological Review* are a useful resource. For example, the excavations which have been undertaken on the Iron Age hillforts of Oldbury and Squerreys are covered by various articles within *Arch Cant* (e.g Vol 85 and 90) and KAR (e.g Vol 22 and 160). *Archaeologia Cantiana* is particularly useful for gathering information from sites excavated in the second half the nineteenth and early twentieth centuries as publication of this periodical began on a yearly basis in 1858.

Copies of this journal have been digitised and are available to access online at: http://www.kentarchaeology.org.uk/Research/Pub/ArchCant/Intro.htm

A great deal of archaeological investigation has been undertaken by the Kent Archaeological Rescue Unit in western Kent encompassing the Prehistoric, Roman and Medieval periods. Much of the information gathered from these excavations is available within a single publication: 'Excavations in West Kent 1960-1970 – The Discovery and Excavation of 30 Prehistoric, Roman, Anglo-Saxon and Medieval sites, mainly in the Bromley Area and in the Darent Valley' by B. Philp 1973. Copies of many KARU excavation reports are available at Kent History Library Centre and from KARU itself.

A very useful source for the Roman period in Kent is 'Agriculture and Industry in South Eastern Roman Britain' edited by D. Bird 2017. This provides a very good summary of the available archaeological evidence for the layout of the countryside, settlement, agriculture and husbandry, as well as other industries such as pottery, iron and salt, from the leading experts in these fields, and gives lists of the available primary resources for each section.

For the Anglo-Saxon period one of the most useful sources for this study has been 'The Jutish Forest. A Study of the Weald of Kent from 450 to 1380 AD' by K. P. Witney 1976. This provides a very detailed explanation of how the landscape developed throughout the early medieval period with reference to archaeological finds as well as primary documentary sources and with particular reference to the areas here studied. Another useful source is 'Early Medieval Kent' edited by Sheila Sweetingburgh 2016. This contains a number of chapters by different authors covering a wide variety subjects such as 'New Life in Towns' (G. M. Draper) 'Saints,

Pilgramage and Landscape in Early Medieval Kent c.800-1220' (H. Powell) and 'Pottery in Kent c. 800-1220: Production, Use and Significance' (J. Cotter).

Many Anglo-Saxon charters have been looked at within this study. These provide useful glimpses into how the land was divided among the major landowners (including the King, Lords and the church) within this period. Many of these charters have been translated and are available online through the Electronic Sawyer, available here: http://www.esawyer.org.uk/about/index.html

Witneys work 'Woodland Economy of Kent: 1066- 1348' within *The Agricultural History Review*, Volume 38, 1990 has been useful for the study of the later medieval period, particuarly in reference to the use of the woodland covering the Chart Hills in the Medieval economy. Everitt's article within *Arch Cant* vol 92 '*The making of the agrarian landscape of Kent*' 1976 provides a good summary of main points covered by his later work '*Continuity and Colonization*, *The Evolution of Kentish Settlement*' 1986 which is a detailed exploration of the development of settlement and the landscape throughout the early medieval and medieval periods in Kent. Another useful source for the study of the medieval period has been '*Later Medieval Kent 1220-1540*' edited by Sheila Sweetinburgh 2010. This, like its earlier medieval counterpart, includes a wide variety of studies by different authors covering subjects such as: 'The Hospitals of Medieval Kent' (S. Sweetinburgh), 'Agriculture in Kent in the High Middle Ages' (B. M. S. Campbell) and 'The Economy of Kent 1200-1500' (M. Mates). A copy of this publication is available at Kent History Library Centre.

Many of the most useful sources for the study of the post-medieval period have come from periodicals such as *Archaeologia Cantiana* (discussed above). Many of the publications produced during this period have also been useful to this study, for example, Edward Hasted's '*The History and Topographical Survey of the County Of Kent*' which dates to 1797 includes a good description of the landscape at the time as well as many detailed maps of the areas discussed.

2.2 Archive Resources

The British Library and Kent History and Library Centre are invaluable resources for the study of primary documentary, photographic and cartographic sources. Both hold collections of many primary sources which provide information about the former use of the commons, including wills, licences to extract resources, documents pertaining to the enclosure of various parts of the commons, parish registers and manorial records. The centre also holds a wide variety of historic maps including the midnineteenth century tithe maps (and associated apportionment tables), estate maps of various dates, as well as copies of the first to fourth edition 6in and 25in Ordnance Survey maps of Kent. Sevenoaks library has a good local history section which includes collections (amongst others) of nineteenth century poll books and electoral registers, parish registers and workhouse records nineteenth and twentieth century censuses, nineteenth and twentieth century directories (including Hookers and Kelly's) as well as local newspaper collections.

The Kent History Library Centre catalogue is available online here: https://www.kentarchives.org.uk/

The British Library catalogue is available online here: https://www.bl.uk/catalogues-and-collections

Sevenoaks and other Kentish library catologues are available online here: https://kent.spydus.co.uk/cgi-bin/spydus.exe/MSGTRN/OPAC/HOME

2.3 Lidar data

Lidar is a method that measures distance to a target by illuminating that target with a pulsed laser light and measuring reflected pulses with a sensor. It can be used to produce three dimensional models of the landscape, and often highlights previously unrecorded archaeological sites. It is particularly useful in areas such as the Greensand Commons area, due to its ability to see though the tree cover and reveal archaeological features that may survive as earthworks.

Much of the information gathered through past Lidar survey by the Environment Agency is available online here: http://enfarchsoc.org/opendata/

As part of this project it is intended to acquire new lidar data for the study area.

2.4 Aerial photographs

Historic aerial photographs are available within Good Earth/Maps. For the area here studied photographs exist for 2015, 2014, 2013, 2011, 2008, 2007, 2005, 2003,

1990, 1960 and 1940. The Kent History and Library Centre also holds collections of aerial photographs from various dates throughout the 20th century

2.5 Kent Historic Environment Record (HER)

Much of the information in this historic review concerning individual archaeological excavations was gathered from Kent HER. This is an online resource which is constantly updated and includes information about archaeological sites, finds and buildings in Kent. Much of the information contained within the HER comes from unpublished archaeological reports produced by archaeological contractors working with the development control sector. Access to the online HER, as well as information about how get in contact with those working on it can be found here: http://www.kent.gov.uk/HER

3 The history of the Sevenoaks Greensand Commons landscape

3.1 Geology and landform

The Sevenoaks Greensand Commons are located on the Greensand Ridge, which is an extensive, prominent, often wooded, mixed greensand/sandstone escarpment in south-east England, running through much of Surrey and Kent. This ridge enters Kent to the west between Oxted and Westerham and continues eastwards towards Sevenoaks. This part of it is known locally as the Chart Hills. It continues eastwards past Sevenoaks, until it is broken by the valley of the River Medway. The scarp topography is apparent across this region and all of the Commons, with the exception of Sevenoaks Weald which is located to the south of the ridge in an area known as the Weald, are generally at an elevation of between 170m and 250m above sea level. To the north of the ridge the land drops steeply down into the Vale of Holmesdale which is a narrow and very fertile valley situated between the foot of the North Downs and the Greensand Ridge at an elevation of between c. 75 and 100m above sea level. To the south of the ridge, the land again drops steeply down into an area of low lying land formed by the erosion of layered Cretaceous rock, which was originally heavily wooded.

The River Darent, a major feature in this landscape, rises from springs at Westerham and runs eastwards towards Sevenoaks through the Vale of Holmesdale, at which point it turns northwards towards the Thames Estuary. Many of the small streams which run through the hamlets and villages bordering the Commons are tributaries to the River Darent, such as the Guzzlebrook and Shode streams to the east.

The underlying bedrock of the Sevenoaks Greensand Commons generally consists of either the Hythe Formation (found beneath Sevenoaks Common, Bitchet Common, Crockham Hill Common and Hosey Common) the Folkestone Formation (found beneath Seal Chart), Weald Clay Formation (found beneath Sevenoaks Weald Common), the Sandgate Formation (found beneath Fawke Common) or the Gault Formation (found beneath Farley Common). All of these formations consist of sedimentary bedrock and were formed between c. 101 and 126 million years ago in the Cretaceous period. They comprise sandstone, mudstone, limestone or an interbedded mixture of these and were all formed under shallow marine conditions. In many parts of the Commons superficial deposits overlie the bedrock. These are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 2.6 million years and normally consist of unconsolidated sediments such as gravel, sand, silt and clay that were laid down by various natural processes such as action by ice, water and wind. All of the superficial deposits located on the Sevenoaks Greensand Commons essentially comprise sand and gravel, locally with lenses of silt, clay or peat material and were formed by solifluction and/or hillwash approximately 3 million years ago.

The geology of the Sevenoaks Greensand Commons area 2 4 Kilometers

Figure 2 The geology of the Sevenoaks Greensand Commons area

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3.2 Early Prehistory : Palaeolithic and Mesolithic (1 m BC to 4,000 BC)

Period Overview

The Palaeolithic period covers the vast majority of time that humans (and early humans or hominins) have lived in Britain, from the initial colonisation between 1 million and 700,000 years ago, to the end of the last ice age 10,000 years ago. The earliest hominins in Britain were a north European descendent of *Homo erectus* named Homo heidelbergensis, evidence for which in Kent comes from the discovery of the back part of a probably female skull at the Kent site of Swanscombe although the skull has some possible Neanderthal features. By 150,000 years ago these were replaced by Neanderthals, who died out in the middle of the last Ice Age 30,000 years ago when modern humans first appeared. The Mesolithic in Britain encompasses the period following the last ice age (c.10,000 BC) to c. 4,000 BC during which time Britain was reoccupied as the climate became more hospitable to human habitation as the last ice sheet began to retreat. The melting ice caused sea levels to rise, and around 8,000 years ago Britain was separated from the continent once more. Mesolithic people continued to be hunter-gatherers, and there is no evidence of permanent settlement. It may be, however, that they protected areas where nutritious cereals were known to grow. At Horton Kirby cereal pollen has been found in a possible Late Mesolithic context which would make it one of only a few examples in the UK of pre-Neolithic cereal cultivation. Much more sophisticated flint tools were developed in this period compared with those used in the Palaeolithic and a wide variety of differing forms are visible within the archaeological record from both single and groups of Mesolithic finds.

Palaeolithic

The Palaeolithic was characterised by a series of dramatic climatic changes. Repeated cold periods that saw the advance of the ice were separated by periods of relative warmth known as interglacials (Wenban-Smith 2007 in Williams (ed.) pp 27). The cold periods would have made much of northern Europe inhospitable meaning

that Britain was only sporadically occupied in these warmer periods. These climatic changes had a major impact upon the landscape of Britain. During the cold periods glaciers carved out valleys, cut through pre-existing sediments and pushed earth and rock before them. The consequent snow melts or rainstorms, as well as the largescale floods and freezes associated with the pivotal points of climatic change, would have caused 'major bodies of sediment to slide downhill, denuding high ground and filling hollows in low ground' (Wenban-Smith 2007 in Williams (ed.) pp 27). These climatic changes also caused large fluctuations in the sea level. Generally, the sea level was much lower than it is today as a result of the increased global ice volume. As White and Pettit point out, in the middle Palaeolithic period sea levels are likely to have dropped to a low of 100m below modern sea level, with subsequent fluctuations between about -50m and - 80m (White, Pettit 2011 in Journal of World Prehistory vol. 24 pp 8). From the study of these sea level changes alongside the bathymetry of the North Sea and the Channel, it can be presumed that throughout the Palaeolithic, the eastern coast of Britain, from the Scottish borders in the north to Kent in the south were connected to the plains of the central and southern North Sea, an area known as Doggerland (White, Pettit 2011 in Journal of world prehistory vol 24 pp 8-9).

These great changes in the environment of the Palaeolithic period means that any archaeological remains were deposited within very different contexts to all of the following periods. The evidence available for the post-glacial occupation of Britain, encompassing the early Mesolithic hunter gatherers and all subsequent periods, is reflected in artefact finds or structural features that have been left or created on the *surface* of this post-glacial landscape. In contrast, the Palaeolithic coincides with the second half of Pleistocene geological period, during which time (as discussed above) the landscape changed dramatically leaving much of the evidence for the Palaeolithic buried deeply within older underlying sediments (Wenban-Smith 2007 in Williams (ed.) pp 27). In Kent there are four main types of sediment which have revealed Palaeolithic finds. These include river terrace deposits (which occur where river channels that have eroded downwards during the cold phases left terraces of older deposits high above the banks of the new channel); colluvial or solifluction deposits that were formed by either high energy landslip events or low energy events where sediments slip down a slope and accumulate at the bottom; aeolian /loessic

deposits which were formed through fine sediments of sand and silt gathered by wind and then deposited at particular points in the landscape where the wind-speed dies, covering the ground with fine layers of sediment; and residual deposits which are found on high ground where there has been little deposition relating to glacial activity and the surface has been exposed throughout the Pleistocene (Wenban-Smith 2007 in Williams (ed.) pp 39-40). The finds which have been recovered from these sediments consist mainly of single stone tools (primarily hand axes) which would have been discarded or lost. In some rare cases groups of items have been found in situ. These are normally from within either aeolian /loessic deposits or residual deposits, in other words, the deposits which were not heavily impacted by glaciation or climate changes. For example, in Kent the residual clay-with-flints deposits or head brickearth deposits, which may have in-situ aeolian elements capping higher outcrops of the Hythe and Folkestone beds, have produced many Palaeolithic finds (Wenban-Smith 2007 in Williams (ed.) pp 37).

There is very little evidence of how those who created the Palaeolithic artefacts would have lived, but it is likely that they were essentially nomadic hunter-gatherers living together in small groups (McClellan 2006 pp 6-12). The types of animals hunted would have varied according to the changes in climate. For example, in the warmer lower Paleolithic period, early ancestors of the elephant would have roamed Kent, evidence for which may be found in the Lower Palaeolithic elephant butchery site (which included more than 30 in situ Palaeolithic hand-axes) that was uncovered in 2004 at Southfleet Road Ebbsfleet (Kent HER TQ 67 SW 456). In contrast however, by the middle Palaeolithic, the cooler climate is likely to have produced 'a rich xeric (shrub) grassland with a diverse array of herbaceous plants capable of sustaining large herds of heavyweight grazers such as mammoth, woolly rhinoceros, horse and bison' (Guthrie 1990 pp 270). As mentioned above, it is probable that Britain was only intermittently occupied, and this was particularly true during the middle Palaeolithic when the climate in the interglacial periods was much cooler and occupation would have been rarer. It has been suggested that 'Neanderthals mainly used Britain as a summer hunting ground, perhaps following migratory herds' (White, Pettit 2011 in Journal of world prehistory vol 24 pp 20). Following herds of animals would have involved traversing great distances, and recent modelling of hominin ranging patterns has suggested that, in northern latitudes, hominins would have had

to adopt a carnivore-scale ranging pattern, possibly between 2025 km2 and 5000 km2 (Gamble, Steele 1999 pp. 403).

The scientific study of the Palaeolithic period in Kent, as with the rest of Britain, began in the nineteenth century when people began to recover prehistoric relics in large numbers from busy gravel pits and brick fields (O'Connor 2007 pp xx). The work of enthusiastic amateurs such as B. Harrison has led to the recognition in Kent of a number of highly significant Palaeolithic sites the investigation of which has underpinned the development of understanding of British Palaeolithic as a whole (Wenban-Smith 2007 in Williams (ed.) pp 33). Kent is especially rich in Palaeolithic artefacts and known sites and has, by a long way, the highest number of Palaeolithic find spots recorded of any county in Britain; 'over 40,000 artefacts almost 14,000 of them hand-axes, from 475 sites are present in museum collections across the country' (Wenban-Smith 2007 in Williams (ed.) pp 33). The wealth of information provided from the Kentish sites has helped to develop the study of the Palaeolithic period to a great extent. For example, at the north Kent sites at Swanscombe, Northfleet, Bakers Hole and Ebbsfleet Channel a variety of Palaeolithic industries occur in a sequence of Pleistocene deposits and gives a clear local archaeological sequence (Roe 2014 pp 302). This exceptional preservation is primarily due to the fact that Kent was relatively unaffected by glaciation. The ice sheets that repeatedly advanced during cold periods never reached further south than London and South Essex and so archaeological evidence survives in the county unlike many parts of Britain where the advancing ice erased any archaeological traces. (Wenban-Smith 2007 in Williams (ed.) pp 32).

A concentration of Palaeolithic finds has been made within the Sevenoaks
Greensand Commons area, with single as well as groups of finds located in the head
brickearth/gravel contexts to the east of Sevenoaks.

Many Palaeolithic flint tools, including bout coupé hand-axes, have been found in the vicinity of Ightham, Oldbury Hillfort and within the river gravels of the Shode Stream suggesting that this hill and its surroundings were in use 'as a hunting ground by our



Figure 3 Benjamin Harrison at the Oldbury Rock Shelters

Palaeolithic forerunners' (Harrison 1933 in Arch Cant vol. 45 pp 148). Many of the tools that were recovered were, as a rule, unworn and whitish in colour, suggesting that they were found in-situ rather than being deposited as a result of moving sediment. Two rock shelters have been identified at Oldbury, within an outcrop of sandstone on the eastern side of the hill. Harrison notes that natural caves are 'not formed under the conditions found at Oldbury and it may be safely inferred that the caves found there were hollowed out by man, possibly by enlargement of an animal burrow' (Harrison 1933 in Arch Cant vol. 45 pp 152). Excavation carried out at these rock shelters produced at least one bout coupé handaxe in association with debitage reflecting a Mousterian discoidal core technique, which is thought to be characteristic of the middle Palaeolithic period, and represents a possible flint working site (Scott in Lawson, Killingray (eds.) 2004 pp 8). These finds have been suggested as signifying the presence of a 'field camp or monitoring point used by hunters operating within the mammoth steppe of the Weald' and the accumulation of finds here may represent 'palimpsest of archaeological remains, probably from repeated visits over maybe several hundred years' (Wenban-Smith 2007 in Williams (ed.) pp62-63).

The situation of the site highlights a type of context that may produce similar material elsewhere and contemporary sites may be present in Kent in fissures in the Hythe Beds in the northern part of the Weald (Wenban-Smith 2007 in Williams (ed.) pp62-63). Recent work, including at Ightham, has suggested that fissures capable of preserving Upper Palaeolithic material may be more common in lowland Britain than previously thought (Pope 2007, pp33).

Mesolithic

As with the preceding Palaeolithic period, the occupants of Mesolithic Britain would have been nomadic hunter gatherers. The rise in temperature after the end of the last ice age would, however, have made the large scale seasonal migration to avoid harsh conditions, which has been suggested for the Palaeolithic, unnecessary in the Mesolithic. This rise in temperature would have also resulted in a wide variety of new animals living in this landscape. Temperate forms like the elk, red deer, roe deer and wild pigs would have occupied much of Britain.

These new sources of food resulted in the improvement of the technology used to hunt them (Milner in Connor and Warren (eds.) 2006 pp 64). The bow was introduced with flint arrows 'the latter tipped with tiny microliths' and for fur bearing animals, such as the fox 'special arrowheads were developed and used to avoid damaging the pelts' (Milner in Connor and Warren (eds.) 2006 pp 64). Though stone tools continue to be the most common find from this period, antler and bone tools were also made, with some examples coming from Higham, Tankerton and Cliffe Creek in Kent (Scott in Lawson, Killingray (eds.) 2004 pp 9).

Development of stone tools continued throughout the Mesolithic period and by the later Mesolithic (c. 8-7000 BP) microliths were distinctively geometric in form. Such assemblages have been recovered from a variety of excavated sites in Kent and may possibly reflect a marked increase in the population (Scott in Lawson, Killingray (eds.) 2004 pp 9). Among the findspots there are some more extensive sites with larger collections of stone tools, 'these may represent preferred sites within the landscape to which the mobile hunting groups regularly returned' (Champion in Williams (ed.) 2007 pp 73).

It is clear that, as is the case for the Palaeolithic period, the archaeological record for Mesolithic period is dominated by stone tools. The context within which these stone tools are located is, however, very different with artefacts being found close to the surface of the post glacial landscape rather than deeply buried within it. Mesolithic finds have not been subjected to the massive geological and landscape changes as have most Palaeolithic finds and there is a greater possibility for finds from this period to occur in situ (Wenban-Smith 2007 in Williams (ed.) pp 27).

As with the preceding Palaeolithic period, there appears to be a concentration of Mesolithic finds in the area to the east of Sevenoaks. These finds include both single artefacts as well as more substantial groups of tools that include a wide variety of types. For example, on the northern side of Oldbury a flaked axehead with evidence of a tranchet sharpening flake which could identify this as a tranchet axe of Late Mesolithic date has been located (Kent HER MKE97079). A possible Mesolithic working floor or habitation site was found in 1933 in a sandpit at Ivyhatch, near lightham, with an assemblage of flint artefacts that included 2 tranchet axes, cores, blades or flakes and microliths (Kent HER TQ 55 SE 16).

Mesolithic occupation is also apparent around Otford, to the north of Sevenoaks. Here numerous finds have been made including an assemblage of over fourteen implements containing microliths, scrapers and part of a polished axe (Kent HER TQ 56 SW 9). A rare find of a possible Mesolithic feature was also discovered in Otford during an archaeological watching brief undertaken there in 2006 (Kent HER TQ 55 NW 108). Here, two later prehistoric burnt mounds were found. The larger, westernmost mound was excavated and found to contain at least two phases of activity and a series of underlying structures in the form of several layers and pits, and most significantly a large section of an apparently circular ring-shaped feature associated with the earlier (possibly Mesolithic) phase (Compass Archaeology 2007 pp 62).

Many of the Mesolithic sites that have been explored in this landscape show some evidence of being used either previously or subsequently. The concentration of finds which have occurred at Oldbury suggests that the features of that area which drew the earlier Palaeolithic occupants to it were also valuable in the Mesolithic period. A similar continuity can be seen at Green Hill near Otford where Mesolithic flints were

found but Neolithic and Bronze Age occupation evidence was also revealed (discussed below).

One of the best examples of this continued use of Mesolithic sites may be found at the Mill Pond Wood Bronze Age barrow site. Here hundreds of pieces of worked flint and tools dating to the Mesolithic period were discovered in the make-up of a later barrow mound, suggesting that the barrow was constructed on a much earlier flintworking site (Kent HER TQ 55 NW 13).

This continuity of occupation/use of these Mesolithic sites in the later prehistoric period may, however, be a reflection of detailed archaeological study. It has also been suggested however, that this continuity had a social function, particularly in regard to ritual sites, and may display attempts by a social elite to legitimise their position through reference to the past. (Bradley 1987 in Journal of the British Archaeological Association vol. 140 pp 1)

Suggested further research questions

What potential is there for fissures such as those present at Oldbury Hillfort and Ightham to produce Palaeolithic material? Where else in the area might such fissures exist.

Is there any faunal or environmental evidence available from the known Mesolithic and Palaeolithic sites within this landscape?

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3.3 Later Prehistory : Neolithic, Bronze and Iron Ages (4,000 BC to 2,350 BC)

Period overview

It was during later prehistory that humans first began to shape, rather than simply subsist in, the landscape around them. Trends that had begun in the Mesolithic period, such as woodland clearance and the creation of more sophisticated flint tools, continued and developed during the Neolithic. To these were added new innovations such as the first pottery, complex ideas about ceremony and ritual, and built structures such as longhouses.

During the Bronze Age (c. 2,350 BC to 700 BC) metal was introduced, first copper and later bronze, and was widely traded, including internationally. Farming became more organised and the landscape was divided up by trackways, fences, walls and enclosures. Settlements became more complex and burial monuments, first introduced in the Neolithic, became much more widespread but were smaller and less impressive.

Although the period that followed the Bronze Age was known as the Iron Age, iron was not much used until quite late in the period and for much of the Iron Age life continued much as it had in the late Bronze Age. The Iron Age is characterised by increasing contact with continental Europe which brought a range of new influences and culminated in Julius Caesar's expeditions in the first century BC and then the Roman invasion of 43 AD. During this time coinage and new forms of pottery, burial rite and ornament were introduced. Settlements became much larger and in some areas proto-towns developed. In the landscape the most dramatic monuments were hillforts, huge enclosed hilltop sites that were mainly used for storage and communal activities but also, at the end of the Iron Age, for occupation and defence. Two of these sites, at Oldbury and Squerryes, exist within the Sevenoaks Greensand Commons area.

Neolithic

Landscape

The start of the Neolithic period is often regarded as a major turning point for the development of human societies. New ideas and technologies laid the foundations for the development of the landscape into what we can see today. The central innovation that brought about this development was a change of subsistence from hunting and gathering to farming and pastoralism. This change is likely to have been a gradual one and throughout the period a mixture of hunting, gathering and farming would have sustained the communities living in the area.

To facilitate this movement towards a more settled lifestyle, the deciduous woodland that originally covered the region was gradually cleared. Evidence of this clearance has been found at a number of sites in the region through the analysis of pollen and molluscs from samples taken during archaeological investigations (discussed in detail below). These clearances would perhaps have been few in number and small in scale in the earlier years of this period, but they would have taken advantage of the fertile soils within the river valleys of the Darent and the Medway. This concentration of activity along rivers was to remain a feature of the settlement pattern of this region until at least the medieval period.

