



Archaeological Field Unit

**Joyden's Wood, Bexley, Kent:
An Archaeological Desk-Based Survey & Management Plan**

Stephen Macaulay

July 1999

Cambridgeshire County Council

Report No. N012

Commissioned by The Woodland Trust as part of the Faesten Dic Local Heritage Initiative funded by The Countryside Agency & The Heritage Lottery Fund



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SUMMARY

As part of a Local Heritage Initiative for the Woodland Trust the Archaeological Field Unit of Cambridgeshire County Council undertook a desk based study and the production of a site management plan for the archaeology of Joyden's Wood, Bexley, Kent (TQ 5011 7165). Hogg's survey of the archaeological features of wood in 1935 still remains the most significant work to date. The project has determined that much of the archaeology is poorly understood and in need of further research and investigation. Management recommendations have been made to preserve and improve the interpretation of the surviving archaeological features within Joyden's Wood, chief amongst which is the Faesten Dic an early Saxon defensive dyke and Scheduled Ancient Monument. Other archaeological features within the wood include rectangular enclosures, sunken trackways, lynchets and deneholes.

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**Joyden's Wood, Bexley, Kent:
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1 Introduction

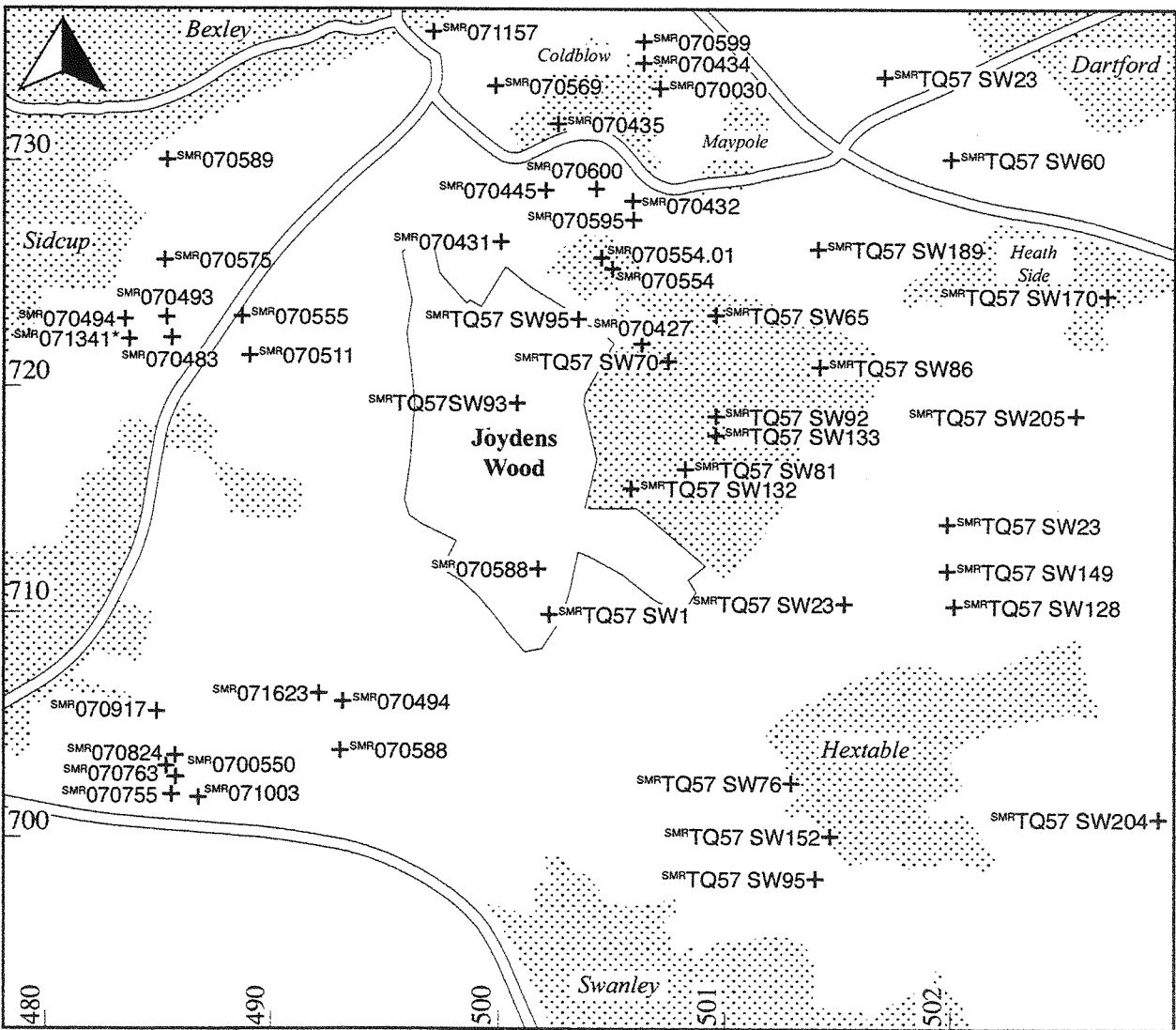
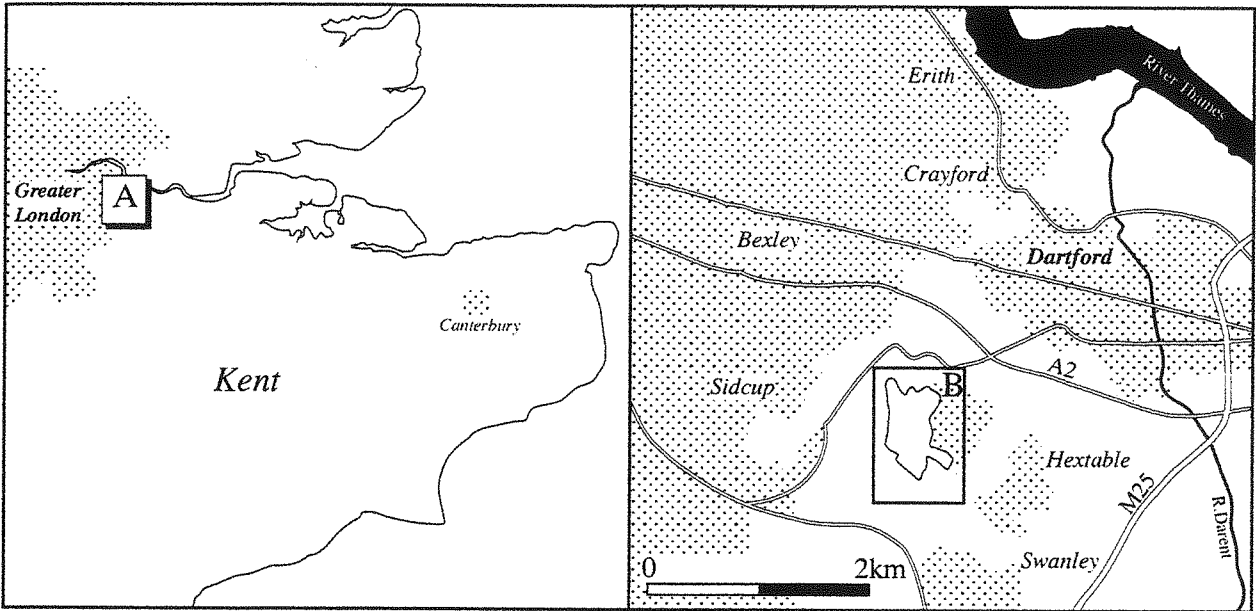
The Archaeological Field Unit of Cambridgeshire County Council was commissioned by the Woodland Trust to carry out a pilot project at Joyden's Wood as part of a Local Heritage Initiative. The project was supported by the Countryside Commission, English Heritage, Kent County Council (Archaeology Section) and local societies.

2 Circumstances of the Project

- 2.1 The project forms part of a pilot scheme for the Countryside Commission's Local Heritage Initiative. The scheme is supported by the Heritage Lottery Fund and aims to find out how to help more people record and care for their local landscape, landmarks and traditions. This project aims to establish a community led project to research, conserve and promote the archaeological heritage of Joyden's Wood and to promote local awareness and understanding of its long history and significance.
- 2.2 This report contains both a study and review of the existing records of the archaeology/history of Joyden's Wood and a conditions survey report which will form the basis of practical conservation management proposals, aimed to protect the surviving archaeological resource, and to help in the production of interpretation and educational materials.

3 Archaeological Background

Joyden's Wood is known to contain a number of archaeological features, chief amongst these being the *Faesten Dic* (Ditch), a 1.67km long earthwork, presumed to be of early Saxon date. This earthwork is a Scheduled Ancient Monument (under the Ancient Monuments and Archaeological Areas Act 1979) and is monitored by English Heritage. There are a number of other earthwork features, many of which were recorded last century, with no further investigation since. These earthworks include supposed 'hut' sites, lynchets or Celtic field systems, trackways, wells and numerous 'Deneholes'. Local housing developments in the 20th Century have removed both areas of woodland and archaeological features, most notably the remains of a medieval manor (possible the Manor of Ocholt), which survived as a well-known square



TQ

Figure 1 Location plan showing position of SMR recorded sites (see gazetteer of SMR entries - Appendix A).

earthwork with associated trackways. Recent planting within Joyden's Wood (since WW II) has created potential threats to the long term preservation and integrity of archaeological remains within the site. This is most clearly demonstrated by the erosion on the *Faesten Dic*.

4 Aims & Objectives

The project aims can be summarised as follows.

- To define both the known archaeology and the archaeological potential within Joyden's Wood, with detailed descriptions of all archaeological features, finds or deposits recorded.
- To assess the threats to archaeological deposits and monuments and to identify suitable measures to avoid or reduce such threats.
- To provide a series of management recommendations for Joyden's Wood to ensure the continued preservation of archaeological remains, and to enhance their appreciation and enjoyment by the local community.

5 Methodology

To meet the aims and objectives outlined above the project was designed using two strategies. Both a desk-based assessment and a site inspection to produce a conditions survey report were necessary.

5.1 The known record of documentary and cartographic evidence was consulted. In addition aerial photographic data was analysed to determine any additional information. The following records and sources of information were consulted:-

- The Greater London Sites and Monuments Record.
- Kent Sites and Monuments Record.
- Scheduling/MPP information held by English Heritage.
- Ordnance Survey Map data.
- Tithe and Local Estate Maps.
- Bexley Archaeological Group (B.A.G.).
- Kent Underground Research Group (Deneholes).
- Dartford Museum and Archaeological Society.
- *Archaeologia Cantiana*.
- Records of previous excavations.
- World War II Crash Sites records.
- Aerial Photographs.

5.2 The site inspection was conducted on the basis of a 'walk over' site survey. This survey aimed to identify (where possible) previously known (or suspected)

archaeological earthworks/features and record their location, extent, preservation and where appropriate make recommendations for their beneficial management. Additionally, where possible, to identify hitherto unknown archaeological remains and record their location and extent. The site inspection was also required to make recommendation for any future surveys and investigations which could be incorporated into existing local research framework strategies and site management plans.

6 DESK BASED ASSESSMENT

6.1 Although Joyden's Wood is a known area of archaeological interest, the quality and quantity of recorded information detailing this knowledge is variable and often very poor. Indeed most of the existing published records which record the archaeological remains and attempt to interpret them date from before WW II. Some records date to the 19th century and have not been validated or supported since that time, for example Spurrell's map of Dartford's Antiquities (Spurrell in Arch Cant 1889). The *Faesten Dic* is the best known of the Joyden's Wood earthworks, although even this substantial monument is not firmly dated. Many of the archaeological earthworks have never been securely dated or interpreted. Most current views are based on Hogg's survey in 1935 where some interpretations were based on simple observation (Hogg 1941) or simply echo Spurrell's ideas from the previous century.

6.2 Sites and Monuments Records

Falling within the parishes of Bexley and Dartford, Joyden's Wood is covered by the Sites and Monuments Records of both Greater London (English Heritage) and Kent (Kent County Council Archaeology Office). Both SMR's record very little archaeology within the modern limits of Joyden's Wood.

6.2.1 Greater London SMR

The majority of 'known' earthworks (e.g. Hogg's 1935 survey and earthworks) identified are not mentioned or recorded as separate entries on the SMR. Clearly the most significant entry is the *Faesten Dic* (GL SMR No: 070588). The only other archaeology recorded within Joyden's Wood, on the Greater London SMR, concerns Deneholes (No: 070427). There are references to other archaeology close to the wood (See Appendix A). The area is known for Prehistoric lithic finds and scatters (Palaeolithic-Neolithic, although no record of any Bronze Age material). There is strong evidence of Roman occupation and settlement in the area, with both the London and Kent SMR's recording discoveries of burials, pottery, building remains and settlements (see Appendix A). Interestingly, other than the *Faesten Dic* there is a poor representation of Saxon archaeology (early medieval), however the Saxon Village of *Byxlea* (modern Bexley) lies further to the northwest (SMR No:

071621) which may account for this. Records of medieval archaeology are mostly concerned with the remains of buildings, although ovens/kilns are recorded. In common with the trend of recording recent discoveries the SMR entries correspond to the areas of recent development *around* the site, generally now beneath modern (housing) developments. The lack of data for the wood itself confirms the site's neglect in terms of recent investigative work.

6.2.2 Kent SMR

The majority of Joyden's wood falls within the parish of Dartford and the jurisdiction of Kent County Council. There is again a significant lack of recorded sites *within* the wood itself. The recorded finds are located to the east, having been discovered prior to or during the construction of the housing development there. These include finds of Mesolithic (SMR Nos: TQ57 SW132/411306, TQ57 SW133/411307) and Neolithic lithics (SMR No: TQ57 SW81/411211), tumuli (SMR Nos: TQ57 SW65/411165, TQ57 SW70/411180) and the records of Tester and Caiger's excavations on the possible site of the medieval Manor of Ocholt (SMR No: TQ57 SW92/411248). Again Deneholes (as many as 40) are recorded within Joyden's Wood (SMR No: TQ57 SW95/411265). The *Faesten Dic* is recorded (SMR No: TQ57 SW93/411255). Finally of significance is the record of the possible Roman site which may be the location of *Noviomagus*, which lies in the southeastern corner of Joyden's Wood (SMR No: TQ57 SW1/410937). The site was excavated from 1951-3 by Peter Tester and John Caiger, who recorded several ditches and pottery kilns, suggesting both 2nd and 4th century occupation. The SMR records the site as overgrown today but that the kilns are still visible as depressions.

6.3 English Heritage Scheduling/MPP Information

The most significant archaeological feature within Joyden's Wood is the *Faesten Dic*, which is a Scheduled Ancient Monument (SAM No: 27006). As such it is protected under the Ancient Monuments and Archaeological Areas Act 1979 and monitored by English Heritage. The existing records of the dyke are held by English Heritage, with copies of Scheduling information held by Kent County Council (Archaeology Section).

The monument is described as a 'medieval frontier work', probably of Anglo-Saxon date. It is mentioned in an Anglo-Saxon boundary survey of AD 814 and referred to as the *Faesten Dic* or 'The Strong Dyke'. It is roughly north-south aligned and takes the form of a series of connected ditches and banks, totalling c.1.67km. The 'most heavily defended' section lie on the higher ground towards the southern and northern ends of the monuments. The monument originally had a large V-shaped ditch up to 8m wide. A bank lies on the eastern side and survives up to 1.5m high. The dyke has been partially modified 'over the years by subsequent agricultural activity' and has been partially disturbed by later tracks and woodland boundary banks. The English Heritage records indicate that the monument continues beyond Joyden's Wood

to the north east, but this section has been destroyed by modern development and cultivation. Importantly the sharp right bend shown on Hogg's plan of the dyke at its northern end is probably incorrect. The recent RCHM investigations indicate that the dyke progressed on the same alignment beyond Joyden's Wood to the north, although this is purely based on casual observations (Dave McCormish pers. Comm.). There is no reference to the dyke continuing beyond the southern limit of the wood, with aerial photographs unable to identify any earthworks, crop or soil marks.

The English Heritage (MPP) Assessment of Importance states that "Although it has been partially disturbed by tree roots and subsequent agricultural and forestry activity, the medieval frontier work in Joyden's Wood survives well as a substantial, visually impressive landscape feature. Partial excavation has confirmed the survival of archaeological remains and environmental evidence relating to the monument and the landscape in which it was constructed".

The English Heritage (MPP) Management Statement records the Woodland Trust as owners and that Joyden's Wood is managed as an 'Ancient Woodland', much used by local families and dog walkers. The dyke is recorded to be covered by mature trees, and in some areas by almost impenetrable scrub and undergrowth, but interestingly states that "despite, or perhaps because of this (the monument) survives relatively well". English Heritage record that scrub and tree clearance has "greatly improved the look of the monument" and recommend an increased frequency of Field Monument Warden visits and further stretches of the dyke being cleared.

6.4 Mapping Information

Ordnance Survey mapping data was consulted for the site. No new information was identified, the *Faesten Dic* was recorded, and on later editions Deneholes (recorded today) were marked. OS maps consulted were; 1869/69 - 1 (inch) 1st edition (Sheets VIII.12, VIII.16, IX.9 L & R), covering Dartford, North Cray, Bexley and St Paul's. Sheets VIII.12, VIII.16, IX.9 & IX.13) were consulted for the 1909 and 1933 editions. Later edition OS maps 1962 and 1963 versions were also consulted, as well as the present OS mapping for the site.

The survey of Joyden's Wood has included a review of Tithe and Estate maps. Tithe Maps for 1839-1840 (Kent VIII & IX Bexley) were consulted, Dartford Parish was not covered in the 1897 tithe survey, although North Cray Parish is covered up to Hadlow's Well. No useful information is recorded on these earlier mapping sources.

It should be noted that the Bexley Archaeological Group (B.A.G) are undertaking a comprehensive survey and investigation into the maps and plans of the area, including Joyden's Wood and may yield information of use for future research into the wood.

6.5 Bexley Archaeological Group

The work of local societies, and in particular the Bexley Archaeological Group (B.A.G.) represents the only recent work on the archaeology of Joyden's Wood. Indeed all the significant archaeological records (Hogg, Spurrell, Erwood, Tester and Caiger) date from over 20 years ago and have not encompassed large scale projects, reflecting both the lack of recent development on the site and that there have been no sizeable investigations in recent years.

The Bexley Archaeological Group have recently undertaken a review of existing knowledge at Joyden's Wood, which is still in progress and are preparing new avenues of research, investigation and survey. The B.A.G. have produced an 'Interim Report on the Archaeological Environment of Joyden's Wood' (Vicerey-Weekes 1998). This report was produced following a meeting of the group and in response to a request for information on the archaeology of Joyden's Wood from the Woodland Trust. This request has also led to the production of this report. To date the work and sites identified by the B.A.G. form the basis and bulk of the archaeological knowledge of Joyden's Wood. The B.A.G. also maintain databases of the references of archaeological records for Joyden's Wood, Bexley and Bexleyheath, and are at present reviewing the Bexley maps, estate plans and tithe records (David Vicerey-Weekes pers. comm.)

Recent work undertaken by B.A.G.:

- Review of A.H.A. Hogg's (1934) 'Earthworks in Joyden's Wood, Bexley, Kent' in Arch. Cant. LIV (1941); 11-27.
- A review of the Bexley AD 814 Charter.
- Interim Report on the Archaeological Environment of Joyden's Wood.

