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**Stowe Farm, Lincolnshire:
A Multi-Period Archaeological Site in its Landscape**

By:

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I would like to dedicate this thesis to my wife, Dr Rebecca Casa.

Summary

Stowe Farm is located near West Deeping, Lincolnshire, in the Lower Welland Valley, a landscape characterised by the presence of many important archaeological sites discovered during past and more recent gravel extraction.

Stowe Farm was one of the many projects instigated by extraction which prompted investigations between 1994 and 2000. However, the analysis of the site was not completed and disseminated.

This MPhil project has collated the Stowe Farm archival material and completed the work that was started back in 1994, with the aim to produce a cohesive site narrative and offer further contribution to the characterisation and contextualisation of the rich archaeological landscape of the Lower Welland Valley. In order to construct a more informed narrative, it has included broader comparative information complemented by environmental evidence.

One of the major difficulties encountered during this MPhil research project was represented by the paucity of dating evidence. In addition, the loss of the material archive has precluded the possibility to reassess the original generic date range offered for the ceramic assemblages. Despite these issues, a cohesive narrative of the site of Stowe Farm has been constructed.

The analysis of the evidence has offered the opportunity to gain further insight into the spatial and chronological development of the Lower Welland Valley landscape during the later prehistoric period. It has also enabled the author to identify Neolithic settlement of regional and national importance, Bronze Age ritual, funerary and agricultural activities and specialisation in livestock management during the Iron Age.

The archaeological record from Stowe Farm shows patterns of local and regional variations, as well as patterns of similarities with sites distributed across Britain and Ireland, the interaction of which contributes to the distinct character of the Lower Welland Valley.

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CHAPTER 1

GENERAL INTRODUCTION

1.1 INTRODUCTION

Stowe Farm is located near West Deeping, Lincolnshire, in the Lower Welland Valley (NGR 509993/311098) (*Figure 1*). It sits on the edge of the East Anglian Fenland, in a landscape characterised by the presence of many important archaeological sites, with particular reference to the prehistoric period. This landscape stretches from the Etton – Maxey area in Cambridgeshire to the Deepings in Lincolnshire.

Gravel quarrying was, and still is, the catalyst for the discovery of many archaeological sites in this area, the investigation of which has offered, and continue to offer, the opportunity to assess large portions of the river valley.

Stowe Farm was one of the many projects completed in advance of extraction and funded by the gravel industry. Unlike Etton - Maxey and West Deeping, however, the investigation and analysis of Stowe Farm were not completed and disseminated. Only interim reports were produced, and the archive was not integrated and interrogated.

This MPhil project collates the Stowe Farm archival material and completes the work that was started back in 1994, with the aim to produce an informed site narrative and offer further contribution to the characterisation of the rich archaeological landscape in the context of the Lower Welland Valley.

Despite the paucity of datable material from the excavated contexts, the author has successfully produced a chronologically framed site narrative based on the re-interpretation of the original site archive. The author has reviewed the available evidence and re-interpreted the original phasing by analysing feature relationships and introducing comparative information from sites in the immediate vicinity and beyond. As a result, he

has proposed a new interpretation of the Stowe Farm site, suggesting the presence of an Early Neolithic settlement in the Lower Welland Valley landscape at a time when the river system was particularly active and flooding episodes frequent, followed by the creation of field systems for mixed agricultural activities in the course of the Bronze Age and Iron Age.

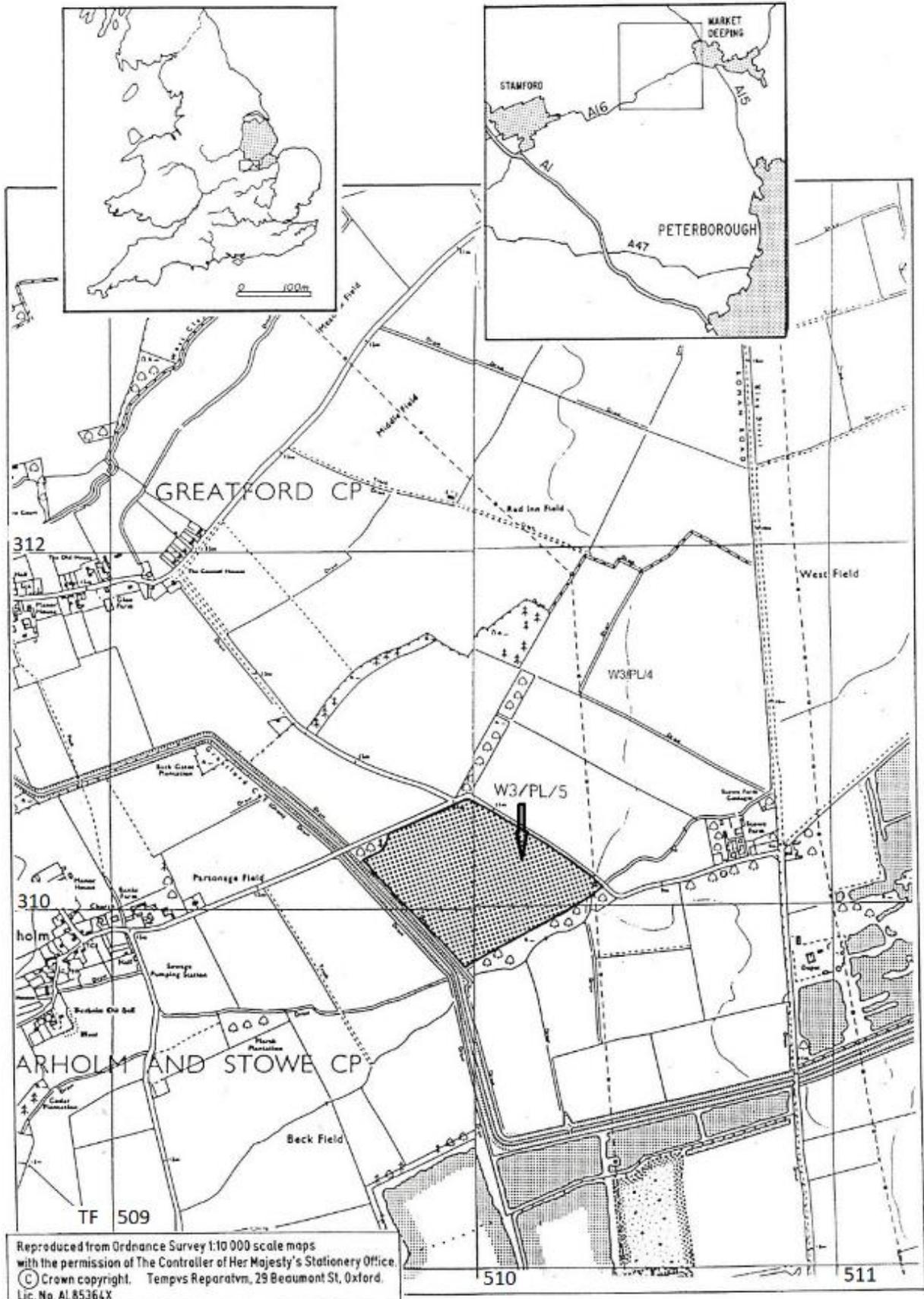


Figure 1 Stowe Farm Location Map (after Kiberd 1996)

1.2 PREVIOUS INVESTIGATIONS AT STOWE FARM

Archaeological excavations at Stowe Farm, West Deeping, Lincolnshire (*Figure 1*) was undertaken in advance of gravel extraction at one of the quarries operated by Redlands Aggregates. The investigation into the development of the local landscape at Stowe Farm began in 1989 with a review of the archaeological potential published in the form of a desk-based assessment (Howlett & Davidson 1994). As part of the programme of non-intrusive evaluation, analysis of aerial photographs, historic survey, geophysics and fieldwalking were carried out to identify the likelihood of archaeological remains being present on the site of Stowe Farm.

Based on the information gained from the non-intrusive surveys, a programme of evaluation by trial trenching was implemented across the area in late 1994, based on the specification produced by Howlett (1994), in order to characterise the extent of survival, degree of preservation, form, function and date of buried remains. The Local Authority's brief for the specification of work was not available at the time this thesis was being written.

Archaeologically, the site appeared to contain a complex system of ditches and pits dated to the prehistoric period. In addition, the site had the potential to include ceremonial and domestic elements.

The archaeological evidence recovered from the evaluation by trial trenching was the basis for the later instigation of open area phased excavation, which commenced in 1995.

Initially, the archaeological investigation was undertaken by Tempus Reparatum, who carried out a series of interventions following guidance contained within the Stowe farm Extension (W3/PL/5) report (Howlett 1995) and the stripping programme determined by Redlands Aggregates. At the end of the 1996 excavation season, following the submission of the site interim reports, Tempus Reparatum relinquished responsibility of the archaeological investigation at Stowe Farm, which had been transferred to Cambridgeshire County Council Archaeological Field Unit (CCCAFU) by the quarry operator, now known as Lafrage Redlands Aggregates. The CCCAFU was entrusted with the excavation of the site, which was conducted from 1996 to 2000. Although the

fieldwork was followed by the publication of interim reports, for reasons unknown to the author a post-excavation assessment and updated project design were never produced, and the site remained unpublished.

1.3 AIMS AND METHODS OF THE CURRENT RESEARCH

The main objective of this MPhil project is to construct a coherent narrative of the Stowe Farm landscape using the excavation archives from the previous investigations. It also aims to interpret the excavated archaeological features and place them in the context of the region's prehistory and history, and to identify future research priorities for the Lower Welland Valley based on the results from the Stowe Farm archaeological investigations.

Throughout the writing process it has become apparent that the targeted excavation of features and subsequent recording techniques originally employed at Stowe Farm were inconsistent, at times. This manifests itself in the case of many identified Neolithic structures which were not fully investigated. Lack of full excavation has partly precluded the opportunity to produce an informed characterisation of these features and obtain conclusive dating for them. Similarly, a number of junctions and intersections of the ditches defining the multi-period Bronze Age and Iron Age field systems were not investigated, with consequences for the identification of accurate sequences and phasing. The general standard of recording of the excavated features was satisfactory, despite some inconsistencies in the level of detailing of the information generated.

Notwithstanding some degree of loss and disturbance caused by intensive ploughing of relatively shallow features, as well as decay, the original methodology has not always successfully translated into maximisation of finds' retrieval from features assigned to those prehistoric periods, namely the Neolithic, which are often difficult to date on the basis of artefactual evidence.

The paucity of artefacts recovered has been the major limitation to this study, as it has impacted on the accurate definition of the site chronology, hence the need to refer to

comparative information from other sites in order to produce a reliable chronological framework.

1.4 THESIS OUTLINE

The present chapter offers an overview of the archaeological work undertaken along the Lower Welland Valley, thus providing a context for the site of Stowe Farm. Chapter 2 analyses the impact of the River Welland on the landscape considering geology and topography, as well as palaeo-environmental data recovered from local sites. Collectively, these elements enable a picture to be developed of the local environmental changes in the Lower Welland Valley, from the Early Holocene to the medieval period and beyond. Chapter 3 presents the results from previous archaeological work undertaken at the Stowe Farm site. Chapter 4 explains the original methodology adopted to investigate the Stowe Farm site, ranging from the non-intrusive methods, such as aerial photography, field-walking and geophysical survey to open excavation and recording strategy for site data collection. It also presents the methods that the author has followed as part of this research. The results are considered in Chapter 5, which presents the author's own interpretation of the excavated features by period and phases. Chapter 6 includes the author's discussion, bringing together evidence from the excavations of Stowe Farm and information from comparable sites to enhance the Stowe Farm narrative. The final chapter, Chapter 7, contains the conclusions and identifies the scope for further work. More detailed information from the original site records is presented in relevant appendices.

This research has demonstrated that the site at Stowe Farm represents a dynamic prehistoric and historic landscape predominantly characterised by agricultural activity, together with elements of occupation evidence that appears to diminish in intensity through time. Archaeological evidence also demonstrates use of the landscape from the Early Neolithic to the medieval period and beyond.

The earliest evidence for activity is characterised by the presence of extensive settlement occupation dating to the Early Neolithic, although economic activity for this period is elusive.

During the Late Neolithic / Early Bronze Age transition the landscape appears to become the theatre of ritual and funerary activities, with no evidence for domestic occupation and limited indication of subsistence.

In the course of the Bronze Age, the landscape becomes more formalised with the construction of ditched enclosures for the purpose of sustaining a mixed pastoral and agrarian economy.

The trend of landscape division associated with a mixed economy continues into the Iron Age, with the definition of larger enclosed areas, and the appearance of a complex funnel shaped enclosure used to control movement of livestock.

After the Iron Age agricultural activity is limited to the presence of a single ditch and a structure interpreted as a possible shrine, both dating to the Roman period.

The site appears to remain unoccupied until the Early Medieval period, when it is reverted to agricultural use, as indicated by plough furrow evidence.

A similar pattern of activity is identified during the medieval period, demonstrating a move forward in plough technology, which resulted in larger furrows being produced.

CHAPTER 2

THE ARCHAEOLOGY OF THE LOWER WELLAND VALLEY

2.1 A HISTORY OF ARCHAEOLOGICAL INVESTIGATIONS IN THE WELLAND VALLEY, LINCOLNSHIRE, FROM THE 1940S TO THE PRESENT

2.1.1 Introduction (*Figure 2*)

This chapter provides the historic framework for the present research by presenting the development of archaeological investigations in the Welland Valley from the 1940s. It is not possible to contextualise the Stowe Farm landscape without considering the history of the archaeological investigations along the Lower Welland Valley, and how they have influenced archaeological data collection and interpretation.

A key theme that runs through this historical review of the study area is the association between mineral extraction and archaeological investigations. In particular, since the end of the Second World War mineral extraction in the Welland Valley has offered the opportunity to investigate large portions of a rich and diverse archaeological landscape. As a result, during the past six decades, methods, as well as research questions, have prompted large scale landscape analyses characterised by the application of increasingly effective techniques of archaeological investigation (Addyman *et al.* 1964; Pryor *et al.* 1985; Simpson *et al.* 1993; Pryor 1998a; French & Pryor 2005; Meadows 2009 & Dymond *et al.* n.d.).

With time, macro landscape analyses came to encompass evidence from a variety of sources, from monuments and sites, to artefactual and ecofactual materials, from soil formations and depositional sequences to environmental remains.

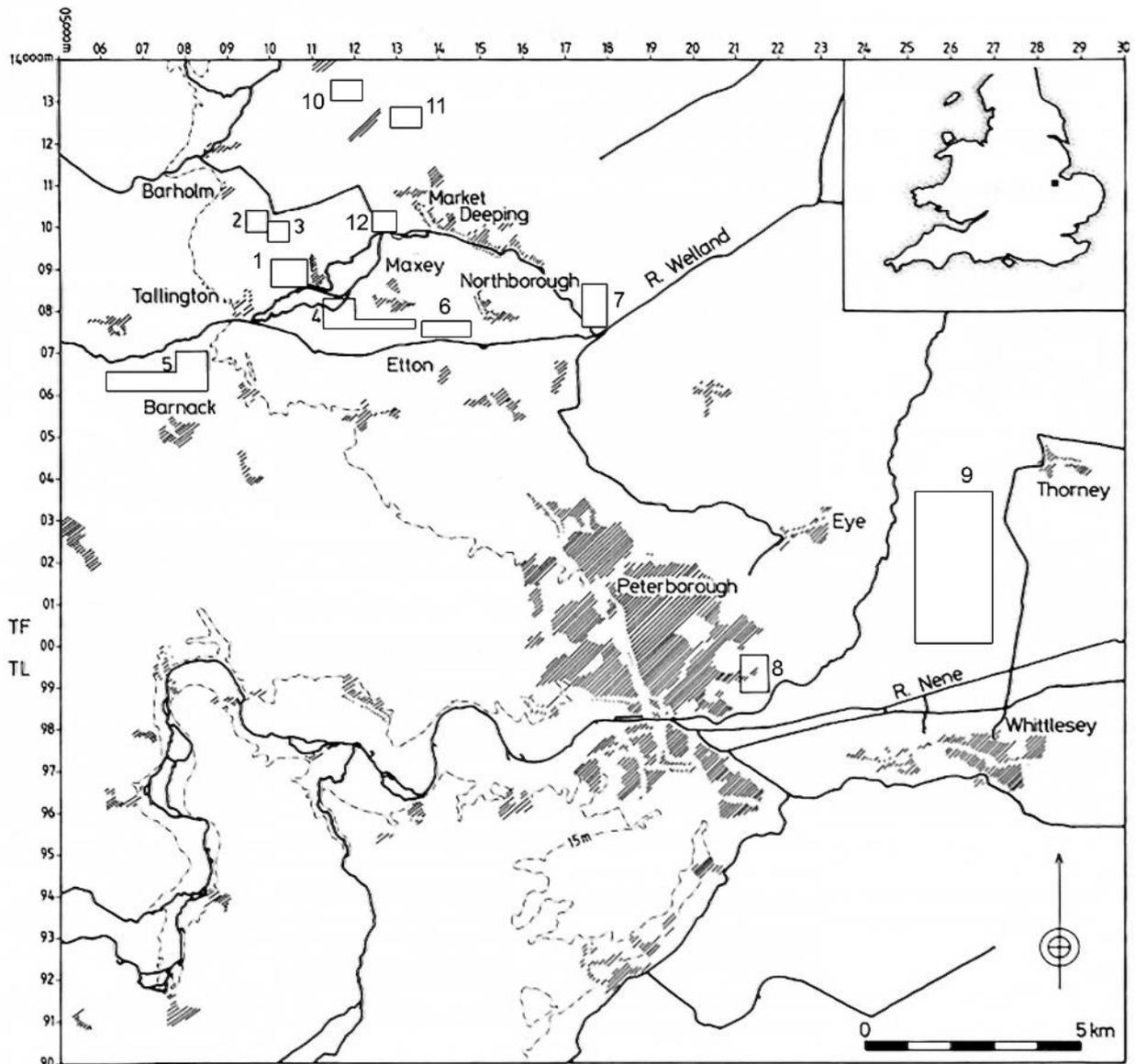


Figure 2 Showing leading sites mentioned in the text: 1, Tallington; 2, Barholm; 3, Stowe; 4, Maxey; 5, Barnack; 6, Etton; 7, Deeping St. James/Deeping St. Nicholas; 8, Fengate; 9, Thorney; 10, Baston; 11, Langtoft; 12, West Deeping. Scale 150,000. Based on Ordnance Survey 1:50,000 (1974) with permission of the controller of Her Majesty's Stationery office, Crown Copyright reserved (After Simpson *et al* 1993 and with author's own alterations)

In other words, large-scale landscapes were increasingly interpreted in their entirety, with emphasis being placed on the interaction of environmental conditions and human impact on the landscape through time (Pryor *et al.* 1985; Simpson *et al.* 1993; Pryor 1998a; French & Pryor 2005; Meadows 2009 & Dymond *et al.* n.d.).

At the beginning, archaeological investigations progressed slowly. These mainly consisted of often inadequately funded rescue interventions carried out by volunteers, with the aim of recovering as much data as possible within a limited time period. Post-excavation work was virtually non-existent, and dissemination of archaeological information in a report format was often delayed and lacked detail (Fennell 1960; Alexander 1962; Addyman *et al.* 1964; Powell 1977; Challands 1985 & Simpson *et al.* 1993)

The first advances in research were prompted by the introduction of government guidelines ensuring preservation by record, if not preservation *in situ*, of important archaeological sites. However, it was not until the publication of *Planning Policy Guidance 16: Archaeology and Planning (PPG16), Communities and Local Government 1990*, and the recognition of archaeology as a material consideration in the planning process, that fieldwork, post-excavation analyses, dissemination through publication, and archiving were financially secured. Since then, more systematic and planned quarry archaeology in the Welland Valley has continued to produce evidence of complex prehistoric and later landscapes of national importance.

2.1.2 Post Second World War

Historically, archaeological investigations along the Welland Valley began to be documented within twenty years of the end of the Second World War. This may suggest that there was no antiquarian interest in the archaeological landscape before 1945 or that no documentary evidence of former archaeological interventions is available. What is apparent is that along the Welland Valley mineral extraction was the result of post-war development and the need for aggregates. The threat to the archaeological landscape posed by extraction acted as the driving force behind the advances in archaeological knowledge (see below).

During the middle to late 1950s the threat to archaeological sites along the Lower Welland Valley increased, as the result of intensified mineral extraction. This situation was recognised by the Council for British Archaeology (CBA) who promoted a series of initiatives to secure rescue archaeological interventions. Among these was the formation

of the Standing Committee – the Welland Valley Research Committee (WVRC), a group that included archaeologists, as well as representatives of local governments and gravel companies (Brown 2009). Although there is no direct evidence as to the reasons why gravel extraction resumed in the late 1950s-60s along the River Welland, it may be suggested that the new quarries were supplying aggregate material for the widening of the A1 Great North Road. It is also likely that the Welland quarries were the sources of ballast for new road building projects and the construction of dwellings associated with the piecemeal regeneration and growth of Peterborough in the late 1960s as part of Phase Three of the *Town and Country Planning Act* 1946 (see below). A similar process of urban growth was also happening in Nottinghamshire, where the aggregates extracted along the River Trent were used to supply the construction industry and the building of new roads (Cooper *et al.* 2014).