Settlement and sites

The Neolithic was the period when people first built complex structures. Across the UK, however, only a few dozen buildings have been found, including at White Horse Stone in Kent. In the Sevenoaks Greensand Commons area traces of Neolithic settlement are elusive being characterised by a few features and scatters of finds. For example, late Neolithic / early Bronze Age settlement is represented at Greenhill near Otford by an area of burning alongside a scatter of occupational debris, including Peterborough and Beaker wares. There was also evidence of extensive flint working and over 230 waste flakes were found (Pyke 1980 in Arch Cant vol. 96 pp 329-330). It is likely that this site represents a temporary settlement of a small group of people practicing seasonal upland grazing in a clearing (Champion in Williams (ed.) 2007 pp 85).

Neolithic occupation in the area is further suggested at Otford Road, just to the north of Sevenoaks, where many worked flint flakes were uncovered, possibly representing a flint production site (Kent HER TQ 55 NW 14). The most numerous Neolithic finds in the area are finds of individual or small groups of flints. Whether or not these indicate Neolithic activity, occupation or settlement they do show that Neolithic people made widespread use of the landscape. Many such flints were collected close to Ightham by Benjamin Harrison (Harrison 1933 in Arch Cant vol. 45).

There is also no evidence of Neolithic enclosures in the area. These are a feature elsewhere in Kent and there absence here probably reflects the likely low density of settlement in this area. Williams (ed.) 2007 pp 85).

Economy and environment

The clearance of the woodland to provide pasture and crop fields was patchy and at first may not have been permanent leading to woodland regeneration in some areas. The first domesticated animals were sheep, pigs and goats and the first crops barley and wheat. The population grew, but, although people became food-producers, wild foods were still an important part of their diet. Evidence of forest clearance in the area has been found at the Greenhill Neolithic / Bronze Age site. Here, two layers containing molluscs were identified; the lower layer contained molluscs of a woodland type, predominantly *Pomatias elegans* a species which, when found in large quantities, has been suggested to indicate disturbed soil, perhaps caused by woodland clearance. The upper layer, which contained Neolithic / Bronze Age occupational debris, produced molluscs of the open country type, quite distinct from the woodland types found in the layer below suggesting that by the time the site came to be occupied, it had been cleared of the tree cover (Pyke 1980 in Arch Cant vol. 96 pp 328). It is clear that clearance was underway on a relatively large scale in this period, and it began the process of forest clearance which was to be continued in all subsequent periods.

Neolithic discoveries in the Sevenoaks Greensand Commons area

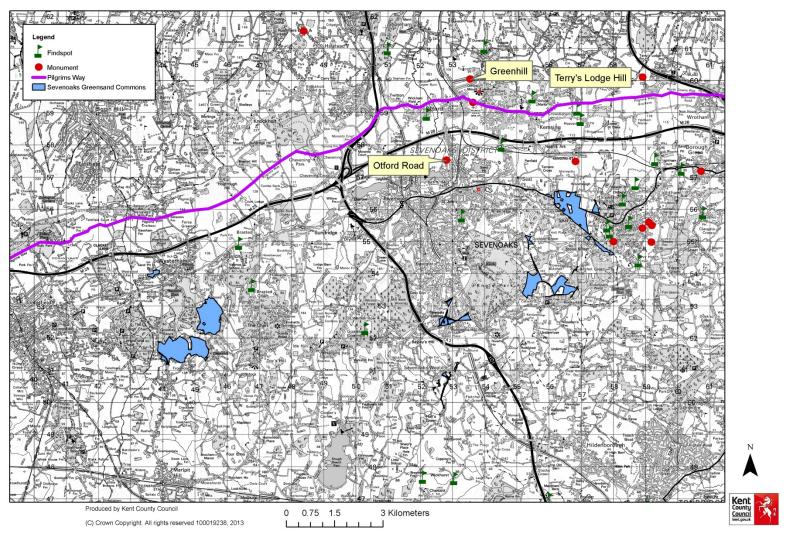


Figure 4

Bronze Age discoveries in the Sevenoaks Greensand Commons area

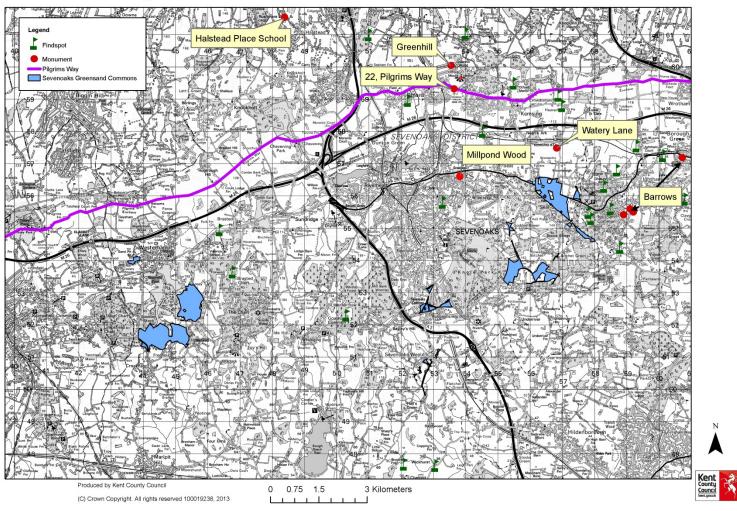


Figure 5

Communication

There are two key land (as opposed to riverine) communication routes that seem to have existed in the area of the Greensand Commons in the later prehistoric period. The first of these is the Pilgrims Way or North Downs ridgeway. 'Stretching in a great arc around the northern edge of the Weald, the north downs provided an almost continuous passageway for prehistoric traffic, upon dry soil, broken only by the crossing of five rivers; Stour, Medway, Darent, Mole and Wey' (Margary 1948 pp 259). Margary, an authority on ancient roads, has pointed out the dual nature of this trackway; it comprises both a ridgeway and a terraceway with the first running along the crest of the escarpment and the second parallel to it, usually at the point below the escarpment where the slope flattens out to cultivation (Lillie 1966 in Arch Cant vol. 81 pp 3). Parts of this ancient trackway have been dated by archaeological finds to 600–450 BC, but it was probably in existence since the Neolithic period (Margary 1948 pp 260). Evidence that it certainly pre-dates the middle Iron Age may be found at Bigberry Hillfort, near Canterbury. The arrangement of the defences around the two entrances of the road implies its previous existence; a later road cut through the camp would not have defended entrances: a contemporary road is rarely to be found running through a hill-top earthwork (Elliston-Erwood 1925 in Arch Cant vol. 37 pp 7).

A possible example of a camp dating to the Neolithic period, consisting of an area of burning and an associated find of a Neolithic axe, was located approximately 3.5 km to the north of Ightham, at Terry's Lodge Hill, immediately adjacent to the Pilgrims Way (Kent HER TQ 56 SE 5). The presence of sites and finds with dates ranging from the Neolithic to the later Iron Age (as well as later periods) within the immediate vicinity of this route suggests that it was in use throughout the later prehistoric period (Elliston-Erwood 1925 in Arch Cant vol. 37 pp 5).

Belief and burial

The most dramatic innovation of the Neolithic period, and one that has left imprints in the landscape around the country, was the development of large ceremonial monuments called barrows, made of earth or stone. The construction of the barrows show the increased complexity of human societies as it took considerable organisation to build them. There were two groups of barrows in Kent, one centred

on the Medway Valley and known as the Medway Megaliths, the other on the Stour Valley. No such barrows are known in the area of the Sevenoaks Greensand Commons, however, and there are no known Neolithic burials other than a doubtful report of burials from Beech Wood Hole / Rose Wood south of Oldbury.

Bronze Age

Landscape

The scarcity of Neolithic evidence in the area continued into the Bronze Age and in contrast to other parts of Kent there is little evidence for large-scale exploitation of the landscape in the Sevenoaks Greensand Commons area during the period. Elsewhere in Kent, particularly during the later Bronze Age, the landscape was divided by trackways and enclosures reflecting the expansion in farming. Geophysical survey at Sevenoaks Quarry in 2005 discovered a large number of enclosures and other features, some of which may well be Bronze Age in date but these could not be confirmed archaeologically.

Settlement and sites

Numerous Bronze Age settlements have been excavated in Kent. Generally, they consisted of round timber houses grouped within compounds. The houses were accompanied by hearths, middens, pits, floors and working areas. Within the Sevenoaks Greensand Commons area, no substantial settlements have been found but there is evidence of occupation. The seasonal occupation site found at Greenhill near Otford probably extended into the early Bronze Age. A pit containing Bronze Age pottery was found in 2006 at Halstead Place School (Kent HER TQ 46 SE 117) and a Bronze Age gully may have been found at Sevenoaks Quarry in 2014 (Kent HER TQ 55 NW 375). There are also traces of Bronze Age activity at the 22 Pilgrims Way site where a post hole contained Beaker (late Neolithic / early Bronze Age pottery).

Economy and environment

As discussed above, the economy of the Bronze Age was based primarily on agriculture and pastoralism. This required a range of ancillary crafts and industries, however, including food processing, weaving, pottery manufacture, flint working, salt

manufacturing and there were other crafts such as ornament and jewellery making. Little evidence of these crafts has been found in the Sevenoaks Greensand Commons area but there is evidence of metalworking or trading in the area. A copper alloy awl was found near Kemsing, approximately 500m to the south of the Pilgrims Way (Kent HER MKE72617); a copper alloy hand axe was found to the north of Westerham, again within 500m of the Pilgrims Way (Kent HER MKE72375); an early Bronze Age flat axe found near Ightham (Kent HER TQ 55 NE 27); and a copper alloy socketed spearhead with a angular leaf shaped blade was found approximately 50m to the west of Oldbury Hillfort (Kent HER MKE74803).

Belief and burial

Ceremonial monuments remained a common feature In the Bronze Age. Barrows have been found across Kent, consisting of round or more rarely oval mounds, often covering a central burial with an encircling ditch. Examples of barrows have been identified within the landscape surrounding the Greensand Commons; Otford Mount, located just to the north east of Otford, is the site of a bowl barrow with a mound 20m in diameter and 1m high, surrounded by a ditch from which the material was quarried during construction (Ward 1931 pp 166). The height of the mound was probably much greater at the time of its construction, but it has been substantially reduced and spread by ploughing (Historic England National List No. 1007986).

Another barrow is located at Millpond Wood, on the north-eastern side of Sevenoaks. This site consists of an oval mound, 33m east-west by 28m north-south and c. 1.8m high with a 3m wide ditch encircling it. The site was first excavated in the 1890s when traces of a cremation burial were discovered beneath the mound. Hundreds of pieces of worked flint and tools dating to the Mesolithic period were also discovered in the make-up of the mound and surrounding area, showing that the barrow was constructed on a much earlier flint-working site (Historic England National List No. 1008015).

A further barrow site was identified during the Watery Lane excavations between the Kemsing Water Treatment Works and the Oak Bank Reservoir, near Seal Chart. The remains consisted of part of an approximately 0.3m-deep, 0.85m wide curved ditch, which formed a rough circle with an outer diameter of some eight metres. The ditch and its associated features were interpreted with confidence as part of a plough

truncated round barrow, the date of the associated burial vessels (*c.* 1550- *c.*1350 BC) identifying it as of Middle Bronze Age date (Kent Archaeological Projects, 2013 pp 3). The remains of four much-fragmented urned burials in association with calcined human bone were identified and excavated within this structure, one urn lying within the ditch-enclosed area, the others (probably the remains of multiple burials) either set into or re-deposited in the ring-ditch when it was partly in-filled with silt (Kent Archaeological Projects, 2013 pp 3).

The Kent HER notes a concentration of possible barrow sites in an area to the east of Ightham (Kent HER NE 35, 36 and 24). These are all within 300m of one another and were uncovered in the later nineteenth century, they have since been destroyed by extraction work undertaken in the region, but were said to have been associated with finds of a Bronze Age date.

Though many barrows may be easily identified within the landscape as above ground features or through a study of aerial photography, a great many more burials are expected to survive only as below ground archaeological remains. It is likely that these are underrepresented within the record due to a general lack of formal archaeological investigation in the region, though some do exist.

Iron Age

Landscape

During the Iron Age there were a number of developments that were to have a significant impact on the landscape. New types of wheat and barley were introduced and there was increased cultivation of peas, beans, flax and other crops. The rotary quern was invented for grinding grain. Farming techniques improved, and the iron-tipped ploughshare allowed the cultivation of heavier soils. Together these improvements led to a significant increase in population, perhaps to over a million. People lived in settlements amid large field systems much as in the Bronze Age.

Wiithin the Sevenoaks Greensand Commons area, however, there is relatively little settlement evidence and the landscape was probably still mostly thickly wooded. So much so that even Julius Caesar's normally detailed chronicle dispenses with his journey through west Kent in 54 BC in a short sentence and this has been held by

some to reflect the lack of noteworthy settlement at that time' (Philp 1963 in Arch Cant vol. 78 pp 75).

Settlement and sites

It is difficult to say for sure how densely the Sevenoaks area was populated in the Iron Age. It is possible that that this area was comparatively lightly occupied but is also possible that it was more densely populated, yet in a way that is not easily visible archaeologically (Champion in Williams (ed.) 2007 pp 107). The location of features within the landscape such as Oldbury and Squerreys hillforts (discussed in detail below) imply that the latter of these assumptions is correct, and that there are settlements located throughout this landscape which are awaiting archaeological investigation.

The largest Iron Age settlement sites found in Kent are known as 'oppida'. Examples of these important centres, which had political and economic similarities to Roman towns, have been found near Rochester, Maidstone and Canterbury, though none have yet been uncovered within the region here studied.

Such settlement evidence as has been found locally is on a much smaller scale. One glimpse was found during works associated with the laying a of a gas pipe in 1966 approximately 2 km to the north west of Brasted, very close to the Pilgrims Way (Kent HER TQ 45 NE 10). Three features were recorded in the side of the pipe trench and about 25 late Iron Age potsherds were recovered from the adjacent spoil heaps. The features and finds suggest an occupation site, with the largest of the three ditches possibly enclosing the settlement.

Further settlement evidence was located during works associated with an extension to Sevenoaks quarry. A magnetometry survey undertaken here in 2006 confirmed the existence of multiple enclosures and associated roundhouse dwellings. The largest of these enclosures was 70m in diameter. Another 21m x 21m square enclosure with a trackway leading into it from the south-east and a smaller 'banjo' enclosure (which are rare in Kent) were also identified. Within these enclosures multiple features were identified including pits and areas of burning as well as numerous circular features with diameters that fall into the expected size range for later prehistoric roundhouses (Archaeology South East 2006 pp 12-13). Overall a

relatively substantial later prehistoric settlement is implied by the geophysical evidence uncovered at this site.

Features from another Iron Age site were located in May 2016 when four evaluation trenches were excavated at the site of 22 Pilgrims Way in Otford (Kent HER TQ 55 NW 392). These trenches uncovered a number of features, mainly dateable to the Iron Age period, including pits and ditches. The finds from the site included an iron nail, an abraded animal bone fragment, 13 sherds of middle to late Iron Age pottery fragments and a fragment of burnt flint (Wessex Archaeology 2016 pp 3).

An Iron Age structure has also been located near Plaxtol (where a number of Roman sites were also located). A semi-circular feature of sarsen blocks was investigated and interpreted as being the bare foundations of a round house which had been cut into the slope on the brow of the hill (Davies in Arch can vol. 129 2009 pp 259). The construction of the semi-circle of stones would have served as a flat base for the sloping thatched roof to rest upon. This, and the associated scatter of Iron Age pottery, are typical of the archaeological evidence we have of Iron Age round houses (Davies in Arch can vol. 129 2009 pp 260).

This evidence shows that while there is not the same wealth of information about prehistoric sites available in this region in as other areas in Kent, for example Thanet, prehistoric communities did reside here, and their former presence is visible in the archaeological record.

Although the most direct evidence for Iron Age prehistoric settlement comes from features such as ditches, pits or parts of structures, evidence may also be gathered from material finds made within the landscape. For example, during the construction of a swimming pool in 1906 at Patchgrove, just to the north of Oldbury Hillfort, traces of a settlement characterised by pottery which 'was undoubtedly pre-Roman in character' was uncovered (Ward-Perkins 1944 in Archaeologia Vol 90 pp 141-142). Later trial trenches here confirmed this record and a great deal of late pre-Roman and Roman pottery was found, water laid in the re-deposited clay which here overlies the valley bottom; without a doubt the rubbish from a considerable settlement.

Economy and environment

By the later years of the Iron Age, farming had advanced so substantially that it allowed many to produce at a higher than sustenance level. This is evidenced by the contemporary writers such as Strabo who noted that exports from the island included 'grain, cattle, gold, silver, iron, hides, slaves and hunting dogs' (Strabo. *Geography*. IV.5.2-3.).

Evidence for this agriculture exists at a number of places within this region and consists mainly of the remnants of prehistoric field systems. At Knole significant evidence of early field systems has been identified across much of the park, characterized by a series of small irregular plots defined by shallow lynchets or scarps, some surviving to a height of 1m in places (Border Archaeology 2016 pp 10).

Further evidence for Iron Age field systems was uncovered during excavations undertaken in 2010 for a new pipeline route, just to the south of Kemsing train station at Watery Lane. At least three intersecting linear features were located at this site, post-dating a nearby Bronze Age barrow and pre-dating the late Iron Age/early Roman cremation cemetery. It is thought that they relate to an Iron Age field system created after the Bronze Age barrow's ring ditch had silted but whilst the mound was still visible (Kent Archaeological Projects 2013 pp 3).

Alongside this there is a possible later prehistoric field system located both on the plateau and slopes of Otford mount. This consisted of square-ish fields of roughly one third of an acre to one and a half acres in size and were separated by earth banks or lynchets (Clarke and Stoyel 1975 pp 8).

To cultivate this land the later prehistoric communities would have cleared large areas of the woodland. There is evidence for this clearance available in pollen samples gathered during the excavation of Squerreys Iron Age hillfort. The interpretation of these suggests that cultivation had been taking place within the clearings in the woodland. Hazel was the predominant species noted within the samples which differs from the beech and oak that would have originally occupied most of this region before clearance. These were likely removed by fire, grazing and felling or a combination of all three (Piercy-Fox 1970 in Arch Cant vol. 85 pp 32).

Iron Age discoveries in the Sevenoaks Greensand Commons area

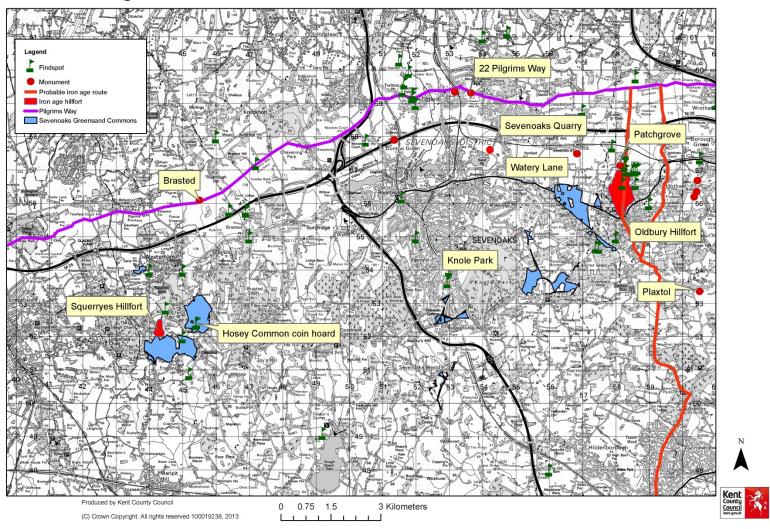


Figure 6

One feature of the Iron Age that provides evidence for the developing economy at this time is the introduction of coinage. Kent was one of the first parts of Britain to use coins, an idea copied from the continent, and they are evident within the archaeological record from the second century BC onwards. Many Iron Age coins have been found in the landscape surrounding the Greensand Commons by both formal archaeological investigation and through chance finds.

The Kent HER notes over 100 examples of gold, silver and copper alloy coins within the immediate landscape. An important assemblage of Iron Age coins was uncovered during extraction work on Hosey common in 1927. The hoard consisted of fourteen gold staters, dated to c.90 BC. Two of the coins were Gaulish and the remaining twelve probably British. They were located within a hollow flint 'money box' uncovered about 50 cm below the surface (Kent HER TQ 45 SE 9). This discovery is important as not only does it show that coinage was in use in this area early in the first century BC but it also reveals the contact that the communities living here would have had with the continent.

Further evidence of contact with Gaul can be seen from the Iron Age coins that were recorded at Oldbury. Two are staters of a type attributed to the Gaulish tribe of the Bellovaci. Another of the same type was discovered by Harrison a few years later (Ward Perkins 1939 in Arch Cant Vol 51 pp 161).

Evidence of continental contact is also provided by some of the Iron Age pottery from the area. Omphalos-bowls, which originated in Brittany, were found during excavations at Oldbury and Plaxtol. These are normally found at the various coastal sites on either side of the Thames Estuary and in Sussex (Ward Perkins 1939 in Arch Cant Vol. 51 pp 168). Their presence within this landscape suggests that the communities living here had contact with the Thames Estuary to the north by way of the Darent valley, and perhaps indirectly with the continent.

Another example of regional contacts in the area was uncovered during the excavations at Oldbury in 1938 where a glass bead was uncovered for which an exact parallel was uncovered in Sussex giving strong evidence of contact between these two areas (Ward Perkins 1939 in Arch Cant Vol 51 pp 163).

It is clear that a range of goods were traded in the Iron Age but there is limited local evidence for the production of the items which would have been exchanged. This is probably due to the lack of formal archaeological excavation in this region, and it is likely that further investigation will produce evidence of production sites. A small amount of evidence for metal working was provided by the excavations undertaken at Squerreys Hillfort. A fragment of a baked clay crucible was found within a quarry ditch. This was submitted to the research laboratory of the British Museum in 1983 and analysis of the fragment revealed that traces of copper, tin and lead were present on the inner surface indicating that it had been used with leaded bronze. Traces of silver, arsenic, antimony and gold were also detected. It seems clear that a specialist metal worker was active on the site during the construction of the southern ramparts (Philp 2005 KAR vol 160 pp 224).

Communication

The major communications routes in the area remained those that had been used during the later prehistoric period – the rivers and the route that subsequently became the Pilgrims Way. A second major route in the area, this time running north-south, was the route that ran from the Pilgrims way past Plaxtol and thence southwards through Shipbourne to Tonbridge. The strategic importance of this track is highlighted by the three Iron Age hillforts/camps along its route at Saxonbury, Tonbridge (where there were probably two forts) and Oldbury (Davies in Arch can vol. 129 2009 pp 257). From Tonbridge the track followed a well-marked ridge all the way through Southborough to Tunbridge Wells, and then on high ground through Frant, Mark Cross, Argos Hill near Rotherfield, and Five Ashes to Cross in Hand where it meets the main east -west ridgeway. This route is a very direct one, trending slightly west of due south and between Tonbridge and Cross in Hand there is only one river crossing, at Argos Hill (Margary 1968 pp 265-66). An ancient crossing of the River Medway existed at Tonbridge, thus this track not only provided a route southwards into the Weald it also provided a northwards route via the River Medway.

Overall this region appears to have been well connected in the later prehistoric period. The Pilgrims Way/North Downs Ridgeway would have provided a route to Canterbury and the Kentish Coast. This north-south route passing through Oldbury would have provided access to other communities living in the area of the hillforts of

Saxonbury and Tonbridge. It also gave access to the River Medway and thence to the concentration of settlement around Maidstone and possible oppida site at Rochester as well as south into the Weald while the river Darent would have provided access up the Darent valley and to north Kent

Defence

The two largest Iron Age features in this landscape are the major Iron Age hillforts of Oldbury and Squerreys.

In contrast to many British hillforts, which were usually built in the early Iron Age, the Kentish examples are generally of a middle or late Iron Age date. Oldbury is the largest example of a hillfort in Kent and is one of the largest in the whole of Britain; it covers an area of approximately 0.5 square kilometres. Towards the end of the early Iron Age, the hill was fortified by the erection of a bank and ditch around the summit. This ran continuously around about two thirds of the area, the remaining third was probably considered too strong to require elaborate artificial defences (Ward Perkins 1939 in Arch Cant Vol 51 pp 139-140).

The finds from various small-scale excavations at the site include pottery, glass beads, sling stones, querns, a whetstone and coins. Despite the presence of these finds there appears to be little evidence of any large scale permanent settlement within the area defended. It seems that the defences were dictated solely by the configuration of the ground and it was certainly not due to the requirements of an extensive permanent settlement (Ward Perkins 1939 in Arch Cant Vol 51 pp 139).

Squerreys hillfort, in the west of the study area, immediately north of Crockham Hill Common, consists of an oval shaped earthwork with an inner bank, external ditch and outer counter-scarp bank, enclosing an area of about 0.045 square kilometres.