The recent B.A.G. report (reproduced in full in Appendix A by permission of the B.A.G.) on the archaeology of Joyden's Wood (Vicerey-Weekes 1998) describes a number of earthworks (see Fig 4 and Fig 1 in Appendix B). These refer to features first recorded by Hogg in 1935. The B.A.G. have divided the earthworks into three categories; Red (highly sensitive/endangered/special priority), Blue (requiring further investigation) and Green (general interest). A total of 14 individual features were identified:-

1. *Faesten Dic*
2. Hadlow Well
3. Earthwork dam
4. 'Hut' Site
5. A second 'Hut' Site
6. Earthwork Banks pre-dating the *Faesten Dic*
7. Man made gap between *Faesten Dic* and the earthwork banks (above)
8. Site of Kings Hollow (recorded in Charter of AD 814)
9. Pond? possibly associated with Hut sites
10. Group of lynchets possibly associated with Hut sites
11. Bank thought to be linked to former Manor of Ocholt
12. Unknown feature possibly associated with Hut sites

13. Group of lynchets

14. sunken trackway thought to be very early.

- Other features identified are areas where deneholes may be located and the medieval hedge which forms the western boundary of Joyden's Wood. Finally 20th century archaeology is present in the form of a WW II crash site and the possible location of a Grey Fox Bunker (Home Guard subterranean defence), which was supposedly secretly constructed in the woods.

The report describes the current condition and state of the earthworks, although it does not attempt to challenge the original interpretations or determine the validity of these assumptions. Some of the earthworks are of questionable antiquity and may be woodland banks of more recent date rather than Prehistoric earthworks (c.f. Section 8 below).

The Interim Report concludes that the present state of knowledge of the archaeology is "shamefully inadequate and outdated". The B.A.G. also conclude that Hogg's work still represents the only significant contribution to the archaeology of Joyden's Wood so far. The B.A.G. has also offered to commit itself to future field surveys and desk studies to help address the present dearth of knowledge.

Action currently being undertaken by the B.A.G. starting from 1998-1999 is:

1. Survey and evaluation of the deneholes of Joyden's Wood.
2. 1998-1999 a teaching module on Joyden's Wood as part of a local adult education course.
3. Field Officers leading guided walks 1998-1999.
4. From mid October 1998 programme of field walking.
5. Wide range of documentary research.

6.6 Kent Underground Research Group

Deneholes are a peculiar feature of the land around Bexley and Dartford Heath, including Joyden's Wood (Le Gear 1992). A denehole is an artificial underground cave entered by a vertical shaft. Their origins and purpose are still the subject of debate. Theories have been put forward, ranging from flint mines to ceremonial or even Druidic temples (Le Gear 1992). The most likely interpretations appear to be either grain storage pits or simple chalk mines. It is thought that the woodland and heaths around Bexley and Dartford once contained hundreds of deneholes, although today most are completely infilled or are simply visible as a hollow or depressions. The only significant published work on deneholes is *The Bexley Deneholes* by R F Le Gear (1992), although there are no specific examples of excavations or records for Joyden's Wood itself. As with so much of the archaeology of the site the works of Hogg and Tester & Caiger represent the only contributions. However even in these works deneholes are only mapped and no further information is available.

There are a number of recorded deneholes in Joyden's Wood, which today are still visible (concentrated to the north and east of the wood), although within

the thick woodland many more are likely to be present. There is no material which has been published relating specifically to the Joyden's Wood deneholes and correspondence with the Kent Underground Research Group (Rod Le Gear pers. comm.) has indicated that no other records exist.

The prospect of opening up one denehole has been suggested. This would offer not only educational and research possibilities but would also create a hibernaculum for the numerous local bat species. The significant problem with this is the increased safety risk which would be created by opening a deep, vertical shaft. Any open denehole would need to be closely monitored and kept safe and secure at all times. However even this may not be sufficient to allow the benefits to outweigh the inherent risks of such a suggestion.

6.7 Dartford Museum and Archaeological Society

With Joyden's Wood falling between two local authority jurisdictions, there are a number of records and archives held at Dartford Museum and potentially the Dartford Archaeological Society (D.A.S.). This review has determined that the D.A.S. hold no records which refer to the archaeology of Joyden's Wood. Dartford Museum is recorded as holding the artefacts and archives of a number of excavations carried out in the woods. The museum holds the following artefacts:

- Medieval artefacts recovered during D.A.S excavation of square enclosure in 1939 by H.M Colvin at Joyden's Wood, Bexley (Arch. Cant Vol. LXI, 1948, pp133-134).
- Medieval and Romano-British artefacts recovered during Tester and Caiger's extended excavations of the above site in 1951-3 (Arch. Cant LXVIII, 1954, pp167-183).
- Other stray finds either donated or loaned to the museum.

6.8 *Archaeologia Cantiana*

All the significant published material for the archaeology of Joyden's Wood is contained within the local Kent journal *Archaeologia Cantiana*. The Bexley Archaeological Group hold data lists of local references, however a number of important works are described below.

Arch. Cant Vol XVIII, 1889, pp304-318 'Dartford Antiquities' by F.C.J. Spurrell

First work on recording the archaeology within Joyden's Wood. Contains notes on Romano-British and Saxon remains found there, Two Tumuli and the Square Camp (originally interpreted as 'Celtic' although later excavations by Elliston and Tester & Caiger proved it to be medieval). Also records the Old English road (a gravel trackway) as 'Pre-Roman' but this is not proved.

Arch. Cant. Vol LIV, 1941, pp11-27 'Earthworks in Joyden's Wood, Bexley, Kent by A.H.A. Hogg

This still represents the most important investigation into the archaeology of Joyden's Wood over 50 years after its publication. The earthworks Hogg records are still the accepted earthworks of Joyden's Wood. Hogg notes that little excavation has been done but states that despite this they are of interest. He mentions the dyke (*Faesten Dic*) and suggests that it belongs to the "grimsditches" which surrounded London in the 6th century. Hogg reviewed the site in 1934 and mapped it at a scale of 1:2500, using both ground survey and aerial photographs. He identifies that accurately re-surveying the denehole clusters was not sufficiently important to justify the labour involved. Hogg also identified that the earthworks belong to several periods.

Hogg recorded the earthworks of Joyden's Wood in order of his interpretation of their date, earliest first (see Figs 2 & 3):-

- I Two trackways (AB, CD) which cross the Square Earthwork. It is the western continuation of the AB track which survives as the sunken trackway in Joyden's Wood today. (In reality these tracks were of medieval date and thus post-date the *Faesten Dic*)
- II *Faesten Dic*, described below, Hogg interprets this as the first earthwork in the wood.
- III Group of earthwork banks forming a small field system (some survive within Joyden's Wood today in the northeast corner of the site). Hogg suggests that the dyke (*Faesten Dic*) was 'converted' into a lynchet during this time. Hogg also suggests that the deneholes were linked to this agricultural activity where chalk was quarried to fertilise the lime-free soil.
- IV Hogg saw the double Square Earthwork as the last phase of occupation on the site. This feature is associated with more field system banks to the west, southwest and south. The site was excavated by Elliston Erwood (Jnl. Brit. Arch. Assoc. Vol 34, 1928 pp165-197) in 1926-27 (see below). Although Spurrell records finding Roman pottery within the earthwork (F.C.J. Spurrell, "Dartford Antiquities" Arch. Cant, Vol. XVIII, 1889, p307), only medieval wares were found during excavations. Hogg parallels the site to a 12th century earthwork at Preston, Surrey and suggests that the site is probably the lost Manor of Ocholt. Interestingly he also suggests that the chalk foundations relate to the nearby deneholes, which may have been dug with this purpose in mind (p16). Finally, Hogg sensibly suggests that many of the small banks throughout the wood are most probably connected to the woodland planting and as such did not warrant inclusion on the archaeology plan.
- V(a) Mound or tumulus, almost destroyed, but surrounded by banks similar to III. Hogg interprets this as a possible windmill.
- V(b) Group of lynchets, close to the *Faesten Dic* 'gap'.
- V(c) Describes a corner of an earthwork on top of small hill, at end of a promontory. By the 1930's most of this site had been destroyed by gravel pits.

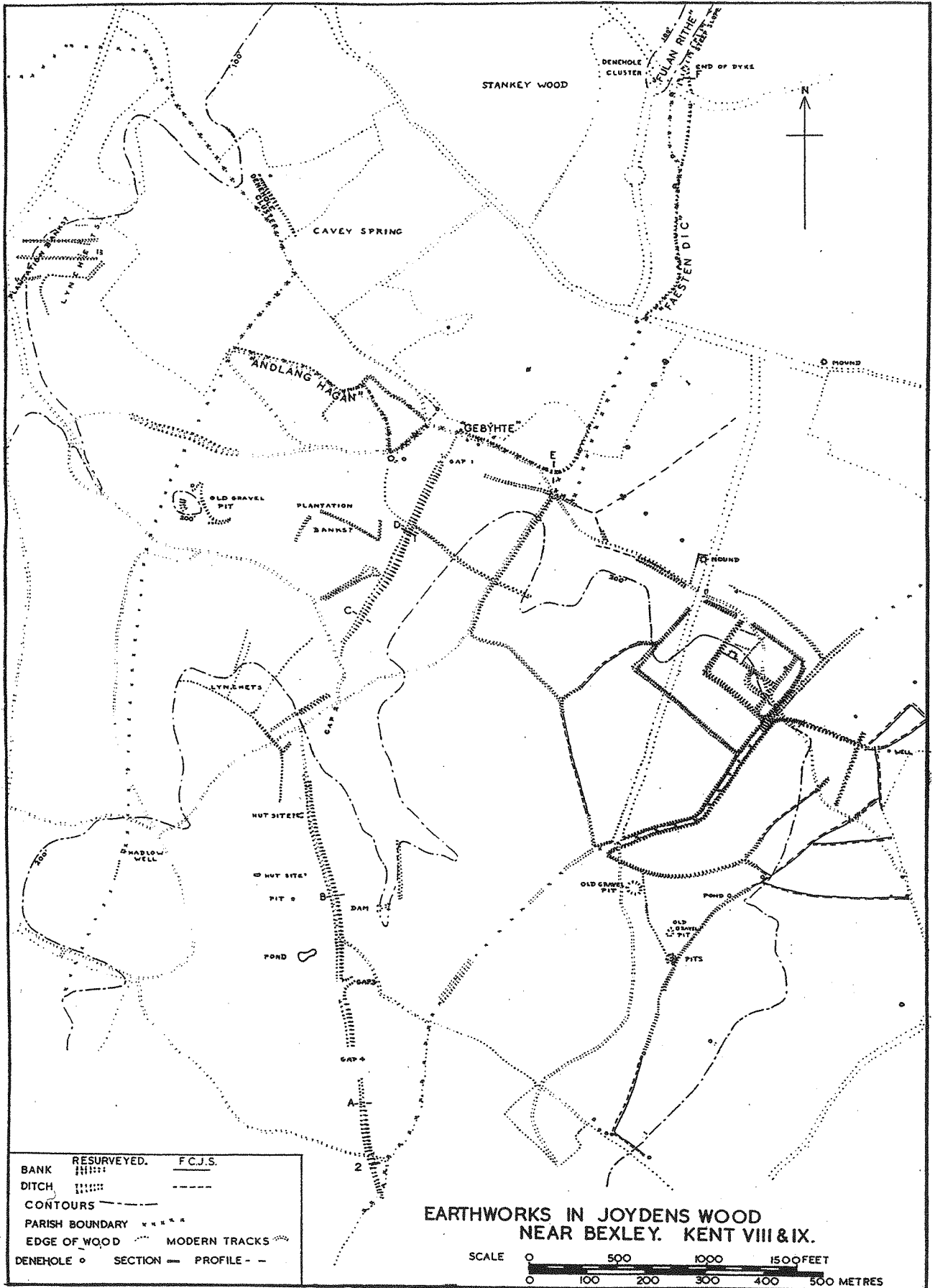


Figure 2 Hogg's 1935 plan of earthworks in Joyden's Wood (Hogg 1941)

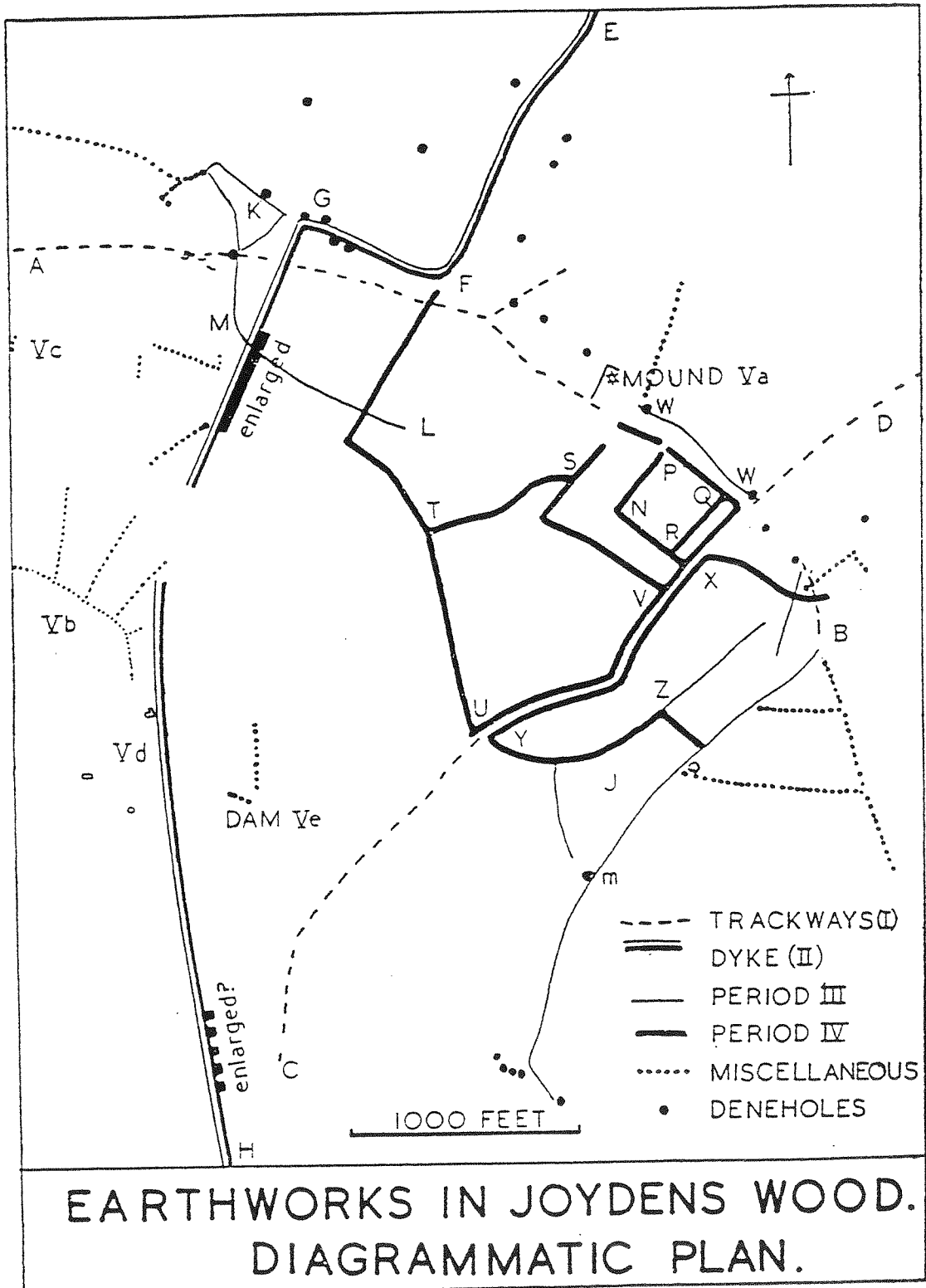


Figure 3 Hogg's simplified plan of the archaeology of Joydens Wood.

- V(d) Two probable hut sites and a pit, of unknown date but close to the dyke on its western side.
- V(e) A small dam at the head of a valley, although no evidence to support this interpretation is offered.
- V(d) Hadlow Well.

* *Faesten Dic*

Hogg, correctly, saw the dyke as the most interesting earthwork in the wood. Although the dyke is described in detail elsewhere, Hogg's interpretations are very much those still used today (see Section 6.3 above). As discussed above, the 'bend' at the northern end of the dyke is now questioned, and it is likely that this interpretation comes in part from the reference in the AD 814 Charter, rather than any archaeological proof. Hogg describes the excavation of two sections through the dyke, neither of which has produced any secure dating evidence. Interestingly a hard gravel track was identified behind the bank, few parallels exist for this on Saxon dykes, although these are features encountered on Roman fortifications; they are also found behind the defences of later Saxon *Burghs*. Their purpose of which seems to have been to move troops quickly and secretly. Sir Mortimer Wheeler suggested that the *Faesten Dic* was part of the dyke system surrounding London (the Grimes Ditches). These dykes do not descend into the valleys, the hypothesis is that the dykes belonged to a period when the uplands were cleared and the valleys wooded (and thus obstacles in themselves). This rather functional (military) interpretation must be questioned, with little or no evidence for upland woodland clearance on the heavy clay, as opposed to the more easily cultivated valley gravels. Further research needs to be carried out on all these topics and to secure an accurate date for the *Faesten Dic*.

Arch. Cant. Vol LXI, 1948, pp 133-134 'Excavations in Joyden's Wood, Bexley' by H.M. Colvin

Records excavation carried out by the Dartford Antiquarian Society, of a medieval site. The site was identified and recorded on Hogg's survey in 1941. As well as medieval finds, Roman pottery (Samian) was recovered. This is claimed to be the first Roman pottery found in Joyden's Wood. However Spurrell claims to have found Roman coarse wares as early as 1881.

Arch. Cant. Vol LXVIII, 1954, pp167-183 'Excavations on the site of a Romano-British settlement in Joyden's Wood, near Bexley' by P.J. Tester and J.E.L. Caiger.

Excavation of a Romano-British settlement which the authors postulate was the site of *Noviomagus*, although there are a number of competing claims to this site (TQ50137082). The site was excavated over 3 seasons from 1951-53 and demonstrated occupation from the 2nd-4th centuries AD. The site was characterised by numerous ditches, 'gravel' pits and several kilns. No evidence of structures was found.

Arch. Cant. Vol LXXI, 1957, pp233 'New Discoveries in the Joyden's wood Square Earthwork near Dartford' by P.J. Tester and J.E.L. Caiger.

Records discovery of buildings described in excavation (see Vol LXXII below).

Arch. Cant. Vol LXXII, 1958, pp18-40 'Medieval buildings in the Joyden's Wood Square Earthwork' by P.J. Tester and J.E.L. Caiger.

Additional information on remains of buildings excavated within square earthwork (TQ509719) first excavated by Elliston (see below).

Arch. Cant. Vol LXXXIX, 1974, pp25-32 'A Post-Medieval Tile Kiln at Bexley' by L.C. Dale.

Simple record of tile kiln excavated during the local housing development (TQ5047872533).

Arch. Cant. Vol XCV, 1979, pp289 'A Re-Assessment of some features of the medieval house in the Joyden's Wood Square Earthwork' by P.J. Tester.

Some additional interpretative information on the internal layouts of buildings recorded above.

6.9 Records of previous excavations.

The only significant record, other than those found in *Archaeologia Cantiana* is Elliston Erwood's article on the Roman Antiquities of NW Kent. Work and reports carried out by the Bexley Archaeological Group are described elsewhere in this document (Section 6.5)

Jnl. Brit. Arch. Assoc. Vol 34, 1928, pp165-197 'The Roman Antiquities of NW Kent' by F.C. Elliston Erwood.

Records the excavations at Joyden's Wood on the Roman site of *Noviomagus* (c.f. see above). Interestingly states that after WW I the estate of Joyden's Wood was sold and cut into plots and by 1924 most of the trees had been cut down and the undergrowth cleared. It is not certain whether this refers to the land now beneath the housing or the area of the wood at present. This article also mentions the Square Earthwork (see below).

6.10 World War II Crash Sites

During the Second World War there were two recorded instances of aircraft crashing in or close to Joyden's Wood. This information will be included on site displays along with other historical data.