The threat to archaeological sites located on the gravels along the Welland and Trent did not go unnoticed. As early as 1956 planners operating under the *Town and Country* government directive were made aware by the Ministry of Works of the threat to the local heritage from gravel extraction and mechanised agricultural practices (Barley 1956). In particular, aerial photographs taken by J.K. St Joseph, a lecturer in geography at Cambridge University and expert in aerial photography, and D. Riley, an experienced aerial photographer and interpreter of aerial photographs, clearly indicated the rapid disappearance of large portions of the prehistoric and historic landscape (Barber 2011).

The threats to archaeological landscapes on the gravels prompted the publication of *A Matter of Time* by the Royal Commission on the Historical Monuments, England (RCHME) in 1960, a pivotal survey of the gravel terraces along river valleys such as the Welland and the Trent. This publication soon generated an upsurge of interest in buried archaeology (Taylor 1985), and a shift of focus from the traditional survey of standing monuments to the investigation of below ground archaeology.

The RCHME began to map cropmarks and earthworks located along the Welland Valley using aerial photographs, and to categorise them as either individual or groups of monuments. Although, on occasion, the terminology used to describe certain monuments has been superseded by today's standards, at the time it was acceptable. In order to

interpret the cropmark landscapes in the Lower Welland Valley, the RCHME investigators drew on evidence gained from previous work undertaken at Dorchester-on-Thames and at Wittenham in the Thames Valley (RCHME 1960).

In 1957 a conference was convened in Stamford, Lincolnshire, to instruct the CBA's newly formed WVRC regarding the specific threat to archaeological monuments from the process of gravel extraction along the Welland. As a result, plans were put in place to begin a series of rescue excavations of those archaeological sites deemed to be under immediate threat (Taylor 1985). A framework for archaeological investigations along the Welland Valley was constructed by R.M. Butler of the RCHME, identifying the need to determine the date, form and function of all monuments encountered (Pryor *et al.* 1985). In addition to the excavation process, the RCHME also emphasised the need to disseminate the results through publication.

The WVRC was the body tasked with overseeing the archaeological investigations along the Welland Valley, until its demise in 1965 (Taylor 1985, 9-12). A number of archaeologists involved themselves in the excavation of sites along the Welland Valley. J. Alexander, a distinguished lecturer and field archaeologist based at Cambridge University's Extra-Mural studies, who later performed the same role at the University of London (*Cambridge Antiquarian Society* 2011), worked on a number of archaeological sites around Cambridge, Arbury Camp and Grantchester to name but two. A. Warhurst, who by 1957 had gained experience through the excavation in 1955 of the Jutish Cemetery at Lyminge (Warhurst, 1955) and K. R. Fennell, another field archaeologist of note, who had excavated the Anglo-Saxon Cemetery at Hough-on-the-Hill in 1957 (Fennell, 1957), were also involved. These archaeologists brought their collective experience to the fore when attempting to identify the form and function of the various monuments identified and excavated in advance of gravel extraction. For example, in Cambridgeshire, near Peterborough, John Alexander partially excavated what was to be later known as the Maxey Great Henge and associated features during 1957-58. A. Warhurst and R. Fennell investigated an Anglo-Saxon settlement site, also at Maxey, during 1957- 59 (RCHME 1960).

The aforementioned sites at Maxey had already suffered damage in the early 1940s, also as the result of gravel extraction (Simpson 1985, 245). Although not recorded at the time of the investigations, it is likely that the gravel was extracted to aid the building of a decoy airfield at Maxey and, possibly, other similar military sites located to the south of Peterborough at Alwalton, which were operational in June 1941 (Dobinson 1996).

Alexander's excavation of the western and northern half of the Maxey site was conducted under rescue conditions as a response to the impending threat posed by proposed mineral extraction. Alexander had only two weeks to complete the investigation. Using a series of trial trenches he made an attempt to characterise the site. During the same period, Alexander investigated a number of other archaeological sites in the immediate vicinity of the Maxey Great Henge, which were also under threat (RCHME 1960; Simpson 1985). After completing the excavation of the Maxey Great Henge, Alexander offered an overview of the results to the WVRC meeting in 1959, although he never produced the final report. The site information is still contained in a manuscript in his possession (Alexander 1962). The most comprehensive account of his excavation was later summarised by Simpson as part of the report he wrote following his own investigation of the Maxey Great Henge and associated features (Simpson 1985). The information on Alexander's site in Simpson's report several years later was probably the result of an exchange of personal communications between the two archaeologists.

Alexander was not the only archaeologist investigating monuments located along the Welland Valley prior to 1960. For instance, Warhurst had excavated an Anglo-Saxon settlement site known as Monument 43 near Tallington, Lincolnshire (RCHME 1960), the results of which are no longer available having been presented as a series of observations recorded in the minutes of a WVRC meeting in 1969 (Addyman *et al.* 1964). What is clear, as noted by Addyman, who re-excavated the site a few years later (1964), was the ever-present threat posed by gravel extraction. At the beginning of Warhurst's excavation potentially large areas of archaeological features had already disappeared as the result of extraction carried out during the Second World War and immediate post-war periods (Addyman *et al.* 1964).

Fennell also explored a series of monuments to the north and north-east of Tallington, including Field OS 29 where he investigated a small rectangular enclosure. However, Fennell's findings only appeared as a series of notes in the WVRC meeting minutes, later to be published as an interim report in the CBA Archaeology Report Series (Simpson, 1966; Pryor *et al.* 1993). Fennell was also active at Maxey where, in 1959, he excavated an Anglo-Saxon settlement located to the west of the village. This site had been previously recorded by Warhurst and was subsequently investigated by Addyman (RCHME 1960; Addyman *et al.* 1964). Like those sites already mentioned, the Maxey site was threatened by extraction. In advance of extraction, the topsoil was removed by dragline, a method not known for its accuracy in differentiating between topsoil and subsoil. Fennell suggested that many archaeological features had been lost, although it is possible that his claim was based on the evidence gathered during Addyman's excavation site located immediately south-east of Fennell's site (Addyman *et al.* 1964). The whole site was investigated under rushed rescue conditions (Fennell in Addyman *et al.* 1964). What Fennell had achieved, possibly unintentionally, is the first recorded open area excavation of features located between Stamford and Market Deeping, South Lincolnshire. Despite the dangers involved in working in an active quarry, accurate location plans were drawn and all excavated features recorded.

The very nature of the difficult (and often dangerous) conditions encountered during the initial investigations further attests the admirable work done by pioneering archaeologists such as Alexander, Warhurst and Fennell.

The information gained through the excavations described above, together with the publication of *A Matter of Time*, prompted the WVRC to appeal to the Ministry of Public Building and Works to partially fund further archaeological investigations in the Maxey and Tallington areas. Funding, however, came too late to support Addyman's excavation of the Anglo-Saxon site at Maxey in 1961 (see below), which had been initially investigated by Fennell in 1959 (see above).

Addyman's excavation was carried out on the recommendation of the WVRC and the CBA. The aim of the investigation was to gain new evidence and throw new light on the evidence from the excavation which had been carried out by Fennell in 1959. One

constraint that emerged from Addyman's site report (1964) was the lack of funding, as indicated by the need to rely on the goodwill of the quarry owner to supply a dragline to strip the site. A total of some 7,000m² was stripped revealing various features which, on excavation, were found to date to the Anglo-Saxon period. Despite the financial restrictions, Addyman was able to excavate and record the site to a high standard, as shown by the detailed planning of the open area, as well as the recording of individual sections. Addyman demonstrated that it was the open area method that had enabled him to interpret the excavated features as being part of a settlement. The analysis offered by Addyman was further corroborated by the review of the evidence recorded by Fennell in 1959 (Addyman *et al.* 1964).

As with many of the sites already mentioned, gravel extraction was the catalyst for the investigation to resume in the Tallington area, in general. The initial excavation in 1961 was directed by M.U. Jones with the aid of a number of volunteers (Simpson *et al.* 1993). In this instance, the goodwill of the gravel extraction company was instrumental in the investigation of the archaeological features. The 1993 report states that, prior to the archaeological intervention, the agricultural topsoil and subsoils had already been removed over an area of c.100x50m to expose the natural gravel ready for extraction at a later date, according to a method often employed by gravel companies to avoid delays. Although uncertain, it is possible that the gravel extraction company made representations to the WVRC, informing them of the existence of possible archaeological features. These features had not been mapped using aerial photography, possibly due to the depth of overburden masking the buried archaeological remains.

A total of 25 pits and a single isolated pit-like feature were identified in the exposed area. The archaeological features proved to be unusual, as they formed parallel rows, as opposed to single alignments, of pits. Furthermore, on excavation, the dating provided by the ceramics suggested a Bronze Age date, in contrast with the accepted Iron Age date of other pit alignments known at the time (Jackson 1974. Simpson *et al.* 1993). It must be acknowledged that none of the aforementioned features could have been investigated if it had not been for Mr Stokes, the pit foreman, who had organised the gravel extraction in order to avoid the archaeological features.

Going back to the pivotal role played by the RCHME at the time, in addition to the development of both intrusive and non-intrusive investigations, the RCHME promoted the report writing process by emphasising the need to publish results. Each of the aforementioned sites investigated after 1961 had a report written in the same year of the investigation or the following year. This process greatly enhanced the archaeological record for the Welland Valley.

The latter half of 1961 witnessed a reduction in archaeological activity, although the importance of the area was still to the fore, as evidenced by a grant made by the Pilgrim Trust for £1000, and by the Ministry of Works who made a substantial award and donations from the public (£1000). The WVRC now had sufficient funds to employ a full-time archaeologist, and at the beginning of 1962 the Committee appointed W. G. Simpson to investigate sites along the Welland Valley.

During the early to middle 1962 the archaeological focus shifted from Tallington to Maxey due to the impending destruction of the Great Henge, under renewed threat from gravel extraction. This rescue intervention offered Simpson the opportunity to excavate a major archaeological feature and associated remains (Taylor 1985).

A plan of work was conceived that would avoid any delays to the gravel company's extraction process by excavating the site in phases. Simpson employed the open area technique of archaeological investigation, which enabled small features to be discovered and investigated. However, success was not always guaranteed. For instance, a Neolithic pit was largely removed during the stripping process. This was a large feature that had not appeared on the aerial survey, hence the reason for its partial destruction.

The large pit described above was filled with a peaty soil, a sample of which was taken for the purpose of pollen identification. This was the first archaeological site along the Welland River where an environmental sampling strategy was employed, albeit without clearly stated aims (Simpson 1985). Based on the pollen record, for the first time it was possible to suggest that during the Neolithic period the landscape was open farmland interspersed with woodlands.

Following on from the 1962-63 excavation season at Maxey Badyke Field, a new stage of excavation at Field OS 29 commenced, in advance of gravel extraction. The

excavation took place between 1963 and 1964, firstly under the direction of Simpson and, later, under the supervision of Jeffery May. The area under investigation included a continuation of the pit alignment initially excavated by Jones (Simpson *et al.* 1993).

The excavation did not have an auspicious start in 1963. Britain was emerging from one of the most severe winters on record, and the excavation coincided with the thaw. A dragline was used to initially strip the site, which proceeded to sink into the larger features, thus removing all potential upper stratigraphic relations in certain areas. In addition to this, the lack of accuracy governing the movement of the bucket, combined with destructive movement of the machine, resulted in a large number of smaller features being truncated before manual excavation and subsequent recording could take place (French *et al.* 1993). Nonetheless, sufficient evidence remained to enable a level of interpretation of the form and function of the monuments.

It is worth mentioning that the final site report was not published until 1993, and that the delay had a positive influence on the theoretical framework, with the authors having the cumulative knowledge of twenty years of archaeological information that could be drawn upon. In particular, French and colleagues (French *et al.* 1993) gave due consideration to a number of more recently excavated archaeological sites, thus enhancing the level of interpretation based on comparative information.

At Tallington, Simpson and May continued to implement an environmental sampling strategy where conditions allowed. Despite the fact that sampling was limited to three specimens taken from two pits, based on the available evidence, the palaeo-environmentalist, J. R. Pilcher, was able to suggest that the pits had been originally located in a large clearing within a wooded area (Simpson *et al.* 1993).

As mentioned earlier, Simpson only directed the site for the first half of 1963, before moving to investigate two barrows nearby, which had already been identified as belonging to a barrow cemetery (RCHME 1960). The complex had suffered damage during the 1950s, with the loss of three ring-ditches through quarrying. As part of his excavations at O.S. 38, Tallington, Fennell had already investigated two ring-ditches which were later obliterated by the gravel extraction process (Simpson 1976). Simpson was engaged in the investigation of Site 17 (the Small Barrow), between September and November 1963,

and Site 16 (the Large Barrow) excavated between June and September 1965. The excavation of these two sites uncovered a number of inhumation burials of adults and infants interred over at least two centuries.

The excavation report of the Tallington site (Simpson 1976) includes a detailed analysis of the artefacts but does not contain a palaeo-environmental assessment. The reason for this omission is not clear. It is possible that time constraints played a role in the decision-making process or that Simpson had decided that a sufficient number of samples had already been taken from sites of a similar period in the locality.

Almost one year elapsed between the excavation of Site 17 and subsequently Site 16. The reason for the interlude between the two sites was the immediate threat posed by mineral extraction to two other sites, the Bronze Age/Iron Age site at Plant's Farm, Maxey, excavated between April and October 1964, and a Romano-British aisled building at Barnack, excavated between August 1964 and April 1965. Plant's Farm was not written up until 1993 and the report was based largely on communications with the excavator and on the examination of site records (Gurney, Neve and Pryor 1993). Unlike on previous sites where Simpson had been allowed to complete his investigations, the excavations carried out in 1964-65 were rushed possibly due to a sudden demand for aggregates in advance of Peterborough New Town expansion.

2.1.3 The Expansion

In 1965 the then Ministry of Housing and Local Government, a department of the United Kingdom Government, worked closely with Peterborough City Council to oversee the possible development of Peterborough. By 1967 Peterborough was deemed a 'New Town', and the Peterborough Development Corporation was established (PDC) the same year. The PDC then commissioned Hancock and Hawkes Associates to produce a draft plan indicating how Peterborough needed to adapt in order to accommodate increased population growth (Peterborough Development Corporation, 1969). Hancock and Hawkes completed their report around 1969, showing expansion areas and increased infrastructure (Peterborough Civic Society 2017).

It is possible that urban expansion plans played a role in the opening of the extraction area at Plant's Farm, Maxey, as the quarry company (not named in the final report) would have been in the position to meet increased demands for aggregates. A number of features identified in the area to be quarried included: a ring-ditch, presumably a Bronze Age burial mound now ploughed flat; a boundary ditch running east-west; a pit alignment of probable Iron Age date running north-south for a distance of 90m; at least three overlapping rectangular enclosures; and a ditched driveway leading from the north-west corner of the churchyard for a distance of c.330m to the north-east corner of the enclosure (Simpson *et al.* 1993).

At Plant's Farm excavation commenced in April 1964 and ended in October of the same year. Instead of stripping the area with a dragline, which would potentially remove features, as had happened on previous excavations (see above), it was decided to grid over the area and to proceed to targeted excavation assisted by the evidence recorded as part of the RCHME survey (1960). Although not stated in the report (Gurney, Neve and Pryor 1993), it would appear that the method used to expose the buried archaeology was hand excavation. This suggestion is based on the site plan, which identified a total of 20 areas of investigation ranging in size between c. 2.5m x 2.5m square to c.34m x 12m. The method employed allowed the archaeologists to describe in detail the smaller features associated with the identified Iron Age and Romano-British farmsteads. In addition, the archaeologists were able to infer phasing from contextualised ceramic evidence, which showed that the site had been continuously occupied until the 3rd century AD (Gurney, Neve and Pryor 1993).

Around the same time of the excavation at Plant Farm near Maxey, W.G. Simpson was involved in the excavation of a Romano-British aisled building at Barnack, where excavation started in August 1964 and continued until April 1965. This site saw the introduction of the use of a magnetometer survey. The survey identified areas of high magnetic values, which were compared with features visible on aerial photographs. The combined results allowed Simpson to devise an excavation strategy: he followed the method previously adopted by Mortimer Wheeler by dividing the area to be investigated into a series of squares separated by baulks. Based on the features identified within the

squares, Simpson then targeted areas for more extensive open area excavations (Simpson *et al.* 1993).

On the basis of ceramic and stratigraphic evidence, Simpson was later able to identify three phases of Roman activity, spanning the late 2nd to 4th centuries. His interpretation of the site was largely based on specialist reports obtained over twenty-five years after the completion of the excavation. In addition to the specialist reports and stratigraphic data, Simpson drew comparisons with similar sites of the same periods, including Landwade, Exning, Suffolk (Taylor, 1960), and Denton, Lincolnshire (Smith 1964).

Collectively, the archaeological evidence from both Barnack and the wider landscape allowed W.G. Simpson to suggest that the Barnack Romano-British buildings were used for agricultural purposes. There was very little domestic ceramic evidence, and the presence of a channel flue kiln and corn-dryer added to the weight of the evidence.

During the 1965 and 1966 the WVRC, under the leadership of W.G. Simpson, was called upon to undertake a rescue excavation on site 69 (RCHME 1960) in the Maxey area. The threat was from gravel extraction, and like on many previous occasions, the quarry operator, in this case The Hoveringham Gravel Company, had granted permission to investigate the whole site (Simpson 1967). Unfortunately, no plan of the excavated features was produced, leaving only the plan produced for *A Matter of Time* (RCHME 1960), which was only an interpretation of the cropmarks and, as such, insufficient as a record of the excavations. The lack of proper records may have been caused by time constraints impacting on care and accuracy.

In 1966 W.G. Simpson published *Romano-British Settlement on the Welland Gravels*. This paper, according to Maisie Taylor (1985), was essential reading even after twenty-one years, as it reviewed Romano-British and Late Iron Age settlement evidence from the Lower Welland Valley. The paper brought together information recovered from archaeological excavations and aerial photographic mapping, interpreting the possible functions of various features or groups of features (Simpson 1966).

2.1.4 The End of the Welland Valley Research Committee

The year 1966 witnessed the demise of the WVRC's activities for reasons not explicitly clear, but with very evident consequences. The end of archaeological investigations in the Welland Valley was not the end of gravel extraction in the area, as noted by Francis Pryor (Pryor & Simpson 1993): gravel was needed for the increasing footprint of Greater Peterborough. Although very little regard was given to the destruction of archaeological features, on occasion some excavation did occur under rescue conditions. In 1971 ring-like features were identified by K. Morvey, manager of the Hoveringham and Co.'s Maxey pit. As a consequence of this observation, Adrian Challands was requested to investigate the aforementioned features. He was allowed one week to excavate and record remains across an area covering c.0.8 hectares, under what was termed 'emergency recording'. Despite the restrictions, Adrian Challands was able to record seven ring-ditches, albeit heavily truncated during topsoil removal by the gravel company (Challands 1985). The brief account describes the retrieval of a number of cremation burials, identifying them in relation to individual monuments.

With the exception of the emergency excavation undertaken by Adrian Challands in 1971, no other archaeological investigations occurred along the River Welland between Stamford and Market Deeping for at least three years. The trend changed slightly with Peter Donaldson's two phase- investigation of a 'multiple round-barrow' at Barnack. The work commenced in 1974 and was completed in 1976. The site was under threat of destruction through gravel extraction. Fortunately, the Trustees from Burghley Estate, in cooperation with the local farmer and the Nene Barge Lighter Co. Ltd, allowed sufficient time for 100 percent excavation of the visible features to take place (Donaldson, Kinnes and Wells 1977). Three phases of concentric disc barrow construction were identified, each phase producing a slightly smaller barrow located within the one previously constructed. In the course of the excavation emphasis was placed on the sequence of human burial, including both inhumation and cremation rites, the position of each individual within the grave cut and recovery of associated grave-goods. What is absent from the brief report is any further analysis of the human remains or artefacts, widely agreed to date to the Beaker period. Environmental assessment is not mentioned as part of the process of investigation (Donaldson, Kinnes & Wells 1977), a situation common

amongst those excavations that occurred during the 1970s (see below). The lack of analysis resulted in no attempt being made to fully interpret the evidence available. It is possible that time constraints and/or lack of financial support played a major role in restricting analytical advancement at the time. However, during the late 1990s Jonathan Last (1998) was able to reinterpret the meaning of the sequence of burials in the barrow.

In 1976 Francis Pryor organised a salvage excavation of a badly damaged triple ring-ditch at Maxey. The main aim of the investigation was to shed more light on the features which had been previously excavated at Fengate (Pryor 1974a). A two day investigation was undertaken by Robert Powell on the ring-ditch. He endeavoured to recover as much information as possible within the time limit. The site was tentatively dated to the Neolithic-Bronze Age transitional period. Robert Powell could only use comparative information from similar sites for dating and interpretation, as any form of diagnostic artefactual evidence was absent (Powell 1977).

In 1983 Francis Pryor noted that “the resultant destruction of archaeological sites has still to be properly assessed, as watching –briefs could only be kept on occasions, but it is probably severe” (Pryor & Simpson 1993). Despite the destructive process of gravel extraction on the archaeological landscape along the Welland Valley, as put by Pryor, credit must be given to the gravel companies for allowing any archaeological work to occur at all. This is particularly significant as, at that time, there were no official bodies to monitor mineral extraction, and gravel companies had no legal obligations to consider the historic environment as having material importance.