Work carried out in 2004 allowed the controlled examination of the inner bank, the large single internal ditch and the outer counter scarp bank. The trenches located parts of quarry-ditches inside the inner bank and also a small pit sealed beneath it (Philp 2005 KAR vol. 160 pp 220). The inner bank was up to about 1.1m high and 6m wide at the base. The external ditch was V-shaped in profile and about 3m deep, and appears to have been cut through solid rock in places. From the

large numbers of stone blocks on the sides and bottom of the ditch it is likely that the bank had a stone revetment and a substantial band of large blocks near the top of the surviving bank could represent a platform, but could equally well be part of the general dump.

As at Oldbury, there is limited evidence for occupation in the interior of the fort, though this may in part be due to the fact that only a small amount of archaeological investigation has taken place there. The finds uncovered during this and other small-scale excavations at the hillfort suggest a date of the second or early first century BC for its construction and use (Historic England National List No. 1005180). The evidence from both Squerreys and Oldbury has not yet proved the existence of any permanent settlement within the areas defended. It seems likely that these two forts were rather the fortified centres of a considerable scattered Iron Age population (Ward Perkins 1939 in Arch Cant Vol 51 pp 139)

Belief and ritual

In contrast to the large funerary monuments of the Neolithic and Bronze Age there is a lack of burial evidence in the Iron Age until later in the period. In the earlier Iron Age the dead are almost invisible. In the few burials that have been found the dead are in a crouched position on their side, a rite which seems to change by the middle Iron Age when the body is laid flat on its back. Eventually, cremation became the norm during the century before Rome arrived. Locally, however, there is very little evidence. In 2010 a late Iron Age/early Roman cremation cemetery was found at the Watery Lane site near Kemsing. In total 17 cremation burials were excavated, most truncated by later ploughing but retaining the burial urns, some with secondary vessels. It is thought likely that the adjacent Bronze Age barrow was a reason for the siting of the cemetery.

Suggested further research questions

Is there any environmental or ecological archaeological evidence available for study from these periods in the Sevenoaks Greensand Commons area?

How substantial was the tree clearance in this landscape throughout the Neolithic, Bronze Age and Iron Age?

Is the paucity of later prehistoric settlement sites true or due to a lack of formal archaeological investigation in this area?

Is there evidence for the continued use of the same sites throughout the Neolithic, Bronze Age and Iron Ages?

The Iron Age Hillforts of Oldbury and Squerreys suggests substantial Iron Age communities in this region. Where did they live?

Is the Iron Age burial record lacking because of a lack of archaeological investigation or an actual lack of evidence?

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3.4 Roman

Period overview

Britain finally became part of the Roman Empire after the invasion of AD 43, following expeditions in 55 and 54 BC. The country became Rome's north-westerly outpost, its acquisition driven by the political ambitions of the Emperor Claudius. The evidence for Roman Kent is very good, with a great number of large scale sites, including military, religious, burial and a wide variety of settlement types apparent across the whole of the county and an associated network of roads running between them.

For this part of western Kent there are numerous sites from which an idea of how this landscape developed in the Roman period may be gathered. The overall character of the landscape actually changed little in this period, with many of the Roman settlements located in the same location as their Iron Age predecessors. A change in the form of the dwellings that were constructed in this period is evidenced with the stone built villa becoming the norm for the elite. A concentration of villa sites, probably representing the centre of vast estates within the Darent valley spread north from this point and included the Roman villa (and associated structures) at Otford.

There were at least three major communication routes across the landscape on both a north-south and an east-west axis and these signify the need for an increased connectivity to markets and other centres for the purposes of trade. There was an increase in the population in the early centuries of the occupation, represented in the archaeological record by the numerous cremation burial sites that have been uncovered.

Landscape

There are a number of features which characterise the landscape surrounding the Greensand Commons and the changes which occurred during the Roman period. At a wider level one of the problems faced by the Romans was how to divide and administrate this new province whilst also encouraging the locals to embrace the

'Roman' way of life. One of the devices that the Romans applied to boost Romanisation was the utilisation of the pre-existing tribal divisions as units of local government. Thus 'the mutually hostile petty states of pre-Roman Britain became self-governing local communities, called civitates and these in turn were divided into two, three or four smaller administrative divisions called pagi of which Kent had two Durovernum Cantiacorum (Canterbury) and Durobrivae (Rochester)' (Clarke and Stoyel 1975 pp 11).

Continuity is an important theme when looking at the landscape in this period. There is a great deal of evidence which suggests that later Iron Age settlements continued to be used and occupied throughout the Roman period. Recent research indicate that there was a major development towards a more settled form of land-ownership in the late pre-Roman Iron Age in Britain, and that the 'Roman Conquest accelerated rather than initiated the process' (Ward 1990 pp 2). That is not to say the population did not increase. 'An investigation of the Basingstoke district suggested that the average population was 8-12 per square mile, rising to 20 per square mile in areas near to heavier soils, woodland, water, and communications' thus an estimate of a total population of about half a million in the province may not be far wrong (Applebaum 1958 in BAHR Vol 6 pp 85).

There was clearly was a marked growth in the construction of new farms of all types to accommodate this population growth, with an increase of over 100% in some areas between the end of the Iron Age and the second century. It seems, however, that these were strongly linked to and built upon the overall settlement pattern that was already in existence in the late Iron Age with few obvious concentrations of new sites (Fulford and Allen in Bird (ed) 2016 pp 8).

Alongside this, there does not appear to be evidence of any significant expansion of the Roman farmed landscape southwards into the Weald (other than for iron working) (Fulford and Allen in Bird (ed) 2016 pp 8).

Overall it appears that the distinct social groupings based around the fertile river valleys populated by communities in the late Iron Age were probably a 'key factor in the subsequent development of Romano British settlement patterns' and led to many

parts of Kent, including the area here studied, becoming quite densely populated in the early Roman period (Booth in Bird (ed.) 2016 pp 65).

Though the location of the settlement sites does not appear to have altered greatly, the form of many, particularly the higher status sites, was transformed. The pro-Roman elite who aspired to Roman culture began building rural villas, mainly in stone or in a mixture of stone and timber. These differ substantially from the simple timber round house dwellings which characterise the pre-Roman Iron Age. Nearly 100 villas are known in Kent with some notable examples located to the north and north west of the area here studied, including those at Lullingstone and Darenth both of which have their origins in the first century. There was also a concentration of villas in the Medway valley, for example sites have been investigated at Eccles, Teston, Maidstone and Snodland (Millett 2007 in Williams (ed.), fig. 5.9). The area surrounding the commons is therefore situated roughly between these two large concentrations, and it is likely that many of them influenced the way in which the landscape was farmed and developed in this period.

The lower status sites also become more visible in the archaeological record, and though the buildings are likely to have changed little (especially in the earlier Roman period) the rapid growth in the manufacture and availability of the pottery, along with ceramic building materials, has increased the archaeological visibility of these sites (Fulford and Allen in Bird (ed) 2016 pp 8).

These new villa sites, established early in the Roman period, represent the estate centres of the major landowning families of the region. In north west Kent in particular, the suggestion is that much of the landscape was divided amongst these villa estates, with the outlying lower status farmsteads contributing to and forming a vital part of their economy (Booth in Bird (ed.) 2016 pp 64). Overall this led to a considerable agricultural community 'essentially Romanised in culture' being firmly established during the first and second centuries with the exploitation of the land being shared between a number of villas (Clarke and Stoyel 1975 pp 21).

Key Roman sites in the Sevenoaks Greensand Commons area

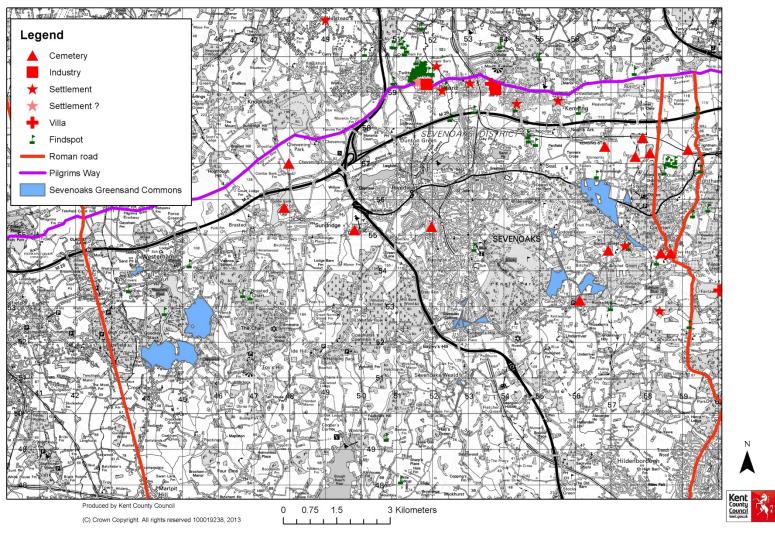


Figure 7

In the later Roman period, after around c 200 AD there was a decline in the number of small, lower status rural settlements visible in the archaeological record. The exact reasons for this decline are not fully understood but it ultimately led to a landscape dominated by a few increasingly luxurious villas controlling, perhaps, greatly extended estates (Boyce 2007, pp 264).

It was in this period that the impact of London and other large urban centres came to be felt in the landscape. Both the villas and smaller scale settlements would have needed access to local centres and it is generally agreed that London was a new foundation in around c. AD 50, perhaps, in part, in response to this need (Bird in Bird (ed.) 2016 pp 41). This, and settlements of a comparable size such as those at Rochester and Canterbury, would have had a variety of roles in relation to local administration, and as religious foci, but perhaps primarily in terms of provision of market facilities. They are likely to have served the expanding market for a 'Roman' way of life (Bird in Bird (ed.) 2016 pp 41) and this new market for things inherently 'Roman' was encouraged by the government.

The result of this was that the tribal aristocrats and their households adopted the life of the town in a relatively short period and 'turned themselves within a generation or two into Romans, in thought, speech, dress and social conventions' (Clarke and Stoyel 1975 pp 11). It is likely that the growth and success of these urban centres was the result of a much-improved road and communication network which was established in Kent in the earlier part of the Roman period (discussed in detail below). Many of these major routes ran between London, Canterbury, Rochester and the coast (where many of the major military fortifications had been established), and passed through and connected many of the rural residences which enabled them to prosper.

Settlement and sites –architecture and buildings

There is a significant amount of evidence for Roman occupation in the area surrounding the Greensand Commons between the first and fourth centuries. The evidence may be split into two categories; that from villa sites and that from rural farmstead sites, though further sub categories may be added for the evidence representing recreation (baths etc.) or production sites (e.g. Kilns etc.).

Simple farmsteads would have been the primary class of rural settlement in the county and are usually characterised by round huts and ditched enclosures. Despite this, the majority of the evidence that we have for Roman occupation is from villa sites. This is likely due to the fact that archaeological investigation has often targeted these villas as well as because higher status sites are far easier to detect than simple timber farmsteads, which often leave little trace.

There is a concentration of Roman sites in and around the settlement of Plaxtol, just to the south-west of Oldbury Hillfort. A villa was excavated by Wessex Archaeology in 2009 and then again in 2011 on the Fairlawn Estate, to the south west of the village (Kent HER TQ 65 SW 20). The excavations exposed a simple form of corridor villa with a central room that was flanked by three rooms on opposite sides c.31m long and c.11m wide (Wessex Archaeology 2011 pp iv). Based on the finds located on the site it was probably constructed in the late first or very early second century and possibly remained in use with no apparent modification until just before the middle of the fourth century (Wessex Archaeology 2011 pp iv).

To the east of Plaxtol, approximately 1.5 km to the east of the Fairlawn villa, evidence of two further Roman settlements have been uncovered. The first was originally discovered in 1956 to the rear of Sedgebrook Cottages when Roman roof tiles and pottery were ploughed up (Kent HER TQ 65 SW 20). Further excavations here in 1986-7 exposed a winged-corridor style house, measuring 25m by 11.5m and facing east, with finds including pottery dating from the first century onwards (Wessex Archaeology 2011 pp 2).

The second settlement was exposed in 1999 and again in 2004 and is situated approximately 600m to the south of the Sedgebrook villa, at Allen's Farm. It consisted of a Roman bath house, a tile kiln and a Romano-British farm house with an enclosure (Kent HER TQ 65 SW 4) (Davies 2009 in Arch Cant vol 129 pp 261). The remains included apsidal rooms, a cold bath, hypocausts, a furnace and a possible latrine as well as timber-lined well. Finds from the site include pottery spanning the first to fourth centuries as well as a bronze figurine of Minerva (Wessex Archaeology 2011 pp 2). It seems likely that that these buildings at Allen's Farm and Sedgebrook were part of one farm estate 'with the original farm owners living in the

Segdebrook villa and the estate workers or extended family houses at the simple farm building at Allens Farm' (Davies 2009 in Arch Cant vol 129 pp 274).

Another concentration of settlement evidence exists within the immediate vicinity of Otford, and includes a wide range of structures which would have had a variety of uses. The remains of a villa, first discovered in 1926, are situated just to the east of the village (Kent HER TQ 55 NW 3).

This villa consists of a small house with walls of flint and a wooden superstructure, erected in the mid first century, probably not long after the invasion (Clarke and Stoyel 1975 pp 12). The excavations here also revealed a variety of associated structures, including a possible kiln and a courtyard (Bertram and Pearce 1930 in Arch Cant vol 42 pp 157-162). Two geophysical surveys have been undertaken at the villa since the original excavation in 2006 and 2015. These revealed the presence of further structures including a possible bathhouse or another kiln, two Iron Age round houses and a number of large pits (West Kent Archaeological Society 2015 pp 4; and Walshe 2006 pp 4). One of the most interesting features uncovered at this site was the considerable fragments of painted wall plaster. One of the designs contained an extract from Virgil's Aeneid. In 1962 Professor Toynbee stated that the Otford plaster painting was probably of the late fourth century, the same as those found at Lullingstone (Clarke and Stoyel 1975 pp 14). This, along with the finds recorded at the site - high quality pottery, statues, busts, and cameo rings - all indicate that this was a relatively high-status dwelling.

Approximately 700m to the south east of this villa site, on the banks of the stream at Springhead, Kemsing, a Roman bath house and possible mill have been identified (Kent HER TQ 55 NW 8). It is possible that as at Plaxtol, all of these structures formed part of the same estate, with the villa at Otford at its centre.

In contrast to this, evidence has also been uncovered of lower status rural dwellings within the vicinity of Otford. To the south-west of the village, near the western bank of the River Darent, an excavation undertaken in 1954 revealed the presence of a simple farm building consisting of a wooden framework seated on ragstone and brick bases and a flint cobbled floor (Kent HER TQ 55 NW 2). Judging from the number of horn cores and animal bones found, the building was likely a cow byre, constructed in around c. 160 AD (Clarke and Stoyel 1975 pp 18).

A site on a similar scale has also been located to the north-west of the village, again on the banks of the River Darent, near Lower Barn (Clarke and Stoyel 1975 pp 18). Traces of a wooden hut was found initially during the construction of a fence and consisted of a rammed chalk floor with traces of water-logged posts. The small finds included fragments of brick and pottery and a boar's tusk (Kent HER TQ 55 NW 6).

Alongside the confirmed settlement sites there are a number of possible others within the landscape surrounding the Greensand Commons that have been suggested by the presence of Roman building material or domestic rubbish.

One example is located at Foxbury, near Stone Street. Here the chance discovery of Romano British pottery led to investigation by Edward Harrison in the late 1920s (Kent HER TQ 55 SE 11). The majority of the finds uncovered were domestic rubbish, including pottery of a second century date, and thus indicate an adjacent settlement site, probably a farmstead or villa (Marsh 1981 in KAR vol 62 pp 63). Two further Romano British sites in or near Otford have been accorded the status of villa on the basis of Roman building material finds.

The first, investigated in 1930, was at the isolation hospital (Wickham Field) (Kent HER TQ 55 NW 9) to the west of the village. A great deal of pottery including samian, Upchurch and Castor wares, roofing tile and hypocaust tile was identified dating from between the mid-first and mid-second century (Clarke and Stoyel 1975 pp 15).

The second was located south-east of Otford Church. Trial trenches dug in 1934 revealed hypocaust tiles and painted wall plaster but no building foundations (Clarke and Stoyel 1975 pp 16).

Even from this small selection of Roman sites it is clear that this part of Kent was well settled in the Roman period, with evidence of a wide variety of stone and timber built structures each with a different purpose and reflecting the social status of the occupants.

It seems that the dwelling houses of most villas were purely residential, which meant that the agricultural and economic tasks of the estate were delegated to the outbuildings (Applebaum 1958 in BAHR Vol 6 pp 76).

Thus, the evidence from this area also provides an indication of the type of relationship these different settlement types had with one another, with the lower status farms possibly belonging to an estate with a villa at its centre. The presence of bath-accommodation in excess of the house's needs, as evidenced at Otford villa and the Allen's Farm villa, supports this view that these farms were part of large estates (Applebaum 1958 in BAHR Vol 6 pp 78-79).

If we take a look at the wider landscape, particularly to the north of the Greensand Commons, even more evidence is available. A large number of villa sites, with a wide variety of associated buildings, are known in north-west Kent, most notably at Otford, Lullingstone, Darenth and Farningham (Millett in Williams (ed.) 2007 fig. 5.9) and the nucleated religious centre at Springhead (Kent HER TQ 67 SW 6). These all provide evidence of a diverse group of structures.

Economy and environment

As discussed above, although urban centres were developing in the Roman period, the vast majority of the population would have lived in the countryside. Their economy would therefore, have been based on agriculture and animal husbandry in the main.

Evidence of the types of farming that were being practiced during this period comes from a number of sites surrounding the Greensand Commons. At the Allen's Farm site discussed above the animal bones discovered indicate that the farm occupants kept sheep, cattle, chickens and geese and hunted red and roe deer (Davies 2009 in Arch Cant vol 129 pp 267). A wide variety of animal bones were also discovered at the sites around Otford, for example stock raising was clearly indicated at Lower Barn by the presence of numerous horn cores and bones of cattle and sheep, and at Otford villa many animal bones, principally those of pigs, were uncovered (Clarke and Stoyel 1975 pp 12-13).

Alongside animal husbandry, arable agriculture is evidenced by both the physical remains of the field systems and the crops themselves but also by the structures used for processing and storage.

Elements of a ditched field system to the east of the Darent valley which was in use in the first century, give some indication of how this agricultural activity was organised in the early Roman period (Booth in Bird (ed.) 2016 pp 63). 'In broad terms the main cereal crops grown were spelt wheat and to a lesser extent hulled barley' (Booth in Bird (ed.) 2016 pp 68). Evidence for the cereals grown exists at Otford villa where ashes of charred wheat and 'glumes possibly of wheat' were uncovered (Clarke and Stoyel 1975 pp 12). This produce would have likely been stored in granaries and processed on site. Granaries are apparent at the villa sites of Horton Kirby and Lullingstone (situated approximately 10 km to the north of Sevenoaks). These had structural characteristics (raised floor supports) similar to those of granaries on military sites (Booth in Bird (ed.) 2016 pp 69).

Evidence for milling of rain exists in the site of a reputed Roman watermill at Springhead, excavated in 1949, and again in 1969 (Philp 1969 in KAR vol 18 pp 27). Alongside this part of a quern-stone was located at Otford villa and a further 6 fragments of querns were identified at Lower Barn (four of which appear to have been imported from France).

All of this suggests extensive corn growing and milling being undertaken in this landscape throughout the Roman period (Clarke and Stoyel 1975 pp 18).

In addition to farming, it seems that many of these Roman estates embraced a number of small scale industries such as metal production and working, pottery manufacture and weaving (Booth in Bird (ed.) 2016 pp 69-70). It is likely that at most sites production was on a fairly modest scale and may have simply constituted a useful supplement to other income or was just for the use of the people living on the estate (Booth in Bird (ed.) 2016 pp 71). Evidence for this small-scale production has been found at a number of sites within the landscape surrounding the Greensand Commons. There was evidence of home crafts such as weaving (loom weights) and bone and horn working at the Allen's Farm site near Plaxtol (Davies 2009 in Arch Cant vol 129 pp 267) and the presence of a spindle whorl with rosette ornament at Otford villa points to textile production here also (Clarke and Stoyel 1975 pp 12).

Further north, Darenth Roman villa is generally thought to have had a fullery for the production or cleaning of cloth (Applebaum 1958 in BAHR Vol 6 pp 78). Kilns are also known at the two centres of occupation discussed above at Otford and Plaxtol. The kiln at Otford villa was located approximately 30m up the slope behind the house. It was about 2m by 1m in plan and a small cellar like building located just a

few meters away may have been the potters workshop. 'From the sherds the kiln would seem to have fired flagons of red clay and other pots, some seem to be of a yellowish soft ware and others of a hard, gritty ware' (Clarke and Stoyel 1975 pp 13).

As Fulford and Allen note 'Underpinning all of the changes which were underway after the Roman invasion of Britain, was the capacity to produce sufficient food to provide the surplus to support those whose priorities were not food production' (Fulford and Allen in Bird (ed.) 2016 pp 1). None of the above discussed sites, however, show any evidence of a surplus, for this we need to look at the wider landscape, to the nucleated settlements of north Kent and Greater London. The presence of multiple four post grain storage structures at Keston Roman villa, located within the London Borough of Bromley may indicate larger scale production and storage, perhaps for distribution or trade (Booth in Bird (ed.) 2016 pp 69). At the recently excavated site at Springhead, at the head of the Ebbsfleet valley, a very large assemblage of animal remains, representing animals of all the main domestic species, was discovered. This large assemblage is unlikely to reflect the composition of flocks and herds in the countryside, rather it suggests that stock was brought into the settlement from the surrounding rural sites. This implies that rural production was typically above subsistence level and that 'animals were being raised throughout the countryside specifically for movement to (and perhaps consumption in) local markets' (Booth in Bird (ed.) 2016 pp 68).

This movement of produce is also suggested by the concentration of villas and associated estates along the Darent valley, many of which included features associated with the production and storage of grain. The easy access to London that this river provided might suggest that these sites were a major source of London's grain (Bird in Bird (ed.) 2016 pp 42). This is supported by the few cases where we can check granary capacity with ox-stalls and estate areas, which suggests a cornyield of 15-20 bushels per acre, a figure supported by data from Belgium and Germany. 'On this production, the province would have had little difficulty in both feeding itself and exporting a surplus' (Applebaum 1958 in BAHR Vol 6 pp 85).

The products of farming were not the only goods to have been transported. Many industries will have produced items for trade. Towards the end of the Roman period Britain acquired reputation throughout the Roman world for its specialised textiles, in

which both estate and the state-owned fulling and weaving mills played a part (Clarke and Stoyel 1975 pp 21). It is likely that many different types of produce, including these textiles, were taken from estates and distributed through urban centres. The trade of pottery in this period is well attested. The presence of Samian, Upchurch (Kent), New Forest and Castor (Northant) wares shows that the area was completely accessible to trade from other parts of the province and from the continent. No doubt the centres at Dartford, Springhead and Rochester were locally important as entry points for these and other luxury goods (Clarke and Stoyel 1975 pp 13).

Pottery production for the purpose of distribution is evidenced within this area; the distribution of Patch Grove wares is thought to originate in this part of western Kent. Patch Grove pottery is a decorated course ware that was first discovered on a site called Patch Grove near Ightham. Since its discovery it has been located during most excavations undertaken in north west Kent, including a concentration in the Cray Valley to the north of the area here studied and even further afield in parts of Surrey (Parsons 1966 in KAR vol 6 pp 15). During excavations at a site near Frog Farm, to the west of Otford (also a site of a Roman cremation cemetery discussed in detail below) undertaken in 1966, several thousand sherds of Patchgrove pottery, including a vast quantity of wasters, were uncovered within pits described as rubbish dumps. This quantity of Patchgrove wares is unparalleled at any other site and points to the fact that the site was a kiln field. This view is supported by the presence of fragments of daub at the site which are thought to have originally been part of the Kiln walls. 'Frog Farm's position for pottery production was ideal; it provided ample supplies of gault clay, wood and water are in the immediate area along with the nearby communication routes of the River Daren and the Pilgrims Way' (Breen 1987) pp 4.2). Therefore, not only was pottery being brought into this region, it was also being distributed from it.

The role of imperial estates is evidenced by the production of iron to the south of the area here studied, in the Weald. It has been argued that the pre-existing iron-mining region of the Weald was absorbed into the 'Imperial *patrimonium* at the conquest; the parallels with Dalmatia and Noricum would make the foundation of an Imperial estate likely' (Cleere and Crossley 1985 pp 69). Iron would have been used for

farming tools and equipment and there would have been a steady demand for replacement of horse shoes.