Crash 1

Pilot Officer Ian James Muirhead's Hurricane (Serial No: V7305, 605 Squadron) was shot down at 11.45am on the 7th October 1940, while in combat with ME 109's over South London. He successfully bailed out and the crash site is located immediately to the north of the wood beyond the end of the

Faesten Dic (metal fragments of the debris are still on the site). He was born in West Ham in 1913, but lived in Carlisle. He was killed in action 2 weeks after the crash, with 6 claims to his name and was buried at Holme Cultran.

Crash 2

Joint Squadron Leader Zdzislaw Krasnodebski's Hurricane (Serial No: P3974, 303 Squadron 1st Polish) was shot down at 9.20am on the 6th September 1940, while in combat with ME 109's over south London. He survived but suffered severe burns as a result of his aircraft hitting an electric cable and was taken to Farnborough hospital. The exact location of the crash site is unknown. He was old for a WW II pilot having joined the Polish Air Force in 1928 and he survived the war.

6.11 Aerial Photographs

The heavily wooded nature of the site and the more recent housing developments have combined to prevent any useful information being available from aerial photographic analysis. The site has not been clear of trees for any period of time nor have sizeable areas been clear for any aerial photographs to show archaeology.

Aerial photographs consulted: HAS/UK/49/217 (24.6.49); HAS/UK/49/219 (1.7.49); Aerofilms 87/95 Run 17-7710 (20.8.87); Aerofilms 87/95 Run 18-7677 (20.8.87); Aerofilms/94C/893 Run 6-2859 (28.10.94); Aerofilms/95C/364 Run 5-8023 (29.6.95).

7 Desk Based Assessment - Conclusions & Recommendations

7.1 Summary of Archaeological Knowledge

The review of the existing archaeological and historical information on Joyden's Wood has highlighted both the extensive survival of archaeology while also demonstrating the weakness of understanding of this resource. The archaeology of Joyden's Wood has been summarised by period.

Prehistoric (c.Palaeolithic-Roman Period c.10,000BC-AD43)

Although the Sites and Monuments Record identifies discoveries of Mesolithic and Neolithic remains in the vicinity, there is no evidence of these remains located within present boundaries Joyden's Wood itself. Importantly, however, the potential of such deposits should not be discounted. The lack of development within the woods has precluded the recovery of such remains, whereas nearby developments have resulted in the discovery of Prehistoric remains. Additionally, surviving earthworks may be of Iron Age date (c700BC-AD43). The *Faesten Dic* itself may be of Iron Age date, other

examples of Iron Age defensive dykes (e.g. Colchester) are recorded, while undated earthworks within the wood (Fig 4, Nos: 5, 6, 7, 8a-d, 11, 12, 13 and 14) may also be of Iron Age or earlier date. Specifically the possible 'hut' sites (Nos: 6 & 7), if their circular shape is true, are more probably dated to pre-Saxon periods. The earthwork bank enclosures (8a-d) might well be Iron Age (or even Bronze Age) in date, however again these interpretations are at best theoretical and should await further research before conclusions are drawn.

Romano-British Period (AD43-410)

A Romano-British settlement is located in the southwest corner of Joyden's Wood (TQ57 SW1 see Fig 1), however no earthworks are present today. There are no other securely dated remains of this period, however as stated above a number of the un-dated earthworks might be attributed to this period. In particular the squared sided nature of the enclosures (e.g. 8a-d) might suggest a Roman-British date, however until these feature are better understood it is not possible to conclude this. Again, the *Faesten Dic* could feasibly be of Roman date, metalled trackways are a feature of Roman military engineering, although if the dyke was Roman it is likely that more data would have survived (artefacts etc.) to indicate this.

Anglo-Saxon (Early medieval AD410-1066)

The single most significant archaeological feature within Joyden's Wood is the *Faesten Dic*. The accepted date for its construction is during the early medieval period. This linear earthwork bank and ditch runs for over 1.67km, broadly on a north-south alignment. It is unknown what happens to the dyke beyond the southern extent of Joyden's Wood, although it is present to the north of the site, continuing north, rather than turning at a right angle, heading east, which was previously thought. The general consensus is that it is of early Saxon date, built towards the end of the 5th century AD. Hogg was the first to suggest this date for construction, when he considered the dyke part of the defences of London in the 5th and 6th centuries, the so-called Chiltern Grims ditches, and linked its construction to fighting in the areas. the Anglo-Saxon Chronicle records battles at Creeganford (457AD) and Nennius records the first of the battles of Vortimer near the river Darent. Subsequent excavations have neither confirmed or refuted this suggestion, which today still represents the accepted date. What can be stated is that the dyke appears in a Charter of 814AD. Excavation has also revealed the presence of a metalled gravel trackway, which ran parallel to the dyke. It is thought that this would have been used to move forces quickly behind the cover of the *Faesten Dic's* bank. The full significance of this feature has yet to be understood, although its size may suggest a primary military rather than boundary function. Although the location of the dyke has sparked discussions concerning its date and function, there does not exist any record of the landscape and environment into which the dyke was constructed. Further work to determine whether the area was wooded etc. would be important and may provide data which might shed light on the dykes construction and function. It is however a well-known factor in the study of presumed Saxon dykes that secure dating evidence is often hard to obtain (Malim et al 1997).

Medieval & Post-Medieval periods (AD 1066-c1600)

The excavations on the Joyden's Wood 'Square Earthwork', which was possibly the site of the Manor Ocholt, uncovered the most significant medieval remains investigated within Joyden's Wood. The site, originally thought to be Roman, was excavated during the 1950's, with later re-assessments in the 1970's. The remains excavated included those of an enclosure, buildings, trackways and agricultural field systems. Today the site lies beneath the housing estates to the east of the present boundary of the wood. Of the surviving earthworks within the woods (see Fig 4), the long bank (No: 13) is most likely to be directly related to the Manor, however the number of undated earthworks, specifically potential lynchets (Nos: 10, 12 & 15), sunken trackway (No:16), Hadlow's Well (No: 4), 'dam' (No: 5) and earthwork banks (Nos: 8a-d) may all be medieval in date and some (Nos: 8a-d, 16) may be directly related to the Square Earthwork (see Hogg above). If the lynchets are correctly interpreted and the earthwork banks agricultural, rather than woodland related, it should be hypothesised that the area was less wooded during periods when these features were created, whether that was the medieval or indeed an earlier period. Post-Medieval remains are not demonstrably present within Joyden's Wood, if one ignores the woodland bank features, although of course the undated earthworks within the wood could be of this date.

7.2 Conclusions

The desk based assessment has brought together the major works relating to the recorded archaeology of Joyden's Wood. Section 8 below will outline the results of the site inspection (archaeological management) and make recommendations for further research and surveys relating to individual (or groups) of features. This section will suggest some avenues of research which have been highlighted during this review.

In summary the level of knowledge of the archaeology of Joyden's Wood is varied and in places based on little supporting data. Much of the interpretation and dating is from observations made in the 19th century and continued in more recent records without being questioned. The result of this is that they have become considered as 'fact' simply because they have been recorded in local journals. A good example of this is the 'dam' Hogg identifies (see Section 6.8 & Fig 3 above, earthwork Ve). Although clearly an earthwork, the interpretation as a dam has no supporting evidence other than its location at the head of a valley. Having said this Hogg's work still represents the only significant work on the archaeology of Joyden's Wood as a whole and forms the starting point of research into the site.

7.3 Recommendations for future research

It is clear from the review of existing record on Joyden's Wood that more information is required. As mentioned above the Bexley Archaeological group

are carrying out useful work into the archaeology of the site and will be adding important information. Recommendations for features are set out below in the Site Inspection section and these should go hand in hand with further documentary and investigative work. The *Faesten Dic* is the prime example. It is clearly the most significant monument within Joyden's Wood, but is not even securely dated. Further work comparing it with other Saxon dykes should be commissioned, whilst auguring or geophysical survey should be considered to determine the full extent of the feature and possibly discover from palaeoenvironmental analysis the landscape into which the dyke was constructed.

It is recommended that:

1. Individual earthworks of unknown origin, date or function should be subject to further investigation (documentary comparisons and where appropriate excavation or test boreholes). This work would need to follow scrub clearance and accurate survey (see Section 8 below).
2. Further investigations be commissioned on the *Faesten Dic*. The dyke is the feature most local people associate with archaeology at Joyden's Wood and would benefit from a greater understanding. A project relating to this monument would stimulate local interest and could form the starting point of longer term community involvement with the local heritage. Non-intrusive surveys (geophysical) should be employed to determine the presence or absence of the 'gap' within the dyke. Similarly test boreholes would be an accurate technique to determine the location of the banks and would also provide samples for palynological (pollen) analysis or other palaeoenvironmental re-construction.
3. The work of local societies (B.A.G.) for on-going documentary and mapping research should be encouraged and integrated with this and any future survey of the wood. This work is likely to shed further light on the possible functions of earthworks within the woods and increase our understanding of the archaeological resource.

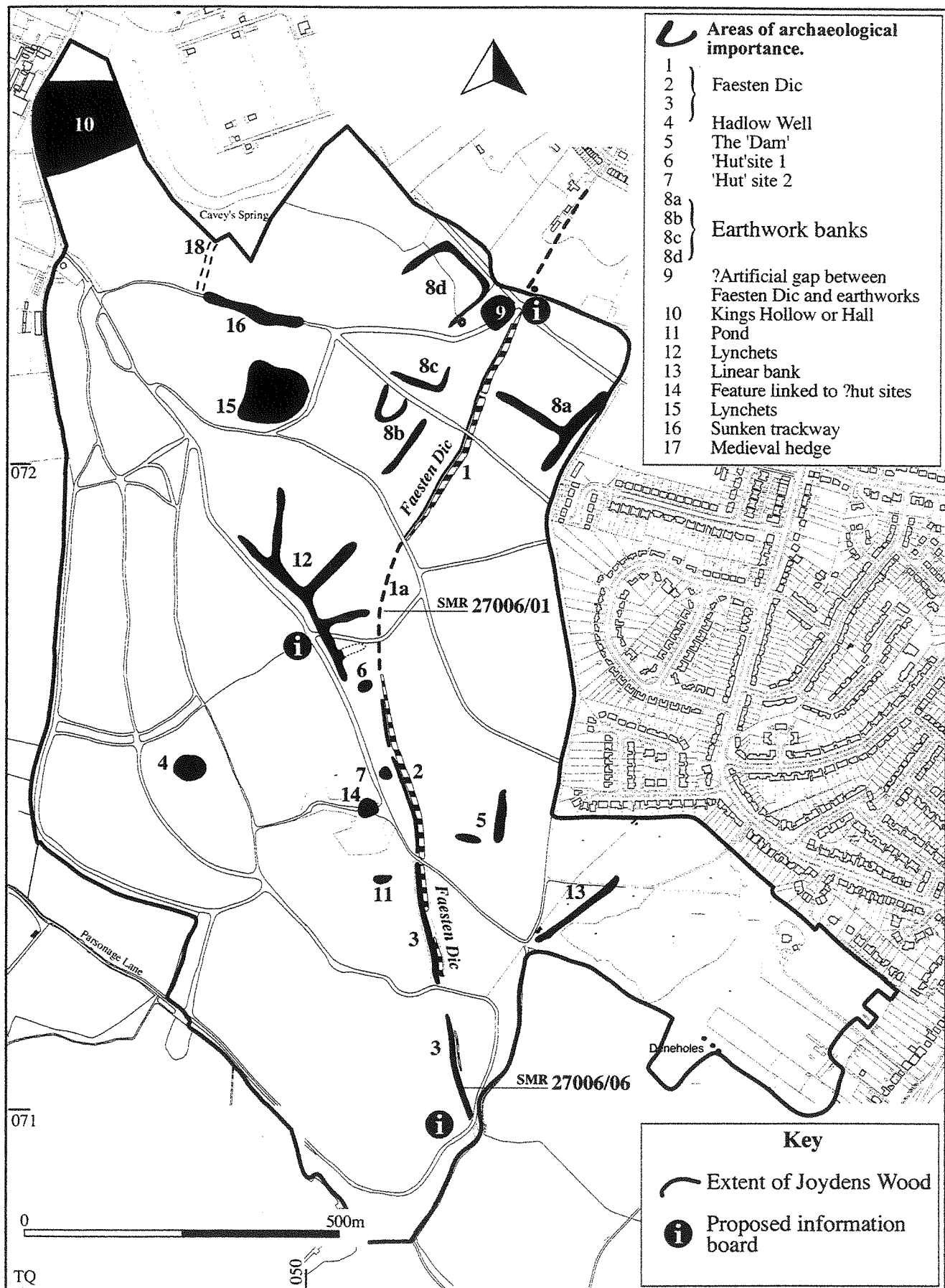


Figure 4 Plan of Joyden's Wood earthworks.

8 SITE INSPECTION

Site: Joyden's Wood

Location: Bexley, Kent

NGR: TQ 5011 7165

8.1 Background

The site was observed by a walk over survey, which aimed to provide general monument management recommendations and proposals for future surveys and other works.

The survey was based, in part, on information and plans of the known (and possible) earthworks identified by previous research and surveys. This has been most recently summarised by the work of the Bexley Archaeological Group (B.A.G.) which recognised that the current state of knowledge is almost entirely based on the work of A.H.A. Hogg carried out in 1935, published in *Archaeologia Cantiana* in 1941 (Vicerey-Weekes 1998).

The survey, although focusing on the known earthworks, also sought to identify other unrecorded archaeological remains if possible. To maintain continuity the numbering of the earthworks recorded and discussed follows that used in the work of B.A.G., including information supplied to the Woodland Trust. This numbering system is shown in Figure 4.

8.2 Geology and Topography

Joyden's Wood is a 340-acre woodland on the south-eastern edge of London, about 2.5km south-east of Bexley, Kent. The wood lies east of the river Cray, on a hill of sandy gravel, at approximately 80m OD. The geology is Blackheath and Woolwich Beds overlying Thanet Sands. Underlying the whole area is the chalk of the North Downs. Topographically the site is characterised by steep-sided valleys, within a heavily wooded hilly area.

8.3 Conditions Survey

(1) *Faesten Dic* (SAM 27006)

Northern section of the *Faesten Dic* runs northeast-southwest and is located in an area of more open woodland (mostly deciduous) with a path running along (and in) its ditch which lies on the western side. There is no evidence to support the theory (shown in Hogg 1941, p12, fig 2) that the route of the dyke turns at 90° to the east at the northern end. At the southern end of this section the *Faesten Dic* runs down into a steep valley and does not appear to continue up the far slope to the southwest. There is however a faintly visible bank and ditch when viewed from the southwest looking northeast, down the slope. The

Faesten Dic then disappears at the top of the valley (see 1a below). Along this stretch of the monument the low lying undergrowth (brambles/dead wood etc.) is not thick and the dyke is clearly recognisable. In fact at this point it is the most clearly defined earthwork in Joyden's Wood. The ditch is suffering from tree root damage and more seriously from tree uprooting. There is evidence of increased erosion on existing paths due to cycles, but no evidence to suggest that the dyke is being seriously damaged at present by cyclists at this point.

Management Recommendations

There should be a continued thinning of undergrowth, including the removal of all tree saplings and the gradual elimination of all conifers. All scrub and brambles etc. should be cut to ground level, stumps poisoned and left to rot in-situ. Dead wood and fallen trees should be removed. There should be monitoring of dead and dangerous trees which should be removed before toppling. Following initial clearance work all scrub/bramble and tree re-growth should be controlled and cut back at least bi-annually. Signs and interpretation boards should be erected to describe the feature where it is clearly recognisable and well visited.

(1a) *Faesten Dic* (SAM 27006)

This is an additional area description for the *Faesten Dic*. At the top of a steep valley there is a gap in the line of the monument of about 100m. There are no known records to explain this, although the presence of possible field boundaries (lynchets?) to the immediate west may contribute (see 12 below). The RCHMe suggest that the area is further confused by old pack horse tracks crossing the area (Dave McCormish pers. comm.) At the time of the survey the area was heavily overgrown with brambles and covered by much fallen wood and many dead trees. It is not an area traversed by any paths and up until recently fairly impenetrable. Clear observation of any surviving earthworks was not possible. This area was cleared in April 1999 prior to a re-survey of the monument by the RCHMe. Following clearance no clearly visible bank or ditch was observed, although a faint trace might be discerned; However it is doubtful whether this would have been noticed if the existing line of the *Faesten Dic* was not being traced. This raises a note of caution for the identification of other ephemeral earthwork features within this heavily wooded environment.

Management Recommendations

The RCHMe survey was not considered practical and has been abandoned. Recommendations are now in place to suggest both geophysical survey (magnetometer) and test boreholes (augering). Both techniques might reasonably be expected to determine the presence /absence of the dyke. Considering that the feature is a Scheduled Ancient Monument, permission for either technique must first be sought under the conditions of the Ancient Monuments and Archaeological Areas Act 1979 for Scheduled Monument Consent. Crucially the identification of previously unknown earthworks throughout the site will rest on the successful clearance of thick undergrowth and recognition through accurate survey and recording.

(2) ***Faesten Dic*** (SAM 27006)

South of the 'gap' in the monument the *Faesten Dic* turns and runs southsoutheast-northnorthwest (more or less north-south). It is not as pronounced as the northern section (1), although it is easily followed. The area is covered by thick brambles (in places), which can obscure the dyke making the monument invisible. It can be easy to pass the dyke by on the paths if you are not actively looking out for it (no path runs along its course). The dyke is also heavily covered by trees (both deciduous and conifer), with many fallen and dead trees. Sections of the monument were cleared in the 1990's but today the re-growth is almost complete.

Management Recommendations

To control the future erosion on the monument all tree saplings should be removed. In addition as part of the on-going Woodland Trust plans all conifers should be removed to thin out the tree cover. To aid in interpretation and visual understanding all brambles (and scrub) should be cleared and kept clear, as well as fallen/dead wood and general debris. A conflict might occur with regards to clearance close to the existing paths, where increased clearance is necessary to allow visitors to see the *Faesten Dic*. Opening up the undergrowth may encourage cyclists to use the banks and ditches which will create a new erosion problem. Following initial clearance work all scrub/bramble and tree re-growth should be controlled and cut back at least bi-annually. Signs and interpretation boards should be placed to allow increased interpretation from the paths which cross the monument.

(3) ***Faesten Dic*** (SAM 27006)

The most southerly section of the monument is heavily overgrown and almost completely obscured from the adjoining paths. Unless the visitor is aware of the dyke's presence it would not be noticed. The dyke is however a definite earthwork at this point but suffers from very heavy tree cover (all species) and thick undergrowth of scrub and brambles as well as the usual fallen/dead wood. The area is suffering continued damage from tree roots, although tree uprooting appears to be less of a problem.

Management Recommendations

Taking into account the potential to increase erosion by clearing (see above). The area should be cleared of all sapling trees and conifers (phased). Again all brambles should be removed, scrub cut and stumps poisoned. Dead wood and fallen trees should be removed from the banks and ditches. Following initial clearance work all scrub/bramble and tree re-growth should be controlled and cut back at least bi-annually. Signs and interpretation boards should be placed to allow increased interpretation from the paths which cross the monument.

(4) ***Hadlow Well***

The area is neglected but reasonably clear of trees and undergrowth, with an earthwork bank visible nearby. Whether this is the accurate location of the actual Hadlow Well is unknown but must be considered probable. A hollow, approximately 8m+ in diameter is present, with a maximum depth of 1.8m.

Management Recommendations

All tree saplings should be removed from the earthworks and scrub/bramble undergrowth cleared from the surrounding area to determine more accurately the extent of nearby earthworks. Other than erecting sign/interpretation boards the area should be managed for its nature conservation and wildlife interests primarily.