The three-year period between 1977 and 1979 appears to be barren of archaeological activity, no doubt resulting in further loss of heritage assets. A turning point for the archaeological investigations of the Welland Valley came with the establishment in 1981 of the Welland Valley Project, which stemmed from the Fengate Project. Unfortunately, the Welland Valley Project had limited scope for placing the sites investigated in a regional context, mainly due to the urban spread of Greater Peterborough and intensified gravel extraction. The main aim of the Project was to integrate various strands of archaeological investigations, including field survey, archaeological excavation and environmental studies, with a view to informing policies that would aid in the protection of important sites under threat by means of preservation *in situ* or by record. However, fieldwork was still confined

to rescue interventions. The initial investigations undertaken by the Welland Valley Project saw a return to Maxey, in particular to an area of the landscape owned by Tarmac Roadstone, immediately south of the village and adjacent to the former investigation conducted by W.G. Simpson (1962 - 1963) (see above). Funding for the excavation was acquired from the Inspectorate of Ancient Monuments, the Department of the Environment (formally known as the Ministry of Works), and the British Gas Corporation (Pryor *et al.* 1985). The impression gained from Pryor's report was that the funding covered the excavation and the post excavation work. However, there was still a heavy reliance on the goodwill of the gravel company, Tarmac Roadstone, to grant permission to excavate, supply earth moving machinery free of charge, provide accommodation in the form of on-site huts (with electricity), sieving equipment and, most importantly, to co-operate with the archaeologists.

A further point to consider when viewing the assistance offered by Tarmac Roadstone, is the continued strengthening of the legislation, affording a degree of protection to archaeological landscapes in danger of being obliterated. This took the form of the *Ancient Monuments and Archaeological Areas Act 1979*, stating that "Where Ancient Monuments occur on agricultural land, the following Act influences the extent of public control to ensure the protection of scheduled ancient monuments." The 1979 Act was further developed, resulting in the publication of the *Code of Practice for Mineral Operators* released in 1982 (Confederation of British Industry 1991). Both documents were considered of paramount importance for the future development of relationships between mineral companies and archaeologists (English Heritage 2008).

Despite the limitations of the Welland Valley resources, time constraints and logistical difficulties, the early investigations promoted developments in the various methods and scientific techniques employed as a means of maximising the data recovered. The spatial location of artefacts was now being considered. Similarly, environmental information was given renewed emphasis, incorporating the extensive investigation undertaken by French & Pryor along the Nene and Welland Valley (Pryor 1974 –1980; French 1985). Significantly, Pryor *et al.* (1985) referred to the Levels III and IV of the Frere post-excavation report guidelines (Table 1), where the emphasis was not only on the fieldwork, but also

on dissemination of archaeological information and the creation of retrievable archives within a set cost framework

Level	Site Description	Loose Material	Availability
Level I	The site itself and general notes, old letters, previous accounts	Excavated Finds	Storage in museums
Level II	Site note books, recording forms, drawings, sound recording tapes	Finds records, X-rays, photographs, negatives, colour transparencies	Available for inspection at museum or regional or national archives
Level III	Full illustration and description of all structural and stratigraphic relationships	Classified finds-list and finds-drawings, and all specialist analyses.	Publication in journal or occasional papers, as required, or available as duplicates, microfiche, microfilm or computer print-outs.
Level IV	Synthesised descriptions with supporting data	Selected finds and specialist reports relevant to synthesis	Publication of multiple copies

Table 1: Extracts from Frere's Post-excavation Recommendations (After Frere 1975)

In addition to quarry operations, which until then, had offered the opportunity to implement large-scale investigations, smaller-scale groundwork interventions began to be recorded systematically. Between November 1980 and May 1981, excavation work commenced along the route of a pipeline located between the villages of Barnack and Bainton (Pryor

et al. 1985). Here, the implementation of non-intrusive survey techniques included the production of a computer-rectified map of the cropmarks of the area, and intensive field walking along the pipeline easement. New methods of scientific research in the form of geophysical, geochemical, soil/sediment and molluscan analyses were also introduced. The combined information from the surveys and the specialist analyses informed mitigation strategies for the re-routing of the pipeline to avoid areas of high archaeological potential (Pryor *et al.* 1985).

The field-walking exercise had identified two significant areas where large numbers of struck flints dating to the Bronze Age were recovered, together with Roman pottery. The presence of the latter was related to a villa complex located to the west of the pipeline easement (Simpson 1966).

The surveys and subsequent excavations were undertaken by members of the Welland Valley Project. Of paramount importance to the completion of the project was the collaboration with a local farmer, who gave permission to extend the survey outside the pipeline easement, thus, allowing the investigative scope to be broadened, and the excavated area to be better-contextualised (Pryor *et al.* 1985). Stripping of the easement revealed evidence of Iron Age and, more predominantly, Roman linear features acting as field boundaries, aligned east-west and north-south, respectively.

During November 1981 work commenced on what was to become known as the Etton Causewayed Enclosure, a single interrupted ditch circuit first identified by Steve Upex in the summer of 1976 through the use of aerial photography. It took a further four years before an initial watching brief was undertaken, sponsored by the Department of Environment (DoE). In the meantime, there had been a major development with regard to the quarry within which the causewayed enclosure was located. Tarmac Roadstone Ltd had been granted planning permission in 1981 to extend the quarry eastwards, without the need to investigate archaeological remains. This decision placed the enclosure and other monuments under immediate threat of destruction. Fortunately, Bruce Sully of Tarmac Roadstone Ltd intervened, authorising the use of a mechanical excavator to remove the overburden, thus allowing the archaeologists to investigate a segment of the enclosure ditch (Pryor 1998a). The excavation of the ditch segment

revealed waterlogged deposits containing preserved leaves, twigs and fragments of wood. Sherds of Mildenhall pottery dated to the Middle Neolithic period, along with animal bones, were also recovered. Although the cultural information was considered important, it was the threat to the preservation of environmental deposits from the lowering of the water table that attracted attention to the site. Funding from the British Museum covered the 1982 excavation. For the next five years the DoE funded the excavation and post-excavation work. Funding also covered the publication of what was the first Welland Valley site report dedicated solely to the investigation of one archaeological monument and inclusive of all the specialist information (Pryor 1998a).

It is interesting to note that, although many of the techniques had already been employed during earlier investigations along the Welland Valley, new sources of environmental evidence added another dimension to the interpretational value of the recovered information, namely analysis of the wood and bark (Taylor 1998) and analysis of insects (Robinson 1998). At the time of the investigation, the organic remains recovered from the Etton Causewayed Enclosure were considered to be the largest collection ever discovered relating to the British Neolithic, together with rare well-preserved evidence of *in-situ* wood-working activity (Taylor 1998).

The delay in the publication of the final report some years after the final phase of excavation (1987) had some benefits, as Francis Pryor was able to draw on new interpretations by Julian Thomas (1991) and Mark Edmonds (1993). Unlike enclosures in topographically prominent locations, Etton is on low-lying flat ground. To explain this unobtrusive setting, Francis Pryor drew on the expertise of horticulturalists to offer insight into the impact of certain botanical species found at the site. He noted the waterlogged state of the landscape and the presence of water-resistant species, such as willow, identified in the pollen record. Inspired by the practices of modern gardeners, Francis Pryor was able to suggest that the brightly coloured stems reflected in the water would have heightened the visual impact of the site, giving it greater presence in the landscape (Gray and Frankl 1984; Johnson 1992; Lloyd & Toler 1987).

Although the Etton causewayed enclosure was the main monument under investigation, it was not the feature immediately threatened by the expansion of Tarmac Roadstone's

quarry activities. A series of cropmarks located to the south-east of Maxey Island, in an area soon to become known as 'The Etton Landscape', were at risk of destruction over the intervening seven years (French & Pryor 2005). Also included within a seven-year plan was the investigation along the route of the new A15 Glinton to Market Deeping bypass located to the east of the causewayed enclosure. Funding for the Etton landscape investigations came from the DoE and the Fitzwilliam Estate, whereas the A15 bypass was funded by Cambridgeshire County Council. Tarmac Roadstone also contributed to the investigation through the supply of machines to strip the overburden. Soil stripping revealed two large curvilinear ditches, as well as numerous features previously undetected through aerial photography. The complexity of the features required further negotiations with Tarmac Roadstone and an extension of time for the investigation, which were granted.

What was conspicuous by its absence was evidence for settlement, at least on the scale that would justify the need for the concentration of monuments in the Etton landscape. The apparent lack of major settlements led the excavators to suggest that population influx during the Neolithic period was seasonal and nomadic (French & Pryor 2005). This is a trend that would continue into the Bronze Age, as shown by the Etton landscape which has provided evidence for ceremonial activities through the construction of barrows and ring-ditches, but no settlement evidence.

Evidence for a more holistic use of the landscape was found during the A15 excavation. Here potential Late Neolithic occupation evidence was recovered, taking the form of midden material, together with two phases of pit construction. French & Pryor (2005) conceded that the occupation evidence was not conclusive, speculating that the midden material may have been the result of domestic activity, and would not have been transported over great distances. As in the case of the Etton Landscape, prehistoric settlement in the area would have been on a short-term seasonal basis, taking advantage of the favourable environmental conditions (French 1990). Domestic use of the landscape was also evidenced by the presence of field systems identified as being contemporary with the pit/midden/occupation complex. Moving into the Early Bronze Age evidence for domestic activity seemed to diminish, being replaced by the construction of a number of round barrows (French & Pryor 2005), which potentially represented a

refocusing towards a more spiritual construct of the landscape and, it may be added, changed social and territorial organisation.

Archaeological evidence relating to the Late Bronze Age appears to suggest agricultural use of the landscape, as indicated by the presence of field-boundary ditches. These were orientated at right-angles to natural stream courses and across the floodplain. This evidence would appear to suggest that the ditches, due to their ephemeral nature, were used for the housing of hedges, acting as visual field boundary markers demarcating the landscape (French & Pryor 2005). The idea of agriculture as playing a major role in Late Bronze Age society was further enhanced through the recovery of insect evidence from a well. The evidence suggested that the surrounding landscape was open pasture during the Late Bronze Age, as compared with at least 50 percent woodland during the Neolithic/Early Bronze Age (Robinson 2005).

Progression through the Late Bronze Age and into the Iron Age witnessed a reduction in the intensity of land use. Excavation revealed a small number of features, namely pits and ditches, dated to the Iron Age and distributed across the landscape. The lack of associated settlement evidence was explained in relation to environmental changes, with the lower lying areas of the landscape being more susceptible to an increased level of flooding (French & Pryor 2005). Each flooding episode deposited ever greater amounts of alluvium, thus potentially making the land unsuitable for agricultural use.

Following the Etton enclosure and landscape excavations, investigations on a large scale ceased, due to Tarmac Roadstone having sufficient ballast to satisfy demand for several years to come. Archaeological work resumed in 1990, with the extension of the Maxey quarry by the newly re-named Tarmac Quarry Products Ltd.

2.1.5 Excavations Post-1990

As part of *The Town and Country Planning Act 1990*, the Department of the Environment published *Planning Policy Guidance 16: Archaeology and Planning* (PPG16), *Communities and Local Government 1990*, which set out the Secretary of State's policy on archaeological remains on land and how they should have been preserved or recorded:

- It described how “archaeological remains are a finite and non-renewable resource”, highly vulnerable to damage and destruction, and gave advice on the handling of archaeological remains and discoveries under the development plan and control system.
- It firmly established that archaeology is a material consideration in the assessment of a planning application by a Local Planning Authority (LPA).
- It recommended mitigation strategies to be devised to safeguard the archaeological remains by either preservation *in situ*, or by excavation and replacement ‘by record’.

The main principle behind PPG16 was the ‘Polluter-Pays Principle’, a major element of environmental policy since its adoption by the Organisation for Economic Cooperation and Development in 1972 (OECD 1975). In essence, with the recognition of archaeology as a material consideration in planning, 1991 saw a shift of responsibility from the UK Government to the Local Planning Authority (Cumberpatch 2001). As a result of PPG16, after 1991 the financial onus for archaeological investigations along the River Welland between Tallington and Market Deeping fell on the ‘polluter’, mainly gravel extraction companies and, occasionally, developers.

The implementation of the new policy did not have immediate effect, as shown by the investigation of the barrow complex at Deeping St. Nicholas excavated under rescue conditions by Charly French in the latter half of 1991. In spite of the lack of planning, French and his team were able to record several inhumation burials of adults of both sexes, and ‘immature individuals’, who appeared to have been interred over many years (French & Bayliss 1994). However, by the beginning of 1992 PPG16 had started to be implemented, as indicated by the 1992 evaluation at the Barnack Road Quarry Extension which revealed three Bronze Age inhumation burials, amongst other features (Reynolds 1992).

Although outside the area under investigation, the excavation of the Welland Bank, is of great interest from an archaeological point of view and in terms of application of the new guidelines. As with many of the sites located between Tallington and Market Deeping, the Welland Bank site suffered from mineral extraction since the 19th century. Based on surrounding archaeological sites, it was suggested that a large number of archaeological

features had been removed. The impression gained from Tom Lane's report (in Dymond *et al.* n.d.) is a lack of cooperation between the mineral extraction company and the archaeologists. Extraction work had commenced in 1989, but it was not until 1994 that a retrospective watching brief was enforced (at least in some of the designated areas). By then, archaeological remains had already been lost. The lack of regard for the archaeology prompted English Heritage (now Historic England) to fund the environmental analysis.

Although not explicit in the report, it is possible that the involvement of English Heritage played a major role in persuading the mineral extraction company to give due consideration to the importance of the archaeology. In 1996 an evaluation, followed by an enhanced watching brief, was undertaken on the Welland Bank site, Deeping St James. The investigations produced evidence of Late Bronze Age settlement in the form of large boundary ditches, potential structures and associated artefact assemblages (Mouraille 1996 APS report No 22/96). Following on from the 1996 excavation, a major programme of work started in 1997 under the direction of Francis Pryor and Tom Lane, with the aim to investigate the possible field systems and associated features identified through aerial photography (Air Photo Service 1996).

Returning to the Lower Welland, at Rectory Farm, West Deeping, Lincolnshire, an open area excavation took place during 1993/94 to determine the state of preservation of the Iron Age and Roman remains, with less emphasis given to the Bronze Age field systems present across the landscape (Evans *et al.* 2009). Lincolnshire County Council had granted Redlands Aggregates planning permission in 1992 to extract gravel at Rectory Farm. Part of the planning process required Redland aggregates to enter into a legally binding Section 106 Agreement with Lincolnshire County Council (Town and Country Planning Act 1990). A detailed report relating to the 1993/94 excavation has yet to be published. The same year, 1994, also saw the evaluation of Stowe Farm (West Deeping, Lincolnshire) in advance of gravel extraction by Redland Aggregates. The evaluation by trial trenching of this site revealed a series of inter-cutting field boundary ditches suggestive of a multi-phase division of the landscape. The site also produced evidence of ritual/funerary activity in the form of two undated ring-ditches interpreted as

representing possible Late Neolithic hengiform monuments (Pryor pers. comm.) or Early Bronze Age barrows.

During the early months of 2002 an evaluation occurred on land located to the west of Crown Farm, Kings Street, West Deeping (Patten 2002). The trenches were targeted on features identified through aerial photographic observation, geophysical survey and fieldwalking, which had been carried out in 1990. The surveys yielded evidence for potential Late Neolithic features, as well as Bronze Age remains such as barrows, ditched drove ways, pits (one of which contained preserved timber), and postholes. Collectively, this information indicated intense, predominately prehistoric, human activity of uncertain interpretation (settlement, light industry, farming?).

Further archaeological work on the Rectory Farm site near Market Deeping commenced in September 2002 and terminated in 2007. The method of investigation for each phase involved a combination of enhanced watching brief or basic monitoring. Evidence for human activity in this area of the landscape had started in the Late Mesolithic/Early Neolithic period, as indicated by the recovery of small flint blades and blade cores. Evidence for Late Neolithic/Early Bronze Age use of the landscape took the form of sherds of Beaker pottery, Collared Urns, as well as a viable assemblage of animal bone. Analysis of the animal bone indicated the exclusive presence of cattle remains, suggesting that the assemblage was evidence of either livestock management or ritual practices (Allen 2006).

It is interesting to note that evidence for occupation of the area seemed to diminish in the Middle Bronze Age, as domestic remains were restricted to a few sherds of Deverel Rimbury pottery. According to Allen (2006), it was very difficult to establish whether the pottery was linked to funerary or domestic activity. Late Bronze Age activity on site was represented by the presence of some 130 sherds of shell tempered pottery, and the presence of small elements of the coaxial field system that extended across the landscape in a south-easterly direction. Iron Age material recovered from the site amounted to a single sherd of decorated pottery (Allen 2006).

This situation was mirrored south of the Maxey Cut, north-west of the village of Etton, at the Tarmac Quarry site, where extensive Iron Age settlement evidence as well as Roman

field systems was present. However, the Bronze Age was only represented by occasional sherds of Beaker pottery (Meadows 2009).

2.1.6 Synthesis

The archaeological investigations which have been carried out along the Lower Welland Valley since the late 1940s have provided evidence of a dynamic landscape. In particular, mineral extraction has offered the opportunity to investigate large portions of the archaeological landscape, also favouring the application of new investigative methods and the formulation of increasingly informed research questions.

The level of information gained to date is undoubtedly due to the professionalism and dedication demonstrated by the numerous archaeologists working in extreme conditions with little or no budget, and very tight time schedules, especially during the period between the 1950s and the 1980s.

Despite the limitations of the WVRC archaeological resource, time constraints and logistical difficulties, the early investigations promoted developments in the various methods of investigation and scientific techniques of analyses employed as a means of maximising data recovery and interpretation.

In the aftermath of the Second World War intensification of mineral extraction posed a threat to archaeological sites, as recognised by the CBA, which promoted a series of rescue excavations of sites located on the gravels along river terraces. As early as 1956 planners operating under the Town and Country government directive were made aware by the Ministry of Works of the threats to the local heritage from gravel extraction and mechanised agricultural practices

These threats prompted the publication in 1960 of *A Matter of Time* by the RCHME, a pivotal survey of the gravel terraces along river valleys. The RCHME publication acted as a catalyst for the development of both intrusive and non-intrusive investigations, as well as promoting dissemination through publication.

In 1965 the then Ministry of Housing and Local Government worked closely with Peterborough City Council to oversee the possible development of Peterborough 'New

Town', and by 1967 Peterborough Development Corporation was established. Demand for aggregates increased during this period.

In 1990, the publication of Planning Policy Guidance 16: Archaeology and Planning (PPG16), as part of The Town and Country Planning Act by the DoE enabled a framework to be developed that allowed excavated archaeological sites to be properly investigated, assessed, reported and archived, as archaeology had become a material consideration in the planning process.

It is in the context of the early investigations, as well as the planning-led interventions after 1990, that the Stowe Farm site must be analysed for the contribution it can make to further the current understanding of past human activity along the Lower Welland Valley.

2.2 THE LOWER WELLAND VALLEY

2.2.1 Introduction (*Figure 2 & Table 2*)

This chapter describes the changing character of the River Welland from a topographic, geological and, most importantly, environmental point of view, with emphasis on the Lower Welland Valley. Relevant environmental information, including soil micromorphology, insect remains, plant remains and the pollen record, has been drawn upon in order to produce a comprehensive narrative. It is worth noting that this source material is limited, being based on the excavated evidence from a handful of local sites, namely the Etton causewayed enclosure, Etton landscape in general and the A15 bypass. The available evidence has been used as a means of 'filling in the environmental gaps', thus providing a more homogenous picture relating to the valley's development.

Stowe Farm has not been included, due to the poor preservation of the environmental record which was deemed to be of negligible potential by the paeleo-environmental specialist appointed at the time of the excavation.