It is likely, however, that by far the greatest demand for iron lay in its use by the military and in major construction programmes controlled by the state. Boat building (for both military and trade purposes) was a heavy consumer of iron and the larger Roman boats could have contained at least 50 kg of iron (Cleere and Crossley 1985 pp 82). The case for the existence of an imperial estate based on the ironworks of the Weald is supported by evidence of direct state participation via the Classis Britannica (at least until the mid-3rd century) in eastern Kent, and it is generally accepted that the state owned the mineral rights in all the provinces during the early empire (Cleere and Crossley 1985 pp 66). That there are no towns within the Weald itself, and that villa settlement is confined to the peripheral Greensand and Chalk, also supports this view (Cleere and Crossley 1985 pp 69).

Provision of wood would have been a key consideration for iron production and it has been suggested that in the part of the Weald that was incorporated within an imperial estate all activities other than ironworking were excluded (Dark in Bird (ed) 2016 pp 26).

Overall then, three differing types of economy are evidenced within this small region of western Kent. First is the small scale estate based economy which involved farming and modest industry at a subsistence level; this was likely the case for the villa sites located at Plaxtol. Then there is the larger scale production, again based at individual estates but with a focus on producing a surplus. This could be an agricultural surplus or that from a specialised industry, such as the Patch Grove pottery, for distribution at local markets or within the surrounding countryside. This was in all probability the case for Otford villa, which contains evidence for a wide variety of different industries within its immediate vicinity and its wider landscape. In fact it has been suggested that the economic interests of the Otford settlement extended as far as the pit fields to the south and south-west of Jubilee cottages on the Sevenoaks Road where there was a tilery or brickworks (Clarke and Stoyel 1975 pp 20). This economy manifested itself in the richly furnished villas located along the Darent valley, which are an ostentatious display of the prosperity of their owners.

And thirdly we have the imperial controlled economy whose primary focus was the continued development, preservation and control of this province.

Communication

As mentioned briefly above, a new and improved network of roads was laid down in the Roman period, and a number of these pass through or near the areas occupied by the Greensand Commons. Initially this network was established for the use of the Roman military and generally linked ports, forts and urban centre but they came to be used by the local population for a variety of purposes, trade being one of the most important. Often the traffic passing along these routeways led to the development and the continued prosperity of the settlements that bordered them. Cleere and Crossley argue that 'all of the known Roman sites are within 3.5 km of a Roman road' (Cleere and Crossley 1985 pp 61). Many of these roads may have had earlier origins. Prehistoric tracks existed in the landscape long before the Roman occupation and often followed the most logical or direct route through the landscape. For example, the Rye - Uckfield ridgeway, located in Sussex to the south of the area here studied, follows one of the main ridgeways of the Weald and can be traced continuously for 45 km on a course so direct that it never wanders more than a mile from a straight line between its termini.

The most important Roman road in this landscape is that running between London and Lewes, passing just to the west of Westerham. It is likely that this road was originally constructed to connect London and Watling Street at its northern end, with the iron works of Sussex to the south (Clarke and Stoyel 1975 pp 20). The road crosses the modern M25 motorway immediately east of the Clacket Lane service station. To the north of this service station, a 65m stretch of the Roman road has been identified along with a Roman temple and villa (Historic England national list No. 1018506).

Excavations here undertaken in 1935 revealed that the road was on a NNE-SSW alignment and had a flint and gravel metalled surface, around 6.7 m wide (Graham 1936 in Surrey Archaeological Collections vol 44 pp 92). Roman material associated with this road was also uncovered during the construction of the Clacket Lane Services. The road continues southwards where its passes Crockham Hill common on its southern and western sides. Here the road deviated slightly from

its north-south alignment to avoid the steep slopes and this slight deviation means that it actually forms the south-western boundary of the Crockham Hill common. It continues south from here to form the main road through Crockham Hill village and on towards Edenbridge.

Another roughly north-south aligned probable Roman road exists within this landscape, this time to the west of the Greensand Commons. A track joins the Pilgrims Way approximately 1.5 km to the west of Wrotham. From here two tracks lead southward, one through Ightham village due south to Ivy Hatch, the other along the ridge through Oldbury Camp and thence to Ivy Hatch (Margary 1968 pp 264). From there the route goes south through Shipborne to Tonbridge and after crossing the river Medway, it follows a well-marked ridge all the way through Southborough to Tunbridge Wells, and then, again, on high ground through Frant, Mark Cross, Argos Hill near Rotherfield, and Five Ashes to Cross in Hand where it meets the main east west ridgeway (Margary 1968 pp 265-66).

It is likely, based on its proximity to the Iron Age Hillforts at Saxonbury, Capel and Oldbury, that his track pre-dates the Roman period but its continued use is suggested by the proximity of a number of Roman settlements. The above discussed settlement at Plaxtol is located approximately 800 m to the west of this track, thus this Romano-British estate was linked to the wider Roman world by both an east-west track to the north (Pilgrims Way/North Downs way) and the north-south track to the west, and it is likely that these tracks had a major role in the continued development of the estate (Davies 2009 in Arch Cant vol 129 pp 274).

The Pilgrims Way was a probable prehistoric trackway and the route was still followed as an artery for through traffic in Roman times. The Darent crossing was one of only five river crossings required along its whole route. Thus, in the absence of any known east-west Roman road through Kent south of Watling Street, it may be assumed that the Pilgrims' Way formed a part of the main communications network of southern Britain (Ward 1990). This is supported by the location of numerous Roman sites along its route or close by. Examples include the villa site at Otford, the kiln and cemetery site at Frog Farm, the bath house near Kemsing, the cemeteries at Kemsing and Patch Grove Woods as well as a vast quantity of small finds which

include coins and items of personal adornment such as rings (for a full list of small finds see Kent HER).

Sections of Roman metalling have been uncovered at a number of locations along this route, including a section just to the south of the Frog Farm site (Kent HER TQ 55 NW 36). Other smaller routes, connecting the rural settlements within this landscape, and the industrial sites within the Weald, likely existed in addition to these main arterial routes. The concentration of Romano British settlements in the Darent valley must also have been connected by roads (Clarke and Stoyel 1975 pp 20) although at present little is known about these.

Belief and burial

In the earliest phase of Roman occupation cremation was generally the main burial rite, although some isolated inhumations of this date have also been found. This is reflected in archaeological discoveries in the area with the majority of burials being cremations with only occasional isolated inhumations. In most parts of Roman Britain the burial rite changed from cremation to inhumation by the fourth century. In the study area there is relatively little evidence of later burials and few inhumations. Whether this really represents a departure from the national trend is unknown however.

During the Roman period there was a dramatic increase in the population and this is reflected within the burial record. It seems that in Iron Age society only a small proportion of the population was accorded burial rites, probably the elite, but after the conquest it appears that both high and low were afforded burial or cremation, though with differing elaboration (Ward 1990). The vast majority of people in the Roman Empire were buried outside the settlements to which they belonged, often grouped along the roads leading from them (Ward 1990). Within the study area the majority of both cremation cemeteries and single cremation burials were in the vicinity of known Roman routeways or settlements.

Cemeteries within the immediate vicinity of the Greensand Commons include two located less than 500 m to the north of Oldbury Hillfort (Kent HER TQ 55 NE 2 and TQ 55 NE 23); one possible example at One Tree Hill, less than 100 m to the south of Bitchet Common (Kent HER TQ 55 SE 1); another Watery Lane approximately 1

km to the north of Seal Chart (Kent HER TQ 55 NE 226) and a large cremation cemetery at Frog Farm, to the west of Otford (Kent HER TQ 55 NW 36). Alongside these cemeteries a great number of individual cremations have been found within the landscape both by chance and through formal archaeological investigation.

The cremation cemetery at Watery Lane, to the north Of Seal Chart was uncovered during works associated with the Kemsing Water Treatment Works and the Oak Bank Reservoir. Here, 16 urned burials dating to between 25 BC. and AD 125 were located alongside the scattered remains of more disturbed cremations (Kent Archaeological Projects, 2013 pp 3). It is likely that this cemetery is considerably more extensive than the part exposed during this project, suggesting a nearby settlement site of a substantial size.

In some instances, cemeteries may be attributed to specific settlement sites, as is the case for the Roman barrow (inhumation) and walled cemetery discovered in 1857 at Dux (or Ducks) Farm, near Plaxtol (Kent HER TQ 65 SW 19). This small cemetery was constructed in the first century and remained in use until the end of the second century. It is possible that it would have been used by the community living within the estate focussed upon the winged-corridor villa at Sedgebrook, located less than a kilometre to the south-east (Davies 2009 in Arch Cant vol 129 pp 274).

By far the largest cemetery located within the landscape surrounding the commons is that uncovered at Frog Farm. Here more than 110 cremation burials have been identified and it is possible that more exist as no definite limit has been found to the cemetery in any direction. The pottery and grave goods associated with the cremations included a variety of forms and mostly date to the second century, though the coins range in date from the first to the fourth century (Kent HER TQ 55 NW 36). The existence of a large cemetery at Frog Farm implies a considerable density of occupation with 'one or two villas as the social focus of the area' (Clarke and Stoyel 1975 pp 20). The foundations of an octagonal structure were also located at this site during excavations undertaken in 1967, possibly representing a mausoleum.

The presence of this mausoleum, along with the presence of a barrow burial at Dux Farm suggests that these burial grounds were intended to be a 'continuing reminder

to the living of those who had gone before' (Ward 1990). Overall, as Ward notes, the cemetery and its grave-goods reinforce other evidence that at Otford there was a 'flourishing community of Romanised Britons who apparently upheld similar religious customs and enjoyed a standard of living comparable to those in larger settlements and towns in the South-east' (Ward 1990).

Suggested further research questions

Is there evidence within this landscape for why there is a disappearance within the archaeological record of lower status sites in the latter half of the Roman period?

Is there place name evidence for Roman settlement within this landscape?

Aside from the major routeways, is there any evidence of Roman communication routes between the smaller scale settlements?

Is there any evidence or Roman extractive work within the landscape?

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3.5 Early Medieval

Period Overview

The early medieval period spans from the time after the end of Roman occupation in the fifth century (although there will be some overlap) to the Norman Conquest in 1066. In the earlier part of the fifth century, people from the continent, mainly northern Germany and southern Scandinavia, started to settle in Kent. From the middle of the fifth century onwards they began to make an impact on the landscape, establishing settlements and dividing up the countryside.

Settlements found in Kent have generally been small and rural with an economy that was largely based on agriculture and animal husbandry. Archaeological evidence in this part of western Kent is relatively sparse and there is comparatively little settlement evidence. As with other parts of Kent and England, most early medieval archaeological evidence comes from burials, with cemeteries providing information about many aspects of Anglo-Saxon society. There are, however, a small number of written sources that complement the evidence gathered during archaeological investigation. Kent has some of the earliest written sources in England and by the early seventh century the texts give details of a series of kings and their laws. The Archbishopric at Canterbury was founded c. 598 meaning that the earliest Anglo-Saxon churches in Britain are in Kent and by the Norman Conquest, around 400 mainly timber churches had been built, often replaced by later stone medieval churches.

Within the landscape surrounding the Greensand Commons the archaeological evidence for the early medieval period is scarce. Despite this, there are a number of features within the landscape that are likely to have originated in this period.

The modern rural settlement pattern of scattered individual settlements that is dissimilar to the nucleated village seen elsewhere in England, had its origin in this period. Many of these scattered settlements, such as Seal or Godden Green, are seen bordering the Greensand Commons. This pattern may be linked to strong independent entitlement that the freemen of Kent had to their land as well as to the peculiar system of inheritance (gavelkind) that was particular to this region.

The seasonal transhumance that was a major feature of the Anglo-Saxon economy had an impact on the location and layout of the settlement and communication system. In particular, many of the north-south routes through this area, still apparent today, were set out in this period as droveways.

This was also the period when formal administrative units were set out in the county, with the creation of the lathes and hundreds that were the basis for the modern-day parishes. The parishes of Westerham, Brasted, Sundridge, Chevening, Sevenoaks, Seal and Ightham became established. They were long and linear, almost transects across the landscape, so as to take full advantage of the wide variety of natural resources offered by this part of the county.

Landscape

There is negligible archaeological evidence for any significant Germanic presence in Kent before about 475. There is however, a variety of documentary sources from this time which describe the battles with the indigenous Britons (though many are likely mythical), which eventually led to the establishment of the first Anglo-Saxon Kentish Kingdom claimed to be the first in England (Riddler 2004 pp 25). The way in which the Anglo-Saxon communities in Kent interacted with the landscape of this newly established kingdom has had a lasting effect on the county that is still visible in many places today.

It was during this period that administrative units were established throughout the county, the landscape was commodified on a large scale and was formally divided. Settlement is also known to have spread southwards in this period from the 'original lands' (defined by Everitt as the foothills, the northern coastal strip and the fertile tracts of the Holmesdale pays) into the Weald (Brooks 2009 pp 75).

As Brooks points out, a vital key to understanding past landscapes, particularly the ways in which the landscape was divided, is the recognition that they were structured by uneven distribution of natural resources (Brooks 2009 pp 35). This uneven distribution (discussed fully above under Geology) is something which is particularly important when studying the landscape in western Kent.

These contrasting topographical zones of agrarian resources have been recognised as underlining much of the settlement pattern in Kent. They eventually led to many of

the parishes in western Kent being long and thin, so as to encompass all of the available land 'types' in the area and to make sure that the land was put to its best use. For example, the Parish of Seal is about 5 miles N-S and 2 miles E-W, and included woodland, arable farmland, pasture, river valley and heath.

The importance of the physical geography of Kent, and the way in which the distribution of the resources helped to shape the landscape in the Anglo-Saxon period, is also evident at a more local level.

The commons here studied lie principally in an area known as the Chart Hills on the northern edge of the Kentish Weald, which in the Anglo-Saxon period, was a vast and dense forest consisting principally of oak and beech. 'Chart', which appears in many of the local place names i.e Seal Chart and Brasted Chart, is a word which is cognate with the Norwegian Kart, meaning 'rough rocky sterile soil' (Everitt 1976 pp 7). Witney suggests that the whole of the western section of the Chart Hills from lightham to the Surrey border remained forest clad until at least the Norman period and it seems clear that this 'poor and intractable soil accounts for its predominantly wooded appearance' (Witney 1976 pp 106).

The relative infertility of the soil in this part of Kent also led to an economy largely based on pastoral farming and transhumance (discussed in detail below) which in turn shaped the settlement patterns and the location of the communication routes. The importance of physical geography as a 'guiding force, channelling, obstructing and moulding the territorial institutions, cannot therefore, be underestimated' (Brooks 2009 pp 36).

Another factor which had a heavy impact on the development of the Kentish landscape in the Anglo-Saxon period was the role and influence of the King and his Royal Vill or *Villa Regales* which went hand in hand with the creation of the 'lathes'. A lathe (meaning land or landed possession) is an administrative subdivision which is particular to Kent and is widely regarded as being implemented in the early Anglo-Saxon period - c. sixth century. These lathes would have been divided into a number of manors and by the end of the sixth century the county consisted of perhaps around 20-30 large estates, each with a centre.

The lathes survived with some adaptation and amalgamation, long after Kent had lost its independence, to appear in the Domesday Book as the primary division of the county (Witney 1976 pp 31). They formed the basis for the division of the county into Hundreds in the thirteenth century, a division which survived in Kent until the nineteenth century (Lawson 2004 pp 30). Much of the west of Kent, including the commons here studied, was encompassed by the lathe of Sutton-At-Hone which covered an area of approximately 270 square miles. Each of the lathes centred upon a Royal Vill or township from which it took its name and it would be visited by the King and members of the royal family on a regular basis. In the early Anglo-Saxon period the King was not only the ruler and law giver but the sole territorial lord to whom rents and services were owed. His lands were partly kept as demesne and partly let to tenants known later as 'in-men' (Witney 1976 pp 78).

In the early seventh century this situation changed with the granting of large quantities of land to the church; the first evidence of this appears in 605 when King Aethelbert granted St. Augustine the vill of Sturry to the east of Canturbury (S3). Evidence exists from this period for the transference of parts of the Greensand Commons from the hands of the King to the hands of the church. In a royal charter of 822, recording the grant to the Archbishop of land at Wilderness near Sevenoaks, it is described as a 'wood which is called cert' having its eastern boundary 'cymesingas cert' i.e Kemsing (now Seal) Chart and its southern boundary 'Andred' i.e. the Weald (Witney 1976 pp 13).

From the early seventh century onwards grants by the Kentish Kings continued undiminished and, by the later Anglo-Saxon period, they also included large grants of land to nobles, to whom rents and services were then owed (Witney 1976 pp 78). All of the chart woods from Ightham west to the Surrey border were in the King's ownership in the early Anglo-Saxon period. It seems that when Seal, Brasted and the other manors were formed by royal grants, they were given an appanage of woodland on and over the crest of the Chart Hills directly to the south of them from what would have previously been the Royal woods of the western lathes (Witney 1976 pp 64).

These grants, in part, led to the smaller scale division of the landscape into parishes filled with the small enclosures that we see today. In some measure this is also due

to the above-mentioned point about the diversity of the available land and the practice of devoting each type of country to the purpose for which it was best suited.

Inevitably, the result of this was that manors held detached and scattered parcels of land, incorporating a wide variety of landscapes which often lay considerable distances from the demesne. It also meant that the system of two or three great open fields with common grazing rights and customary rotations associated with a nucleated manorial village, a system which was seen throughout much of England in this period particularly the midlands, was inappropriate for Kent, making it distinctive from many other parts of the UK (Sweetinburgh 2016 pp 8-9).

Though the lands owned by the King, and later the church and noblemen, were vast in the Anglo-Saxon period, they did not comprise the entire lathe. Rather, each lathe was split into two types of land-holding; inland, which was owned and worked by the lord or his tenants, and outland which was occupied by freemen or 'ceorls'. The ceorls had a strong independent entitlement to their land and were free to work, devise and sell it as they pleased without leave of the lord (Witney 1976 pp 57).

This independence, which differed greatly from the governed communal field systems in use by the freemen in other parts of the UK, meant that their farmsteads stood apart from their neighbours and were surrounded by their own fields. This aided the development of the scattered farms and hamlets still characteristic of the Kentish countryside today (Fox 2007 pp 9). Freedom encouraged innovation and ultimately produced, by the later medieval period, a rural society of enviable wealth.

Often the boundaries between the lands owned by the King, and later the noblemen, and those left as common or owned by the ceorls had a long-lasting effect on the division of the landscape. For example, it was around the above-mentioned appanages of land on the Chart Hills to the west of Ightham that the parish boundaries were formed, and the southern boundaries are in alignment because they followed a previous demarcation between royal woods and common (Witney 1976 pp 64).

The system of inheritance for these freemen that was introduced during in the Early Anglo-Saxon period was also one particular to Kent. It was called gavelkind and it had an enduring effect on the size and distribution of the landholdings in Kent (Fox

2007 pp 9). Gavelkind was a form of inheritance in which a deceased person's land is divided equally among all male (or female if there were no male) heirs. Thus, not only was the land owned by the King being divided distributed during this period, the small holdings owned by the ceorls were also being divided amongst their children. Again, this would have contributed to the creation of the small enclosures and scattered farmsteads characteristic of the Kentish countryside.

Economy and Environment

No account of the economy of western Kent in the Anglo-Saxon period can avoid a discussion of the seasonal transhumance and use of the Weald (situated to the south of the area here studied) for the fattening of swine.

For around seven weeks of the year, in autumn, herdsmen would drive swine over many miles into the vast woodland of the weald so that they could feed on acorns and beech mast (pannage). Though the acorn crop might sometimes fail, it was more dependable than beech mast. Oaks were therefore the prime pannage trees which meant that for this purpose the Weald far exceeded in value all the other woods and forests (Witney; 1990 pp 23).

The proximity of the weald to the Chart Hills which were situated near its northern boundary meant that this seasonal transhumance had a bigger impact in this area than others in Kent. Manors in Holmesdale, bordering the Weald, received, size for size, twice as much as manors situated to the north of the Downs that could not as easily use the Weald for pannage. For example, Milton Regis (by Sittingbourne), was by far the largest manor in Kent, nearly twice the size of any other but still received less in pannage than the Holmesdale manor of Wrotham.

It seems that by the end of the Anglo-Saxon period something like three-quarters of all the pannage in the county was derived from The Weald, much of it over distances of twenty miles or more (Witney; 1990 pp 23-24). During this annual migration into the weald, the drovers set up temporary shelters/enclosures and clearings called 'dens' across the area (Lawson 2004 pp 29). Exactly how many of these dens there were will probably never been known but by the time records of them were being

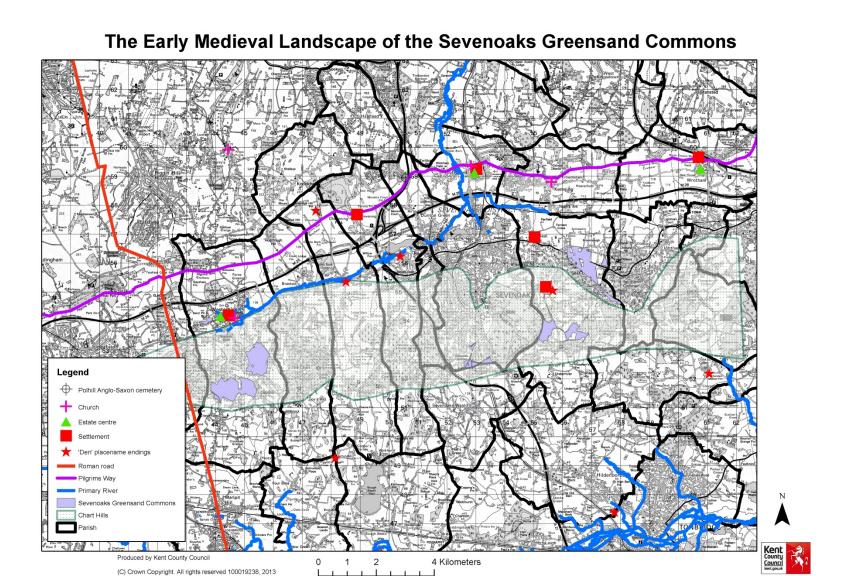


Figure 8

produced (by about the eighth century) about 700 can be traced, owned by 135 manors (Witney 1976 pp 37). It is possible that many of these were located in clearings in the wood that were made by the Roman iron industry.

In the earlier Anglo-Saxon period these dens were created through regular and undisputed occupation by the free ceorls who made use of the commons in which they were mere lodgements. Evidence for this comes in eighth and ninth century charters which suggest that the Wealden commons were initially undivided and for the use of all of the settlements in the arable foothills. Only in the ninth century when it became usual for the King, in granting land, to allot certain dens or swine pastures as appurtenant to the estate, was subdivision of these commons apparent and access restricted to specific manors (Reaney 1961 pp 69). Boundaries were then established, and individual names were given to each den. This pushed colonisation by the freemen further south into The Weald (Brooks 2009 pp 54).

The prevalence of this practice of droving swine and setting up 'dens' *en-route* is attested by the concentration of swine pasture place-names in The Weald and areas surrounding it (Lawson 2004 pp 29). For example, in the area now occupied by the parish of Chiddingstone approximately 6 miles south west of Sevenoaks, in what was formerly the south-western corner of the lathe of Sutton-At-Hone and firmly within the Kentish Weald, the name Somerden still survives in the farm settlements of Somerden and Somerden Green. This name simply means Summer Pasture and the area is linked by a series of droveways (discussed in detail below) which pass northwards over the Chart Hills and Downland escarpment near Sundridge towards their associated manors at Lewisham, Woolwich and Greenwich (Everitt 1976 pp 19). The name Sundridge itself is worthy of mention for it means 'sundred' or 'separated pasture'. Though it is not clear which manor it was attached to it may have served as intermediate feeding place *en-route* to the central weald (Everitt 1976 pp 19).

The practice of pannage continued throughout the Anglo-Saxon period and the dues received by the lord are detailed in the Domesday Book. In this the total pannage dues recorded for the whole county indicate the presence of just under 7350 swine for which dues were paid to the lord. There were however, a few gaps and a truer figure would be around 7500, implying herds ten times that size (for only one in

every ten swine was kept for the lord of the manor) (Witney 1990 pp 23). It is probable that by the time of Domesday Book, however, pannage in Kent was already well past its peak. Witney notes that the 7500 or so swine that the lords received were worth in sum more than £250 and probably less (Witney 1990 pp 25). The enclosure of the Wealden commons by the lords of the manor in the later Anglo-Saxon period and subsequent decline of transhumance were therefore intrinsically linked. Though it is clear that this practice was a major factor in the Anglo-Saxon economy of Kent, it was by no means the only way by which wealth could have been accumulated. Other animals were certainly kept and there is evidence that the woodland was used in a similar way for these also. Indeed, three dens granted to Milton in Seal in a charter dating to 822 (S186), were specifically stated to be for the pasturing of swine, sheep or goats (Witney 1976 pp 65).

It is likely that the woodland occupying the Chart Hills was more suited to this purpose. The oak woods of the weald could have support pigs but not cattle as acorns are harmful to them. In the areas surrounding the Greensand Commons, however, the woods were more varied than in the Weald, containing far more beech interspersed with heath which may have supported a wider variety of animals including possibly cattle, goats and sheep (Fox 2007 pp 12).