(5) *The 'Dam'*

The designation of these earthworks as a 'dam' must be open to question. Two banks (approx. 5m and 10m long respectively) are visible, forming a rough L shape. The location close to an old stream might support this functional interpretation, however there is no further evidence to support this theory. Hogg refers to it as "a small dam across the head of the valley" but does not offer any further information or justification. This area is more sparsely covered by trees and is not totally obscured by brambles. There is however some undergrowth and dead/fallen trees. The earthworks are suffering from tree root damage.

Management Recommendations

The area should be cleared of brambles and undergrowth and a more accurate survey undertaken. Although mature trees should be retained, tree saplings should be removed to prevent future damage to the banks from root penetration. If interpretation is to be encouraged then following the initial clearance work and site survey, scrub and brambles should be cut back at least bi-annually. If not then only tree saplings should be cleared.

(6) *'Hut' Site No 1*

This earthwork has been recorded on previous surveys, but today is only partially visible as an irregular earthwork beneath thick undergrowth (brambles). Only rough estimates can be given for the dimensions, with a roughly circular earthwork measuring in excess of 4m in diameter. It is located close to the field boundary/lynchet (see 12 below) earthworks and may be directly associated with these, potentially part of a small rural settlement (Iron Age/Romano-British?). If the earthwork is circular then an Iron Age or Roman date is probable as it is unlikely to be Saxon or medieval. However, until an accurate survey is undertaken this cannot be determined. The earthwork is covered by thick brambles, mature and sapling trees (both conifer and deciduous) as well as dead and fallen trees.

Management Recommendations

The site needs to be clearly understood before any meaningful management recommendations can be undertaken. In the first instance this should entail clearing all dead and fallen wood and the removal of scrub and brambles. Following this, and once the earthworks have been identified (and surveyed), all tree saplings should also be removed from the earthworks (as well as conifers), leaving only mature trees. An accurate survey should be undertaken (c.f. General Site Survey Programme). Following initial clearance work all scrub/bramble and tree re-growth should be controlled and cut back at least bi-annually. An interpretation board could be placed to allow increased

interpretation to include the nearby rural settlement and detail the possible pre-Saxon archaeology of the area.

(7) ***'Hut' Site No 2***

This earthwork has been recorded on previous surveys, but today is only partially visible as an irregular earthwork beneath thick undergrowth (brambles). As above, the supposed circular plan would suggest that the feature dates to the Iron Age or Roman period. However, until an accurate survey is undertaken this cannot be determined. The earthwork is covered by thick brambles, mature and sapling trees (both conifer and deciduous) and dead and fallen trees.

Management Recommendations

The site needs to be clearly understood before any meaningful management recommendations can be undertaken. In the first instance this should entail clearing all dead and fallen wood and the removal of scrub and brambles. Following this, once the earthworks have been identified, all tree saplings should also be removed from the earthworks (as well as conifers), leaving only mature trees. An accurate survey should be undertaken (c.f. General Site Survey Programme). Following initial clearance work all scrub/bramble and tree re-growth should be controlled and cut back at least bi-annually.

(8a) ***Earthwork Bank (one of four thought to predate *Faesten Dic*)***

The most easterly of the banks, this large 'T' shaped feature is not clearly visible and it is debatable whether this is archaeological or geological. Theoretically the feature may be T shaped, up to 150m long and broad. However as elsewhere on the site, the monument is covered with thick undergrowth, particularly brambles. There are fair amounts of dead wood and fallen trees. This area is more open to the east, with trees increasing in number towards the west. Both conifers and deciduous trees are present, with the former being the majority.

Management Recommendations

The first priority is to determine the validity of the earthwork interpretation. This will only be possible following a large scale clearance programme. All scrub/brambles need to be removed and all dead wood etc. needs to be cleared from the area (and beyond) to allow an accurate survey and recording to be undertaken. It may necessary to undertake some form of excavation to determine the presence of man-made features. An auger survey might easily accomplish this with a minimum of disturbance. If a survey confirms the presence of archaeology, unless further requirements become apparent, the earthworks should be cleared of all tree saplings leaving only mature trees. All conifers should be removed as part of the overall Woodland Trust policy of conifer clearance. To aid interpretation and understanding the site should be kept clear of scrub/tree/bramble re-growth and cut back bi-annually. An interpretation board for the northern section of the *Faesten Dic* should also record and describe the nearby earthworks. Signs might be erected to aid the location of these features.

(8b) ***Earthwork Bank (one of four thought to predate Faesten Dic)***

The earthworks of 8b are one of the most easily identifiable within Joyden's Wood. The banks form a horseshoe shape (c20m diameter), with a straight linear bank to the east (approx. 100m long). Where erosion and roots have penetrated the bank blue/grey small stones and gravel from it is clearly visible. The banks are being damaged by tree roots and the height of the banks suggests that they are more vulnerable to tree uprooting, if it were to occur. The area is surrounded by fairly thick undergrowth (brambles) and dead wood.

Management Recommendations

Clear all tree saplings and conifers from the earthwork banks and clear all scrub/brambles from the area to allow increased interpretation and an accurate survey to be undertaken. Following initial clearance work all scrub/bramble and tree re-growth should be controlled and cut back at least bi-annually.

(8c) ***Earthwork Bank (one of four thought to predate Faesten Dic)***

Supposed 'L' shape earthwork, again like (8a) it is not entirely convincing as a real archaeological earthwork. A slight bank is visible but it is covered with thick undergrowth particularly brambles. There is a fair amount of dead wood and fallen trees. This area is more open to the east, with trees increasing in number to towards the west. Both conifers and deciduous trees are present, with the former being the majority.

Management Recommendations

The first priority is to determine the validity of the earthwork interpretation. All scrub/brambles need to be removed and all dead wood etc. need to be cleared from the area (and beyond) to allow an accurate survey and recording to be undertaken. Some form of excavation or testing may be required to determine the presence of man-made features. An auger survey might easily accomplish this with a minimum of disturbance. If a survey confirms the presence of archaeology, unless further requirements become apparent, the earthworks should be cleared of all tree saplings leaving only mature trees. All conifers should be removed as part of the overall Woodland Trust policy of conifer clearance in Joyden's Wood. To aid interpretation and understanding the site should be kept clear of scrub/tree/bramble re-growth and cut back bi-annually. In the long term no new trees should be allowed to grow on the earthworks.

(8d) ***Earthwork Bank (one of four thought to predate Faesten Dic)***

The most clearly defined earthwork amongst this group (8), three sides (c.40m long, 4m wide and up to 0.75m high) of a rectangular enclosure still remain visible. In addition a large denehole crater is present to the south of the banks. The area is quite heavily overgrown with knee high brambles, and is covered in dead wood and debris. It is significant that despite this the earthworks are clearly present. The earthworks are suffering from continued erosion and damage from tree uprooting and root damage. Both deciduous trees and conifers are present.

Management Recommendations

This feature is both recognisable and close to a path. Sign posting and a possible inclusion on a nearby interpretation board should be investigated. The site needs clearing of all brambles and scrub growth, the removing of sapling trees and dead/dangerous trees. Clearance over a wider area to locate any further earthworks that may be present should be undertaken. Bi-annual re-cutting should be undertaken on any areas cleared and monitoring and removing trees liable to topple.

(9) ***Man made 'gap' between Faesten Dic and earthworks (8d)***

It is not clear what, if any, archaeological feature is supposed to be present here. There is no evidence to support the theory of a deliberately constructed gap.

Management Recommendations

As part of the survey to record accurately the earthworks of (8d) it would be worthwhile extending to cover this area. It may be once scrub and brambles have been cut to ground level and removed that more will be visible. However at this stage no archaeological features can be discerned.

(10) ***Kings Hollow or Hall***

Several linear earthworks or lynchets are present, however some caution may be necessary as a natural gully, caused by relict streams/springs, is certainly responsible for one 'earthwork' type feature. The area is located on steep ground and is not so heavily overgrown on the slope, although towards the summit the ground levels out and thicker undergrowth/brambles are present. The earthworks are covered by deciduous trees (birch).

Management Recommendations

On the surviving earthwork banks tree saplings should be removed to prevent future problems. Mature trees can be retained but dead/dangerous/dying trees liable to topple should be removed and the area monitored. The area is a popular site for mountain bikers, so measures (dead wood piles etc.), should be implemented to prevent cleared areas becoming used as cycle runs. This area should not be considered a high priority.

(11) ***Pond? (linked? to Hut Sites 6 & 7)***

The large sunken feature is (probably correctly) recorded as a pond. Hogg's 'round pit' more probably refers to (14). There is no real evidence to support a connection to the Hut Sites while it may be equally probable to suppose the pond is 'natural' in an area of springs and old water courses. The possibility of a bomb crater must not be discounted, although Hogg's 1935 survey (*Archaeologia Cantiana* 1941) records several deneholes in this area and the hollow would thus predate WW II bombing.

Management Recommendations

Other than to remove dead or dangerous trees there is little to be recommended for this feature. Ultimately it should be managed for wildlife considerations if it is indeed a pond. If possible a limited investigation might be recommended to

determine its antiquity or whether it is a denehole. If it is the latter, it must be made safe and sapling trees removed from the hollow. Scrub and brambles might in this case be left to deter access.

(12) ***Group of Lynchets (associated? with Hut Sites 6 & 7)***

Part of this feature runs parallel to the wood path, broadly northwest-southeast. This main bank is clearly visible (potentially over 200m long), however whether it can be truly described as part of a field system is open to interpretation. The RCHMe (Dave McCormish pers. comm.) dispute this theory and suggest that the banks are more likely to be woodland banks. Hogg records four linear banks (approx. 100m+) radiating to the east (north, northeast x 2, and east), however only the most southerly is visible, although the area is heavily overgrown with brambles and bracken. Trees (conifers and deciduous) proliferate, and the area is littered with dead wood and fallen trees. These features, if correctly interpreted as a field system, will be of particular interest as they might provide a clue to explain the gap in the *Faesten Dic* and data for relative dating.

Management Recommendations

Firstly the area must be cleared to allow a survey to be accurately undertaken. This should entail a clearing of all scrub, bracken and brambles cutting to ground level and the removal of all dead wood to allow a clear view of the area. It may then be possible to record the full extent of the earthworks, however the experience of clearing in April 1999 (see 1a above) may indicate that more intrusive survey techniques may be required. The RCHMe (Dave McCormish pers. comm.) suggest that Geophysical Survey may be necessary, while an augur survey may also prove useful. If a survey is being carried out for the *Faesten Dic* (see above) then it should be extended to cover this area. On a general note for the control of erosion all sapling trees should be removed along with trees liable to topple, leaving only mature trees. Again as part of the woodland management plan all conifer trees can be removed to thin the area. Signs and interpretation panels should be erected to include not only the *Faesten Dic* but also the possible rural settlement and nearby hut sites, if these can be proved.

(13) ***Linear bank (linked to manor of Ocholt?)***

This is quite a clear earthwork feature which runs northeast for over 150m (c4-5m wide and up to 0.80m high). It is quite heavily covered with mature and sapling trees, brambles and low lying undergrowth. There are some toppled trees and evidence of root damage. It may be that other, more discrete earthworks, survive in this area, although without scrub clearance it would not be possible to determine this.

Management Recommendations

To prevent further damage all tree saplings should be removed. If more interpretation is to be encouraged then the brambles and thicker undergrowth should be removed to reveal the banks more clearly. All areas cleared should be re-cut at least bi-annually to prevent re-growth. This area would benefit from a more detailed survey once clearance has been undertaken. A possible

avenue for interpretation would be to include the southern *Faesten Dic* and some information of how the bank (13) may relate to the Manor excavated to the east in an area which now lies beneath the modern housing development.

(14) *'Man-made' feature (linked? to Hut Site 6 & 7)*

It is unclear what this feature truly is, it is in an open area, but covered by vegetation (heather).

Management Recommendations

No measures can be suggested at this stage. However, if clearance work is being undertaken at (7) then this could be expanded to the area over (14) to reveal more clearly the possible feature.

(15) *Group of small Lynchets*

This covers an area of damp and boggy ground which contained a number of small linear banks or possible lynchets. Standing water is present in most hollows and there may be a spring nearby. The area is open with only deciduous trees (birch mostly), however some heather growth, scrub and brambles are present.

Management Recommendations

Areas like this are not common in the wood and there may therefore be an enhanced wildlife interest. The area could have tree saplings removed, leaving only mature trees. It is unnecessary to remove brambles and heather etc. as access is not possible anyway due to the waterlogged conditions.

(16) *Sunken Trackway*

This sunken trackway or Hollow Way was interpreted by Hogg as part of a trackway identified during the excavation of a square enclosure excavated by Erwood in 1925. However this square enclosure dates to the medieval period and thus is likely to *post-date* the *Faesten Dic*. By inference the trackways would also date to *this* period and not the early Anglo-Saxon period when the *Faesten Dic* was supposedly built. The sunken trackway is clearly visible and recognisable, and must be considered an important landscape feature. The woodland forms an arching avenue through which the hollow way runs. The banks to either side have brambles, scrub and trees growing on them.

Management Recommendations

The main erosion threat is from trees uprooting and pulling up 'bank' material, therefore dead and dangerous trees should all be removed. Also fallen and dead wood should be removed. To prevent future threats, the removal of tree saplings should be considered. Scrub and brambles could be removed to increase the sunken feel of the track, however this would not noticeably improve the preservation of the feature. A sign marking out the hollow way and its antiquity should be erected.

(17) *Medieval Hedge*

Apparently this boundary is disputed with the site's neighbours. It is also not readily apparent that the existing hedge has any antiquity to it at all. At present only a low lying hedge survives.

Management Recommendations

Once the legal disputes have been resolved this boundary should be fully re-established and where appropriate the hedge should be laid/planted and gapped-up using suitable native species.

(*) *Deneholes*

There has not been any significant survey of the deneholes of Joyden's Wood since Hogg's in 1935 and Spurrell's work in the late 19th century. Hogg's plan of earthworks in Joyden's Wood which records the deneholes is the most detailed in existence. The present condition of deneholes ranges from entirely infilled and lost, to steep sided hollows. These are filled with dead wood, fallen trees, and have trees and scrub growing on them. The features are impossible to interpret for those who do not know of deneholes and they can be mistaken for ponds or even bomb craters, which are also present in the wood.

Management Recommendations

There has been discussion of opening up a denehole for display, education research and as a bat habitat. The inherent safety risk and inability to monitor access for 24 hours per day may make this option unacceptable. Even securing access using a metal grid will not, in the authors opinion, provide adequate security (supported by Rod Le Gear pers. comm.). Although the possibility should not be totally discounted, consideration must be given by the Woodland Trust to balance the potential benefits against the possible liability the Trust might incur should an accident occur. It is recommended that a survey of the wood's surviving deneholes be undertaken and that they are mapped to update the 1935 survey. Where fallen trees and tree roots are causing damage, including toppling, these should be removed and the hollows kept clear. Increased sign posting and interpretation should be provided to describe these features within the wood.

8.4 Joyden's Wood Archaeological and Historic Landscape

The conditions survey has described and recommended management by individual archaeological feature. This approach was adopted to allow a phased management plan to be implemented by the Woodland Trust. The archaeological resource of the area, should, however be considered in a wider landscape setting. Undermining this approach is the lack of understanding of many of the features recorded. To create groupings of features and attempt to consider these within the wider archaeological landscape is dangerous, since the confidence of their interpretation is low. There are, however, a number of potential hypothesis that it would be useful to suggest.

There is insufficient evidence to make suggestions concerning the Prehistoric landscape of the area, although if the *Faesten Dic* is Iron Age in date there would need to be a re-assessment of this.

The evidence of Roman settlement and activity in the wood is limited. The settlement in the southwest corner of Joyden's Wood has no recorded structures but kilns and gravel pits are mentioned. There is no evidence to suggest that there was extensive occupation nearby or whether this site fits into a broader Romano-British settlement. Roman settlement was centred along the London-Rochester Road at Crayford and Dartford (An Archaeological Research Framework for the Thames Estuary, Consultation Draft 1998). It may be that the site within Joyden's wood was a small 'industrial' type settlement and whether it was within a wooded environment is impossible to determine.

The *Faesten Dic* is the most prominent archaeological feature within the landscape. The dyke lies on the eastern edge of the River Cray valley, it represents a physical barrier on the edge of Dartford Heath, a chalk promontory overlaid by gravel that run south to the North Downs (Acworth 1999). Within Joyden's Wood the dyke runs over two ridges overlooking a steep valley. As the valley gets higher the dyke almost disappears into the rising ground (Acworth 1999). Acworth also suggests that the area was extensively ploughed but that the dyke was still visible as an ancient boundary. The positioning of the bank and ditch indicate that it was constructed to defend attacks from the west. Presumably it was built by Anglo-Saxons against British counter-attacks from the London area. Acworth raises the question of a dyke built west of the valley and suggests looking for it behind the spur of Glattons Plantation and round Chalk Wood.

The medieval settlement (possible Manor of Ocholt) located to the east of the wood was linked to an agricultural landscape which contained trackways, enclosures and lynchets. The sunken trackway (Fig 4, No:16) is part of this and it is possible that the earthwork banks (Fig 4, No: 8a-d) may relate to this. In addition the feature interpreted as lynchets (Fig 4, Nos: 10, 12 & 15), if these are correct, may also be part of this medieval agricultural landscape. This, if correct, has implications on whether this part of Joyden's Wood was clear of trees during this period and whether it was cleared in the Saxon, Roman or even Prehistoric periods. It is unlikely that lynchets could arise in a woodland, since they are produced by ploughing. Further research into the palaeoenvironmental conditions would be a useful avenue to pursue.

8.5 General Notes on Erosion Control

Overall there are a number of measures which apply equally to the beneficial preservation of all the Joyden's Wood earthworks. Where the accurate extent of the earthworks has been determined (see Section 4 below) the following measure apply:-

- (a) Removal of ALL tree saplings. Buried archaeology is damaged by tree roots, existing mature trees are not a threat as they have already caused damage, however removing tree saplings will prevent future damage occurring.
- (b) Removal of conifers, adopting a phased approach in heavily wooded areas.
- (c) Clearance of thick scrub and brambles prior to surveys.
- (d) Where clearance work is undertaken, cut to ground level and poison stumps to prevent/limit re-growth.
- (e) Trees and scrub should be cut and roots left to die in situ, not pulled out.
- (f) Where areas are to be kept clear of scrub/brambles they should be re-cut at least bi-annually.
- (g) To thin the trees, while leaving mature trees, saplings re-growth should be cleared at least annually.
- (h) Remove trees liable to topple through death or windthrow. The uprooting of trees causes extensive damage to archaeological features and promotes additional erosion of bare earth scars left following uprooting.
- (i) With features with interpretation and those desired to be visible to the public, vegetation should be controlled. Extensive undergrowth (scrub, brambles, fallen trees etc.) will obscure the site and prevent visitors from viewing or comprehending the remains. In addition people working in the area may be unaware of the archaeological remains and may inadvertently damage the archaeology (e.g. logging operations).

8.6 Overall Site Survey Recommendations

It is clear from the recommendations above that the level of knowledge of many of the earthworks in Joyden's Wood is insufficient to make accurate recommendations for their correct management. A number of specific surveys have been recommended. Overall the Joyden's Wood management plan will need to include a schedule to undertake systematic earthwork, non-intrusive (geophysical) and intrusive (auger) surveys. These will need, in most instances, clearance of low lying scrub and brambles to ground level (see Section 3 above), to make visual and scientific instrument surveys possible. Following these surveys, maps and plans will need to be compiled to record the accurate dimensions of surviving earthworks. This will then allow research and re-assessment of the remains and the implementation of conservation management proposals to encompass the entirety of the monument.

9 Management Priorities

In conclusion there are a number of measures which will need to be implemented to ensure the beneficial management and future preservation of the archaeology of Joyden's Wood. The table below summarises the individual archaeological earthworks recorded to date and the management recommendations and priorities for each.