Period ^α	Regional Climate [¶] (Primarily based on Etton/Maxeys Landscape Studies) ^α	Regional Vegetation Cover [¶] (Primarily based on Etton/Maxeys Landscape Studies) ^α	Type of Landuse [¶] (Primarily based on Lower Welland Valley Sites, including Stowe Farm) ^α	Intensity of Landuse [¶] (Primarily based on Lower Welland Valley Sites, including Stowe Farm) ^α
Early to Middle Holocene (c. 12000 cal. BP to c. 6000 cal. BP) ^α	Braided river system [¶] Wet climate, with seasonal water inundation/flooding, and raised drier areas within the floodplain ^α	Open landscape dominated by juniper scrub, short turf, tall herbs and dwarf shrubs indicated by the palaeo-environmental record (Scaife 1998) ^α	No evidence for human occupation/exploitation of the Lower Welland Valley landscape possibly due to the constantly changing river system and the frequent flooding episodes (French 2003) [¶] ¶ ¶	
Boreal period (9000 to 7500 BP) into the Atlantic period (7500 to 5000 BP) ^α	Warmer climate [¶] From braided system to single channel meandering river system ^α	Formation of argillic brown earths or brown earths consistent with the presence of deciduous tree species (French 1990 and 2003; French & Pryor 2005; Waugh 2000). Appearance of deciduous woodland species, including oak, in the palaeo-environmental record (Scaife 1993) ^α	¶ ¶ ¶ α	
Early Neolithic (4000 to 3300 BC) ^α			Stowe Farm: nucleated settlement ^α	Intensive landuse for settlement ^α
Middle Neolithic (3300 to 2900 BC) to Late Neolithic (2900 to 2200 BC) ^α	More active river system with increased level of alluvial deposition [¶] Fluctuating water table and flooding episodes [¶] Localised variations within the Etton landscape ^α	Paleo-environmental record suggesting damp woodland interspersed with drier open scrub landscape (Etton Causewayed Enclosure Site) (Nye 1998, Scaife 1993 and 1998) (Scaife 1998 (Scaife 1993), Robinsons 2005) ^α	Scrub landscape subdivided into areas of arable and grazing (Etton Causewayed Enclosure Site). Ceremonial use of the landscape for monuments [¶] Stowe Farm: ceremonial use of the landscape: ring ditches and hengiform monuments ^α	Varying intensity of landuse, with localised variations. Small scale crop growth and animal husbandry [¶] Stowe Farm: Limited ceremonial use; no evidence for agricultural landuse. ^α
Early Bronze Age (2200 to 1600 BC) ^α	Wetter landscape and rising ground water table ^α	Woodland clearing and drainage of open, seasonally flooded landscape indicated by the palaeo-environmental record (Nye 2005a, 2005b, Robinson 2005) ^α	Increased deforestation with reclamation of land for agricultural practice: mixed economy with emphasis on pasture and livestock management. Funerary use of the landscape for barrows [¶] Stowe Farm: mixed economy with emphasis on pasture and livestock management. No evidence for funerary use ^α	Increased intensity of landuse with localised variations: early field systems [¶] ¶ ¶ ¶ α

Table 2 Environmental information for the Lower Welland Valley

Period [Ⓜ]	Regional Climate [¶] (Primarily based on Flag Fen Basin Studies) [Ⓜ]	Regional Vegetation Cover [¶] (Primarily based on Flag Fen Basin Studies) [Ⓜ]	Type of Landuse [¶] (Primarily based on Lower Nene Valley sites and Stowe Farm) [Ⓜ]	Intensity of Landuse [¶] (Primarily based on Lower Nene Valley sites and Stowe Farm) [Ⓜ]
Middle Bronze Age (1600 to 1200 BC) to Late Bronze Age (1200 to 700 BC) [¶] [Ⓜ]	Progressively wetter landscape and rising ground water table. [Ⓜ]	Continued woodland clearing and drainage of open, seasonally flooded landscape indicated by the palaeo-environmental record (Nye 2005a, 2005b, Robinson 2005) [Ⓜ]	Continued deforestation and land reclamation for agricultural practices: mixed economy with emphasis on pasture and livestock management [¶] Stowe Farm: Early rectilinear and curvilinear field systems. Mixed economy with emphasis on pasture and livestock management reaching the apex. [Ⓜ]	Increased intensity of landuse, with emergence of more extensive field systems [Ⓜ]
Early Iron Age (800 to 300 BC) to Middle Iron Age (300 to 100 BC) [Ⓜ]	Wetter landscape [¶] [Ⓜ]	Open, seasonally flooded landscape (French 2003). Change in the taxa that thrived in wetter conditions, as opposed to former muddy/sediment conditions in the Flag Fen basin (Scaife 2001) [Ⓜ]	Continued deforestation and land reclamation for agricultural practices: mixed economy with emphasis on pasture and livestock management [¶] Stowe Farm: larger enclosed areas, and appearance of a complex funnel-shaped enclosure to control movement of livestock [Ⓜ]	Extensive landuse [¶] ¶ ¶ ¶ [Ⓜ]
Late Iron Age (100 BC to 43 AD) to Roman + (43 to 410 + AD) [Ⓜ]	Wetter landscape [Ⓜ]	Increased inundation of the river valleys (French 2003, Evans and Knight 1996a). More extensive use of the landscape for cultivation (French 2003). [Ⓜ]	Continued deforestation and land reclamation for agricultural practices: mixed economy with more emphasis on cultivation. Settlement expansion, light industry and ceremonial use of the landscape (temple sites) [¶] ¶ Stowe Farm: Abandonment of field systems. Evidence for ceremonial use of the landscape (shrines) [Ⓜ]	Extensive landuse with more open field systems [¶] ¶ ¶ ¶ Stowe Farm: abandonment of the site with very sparse activity limited to some evidence for ceremonial use [Ⓜ]
Early Medieval to Post Medieval [Ⓜ]	Increasingly wet landscape until systematic drainage from the Post Medieval period [Ⓜ]	Continued inundation of the river valleys. More extensive use of the landscape for cultivation (French 2003). [Ⓜ]	Cultivation on higher ground, as suggested by distribution of ridge and furrow [¶] ¶ Stowe Farm: evidence for ridge and furrow [Ⓜ]	Extensive use of dry land with extensive ridge and furrow systems [¶] [Ⓜ]

Table 2 (cont.) Environmental information for the Lower Welland Valley

2.2.2 Geology between Stamford and Peterborough

The solid geology between the area east of Tallington and Market Deeping, in Lincolnshire, consists of Cornbrash, Kellaway Beds comprising dark grey clays and sand, and Oxford Clay (Booth 1981; French & Pryor 2005). The overlying drift geology includes late Devensian glacial sand and gravels in the form of first and second terrace deposits, with the first terrace being the dominant deposit along the valley east of Tallington. The 'islands', one example being Maxey, are made-up of what is termed First Welland Terrace gravel, which is topographically slightly higher than the surrounding lower first terrace river gravels (French & Pryor 2005). Second terrace river gravels deposits are patchier in their distribution, being located around Stamford (Lincolnshire) and in the Glington-Peakirk area north of Peterborough (Cambridgeshire) (Booth 1981; British Geological Survey 1978 & 1984).

2.2.3 The River Welland

The River Welland headwaters rise to the west of Market Harborough, in Leicestershire, and flow east to its outfall into the Wash (Booth 1981). The river is fed by a number of tributaries, which include the West and East Glen rivers, Eye Brook, the River Chater and the Gwash, covering a catchment area of 1,680km² (Environmental Agency 2016). For approximately half of its length, the river flows through a gently rolling landscape of the Lias group formations - Mudstone, sideritic sandstone - and the Lower Oolite - Cornbrash, Great Oolite Series and inferior Oolite Series (West 2012). The valley floor drops gently from around 80m AOD at Market Harborough (Leicestershire) to 20m AOD at Stamford (Lincolnshire). East of Stamford, at Tallington (Lincolnshire), the river enters a flatter area, below 10m AOD, slowing and meandering through the landscape. Finally, the river reaches the Fen Basin, east of Market Deeping (Lincolnshire), before its outfall in the Norfolk Wash.

The Welland is one of the three major rivers to drain the fenland basin into the Wash, the others being the Nene and the Great Ouse. The topographical characteristics of the Nene and Great Ouse are similar to that of the Welland, as both rise in what can be described as undulating landscapes, the Nene near the village of Badby, in Northamptonshire, and

the River Great Ouse close to Syresham and Sulgrave, in Bedfordshire. The three rivers share common traits regarding their geological make-up, which may account for the topographical similarities exhibited (Harding & Healy 2013; Dawson 2000).

Over a number of years investigations have been undertaken in the formation processes behind low-energy rivers located in the East Midlands of England, including the River Welland (Howard & Macklin 1999). These studies have focused upon the Holocene period, a time of climatic change that impacted on the nature of rivers and their behaviour within the landscape, with a profound effect on the human inhabitants and their interaction with the changing environment (Evans 1991).

The Lower Welland Valley in the Early to Middle Holocene (c. 12000 cal. BP to c. 6000 cal. BP)

Evidence suggests that the lower reaches of the River Welland, together with other rivers of similar characteristics (Nene, Soar and Ouse), underwent a fundamental change during the pre- and early Holocene, moving from a braided system, in essence a series of reasonably shallow stream channels located across the valley floor, to a more meandering system. The nature of braided stream channel systems means they change location on a regular basis, being in-filled and then re-cut, according to the flow rate and type of sediment discharge which, in this case, needs to be coarse-grained (Wilkinson & Stevens 2003).

Palaeo-Environmental Data

Investigation of the pollen data and insect assemblages from the Etton environs indicates that the earlier Holocene landscape along the Lower Welland Valley witnessed the growth of herbaceous grasses, shrubs namely juniper, followed by the establishment of birch/pine, resulting in the formation of scrub woodland (Scaife 1998). It should be noted that the existence of a comprehensive dataset covering the earlier Holocene pollen and insect related data is somewhat fortuitous. The Neolithic people who constructed the

ditch segments on the northern side of the Eton causewayed enclosure used a natural stream channel, integrating it into the finished structure. The depth of the waterlogged peaty deposit dated to late Devensian and Early Holocene (c. 11,000 – 7500 cal. BP) within the channel allowed for good preservation of the pollen and insect record (Robinson 1998; Scaife 1998). It must also be noted that pollen evidence for the Pre-Boreal, Boreal (c. 9000 – 7500 cal. BP) and Atlantic periods (7500 – 5000 BP) recovered from the stream channel only gives a partial view of the environment, with tree pollen largely absent from the sequence. In this instance related data from sites investigated in the general Eton area enabled the succession picture to be further developed. The pollen record indicated the presence of pine and hazel superseded by oak and elm present during the Pre-Boreal, Boreal period (c. 9000 – 7500 cal. BP), becoming the dominant woodland species, at least on the higher ground (Birks, Deacon and Peglar 1975; Birks 1989; Godwin 1975; Scaife 1998; Waller 1994). Based on the pollen evidence, an alternative view regarding the environmental landscape of the Lower Welland valley pre-Holocene Devensian and Early Holocene has been suggested. Scaife has moved away from the localised view that the landscape was dominated by birch/pine woodland during the late glacial environment to suggest the existence of a more expansive open landscape initially dominated by juniper scrub, short turf, tall herbs and dwarf shrubs (heliophilous species) (Scaife 1998).

The alternative view suggested by Scaife (1998) appears to be supported by the evidence recovered from the study of the insect assemblage, again recovered from the stream channel on the south-west end of the Eton causewayed enclosure (Robinson 1998). Within the assemblage Robinson (1998) noted a high percentage of beetles (including: *Donacia impressa*) with their primary food source being early growth reed swamp vegetation. Ground beetles (Carabidae) were also recovered from the samples. These species inhabit marshland, as well as the zone between the slightly raised drier landscape and the area largely inundated by water (Robinson 1998). Interestingly, species that thrive in tree-covered areas inclusive of shrub growth were absent. A further strand of environmental evidence was recovered during plant macrofossil analysis of deposits from the stream channel. Of the 26 taxa identified, *Cyperaceae* (sedge) was the most numerous, followed by *Carex* seeds (grasses) as well as *Schoenoplectus lacustris* (club-rush), all of which inhabit wet environments *i.e.* marshland. The remaining taxa that

included *Cirsium cf palustre* (grasses), *Lycopus europaeus* (gypsywort), to name but two, all enjoy wet muddy conditions, preferably on the margins between wet and dry land (Nye & Scaife 1998). Evidence for plants that thrive in drier condition was largely absent from the macrofossil record, with the exception of *Polygonum aviculare* (common knotgrass) and *cf Artemisia* sp (mugwort).

Collectively, the evidence appears to suggest that the landscape along the Lower Welland valley was open, with the presence of flora and fauna adapted to wet conditions. The macrofossil record does suggest that the local environment was largely wet, potentially experiencing seasonal water inundation/flooding, with raised drier areas within the floodplain.

The progression of time moving through the Boreal period (9000 – 7500 BP) and into the Atlantic period (7500 – 5000 BP) witnessed a change in the river system and vegetation. A meandering system consists of a single channel, which as the name implies, meanders across the landscape, gradually replacing the braided system. According to Coard and Chamberlain (1999), the fundamental transformation affecting the rivers was the result of rapid climate change from cold temperatures (terminal Pleistocene c. 11,500-10,000 cal. BP) to warm temperatures (Holocene c. 12,000 cal. BP - today) over a few decades. The mechanics of the meandering system, being very different from the braided system, had a major impact on the river valleys of Lowland Britain, including the River Welland. The increased temperature would have reduced the flow rate of the river, with the larger and heavier coarse-grained particles moving along the base of the channel, and the lighter finer grained particles such as sand and clays moving in suspension, albeit slowly. Naturally occurring levees would have further enhanced the deposition of the fine-grained material (sand and clay), gradually building them up to become features in their own right within the valley floodplain (Wilkinson & Stevens 2003). The 'lazy' meandering river system, coupled with a warming of the climate, triggered a change in habitat, with oak becoming more evident as the dominate species, and elm and hazel also occurring (Scaife 1993).

Further evidence that the early Holocene landscape was dominated by deciduous tree species, including oak and lime, is provided by the formation of argillic brown earths or brown earths (French 2003; French & Pryor 2005). Brown earth is a nutrient rich humic

soil typical of cool temperate Western Maritime climates, namely temperate Europe, east coast of the USA and eastern Asia (Barker, Redfern & Skinner 2006). The brown earth is a soil which is replenished on a seasonal basis when new leaf litter is generated during autumn. The chemical make-up of brown earth, with a high pH level and low tannin content, allows the rapid break down of the plant material through worm action, rodent activity and intense bacterial action (Limbrey 1975; Briggs 1985). The various natural activities result in the production of a loamy, potentially clay rich, soil with a structure that resembles breadcrumbs, which is well drained and aerated.

In the case of the Lower Welland Valley, what could be considered the archetypal brown earth was only present on the raised areas within the valley, above the active floodplain. Moving down slope towards the marginal zone between wet and drier land, the brown earth was less well-developed. Further evidence for the presence of deciduous woodland along the Lower Welland valley is the formation of an argillic brown earth identified towards the base of the brown earth. This deposit is the result of clay particle movement thorough the soil profile with water being the medium that allows the movement to take place. The resulting horizon is classed as a B horizon or more commonly known as subsoil (Waugh 2000; French 1990, 2003, French & Pryor 2005).

Evidence for human occupation/exploitation of the Lower Welland valley landscape is absent. The reasons for this lack of evidence are not readily apparent. It is possible that the constantly changing river system, which appears to have migrated across the valley floor, and the frequent flooding episodes, played a role (French 2003). Each change of location associated with the anastomosing (two or more stable channels existing at any one time) river system was proceeded by the infilling of the earlier channel with either an alluvial rich soil or coarse gravelly sand. The reason for the differentiation in deposits is not clear. It has been suggested that coarse gravelly sand was the result of ponding followed by rapid drying of the landscape (French 1998). The shifting anastomosing system continued into the Neolithic, cutting through earlier systems and, eventually, impacting on the general plan of the Etton causewayed enclosure and remodelling a segment of the enclosure ditch.

The Lower Welland Valley in the Neolithic (4000 – 2200 BC)

The meandering river system and vegetation cover along the valley remained unchanged during the earlier Neolithic. This situation changed in the mid fourth millennium BC, although the pace of change is unclear. This is primarily due to the limited availability of data

The period from 3300 to 2900 BC (Middle Neolithic) saw the river systems become more active, with the consequential increase in the levels of colluvial and alluvial silt deposition. The deposition of alluvial silts appears to continue in a northerly direction, corresponding to the locational change of the channel system which, together with high ground water table, contributed to the flooding process (French 2003).

Palaeo-Environmental Data

Samples taken from the Etton causewayed enclosure ditch system dated to the Middle Neolithic support the increasing level of water inundation producing areas of standing water. The macrofossil assemblage yielded evidence for the presence of aquatics (those species that are specially adapted for living submerged in water), including: *Ranunculus* subgenus *Batrachium* (water-crowfoots), recovered in substantial numbers, as well as *Myosoton aquaticum* (water chickweed), *Potamogeton sp* (pondweed), and *Chara* (green algae) oospores (Nye & Scaife 1998). The diversity of the landscape within the immediate environs of the Etton causewayed enclosure is evidenced through the range of taxa recovered that thrive in wet or muddy habitats, including *Lycopus europaeus* (gypsywort), *Cirsium palustre* (marsh thistle), to name but two (Nye & Scaife 1998).

The pollen sequence recovered from the waterlogged deposits within the enclosure ditch was less informative, potentially due to the drying and oxidation of the sediments. Despite poor pollen preservation, what was recovered reinforced the evidence from the macrofossil analysis, which had identified wetland taxa, including pollen of *Cyperaceae* (sedges) (78%) (Table 3), thriving in damp conditions (Scaife 1998). Other species, such as *Alisma* (water-plantains), *Typha angustifolia* (Bulrush) and *Typha latifolia* (Broadleaf cattail), indicated the presence of standing water. Molluscan evidence recovered from

the enclosure at Etton was considered unreliable due to a number of possible factors that included fluctuating ground water, flooding, deposition of colluvium/alluvium and human action (i.e. cleaning out the enclosure ditch). (French 1998). However, the molluscan evidence does tend to reinforce the more reliable environmental data. For example, the species *Aplexa hypnorum* (moss bladder snail) which made-up 43% of the sample exists in freshwater environments, together with other species such as *Carychium tridentatum* (Land snail) and *Aegopinella nitidula* (small land snail), who collectively formed 22.5% of the sample. These species are found in a number of environments ranging from leaf litter to the base of leaves in tall unmanaged grassland (French 1998).

The information from the Etton area appears to mirror the evidence gathered from Crowtree Farm and Oakhurst Farm located 6-7km from Maxey village (Scaife 1993), where the pollen record spanned the transition between woodland to open landscape, c. 3300 to – 2900 BC. The insect record appears to confirm the pollen sequence from c. 3300 to - 2900 BC through to c. 2900 to – 2200 BC. The insect fauna included 35% terrestrial Coleoptera, 17% of which was Scarabaeoid dung beetles, which largely feed on dung produced by domesticated herbivores, indicating a degree of animal husbandry occurring within an open landscape (Robinson, 1998). A total of 5% of the terrestrial Coleoptera recovered from the samples were identified as being wood and tree-dependent species. This has led to the suggestion that the open areas were set against a woodland backdrop.

	Numbers	%
<i>Betula</i>	7	1.1
<i>Pinus</i>	2	0.3
<i>Quercus</i>	1	0.2
<i>Fraxinus</i>	1	0.2
<i>Salix</i>	3	0.5
<i>Rununculaceae</i>	1	0.2
<i>Rununculus type</i>	1	0.2
<i>Hornungia type</i>	2	0.3
<i>Papilionaceae</i>	1	0.2
<i>Umbelliferae</i>	20	3.1
<i>Hydrocotyle type</i>	3	0.5
<i>Rumex</i>	4	0.6
<i>Convolvulus</i>	2	0.3
<i>Plantago coronopus type</i>	1	0.2
<i>Rubiaceae undiff</i>	3	0.5
<i>Succisa</i>	1	0.2
<i>Artemisia</i>	1	0.2
<i>Alisma type</i>	1	0.2
<i>Sparganium type</i>	1	1.7
<i>Typha latifolia</i>	1	0.2
<i>Cyperaceae</i>	503	78.0
<i>Gramineae</i>	66	10.2
<i>Cereal type</i>	3	0.5
<i>Unidentified/degraded</i>	1	0.2
<i>Dryopteris type</i>	5	0.8
<i>Pteridium aquilinum</i>	3	0.5

Table 3 Pollen from sample 10 (of sample series A), enclosure ditch segment 1, Layer 4, section 6 (Phase 1) (after Nye & Scaife 1998)

The environmental picture of the Lower Welland valley was further enhanced and slightly modified through the excavation of various features in the Etton landscape, and along the A15 bypass (French 2005). Mark Robinson's (2005) analysis of the insect assemblage identified the presence of a species of *Coleoptera*, dependent on woodland and scrub, making-up 9% of the total species groups. The significant percentage of woodland dependent *Coleoptera* appears to suggest that between c. 3500 to 1700 BC, had

undergone limited clearance. This is further reinforced by the presence of *Colydium elongatum*, a woodland beetle only associated with very mature trees, either alive or dead within an undisturbed context (Robinson 2005).

Although the features and monuments excavated on the Etton Landscape, including the A15 bypass, are not far from the Etton causewayed enclosure, the use of the landscape is different. As discussed, the landscape in the immediate vicinity of the Etton causewayed enclosure was open grassland, suitable for small scale crop growth and animal husbandry, whereas the Etton landscape appeared to be more wooded, with possible areas of open landscape. In essence, a patchwork of cleared spaces, at least on the raised areas appears to characterise the landscape from the Middle Neolithic period onwards (Robinson 2005). This idea of a wooded landscape punctuated by open spaces is also evidenced by the insect assemblage. Robinson (2005) identified the presence of *Scarabaeidae* and *Elateridae* species whose staple food is the roots of grassland herbs, and *Phyllopertha horticola* and *Agrypnus murinus* whose *larvae* spend their initial existence in well-aerated grassland soil. Other insects species present in the samples from the A15 bypass were *Aphodius* from the genus of beetles that feed on dung but only in the larval state, and two species of the scarbaeoid dung beetles, *Onthophagus nutans* and *Onthophagus fracticornus* (Robinson 2005).