This point is supported by the archaeological record. Excavation of Polhill Anglo-Saxon cemetery uncovered occupational debris which included the bones of sheep, canines (teeth of), pig and goats alongside a single horn of a sheep or a goat (Philp 1973 pp 171).

It would, however, be a mistake to overestimate the importance of the northern woods as cattle pasture in comparison to their other uses for fuel and to a lesser extent timber. With the division and enclosure of lands that came with the grants by the King to noblemen, and as a result of gavelkind, there arose a need of timber for fencing.

At this time there were few permanent hedgerows, partly due to the fact that gavelkind caused a constantly shifting kaleidoscope of landholdings (Witney; 1990 pp 30). There was a need for flexible and easily removable barriers which would



Figure 9 Probable droveway at Rooks Hill leading north into the Commons area

have likely consisted of wattled hurdles or posts interlaced with flexible rods, taken mostly from alders (Rackham 1990 pp 73). Alongside fencing a variety of trees went into the making of wagons and implements associated with farming like ploughs and yokes, but these were still relatively minor requirements and easily met. Much the largest demand was for oak used in framing and roofing buildings, more of which was needed as the population continued to expand (Witney; 1990 pp 28).

The value of the woodland for the production of fuel to those who owned and occupied it was great and underpinned many of the other major economic activities of the county. It was principally during the Anglo-Saxon period that the value of this resource was realised, and the practice of coppicing was introduced on a large scale. In the old settled country of north Kent, the primary demand on the woodlands had always been for fuel, the county having little peat. It was required for every form of heating and cooking, for baking, and for making malt for the ale that was drunk in great quantities (Witney 1990 pp 31).

The production of salt also required vast quantities of fuel, which was essential for producing cheese and curing meat so that it may be kept for long periods or sold on at market. Generally, the price at which this timber could be sold for fuel depended on its proximity to a navigable river or routeway, thus the timber of the Chart Hills would have likely had a greater value than that of the more remote parts of the Weald. This is evidenced by the fact that the Archbishop of Canterbury was creating protected reserves in the more extensive of his woods, including an area at Whitley in the Chart near Otford (Du Boulay 1966 pp 217).

A location near one of the principal centres of population was also a factor that pushed up the price of fuel - London being an especially powerful magnet. Although the outskirts of London would have been much further north than they are today, the fact that the river Darent (which would have been much deeper and wider in the Early medieval period) flows north from the Chart Hills to the Thames was important. It gave access to both London and the English Channel.

The proximity of a number of major communication routes would have also had an impact on the price that could be obtained for the raw materials, this is discussed further below. The value of the Woodland on the Chart Hills and in the Weald, which continued to grow throughout the medieval period until the sudden drop in population that came with the black death in the mid fourteenth century, led to its continued preservation by the lords who could profit from it.

The location of mills within the landscape are a good indicator of the economic changes that were taking place in Kent by the middle Anglo-Saxon period (about 660-900). A number of Anglo-Saxon charters make reference to mills and milling in Kent. For instance, a grant of five sulungs at Mylentun was made by Ceolwulf (821-23) King of the Mercians and of the men of Kent, to Archbishop Wulfred (805-52) in 822 (Sweetinburgh 2016 pp 52).

Mylentun or mill-tun is located on the eastern bank of the Darent and in an area that originally formed part of the manor of Otford. The manor of Otford at its height stretched from the top of the north downs southwards across the Vale of Holmesdale and reached the foot of the greensand ridge beyond Sevenoaks, and incorporated may of the areas encompassed by the Greensand Commons. The siting of this mill suggests a movement of the people living within the manor from subsistence farming

towards a production that was oriented to the market and dependant on the intensification of rural production.

In Kent this shift occurred where estates had a combination of good arable land, people to grind the grain on a large scale at mills, and water transport to the centres of demand (Sweetinburgh 2016 pp 52). Mills were notable sites of human activity and depended upon the existence of a local population, they thus provide important archaeological evidence for settlement within their vicinity (Sweetinburgh 2016 pp 49).

The location of mills in western Kent also points to another economic change that was underway by the middle Anglo-Saxon period, that is the development of market towns. Prior to the Norman invasion, the nearest would have likely been in Otford (discussed further in detail below).

Often the largest amounts and widest variety of earlier Anglo-Saxon finds are made during the archaeological excavation of cemeteries. The largest Anglo-Saxon cemetery in western Kent was discovered just to the north of the areas here studied, at Polhill, approximately 2 km to the West of Otford. 69 of the 107 graves, all dating to between the mid seventh and mid eighth centuries, provided grave goods. 12 men were buried with spears and 4 with seaxes. A high percentage of the women were buried with beads, rings brooches and other items of personal adornment and many of the burials, including those of children, included an iron knife (Philp 1973 pp 164).

Though a useful assemblage of items, representing a wide variety of forms, was uncovered alongside the burials, the grave goods at Polhill were neither rich nor socially distinguished (Clarke and Stoyel 1975 pp 27). At the western end of the site, several round barrows were uncovered. The barrows suggest that the more important members of the community were grouped in the western end of the cemetery, though the graves are not richly furnished, and it seems that the leaders of the community at Polhill did not come from the higher classes of Anglo-Saxon society (Philp 1973 pp 164).

The highest-ranking Anglo-Saxon men of the seventh century would have carried the expensive two-edged long sword. The owners of the single edged seax which is simpler and therefore cheaper to produce than the long sword, were likely to have

been ranked lower in status than those of the long sword but higher than the owners of spears. (Philp 1973 pp 187)

Communication

Many features of the Roman landscape survived into the Anglo-Saxon period due to their continued use. One of the most important and easily recognisable of these inherited features is the communication routes.

At the end of the Roman period, the settlements were abandoned. The iron workings and the fields surrounding them were allowed to grow to frith and wood, but the tracks remained as passages through what was no longer a wilderness but a vast common, in use by a growing number of swine drovers throughout the whole of the Anglo-Saxon period.

There are a number major droveways that can be identified as the primary entrances to the Weald used by the herdsmen; of these all but two were former Roman roads. (Witney 1976 pp 28). Some trackways of an even earlier origin continued to be used and had a role in shaping the way in which the Anglo-Saxons used and divided the landscape. For example, the Sutton-at-Hone common was formed along an ancient track which ran from the Iron Age hillfort at Oldbury to Dryhill camp in Cowden and was divided from the Aylesford common by another track leading due south from Oldbury to the Tonbridge fords (Witney 1976 pp 51).

Since the distances travelled by the drovers was often very considerable, as is evidenced by the manors of Lewisham, Woolwich and Greenwich holding dens at Somerden (discussed under Economy and Environment), the trackways that they would have followed were correspondingly substantial. They have led, with a few obvious exceptions such as the Roman Watling Street or the Pilgrims Way, to most of the old roads and tracks of the county still displaying a marked tendency to run across the grain of the county, from north to south in the direction of travel used by the drovers (Everitt 1976 pp 17-18).

With the rise in droving through the Anglo-Saxon period, the pre-existing network of communication routes was developed and expanded upon. The winding droveways, or braided trackways and bridges created for herding later formed the lanes between individual farmsteads or small hamlets. They led between places that often

incorporated den in their names and formed the basis of the medieval landscape, which extensively still survives today (Sweetinburgh 2016 pp 55).

A number of these droveways may be identified within the landscape surrounding the Greensand Commons. Part of a connecting droveway is identifiable as the road running through Flanes Wood from the A25 to Stone Street and another near Seal village is the northern end of Childsbridge Lane and the present footpath which runs from there south west to the main road and thence up Seal Hollow Road to Sevenoaks (Fox 2007 pp 10).

In a number of cases, as at Kettleshill where a deep track has worn through the sandstone ridge and descending to the Weald at Underriver (D. Killingray, in Arch Cant vol 130 2010 pp 40), the lanes are still locally referred to as 'The Drove' or 'The Drift' (Everitt 1976 pp 19).

These trackways also had a role in the development of Anglo-Saxon settlement. Brooks argues that there is a clear tendency for sites to be located close to roads or routeways, to the extent that it is possible to argue that cemeteries not on Roman roads or waterways, mark the course of other prehistoric or Anglo-Saxon routeways (Brooks 2009 pp 75). Some examples within the area here studied include Otford, a village which occupies a strategic position at the point where the North Downs ridgeway descends into the valley crossing the river Darent, more or less in the position of the present-day Pilgrims Way (Philp 1973 pp 173); Kemsing, which is situated at the point where Childsbridge Lane meets the Pilgrims way, and Westerham which lies just to the south of the Pilgrim's Way where it was crossed by another track running south from Bromley to the dens and commons in the Wealden forest (KCC 2004a pp 3).

All these are settlements which developed in the Anglo-Saxon period as is evidenced by their mention in charters of the time. The tracks provided potential trade routes which also aided the development of settlement, particularly where routeways lead to the major economic centres of Canterbury, Rochester and London.

The role of rivers in the Anglo-Saxon communication network was substantial and many of the great royal estates were predominantly located in the river valleys in the sixth and seventh centuries (Sweetinburgh 2016 pp 3). As discussed above (under Economy and environment), the location of a settlement near a navigable river had an effect on the economy. For example, the price at which timber could be sold for fuel depended on its proximity to a navigable river or routeway.

River crossings were focal points in the landscape of Anglo-Saxon Kent, they were often the meeting places of the hundreds and on a number occasions this led to the development of settlements there. An example of this can be seen at Tonbridge, which appears to have evolved in a riverside clearing in the forest, on the line where several tracks from the North Downs to the Weald converged at a crossing point of the river Medway. The crossing would originally have been a ford, but there may have been a bridge at some time between the ninth century and the Norman Conquest (KCC 2004 Tonbridge pp 2).

Therefore, the prevalent impression gained from the distribution of Anglo-Saxon settlement sites and cemeteries in Kent is that they are structured around the then existent routes of communication, i.e. roads, navigable rivers or the coast (Brooks 2009 pp 59).

Settlement and sites – Architecture and buildings

Early settlement in Anglo-Saxon Kent may often be inferred by the presence of early place name elements, together with being mentioned in Anglo-Saxon charters.

Though, as noted above, settlement of the Chart Hills was not substantial in this period due to the fact that the hills retained their wooded character throughout, there are a number of examples where place names may indicate early settlement. One of the most important of these is Otford; the earlier form of the name being Ottanford meaning 'Ottas Ford', Otta possibly being an unknown Anglo-Saxon with some influence in the vicinity. Clarke and Stoyel note that this name could be up to 150 years earlier than the first mention of Otford in an Anglo-Saxon charter which dates to 775 (Clarke and Stoyel 1975 pp 27). There is some debate about this point as others suggest that the origin of the name may be attributed to Offa, the King of

Mercia who fought the Kentish Saxons in 776 at the Battle of Otford, either way the origin of the name is Anglo-Saxon.

The place name of Westerham first appears as *Westerham* in a will of Duke Aelfred (S1508). Wallenberg suggests that it is from the Old English westra (the west) ham (settlement), lying as it does in the westernmost part of Kent by the Surrey border (Wallenburg 1934 pp 75). The 'ham' element of the name is thought to date to the period of expansion and consolidation of Anglo-Saxon settlement, from the close of the sixth century onwards (Witney 1976 pp 104). The date of the charter which mentions Westerham itself indicates the antiquity of the settlement as it dates to 871-899. (S1508) meaning that there was settlement there by at least the later ninth century and probably earlier. Kemsing, or Cymesinges as it is noted in the 822 charter (\$186), is interpreted is being 'the place of the cymesa people'. The antiquity of this settlement is also attested by the presence of a holy-well here which is discussed fully below. The name cheveining (cefningas) is interpreted as of the people in the ridge, from the Celtic cefn, which refers to the ridge below which it stands (Clarke and Stoyel 1975 pp 27). This name contains the element 'ingas' which, like 'ham', is thought to date from the sixth century onwards. Another example, and probably the closest of the settlements here discussed to any of the Greensand Commons, is the village of Seal. In early documents the name of the village is often given as 'Sele', 'Sale', 'Zela' or 'la sela'. The etymology of the place name suggests that the name of the village could have come from the Anglo-Saxon word sole or sol meaning 'a muddy slough' or 'wallowing place' or a 'muddy pond that overflows' (Fox 2007 pp 1-2).

The place name element 'den', which is prevalent many of the small settlements located within the weald, to the south of the Chart Hills, gives some indication as to how many of these settlements originated. The seven weeks in which pannage (discussed above under Economy and Environment) took place would have likely been the wettest of the year, the herders must have built for themselves rough shelters as protection from the wind and rain with pens nearby for their swine. There would have been a tendency for the drovers to occupy the same points year after year and by this constant occupation to establish some sort of squatters rights to them (Witney 1976 pp 73).

The fact that so many farms in the Weald still bear the names of the ancient drove dens suggests that in numerous cases the old summer lodges of the herdsmen formed the nucleus of the new farms, which thus gradually developed from seasonal shielding's to permanent abodes (Everitt 1976 pp 25). This tendency for the herdsmen to gradually form their own small communities was strengthened by the fact that there was often great distances between estates and their dependant dens (Reaney 1961 pp 71).

It was the lords own interest to encourage settlement; they were concerned with the profit that they could make from their dens and the few acres which had been cleared for cultivation at each of the dens could be turned into a useful additional source of revenue (Witney 1976 pp 117).

The role of the freemen or ceorls occupying the outland was also important to the development of the settlement pattern typical of Kent. Their independence (discussed above) meant that their farmsteads stood apart from their neighbours and were surrounded by their own fields, leading to a countryside of scattered farms and hamlets, distinct from compacted villages (Fox 2007 pp 9).

The number of settlers occupying both the outland and the dens must have continuously increased throughout this period, not only by new arrivals from the uplands but by the birth of sons, each entitled by the law of Gavelkind to succeed to some portion of his father's lands. This would have led to an increase in the number of dwellings at each of these small settlements, thus the hamlet followed fast upon the homestead (Witney 1976 pp 118).

Ultimately these factors all led to the landscape of scattered individual settlements which is distinctive of Kent in this period still today in many parts of rural Kent. It differs substantially from the nucleated villages characteristic of much of the midlands, where individual tenements were strung out on either side of the highways and close to the church or manor house (Sweetinburgh 2016 pp 10).

Place name evidence in this part of Kent is rich when compared to the lack of archaeological or architectural evidence for settlement. This may be due though to the lack of archaeological investigation in this area of Kent.

Some sites have however, been uncovered. Evidence of an early medieval settlement was uncovered by Canterbury Archaeological Trust at Yaldham Manor. This evidence consisted of cut features and possible spreads of material from earthworks in the area, probably a moat (CAT 2013 pp 20). Indirect evidence for Anglo-Saxon settlement in the landscape of the Chart Hills and Greensand commons may be found at the Anglo-Saxon cemetery at Polhill dating to between the mid seventh and mid eighth centuries, which was excavated on a number of occasions throughout the nineteenth and twentieth century. 107 graves were recorded in total, but taking into account those destroyed by roadworks and the multiple burials, it is likely that around 200 individuals are represented. From the age of and number of the burials within the cemetery suggests an average life expectancy of 24, and over a 100-year period the cemetery may represent a community of about 50 people (Philp 1973 pp 164). Philp notes that the most likely settlement is Otford about a mile to the east of the cemetery where the North Downs ridgeway descends into the valley to cross the Darent (Philp 1973 pp 163). This point has however been disputed with Clarke and Stoyel suggesting that we should think of Polhill's dead as coming from half a dozen or so small dispersed hamlets within reach of the cemetery. These may have included Twittin, Filston, Sepham, Wickgham and Duton a distinct group of hamlets which make up the later medieval manor of Otford and which had been in existence since at least 700 AD (Clarke and Stoyel 1975 pp 34).

In terms or architectural evidence, the record is sparse. This is likely due to the fact that during this period the primary construction material for dwellings was timber, which leaves little or no above ground trace. Archaeological investigation can however, inform our understanding and small-scale evidence of the type of buildings which may have been erected during this period is also available at the Polhill cemetery. A small sub-rectangular structure in the north-west corner of the cemetery on a narrow platform or terrace cut into the chalk, was identified by a network of post holes and stake holes. Its location within a cemetery points to the interpretation of it as a funerary hut (Philp 1973 pp 164). Alongside this a pit and associated stake holes were located also in the north-west corner of the site possibly representing a slight structure perhaps used for weaving or drying (Philp 1973 pp 171).

In the early Anglo-Saxon period the practice may have been one of patching up or reusing existing buildings and it is thus likely that many of the Roman sites in the landscape, particularly the numerous substantial remains which are scattered along the banks of the river Darent, were used in some way by the later Anglo-Saxon settlers, as at Northfleet during the sixth and seventh centuries.

It was the reintroduction of Christianity in the Anglo-Saxon period that brought the first timber and stone churches in England. Though no complete examples survive in Kent, the remains of Anglo-Saxon churches are often found within later structures. A good example of this is the discovery during the re-pointing of the west wall of the St. Mary's Church in Kemsing in 1982 of strongly coursed ragstone and herringbone construction. These are both characteristic features of Anglo-Saxon architecture and point to an early foundation of this church (Tester in *Arch. Cant.* Vol 98 1982 pp 245).

Belief and burial

For evidence of Anglo-Saxon belief and burial within the landscape surrounding the Greensand Commons we must again turn to the archaeological evidence uncovered during the excavations undertaken at Polhill near Otford. Though the burials here span a relatively short period (between the mid seventh and mid eighth centuries) they demonstrate an important change in the belief and rituals of the people at the time; that is from predominantly pagan to predominantly Christian. This began to take effect in the sixth century with the arrival of Augustine in 595.

One of the main ways this is represented within the archaeological record is in the burials. The earlier Anglo-Saxons buried their dead fully clothed, and placed a wide variety of objects in the grave. This was not a practice that can be seen within Christian cemeteries and later Anglo-Saxon burials tend to be far less richly furnished.

The intermediate period between the pagan cemeteries of the early period and the Christian of the later period is represented by the finds and burials at Polhill. This change was a gradual one and at least one generation had been buried at Polhill before the practice of weapon burials had ended (Philp 1973 pp 187). 26% of all adults and 55% of children at the site were buried without grave goods while another

22% of adults and 31% of children were buried with only the bare essentials. Even the higher status burials located beneath barrows at this site were not richly furnished.

This not typical of the full pagan period and is characteristic of later Anglo-Saxon cemeteries throughout England. It seems to be symptomatic of a gradual decline, after the conversion, of the practice of depositing grave goods with the dead (Philp 1973 pp 200). The lack of shields is important; it is suggested that only the richest and perhaps least Christian males were interred with a shield by the seventh century, and instead the majority seem to have been interred with offensive weapons (Philp 1973 pp 187). There are two graves at Polhill, one early (grave 65) and one late (grave 43) that contain objects of a possible Christian significance (Philp 1973 pp 201). These objects include a simple four spoke wheel ornament which may be interpreted as a simple cross and worn by a convert as a token of Christianity. The other is a decorative thread box from grave 43, which has, amongst other things, a cross motif. This a feature of comparable thread boxes located at other Anglo-Saxon cemetery sites in England and it seems that though not strictly amulet capsules, they often bore Christian motifs and evidence from other finds of grave boxes in grave contexts in Britain shows that there are none in a pre-Christian context (Philp 1973 pp 198). The supposition that the people interred at Polhill were Christian from the start of its period of use is supported by these finds.

The overall distribution of Anglo-Saxon cemeteries in northern and western Kent reveals a number of interesting trends. Firstly, there is a close correlation between the location of cemeteries and the location of communication routes. With the exception of Thanet the vast majority of the Anglo-Saxon cemeteries lie within 1000m of the communication network. Brooks argues (Brooks 2009 pp 59) that presence of cemeteries outside this 1 km boundary may suggest the former presence of a droveway in the vicinity.

The second feature is particular to those cemeteries that have been identified within the Darent valley; they represent the direction of movement during this period. The cemeteries at Northfleet, Horton Kirby and Orpington which were first used in about 450 during the very early period of Anglo-Saxon settlement and continued in use

until about 550 denote the early stage of movement south towards the Weald (Clarke and Stoyel 1975 pp 29).

Recently researchers have attempted to unearth the religious practices that were preformed away from the mainstream church environment, especially where the ritual foci were natural landmarks such as trees, springs or stones (Powell in Sweetinburgh (ed.) 2016 pp 138).

Evidence of such a cult can be seen in the study area in the form of St. Ediths holy well in Kemsing. St. Edith of Wilton c. 961-984 was an English nun, born in Kemsing, and daughter of King Edgar of England. It seems she spent her childhood in a convent in Kemsing and according to legend it was hallowed by her presence and its waters became a source of healing (*Yorke, B. 2008 145*). The persistence of this cult throughout the Anglo-Saxon period and into the medieval is likely due to its position close to the Pilgrims Way; it may have been a stop off point for pilgrims on their way to Canterbury.

This shrine may also have had a bearing on the establishment of an Anglo-Saxon church at Kemsing where, in 2011, Canterbury Archaeological Trust carried out a watching brief that revealed the remains of a substantial masonry wall in the churchyard immediately east of the chancel. These could relate to a sanctuary or shrine that previously existed beyond the altar at the east end of the church. An examination of the church fabric suggested that sections of the nave and the chancel's south wall are possibly of late Anglo-Saxon date and that the west wall of the nave was built in the early Norman period. An Anglo-Saxon door head is visible above a thirteenth century door in the porch (CAT 2012 pp 9-10).

It seems that the early medieval Kentish cults may be best characterised as small scale, localised and rooted in the rural landscape (Powell in Sweetinburgh (ed.) 2016 pp 140). This stands in stark contrast with the cults of the later medieval period, such as that associated with Thomas Becket, which were focussed on urban centres and often involved a pilgrimage.

The construction of the churches serving the local population may have started in the seventh or eighth century, though it is in the ninth where they can be recognised in

any great numbers and the tenth century is generally recognised as the great age for the establishment of parish churches (Clarke and Stoyel 1975 pp 36).

The Textus Rodffensis, which was compiled by a scribe in the 1120s is a catalogue of English laws going back to 600, from the first Christian kingdom in Kent shortly after the mission of St Augustine in 597. This notes the number of 'churches of the bishopric of Rochester' and includes mention of churches at Wrotham, Ightham, Westerham, Chevening, Kemsing, Seal, Brasted, Otford, Shoreham and Sevenoaks, suggesting that by the early twelfth century there were a number of well-established churches in the region surrounding the Greensand Commons (Ward in *Arch. Cant.* 1932 Vol 44 pp 8).

At the end of the Anglo-Saxon period the emergence of Shoreham as the deanery church is noted, surprisingly in preference to Otford, seat of the Archbishop. This is probably due to the church there being the first to be built in this region though there is as yet no archaeological evidence of this (Clarke and Stoyel 1975 pp 35-36).

Suggested further research questions

What was the impact of the poor-quality land of the Chart Hills on the Anglo-Saxon economy?

Is there any evidence of what exactly was grown at the Anglo-Saxon farms?

There is little evidence of Anglo-Saxon settlements to the south of the Commons, is this due to a lack in archaeological investigation in this area rather than an actual lack of occupation here?

What was the nature of the settlement (form and layout of buildings etc.) in the areas surrounding these commons in the Anglo-Saxon period?

Is there further detail of links between the droveways and their associated settlements and denns?

Did the droveways have a role as trade routes?

Are there any droveways running through the Commons themselves?

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3.6 Medieval

Period overview

The medieval period is generally said to begin in 1066 when Duke William of Normandy invaded and conquered England. This period may therefore be characterised by the merging of the new ideas, technologies, ideologies and culture brought in by the Norman-French invaders with those of the native Anglo-Saxon population.

The first half of this period appears to have been one of great prosperity brought in by the relative political stability as well as developments within the economy. This led to a growth in the population which in turn resulted in the development of a number of new settlements some of which had markets, such as Sevenoaks, or the extension and development of pre-existing settlements, such as Westerham. It also

led to further land being brought under cultivation, with more and more clearance of the historic woodland.

As with the preceding Anglo-Saxon period the role of both the church and the gentry continued to be a dominant factor in the development of the landscape. Many of the large estates and parks located within the area here studied appeared in this period, including Knole. This is also the first period in which we see survival of buildings, including many of the churches and numerous timber framed houses within Westerham and Brasted.

During the prosperous early years of the medieval period new technologies developed in relation to farming, and other industries such as iron smelting, weaving and milling. All of this changed in the latter part of the medieval period however, with the Black Death which killed between one third and one half of the entire population in the years 1348-1350. This ultimately resulted in a recession from which Kent would only recover by the end of the Medieval period.

Landscape

In the years succeeding the Norman Conquest (1066) there were a number of changes that had a substantial impact on the Kentish landscape, one of the most significant being the great increase in the size of the population. From a population in Kent of around 75,000 in 1086, by 1290 (just 200 years later) it had risen to approximately 164,000 people (Broadberry, Campbell and Leeuwen 2010 pp 24).