SITE	INFO. Summary	Confidence Rating	Practical Management Summary	Survey (Yes/No)	Volunteer Opportunities	Prof. Archaeology	Signs / Boards (Yes/No)	Priority Rating
<i>Faesten Dic</i> (1)	Saxon Ewk Dyke	High	Tree/Scrub clearance	No	Scrub clearance	Yes - Samples	Yes	High
<i>Faesten Dic</i> (1a)	Gap in Dyke	Unknown	Unknown	Yes	Scrub clearance	Yes - Geophy Survey	?	High
<i>Faesten Dic</i> (2)	Saxon Ewk Dyke	High	Tree/Scrub clearance	No	Scrub clearance	Yes - Samples	Yes	High
<i>Faesten Dic</i> (3)	Saxon Ewk Dyke	High	Tree/Scrub clearance	No	Scrub clearance	Yes - Samples	Yes	High
Hadlow Well (4)	Poss. Spring	Medium	Manage for wildlife	No	Yes	No	Yes	Low
'Dam' (5)	Poss. Ewk bank	Low	Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	No	Low
'Hut' No 1 (6)	Ring-ditch	Medium	Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	Yes	High
'Hut' No 2 (7)	Ring-ditch	Low	Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	?	Med
Earthwork Bank (8a)	T shaped Earthwork	Low	If real - Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	No	Med
Earthwork Bank (8b)	C shaped Earthwork	Medium	Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	?	Med
Earthwork Bank (8c)	L shaped Earthwork	Low	If real - Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	No	Med
Earthwork Bank (8d)	Earthwork enclosure	High	Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	Yes	High
'Gap' (9)	Gap in dyke	Low	None	Yes	Survey & Scrub clearance	?	No	Low
Kings Hall (10)	Med. ? earthwork	Low	If real - Tree clearance	Yes	Survey & Scrub clearance	No	No	Low
Pond (11)	Hollow	Med-Low	If real - tree/scrub removal	Yes	Survey & Scrub clearance	No	No	Low
Lynchets (12)	Earthwork ?Celtic fields?	Medium	Tree/Scrub clearance	Yes	Survey & Scrub clearance	(Excavation?)	Yes	High

SITE	INFO. Summary	Confidence Rating	Practical Management Summary	Survey (Yes/No)	Volunteer Opportunities	Prof. Archaeology	Signs / Boards (Yes/No)	Priority Rating
Linear Bank (13)	earthwork	High	Tree clearance	No	Scrub clearance	No	?	Med
'Man-made' feature(14)	Unknown	Low	None	No	None	No	No	Low
Lynchets (15)	small ewk banks	Low	None	No	None	No	No	Low
Sunken Track (16)	Hollow way Med?	High	Tree/Scrub clearance	No	Scrub clearance	No	Yes	High
Med. Hedge (17)	Line of boundary	Medium	Hedge repair & planting	No	General upkeep	No	No	Low
Deneholes (*)	Underground shafts	High-Low	Selected Tree/Scrub clearance	Yes	Survey & Scrub clearance	? Investigation	Yes	High-Low

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10 Bibliography

Acworth, J. (1999) **The Road and the Dyke.** Handout/Talk Bexley Archaeology Group.

Barclay, G.J. (1992) "*Vegetation Management on Ancient Monuments in Forestry and other areas*" in **Aspects of Applied Biology 29, 1992.**

Berry, A. Q. & I. W. Brown eds. (1994) **Erosion on Archaeological Earthworks; Its prevention, control and repair.** Clwyd County Council.

Colvin, H. M. (1948) "*Excavations in Joyden's Wood, Bexley*" in **Arch. Cant. Vol. LXI pp133-134.**

Bexley Archaeological Group (1998) **A review of the Bexley 814AD Charter.** Unpublished report Bexley Archaeological Group, Kent.

Dale, L.C. (1974) "*A Post-Medieval Tile Kiln at Bexley*" in **Arch. Cant. Vol. LXXXIX, pp25-32.**

Darvill, T. (1982) **Ancient Monuments in the Countryside: An archaeological management review.** HBMC (English Heritage), London.

Elliston Erwood, F.C. (1928) "*The Roman Antiquities of NW Kent*" in **Jnl. Brit. Arch. Assoc. Vol. 34, pp165-197.**

English Heritage (1998) **MARS: The monuments at risk survey of England 1995: Summary Report.** Bournemouth University & English Heritage.

Greater London Sites & Monuments Record

Hamerton, I. (1998) **A Wood On Our Doorstep Joyden's Wood.** The Woodland Trust.

Hogg, A.H.A. (1941) "*Earthworks in Joyden's Wood, Bexley, Kent*" in **Arch. Cant Vol LIV, pp11-27.**

Kent County Council Sites & Monuments Record.

Le Gear, R.F. (1976) "*Pillared Deneholes at Stankey Wood, Bexley*" in **Arch. Cant. Vol. LXXXII, pp137-144.**

Le Gear, R. F. (1992) **The Bexley Deneholes.** Bexley Libraries & Museums.

Malim, T. et al (1997) "*New Evidence on the Cambridgeshire Dykes and Worsted Street Roman Road*" in **Proc. Cambs. Antq. Soc. Vol LXXXV, pp27-122.**

Monighan, J. (1982) "*An investigation of the Romano-British Pottery Industry on the Upchurch Marshes*" in *Arch. Cant.* Vol. LXXXVIII, pp 28-37.

Paye, W. (1926/1974) *VCH of Kent Vols 1-3*. University of London. Inst. Of Hist. Res.

Spurrell, F.C.J. (1889) "*Dartford Antiquities*" in *Arch. Cant* Vol XVIII, pp304-318.

Tester, P.J. & J.E.L. Caiger (1954) "*Excavations on the site of a Romano-British settlement in Joyden's Wood, near Bexley*" in *Arch. Cant.* Vol. LXVIII, pp167-183.

Tester, P.J. & J.E.L. Caiger (1957) "*New Discoveries in the Joyden's Wood Square Earthwork near Dartford*" in *Arch. Cant.* Vol. LXXI, pp233.

Tester, P.J. & J.E.L. Caiger (1958) "*Medieval buildings in the Joyden's Wood Square Earthwork*" in *Arch. Cant.* Vol. LXXII, pp18-40.

Tester, P.J. (1979) "*A Re-Assessment of some features of the medieval house in the Joyden's Wood Square Earthwork*" in *Arch. Cant.* Vol. LXCIV, pp289.

Vicerey-Weekes, D. (1998) **Interim Report on the Archaeological Environment of Joydens Wood**. Bexley Archaeological Group internal report.

Wheeler, R.E.M. (1934) "*London and the Grims Ditches*" in *Ant. Journ.* Vol. XIV, p254.

Woodland Trust (1999) **Joydens Wood: Proposed Long Term Forest Plan (1999-2019)**. Woodland Trust, S.E. Region

APPENDIX A - Sites & Monuments Records GAZETTEER

Greater London SMR

SMR NOS	PARISH	NAT GRID REF	PERIOD	DESCRIPTION
070075	Bexley	TQ 4925 7252	Med/PM	Buildings
070312	Bexley	TQ 495 735	Pal	Flint artefacts
070427	Bexley	TQ 503 723	UN	Denehole
070431	Bexley	TQ 500 726	UN	Denehole (Cavey Springs)
070432	Bexley	TQ 5059 7287	UN	Denehole
070434	Bexley	TQ 5063 7344	IA	Settlement excavated
070438	Bexley	TQ 5009 7313	UN	Kiln?/Oven?
070445	Bexley	TQ 502 729	Pal	Flint Artefact (Axe?)
070483	Bexley	TQ 4855 7220	Neo	Flint Arrowhead
070489	Bexley	TQ 4931 7057	Un	Denehole
070490	Bexley	TQ 4928 7033	UN	Denehole (Chalkwoods)
070493	Bexley	TQ 4853 7227	Ro	Buildings remains, artefacts (Settlement)
070494	Bexley	TQ 4843 7225	Ro	Pottery
070508	Bexley	TQ 4970 7343	Med	Oven/structure
070511	Bexley	TQ 489 721	Meso	Lithics
070513	Bexley	TQ 495 735	Pal	Flint Flake
070554	Bexley	TQ 50478 72533	P/Med	Tile Kiln, Baldwyns Park
070555	Bexley	TQ 4881 7229	Med	Building remains
070569	Bexley	TQ 500 733	Meso	Flint Axe
070575	Bexley	TQ 485 725	Pal	Flint Blade
070577	Bexley	TQ 510 730? TQ 498 756? TQ 508 757?	Ro	Cremation and grave goods
070588	Bexley	TQ 5056 7222 TQ 5020 7118 TQ 5021 7117 TQ 5027 7096	Sax	FAESTEN DIC earthwork bank and ditch
070589	Bexley	TQ 4850 7295	IA	Ditch
070595	Bexley	TQ 506 728	Meso	Flint (Blades/Flakes) scatter
070599	Bexley	TQ 5073 7350	UN/RB?	Settlement/Enclosure cropmarks
070600	Bexley	TQ 504 729	UN	Earthwork/Enclosure/Ditch cropmarks
071030	Bexley	TQ 50717 73440	IA	Pottery
071099	Bexley	TQ 4963 7348	Med	Mill remains
071157	Bexley	TQ 49750 73500	IA	Ditch
071341	Bexley	TQ 4843 7223	Ro	Ditch excavation
071342	Bexley	TQ 4843 7223	Ro	Pits excavation
071343	Bexley	TQ 4843 7223	Ro	Settlement excavation
071344	Bexley	TQ 4843 7223	P/Med	Ditch
071621	Bexley	TQ 495 735	Sax	Village of Byxlea from documentary records
071623	Bexley	TQ 492 706	UN	Denehole
071624	Bexley	TQ 496 704	Un	Denehole
212043	Bexley	TQ 49830 73490	Med	Manor House
07043201	Bexley	TQ 5061 7279	UN	Denehole
07055401	Bexley	TQ 50478 72533	PM	Kiln/Oven
070755	Bromley	TQ 485 702	Meso	Blade flint
070763	Bromley	TQ 4853 7024	P/Med	Building foundations
070824	Bromley	TQ 4853 7025	Sax/Med	Burial Ground excavation
070917	Bromley	TQ 485 705	Med/PM	Deserted medieval village
071003	Bromley	TQ 486 702	Med/PM	Coins
07050101	Bromley	TQ 48538 70252	P/Med	Corn drying kiln

Kent SMR

SMR NOS	PARISH	NAT GRID REF	PERIOD	DESCRIPTION
TQ57 SW1 410937	Dartford	TQ 5013 7082	Ro	R-B settlement in se corner Joydens Wood, site of Noviomagus. Pottery, tiles, nails, ditches, kilns.
TQ57 SW65 411165	Dartford	TQ 5103 7234	Sax	Tumulus?
TQ57 SE70 411180	Dartford	TQ 5077 7206	Ro/UN	Tumulus (not burial), windmill?
TQ57 SW81 411211	Dartford	TQ 5077 7159	Neo	Chipped axe
TQ57 SW92 411248	Dartford	TQ 509 718	Neo/IA/ Ro/Med	Excavations in Square enclosure in se of Joydens Wood. Site of Medieval manor, poss. Manor of Ocholt. Artefacts, earthworks, ditches, buildings.
TQ57 SW93 411255	Dartford	TQ 5024 7207	Sax	FAESTEN DIC Saxzon boundary feature. Two sections excavated 'A' TQ 5027 7210 and 'B' 5025 7099. Presumed date 5th-6th C, similar to Chiltern <i>Grimes Ditches</i> and <i>Pinner/Bexley Ditches</i> . Scheduled Ancient Monument No 151.
TQ57 SW95 411265	Dartford Bexley	TQ 5037 7227 TQ 5073 7102	UN	Denehole scatter (as many as 40)
TQ57 SW132 411306	Dartford	TQ 505 715	Meso	Flint pick (Joyden's Wood)
TQ57 SW133 411307	Dartford	TQ 509 719	Meso	Lithic scatter inc. Tranchet axe, cores, blades, scrapers and microliths in Joyden's Wood.

APPENDIX - B

**BEXLEY
ARCHAEOLOGICAL
GROUP**

**INTERIM REPORT
ON THE
ARCHAEOLOGICAL
ENVIRONMENT OF
JOYDENS WOOD**

**COMPILED BY
DAVE VICEREY-WEEKES**

CONTENTS OF REPORT

- SEC. 1. Introduction
- SEC. 2. Area Map
- SEC. 3. Red Category Sites
- SEC. 4. Blue Category Sites
- SEC. 5. Green Category Sites
- SEC. 6. Other Matters for Consideration
- SEC. 7. Summary
- SEC. 8. Actions Currently Being Implemented
- SEC. 9. Appendix A
- SEC. 10. Appendix B

SEC. 1.

INTRODUCTION

This interim report will limit its contents to the archaeological potential of the area in question, as it is felt that other issues relating to Joydens Wood will be more adequately dealt with by other specialist organisations and individuals.

When evaluating the information and other matters which arose from the Bexley Archaeological Units meeting on the 20th August 1998. It became apparent that the area under consideration contained archaeological sites which fell into three main categories. For the purpose of this report these categories have been used and they are:-

RED CATEGORY.

The red category denotes sites that are of a highly sensitive nature, are endangered by present ground use or future land management/development and require a special priority.

BLUE CATEGORY.

Under the blue category sites are included which require careful consideration, also further investigation before any long term management strategy is decided.

GREEN CATEGORY.

Sites in the green category are of a general interest, or have special features. Although not considered sensitive, they should be given some consideration in any management strategy.

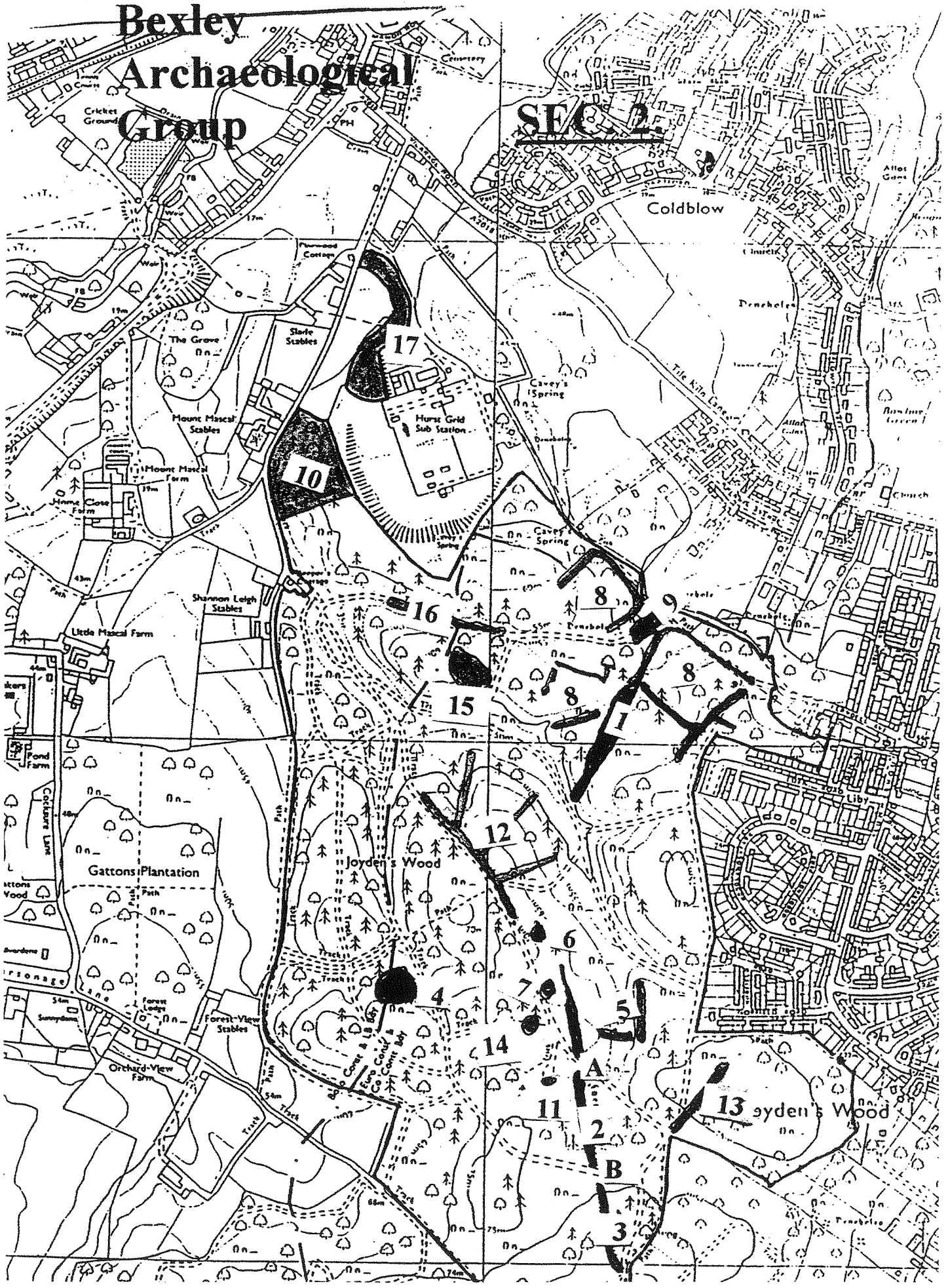
On the AREA MAP [SEC. 2.] for the ease of location of the sites, they have been given numbers as well as colour categories. The numbers given to these sites do not indicate any priority, and should be regarded only as an aid to referencing the relevant text.

When reviewing our current state of knowledge on Festyns Dyke, it became apparent that our knowledge was mainly based on the work undertaken in 1935 by A. H. A. HOGG, which was fully published in the Kent Archaeological Society's annual publication *Archaeologia Cantiana* in 1941. The relevant parts of Mr. Hogg's work are of such value that they have been included as APPENDIX A [SEC. 9.] of this interim report.

Other sources of information on the Dyke have been reviewed, including the Victoria County Histories, publications by F. C. J. Spurrell, F. C. Elliston Erwood and Col. O. E. Ruck. It was found that the other sources mentioned above were either based on, or included in Mr. Hogg's 1941 report in the *Archaeologia Cantiana*, hence another reason for including it as an Appendix.

Bexley Archaeological Group

SEC 2



Our reasoning for the inclusion of APPENDIX B [SEC. 10.] in this report is that apart from being the earliest known reference to the Dyke [at present], also most other sources quote it. The 814AD Charter allows us to place the Dyke into the present day landscape and not view it in isolation to its surroundings, which would be a grave error if we wish to resolve the enigmatic problems the Dyke poses for us.

Mr. Rodney Legear apart from being a Spieliologist of national repute, is also the technical adviser to Bexley Archaeological Group and in this capacity will be undertaking a re-survey of the Dene Holes in Joydens Wood as part of the proposed next phase of this project [Ref. SEC. 8. ACTIONS CURRENTLY BEING IMPLEMENTED].

Due to the time constraints on the preparation of this interim report and for the sake of brevity, a simplified format has been deliberately adopted. It is hoped that this simplified format has not hindered the reports clarity or usefulness.

After considerable discussion, the Field Officers of the Bexley Archaeological Unit agreed that this interim report was not the place for them to include recommendations to yourself for any future actions. It is the opinion of the Field Officers, that until the present investigations your request for information stimulated are complete, it would be unwise to attempt to formulate valid recommendations.

It is hoped you will find this report of interest and use.

SEC. 3.