The macrofossil evidence from various internal features of the causewayed enclosure, which was dated between c. 2900 to 2200 BC, suggests a drier landscape. This interpretation is based on the reduced number of taxa that thrives in damp conditions, such as *Batrachium* (water-crowfoots); *Ranunculus flammula* (lesser spearwort); *Rorippa nasturtium-aquaticum* (water-cress) and *Lycopus europaeus* (gypsywort) (Nye & Scaife 1998).

Although it is difficult to characterise the use of this drying landscape with confidence, it is possible to suggest continued agricultural practices. Evidence for this derives from the presences of certain taxa, such as *Rubus* (member of the rose family), *Sambucus* (elder and elderberry) and the more abundant *Corylus avellana* nuts, *Rubus fruticosus* (blackberry), *Sambucus nigra* (elder, elderberry, black elder, European elder, European

elderberry and European black elderberry – a species group that thrives in wet or dry conditions.

On the basis of the macrofossil evidence, Nye and Scaife (1998) have suggested the existence of a scrub landscape possible subdivided into areas of arable by managed hedgerows, as indicated by the macrofossil assemblage recovered from a small number of contexts of the Etton causewayed enclosure which contained *Triticum* wheat.

It is unfortunate that the preservation of plant remains was poor from features located on the Etton landscape, thus reducing the level of detail to be added to the environmental narrative. Despite poor preservation, sufficient evidence was recovered from the excavation of features along the A15 bypass to suggest that the later Neolithic Landscape comprised damp woodland including *Prunus spinosa* (Sloe), *Sambucus nigra* (elder, elderberry, black elder, European elder, European elderberry and European black elderberry – this species group thrives in wet or dry conditions), and *Urtica dioica* (nettle).

In synthesis, the environmental narrative for the Etton landscape during the Neolithic period is different to that of the immediate environs surrounding the Etton causewayed enclosure some 400m to the west, as indicated by the past assessments of both plant and insect remains.

The Lower Welland Valley in the Chalcolithic and Bronze Age – (2500 – 700 BC) (Table 2)

Chalcolithic and Early Bronze Age (2500 – 1600 BC)

Evidence from excavations suggests that the transition between the Late Neolithic (2900 – 2500 BC) into the Chalcolithic / Early Bronze Age (2500 – 1600 BC) was characterised by environmental changes, which possibly contributed to the appearance of a progressively wetter landscape. This change appears to have had an effect on the domestication of the landscape, with apparent increased in deforestation and reclamation of land for agricultural practices.

Environmentally, the transition between the Late Neolithic and Early Bronze Age witnessed the potential onset of a wetter landscape. French (2003; French & Pryor 2005) alluded to this when he suggested that the lower river terrace was covered by increased levels of river borne silts and clays, as a result of seasonal flooding. Water inundation also had the effect of raising the ground water table, at least on a seasonal basis.

It is tempting to suggest that the increase in silts and clay deposition was partly the result of clearance through the removal of tree cover. This process would have had an effect on the hydrological system by increasing the rate of both water inundations, at least on a seasonal basis, and erosion of the forest soils (Nisbet & Thomas 2006). However, the extent and scale of woodland clearance cannot be proved conclusively.

Further evidence relating to the Early Bronze Age landscape of the study area in the context of the Lower Welland Valley has been provided by the analysis of environmental samples from a Beaker pit complex from the Etton Woodgate site (French & Pryor 2005). The samples contained evidence of woodland species dominated by *Betula* (alder and birch), with ground cover of *Carex* (sedges) and, to a lesser degree, *Myosoto aquaticum* (chickweed) and *Moehringia* (nerved sand wort).

The taxa indicate varying landscapes at the waterside, ranging from running to standing water, either permanently or on a seasonal basis. Species such as *Rannunculus* (Crowfoot) thrive in a landscape that has no standing water for at least part of the year, whereas *Polygonum hydropiper* (water pepper) and *Bidens cernua* (bur-marigold) favour locations where there is no standing water during the growing season. Interestingly, other species such as *Sphagnum*, *Camptothecium sericeum* (moss), *Montia Fontana* subsp. *chondrosperma* blinks (water chickweed or annual water miner's lettuce) all grow well in areas with a high water table.

There is also evidence for areas of the landscape being drained, provided by the presences of *Rannunculus acris* (buttercups) and *Rumex* (docks), species which thrive in marshy grassland and pasture. With reference to them, Nye (2005a, 2005b) suggests that in order to encourage growth, woodland would have to be cleared, and areas of standing water drained.

To gain insight into possible arable characteristics of the Early Bronze Age landscape, Nye (2005a, 2005b) used environmental proxies, observing the presence of weeds, such as *Stellaria media* (chickweed), and *Lamium album* (white dead nettle), *Sonchus asper* (Prickly sow thistle), *Polygonum* (knotgrass), which are commonly present in modern corn fields. Further evidence relating to the cultivation of the cleared landscape has been identified through the presence of *Galeopsis tetrahit* (Hemp nettle), *Lapsana communis* L (nipplewort) and *Torilis arvensis* (hedge parsley) all common on arable land (Nye 2005a, 2005b).

Palaeoenvironmental analysis also suggests there were differences in woodland and scrub cover between the Neolithic and Early Bronze Age. The presence of terrestrial Coleoptera beetles (9%) (wood and tree dependent) appears to indicate marginal woodland in the Early Bronze Age, consisting of *Alnus glutinosa* (alder), *Quercus* (oak) and *Corylus avellana* (hazel). The presences of certain species of trees also indicated possible ground conditions ranging from low-lying areas, which are favoured by alder, to higher land where hazel and oak thrive (Robinson 2005).

The presence of terrestrial Coleoptera species group, which included Scarabaeidae and Elateridea (click beetles) beetles, indicated an open component to the landscape, as these beetles feed on the roots of grassland herbs. This evidence was further enhanced by the presence of Apion beetles/weevils, which feed on clover or vetches (Robinson 2005).

The identification of an expanse of marshland through the insect record was not wholly convincing. What was more convincing was evidence that allowed Robinson (2005) to suggest the presence of marshy ground alongside waterways. The evidence included *Elaphrus cupreus* and *Bembidion doris* (ground beetles), as well as *Notaris acridulus* (weevil) recovered from two pits along the A15. The insect record also gave indications of human habitation/exploitation of the landscape. This will be discussed below.

In synthesis, the analysis of the minimal plant evidence gathered from the A15 excavation indicated that the landscape during the Early Bronze Age was becoming more open pasture.

Middle Bronze Age (1600 – 1200 BC)

During the Middle Bronze Age the trend towards increasingly open landscapes continued, as indicated by the excavation along the A15. Samples from the A15 site dating from 1600 to 1200 BC produced redshank (*Polygonum persicaria*), spike rush (*Eleocharis* sp) and sedge (Cyperaceae), all of which favour open damp areas. Further evidence for the move towards a more open landscape was the existence of species that favour such conditions, namely chickweed (*stellaria media*) and white dead nettle (*Lamium album*), (Nye 2005a, 2005b). However, this does not mean the landscape was devoid of trees, as evidenced by the recovery of oak charcoal.

Robinson (2005) used insect records from a small number of excavated features from the Etton Woodgate and A15 sites to assist in gaining insight in the use of the Middle Bronze Age landscape. The species identified supported the paleobotanical conclusions reached by Nye (2005a, 2005b)

Late Bronze Age (1200 - 700 BC)

During 1200 to 700 BC the landscape along the Lower Welland Valley continued to be open in nature and flooded on a seasonal basis, as evidenced by the insect assemblage and macrobotanical remains.

In total, Nye (2005a, 2005b) identified the seed remains of thirteen species from features excavated on the line of the A15 bypass, many of which indicate a wet or, at the very least, moist (on a seasonal basis) and partially open pasture land. The species identified included buttercup (*Ranunculus acris* type), dock (*Rumex* sp), hogweed (*Heracleum sphondylium*) and willowherb (*Epilobium*). The presence of certain species such as violet (*Viola* sp) and speedwell (*Veronica* sp), indicated increased woodland clearing for open spaces (Nye 2005a, 2005b), the extent of which remains uncertain.

The plant remains also corroborated the archaeological evidence for a fundamental anthropogenic change in the Lower Welland Valley, with the creation of extensive land division through the excavation of ditch systems. The Late Bronze Age ditch systems

attracted specific species suited to slow moving, or even standing water, including water crowfoot (*Ranunculus* subgenus *Batrachium*), as well as willow (*Salix* sp) suited to grow on the bank sides (Nye 2005a, 2005b). Robinson's results from analysis of the insect remains appears to mirror the macrofossil evidence. The open pasture landscape was evidenced by the species *Aphodius* and, in particular, *A. cf. Sphacelatus*; and two scarabaeoid (dung beetles), *Onthophagus* and *Onthophagus fracticornis*, all indicating the presence of domestic animals. However, as Robinson pointed out, the number of animals present within the landscape could not be estimated with a degree of accuracy because of the absence of a full dung heap fauna, which usually implies the presence of several animals (Robinson 2005)

In synthesis, the Late Bronze Age appears to have been characterised by an open, seasonally flooded landscape, which became divided through the excavation of extensive ditch systems, a trend that continued throughout the Iron Age into the Romano-British period.

The Lower Welland Valley from the Iron Age to the Modern Period (700 BC to present) (Table 2)

The palaeoenvironmental evidence would indicate that the open, seasonally flooded landscape of the Late Bronze Age continued to dominate the earlier Iron Age, with environmental change along the Lower Welland Valley occurring during the Late Iron Age and Roman period, when the land appears to have been used more extensively for cultivation (French 2003).

In order to characterise such change, information has been gathered from investigations along the Lower Nene Valley and Flag Fen basin (Peterborough, Cambridgeshire), due to the limited evidence produced by the sites excavated along the Lower Welland Valley.

Investigation of the environmental evidence recovered from the River Nene has shown extensive deposition of alluvial silty clays across a wide area of the valley floor, as well as the west (Fengate) and east (Northey) shores of the Flag Fen basin. These deposits have been dated to c. 340 BC for the west shore and c. 230 BC for the east shore (French

2003; Scaife 2001). It has been suggested that tree clearance on the higher land to the west reduced the evapotranspiration rates, and increased the amount of soil loss into the river system. Together with increased water levels, this impacted on the amount of alluvial silty clays being deposited across the lower reaches of the Nene Valley and beyond into the Flag Fen basin. Here, Scaife (2001) was able to identify a change in the taxa that thrived in wetter conditions, as opposed to muddy/sediment conditions that previously existed in the basin. These included *Nymphaea alba* (white water lily), *Myriophyllum* (water milfoil) and Potamogeton (pond weed) as well as a small increase in the presence of algae *Pediastrum*. A further defining factor was the potential for increased agricultural activity on the newly exposed land (Scaife 2001). The environmental processes identified along the Lower Nene Valley were mirrored along the Lower Welland Valley and the Lower Ouse Valley at about the same period (Evans and Knight 1996a). The general consensus for the first two to three centuries AD was that environmental conditions along these river valleys evolved gradually, with a progressively larger area of the landscape being inundated as the result of increased water levels and deposition of alluvial silty clays.

As with the Lower Nene and Lower Ouse Valleys, by the third century AD of the Roman period the Lower Welland Valley was affected by depositional factors that changed the facet of the landscape. Further deforestation, rising water table, and heavy ploughing of the valley sides allowed for erosional processes to continue at an increased rate. The movement of clay rich soil in-filled the established ditches, blocking the ditch system put in place to avoid or at least reduce the flood risk (French & Pryor 1992; Passmore and Macklin 1993). Eventually, the river was no longer able to cope with rising water levels and the amount of moving sediment, especially during the winter months. Potentially, the summer months offered some respite from the levels of water inundation, due to the seasonal lowering of the water levels. An alternate view has been proposed by Ljungqvist (2010) who reconstructed a picture of the Roman climate using multi-proxy temperature data. The evidence would suggest the presence of a Northern Hemisphere Roman warm period c. AD 1-300. The effect of increased average temperatures would have allowed the atmosphere to hold elevated moisture levels, especially in the summer months. This in turn would have led to increased precipitation, further contributing to the wet conditions and to the deposition of greater amounts of alluvial material (French & Pryor 2005). It

has been estimated that during the later Roman period 1.5m of alluvial silty clays were deposited across the original flood-plain, covering those terraced areas located on the 7.5m OD contour. It must be noted that the figure for the depth of alluvial deposition is only an estimate, as it is not known how much of the alluvium has been lost to later erosion (French 2003).

Archaeologically, the depth of alluvial silty clay deposited across the flood-plain of the Lower Welland Valley in the immediate environs of the river had a positive impact on the degree of preservation of the prehistoric and early historic landscape from extensive damage through agricultural practices, namely ploughing.

Topographically, away from the immediate environs of the river the bank raises in a northerly direction from an average height of 7.5m OD to an average height of 10m OD at the Stowe Farm site. Although the inclination is not steep, it is sufficient to impact on the level of protection offered by the alluvial silty clay which is some 1.5m thick close to the river but only c. 0.5m thick at the Stowe Farm site, due to soil erosion. This is evidenced by the extensive damage of the upper layers of the buried archaeology caused by ploughing, a process that appears to have started during the early medieval period and continued into the modern period.

2.3 SYNTHESIS (Table 2)

During the Early Holocene the lower reaches of the River Welland underwent a fundamental change, moving from a braided system to a more meandering system. Evidence for human occupation and exploitation of the Lower Welland valley landscape is absent, possibly due to the constantly changing river system, and the frequent flooding episodes.

The character of the meandering river system and vegetation cover along the valley changed in the course of the Neolithic period (4000 – 2500 BC) and gave rise to localised variations in the environmental narrative of the Etton landscape.

The transition between the Late Neolithic (2900 – 2500 BC) into the Early Bronze Age (2500– 1600 BC) was characterised by environmental changes, which possibly contributed to the appearance of a progressively wetter landscape. The Late Bronze Age (1200 – 700 BC) appeared to be characterised by an open, seasonally flooded landscape, which became divided through the excavation of extensive ditch systems, a phenomenon that continued into the Romano-British period.

From the Iron Age (800 BC) the landscape became increasingly wet, with short-lived episodes of drier conditions. Notwithstanding attempts at drainage during the post-medieval period (AD 1540 – 1901), the extensive flooding episodes continued until the mid-1950s, when the Maxey Cut drain was excavated.

CHAPTER 3

INITIAL INVESTIGATIONS OF THE STOWE FARM SITE

3.1 INTRODUCTION

This chapter describes the archaeological and historical background to Stowe Farm, based on the results from the initial investigations conducted at the site in 1994 in advance of area excavations between 1995 and 2000, as reported and disseminated (Howlett & Davison 1994; Kiberd 1996; Kemp 1997, 1999, 2000 & Hatton 2001). Relevant information gathered from original site reports has been supplemented by the content of available documents submitted as part of the original planning process.

Following the submission of a desktop assessment to the local planning authority to review the archaeological significance of the site, a series of evaluation techniques were implemented, which included non-intrusive surveys - field walking, aerial photographic assessment, soils survey, historic survey -, and geophysical survey, as well as intrusive investigation, namely evaluation by trial trenching. Unfortunately, the original archaeological desktop assessment submitted to support the planning application and the brief of work written by the local planning authority are no longer available from Lincolnshire County Council. As a result, the Stowe Farm Extension Document (Howlett & Davison, Appendix 7, 1994) has been used in this report in place of the original documents.

In 1994 the quarry operator Redland Aggregates commissioned the archaeological contractor Tempus Reparatum to produce a written assessment of archaeological potential of the Stowe Farm site and surrounding area (TR doc 31012DB) (Howlett & Davison, Appendix 1, 1994). Unfortunately, at the time this paper was being written, staff at Lincolnshire County Council could not locate the aforementioned document.

In 1989 an area of landscape at Stowe Farm known as W3/PL/4 (*Figure 1*) had already been investigated by Tempus Reparatum to determine the impact aggregate extraction would have on the buried archaeology. The application was refused for unclear reasons. However, the second application for the extraction of gravel for the area known as W3/PL/5 was granted, subject to the fulfilment of a series of archaeological conditions. At the time, the process followed *Planning Policy Guidance 16* (PPG16, 1990) and the Confederation of British Industry Code of Practice (CBI) 1982 (revised 1991) which promoted co-operation between mineral operators, archaeologists and mineral planning authorities. All work on and off-site followed the *Management of Archaeological Projects* 2nd Edition more commonly known as MAP 2 (Andrews 1991).

3.2 ARCHAEOLOGICAL WORK

3.2.1 Desk – Based Assessment

The desk-based survey (dated 8/11/89) identified a series of archaeological sites located within the application site and surrounding area (*Figure 3*). These are listed below in tabulated form (Table 4).

This information led to a first phase of non-intrusive archaeological investigations of site W3/PL/5 (*Figure 1*), which included an aerial photographic re-assessment, a field walking survey, a historic landscape survey, and a geophysical survey.

HER (SMR) Number	National Grid Reference	Site/Monument Description
MLI32979	0971 1167	A shield shaped enclosure visible as a cropmark on aerial photographs, on the side of the field, partly covered by woodland, with double ditches leading from the entrance in the southern corner of the flattened side. It extends into the adjoining Scheduled Ancient Monument (?IA/R)
MLI32991	0992 1169	A ring ditch visible as cropmark on aerial photographs, on the eastern side of the field
MLI32992	0980 1158	A ring ditch, visible as cropmark on aerial photographs in the middle of the field, approached by two ditches, to form a corner on the west side of a barrow
MLI33559	0980 1155	An extensive, probably Roman, occupation site, set within an area of ancient fields and visible as a cropmark
MLI30051	0951 1400	Scheduled Ancient Monument (SAM 160). Recommended for scheduling by the RCHM (E) in 1960: 'This clearly marked enclosure, in which lines of pits can be distinguished, may be an Iron Age farm frequently reconstructed'. The Scheduled Ancient Monument is described as an irregular pentagonal enclosure (approximately 60.96m x 79.25m) with subdivisions, excavated by the former Welland Valley Research Committee. It contains what appears to be a timber basilical building, visible on aerial photographs. A ditched driveway leads to the site. Pottery from the site has been mostly Roman
MLI30054	0980 1190	Scheduled Ancient Monument (SAM 327). Described by the former Department of the Environment (DoE) as 'Part of the large and straggling agricultural settlement at Greatford, probably of Iron Age or Romano - British date'. This site comprises a homestead enclosure, and what appear to be seven stockyards. There would appear to be a complex palimpsest of features, indicative of several overlapping periods of use. At least fourteen irregular rounded enclosures are known in the complex as a whole, linked by drove ways, and double ditches with right angle bends
MLI32980	0960 1170	Slight cropmarks, no distinctive site types visible
MLI33559	0980 1155	Cropmarks, extensive and probably indicating Roman settlement.

Table 4: HER Records (Lincolnshire County Council HER)

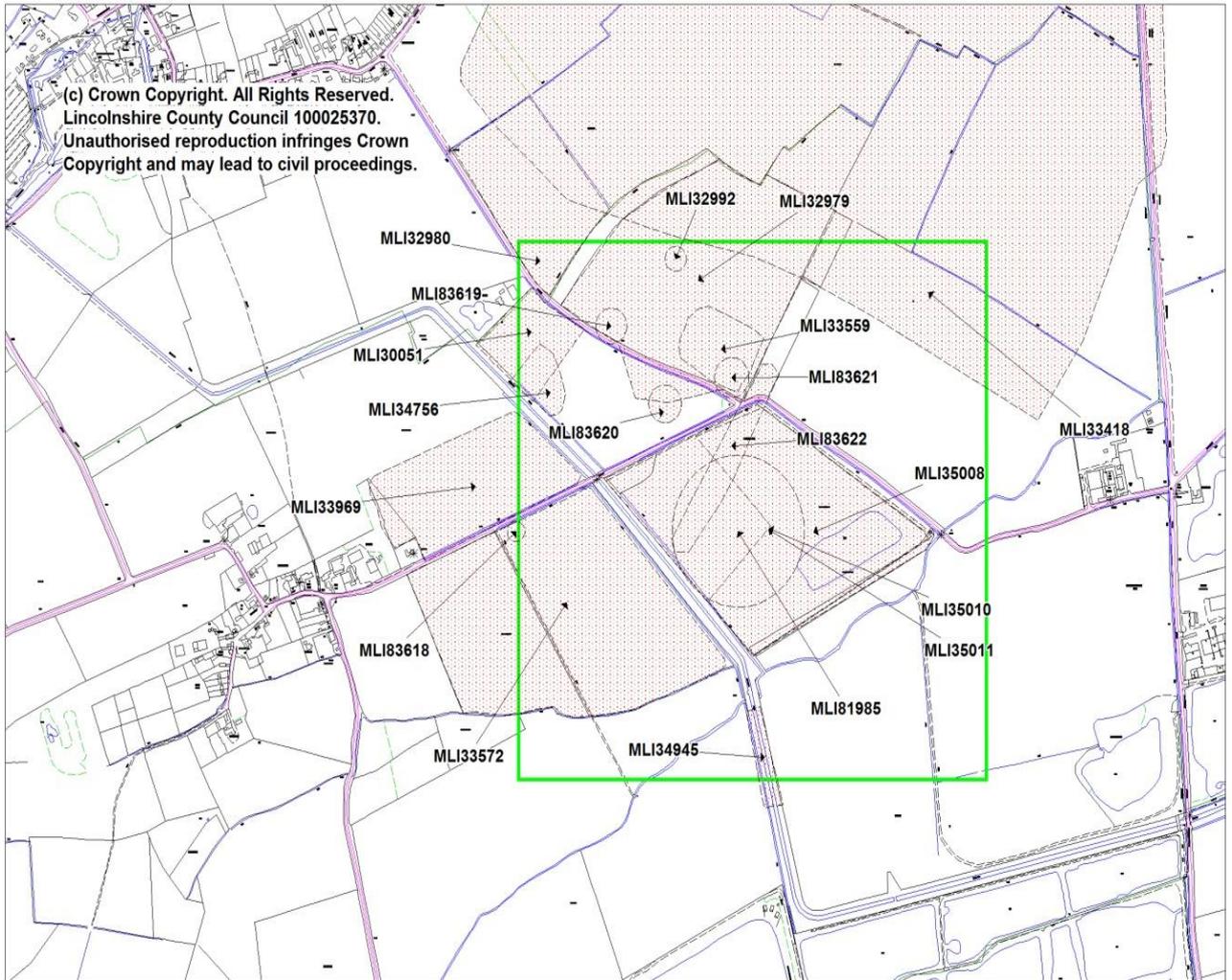


Figure 3: Stowe Farm: HER Monument Location Map (Lincolnshire County Council HER)

3.2.2 Non – Intrusive Surveys

Field walking

The field walking survey was supervised and undertaken by A.M. Wood, together with other Tempus Reparatum field staff. The aim was to identify areas of interest for further investigation. The area was then divided into fourteen transects, each 20m apart. The western two thirds of the site were walked within a 20 x 20m grid, the remaining third being under stubble and, therefore, unsuitable for field walking (*Figure 4*). Finds collected

from each individual 20x20m grid square were bagged and labelled using the south-west corner of the square as the collective reference point. In the interest of continuity, the geo-referenced field walking grid was subsequently used for the geophysical survey and to locate the evaluation trenches (Wood 1994 in. Howlett & Davidson 1994). At the time the weather was warm and dry with good light, thus providing ideal conditions for field walking.