The landscape now had to accommodate all of these extra people, both in terms of new settlements for them to live in and additional resources to sustain them. Consequently, this period saw the emergence of a number of new urban settlements within the landscape surrounding the Greensand Commons, including Sevenoaks. There was also a rise in the number of scattered rural individual residences and in the number of dwellings at those settlements which were established in the earlier Anglo-Saxon period. Though it is likely that colonisation of the Chart Hills was not as widespread as on the fertile lands to the north, this landscape was still well settled by 1200 (Mate in Sweetinburgh (ed) 2010 pp 2).

The increase in population also led to the continued division of the landscape into small and smaller holdings of a wide variety of differing shapes. This was intensified

by the gavelkind system (see chapter 3.2.7), meaning that by the fourteenth century a considerable proportion of the peasantry held only a very small acreage which was often not large enough to sustain them (Sweetinburgh in Lawson and Killingray (eds.) 2004 pp 48).

There were, however, far more options open to the medieval peasantry than there had ever been before. A man whose landed inheritance was inadequate might 'supplement his livelihood by some craft such as smithing, or hurdle making, or (with the permission of the lord) open up an assart in the surrounding woodland. He might hire himself out to the lord as a labourer or abandon the countryside altogether for one of the growing towns' (Witney 1976 pp 157).

Some evidence of this freedom exists within medieval records; many of the later thirteenth and fourteenth century charters record the sale of 'all my father's land' or the 'holding which I shall inherit from my father' (Du Boulay in Arch. Cant. vol 80 1974 pp 3). For the freemen of Kent all of these choices were open and many of them would have had an impact on the landscape.

Any examination of the landscape surrounding the Greensand Commons in the medieval period must include a discussion of the development and use of the 'manorial waste' or common land.

The term 'common' is used in many different ways to describe many different processes. It is used with respect to the practice of setting up 'dens' or 'commons' by those droving swine in the Weald in the early Anglo-Saxon period, as discussed above (section 3.5). It is also used to describe the communal pasture associated with the open or strip field system which was prevalent in many parts of medieval England, particularly in the Midlands. The use of the word here, however, is distinct from these definitions and refers instead to 'the 'waste' of some particular manor or group of manors' – waste here being a quasi-technical term meaning 'land that was not intensively exploited for agricultural purposes' (Everitt in Thirsk (ed.) 2002 pp 215). The commons are therefore intrinsically linked to the enclosure or division of the landscape by both the lords and the free population that was becoming more widespread throughout the medieval period. Since the 10th or 11th centuries commons have been the private property of manorial lords, though they are subject to a complex system of laws, some of which are of great antiquity, that gave 'all the

local commoners, including the lord – but not the general public – certain rights of usage' (Everitt in Thirsk (ed.) 2002 pp 215).

Usually these lands consisted of moorland, woodland, heathland or rough pasture, and were often in places that were infertile or were inaccessible and not easily cleared or ploughed, for example steep hillsides. These are features which are apparent on the Chart Hills and explain why the Greensand Commons are located there.

It is probable that these commons have been located on the Chart Hills in some form since the medieval period. Originally these areas would have been vast, but they were gradually eaten away through the enclosure of parks and chases, the formation of new towns and the reclamation of new holdings that came with the rise in the population in the centuries following the Domesday (Everitt in Thirsk (ed.) 2002 pp 230).

Traditionally these areas are thought of as useless to the lord (hence they remained unenclosed), but although their use for agriculture would have been limited they had a wide diversity of other things to offer.

Often, they included land that was rich in mineral resources such as stone, glass sand, iron ore and brickearth and rich too in a great variety of trees scrubs and plant life. It is this diversity that gave common land its greatest importance in English history, it's variety of resources gave rise to a number of small scale trades, particularly in the post medieval period, and this led in many cases to to their continued preservation (Everitt in Thirsk (ed.) 2002 pp 216).

The pressure on the land felt by the peasant population likely led to their use of the common land for gathering timber for construction or fuel or for rough pasture. It appears that it was a valuable resource for both the poorest within society and the lords of the manor and was thus well protected.

A number of documentary sources mention these commons. For example, the Book of Manor Rolls (CKS U1000/4/M10), dated 1527, refers to a wrongful encroachment by a man called Cuthbert [?] between the king's highway and the dwelling place of John Potter. His meadow bordered the road and he encroached by straightening bends. He was ordered to 'reform' it and was fined 6d, on pain of 40d if he failed to

comply. A later record in the abstract of rolls of the Manor of Otford for October 1590 (CKS U1450/M49) refers to John Stonond, fined 5d for commoning on Brasted Chart without a licence. Such records demonstrate that the common waste was valued as an economic asset by the manorial court at this time, and its officers enforced any infringements.

It was not only the peasant population that grew during this period, there was also a rise in what Everett calls the 'independent manorial gentry' (Sweetinburgh in Lawson and Killingray (eds.) 2004 pp 48). By the close of the thirteenth century there had come into being in western Kent and the western Weald in particular, 'a succession of manors, large or small (but usually small), with demesnes strung out along the line of the rivers where the best soil was to be found' (Witney 1976 pp 171). It was the freedom of the feudal system and the 'knights fee', both of which are discussed in detail below, which were, along with the rise in the population, the primary influences in the creation of this heavily manorialised landscape.

With the growth in the number of the nobility, for the first time a landscape evolved that was in part designed for the purpose of enjoyment and display of social position.

BBy the High Middle Ages, the necessity for hunting was transformed into a stylized pastime of the aristocracy. More than a pastime, it was an important arena for social interaction, essential training for war, and a privilege and measurement of nobility. The enclosure of significant tracts of land into parks, demarcated by high fences stretching for miles across the countryside, was a symbol of the power, wealth, status and exclusivity of park owners and the impact of these park enclosures on the countryside would have been considerable.

In west Kent by the early post medieval period, 'from the Thames in the north to Tonbridge in the south, and from the Surrey border in the west to Wrotham in the east, twenty active and 17 disparked parks are apparent' (Pittman 2010 in Arch. Cant. vol 132 pp 68-75). There was a particular concentration of parks located along the wooded, unproductive, shallow-soiled Greensand ridge. Here lay unexploited or under-exploited land where parks could more easily be carved out of woodland (Pittman 2010 in Arch Cant vol 132 pp 65).

This new emphasis on the display of wealth in the medieval period can also be seen in the opulence of many of the great houses and castles. Knole (1456-64) is a good example of this, whose expansive house and grounds are still a major feature of the landscape surrounding the Greensand Commons today.

Not only did this growing population need to be housed but they also needed to be supplied with food and various tools. This led to the large-scale exploitation of the natural resources that Kent had to offer. Agriculture was intensified but so was the management of the woodland for its use in construction and for fuel.

There was also a growth in the iron industry and the cloth trade during this period, all of which relied upon a well-managed wealth of natural resources in order to prosper. For example, the iron industry of medieval Kent relied heavily on the woodland for its fuel. An output of four tons a season and cutting on a 12-year cycle suggests that 200 acres of well managed woodland could supply a small bloomery the size of the one at Tudeley (Cleere and Crossley 1985 pp 100).

In the post conquest period the need for this woodland meant that pannage, which was a major feature of the Kentish economy, became a wasted asset; a bonus to be taken where there were other reasons for preserving the Woodland. For centuries the resources of the forest had gone largely to waste because ample land had existed in the north of Kent to support the economy, once that had ceased to be so the fattening of swine was found to be an extravagant use of even the marginal land such as the Weald (Witney 1976 pp 162).

Overall then, we see a landscape which is being divided, settled and managed to a much higher degree than in any of the preceding periods.

Key Medieval sites in the Sevenoaks Greensand Commons area

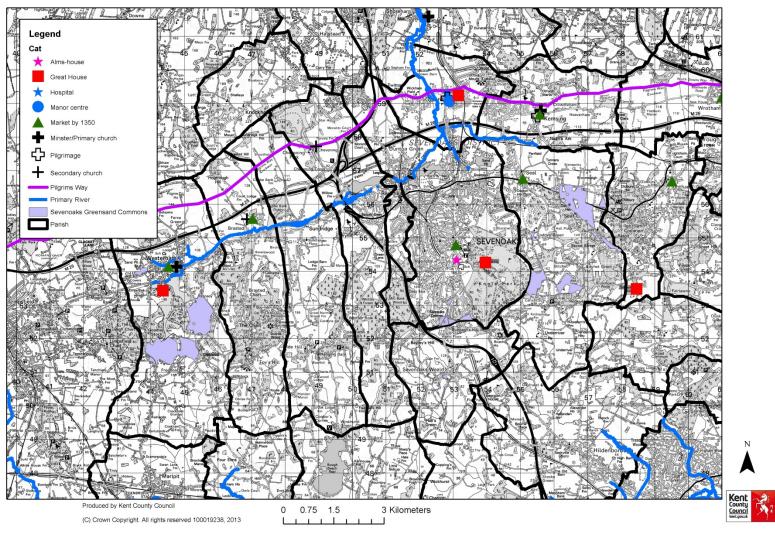


Figure 10

Settlement and Sites – Architecture and Buildings

The impact of the rapid growth in population between the Norman Conquest (1066) and the Black Death (1348) had a profound effect on the settlement in Kent. There was something of an urban explosion in the south-east of England, even if many of these towns were little more than villages. Not only were pre-existing settlements, such as Westerham, developed and expanded upon, individual dwellings grew into hamlets or villages and entirely new settlements were established. Royal, seigneurial or ecclesiastical initiative was driving forward the establishment and development of these towns as evidenced by the number of charters issued and other documentary evidence that becomes abundant in the thirteenth century. It was this period that saw the construction of many of Kent's most historic buildings and Kent is comparatively rich in medieval domestic built heritage.

The rise of the market town in this period was a result of the developing economy and the expanding population. Population pressure gradually deprived many peasants of adequate holdings to support themselves and when forced into various supplementary employments they became purchasers of food from others (Lawson in Lawson and Killingray (eds.) 2004 pp 50).

Two of the largest market towns in the landscape surrounding the Greensand Commons today, Westerham and Sevenoaks, developed as urban centres during the period. Westerham, situated to the north of Crockham Hill Common, appeared in the Domesday Book (1086) as 'Oistreham' (Domeday Book Williams and Martin 2002 (eds.) pp 35) and though this reference, alongside place-name evidence, is suggestive of an early origin, both the market and the oldest surviving buildings originated in the medieval period. The earliest stone building in Westerham is St Mary's Church which was constructed in the twelfth century using stone quarried at Hosey Common. It was subsequently extended in the fourteenth and fifteenth centuries. It was not mentioned in Domesday Book, but was listed in the Textus Roffensis of *c*.1120 (Ward 1932 in Arch Cant vol 44 pp 47).

Evidence for a market at Westerham existed in the form of a charter from 1227 whereby Henry III granted to the lord of the manor (Thomas de Camville) rights over a weekly Wednesday market and an annual fair (*CChR*, 1226–57, pp. 52 (a gazetteer of markets and fairs in England). This market survived until the sixteenth

century and occupied a triangular area to the west of the parish church and beyond The Green (KCC 2004 Westerham pp 3).

The original medieval manor house lay to the north of the town where Court Lodge, (a fifteenth century or earlier timber-framed house), stands today (Kent HER TQ 45 SW 104). At the time of Domesday, the manor was held by Eustace of Boulogne and included the greater part of Westerham parish and much of Edenbridge. It then passed to the de Camville family who by 1225 held Westerham and *Ponti Edelmi* (Edenbridge). At the end of the thirteenth century the estate was acquired by the Crown and then granted to the abbot of Westminster who held it until 1539 (KCC 2004 Westerham pp 3-4).

Alongside the church and manor there are numerous buildings in Westerham that have survived from the medieval period, though many are much altered. Notable examples include The Vicarage, a fifteenth century or earlier hall house of Wealden shape (Kent HER TQ 45 SW 214); The Red Cow House, a timber framed building dating to c. 1450 (Kent HER TQ 45 SW 175); and 49-51 High Street which is a late fourteenth or early fifteenth century timber framed hall house (Kent HER TQ 45 SW 129) (for a full list of the medieval buildings of Westerham see Kent HER).

Most of these fourteenth, fifteenth or sixteenth century timber framed buildings were on the main east-west thoroughfare which constitutes High Street, Market Square and Vicarage Hill (the A25), suggesting that this was the main communication route through the settlement in the medieval period.

Sevenoaks differs from Westerham in that there is no solid evidence that it existed before the Norman Conquest and may thus be of purely medieval origin. Exactly why the area encompassing Sevenoaks was first settled is unclear. Knocker, writing in 1926, points to two possible causes; that the site developed by the needs of the through traffic and that site was selected because of its extreme infertility, 'whereon the casual squatter could establish himself without leaving his manor, and with the less objection from the owners of the soil' (Knocker 1926 in Arch Cant vol 38 pp 52).

The through traffic would have come from those travelling the roads between London and Rye for which Sevenoaks market-place is a natural junction, and the infertility of the region is well attested and is discussed in detail above. In the 13th century, when

Sevenoaks first appears in documents, it was simply the poor, southerly segment of the manor of Otford; it contained no demesne arable and was settled by tenants who were for the most part small-holders and probably as much woodlanders as cultivators (Du Boulay in Arch. Cant. vol 80 1974 pp 2).

Despite this, there are references to a market from 1281 onwards (Knocker 1926 in Arch Cant vol. 38) and it is likely that by the end of the 13^{th} century the smallholders from Seal and other similar settlements surrounding Sevenoaks would have taken their produce there (Fox 2007 pp 12). The site of the first market place may have been in the spindle-shaped widening in the road south of the church, but probably by c.1200 it had moved to the triangular open space in the fork between High Street and London Road. Two small, two-storeyed and jettied timber-framed buildings, discovered in 1982 when a building fronting the present-day Shambles was being renovated, had probably been shops c. 1450 - 1530. Their arrangement indicated the position of lost alleyways, perhaps from the time when the market stalls were laid out in grid fashion, with walkways between them (KCC 2004 Sevenoaks pp 3).

The Parish Church of St. Nicholas at Sevenoaks would have been built early in the history of the settlement. It is mentioned neither in Domesday Book nor the Domesday Monachorum, and it may then have been a chapelry dependent on the church of SS Peter and Paul, Shoreham (KCC 2004 Sevenoaks pp 4). The site was archaeologically excavated in late 1993 during which the foundations of a two-celled structure consisting of a rectangular nave, *c*. 13m x 6.5m, and a chancel, 3m x 6m, probably dating from the late eleventh century, were located. A narrow north aisle appears to have been added soon after, and the chancel was extended, and transepts added in the twelfth century (OAU 1994-19).

The church was enlarged during the late thirteenth and early fourteenth century. The north aisle was widened, the south aisle was added, and a bell tower built on the north side of the chancel. The chancel was reinforced by buttresses in 1404, and the whole church was substantially rebuilt in the fifteenth century (KCC 2004 Sevenoaks pp 4).

The early history and evolution of the manor of Sevenoaks is unknown, but it appears originally to have formed part of the archiepiscopal manor of Otford.

Sevenoaks may have become its own manor shortly after 1086, but there is no indisputable record of this (KCC 2004 Sevenoaks pp 4).

Knocker suggests that the residence now known as Park Grange, and 'a few acres of modus land in Solefields have the best claim to be called the manor house and land of Sevenoaks manor' (Knocker 1926 in Arch Cant vol 38 pp 54).

When comparing the settlement with Westerham, there are relatively few surviving buildings which date from this period, but they do exist. In 1418, William Sevenoke founded a hospital for the relief of the poor as well as a free grammar school for the education of youths within the town, the fourth school to be founded in England. Both the school and alms-houses were substantially altered in the post-medieval period, but they are still extant at their original site on the Eastern Side of High Street (TQ 55 SW 63).

Further buildings of a medieval date are located on High Street and include Nos 13, 15 and 17 which are timber framed and date to the early sixteenth century at the latest. The concentration of early buildings here, including the church and school, suggests that it was from this point, at the southern end of the town along the main thoroughfare, that the settlement was originally located with the market situated a short distance to the north.

Alongside these larger urban centres, the growth in population was also absorbed by the growing number of smaller villages or hamlets and throughout the medieval period the majority of people still lived in small rural settlements.

It may be to the medieval period that we must assign the first expansion of many older settlements which had originated earlier as isolated farms, into, as Everitt puts it 'those charming little 'streets' or 'forstals' to use the local expressions, that are still a marked feature of the county' (Everitt 1976 pp 28). As discussed previously the origin of many of these may lie in the increase in the population of individual farms, which together with the custom of Gavelkind, would have led to an increase in the number of dwellings at each of them.

Thus, the hamlet followed fast upon the homestead (Witney 1976 pp 118). Many small settlements which could have originated in such a way exist in the landscape surrounding the Greensand Commons. Settlement at Seal in this period is attested by a number of medieval hall houses of which at least four exist in Seal village (Fox 2007 pp 18). Two are the inns on the south side of the road, now called 'The Kentish Yeoman' and 'The Crown' though both buildings have been substantially re-built.

The third, opposite the Kentish Yeoman and next to the butchers, has a roof line which is clearly that of a 15th century hall house and there is another on the western edge of Seal Green which was originally built in c. 1500 but re-built in about 1750 as Camden House (Fox 2007 pp 18). By the 14th century a standardised arrangement had emerged for the hall house of ground floor hall (open to the roof) with flanking service rooms and private apartments (the solar). Knole (1456-64) fits into this pattern on a grand and lavish scale (Lawson in Lawson and Killingray (eds.) 2004 pp 64).

Sevenoaks Weald, situated to the South of Sevenoaks is another good example of this type of settlement. The medieval buildings there include the fifteenth century rear of the former butchers shop in Windmill Road (D. Killingray, E. Purves 2012 pp 216). Long Barn is another example. Located at the southern end of Long Barn Road, it was revealed to be of fourteenth century date when excavations there uncovered a coin of Edward III dating to 1327-77 (WHG 1999 pp 10). Everitt notes that a large number of the new hamlet settlements in Kent which date to this period were sited on small patches of heath, common or waste, like for example Godden Green in Seal, first distinctly recorded by Wallenburg in a document of 1516 (Everitt 1976 pp 28).

In this period, we see the demise of the expansive manors which held vast swathes of land in different parts of the county, such as that of Otford, and the rise of smaller manors or sub-manors. This was the result of the freedom within the feudal system for tenants in chief, or lords, who had received grants of land from the King to parcel out his land among a number of tenants from whom they may then demand certain services. The sub-tenant in turn may divide his holding, on what terms he pleases, among a group of people, each of whom will owe him service. Land that to begin

with was held as a single manor, may thus be sub-divided at each remove into more than one new manor (Hamilton-Thompson 1928 pp 301).

This led to the lay tenants in chief, the vast majority of them comparatively minor lords possessing only one manor, clearly dominating landownership in Kent (Campbell in Sweetinburgh (ed) 2010 pp 29). A good example of this may be found at Otford, where in 1440 only 8 % of the tenant population held a hundred acres or more whereas 40 % held between 1 and 5 acres (Mate in Sweetinburgh (ed) 2010 pp 18). The reasoning behind the splitting up of many of these larger estates probably had something to do with the 'Knight's Fee'. Knights fees were the granting of lands on the condition that the recipient and his heirs should supply a stipulated number of knights or proportion of the costs of equipping one. For many landowners this was an onerous requirement and may have encouraged them to pass on the burden by sub-dividing their land. This was a particularly prevalent practice on lands held by the Archbishop, as an exceptionally large quota was expected from him by the King (Witney 1976 pp 167). During the twelfth century, for example, the Clares of Tonbridge were granted by the Archbishop the manor of, among others, Milton in Seal, for which they owed the Archbishop a knight (Witney 1976 pp 168).

Overall this resulted in a great number of lesser manor houses being built in areas away from urban centres during this period, of which a number still survive. This may be held in stark contrast with the situation of the preceding early medieval period where the individual dwellings that emerged belonged to the simple freeman. Examples may include Squerryes Court – a site that has been inhabited for at least 800 years. A substantial timber-framed hall house stood on this site before the present house was built between 1681 and 1685. From before 1272 it was owned by the Squery family.

Another example may be Ightham Mote which is a rare survival of a medieval moated manor house with its associated multi-phased designed landscape. The first recorded owner of the Ightham Mote was Sir Thomas Cawne who seems to have been resident between 1360 - 1374 (Rumley 2007 pp 35). Stonepitts manor, situated just to the north of Seal Chart which is Grade II* Listed Building with 14th-15th century remains within an Elizabethan plan is another (KAP 2011 pp 14).

The result of these processes was the continued establishment of scattered farmsteads throughout Kent. In all parts of the county there are numerous outlying farms sometimes as many as 50 - 60 in a parish, most of them on sites which have been occupied for 6 or 7 centuries and not a few for more than a thousand years. As a consequence, there are probably about 10,000 farms and hamlets in Kent whose sites have been continuously for the best part of 800 years and for many cases a much longer period.

This extraordinary abundance of medieval and sub-medieval buildings in Kent, which has so often been taken as a sign of wealth, should thus be seen as evidence of exceptional continuity of settlement rather than of exceptional prosperity in agriculture (Everitt 1976 pp 12).

Economy and environment

In the three centuries following the Norman Conquest agrarian expansion proceeded hand in hand with population growth and by the end of the thirteenth century the regional economy had developed with all the products of a now more populous countryside being marketed through the growing number of towns and ports (Cleere and Crossley 1985 pp 91). In many parts of Kent during the medieval period, with "labour so plentiful, mouths so many and land so sought after" there were strong incentives to adopt relatively intensive forms of agriculture (Campbell in Sweetinburgh (ed) 2010 pp 27).

The ease with which surplus produce could be sold at market - most families would have been able to travel to the market and back in a single day – meant that the ability of the lord to profit from his land was increased.

The prospect of greater profits encouraged landlords to make changes and from c. 1200 lords began to take their estates in hand rather than leasing them out, and exploited them directly (Mate in Sweetinburgh (ed) 2010 pp 4). These allowed cropping patterns to become extremely varied; demesne fields could be sown in sections with different crops thus reducing the risk of losing a certain crop to disease.

Animal husbandry seems to have become equally efficient in this period; lords – both lay and ecclesiastical – were willing to invest large sums to build up their sheep flocks on land that was not particularly fertile, like for example on the Chart Hills. In

addition, dairy farming and cattle breeding became an increasingly important part of the demesne economy providing, milk, cheese, butter and leather for the household or to sell at the market (Mate in Sweetinburgh (ed) 2010 pp 5-6).

The expansion of the population also led to an increased demand for mills. At the time of Domesday, the county had a considerable concentration of watermills. This number continued to grow throughout the medieval period and the introduction of the windmill in the twelfth century added a new source of energy (Mate in Sweetinburgh (ed) 2010 pp 6).

There are numerous references to the presence of mills in the landscape surrounding the Greensand commons. Two watermills belonging to Otford manor are recorded in a thirteenth century deed and watermills recorded in the seventeenth century by the springs at Greatness may have perpetuated medieval predecessors (KCC 2004 Sevenoaks pp 5).

Another prominent example is Ightham Mote. There is little doubt that settlement here was based on the provision of water. Geologically the location provides the perfect setting for a watermill and millpond, with the valley being continually fed by springs emanating from the spring line and it is highly likely that a watermill existed on the site prior to the construction of the house. (Rumley 2007 pp 36-37).

The exploitation of the raw materials offered by the county, apparent in the earlier periods, developed throughout the medieval period. Timber continued to be an important commodity for this region and was the basic raw material of the county until the nineteenth century.

Amongst the more important of its uses in Kent were the building of ships, which were being used more and more for trade in this period; the construction of houses, mills and farm buildings many of which were timber framed; the manufacture of carts, waggons and farm gear for the advancing agricultural industry; the making of hop poles (which came with the introduction of beer to the county in the later medieval period), sheep hurdles, fencing and pit props and the burning of charcoal for fuel both for the household and for the wide variety of developing crafts (Everitt 1976 pp 15). Often this timber would be taken great distances, again emphasising its use in boat, ship and cart construction. It would be expected that the wood required

for fencing could be found locally but in 1225 Henry III who was lord of the manor of Kemsing and Seal, ordered that timber for the making of palings be taken from Kemsing and sent to Dover by Water. Five or six years later Henry ordered the sheriff of Kent to provide oak trees from Kemsing and Seal manor for the repair of Dover Castle (J. Fox, D. Williams, P. Mountfield 2007 pp 39).

The specific importance of Kent in producing this raw material is clear - there is more coppice woodland in Kent than in any other county – nearly 75,000 acres. Everitt suggests that this may be attributable to the development of hop farming in the later medieval period and throughout the post-medieval period and the consequent need for hop poles (Everitt 1976 pp 15).

The Weald was a great reserve of timber, but the problem was getting this resource to market. In many parts of the Weald, particularly in the west, travelling via road or river with a cargo of timber would have been impossible. The whole section of the Chart Hills from Plaxtol to the Surrey border was heavily wooded and almost devoid of agricultural use (as most of it still is). Its proximity to navigable rivers and routeways made its timber a valuable resource and it was profitless to seek timber and firewood from further afield in the Weald (Witney 1976 pp 163).