RED CATEGORY SITES

1. This site includes the stretch of the Dyke where it has been strengthened and is the best preserved section, which is still very evident on the ground. Special consideration must be given to the areas in which the two sharp bends of the Dyke are situated. It seems to have been deliberately constructed to finish at the edge of a steep valley.
2. This section of the Dyke restarts from the edge of the valley opposite site RED 1 and includes the two deliberately made Gaps [A and B on Area Map], which are of considerable interest.
3. From Gap B, this section continues to the edge of the woods, where it becomes indistinct on the ground. The area around the present terminus of the Dyke requires close attention, if we are ever to know in which direction the Dyke originally ran.
4. A much neglected and ignored site, is the area around Hadlow Well, including the reasonably preserved section of bank which appears to be associated with the Well site. We feel that a full investigation of this area would more than repay any investment in it.

SEC. 4.

BLUE CATEGORY SITES

5. The area where the Dam was constructed has never been properly investigated. It is significant that the construction of a dam indicates a good level of technical knowledge, social organisation and environmental awareness. This site deserves consideration.
6. Although identified as a Hut site in 1935, this site has never been investigated, also no evidence has been offered as to its date or purpose, It is indicative that the Hut Site appears to be associated with the group of lychets, noted in GREEN 12 in this report.
7. Hut Site. Comments as in BLUE 6.
8. The group of Four Banks, closely relating to the bends in the Dyke are of interest. It is possible that these banks are of an earlier date than the Dyke. If this is the case, this group of Banks could provide information on the initial people settlement and land usage in Joydens Wood.
9. Just outside the main bend in the Dyke [RED 1], there appears to be a man made Gap, between the Dyke and the banks mentioned in BLUE 8. this Gap is worth further investigation.

SEC. 5.

GREEN CATEGORY SITES

10. This site is the Kings Hollow or Hall, recorded in the Charter of 814AD [Ref. SEC. 10. APPENDIX B of this report]. It is significant that there are a series of Lychets in this area, possibly indicating a nearby dwelling site, if the suggested dwelling site existed, it was most probably situated nearby on the slightly higher ground to the North East.
11. Near Gap A, recorded above under RED 2 there is an interestingly situated Pond . This Pond site could also be connected to the two Hut sites [BLUE 6 and 7]
12. The group of Lychets associated with the two Hut sites [BLUE 6 and 7], are of interest, as they demonstrate a early understanding of how to gain the optimum benefit from the terrain for agricultural purposes.
13. Behind the Dyke, between the Gaps A and B [given in RED 2], there is a Bank that could possibly be associated with the square earth work site which was investigated by F. C. Eliston Erwood in 1925. This square earth work site has by some sources tentatively identified with the Manor of Ocholt, or less likely with the Manor of Baldwyns.
14. Near the Pond recorded in GREEN 11, is a undefined man-made feature, which could have links with the two hut sites [BLUE 6 and 7]

15. A group of small Lychet are of interest due to their close proximity with the sunken track way noted in GREEN 16.

16. This very early Sunken Track way should probably be given a higher category rating, but it is difficult to see what significant additional information could be gained by intensive archaeological investigation.

17. In Sands Spiny, a local person claims to have identified the remains of a Deer Run. Due to the association of the Spiny with the Kings Hollow/Hall [Ref. GREEN 10] this is a possibility, but it is more probably another group of Lychets. [site not yet visited by a Field Officer from the Bexley Unit.]

SEC. 6.

OTHER MATTERS FOR CONSIDERATION

- With regard to the Hurricane fighter plane, which crashed in Joydens Wood during World War II, there are three possible aircraft which could fit the current information we have available to us. It is hoped to have a definitive identification in the near future.
- The two high points in Joydens Wood [over 85m.], although not given a category in this interim report, will be visited and evaluated.

- Oral traditions regarding the Woods include:-

The normal crop of Ghost stories including the Lady in Grey who it is claimed, has been seen at many points in the wood, also a knight is reputed to ride along the Dyke when there is a full moon and a small dog which sits and barks for his lost master by one of the Dene Holes. Opinions differ as to which Dene Hole the faithful hound devotes his attention to.

Joydens Wood is also the proud possessor of a Witch's Well, although again opinions differ as to its exact location. [Hadlow Well being the most often mentioned].

- More interestingly, from three independent sources has come the statement, that a Grey Fox's Bunker was secretly constructed in the Woods, during World War II, for use by selected members of the local Home Guard Unit, to enable them to offer continue resistance, in the event of an invasion. The compiler of this report was told in 1973, by one of the sources that the Bunker was sealed up along with its contents at the end of the war. This source claimed to know the location of the Bunker, but frustratingly, would not divulge it to me. For as far as he was concerned it was still covered by the official secrets act, which he had signed.

SEC. 7.

SUMMARY

Our preliminary investigations have demonstrated that the state of knowledge of the present day archaeological status of Joydens Wood is shamefully inadequate and

outdated. In fact we are reliant on the excellent work of our predecessors, most notably A. H. A. Hogg, without whose efforts in 1935, our knowledge would be sparse indeed.

Your timely inquiry for information has certainly shaken Bexley Archaeological Group from its unintentional apathy, with regard to this most important local area of archaeological interest, also your inquiry highlighted the need for a total re-survey and evaluation of the known and potential sites in Joydens Wood, using modern archaeological and surveying techniques.

Until this re-survey and evaluation is completed, we feel that no sound recommendations which will remain valid in the long-term can be offered for your consideration. We are all agreed that short term fixes, will in fact have a detrimental effect.

If you find this interim report useful, the Management Committee of B.A.G. are prepared to commit its Field Officers and Membership, to undertake a full field survey and desk study of Joydens Wood, which will Result in the production of a full report containing recommendations for further actions and management strategies.

This field survey, desk study and production of the report could be undertaken by B.A.G. on a resource provision and cost recoverable basis. We would, of course submit a detailed specification of works to be undertaken and any costs, should you wish to commission the full report from B. A. G.

SEC. 8.

ACTIONS CURRENTLY BEING UNDERTAKEN

1. Liaison is taking place though Rod Legear with the Kent Underground Research Group, for them [under the direction of B. A. G.] to undertake a survey and evaluation of the Dene Holes in Joydens Wood.
2. From mid August 98 until May 99, an expanded module on Joydens Wood will be incorporated in the adult education course B. A. G. are providing [Ref. Enc.].
3. In order to stimulate public interest, the Field Officers will lead a series of conducted walks in Joydens Wood, between October 98 and March 99.
4. From mid October, when the undergrowth and foliage has reduced, B. A. G. members and volunteers will commence a programme of field walking in Joydens Wood .
5. Wider ranging documentary research is being implemented.

SEC. 9.

APPENDIX A

EARTHWORKS IN JOYDENS WOOD, BEXLEY, KENT.

By A. H. A. Hogg [1934]

JOYDENS WOOD lies about 1.5 miles to the South-east of Bexley Village, to the East of the River Cray, on a hill of sandy gravel rising to about 250 feet above Ordnance Datum. It has long been known to contain many deneholes, associated with banks and ditches.

Most of these seem to be the remains of a farm site, probably medieval, and its associated fields, lying at the junction of two ancient tracks.

To the west there is a dyke, probably of earlier date, facing towards the Cray valley. Little excavation has been done, and relics are scarce, but in spite of this the remains are of interest.

The farm site is unusually complete and well preserved owing to the absence of later disturbance, and provides a useful indication of the character of medieval agriculture in this area.

It would be unwise to generalise without further work on other sites, but it may be noted that strip lynchets, generally regarded as typical of the early medieval period in most of southern England, are decidedly rare in Kent, and it seems possible that the Joydens Wood type of site may have been more usual.

The dyke belongs to the group of "Grims ditches" partly surrounding London, and is the only one in which any excavation has been carried out.

It is also mentioned in a ninth century boundary survey which is itself of interest and which has not previously been worked out in detail.

Only two accounts of the site which are of any value have been published, and neither deals fully with the remains. F. C. J. Spurrell has published a plan on a scale of approximately 6 inches to one mile, together with a short description, in his paper on "Deneholes." The plan contains a few minor errors, but is generally very accurate and complete.

All subsequent general plans seem to have been based on this survey, and without it the writer's re-survey would have been impossible.

The results of excavations made in a square earthwork in the eastern part of the wood during 1925 by Mr. F. C. Elliston Erwood, F. S. A., have been described by him in a paper on "Roman Antiquities" of North-west Kent, accompanied by a new plan of the square earthwork, and a small scale plan of the other banks, showing a few in addition to Spurrell's. These papers are referred to as *S* and *E* in the following account.

In addition to the above, a plan of the square earthwork, with profiles, and an enlarged plan of the other banks based on *S* were published by Colonel O. E. Ruck in 1906 and there have been a few other minor references.

From 1924 onwards the eastern part of the wood has been sold as small holdings and building plots, but although much cut up and rendered difficult of access very few of the banks have been destroyed.

During 1934 the writer re-surveyed the site on a scale of 1-12500, checking *S*, both on the ground and from two sets of aerial photographs.

EARTH WORKS IN JOYDENS WOOD

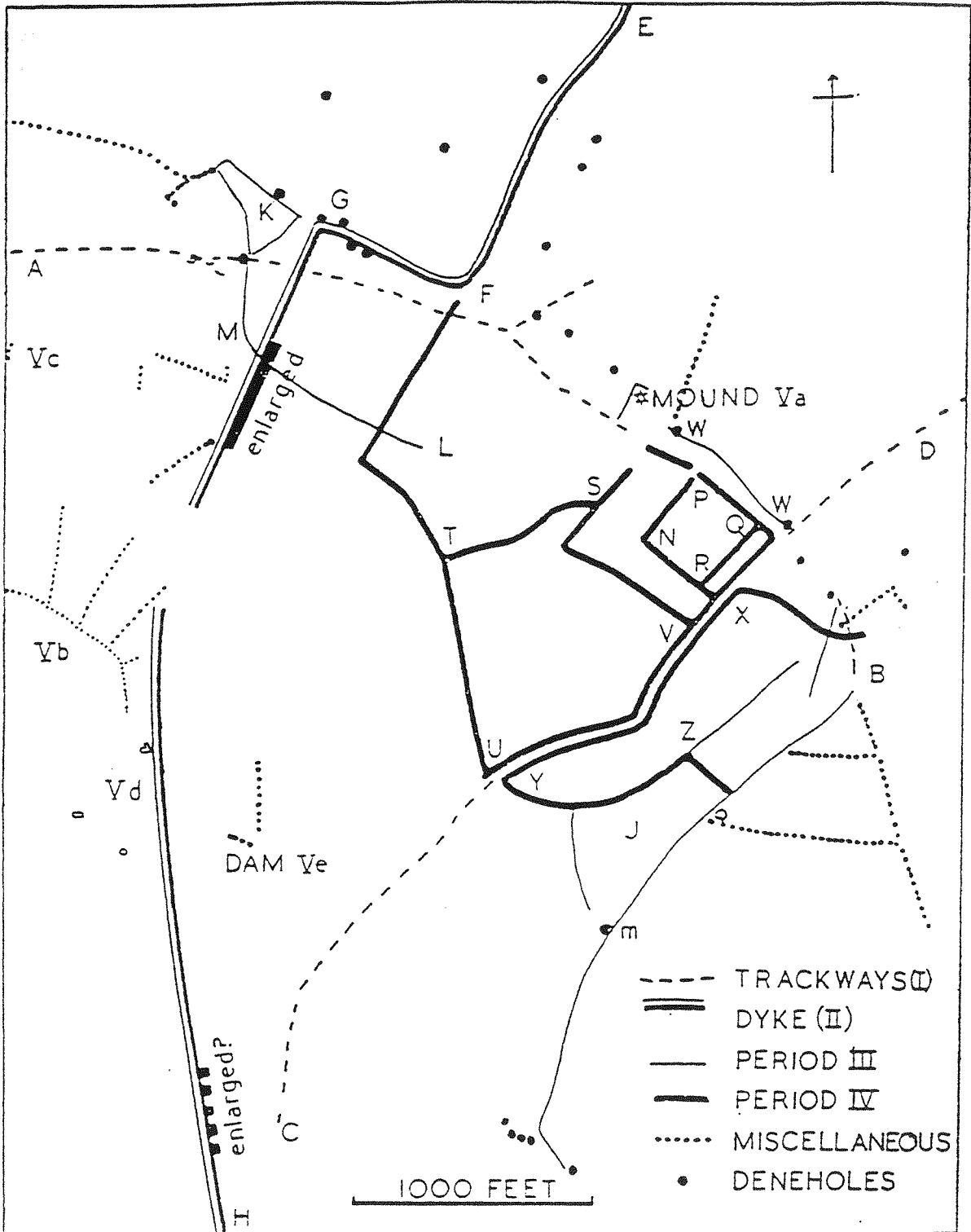


FIG. 2

Conv of the Plan made by A. H. A. HOGG. [1935]

On the plan [Fig. 1], reproduced to 1-17500 scale) those banks which could not be examined are indicated by a different convention.

Deneholes, except where they occur on lines of bank which have been re-surveyed are based either on the 1-12500 O. S. map or on *S*. No attempt has been made to plan the two denchole clusters, as the exact distribution did not seem of sufficient importance to justify the labour involved and a check in Cavey Spring showed both *S* and the O. S. map to be incorrect. Stankey Wood is now built over.

It is clear that the earthworks belong to several periods, but since these are not always certainly distinguishable it was decided to prepare a plan showing all banks of whatever age, and to supplement it by a diagrammatic period plan. (Fig. 2.)

The remains will be described in the order in which they seem to have been constructed, with the exception of the Dyke, which cannot be treated without considering other examples of similar earthworks.

[1] The earliest remains on the site seem to be two tracks **A-B** and **C-D**, which cross at the square earthwork. There is no certain evidence of the date of the Dyke **E-F** and **G-H** relative to these tracks, but it seems reasonable to suppose that their existence formed one of the principal reasons influencing the position of the Dyke. The track **A-B** generally forms a slight hollow between two low banks (**C-D** vert. 12-18 ins.), and seems to have sent off a branch towards Dartford. **C-D**, except where altered by later banks, forms a very faint intermittent hollow track. It may be noted that it leads towards the ford at Dartford, and is unlikely, therefore, to be earlier than that crossing. Its extension to the south is uncertain.

[2] The Dyke seems to have been the first earthwork to be constructed, but will be discussed later.

[3] It seems to have been followed by a system of agriculture involving the cultivation of small fields and the use of chalk to fertilise the sandy soil. The remains of this period fall into two groups, **J** and **K**, both characterised by small banks (**C-D** 12-24 ins.), sometimes forming lynchets, with deneholes on the line of the earthworks. It seems probable that it was during this period that the deneholes were dug on the line of the Dyke at **F-G**, and the Dyke there was converted into a lynchet. The most reasonable explanation of the dencholes is that they provided the chalk to help the poor lime-free sandy soil. The pits at **M** seem to be neither deneholes nor pit dwellings, but are more probably sand pits, similar to those in Rose Wood, near Ightham.

[4] In the last phase of the occupation of the site the double square earthwork and the banks (**C-D** ca. 3 ft.) surrounding the three adjacent fields were constructed. These banks are later than the track **C-D**, and also overlie, and in some cases make use of, the banks of group **J**. The banks **U-T-F** on the west of the old track **C-D** are shown on the Tithe Award Map as the boundary between Baldwynes Wood and Joydens Wood. On the west of the site these latest banks cross the small bank **L-M**, which itself is later than the Dyke. **L-M** seems to belong to period [3], but the bank shown connecting **L-M** to group **K** is very faint indeed and it would be unsafe to base any argument upon it.

**Bexley
Archaeological
Group**

Earth Works in Joydens Wood

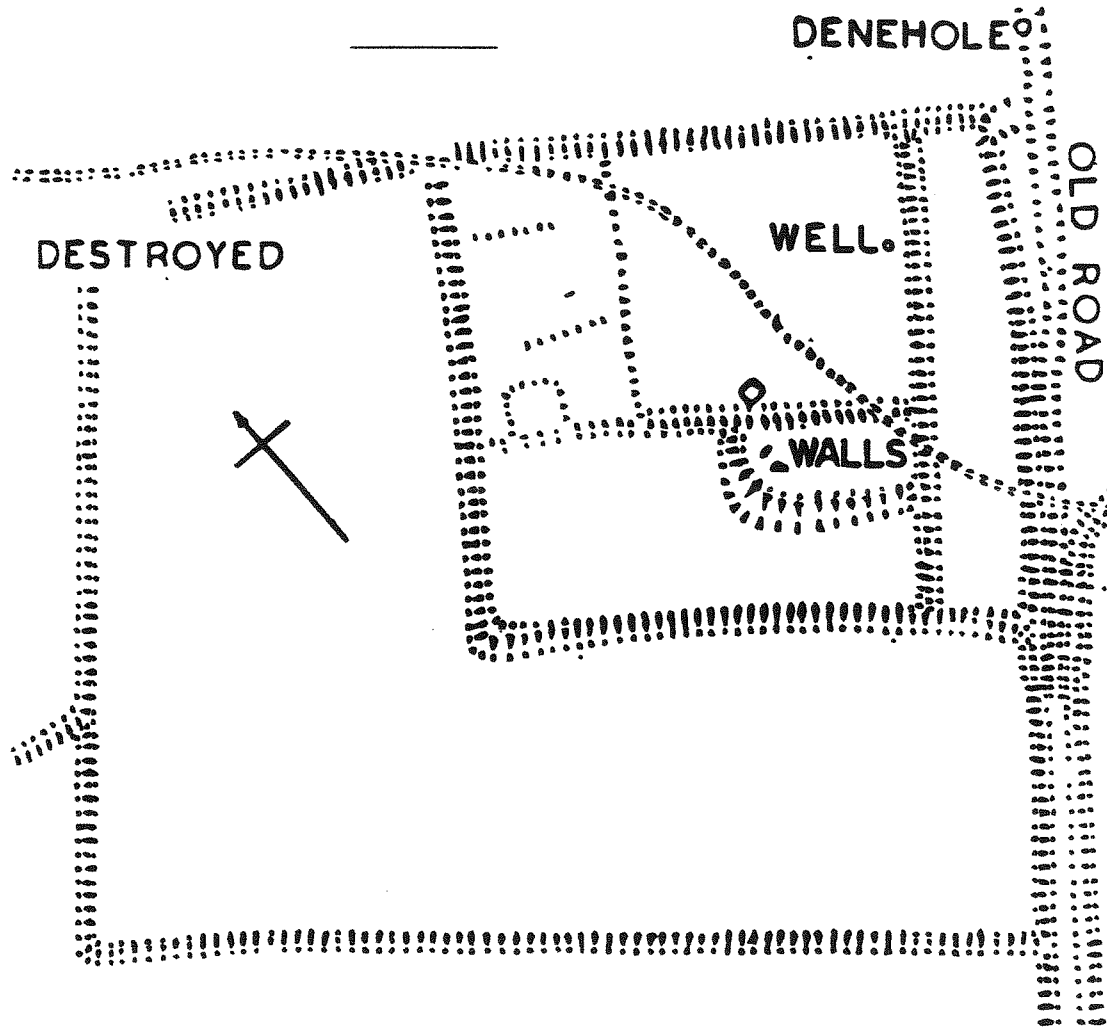


FIG. 3.

Plan of the Square Earthwork

Copy of plan prepared by Mr. Eliston Erwood [1925]

It is possible that the small inner square **N-P-O-R** may be earlier than the other banks, but this is unlikely, for the corner **N** is very large, owing to the extra earth which comes from the ditch at a right-angled corner, where as **Q** shows no increase in size. **P** and **R** have both been disturbed. If the original work had been **N-P-Q-R**, it seems probable that all the corners would be equally enlarged. It is almost certain therefore that **N-P-Q-R** is contemporary with the banks which touch it

The other banks of this group are certainly all of one period.

It is clear from the layout of the enclosures on either side of the track **C-D** that the large enclosures **S-T-U-V** and **X-Y-Z** are contemporary, but at first it appears that the double square may have been constructed later. It will be shown below that this cannot be the case.

An examination of the junction **T** shows that the three banks meeting there are all of one build.