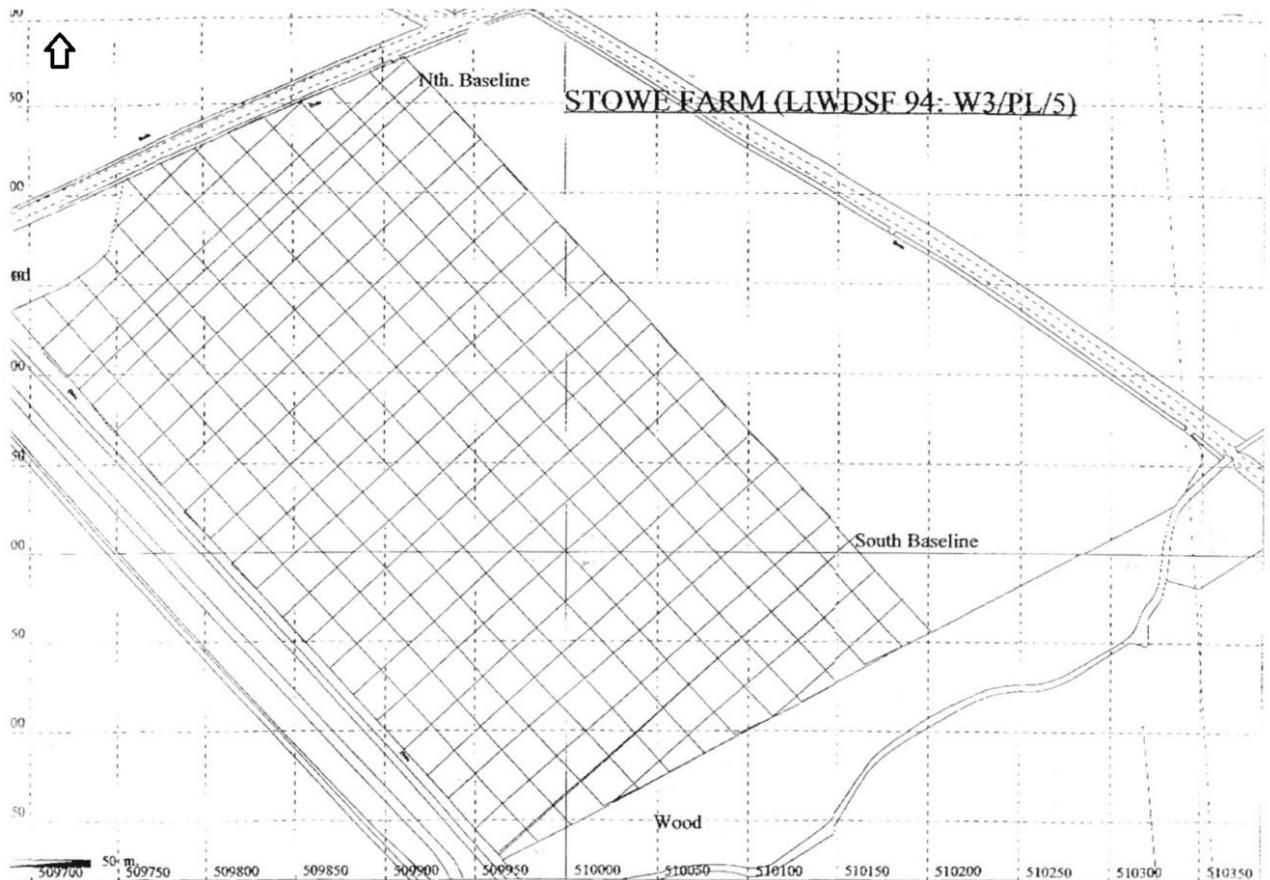


Figure 4: Layout of Field -Walking Grid (After Howlett & Davison 1994)

The number of finds recovered was quite disappointing. In total, 13 ceramic sherds were recovered, ranging in date from medieval to post-medieval; four fragments of flint, one of which was not included as it was recovered before the field walking commenced; one fragment of glass, bone and clay pipe, bringing the total count to 16 artefacts. No artefactual evidence dating to the late Bronze Age, Iron Age, Roman or Early Medieval

periods was recovered. On this basis, the field-walking report recommended trial trenching to investigate the apparent chronological gap in the artefactual record, especially when considering the high potential for the presence of prehistoric and Roman remains in the immediately surrounding area, as indicated by the desk-based survey (Wood 1994).

Historic Land Use Survey

Information relating to the historical element of the research was obtained from Lincolnshire Record Office. Documents used in the survey included the Domesday Book, estate maps (a 16th-century survey), Parliamentary Enclosure Award and Map dated to 1802, tithe map (1840) and the Ordnance Survey map series. The main aim of the study was to identify the history of land use of the proposed extraction area through map regression.

What became apparent from the research was that the landscape was open and cultivated until the time of Parliamentary Enclosure, when the present area was enclosed and subsequently divided, with the 1843 Tithe Map showing the north-eastern half of the now enclosed field being considerably narrower than the south-western half (Howlett & Davidson 1994). Cartographic evidence also indicated the presence of a small area of gravel extraction possibly opened at the time of Parliamentary Enclosure and used to maintain the route ways of the parish. With the exception of the small quarry, the sources appeared to indicate that the proposed extraction area had been used as arable during the medieval and post-medieval periods.

Soil Survey

As a means of explaining why the application area had produced scanty aerial photographic evidence for buried features, in contrast with the surrounding landscape, a soil assessment was undertaken in advance of trial trenching. The soil assessment data was also needed to indicate the suitability of the site for a magnetic susceptibility survey (below).

The soil survey was based on visual observation enhanced by the data from a coring survey conducted along an east-west transect across the site (Figure 5). It was apparent that the flat topography was interrupted by two parallel ridges running SW-NE across the site, thought to represent gravel ridges or bars. Therefore, it was suggested that the location of possible evaluation trenches should be targeted on these features in order to ascertain whether they were artificial or natural.

The depth of each individual core was determined by the presence of gravel and unconsolidated sediments. The underlying gravel appeared to be undulating, unlike the current ground surface which is largely flat. The overburden was recorded across the transect, as follows:

- Cores 2, 5 and 6 confirmed gravel encountered at 30cms
- Cores 3 and 7 confirmed gravel encountered between 40-50cms
- Core 4 confirmed gravel encountered at 70cms
- Core 1 confirmed gravel encountered at 125cms.

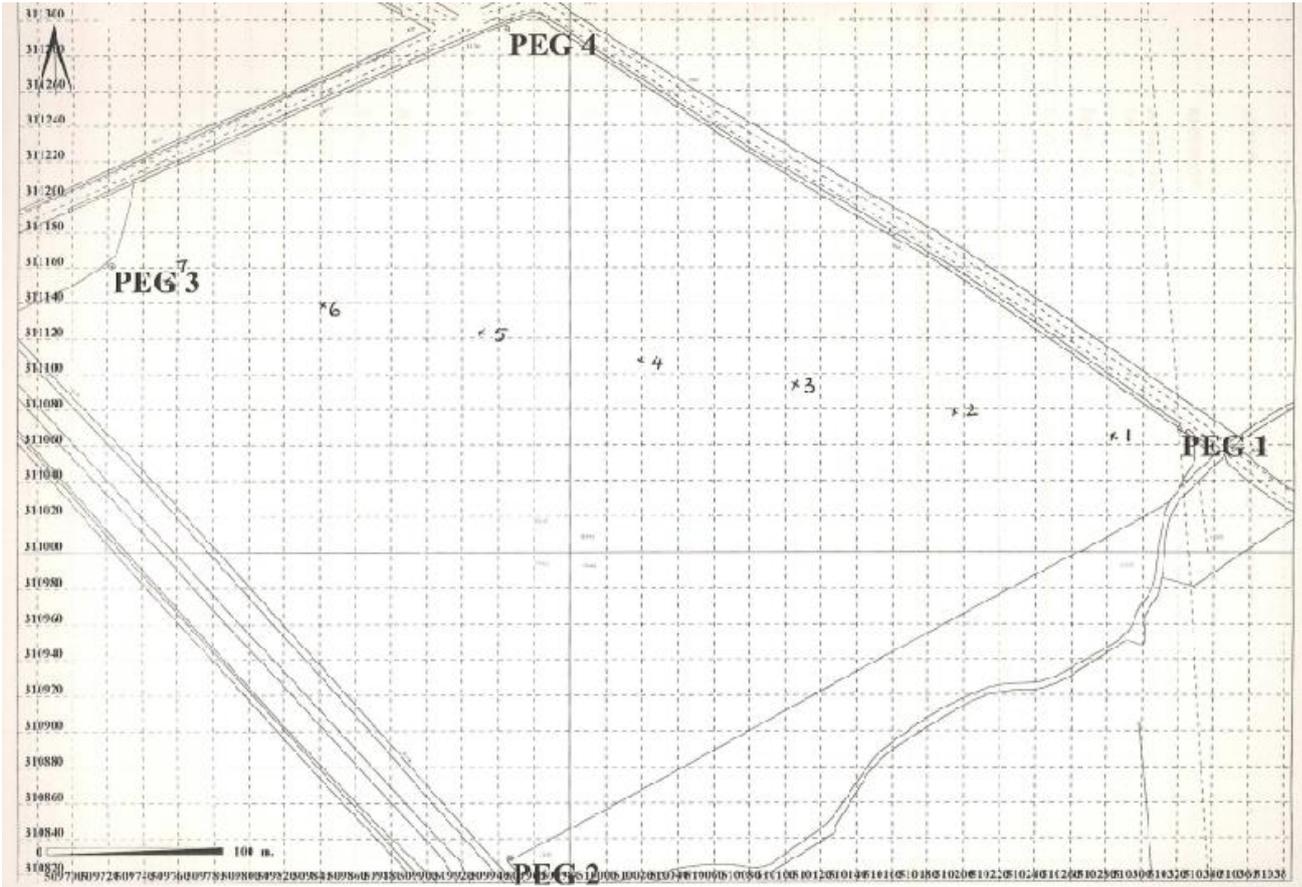


Figure 5: Location of Core Survey (After Howlett & Davison 1994)

The greater depth of Core 1 appeared to suggest the presence of a negative feature, possibly a ditch. This interpretation was further reinforced by the presence of charcoal in the deposit just above the natural gravel, and the high moisture content of the sediment. It was noted that all sediments were silty loams with minimal clay inclusions. No evidence of alluvial deposition occurred on the site (Redlands 1994).

The coring survey allowed the suggestion to be forwarded, that the limited results gained from the aerial photographic survey had been determined by the shallow nature of the features, coupled with well-drained soils. These conditions had reduced the possibility for the soil to form a subsoil reservoir, which, in turn, would have led to the formation of detectable cropmarks.

Geophysical Survey

It was anticipated that the shallow depth of overburden across the site, as determined by the coring survey, would be conducive to successful geophysical surveys (Howlett & Davison 1994).

Topsoil magnetic susceptibility was the survey method used for the whole site as a means of preliminary evaluation, followed by a detailed magnetometer survey of targeted areas of high archaeological potential.

Across the site the magnetic susceptibility survey identified two areas of interest, one located in the extreme west of the site, and the other in the extreme east. Both anomalies were found to extend, albeit irregularly, into the field for some distance. It was noted that the high susceptibility values may not have been archaeological in origin, but naturally occurring features on the landscape or modern constructions, for example an electricity pylon, or more recent gravel extraction (A. Bartlett 1994).

The magnetometer survey was successful in confirming the presence of those potential features identified using aerial photographs, including the pit-like features. However, it appeared to indicate that the limited evidence for archaeological features may have been due to low level of human activity.

It was concluded, due to reduced magnetic activity on site generated by human activity, the results from the magnetometer survey were uncertain (A. Bartlett 1994).

Aerial Photography

Aerial photographic interpretation was conducted by Roger Palmer (1994) using photographs sourced from the Cambridge University Collection of Aerial Photography (CUCAP) and The National Library of Aerial Photography (NLAP), as well as from a private collection owned by Mr James Pickering, a locally based aerial photographer who had flown over the area on 23 different occasions between 1975 and 1991. Unfortunately, none of the photographs taken by Pickering targeted W3/PL/5. Of greater use was a series of images taken in 1990 by CUCAP and by the Royal Commission on the Historical Monuments of England (RCHME) then housed by the National Monument Record (NMR). The photographs showed that the most common features across the site consisted of remains of medieval ridge and furrow with associated headlands. There were also earlier features, including two ring-ditches, one partially masked by a verge, and linear cropmark ditches, two of which were potentially marking the route of a trackway. The aerial photographs also showed pit-like features located in the north-western half of the field. Series of natural features and geological variations were also evident across the site (*Figure.6*).

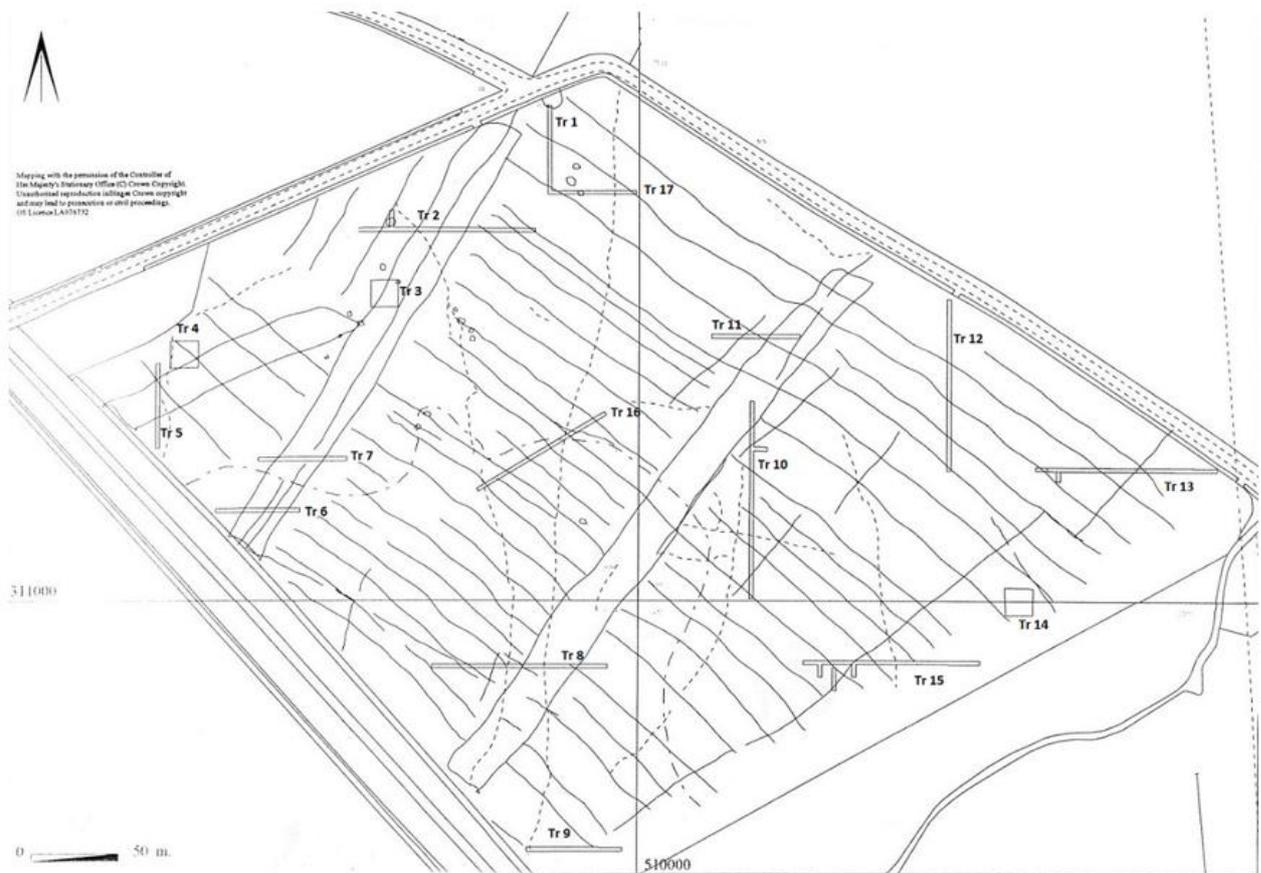


Figure 6: Aerial Photographic Plot and Proposed Trial Trench Location Layout (After Howlett & Davison 1994)

3.3 FURTHER WORK: TRIAL TRENCHING

Despite the inconclusive results from the various non-intrusive methods of investigation employed at the Stowe Farm site, an agreement was reached between Redlands and Lincolnshire County Council to implement a programme of trial trenching (Howlett 1994). If present, potential buried remains were expected to survive in reasonably good conditions of preservation, as indicated by the non-intrusive survey, even allowing for some degree of truncation of the upper deposits due to ploughing. The trenches were strategically located across the site to offer maximum coverage in order to assess the

presence/absence of archaeological remains, their character, date, phasing, quality, and degree of preservation.

3.3.1 The Evaluation Results

In total 18 trenches were excavated across the site in three sizes: 50x2m, 100x2m and 15x2m (*Figure 7*). All the trenches contained archaeological features that needed to be investigated. It was agreed from the outset that dating by artefactual evidence would be enhanced by taking environmental samples from excavated features, which would then be analysed scientifically. Excavation of the trial trenches exposed a reasonably complex series of features, predominantly pits and ditches, later attributed to agricultural practices dating to the prehistoric period. There was also a large number of ridge and furrow features present across the whole site which had partly impacted on the preservation of earlier features.

In total, 227 features were identified. All features were given a pre-excavation context number and were digitally planned. On excavation, all features were recorded using the pro-forma single context recording sheets designed by Tempus Reparatum, and based on the then Museum of London Archaeological Services (MOLAS) system (1990). Sections were drawn at a 1:10 scale and plans produced at a 1:20 scale. A photographic record was also compiled of all features excavated, which included monochrome and colour prints, and colour slides (Hatton in Howlett & Davidson 1994).