The constant demand for timber and fuel saved the woodlands in many parts of Kent, including those on and surrounding the Greensand Commons. By the thirteenth century many of them were being coppiced and cut on a regular basis and between 1260 and 1348 the price of a faggot nearly trebled, making the woodland increasingly valuable (Mate in Sweetinburgh (ed) 2010 pp 3).

Iron was another raw material that was in demand during this period, both at a local and national level. Military campaigns are always a major factor in the production of iron and the French and Scottish campaigns that were ongoing in the medieval period called for high spending by the crown on arms and projects such as the artillery fortifications of the south coast. One example was in 1242 when the Archbishop's officials received funds for a consignment of 8,000 horseshoes and 20,000 nails to be conveyed to Portsmouth from Maidstone and Otford. This consignment is an important indication that the Archbishop's lands, stretching south from Maidstone and Otford and including much of the landscape surrounding the Greensand Commons were seen by the crown as a reliable source of iron and

shows that, when needed, iron could be produced in this part of Kent on a large scale (Cleere and Crossley 1985 pp 88-90).

With the growth of traded goods in this period, the requirements for shipping also grew and thus also the innumerable kinds of equipment that a developing port needs (Cleere and Crossley 1985 pp 118). Another factor in the growth of the market for iron, particularly in the years between the Norman Conquest and the Black Death, is the increasing pressures on agriculture to provide food for a growing population. There was an increasing need for iron for the tools required by these farmers.

The Weald was an important source of iron deposits. They lie relatively close to the ground surface and so were easily extracted by open cast mining. There are no known production sites within the immediate area surrounding the Greensand Commons. Most extraction and smelting took place to the south of Sevenoaks in the High Weald, a section stretching roughly east of Horsham across to the south of Tunbridge Wells, and down to Hastings (Pearce 2014). Sites are however, suspected in the area surrounding Edenbridge situated approximately 4 km to the south of Crockham Hill common. An example may be found near Four Elms where a sixteenth century furnace and associated pond have been located (Kent HER TQ 44 NE 3).

Throughout the earlier part of the medieval period iron smelting used a 'bloomery', the best known of which was at Tudeley near Tonbridge which dates to the early twelfth century (Cleere and Crossley 1985 pp 92). Between the years 1490 and 1540 a change took place from the use of the bloomery to the blast furnace and the finery forge.

This was the period of French immigration to the region that brought continental innovations in the production of iron. Permanent 'blast' furnace structures were constructed which once alight were continuously 'in blast' for a much longer period of time than the old bloomeries (Pearce 2014). Ultimately this resulted in the growth of the Weald as both the supplier of armaments to the King and wrought iron to the expanding markets of London and the South-East.

The importance of Kent and the Weald in this industry is attested by the fact that blast furnaces appeared in the south east 30 years before the midlands where the

blast furnaces were not being built until the 1560-70's (Cleere and Crossley 1985 pp 118).

The increasing use of stone for the construction of buildings led to the growth in the exploitation of outcrops of various types of stone in the area. Sandstone quarries are present on Hosey Common (known as the Hosey Caves) where the stone here has been quarried and used for buildings in Westerham, such as the medieval church of St Mary, since at least the 12th century. It has been estimated that in total over 20,000 tons were quarried over 800 years (Combley. 2010 pp 8).

Further evidence for quarrying in the landscape around the commons comes from the place-name 'Stonepitts Manor' which is of a possible 12th century date, located just to the north of Seal Chart. Its name suggests nearby stone quarrying, though these are not visible on historic maps and may have disappeared by the post medieval period. Alongside this, Carters Hill, just to the south of Fawke Common and south west of Bitchet Common has a name that is said to derive from 'John Carters Quarry' mentioned in a conveyance for Knole from Lord Say to Archbishop Bourchier in 1456 (J. Fox, D. Williams, P. Mountfield 2007 pp 87). These examples from a relatively small part of Kent suggests that this was a practice that was widespread in the medieval period.

Kent, and in particular the northern and western parts of it, benefitted from the effect of the needs of the capital for food supplies and raw materials. The south-east as a whole enjoyed a growing prosperity at this time as the increasing population of London led to specialisation in agriculture over the Home Counties. The capital was a magnet for trade. Grain was frequently shipped directly to London or other urban markets across the channel. At many manors the high revenues generated by sales at these markets were used to finance new construction on the estate. New mills, barns and halls, many of stone with elaborate tiled roofs, were constructed in this period (Mate in Sweetinburgh (ed) 2010 pp 7). Both the timber and iron industry benefitted from the direct trade to London as the city's suburbs began to expand bringing the need for vast quantities of raw material for construction.

The above review may suggest that the medieval economy of Kent was characterised by a continued growth in prosperity. This is not the case however. The arrival and aftermath of the Black Death in Kent in 1348-9 disrupted every aspect of

society. Some remote areas may have survived unscathed, but most places had lost between a third and half of its population by 1350 (Ziegler 2003 pp 230). The period was a time of severe recession, particularly for the gentry. The population declined faster than production and more grain, stock and wool were being produced than the population could absorb. Revenues from fares and markets dropped as stalls stood vacant for lack of renters, at Sevenoaks for example the rents for shops decreased from 20s to 6s 8d (Mate in Sweetinburgh (ed) 2010 pp 14). Small rural settlements and agricultural land dropped out of use and was soon reverted to scrub and waste undoing the assarting of the woodland of previous years. The demands of the Hundred Years War exacerbated the existing problems caused by the Black Death, and although the campaigns were halted until 1355, after this war recruiters competed with lords for the services of labourers. (Mate in Sweetinburgh (ed) 2010 pp 13).

Despite the general desolation caused by the Black Death there were some advantages. The reduction in the size of the population meant survivors were able to demand better rates for their work such as higher money wages or payment in better quality grain. An example of this is an Otford carpenter who in '1402 was being paid 4d or 5d a day was by 1427 receiving 6d a day' (Mate in Sweetinburgh (ed) 2010 pp 17).

The rise in wages led to some peasants being able to spend a larger proportion of their wages on meat and dairy products which, up until then, had been regarded as luxury products, thus causing an increase in their demand (Mate in Sweetinburgh (ed) 2010 pp 13). The increase in the demand for meat and dairy would have had an impact on the cleared areas surrounding the Greensand commons which is primarily suited to pastoral farming, indeed it helped the county as a whole in its economic recovery.

Another factor which would have aided this recovery is the introduction in the fifteenth century (c. 1460) of hopped beer; this encouraged the import of hops and stimulated the demand for barley and fuel meaning that prices paid for faggots and firewood rose. After it had been introduced to the region, most likely from Flanders, it would have been first produced by aliens, or with alien help. Despite this native beer brewers quickly adopted the new techniques and between 1460 and 1500 the

brewing of beer spread throughout Kent and parts of Sussex and by the midsixteenth century beer had become a major drink of the masses (Mate in Sweetinburgh (ed) 2010 pp 22).

The growth of the cloth industry was also important in later medieval Kent with the revival of the international wool trade after the end of the Hundred Years War (in 1453). Cloth-making was mainly carried out within the Weald, and on a large scale. The industry was based on wool from nearby Romney Marsh together with water and timber obtained locally and it rapidly became a major employer in the region. In the 14th century immigrants from Flanders brought new ideas that further boosted the industry. There is evidence of a cloth industry in Seal parish in the fifteenth and sixteenth century suggesting that this trade was not limited to the Weald but spread to many of the areas surrounding it. Court records from the 1550s mention a cloth worker and a weaver (J. Fox, D. Williams, P. Mountfield 2007 pp 37).

Further evidence exists in the place names of the areas surrounding the Commons. Fullers Street, Fullers Hill and Fullers Hill farm are all situated less than 1 km to the north of Seal Chart (OS first ed. 1862-75). At the same time the dominance of London became increasingly felt as the export of wool and cloth and the import of wine, linen goods and luxury fabrics were predominantly channelled through the capital (Mate in Sweetinburgh (ed) 2010 pp 23).

Overall the economy had recovered from the recession by the end of the medieval period with land being brought back into cultivation and tenants as well as lords keeping large flocks of sheep and cattle.

Belief and burial

The Church was the single most important institution in medieval life, its influence pervading almost every aspect of people's lives in this deeply religious society. Not only did the church have a role in the everyday lives of the medieval population, it had a major impact on the development and division of the landscape.

The parochial system was formed throughout this period although this began before the Norman Conquest with the establishment of many of the minster or primary and secondary 'mother' churches. Fourteen of these primary and a further twelve secondary mother churches have been identified within the Diocese of Rochester. The main differences between primary and secondary churches is the date, with the former being earlier and having a greater number of subordinate churches associated with them, the secondary churches generally having less. St. Mary's Church in Westerham (Kent HER TQ 45 SW 160) and St. Mary's Church in Kemsing (Kent HER TQ 55 NE 7), both of which have a possible Anglo-Saxon origin, were the two primary 'mother' churches in this region, while the Church of St. Botolph in Chevening (Kent HER TQ 45 NE 62) and the church of St. Martin in Brasted (Kent HER TQ 45 NE 60) were the secondary (Sweetinburgh in Lawson and Killingray (eds.) 2004 pp 40).

These 'mother' churches, were originally the only church within its sphere but by the thirteenth century each of them had a number of 'daughter' or subordinate churches that would have been established by members of the nobility for their own private use and to serve the scattered settlements and farmsteads of Kent. The churches of St. Nicolas in Sevenoaks, SS Peter and Paul in Seal and St. Peter in Ightham all fit into this category. The last of these churches were established in the twelfth or early thirteenth century, marking the end of the period of parish formation, an administrative division which is still apparent in the landscape today (Sweetinburgh in Lawson and Killingray (eds.) 2004 pp 40).

Alongside piety, charity was a major cornerstone of medieval faith and a number of alms-houses and hospitals were established in this period. These hospitals were open to lepers, the poor and people unable to care for themselves as well as poor travellers or pilgrims requiring overnight accommodation.

The first hospitals founded after the conquest were established by Archbishop Lanfranc at Canterbury as part of an ambitious ecclesiastical building programme. The main period of hospital building throughout the rest of Kent took place in the 11th, 12th and early 13th centuries (Sweetinburgh in Lawson and Killingray (eds.) 2004 pp 44).

The hospitals' spiritual role was one of primary importance and the founders sought to provide at least one priest and if possible a chapel where 'he might celebrate the divine service daily' (Sweetinburgh in Sweetinburgh (ed.) 2010 pp 117). Alms collection was an important part of hospital life and many would have relied upon passing pilgrims or travellers (Sweetinburgh in Lawson and Killingray (eds.) 2004 pp

44). The distribution of many of the known medieval Hospital or alms-house sites reflects this need; the majority of them being located in urban centres, where it would have been far easier to beg for alms, or near the major route ways used by travellers and pilgrims.

Although there is no trace of it today, by the late 13th century a hospital had been established next to the chapel at Greatness (the chapel itself is mentioned in the Textus Roffensis which notes that Otford had a "capella" named "Gretenersce") (Ward 1929 pp 3). This was the Hospital of St. John to which Otford Regularly paid "the alms appointed" in 1289 (see Lambeth Court Roll, No. 830) (Ward 1929 pp 3-4). Originally this hospital would have been for lepers and in 1228 there is evidence of 35s being paid by the Archbishop to the 'keeper of the lepers of Otford' (Hasted 1778 pp 326).

Alms-houses have also been located within the landscape surrounding the Greensand Commons Some examples include 1-10 Alms Row Cottages in Brasted (TQ 45 NE 135) which are of a 16th century or earlier date and alms-houses located on the eastern side of Tonbridge Road at the southern end of Sevenoaks (TQ 55 SW 207) which were originally established in 1432.

A major aspect to medieval religion was the veneration of saint's cults. This was something which was also apparent in the earlier Anglo-Saxon period, as discussed above with reference to St. Edith's Holy Well at Kemsing, though the various cults appear to have amassed a far greater following in the years following the Norman Conquest.

Pilgrimage was a fundamental element in the cult of the saints. People sought physical proximity to the saint or their associated relics with the hope that this connection would bring them blessing. The murder of Archbishop Thomas Becket in 1170 and his subsequent canonisation two years later, sent shockwaves across Europe. This Kentish saint was celebrated internationally and attracted pilgrims from all over Europe, including royalty such as 'the penitent King Henry II and Lewis VII from France' (Powell in Sweetinburgh (ed.) 2016 pp 152). It is impossible to know the exact numbers involved in pilgrimage, but the surviving accounts suggests that the high point was in 1350/51 when a total of approximately '180,000 individual

offerings were made assuming an average rate of one penny' (Webb in Lawson and Killingray (eds.) 2004 pp 46).

The custodians of Beckets shrine actively sought to widen the pilgrim access and participation. Archbishop Langton went to great lengths to persuade Pope Honorius II to declare 1220 a Jubilee year in which visitors to the shrine would receive forty days remission of their sins. Pilgrims bringing with them donations to the church and money to spend in the city 'were welcomed with open arms' making pilgrimage a big business for those towns and cities that were *en-route* (Powell in Sweetinburgh (ed.) 2016 pp 153).

It is likely that the proximity of the Pilgrims Way may have had an impact on the development of the medieval settlements surrounding the Greensand Commons. There have been some suggestions that those travelling from Winchester towards Canterbury could have had the option of going by an alternative route, located just to the south of the Pilgrims Way, in the same approximate location as the present A25. This would have passed through the market settlements of Westerham, Brasted and Sevenoaks, and past the above discussed Hospital of St. John the Baptist at Greatness. Rayner argues that 'the growth of Seal and its eclipsing of its mother settlement at Kemsing appears to be due to its position on this preferred route, which swung to the N-E of Seal Church, by way of Styants Bottom and over the centre of Oldbury Hillfort' (Rayner 1997 pp 33). It is likely that this route and the Pilgrims Way to the north were both used interchangeably at various times depending on the state of the roads and the local flooding (Rayner 1997 pp 33).

Religion and faith was something which was constantly developing and changing throughout the medieval period and the institutions had to evolve alongside these changing beliefs. An example is the emergence of the doctrinal ideas concerning purgatory during the thirteenth century which led to the foundation in the later medieval period of a number of chantry chapels within or in addition to the parish church (Sweetinburgh in Sweetinburgh (ed.) 2010 pp 119).

These chantry chapels were for the purpose of employing priests to sing a stipulated number of masses (liturgical services) to guide the soul through its indeterminate period in Purgatory onwards into Heaven. A number of these chapels may be identified within the landscape here studied for example In Sevenoaks Church the

present south transept is called the Chantry chapel, the chantry, having been established there in 1257 (Knocker 1926 pp 66).

Suggested further research questions

It is very likely that roads and tracks of a Medieval date existed between the known medieval settlements in the landscape surrounding the Commons, is anything known about these and was there a continued use of the droveways or was a new network of roads constructed?

What was the impact of the large estates and the Church on the Medieval landscape in this area? What was the impact on the economy?

There seems to be a lack of evidence for defensive sites in the area, is this due to a lack of investigation or an actual lack of sites?

Is there burial evidence associated with the known former sites of churches?

What kind of produce was being transported to and sold at the medieval markets and did any of it derive from the Commons or areas surrounding them?

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3.7 Post-Medieval

Period overview

It was in this period that the landscape, including the communications routes, settlements and the layout of the farmland, took on much of the form that it has today. Many of the people who lived in this area would have worked within the growing agricultural economy, helping to create the wide variety of different produce that was in demand from an expanding market.

Our understanding of the ways in which the landscape, settlement, and economy developed throughout the post-medieval period is greatly aided by the presence of numerous documentary and cartographic sources. These records note that the wealthy landowners continued to be a major factor in the way the landscape was utilised and enclosed. Many records exist in the form of wills or licences, these detail the ways in which the people who lived in the towns and villages bordering the commons would have exploited the resources available from them. The scattered rural settlements that characterise the earlier periods in this part of Kent are also evident through the post-medieval period, though many of these began to expand, particularly with the introduction of the railway to this region in the later nineteenth century. Many buildings which were constructed, in timber, brick or stone, are still extant (many of which are Listed Buildings) and are a clear indication of the way in which the settlements developed in order to accommodate growing population.

Landscape

The modern layout of the parish, with the exception of the dense twentieth century housing developments located in and around many of the villages, was established during this period, and was probably substantially in place by the eighteenth century. As Killingray notes 'the present-day view of field patterns from the Downs and Chartland ridge would have been familiar to an eighteenth century inhabitant, so also would be some of the narrow hollow tracks that descend into the Weald' (Killingray 2010 in Arch Cant vol 130 pp 60).0

In this period, it is also possible to gain a much clearer appreciation of what the landscape encompassed by the Greensand Commons was like through the numerous documentary sources that are available. Edward Hasted, for example, mentions Seal Common in his comprehensive (1797) work 'The History and Topographical Survey of Kent'. In this he writes 'this (Seal) parish has, in the upper part of it, much waste ground in it, which is a dreary barren sand, consisting in this and the adjoining parishes eastward, of several hundred acres, being in general covered with heath and furze, with some scrubby wood interspersed among the hills.' (Hasted Vol.3, 51-59).

William Boys, (1735–1803), surgeon and topographer, again describes a number of commons on the chartland of west Kent including Seal Chart, Ightham Heath and Wrotham Heath, he notes that 'they are in general covered in furze and fern, interspersed of with patches of grass and feed some lean cattle and half-starved sheep' (Fox, Williams, Mountfield 2007 pp 34). Alongside this, Farley Common, which is situated on the western outskirts of Westerham is mentioned in Wolfe-Land's 'A handbook for Westerham and its surroundings' where it was described as being 'a breezy bit of open country, bright with gorse and heather' (T. Gibson 1904 pp 104).

From these records we may get an idea of how each of the Greensand Commons differed from one another in this period. Farley Common is only 6 ha in size which is tiny in comparison to Westerham's other common land at Crockam Hill and Hosey, each of which encompass over 40 ha. In addition to differences in size, the habitats of these two Commons are distinctly different. The grassy nature of Farley Common meant that in the later post-medieval period it was used for sports, in particular cricket, while the rough and wooded nature of commons at Crockham Hill and Hosey were used by the community to gather resources like gorse and timber.



Figure 11 Samuel Palmer View from Rooks Hill 1843

One of the major features, which continued to have a dominant role in the shaping of the landscape of the post-medieval period, was the number of expansive estates which were located within it.

The owners of both Knole and Wildernesse were acquisitive during the later post-medieval period, especially in the eighteenth century. Many of these wealthy landowners 'acquired pieces of land which lay near the property they already possessed, often for the purposes of rent rather than produce' an example being the owners of Knole who bought up large parts of the parish culminating in the purchase of Hall Place and its lands in 1780 from the Thompson family (Du Boulay in Arch

Cant Vol 89 1974 pp 4). The process of extending and consolidating Knole Park had gone on for centuries, and continued well into the nineteenth century. Not only did the aristocratic inhabitants of Knole, from 1550 onwards, wield economic and political influence over the town, 'but their control of an emparked estate to the east served to restrain the way that Sevenoaks developed in the next three hundred years' (Killingray 2010 in Arch Cant vol 130 pp 42). In addition to the land that was already enclosed and under cultivation, or within the estate parkland in this period, much of the common land was owned by the large estates of, for example, Knole, Wildernesse, Hall Place, Chartwell and Squerreys.

These estates would have had a continuing role in how their commons or 'manorial waste' was used and developed and there are many documentary sources that exist which display their interest in it. The commons located on the eastern side of Sevenoaks are likely to have passed to the Sackville (of Knole) family during the reign of Elizabeth I and Bitchet Common, together with several other sites in the areas, including Redhill Wood and Larchwood, formed part of the manorial wastes of the Knole Estate. Seal Chart, and the small area of Flanes Wood were also owned by the Knole Estate, forming part of the Outside Woods (Crichton Maitland & Co., 1993).

There are many instances of where the owners of Knole tried to enclose their common land and restrict the commoner's use of it. Arabella, countess of Dorset in the nineteenth century, tried to enclose common land on the chart. She complained that 'the inhabitants of Seal have practised the digging of turf and the turning of their cattle and sheep without any interruption in vary late years. They also pull heath and cut furze'. She wanted to fence the whole area and sought advice about her right to do so (Fox, Williams, Mountfield 2007 pp 65).

It is therefore clear to see that the landscape, including the towns, cultivated land and manorial waste was largely shaped and developed by the wants and needs of the gentry.

Another factor that played a major role in the development of the landscape in this period was the greatly increasing population. This would have led to increased pressure on the countryside and the ways in which the land was exploited for the expanding economy and for housing (see below). The information that may be

derived from the maps and documentary sources that were produced, particularly in the last two centuries of the post-medieval period, can add a great deal to our understanding of the landscape. For example, the tithe maps that were drawn in the mid-nineteenth century suggest that the parish of Seal supported significant areas of both arable and pastoral farming as well as having areas of managed woodland used commercially for timber and charcoal production. The 1842 tithe apportionment has the parish divided into 39% arable including hops, 25% pasture, 21% woodland, 10 % waste with the balance being made up of buildings, roads and public areas (1842 Seal tithe apportionment table KHLC WU16).

Much of the remaining unenclosed land and woodland, which was fit for the improved agricultural techniques in the post-medieval period, was cleared or assarted. This led, more than any other period preceding it, to an enclosed landscape often bordered on more than one side by small areas of woodland and which was crossed by various types of communication routes that enabled the economy in this region to flourish.

By the early years of the twentieth century there was a change in the use and ownership of the Greensand Commons. Those areas which had not been enclosed either by local agreement or by landowners nibbling at land adjoining their estates were often bought by local authorities for the purposes of recreation. For example, Sevenoaks Common which consists of 39 acres to the south of the town on the greensand ridge, was bought by Sevenoaks Urban District Council and is now owned and managed by Sevenoaks Town Council, for the purpose of the general public's enjoyment (Killingray, Purves 2012 pp 179). Alongside this, gardens and gardening became a major leisure activity for all social classes in the twentieth century. The cultivation of gardens, both public areas provided by the local authority, and those tended by house owners, gave the town a greater degree of seasonal colour and also preserved trees and open spaces, the 'green lungs' that made the place so attractive to potential residents (Killingray 2010 in Arch Cant vol 130 pp 51).

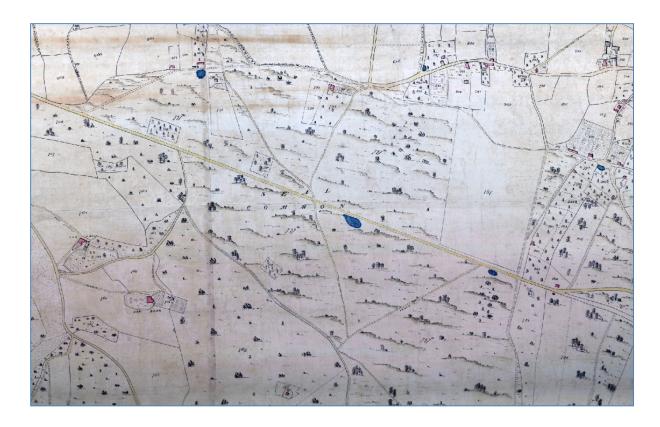


Figure 12 Seal Common, 1839 tithe map

Settlement sites

The settlement in the landscape throughout much of this period was, as with many of the periods preceding it, characterised by small scale scattered dwellings and villages.

In the post-medieval period the principal unit of settlement in Kent was the hamlet. This usually consisted of a cluster of buildings around a green with one or more farms, its own well and inn or beer-shop. Many of these hamlets and villages developed and expanded as a result of the population growth in the post-medieval period.

The evidence for this growth can be obtained through a study of the numerous cartographic sources which were produced as well as the many buildings that were constructed in this period, many of which are still extant. In Seal, for example, though the settlement originated in the medieval period there are at least fourteen structures that were constructed during the sixteenth century and a further nine at least that were constructed in the eighteenth century. Many of these are Grade II Listed

Buildings and a full list of the extant post-medieval buildings may be found on the Kent HER or Historic England's National List.

The development of Sevenoaks Weald in the later post-medieval period can be seen by comparing the first and fourth edition OS maps; on the first edition the majority of the dwellings are located on the western side of Long Barn Road and on the southern side of Windmill Road (OS First Edition 25in 1862 – 1875). By the fourth edition however, there are a far greater number of buildings located on both sides of Long Barn and Windmill Road, as well as the settlement spreading eastwards along Morley Road (OS Fourth Edition 25in 1929-1952). Development can also be seen on the OS maps in the larger settlements such as Sevenoaks. On the first edition OS map, the majority of the buildings encompassed within the settlement of Sevenoaks were located along the major north-south thoroughfares of High Street and London Road, but by the time of the Second Edition OS map there is large scale development apparent to the north- west on the town along Granville Road (OS Second Edition 25in 1897-1900).

It is very likely that the smaller scale commons discussed within this study, for example Sevenoaks Weald or Bitchet Green, were created and maintained principally for the use of the occupants of these small settlements, either for recreation or for the pasturing of small amounts of livestock (Fox, Williams, Mountfield 2007 pp 86).