At **S** the bank **S-T** crosses the ditch of the outer square, which cannot therefore be the more recent. But at **V** the ditch of the outer square cuts the bank **U-V** which is contemporary with **S-T**, so the outer square is not earlier than **S-T** and must, therefore, be contemporary with it, as it has been shown that it cannot be later.

It is suggested in **E** that **W-W** formed the North East side of the outer square, but there is no bank on the line to complete the other side, and **W-Y** has more resemblance to the banks of period [3].

A plan of the square earthwork (Fig. 3) is given on a larger scale and shows the arrangements of the internal banks (**C-D** ca. 2') and the position of the foundations found.

The small square foundation dry built of flints is that discovered by Mr. Elliston Erwood. Fifty pieces of medieval pottery were found near it. The other walls, further to the South, are exposed in the sides of a small rubbish pit. They are dry built of chalk and flint, about 18 inches high, and are accompanied by a layer of thin roofing tiles 18 inches below the present surface, evidently from the fallen roof. No complete tile could be recovered, but they are certainly post-Roman. The absence of scattered building material suggests that the superstructure was of timber.

The ruined building seems to have been buried by the construction of the rectangular mound in which it stands, but this is not certain. Sections cut by Mr. Elliston Erwood in the other banks gave no information as to their structure, owing to the way in which the sandy soil "heals", leaving no trace of disturbance, but they are far too regular to be dismissed as natural.

The low lynchets in the north corner indicate that part of the area was cultivated. There is a deep well in the Eastern part of the earthwork, steyned with flints.

It is doubtful whether the pit at the east corner is in fact a collapsed denehole, as the bottom is flat, not bowl-shaped. It is more likely to have been a small sand pit

Spurrell records the finding of Roman pottery within the earthwork, but nothing of Roman date has since been found on the site, and it seems probable that the pottery was coarse medieval ware, which could formerly be picked up on the surface. Apart from this doubtful record, there is nothing to suggest a Roman date for the earthwork.

The relics found have all been of medieval date, and, apart from any other point, the lack of entrances is not characteristic of Roman work. The plan can be very closely paralleled by the site of Preston, Surrey, first mentioned about the twelfth century. It is practically certain, therefore, that the earthwork in Joydens Wood is post-Roman.

The mediaeval foundations of chalk and flint suggest very strongly that some of the deneholes belong to approximately the same date..

Lesness Abbey is known to have held two manors, Baldwyns and Ocholt, in this district. The name of Baldwyns has survived, and in modern times the house stood on the site now occupied by the Mental Hospital North of the wood.

As mentioned above, some of the banks of Group IV form the south boundary of "Baldwynes Woods in Dartford Parish Tithe Award Map.

The name of Ocholt, however, has entirely vanished, but its position agrees very closely with that of the earthworks of Group IV. It is known to have stood on the boundary of Dartford and Wilmington parishes, and part of Ocholt lay between the land of Simon le Hert ["Haec?"]. These names may survive in Lower and Old Harts (adjacent field names on the T.A. map about 1,500 feet north-east of the square earthwork), and possibly in Hook Green. On the Wilmington T.A. map the woodland East of the track C-D is described as Hazely, Baldwyns, and Harts Woods, but no boundaries within the wood are shown.

The T.A. maps also show that most of the wood North of the square earthwork was open at that date. Near the square, the bank W-W formed the boundary of the wood.

Precise identification is not possible, but it seems extremely probable that the square earthwork and attached field are the remains of Ocholt manor, or in some way connected with it. The disappearance of the name may be due either to its absorption by Baldwyns manor, or the two manors may be identical.

Before considering the Dyke, some of the other remains in the wood may be mentioned, but the small banks which were probably connected in some way with the planting of the woods, and the occasional hollow trails and gravel pits, do not need any further description than that given on the plan.

Va. The mound near the north corner of the square earthwork is now practically destroyed. . It was excavated by Spurrell, and nothing was found. It seems to have stood within a small uncultivated rectangle, surrounded by slight lynchets resembling the Group [3] banks. It may have formed the site of a windmill but there is no evidence.

Vb. A group of Lynchets on the South side of the valley.

Vc. Corner of an earthwork (O-H 50' C-D vert. 2-.5') on the top of a small hill forming the end of a promontory. Most of the site has been destroyed by old gravel pits

Vd. Two probable hut sites and a round pit, date unknown.

Ve. A small Dam across the head of a valley

Vf. (not on diagram). Hadlow Well, a spring pond in the West of the wood on the parish boundary. At present the only permanent source of water in the wood.

The Dyke, [2], perhaps the most interesting of the earthworks in the wood, has been fully described in a [note iii] in the Antiquity Journal. It is to be identified with a " faestendic " referred to in a Saxon boundary survey dated AD. 814. This survey is discussed in Appendix 10.

The description which follows is substantially that given in Antiquity with a few additions. The plate of profiles is not reproduced here, but the points at which they were taken are indicated.

The Northern end of the dyke lies on the East side of a shallow valley running Northwards but the steep slope on which the Dyke ends dies out a short distance to the South.

The Dyke extended to the South of the wood but the ground has been cultivated for many years. Two sections were cut, one, 600 feet south of the footpath, through the bank and ditch, the other, near the South end of the Dyke, through the bank only. They are shown in Fig. 4. No evidence as to the date of the earthwork was found in either.

For section [1] a trench 3 feet wide and 40 feet long was cut across the bank and ditch, and was widened to 6 feet in the centre of the bank where small potsherds were found. The soil of this wood " heals " very completely, and the section of the ditch was obscure, but it seems to have had a blunt V shape, the bottom being. about 3 feet deeper than at present. When it had silted up to its present level, the ditch was used as a cart track. In the Western rut was found a horse shoe, of the small medieval type.

The old surface line under the bank was marked by a layer of very clean white sand with some pebbles. Over this was a bank about 14 feet wide and 3 feet 6 inches high of clean whitish sandy gravel with some thin horizontal iron-stained lines.

Behind this bank was a layer 5 feet wide by 1 foot thick of very hard gravel, stained dark brown. Above this was a layer of loamy sand, dirty yellowish, with many pebbles near the top of the bank, becoming greyer and more sandy over the gravel layer.

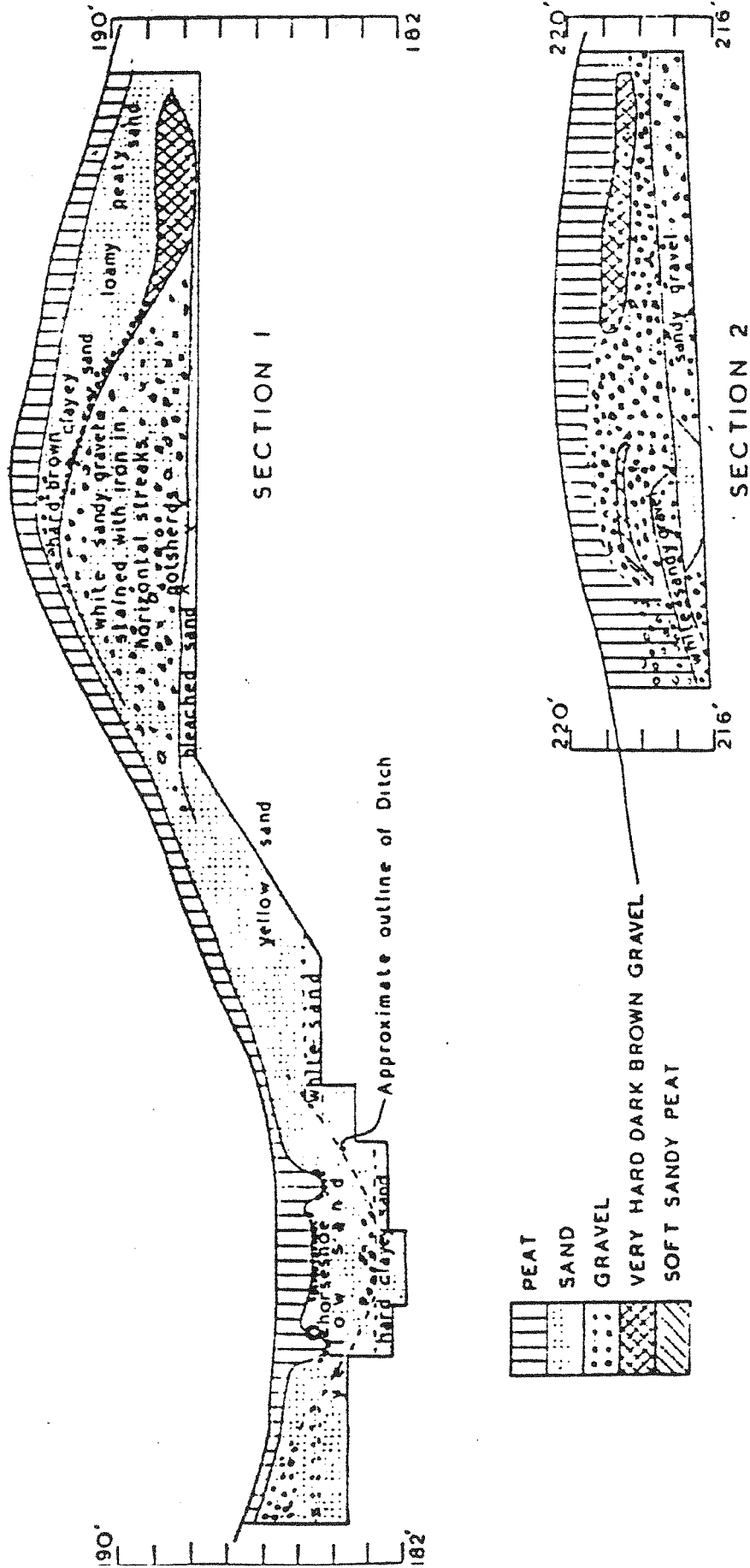
In the white sand layer marking the old surface line, as indicated, three small fragments of pottery were found. Mr. C. F. C. Hawkes has examined them, but they are so small that they cannot be dated, except to say that they are probably not Roman and not before 100 BC. Their description is size:-

- X 0.4 X 0.25 ins. thick, pink surface, grey centre.
- X 0.5 X 0.25 ins. thick, slightly curved, very sandy grey clay, grey inner surface, brown outside.
- A fragment about 1 in. square X 0.3 ins. thick, of soft red clay.

The appearance of this section suggested that the original Dyke was formed by the bank of clean whitish gravel, with the hard gravel layer forming a track behind the bank, and that the Dyke had later been enlarged by the addition of the layer of loamy sand. As mentioned above, this part of the earthwork is of stronger profile than is usual

Section [2] was dug across the bank only at a point near the South end of the Dyke. Its object was principally to determine whether the hard gravel layer found in Section [1]

EARTHWORKS IN JOYDENS WOOD,



did in fact extend for the full length of the earthwork. Time did not permit a section to be taken across the ditch. The original surface and subsoil were discoloured sandy gravel, containing a few burnt pebbles. Near the front of the bank was a hollow filled with grey sand, apparently natural

The Dyke was formed principally of dirty yellow sandy gravel. In the front of the bank was a soft sandy layer, stained dark brown. It does not seem to have served any structural purpose.

At the back of the bank the hard dark brown gravel layer again appeared, 7 feet wide and about 9 inches thick

A few flint flakes were found in the dirty yellow gravel. Section [2] therefore confirms the conclusions based on Section [1].

It is certain that the Dyke was in existence before the ninth century, that it was interrupted at a steep sided valley, that it was in parts enlarged at an unknown date, and that it was originally followed by a hard gravel path behind the bank. This last feature has not been recorded from any similar work, but it is to be hoped that it may ultimately be found in a dated dyke.

It is also of interest as suggesting that the line of the earthwork was intended to be patrolled

The date of the Dyke must remain uncertain, but the evidence points to the Dark Ages, rather than to the Roman or pre-Roman periods. Dr. R. E. M. Wheeler has recently drawn attention to the dyke systems surrounding London and has argued convincingly for a fifth or sixth century date for the Chiltern Grims ditches and the Pinner and Bexleydykes.

It has been noted in the papers referred to that these dykes do not usually descend into the valleys, but it does not seem to have been pointed out that if the valleys themselves are regarded as obstacles, the Chiltern dykes and valleys together form a continuous frontier for a considerable distance, and although the Pinner and Bexley dykes are much shorter.

- This suggests the hypothesis that the dykes belong to a period when the uplands were cleared and the valleys still wooded, rather than that they protected cultivated valleys.
- This point, however, does not affect the main argument for dating, that the Chiltern uplands with their covering of heavy clay can hardly have been cleared before the end of the Roman period.
- It may be noted. that parish boundaries seem to avoid rather than to follow the dykes, but as it is certain that the earthworks are not later than the Dark Ages, this remains equally remarkable whatever dating is proposed. Possibly the boundaries follow the actual edge of the original clearing. Offa's and Wats dykes show the same phenomenon.
- It has been necessary to consider the Chiltern remains in order to show the similarities between them and the Bexley example, but it would be out of place in a paper describing the Bexley earthworks to enter into a general discussion of the purpose of these dykes.
- The distribution of relics in the Cray and Darenth valleys also points to a date in the Dark Ages. The Iron Age is almost unrepresented, Romano-British remains are

equally frequent in both valleys, but objects of the pagan Saxon period are practically confined to the Darenth valley. Their distribution is shown on the map (Fig. 5).

To attempt to date the dyke by these arguments is very hazardous, however, and there can be no certainty until more work has been done on similar remains. The Chiltern Grims Ditches offer the most promising field for excavation.

If the Bexley Dyke in fact belongs to the Dark Ages, its construction must surely be connected with the fighting in this district recorded in the Anglo-Saxon Chronicle as the battle of Creeganford, in A.D. 457, and by Nennius as the first of the battles of Vortimer, at the river Darenth, but in the present state of our knowledge it would be unprofitable to attempt to assign it to any particular phase in the struggle.

I am deeply indebted to Mr. M. D. V. Holt, the owner of the western part of the wood, for permission to examine the site, and for much help in locating the earthworks ; to Mr. Hawkes for examining the pottery; to Dr. R. E. A. Wheeler and Mr. O. G. S. Crawford. for much help and advice; and to all those who have either helped me with the survey or permitted me to examine earthworks on their land. The objects found are now in the possession of Mr. Holt.

SEC. 10.

APENDIX B

A REVIEW OF THE BEXLEY 814AD. CHARTER

We are very fortunate in the Borough of Bexley in having a copy of charter available to us from such an early date. The Bexley Charter was copied in circa 1125AD and is written in a mixture of Latin, Norman-French and Old English, which poses problems with its translation.

The charter has been evaluated by several scholars, most notably by W. de Gray Birch, K. P. Witney, J. K. Wallenberg and Professor Dorothy Whitelock. The much respected Mediaeval expert W. H. Stevenson verified that the 1125AD copy was genuine.

The document is very comprehensive, covering the Land grant, Woodland rights, Panage rights and Manorial privileges. Granted by King Cenwulf of Mercia [who was also ruler of Kent], to the then Archbishop of Canterbury, Wulfred.

The land grant section of the Charter records that Cenwulf granted "Ten Ploughlands in the place called Bexley". It must be borne in mind that the Ploughlands were only the land under cultivation, the total land granted covered a considerably larger area, including woodlands, heath land and water meadows [Shweetlands].

If we accept that one ploughland is approximately nine to thirteen acres, making a total of ninety to a hundred and thirty acres, it strongly suggests that there was in practice ten ploughs working in Bexley at that time. We do not know for certain who personally owned the ploughs, but if evidence is used from other Kentish Villages where we do have information on plough ownership, we can estimate that three of the Bexley ploughs would have been owned by the lord of the Manor, four by the more wealthy landowners and three sheared by the smaller freeholder's. Seasonal ploughing was very much a communal task. It was not uncommon for the Lord of the Manor to borrow a small freeholders draught animal to make up his team to draw his plough.

For the archaeologist the charter is interesting from a general as well as local viewpoint as it gives us an indicator of where the early settlements were sited, the social structure and the economic and spiritual practices of that time locally, which allows us to draw comparisons with other similar areas nationally.

Although of considerable interest to the historian, the section of the charter recording the granting of Manorial Privileges is of limited value to the archaeologist, so has been omitted from this review.

THE LAND GRANT

The part of the charter dealing with the land grant may be translated as follows:-

I, Cenwulf, by God's grace King of the Mercians.

Give to Wulfred the archbishop some part of the land belonging to my right.

Since the Apostle says "the Lord loveth a cheerful giver"; and this is in a place called Bexley, and consists of ten Ploughlands, to be held in perpetual possession.

This land shall remain free of service other than work on strongholds, service in the host and bridge-building.

If anyone deny this gift, may God deny him entry into eternal life.

And this portion of country is encircled by the following boundaries:-

AEREST UP OF CRAEGAN ON FULAN RITHE

First, up from the river Cray on the Dirty stream;

ANDLANG RITHE OTH THONE FAESTENDIC

Along the stream as far as the Strong Ditch [Dyke];

ANDLANG DICES OTH THONE GEBYHTE

Along the Ditch to the Bend;

OF THAM GEBYHTE ANDLANG HAGAN OTH CYNINGES HEAL

From the Bend along the fenced enclosure as far as the King's Hollow [Corner];

THANNON ADDLING HAGAN UT ON CRANAGE

From that point along the enclosure to the river Cray;

ADDLING CRANAGE OTH THANE HAGAN.

Along the Cray to a Fenced Enclosure;

ADDLING HAGAN OTH PETIOLE SHANNON

Along the Enclosure to a Field with a Path in it;

OF ADDLING PAGAN OTH AESCBURNAN

From that point along the enclosure to the Ashburn [probably the present river Shuttle];

OF THAM BURNAN ANDLANG HAGAN UN CASINGSTRAETE

From the stream along the enclosure to Casingstraet [part of Watling Street on a stretch of high ground between Welling and Crayford];

EAST ANDLANG STRAETE ON SCOFFOCES SAE

Eastwards along the road to Scoffoces Lake [an unidentified lake];

THANON NORTH ANDLANG STRAETE OTH LYTLANLEA

Then Northward along the road as far as Lytlanlea [a little clearing, possibly giving the name

to the "Hundred" of Little and Lessness];

EAST FRAM THAM LEA ANDLANG MEARCE OTH ENEDE MERE

Then Eastward along the boundary as far as the Duck Pond;

SUTH RITHE OF THAM MERE ON BURNES STEDE

Then due South of the pond to Burnes Stede [probably Bursted Wood];

THEN ON ANDLANG HAGAN OTH CASINGSTRAETE

Then along the enclosure as far as Casingstraet;

ANDLANG STRAETE OTH THONE CALEWAN TELGAN

Along the street to the Bare Boughs;

THANON UT ON CRAEGAN SWA EFT ON FULAN RITHE

Then along the Cray; thus back to the Dirty Stream.

RELATING THE LAND GRANT TO PRESENT DAY BEXLEY

Some of these place-names are difficult to identify, but the Bexley boundaries as they have been conjecturally identified on a modern map, correspond quite closely with the permanent parish boundaries

We should not find it surprising that the early land boundaries of Bexley should correspond with the boundaries of our modern parish. The early Germanic peoples practised an agricultural economy and would have sited their settlements so that arable and meadow, wood and rough pasture could support the local community and economy. These social and economic units were recognised by the early Christian church and adopted as the basis for the parish system of administration.

We can trace where the boundaries actually run across the present day landscape. Even today, there are some boundaries recorded in this Charter still in evidence, that have not changed, since they were first granted in 814AD.

The starting point given in this charter is most probably at the River Cray on the Eastern side of Hall Place Recreation Ground, the boundary then veers East to join the stream that rises just outside Crayford. Part of this stream's course runs on the Northern side of Joydens Wood. The suggestion of it being a Dirty stream, may be due to the rain water percolating through the dark brown sandy gravel's and bleaching the colour out, this activity could have discoloured this small stream.]