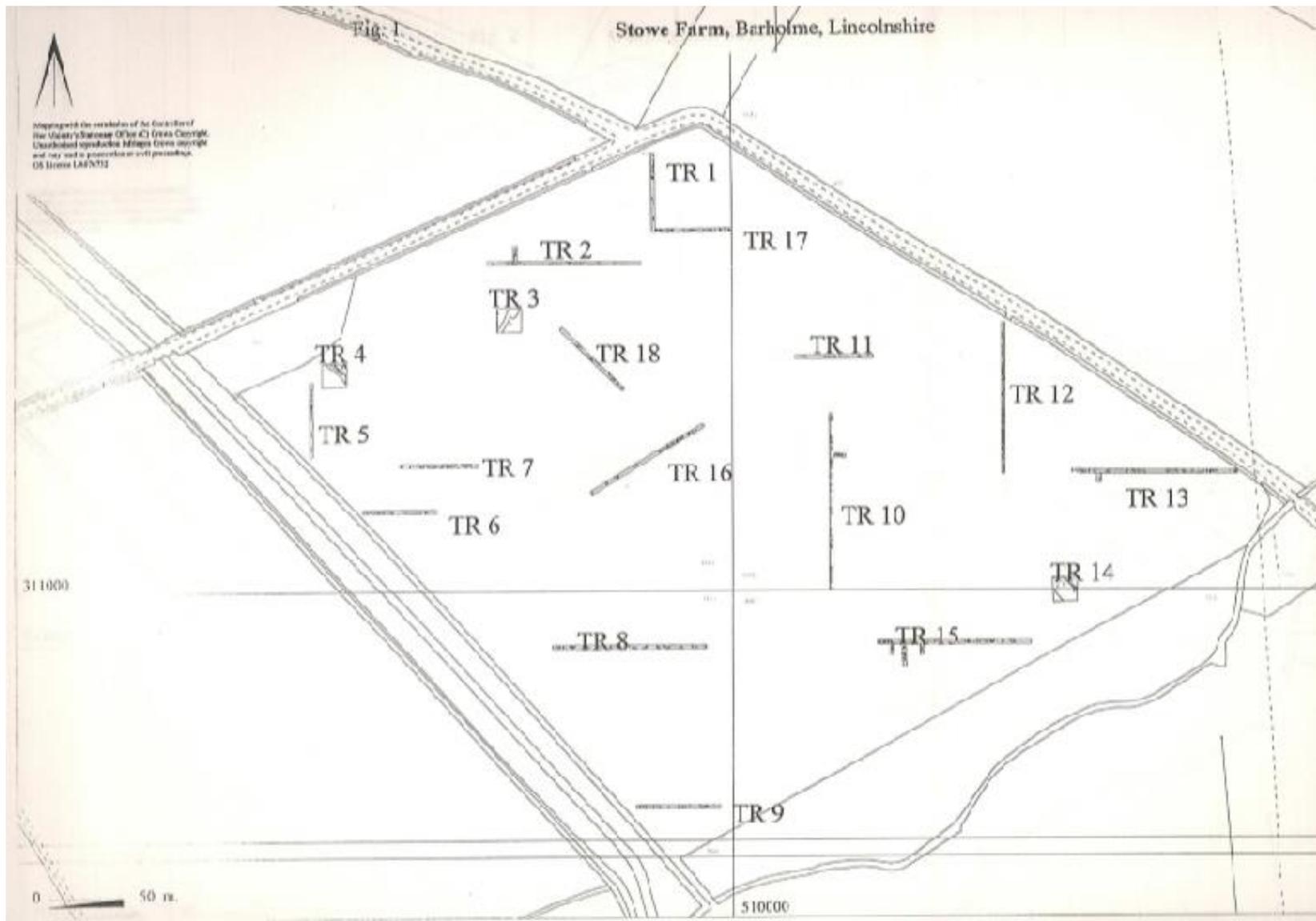


Figure 7 Location Plan of Trial Trenches (After Howlett & Davison 1994)

Prior to the evaluation by trial trenching, it had been suggested that certain discrete features, namely pits, curvilinear features or large post-settings, may have had some ceremonial purpose. The evaluation revealed three circular ditches, two of which were located near the northern boundary of the extraction site and corresponded with those identified on the aerial photographs. The remaining features consisted of ditches and pits of uncertain function (Hatton in Howlett & Davidson 1994).

The circular feature identified in Trench 1 (*Figure. 6* - aerial photographic plot and *Figure. 7* - trial trench location plan) corresponds with that identified by Roger Palmer as part of the aerial photographic survey, located in the northern corner of the assessment area W3/PL/5 (*Figure 1*), (Palmer in C. Howlett & D. Davidson 1994). Although its function could not be ascertained with any degree of certainty, on the basis of the segmented form it was suggested that it may have dated to the Late Neolithic period.

A further circular feature located towards the western end of Trench 2, (*Figure 6* – aerial photographic plot and *Figure 7*, trial trench location plan) initially identified by Roger Palmer (1994) was, on excavation, considered to be a 'hengiform' monument dating to the Neolithic. Unfortunately, a furrow ditch truncated the monument, partly damaging its north-western half. It was suggested by Francis Pryor (pers, comm.) that the monument would have had one or possibly two entrances, which were later removed.

A curvilinear ditch [0292] was exposed in Trench 10 (*Figure. 7*). This feature had not been identified using aerial photography, due to its location under a large medieval headland, which had contributed to its preservation. Based on the curvature of the ditch, it was suggested that the monument had a diameter of c. 30m. Two large post-holes, later described by Francis Pryor as ceremonial post-settings, were identified in Trenches 5 [0255] and 7 [0167] (*Figure. 7*). The reason for the ceremonial interpretation was the size of the feature in Trench 5 which was found to be 0.7m in diameter and c. 0.6m in depth, thus considered to be too large to be structural (Francis Pryor pers comm.). The feature in Trench 7 was not sampled; however, due to its proximity to the Trench 5 post-setting, and general size and shape in plan, it was considered part of the same potential monument.

Other features of note from the evaluation were found in Trench 14 (*Figure. 7*). This trench was later extended to reveal four postholes [301, 303, 304, 232] forming a semi-circular shape. No interpretation relating to the potential use of these four postholes was offered, due to the presence of the baulk of the site restricting any further investigation. Trench 13 (*Figure. 7*) contained what appeared to be a small curvilinear feature, possibly a ring-ditch [0245]. As with other trenches, a small right-angled extension was excavated in order to identify and measure the curve of the feature as a means of determining the diameter. Unfortunately, this feature had been severely truncated by ploughing.

The majority of the features identified during the evaluation consisted of either ditches or pits of uncertain use and date. However, some of the linear features were found to be intercutting, and on different alignments, with the majority running NW-SE, some NE-SW and occasional examples having a N-S alignment. This evidence suggested at least two phases of prehistoric land enclosure (C. Howlett and D. Davidson 1994).

There was a paucity of artefacts recovered from the excavated features. This appeared to correspond with the field-walking results. The lack of artefactual evidence led to the suggestion that the features had, with the exception of medieval furrows, a very early date (Hatton in Howlett & Davidson 1994). This interpretation was further corroborated by the evidence from the environmental survey.

In total 18 bulk (10-30 litres) samples were taken from features in eight of the 18 trenches excavated. From the processed samples fragments of animal bone were recovered, as well as semi-aquatic and terrestrial snails, charred wood and cereal grains. The animal bones were considered to be too fragmentary and poorly preserved to be retained for further analysis. The snails also offered no real insight into the surrounding environment, and one snail in particular, *Cecilioides sp*, found in the greatest number, was considered modern (Izard 1994). The charred grain was also very poorly preserved and, as a consequence, not feasible to be used for radiocarbon dating. Of the 18 samples, only two contained sufficient organic material to warrant radiocarbon dating. One had been taken from the curvilinear ditch [0245] in Trench 18 which, after analysis of the partly mineralised charred wood, gave a date range of 1935 to 1420 cal BC (Beta-77929, 3380 +/- 110BP). The second sample suitable for radiocarbon dating was obtained from the secondary fill (0272) of a large and reasonably deep pit [0273] also in Trench 18

(compared to the shallow depth of most features excavated on site). The sample contained charcoal that gave a date range of 1404 – 930 cal BC (Beta-77931, 2970+/- 80BP) (Izard 1994) in C. Howlett & D. Davidson 1994). Regrettably, the environmental sample taken from the post-pipe fill of the large post-setting [0255] did not contain sufficient organic matter for an accurate radiocarbon measurement to be obtained.

3.3.2 The Recommendations

On the basis of the results from the evaluation by trial trenching, the local planning authority made recommendations for open area excavation of the whole site in order to better characterise the prehistoric landscape. In order to achieve this, open area stripping of the site was to be carried out under archaeological supervision to minimise potential damage to the exposed features, most of which had already been found to be shallow in depth (Hatton in Howlett & Davidson 1994).

The environmental evidence, albeit limited, had provided the radiocarbon dates for the site. However, based on the paucity of the evidence, Izard (1994) recommended increasing the sample size to 50 litres from the previous level of between 10 and 30 litres, thus enhancing the potential for environmental collection and assessments.

3.4 CONCLUSION

The non-intrusive methods employed to assess the archaeological potential of the Stowe Farm site produced mixed results. For instance, the historic document survey and field walking survey offered little insight into the archaeological character of the site. By contrast, the aerial photographic survey, combined with the geophysical survey, identified potential archaeological features that warranted further investigation.

On this basis, the local planning authority recommended an evaluation by trial trenching. The excavation of 18 trial trenches enabled to identify the archaeological potential of the

Stowe Farm site (Hatton 1994). The trial trenches also revealed evidence of a complex and multi-phase system of field boundaries, as well as confirming the presence of the ring-ditches, which had been originally identified during the aerial photographic survey.

The evaluation was successful in gaining information about the archaeological significance of the proposed development area (including the presence or absence, character, extent, date, integrity, state of preservation of the identified archaeological resources), in order to make an assessment of its merit in the appropriate research context.

Subsequently, the results of the evaluation led to the formulation of a strategy to ensure the preservation by record of the identified heritage assets in advance of gravel extraction.

The local planning authority requested the submission of a specification of work, which was expected to include the statement of significance and research objectives. The programme and methodology of site investigation and recording, the nomination of competent persons or organisations to undertake the agreed works, including specialist input, and the programme for post investigation assessment, subsequent analysis, publication and dissemination, and deposition of resulting archive.

The content of the specification of work has informed the methodology described in the next chapter of this research (Chapter 4).

CHAPTER 4

METHODOLOGY

4.1 INTRODUCTION

This chapter presents the original methodologies followed during the excavations carried out at Stowe Farm by Tempus Reparatum in 1995 and 1996, and by Cambridgeshire County Council Archaeological Field Unit (CCAFU) between 1997 and 2000, based on specification of work and site reports, as available.

This chapter also contains information on the methods employed by the author to collect and analyse the data on which this report is based. It includes information on the primary archival material used to gather all the information for this study, This includes the original excavation data, together with context and dating information, as well as bibliographic references for all data collated from the site published reports, the details of which inform the results in Chapter 5. The limitations of the dataset and the impact that such limitations have had on this research have been addressed. Finally, the main secondary sources consulted to enhance the site narrative have been presented.

The main contribution of this MPhil research is represented by the collection and original interpretation by the author of all the available data to produce an informed site narrative for Stowe Farm within the broader archaeological context of the Lower Welland Valley.

4.2 THE STOWE FARM EXCAVATION METHODOLOGY

4.2.1 Introduction

The content of this section has been informed by the specification of work which was written by C. Howlett (Tempus Reparatum Consultancy Department) in 1995, and approved by the Lincolnshire County Council Archaeology Office in the same year (Howlett 1995). It also makes reference to the interim reports which were produced by Tempus Reparatum (Kiberd 1996a, 1996b), in advance of the submission of the final report (still pending).

By contrast, the methodology adopted by Cambridgeshire County Council Archaeological Field Unit (CCC AFU), who took on the role of preferred archaeological contractor in 1997, has been extrapolated from the site reports, as the original specification of work was unavailable at the time of writing (Kemp 1997, 1999, 2000; Hatton 2001).

The original methodology agreed for the fieldwork at Stowe Farm in 1995 aimed to assess spatial patterning and interrelationships of features encountered during the evaluation stage, giving special consideration to 'landscape patterning' over that of site development.

In 1997, following the change of archaeological contractors on site, the methodology was reviewed. The only change was CCC AFU's introduction of a new feature numbering system to keep the new records separate from those produced by the former contractor (Kemp 1997, 1999, 2000; Hatton 2001).

The initial excavation carried out by Tempus Reparatum in 1995 targeted an area which was excavated to the upper interface of secure archaeological features or, where these were not present, to the upper interface of natural deposits. Thereafter, hand-excavation was implemented to sample a selection of features exposed with the aim to characterise the field systems, as well as post-holes, pits and ring ditches which had been exposed during the evaluation conducted in 1994 (Hatton 1994). Deposits and layers were sampled sufficiently to enable a confident interpretation of their character, date and relationships with other features.

There were areas not destined for extraction, including the margin around the edge of the site (the bund) and, initially, the haul road. These areas were partially investigated based

on the location of potential archaeological features, thus freeing space for the re-deposition of sub-soils removed from areas related to later phases of the archaeological investigation and subsequent gravel extraction (Howlett 1995 & Kiberd 1996a; Kiberd 1996b). Removal of the overburden from the bund and haul road locations enabled the archaeological consultant and mineral authority to identify the upper layer of the archaeological horizon, which had been difficult to establish during the evaluation stage in 1994 (Howlett 1995 & Kiberd 1996a; Kiberd 1996b) (see Chapter 3).

The sequence of topsoil and subsoil stripping was determined by Redlands Aggregates, based on their programme of mineral extraction, with each area divided into 50m wide strips. The overburden was removed down to the top of the archaeological horizon by a 360 degree tracked excavator equipped with a toothless ditching bucket, and removed by two six-wheeled 20 tonne dumper trucks. The stripping process was carried out under the direct supervision of a field archaeologist, who ensured the correct depth was maintained, thus minimising the potential damage to fragile buried remains and/or thin buried soils (Howlett 1995; Kiberd 1996a; Kiberd 1996b; Kemp 1997). On a single occasion, stripping of the overburden extended into the area designated for the bund to fully expose a ring-ditch (Howlett 1995). To avoid damage to the archaeology, no wheeled or tracked vehicles were allowed to cross the newly stripped areas until all archaeological recording and excavation had taken place. Each 50m strip was excavated and recorded separately.

The Tempus Reparatum method of recording involved hand cleaning the newly exposed archaeological horizon, followed by single context planning at a scale of 1:200 (this scale was not part of the original specification but possibly a field decision based on feature density). Where complex linear features were encountered, 'floating plans' (this term is not clearly defined in the report) at a scale of 1:50 were produced. Features considered to have complex relationships were planned at more detailed scales of 1:20 or 1:10, as deemed appropriate (Howlett 1995; Kiberd 1996a; Kiberd 1996b)

According to the specification of work (Howlett 1995), linear features would be hand-excavated at regular intervals along their length, at intersections and at their *termini* with the aim to characterise the features, determine relative dating through stratigraphic relationships, and define a date range through the recovery of contextual dating evidence. Where clusters of postholes were identified, a representative sample (not specified in the

methodology) would be half-sectioned to characterise them as a group. Discrete postholes would also be half-sectioned. Pits would be either quartered or half-sectioned, depending on their size in plan, and depth. All sections would be drawn at a scale of 1:10 and photographed using Single-Lens Reflex manual cameras using colour/monochrome prints and slide films (Howlett 1995; Kiberd 1996a; Kiberd 1996b). For features that were considered to be more complex the level of recording would be refined. A greater percentage of features (between 25 and 50%), such as ring ditches, would be excavated to maximise the recovery of dating material, determine the character and function of the features, and establish possible relationship with physically associated linear features. For the recording of the more complex features the basic section drawing and photographs would be complemented by the use of an Electronic Distance Meter (EDM) to produce a 3D image/finds location plot.

However, for unknown reasons, during the 1995 and 1996 excavations not all elements of the specification of work were fulfilled, with the investigation of linear features being sometimes reduced to a single section between 1m and 1.5m wide, and intersections being ignored. The investigation of clustered pits and post-holes was often limited to the half-sectioning of a single feature. Many potential post-built structures were not investigated. Discrete features remained largely unexcavated. Two of the ring-ditches identified during the 1994 evaluation were fully excavated, with a third one being only partially sampled.

The soil stripping strategy remained consistent for the duration of the project, irrespective of changes in the archaeological contractors involved. However, the original mapping and recording methods were changed when CCC AFU took over in 1997. Essentially, all pre-excavation site plans were generated using a total station and reproduced to a scale equivalent to 1:100. These were then used to inform discussion between CCC AFU, C. Howlett (by then Phoenix Consultant) and J. Bonner (Lincolnshire County Council) relating to the investigation strategies. Areas of archaeological interest were identified and subsequently hand-excavated. Instruction relating to the length of the excavated segments was more specific within CCC AFU's methodology. It was stated that 1m and 2m segments were to be excavated along the length of linear features, sufficient to characterise them in terms of form, fills and date (Kemp, 1997, 1999, 2000; A. Hatton, 2001). Where evidence of settlement or complex activity was identified, the methodology designed by Tempus

Reparatum was followed, with postholes being half-sectioned and pits either quarter or half sectioned. The sections were then drawn at a scale of 1:10. However, plans of the more complex areas were recorded using the total station and not by hand. The CCCAFU's methodology also saw the introduction of the principle of 'discrimination' (Kemp 1999) to exclude certain features from the investigation, based on spatial associations or, as in the case of linear features, knowledge gained through investigation during previous excavation seasons, unless there was the potential for dating or environment material to be recovered (Kemp, 1999).

4.2.2 Post-Excavation Methodology and Specialist Analysis

The original provision made for dealing with the artefacts recovered from the site included three main stages:

1. Cleaning/conservation and stabilisation/packaging, as appropriate.
2. Cataloguing and numbering
3. Boxing for temporary storage in a secure place, pending final deposition.

Guidance was sought from local and regional specialists who had been appointed to identify artefact categories, apply conservation techniques, select suitable carbonised samples for radiocarbon dating, and arrange the final deposition of the archive. However, with the changeover to CCC ARU there was less reliance on independent specialists, and growing emphasis on in-house experts to undertake the various post-excavation analysis, with the exception of environmental work.

The archive comprised both the materials (namely, the artefacts recovered from the site) and the paper records, including plans, section drawings and context sheets, as well as background information. Photographic records of the site, as well as replotted aerial photographs were also submitted as part of the archive (Howlett 1995; Kiberd 1996a; Kiberd 1996b).

It was agreed from the outset that an interim reports would be produced at the end of each phase, detailing the archaeological investigations carried out site by site, including the complete specialist reports, followed by 'a fully integrated report on all archaeological work

on the Stowe Farm project' to be produced at the end of the life of the quarry (Howlett 1995; Kiberd 1996a; Kiberd 1996b). The interim reports were made available to the mineral planning authority and the archaeological advisor to the mineral planning authority. The timescale for the publication of the final report was expected to be twelve months after the completion of the field work.

However, for unknown reasons, a final report was never written, hence the reason for this MPhil research,

4.3 THESIS METHODS

For the purpose of this work, the primary sources used in the results and in the discussion chapters (Chapters 5 and 6) of this thesis have been based on the original joined paper archives produced by Tempus Reparatum during excavation in 1995-1996 and by the CCCAFU in 1996-2000. The original paper archive is currently held by Oxford Archaeology East in Cambridgeshire. The author of this report was granted permission to consult the archive and reproduce parts of it, including lists and drawings.

The original archive include single-context record forms with a separate numbering system introduced by the CCCAFU, pre-excavation plans at 1:200 or 1:50 scale for complex features; and detailed plans and sections at 1:20 or 1:10 scale; monochrome and colour photographs, and colour slides; context lists, small finds list, environmental sample list, and photographic record lists. The archive also includes the various interim reports written since the initial evaluation of the site in 1994 (Howlett & Davison 1994; Hatton in Howlett & Davison 1994; Kiberd 1996a; Kiberd 1996b; Kemp 1997; Kemp 1999; Kemp 2000; Hatton 2001).

Unfortunately, the location of the joined material archives is currently unknown. All efforts were made by the author of this report to locate the finds from Stowe Farm, including visiting Lincolnshire County Council and Oxford Archaeology East office in Bar Hill (Cambridgeshire), as well as contacting the former directors of Tempus Reparatum, the

authors of the unpublished Rectory Farm report, the specialists who would have assessed the original materials, and South Kesteven District Council. As a result, the original finds could not be viewed and reassessed for this report.

The original site records, as available at the time of writing, were checked and digitised by the author as part of the initial stage of work. The complete list of excavated features and the list of datable material are reproduced in Appendix 1 and in Appendix 2, respectively.

With reference to the excavation records, only features that were considered to be of informative value have been included in the results chapter of this research, namely dated features, intercutting features, features showing changes in plans or section, groups of features by type and/or proximity, and clusters of more apparently associated features.

The numbering systems introduced by the original excavators (Tempus Reparatum and CCCAFU) have not been changed. However, for the sake of clarity, additional 'master' numbers have been introduced by the author of this report for individual features or group of them, as necessary.

All plans presented in this report are based on the original site plans, which have been digitised by the author using AutoCAD and georeferenced to the Ordnance Survey grid to produce a 'master plan'. From the 'master plan' mapped layered phases of the site have been constructed and colour-coded. This system has enabled to achieve a clearer understanding of the life-history of the site, and to present a visually enhanced narrative.

The original site photographs and section drawings have not been reproduced in this thesis as they are of neutral value to the interpretation of the site.

The analysis of the site record was fraught with difficulty, and this has affected interpretation. The major issue relating to site interpretation concerns phasing. This is due to several factors, including: (1) The paucity of finds recovered from excavated features. (2) A lack of precision regarding artefactual dating, a problem compounded by the apparent loss of the finds' archive. For instance, pottery is often generically described as being 'prehistoric'. (3) Limited excavation of structures and, in some cases, no investigation of intercutting features, which hampers the definition of potential stratigraphic sequencing and relative chronologies. (4) On occasion, the site plans do not illustrate the location of excavated segments of features. (5) Unavailability of material archive. (6) The poor

preservation of organic material which was considered to be of negligible value by the paleo-environmental specialist consulted. (7) Absence of a completed site plan.