It seems that in a number of cases new settlements sprang up on the commons in the post-medieval period, generally at road junctions or around an original farmhouse, often these were given a 'green' name, such as Godden Green. Other new settlements in the landscape included Ide Hill, Ivy Hatch and Toys Hill (Rayner, 1997 pp 53-54).

Many of the commons acted as a catalyst for the development of new settlement in the form of squatters. This phenomenon occurred much more frequently in this period due to the increased pressure on the land that was a result of the growth in the population. Squatters rights to land could often be obtained by building a dwelling overnight, this appears to have happened in 1516 at Godden Green when an illegal squatter cottage was recorded there (Rayner, 1997 pp 53).

These areas of common land also appear to have been attractive to travelling communities, for example Farley Common was a spot beloved of the peripatetic gypsy (Gibson 1904 pp 104). Therefore, it would appear that these commons had a role in the establishment of new villages in this period as well as providing preexisting settlements with a useful open area.

The construction materials and methods used for the buildings within these settlements can still be seen in many of the surviving buildings. As with the preceding medieval period, timber was widely utilised, particularly in the construction of the lower status buildings. These had externally exposed timber frames infilled with wattle and daub. Wattle and daub consisted of vertical timbers fixed between two horizontal members of the timber frame which supported timber laths woven between them. This in turn supported the daub which was a rough lime-based plaster (containing animal hair, dung and locally found aggregates).

In Sevenoaks timber was widely used for the frames of many houses until the nineteenth century and timber-clad weather-boarding was also a common feature, sometimes with an upper storey hung with nailed tiles (Killingray 2010 in Arch Cant vol 130 pp 37).

In contrast to this, the homes of the more prosperous were increasingly built of more durable materials such as brick and ragstone with clay tiles on walls and roofs. A good number of substantial brick villas were built in Sevenoaks after the 1870s, on new roads to the south of Tubs Hill station, on Tubs Hill itself, Granville Road and South Park, where there were 'good residences, principally inhabited by the families of London merchants' (Killingray 2010 in Arch Cant vol 130 pp 50).

Much of the building materials for these stone and brick dwellings would have been available locally, for example outcrops of hard grey Kentish rag (a limestone embedded in the Greensand) would have been available within the immediate vicinity of Sevenoaks (Killingray 2010 in Arch Cant vol 130 pp 36).

Many of the great houses at the centre of the large estates in this landscape were developed and expanded throughout the post-medieval period. For example, in 1606 Lord Sackville undertook extensive renovations to the state rooms at Knole in preparation for a possible visit by the King. Squerreys Court, which had existed as a

substantial timber-framed hall house since the medieval period, was re-built between 1681 and 1685 by Sir Nicholas Crisp, a wealthy Guinea merchant, and is now one of the finest examples of a Renaissance manor house in Britain (Kent HER TQ 45 SW 109).

The wealthy owners of these estates also invested money in the construction of smaller buildings and many of the later cottages in settlements such as Godden Green etc. were built by the owners of Knole estate for the people working their land (Killingray, Purves 2012 pp 66).

In the later years of the post-medieval period there were a number of factors, including the great depression of British agriculture at the end of the 19th century, and the introduction in the 20th century of increasingly heavy levels of taxation on inherited wealth, which put an end to agricultural land as the primary source of wealth for the upper classes.

As a result, many of the large estates which had dominated the landscape up until this point were sold or broken up. This led to many of the great houses within this landscape being acquired by organizations such as the National Trust. This in turn led to both the houses and the associated gardens and parkland being opened up to the public; Ightham Mote, Charwell and Knole are all examples of this.

Both Crockham Hill Common and neighbouring Toy's Hill hold a position of particular significance within the history of the National Trust through the direct personal association with Octavia Hill, one of the triumvirate (with Robert Hunter and Canon Hardwicke Rawnsley) who founded the Trust in 1895. In 1877 Octavia Hill's sister, Gertrude, bought a house (The Warren) at Crockham Hill. Octavia and her friend Harriet Yorke had a cottage (Larksfield) built nearby in 1884. The Trust operated on the principle of building up estates by assembling small pieces of land, and this process commenced at Ide Hill in 1899 when her sister Miranda presented a small portion of land (Waterson 1994, 25). By 1904, further land around Ide Hill, Toy's Hill and Mariners Hill had been added (Darley 1990, 311), some of it bought by Octavia herself. Octavia Hill died on 13th August 1912 and was buried in the church at Crockham Hill (with a marble effigy added in 1928).

Economy and environment

The economy of this region of Kent was, as in the preceding periods, essentially based upon agriculture. Even within urban centres such as Sevenoaks economic activities, particularly in the first half of this period, were 'overwhelmingly agrarian and the community were to a large extent self-sufficient' (Killingray 2010 in Arch Cant vol 130 pp 42). Most men, women and children would have continued to be employed in work related to agriculture until the later years of the post-medieval period (Killingray 2010 in Arch Cant vol 130 pp 42-43).

A clear indication of the proportion of the landscape that was used for agriculture can be seen very clearly in this period for the first time. The tithe maps and associated apportionment tables, which were produced in the mid-nineteenth century, detail all the owners and occupiers of the land in the parish and exactly how this land was put to use. For example, the Seal parish tithe map (1838) and apportionment table (1842) notes that 39% of the parish was used in arable farming (including hops) while a further 25% was in use as pasture (Seal Parish tithe map and apportionment table 1838-42 KHLC WU16). Farming in this period, particularly in the later eighteenth and nineteenth centuries, was characterised by a new diversity of products which were in demand from a continually expanding market.

The number of Kentish yeomen (a medieval class of farmer below the gentry but above other free men) by the seventeenth century is estimated at between about 2200 and 2500 men representing around 2% of the county's population (Bower 1994 in Arch Cant vol 114 pp 152). The Kent yeomen have traditionally been seen as the wealthiest in the country and there are a number of factors, aside from their good investment decisions, which may be attributed to the prosperity of this new class in the post-medieval period. Gavelkind (discussed above in section 3.5) is likely to have been one of them as it led to landownership being something which was constantly expanding rather than being restricted to a few powerful members of the landed gentry. Another factor was probably the region's proximity to the increasingly demanding London food market and the fact that many Kent farmers had access to this market by water transport (Bower 1994 in Arch Cant vol 114 pp 156).

Overall, this new class illustrates that within a few centuries, the ordinary man could acquire great wealth from the Kentish landscape.

Despite an increasing diversity of produce in this period, wheat continued to be grown and evidence for its' sustained demand can be found in the numerous wind and water mills many of which were likely to have been used for processing this grain.

Both the Darent and its tributaries have been exploited as a source of water power for the last millennium. At the peak of its use in the eighteenth century there was on average mill every two miles along the length of the river (Killingray 2010 in Arch Cant vol 130 pp 40). A number of mills and possible mill sites from the landscape surrounding the Greensand Commons are shown on the OS First Edition maps of the county. The OS First Edition shows a windmill near Horns Hill on Hosey Common, and another is located near the southern boundary of Sevenoaks Weald Common, near the Methodist Chapel (OS First Edition 25in 1862-75). The former presence of a mill at Sevenoaks Weald is also attested by name 'Windmill Road' (on which The Windmill pub is situated at its southern end) which borders the northern and western sides of the common.

In addition to this, the Sevenoaks guide of 1873 refers to Sevenoaks Weald and its whitewashed windmill 'the windmill haven given its name to the inn and the main road through the village was eventually bought by a Mr. Shepherd from Brasted who broke it up and removed it' (WHG 1999 pp 98). At Crockham Hill Common the possible site of a windmill was noted on the OS First Edition map on the southeastern boundary of the common, which is labelled Windmill bank (OS First Edition 25in1862-75) though no archaeological or documentary evidence has been found for this.

A mill was originally situated on the north-western side of Farley Common. Although it had been taken down by the time of the OS First Edition there are still numerous references to it in the local place names, for example there is a 'Windmill Field' located near the north-western boundary of the common (OS 25in First and Second Editions). The windmill on Sevenoaks Common (Kent HER TQ 55 SW 33), which is visible on an 1839 map, had already gone by the time of the 1870 map and a 'ragstone cottage had been built blocking its perfectly shaped south facing wind funnel' (C. Rayner, 1997 pp 85).

There are also numerous documentary sources that point to the former location of mills within this landscape. For example, there must have been at least one mill at Seal as a court case in 1671 about poaching mentions 'George Woodens Mill at Seal' (Fox, Williams, Mountfield 2007 pp 68). There may also have been a windmill at Childsbridge, where the 'banks around the millpond, shown on the large-scale maps, could be seen until the 1980's when they were destroyed by motorway works' (Fox, Williams, Mountfield 2007 pp 68).

Animal husbandry also continued to be a major part of the agricultural economy in this part of Kent. As has been discussed previously in this document the relative infertility of the Chart Hills lend themselves to pastoral farming over arable. Bower notes that the livestock kept by the average Kentish yeoman may have included 'oxen, cattle, sheep, horses, pigs, geese, ducks, hens and chickens and bees' (Bower 1994 in Arch Cant vol. 114 pp 157).

The pastoral nature of settlements like Seal (located just to the west of Seal Chart) and its neighbours is evidenced through a wide variety of documentary sources including wills. A study of the wills of the Christopher family, one of Seal's best documented families, illustrates the pastoral nature of the neighbourhood. In 1562 William left 60 sheep to be equally divided between his four sons and a daughter and in 1577 James left his eldest daughter 'one bullock and my wife to keep it til it hath a calf' (Fox, in 1993 Arch Cant Vol 112 pp 231). In 1592 another William left his second son one ewe, one lamb and a 'great black wether with one horn' (KHLC DRb/PW16).

Evidence of animal husbandry from documentary sources continued throughout the post-medieval period, and there are many references to it, specifically with regards to the Greensand Commons. In early twentieth century correspondence relating to the manor of Kemsing and Seal, specific references are made to the 'waggon loads' of gorse or bracken which were taken from Fawke Common, Bitchet Common and Seal Chart (KHLC U269/M187). This gorse and bracken would have been used as litter or bedding for cattle and pigs in the winter months.

There are also references to the use of these commons in the post-medieval as pasture for livestock; in 1908 a licence was sought 'to run fowls and ducks on Godden Green' (KHLC U269/M187). A questionnaire compiled during the process of

enclosing the common in the mid-nineteenth century specifically refers to 'levant' and 'couchant', which was the right to pasture cattle on the common. It notes that all the commoners had this right, but not at all times (KHLC U1000/4/M9/1). Through these sources, not only do we see some indication of the type of animals that would have been kept in this period, we also see the ways in which the commons may have been used to support this agricultural economy.

In addition to the farming of wheat and grain, there was an increase in the production of foods that were seen as 'luxury' goods in the preceding periods, namely fruit. By the later post-medieval period large areas of the landscape were dedicated to fruit, for example in 1840 there were approximately 13,000 acres of orchard alone (Harvey 1964 in Arch Cant vol 79 pp 97).

This rise in fruit growing in Kent occurred late in the post-medieval period and was spurred on by the development of the railways making transport of produce cheap and easy.

Even before the railways penetrated into Kent, the rail links between London and the rest of England allowed Kentish fruit to reach northern industrial markets relatively cheaply (Harvey 1964 in Arch Cant vol. 79 pp 97). As early as 1840 the *Maidstone Gazette* reported that cherry prices had been improved because of the 'great quantity sent by the railway to Liverpool, Manchester, and other manufacturing places' (*Maidstone Gazette*, 11th. August, 1840). The region to the north of the area here studied certainly possessed a fruit industry since the early seventeenth century and by 1800 there appear to have been centres of production within the Thamesside parishes of Erith and Plumstead, which were famous for their cherries (Harvey 1964 in Arch Cant vol 79 pp 104).

The increase in the size of the population throughout the post-medieval period was another important factor in the increased demand for fruit. Not only did the population grow, but it was also becoming increasingly urban and industrial in composition and, more importantly, the standard of living of that population was rising (Harvey 1964 in Arch Cant vol. 79 pp 95). This led to a population who were not able to grow the fruit themselves, but had a greater amount of money to spend on it. The increase in small and soft fruit production was also closely related to the

rise of the jam and preserve industry in this period (Harvey 1964 in Arch Cant vol. 79 pp 97).

Hop farming, which was introduced to the region in the later medieval period, continued to flourish throughout the post-medieval period. In the nineteenth century, the hop was the best recorded of all crops because, uniquely, it was dutiable at the point of production and by 1900 hops were grown in just about every parish in Kent (Tann 2005). To the east and south east of the area here studied there was a concentration of hop farming with the parishes of, for example Wrotham and Yalding having between 400 and 900 acres of hop acreage by 1821 (Whyman in Lawson and Killingray (eds.) 2004 pp 109).

In the area here studied hop farms certainly existed and it is highly likely that this industry supported others in the region. Timber was needed in large quantities for hop poles and this led to the woodland of the chart Hills being managed and coppiced so that its timber could be sold for use in the hop industry (Killingray 2010 in Arch Cant vol 130 pp 43).

Profit was the motivation behind such widespread cultivation of hops. 'An acre of hops could be as profitable as fifty acres of arable. The capital investment needed, of course, was much higher. Figures of £125 per acre, against £10 - 12 for arable were quoted in 1857' (Tann 2005).

Alongside the hop farming industry there is also evidence in the area for hop processing. Oast houses, which were buildings designed for kilning (drying) hops as part of the brewing process, can be identified at numerous locations within the landscape. An oast house at Foxbury Farm, just to the east of Seal Chart, is marked on the First Edition map (OS First Edition 25in 1868-72) and another still extant example is located at the Grade II Listed Froghole Farm, to the south east of Crockham Hill Common (Kent HER TQ 45 SW 97).

Breweries are also apparent within the immediate vicinity of the commons; the Swan Brewery stood on the west side of Hosey Hill close to the river and the junction with Vicarage Hill. It originated *c*. 1720 as a malthouse, and developed into a small brewery in 1795 which operated until 1899 (KCC Westerham 2004 pp 6). Another consisted of the Westerham Black Eagle Brewery, which was situated at the western

end of the town, near Farley Common. This was founded sometime during the late 1830s (KCC Westerham 2004 pp 6).

By the end of the nineteenth century however, the hop industry of Kent was in decline; brewing industries were subject to take-over and amalgamation and relocation to 'deep water ports to take advantage of imported supplies' (Killingray 2010 in Arch Cant vol 130 pp 52). By the early twentieth century Brewers were using hops in pelletized form from China and the USA (Tann 2005). The hop industry was not the only industry to be in decline in the late nineteenth century, there was a general depression in British agriculture caused by the dramatic fall in grain prices following the opening up of the American prairies to cultivation in the 1870s.

A wide variety of both small and large-scale industries appear to have flourished in the post-medieval period, one of the most important being the cloth industry. For most of the period between 1500 and 1700 woollen textiles were by far the county's most important industry. Between the early sixteenth and mid-seventeenth centuries textile manufacture employed thousands of workers, 'the workforce of most other Kentish industries could usually be counted in the hundreds or fewer, only the royal dockyards of the later seventeenth century employed more than a thousand' (Zell and Chalklin in Lawson and Killingray (eds.) 2004 pp 74).

Some mills which started their life milling corn were adapted to suit the growing cloth industry. This was the case for the mill at Greatness which was a fulling mill in the seventeenth century (Killingray 2010 in Arch Cant vol 130 pp 40).

The silk mill was very important for the local economy in Seal in the later post-medieval period. By 1816 it was one of the 'largest industrial establishments in west Kent outside the Royal Naval Dockyards – probably bigger than the paper or gunpowder mills in the Darent valley' (Fox, Williams, Mountfield 2007 pp 69). Documentary sources make numerous references to this industry, for example Court records from the 1550s mention a cloth worker and a weaver living in the village of Seal (Fox, Williams, Mountfield 2007 pp 37). Another example may be found in the wills of important families; the will of John Tebold (1501) mentioned in his will 'his two shops which sold cloth, one in Seal and the other in Sevenoaks' (Fox, in Arch Cant Vol 112 1993 pp 217).

Further evidence exists in the place names seen on the First Edition OS map. For example, less than 1 km to the north of Seal Chart there is a Fullers Street, Fullers Hill and Fullers Hill farm (OS First Edition 25in 1862-75).

The extraction of raw materials also appears to have been big business in the post-medieval period.

The extraction of stone on Hosey Common has been discussed for the medieval period (section 3.6) and this appears to have continued throughout the post-medieval period also. Many of the post-medieval stone buildings located in and around Westerham were constructed using this stone, including the Tower in Tower Wood which was built in 1735 and Hosey School in 1828 (Combley 2010 pp 9).

There were also many similar small quarries which were exploited in this period. Some of these are easy to locate and may be identified by place or street names, for example Stonepitts, east of Seal, and Quarry Hill off Seal Hollow Road, while others are now little more than depressions left in the surface of the land (Killingray 2010 in Arch Cant vol. 130 pp 38). The First and Second Edition OS maps show a number of gravel pits in the area encompassed by the Commons; in an area to the north of Maidstone road, within Seal Chart and in the south west corner of Farley Common a number of 'Old Gravel Pits' are located (OS First Edition 25in 1862-1875).

The lord of the manor usually retained the mineral and timber rights although access was allowed to quarry suitable materials for several purposes, including building stone and to provide road metal (Hewitt 1932, 392). The latter function was important as there was a statutory requirement on all parishes to maintain the roads in their jurisdiction, dating from the Statute for Mending Highways in 1555 (Morriss 2005, 40).

The extraction of sand for both local and commercial purposes, to make mortar and later bricks, is clearly seen in this landscape. The OS First Edition map shows a sand pit in the northeastern corner of Sevenoaks Common. There is a specific reference to sand extraction at St Lawrence's Sand pit, situated along the northern boundary of Seal Chart, which describes the need for a 'licence to remove 500 cubic yards of sand from Seal Chart sand pit' (KHLC U269/M187).

The manufacture and use of bricks increased from the sixteenth century onwards. Hand-made bricks were produced north of Sevenoaks along the Otford road where there were several brickfields (Killingray 2010 in Arch Cant

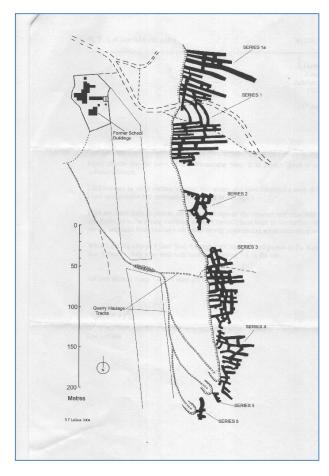


Figure 13 Hosey Common stone mine (Kent Underground Research Group)

vol 130 pp 38). There are references to brickmaking on Seal Chart; there is a brick works located on the first edition within the land encompassed by the common, just to the south of the Maidstone road (OS First Edition 25in 1862-1875) and the tithe map of 1839 has a brickworks on one of the crossroads on the Seal Chart, known locally as Saxbys Corner (1838 Seal tithe Map KHLC WU16).

Other mineral and stone extraction is evidenced through the presence of kiln sites, many of which have been identified within the landscape here studied. For example, a sixteenth century glass furnace has been located on the land between Sevenoaks Common and Sevenoaks Weald in an area between Hubbards Hill, Anchor Cottages and Beechmount (WHG 1999 pp 10).

There was also a pottery kiln located in Sevenoaks Weald in the post-medieval period, the former presence of which is attested through the place name Pot Kiln Cottage which is situated at the southern end of the village (WHG 1999 pp 10). The

Seal tithe map also has three references to limekilns at Bitchet Green Farm, near High House at Underriver and at Fawke Common, and another is located on an earlier map (dating to 1775) near Hall Place (Fox, Williams, Mountfield 2007 pp 68).

In the landscape surrounding Crockham Hill and Hosey Commons more limekiln sites are known, located in Chandlers Wood, Puddledock Lane, near Crockham House and on the northern boundary of Crockhamhill Common (OS First Edition 25in 1862-1875).

Overall it seems that there was a wide diversity of both small scale and large-scale industries which took advantage of the natural resources offered by this region of Kent and which underpinned the agricultural economy of the post-medieval period.

Communication

The improvement of the communications network throughout the post-medieval period had consequences with regards to both the development of the settlements and the economy of the region.



Figure 14 Adit at Hosey Common stone mine

It is likely that many of the settlements that continued to develop and prosper throughout this period did so as a result of their location along major routes.

Childsbridge lane, for example, joining Seal and Kemsing, was still one of the few crossings of the valley in the later postmedieval period and contributed to the continued development of these two villages (Fox, in Arch Cant Vol 112 1993 pp 216).

Sevenoaks is a very good example of the important role that communication routes can hold with regard to the development of

towns. 'Sevenoaks began as a market place at a junction where the road from the

south divided with one branch going north-west to London, the other north to Dartford' (Killingray 2010 in Arch Cant vol 130 pp 40-41). In addition to this, by the early seventeenth century, the London to Hastings road was the main postal route from London to France, and in 1676 Sevenoaks became a post town with a postmaster. The road was also busy with transports to London, of fish from Rye (which also passes within a mile to the west of Sevenoaks Weald) and livestock from the Kentish Weald and East Sussex (KCC 2004 pp 5).

As discussed above, the expanding economy of the region relied upon this communication network for the transport of goods from their production sites to markets and ports.

Economical use of horse drawn traffic required the construction of new roads with better road surfaces with easier gradients, or the improvement of the pre-existing network. The construction and maintenance of these roads was expensive so to finance their improvement toll roads and turnpike trusts were set up with powers to collect road tolls for maintaining the principal roads in Britain. At its peak in the 1830s, over 1,000 trusts administered around 48,000 km of turnpike road in England and Wales, taking tolls at almost 8,000 toll-gates and side-bars (Searle 1930 pp. 798).

The first turnpike to be established in this region of Kent was authorised in 1709 and created a better surfaced and regularly maintained road from Tonbridge and Tunbridge Wells to Sevenoaks (Killingray 2010 in Arch Cant vol 130 pp 45). Between 1834-38 the turnpike road up the Downs was rebuilt to the east at Polhill providing a longer but easier gradient to the top and then a straight road to Badger's Mount, the present A21. The old road through Knockholt continues to bear the name of the London Road (Killingray 2010 in Arch Cant vol 130 pp 46).

In the mid-nineteenth century regular coaches and carriers traversed these new routes and in Sevenoaks these connected the town with Maidstone, Westerham, Wrotham and Tonbridge. By 1859 a daily omnibus ran from The Chequers Inn to Gravesend and back, and there were less frequent services to Sevenoaks and Maidstone. Carriers also ran carts to London every Monday returning the following Friday, and by 1847 a carrier went regularly to Maidstone (Ightham KCC 2004 pp 10).

It is likely that many of the routeways which cross or border the Sevenoaks Greensand Commons originated in the post-medieval period. For example, some of the trackways which run through Hosey Common may be ancient in origin; a stone known as Josh's Stone is located at the crossroads of tracks located in the southwestern corner of the common on Horns Hill. It has an unknown origin in the shape of a large mounting block, 3' x 3' x 1'. Local tradition has it that the stone was used as a block by Henry VIII on his visits to Hever Castle. (Kent HER TQ 45 SE 8). Both the tithe map of 1845 and the OS First Edition illustrate that the existing road network leading north-east from Crockham Hill and running to the east of Chartwell house along the southern boundary of Crockham Hill Common had been established (Westerham tithe map 1845 KHLC U442/P79).

By far the biggest and most important improvement made to the communications network in this period was the introduction of the railway. The first railway to influence Sevenoaks was the line built in 1841- 2 across the Weald from Redhill to Tonbridge and on to the east Kent coast.

A second and more expensive line was built by the rival South Eastern Railway Company in 1868 which ran directly from Lewisham via Orpington through a tunnel in the North Downs (Killingray 2010 in Arch Cant vol 130 pp 48). South Eastern Railway built a branch line connecting Westerham with Dunton Green on the main London line, which was officially opened in 1881.

By the 1930s there were seventeen trains to London every day (KCC Westerham 2004 pp 6). The coming of the railway brought radical change to the town and to a certain extent to the Sevenoaks landscape. It allowed the towns which were within an hour by train to London, such as Sevenoaks, to become the home of people who worked within the city. In response to the opening of the two railway lines new building land became available. 'Around the Bat and Ball station building plots with planned roads west of St John's Hill came on the market in the late 1860s' (Killingray 2010 in Arch Cant vol 130 pp 50).

The development of railways eventually ended the role of horsedrawn mail coaches while increasing the demand for local horse-drawn carrier services to serve villages away from the line of rail. The railway also reduced the commercial value and

income of turnpikes; tolls fell, and road surfaces deteriorated. (Killingray 2010 in Arch Cant vol 130 pp 54).

Suggested further research questions

What was the impact of the 1801 Inclosure (Consolidation) Act upon the commons?

Did the resources which are available from the commons have a role in the First or Second World Wars?

Is there a potential for the numerous extractive pits and quarries which were excavated on and around the commons to produce earlier prehistoric material (i.e Palaeolithic and Mesolithic) either from the pits themselves or any surviving spoil heaps?

Can further and more detailed study of historic maps aid our understanding of how the Commons were exploited in this period?

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