Along this stream South, to where the Strong Ditch [Dyke] begins at the edge of Dartford Heath, on the southern side of the newest section of Dartford by-pass [A2/M2]. The Dyke appears here at the top of the ridge above a stream. From its start as far as the bend in the Dyke, where it enters Joydens Wood, still forms the present day boundary between the Borough of Bexley and the Borough of Dartford,

At the bend in the Dyke is where it is joined by the crossing of the ancient North to West and the South to-East sunken track ways which run across the wood. These track ways appear to have been in use before the Dyke was constructed. From the crossing of the track ways, the boundary turns West and probably follows the track way to a point now under the Electricity Sub Station, which is part of the area called King's Hollow, Corner or Hall ?. [It is possible that a Royal Hunting lodge once existed on the edge of the Joydens Wood, some half a mile South of Bexley Village.]

From the site of the Kings Hollow/Corner. The boundary runs over the area now full of riding stables, to meet the River Cray where it adjoins with Upper College Farm. It then follows the river to the South-West. The boundary then turns to North-West.

There are a couple of places at this point where the boundary could have diverged. If it ran due South it would encroach on the boundary of North Cray Parish. It appears more probable that it turned North-West somewhere near Water Lane, going along the present day path, then across fields, to meet the River Shuttle at a position now thought to be near to the modern Penhill Bridge. [*Acseburnan could be corrupted to Shuttle from, "Stream by the clearing through the Ash Wood".] The original suggestion by Hogg [op.cit.] that Aesebuman refers to the Wyncham Stream at Halfway Street, Sidcup, would seem to create a too long a boundary without the charter recording any intermediate features or identifiable positions, to denote its course.*

The Charter informs us that the boundary ran. "From the stream [Shuttle/Wyncham] along a hedge to Casincgstraete". This suggests that the boundary does not follow the stream, but diverts Northwards towards the Roman Road somewhere in the vicinity of Welling High Street. This Northerly course would keep the boundary to the high land between the tributaries of the River Shuttle. [*It may possibly have also formed the Western boundary of the Dansington Estate.?*]

The Romano-British wayside settlement of Noviomago is thought by many sources, to have been in the area of Welling High Street, just to the West of where the boundary

met Casinegstraete, [later called Watling Street]. It is around this area that Romano-British burials have been discovered.

The boundary then goes East along the route of the Roman Road until it meets another street going north at "Scoffocces" marsh. *[If one looks at the lie of the land around the area of Bexleyheath Cricket Ground and the Northern side of Danson Park there is an area of land here that is lower than the surrounding areas to the North, East and South with no visible natural surface drainage. Well within living memory this area was given to flooding and was "boggy" except in the very dry weather.]*

The street mentioned at this point in the charter follows closely, or is under the present day Gipsy Road. This boundary was still extant in the early years of this century as the boundary of Bexley Parish with East Wickham Parish

The text would indicate that somewhere around the junction with Long Lane and King Harolds Way there was a small clearing (Lytianica) which may be either what is now Little Heath or slightly more to the North at West Heath.

From Little or West Heath the boundary turns East along the "Oak Enclosure". This is almost certainly the Southern edge of Abbey Wood, which continues all the way along to the old Duck Pond near Bedonwell School. *[Until recent times, when the area was drained for housing development, there had been a series of duck ponds on the stream which flows East from Bedonwell through Parsonage Manor Farm].*

The boundary turns south from the Duck Pond through a small valley in which a stream still flows, past a collection of houses. Arriving at Bursted Wood. [It is probable that Bursted is a corruption of the Burnes Stede mentioned in the Charter].

From the stream the boundary reconnects with the Roman Road possibly at Martens Grove. *[It is likely that the "Calewan Telgan" [Bear white trees] recorded in the Charter refers to Silver Birches, whose descendants still flourish on the spur at Martens Grove. [When houses were built at Old Road, Crayford, a collection of Iron-Age hutment's were found at the Western end near to the rough ground at the spur of the hill at Martens Grove.]*

No sign of the Roman road has been found on the present route Of Watling Street, between Bexleyheath Broadway and the ford at Crayford. If the Roman road followed this route it would had to have been constructed over marshy land before crossing the river at Crayford. The road is more likely to have kept to the top of the Heath, passing North of the spring and steep valley of Martens Grove, until meeting with the Iron-Age village, to the West of where St. Paulinus Church now stands on the top of the hill above Crayford. From here the road could have gone down the hill and straight over the river.

At Martens Grove, the boundary could then go due South to rejoin the River Cray, at the Eastern side of the Hall Place recreation ground, which was the starting point of the boundaries described. in the Land Grant section of the Charter.

To stretch the boundaries of the 814AD Bexley Land Grant any further West or South during the period the Charter covers would include the area of woodland known as Westwood and also most of the valley of the Shuttle and Wyncham rivers. These parts of Bexley would appear to be later additions, and only included after the land was

cleared. The same rationale can be applied to the slopes of Shooters Hill, which was probably found to be too stony to support viable agriculture at that time.

PANAGE AND WOODLAND RIGHTS

The section of the Charter recording Pannage [grazing] rights demonstrates the inter linking of manors some distance apart. The right of turning your pigs out into woodlands to feed on the acorns and roots was of considerable value to people in the Medieval world, and should not be underestimated.

The practice of driving herds of swine from the home manor to woodlands where that manor had grazing rights gave rise to the "Drover Roads" which until the coming of the Motor ways, was such a feature of the South East of England's countryside. One of Bexley's ancient Drover Roads which in parts can still be followed is the old North Cray Road, Sandy Lane, through St. Mary's Cray to Orpington, Green Street Green and then on to the forests of the Weald of Kent. Probably the most well known Drover Road is the Old Kent Road, which ran from Bexley through the villages of Lee, Lewisham and what was latter known as New Cross to the large [mainly ecclesiastical] estates in Southwark, Bermondsey and Lambeth, where the animals would be fattened before being driven across London Bridge for slaughter and sale in the City of London.

The Charter records that pigs were driven from Bexley, along Drover Roads to swine pastures belonging to Bexley, in the places given below:-

Helfrethingdenn	[Frienden in Chiddingstone].
Hunbealdinghola	[Tub's Hole in Penshurst],
Frumesingleah	[Friends in Edenbridge, now Localhurst],
Burnesstedesdenn	[possibly Furnace Farm in Hever].
Heanfre	[Hever, near Chiddingstone].
Spachrycg	[Pokerage in Hever?] <i>described as on the eastern side of the boundary</i>
Plumwearding Pearrocas	[Park Wood in Chiddingstone?] <i>on the southern side of the boundary.</i>
Lind Cyline	[the lime-kiln or, possibly, Linckhill] <i>on the western boundary,</i>
Avene	[the Eden?] <i>on the northern boundary.</i>

WOODLAND MANAGEMENT

As noted earlier in this review, a considerable amount of the land included in the 814AD Charter was woodland [Hoatha] and heath land [Wastlan]. The great woodlands of Westwood which covered an area from Shooters Hill to Danson Lane in one direction and from Blackfen to nearly Well Hall in the other is not included in the land grant and was not included in the Bexley area till a latter period. Unfortunately the charter is not specific as to the total area of woodland, but by careful research a reasonable estimate can be arrived at.

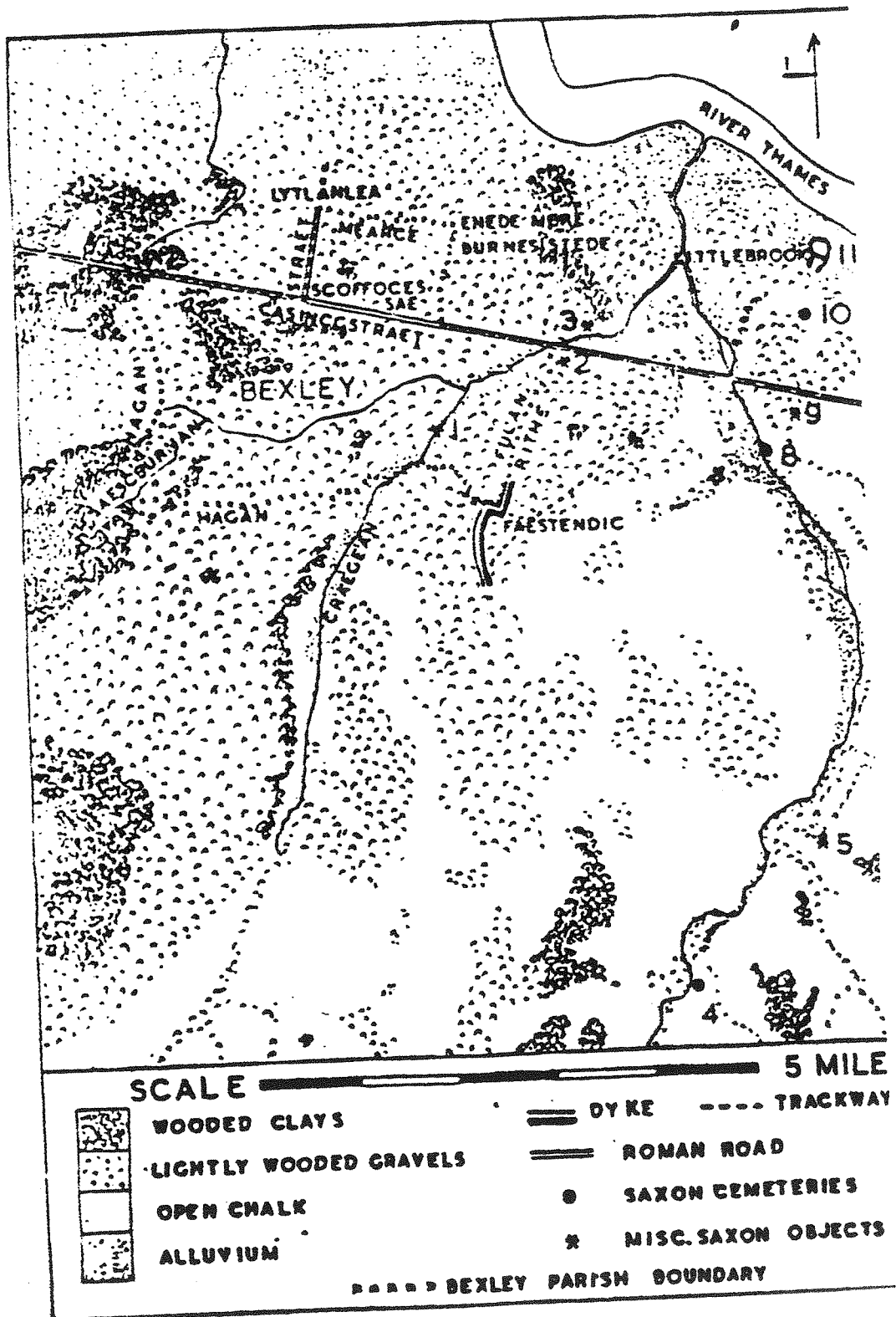
Woodlands provided much that was essential to the residence of Bexley during this period, wood for building, heating, cooking, fencing and game for hunting, also grazing for their domestic animals. Good woodland management was not just important it was vital for the survival and prosperity of the community, hence

woodland laws were formulated and rigorously applied, although not with the barbarity of the forestry laws after the Norman conquest.

Sadly only small pockets of the ancient woodlands of Bexley survive, such as Bexley Wood, the much reduced Bursted Wood, Martens Grove and Franks Park. Bexley Wood still retains some earth works which have been identified as deer runs, although these are from a much latter period [circa 1250AD] than the charter. There can be no doubt that woodlands were Coppiced from a very early time and formed one of the main commercial factors in woodland management. Coppicing continued to be widely practised well into the 1930's and still is practised on a limited scale as part of some woodland management schemes.

BEXLEY ARCHAEOLOGICAL GROUP

AREA OF BEXLEY RECORDED IN THE 814AD CHARTER



Copy of plan prepared by A. H. A. Hogg [1934]

APPENDIX -C Historic Maps

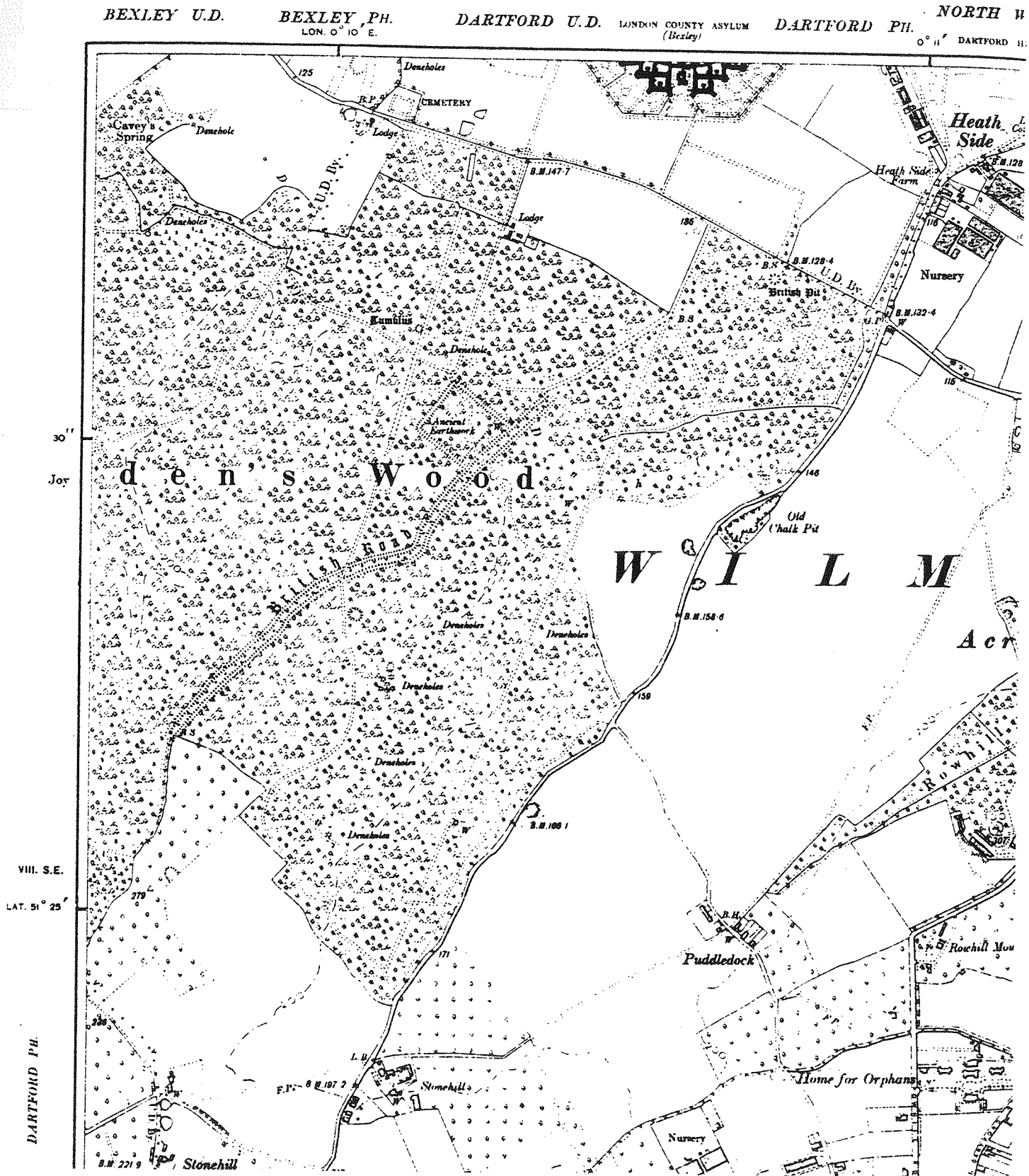


Figure (i) Eastern portion of Joyden's Wood (now beneath housing development), taken from OS edition of 1910 (based on 1862-67 survey).

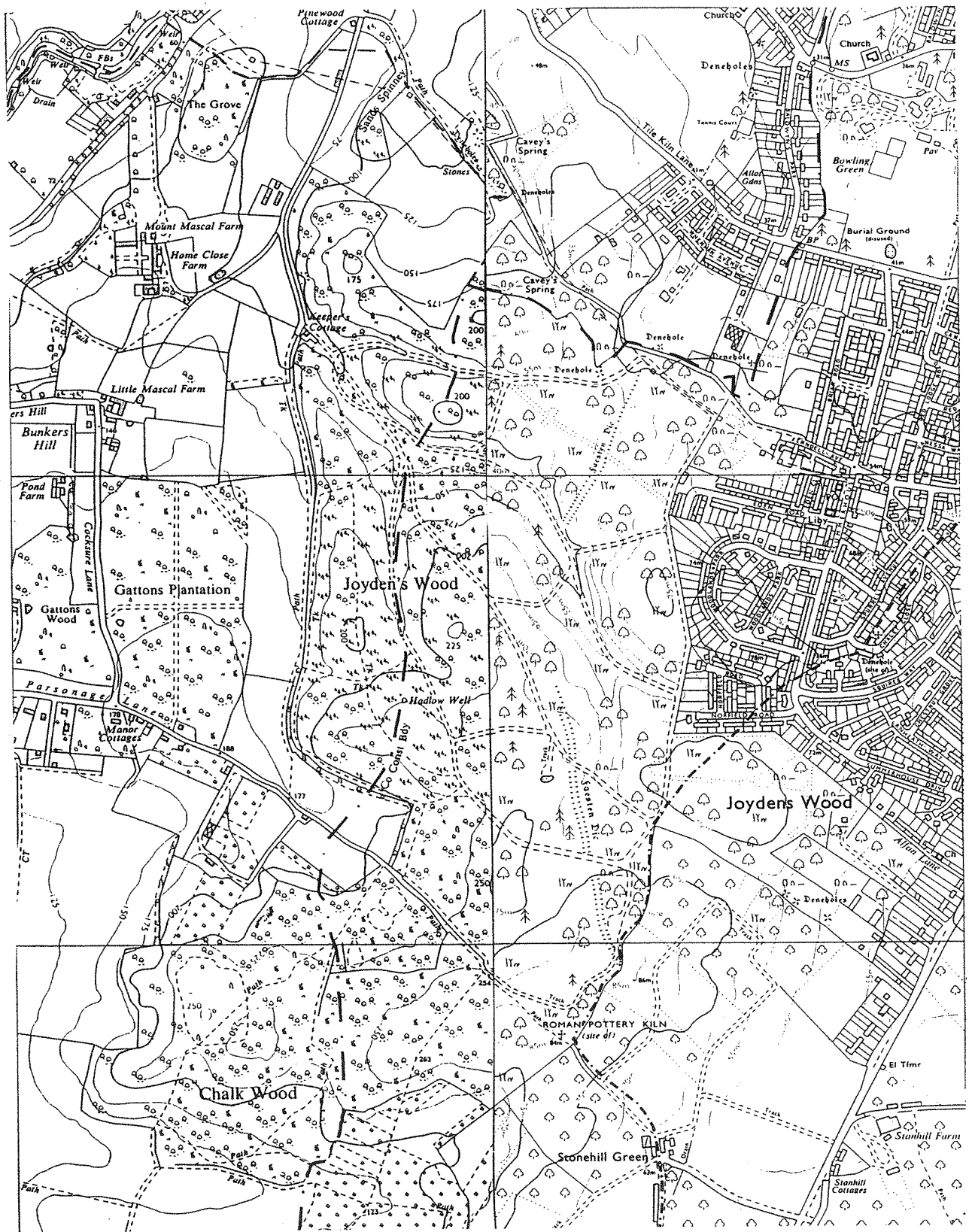


Figure (ii) Joyden's Wood shown in extract from OS edition of 1966 & 1975.



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