Where available, stratigraphic feature relationships were used to produce relative phases which were subsequently re-mapped to construct a comprehensive site plan (Figure 12).

The analysis of stratigraphic relationships has been especially useful for the study of the field system dated to the Iron Age, as a number of inter-cutting ditches were identified, which in turn revealed the sequential development of the landscape. Unfortunately, the rather limited recovery and vague identification of artefacts have not allowed each phase to be chronologically positioned within the Iron Age. For the purpose of this report, the various phases associated with the Iron Age field systems have been linked by means of relative sub-phasing to compensate for the lack of datable material.

To add depth to the interpretive process and enhance the narrative, extensive use has also been made of information from comparable sites in the local area (French and Pryor 2005); (Pryor 2014); (Hunn n.d). Evidence from comparable sites located along the fen-edge and further afield has also been incorporated. Of particular relevance to the early Neolithic period at Stowe Farm was the report of the excavations carried out by Pryor at Fengate. Where a Neolithic house was identified at the Padholm Road site (Pryor 1974), This was further complimented by information obtained from Yarnton (Hey et al. 2016) (*Figure. 8*), which played a significant role in the interpretation of a similarly large structure at Stowe Farm, suggesting a more community based use, rather than a dwelling used by a single family group. Evidence for Neolithic settlement was also gathered from Lismore Fields (Garton 1991), where the investigation enhanced the current understanding of how dwellings were used, as well as from Irish examples (Smyth 2013) which have provided evidence for settlement development and lifespan. The Fengate investigations also enhanced the Bronze Age element of the Stowe Farm Landscape, with particular reference to the Storey's Bar Road (Pryor 1978), the Newark Road and Padholme Road Sub-sites (Pryor 1980), where Bronze Age enclosures, settlement evidence and droves ways were identified. The Barleycroft Farm (Cambridgeshire) Bronze Age post alignment excavation was of particular relevance when attempting to interpret the use of similar groups of features at Stowe Farm (Evans & Knight 2001).

4. 4 SUMMARY AND CONCLUSION

The methods followed for this research have produced satisfactory outcomes, enabling information to be properly gathered and analysed with a view to offer an original and comprehensive interpretation of the Stowe Farm site in the context of the Lower Welland Valley, which was the main aim of this study.

In particular, analysis of the available evidence, and the comparisons drawn with published sites within and outside the region, have offered the opportunity to identify and characterise the evidence for Neolithic settlement, and ritual/funerary activity, and to refine the interpretation of the Bronze Age and Iron Age field systems, clearly indicating the regional, if not national, importance of the Stowe Farm site.

Although there are still inconsistencies in the datasets used, the attempt to rectify them would not have been justified in the context of this research, as the effort would have not advanced the current understanding of the site, due to gaps in the primary site records. However, for future research, additional data collection from the currently unavailable material archive may throw further light on the interpretation of features which have only been generically dated, thus allowing more refined chronologies and phasing to be produced.

CHAPTER 5

OPEN AREA EXCAVATION AT STOWE FARM: RESULTS

5.1 INTRODUCTION

The aim of this chapter is to construct a coherent narrative of developmental changes at Stowe Farm, in the context of the use of the Lower Welland landscape in prehistoric and early historic times. The interpretation of the evidence does differ from the original results described in the interim reports.

It is worth mentioning here that the paucity of artefactual evidence recovered from the site has impacted on the accurate phasing of the majority of features investigated on-site, as discussed in detail further on. Where individual or groups of potentially related features produced no datable material, evidence from comparable sites has been used as a means of confirming dates, and identifying potential form and function. Where possible, the stratigraphic relationships between features has been used which by, its very nature, has allowed for the sequence of events to be identified by means of relative chronology. However, in the absence of datable evidence, it has not always been possible to establish absolute chronologies.

The chronological serialisation used throughout the chapter is based on the *Forum on Information Standards in Heritage* (FISH) (Table 5).

Palaeolithic -1,000 000 to -10,000 (BC)
Lower Palaeolithic -1,000 000 to -150,000
Middle Palaeolithic -150,000 to -40,000
Upper Palaeolithic -40,000 to -10,000
Mesolithic -10,000 to -4,000
Early Mesolithic -10,000 to -7,000
Late Mesolithic -7,000 to -4,000
Neolithic -4,000 to -2,200
Early Neolithic -4,000 to -3,300
Middle Neolithic -3,300 to -2,900
Late Neolithic -2,900 to -2,200
Bronze Age -2,600 to -700
Early Bronze Age -2,600 to -1,600
Middle Bronze Age -1,600 to -1,200
Late Bronze Age -1, 200 to -700
Iron Age -800 (BC) to 43 (AD)
Early Iron Age-800 to -300
Middle Iron Age -300 to -100
Late Iron Age -100 to 43
Roman 43 to 410 (AD)
Early Medieval 410 to 1066
Medieval 1066 to 1540
Post Medieval 1540 to 1901

Table 5: Period Table (After FISH)

Phase 1: Early Neolithic (c. 4,000 - 3,300 BC) (Figures. 13 & 14)

Features of this phase comprised a series of rectangular, sub-rectangular and square structures potentially associated with settlement.

Phase 2: Late Neolithic/Early Bronze Age Transition (2,600 – 2,200 BC) (Figures 15 & 16)

This phase included features associated with monument structures in the form of hengiform enclosures, curvilinear ditches and ring ditches. Unlike the Earlier Neolithic, no conclusive domestic activity in the form of dwellings was observed as part of the archaeological record for this phase.

Phase 3: Early Middle to Late Bronze Age (c. 2,200 - 700 BC) (Figures 17 & 18)

Features of Phase 3 included what is considered to be the earliest form of land division on the Stowe Farm site, a post-built fence line, acting as a possible boundary. Features identified as belonging to this phase also included a small element of what is considered a curvilinear field system, together with limited evidence of possible trackways. There was evidence of occupation associated with what was considered to be activity areas.

Phase 4: Early, Middle and Late Iron Age (800 BC – AD43) (Figures 19, 20, 21 & 22)

Due to the paucity of datable material, dating for features in this phase was achieved by means of direct relational evidence and, in some cases, comparative information from nearby sites. Unfortunately, it was not possible to determine more accurate dating for individual features. Therefore, in order to differentiate between chronologically earlier or later feature or feature groups, Phase 5 has been subdivided into Phases A, B and C, with Phase A being the earliest and Phase C the latest. The archaeological record indicated some evidence of domestic occupation, together with uncharacterised activity areas. The most apparent feature was represented by an extensive rectilinear field system, as well as a funnel-shaped enclosure.

Phase 5: Roman (AD 43 – 410) (Figure 23)

Stowe Farm produced limited evidence of Roman activity which was confined to a boundary ditch and possible shrine.

Phase 6: Early Medieval to Post Medieval (AD 410 – 1901) (Figure 24)

This phase was characterised by extensive evidence of agricultural activity in the form of furrows associated with the historic open fields of the parish.

5.2 OCCUPATION EVIDENCE

Phase 1: Early Neolithic (c. 4,000 -3,300 BC) (Figures 13 & 14)

Phase 1 consists of a number of rectangular and sub-rectangular structures interpreted as possible dwellings dated to the Early Neolithic. At least six dwellings (A020, E029/E039, E035, E031, E022, E037/E036 and A050) were clustered in the north-eastern corner of the excavation site, forming what appeared to be a small 'nucleated' area of predominantly domestic structures. One structure in this group was almost twice the length of the others, and may have been used as a communal meeting house.

In addition to the nucleated structures, at least 11 dwellings, E100, E105, A056, E080, E160, E156, E157, A270, E207, E208 and A271, occurred in isolation or semi-isolation from the nucleated centre. It is possible that the more isolated dwellings were associated with farmsteads.

Two related structures, E156 and E157, might have had an agricultural function as byres.

Domestic Structures

All structures associated with Phase 1 lack datable finds or scientific dates. They have been attributed by the author of this thesis to the Early Neolithic on the basis of their similarities to comparative structures. In particular, the author has made reference to the Early Neolithic structures at Yarnton (Hey *et al* 2016), Lismore Fields (Garton 1991), Horton, Kingsmead Quarry (Barclay and Chaffey 2014), Chigborough Farm (Wallis and Waughman 1998), Fengate (Pryor 1974) and Landwade Road (Connor n.d.) (*Figure 8 & 11*), which although varying in size, display similarities in the construction techniques used. *i.e.* post-built or a combination of post-built and sleeper beam, and in the rectangular base plan. Although difficult to prove absolutely, it is possible that all the identified structures at Stowe Farm were in use at the same time, as there was no indication of stratigraphic phasing, namely inter-cutting.

Unfortunately, this phase has produced no environmental evidence, which could inform the characterisation of land-use and the economic regime.

Structure E035 (Figures 13 & 14)

This is a possible north-west to south-east aligned sub-rectangular structure centred on NGR 510220/311025. It comprised fourteen postholes of varying sizes which defined an area c. 12m x 10m. Only one posthole, 2460, associated with the structure was investigated. Within the enclosed area, a series of postholes, also of varying sizes, could have formed internal divisions. A substantial amount of burnt stone recovered from one of the internal postholes was interpreted as originating from either domestic or uncharacterised industrial processes. Alternatively, the stone could have been used for post-packing.

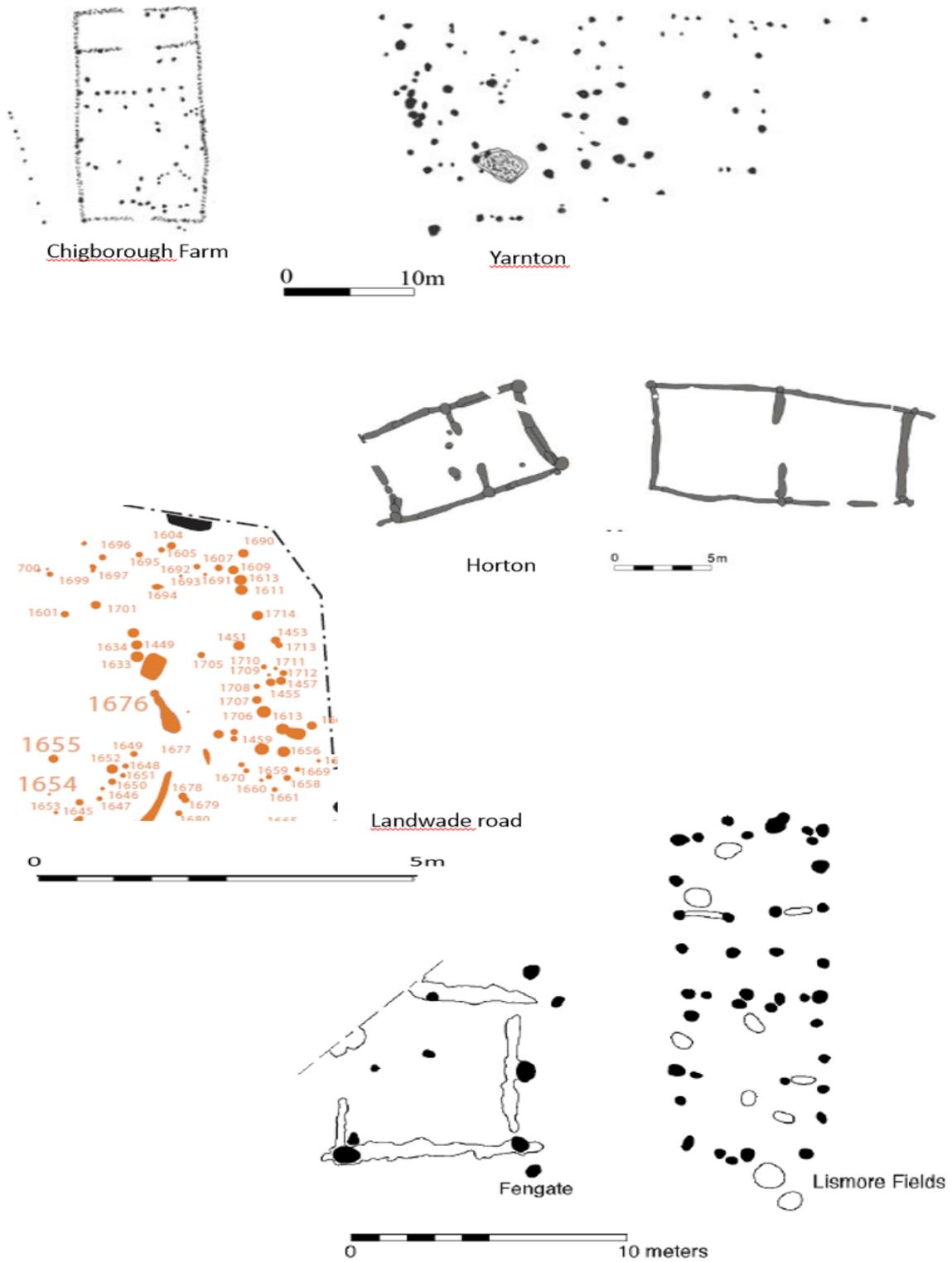


Figure 8: Plans of Early Neolithic Houses - Chigborough Hall (Waughman 1998a); Yarnton (Hey, *et al.* 2016); Horton (Barclay & Chaffey 2014); Landwade Road (Connor n.d); Fengate (Pryor 1974); Lismore Fields (Garton, 1991)

A large pit 2462, of uncertain function, also located internally, was interpreted as being potentially contemporary with the structure on the basis of its position and lack of evidence for inter-cutting. Further pits located to the north-west and south-southeast of the structure could all be evidence of some form of domestic activity associated with the structure.

Structure A020 (Figures 13 & 14)

Three sides of a possible rectangular or sub-rectangular structure centred on NGR 510154/310975 and aligned north-east/south-west comprised nine postholes of varying sizes defining an area c. 13m x 7m, together with pits and stake holes possibly associated with the structure. Internal features indicated the presence of an internal division. The eastern wall of the structure was not well defined due to the presence of a number of clustered stake holes that appeared to have no visible pattern in plan. Three postholes and one pit were excavated. Three elongated features, 1574, 2893 and 2894, together with a single pit 2896, originally associated with structure A020, could have been part of a separate semi-circular feature broadly contemporary with Structure A020, but on a slightly different alignment. This feature was interpreted as indicating a different phase of construction. However, it is also possible that part of the semi-circular feature was the result of truncation by medieval furrow 1204, which had also partially destroyed the northern and southern structural walls of A020, potentially removing associated features.

Structure E031 (Figures 13 & 14)

Rectangular structure E031 centred on NGR 510180/310992 was north-west/south-east aligned and comprised nineteen postholes of varying sizes defining an area c. 14m x 9m. One posthole associated with the structure was investigated. A total of five postholes were present internally, potentially indicating divisions within the structure. The north-western structural wall was largely absent, probably due to truncation by medieval furrow 1206. Evidence for the southern corner had been removed by the construction of two ditch-like features, 2919 and 2918.

Structure E022 (Figures 13 & 14)

Three sides of a rectangular structure centred on NGR 510195/310980 and north-east/south-west aligned consisted of thirteen postholes of various sizes demarcating an area c. 14m x 10m. Two features associated with the structure were excavated. The absence of the south-eastern structural wall may be attributed to the ephemeral nature of the postholes being truncated by ploughing or during topsoil stripping. It is also possible that the south-eastern structural wall may have been located beyond the extent of the excavation, although this would have made E022 exceptionally large in plan. Alternatively, the structure was originally conceived as a three-sided building. Two intercutting postholes indicated that uprights had been replaced for maintenance. Two internal pit/posthole features were identified and, although their use could not be established, they may have acted as part of an internal division.

Structures E036 and E037 (Figures 13 & 14)

Although originally described as two distinct feature groups (Kiberd 1996), there is the possibility that E036 and E037 are in fact one building centred on NGR 510200/310897. This interpretation is based on alignment and proximity. Collectively, E036 and E037 comprised 18 small pits or large postholes (none of which were excavated) forming the north-eastern post-built structural wall and partial evidence for the north-western and south-east walls. The structure was aligned north-west/south-east and measured 14m in length. Evidence for the width of the structure was not available, due to the absence of associated features that could be considered walls. A number of man-made and natural features were identified during the investigation. Two postholes/small pits appeared to be randomly located within the structure. Also present were four internal postholes, 1477, 3617, 3618 and 3619, which appeared to surround a posthole or tree-throw hole 3620. Although unexcavated, the posthole/tree-throw feature may have been used as a hearth. Evidence for hearths associated with Neolithic houses from England is scanty, possibly due to the shallow nature of this type of features, and truncation caused by ploughing. By contrast, comparisons can be drawn with sites from Ireland where the possible Neolithic house found at Inch, Downpatrick, Co. Down (McManus 1999), or House 3 identified at Corbally, Kilcullen, Co. Kildare (Purcell 1999) (*Figure 11*), suggested the presence of a

roughly central hearth. The presence of hearths at sites in Ireland may reflect better preservation of the archaeological remains, rather than indicating geographically-distinct features characteristic of Irish, as opposed to British, sites.

Structure A050 (Figures 13 & 14)

A rectangular structure centred on NGR 510244/311032 and north-west/south-east aligned comprised five postholes and four pits of varying sizes and shapes, which defined an area c. 12m x 7m. In total, three postholes were investigated. A large pit 1293 may have also been part of the structure. Given the depth of 0.70m, it may be possible to suggest that this feature was used as a form of well, although this cannot be proven absolutely. Some organic material was recovered from the primary fill, but was considered too degraded to warrant further investigation.

It is possible that the missing postholes associated with the structure were truncated by the excavation of ditch Y054 and plough furrow H064.

Structure E029 and E030 (Figures 13 & 14)

E029 and E030 were originally described in the site report as representing two distinct structures. E029 comprised nine postholes, three gullies/beam slots, two linear and one curvilinear, and two large pits. E030 consisted of six postholes and two gullies/beam slots. Based on their alignment in plan, it is suggested that they may have formed a single structure.

Collectively, E029 and E030 comprised fifteen postholes, four gullies/beam slots defining an area c.24m x 8m, as well as two pits. In total, five postholes and two gullies/beam slots were investigated. The structure was centred on NGR 510187/311019 and aligned north-east/south-west. The north-western wall appeared to consist of two gullies/beam slots with no visible evidence of postholes. This may be due to truncation caused by furrow 1208 having also obliterated further evidence relating to the structure's north-western and south-eastern walls. Internally, four postholes 1399, 3034, 3035 and 3036, appeared to indicate some form of subdivision.

Structure A056 (Figures 13)

A rectangular structure centred on NGR 510170/311018 and approximately north-west/south-east aligned included fifteen postholes of varying sizes defining an area c. 15m x 8m. None of the postholes were excavated. The south-western and the north-eastern structural walls were present. However, the north-western structural wall was absent, as was the south-eastern wall, having been truncated by medieval furrow 1207. Internally, two sub-circular small pits 1548 and 1550, as well as an oval shaped pit/posthole 1554, may have been associated with internal activity. Immediately outside the south-western structural wall a single pit, 1552, could have also been related to this structure.

Structure E130 (Figures 13)

Three sides of a rectangular structure centred on NGR 510176/311064 comprised nine postholes defining an area c. 6m x 4m. The structure was aligned north-east/south-west. There is a distinct possibility (although it cannot be proven) that the structural wall located to the north-east was truncated by medieval ploughing activity. None of the postholes marking the structural walls or the internal features were investigated. A large quantity of charcoal was observed on the surface of a centrally located pit, which may lead to the suggestion that this feature was a hearth, especially when compared to the possible Neolithic house found at Inch, Downpatrick, Co. Down, where evidence of a roughly central hearth was present (McManus 1999). The pit was not excavated or numbered in plan. This was unfortunate, as the charcoal could have provided radiocarbon dating.

Structure E131 (Figures 13)

A rectangular post-built structure centred on NGR 510170/311092 included eight postholes of similar size which defined an area c. 8m x 6m on a north-east/south-west alignment. None of the features associated with structure E131 were excavated. Internally, a single feature 330 in the form of a short gully was identified. Based on its alignment in relation to the structure, it is possible suggest that this formed an internal partition.

Structure E105 (Figures 13)

A sub-square structure centred on NGR 510740/311080 comprised three elongated gullies/possible beam slots of varying lengths and widths, together with five postholes of varying sizes, which enclosed an area of 10m x 10m. None of the features associated with the structure were excavated. Based on the pre-excavation plan, it is possible to suggest that three sides of the structure were constructed using beams as the foundation, whereas the remaining structural wall were constructed using posts. The form appeared to be similar to the square structure found at the Padholme Road site, Area XIII, Fengate, Peterborough (Pryor 1974) (*Figure 8*). Internally, a number of postholes may have defined divisions. Externally, two pits of uncertain function, 3166 and 3167, both located to the south, may have been associated with the structure due to proximity.

Structure E100 (Figures 13)

A square structure centred on NGR 510260/311067 included two possible beam slots of varying length and widths, as well as four postholes also of varying sizes, defining an area c. 8m x 8m. Only one posthole associated with the structure was investigated. Internally, a single feature, 1446, in the form of a short gully was identified. It is possible that this feature was some form of division.

Structure E080 (Figures 13)

Three sides of a rectangular structure centred on NGR 311057/510110 comprised 21 postholes defining an area c. 15m x 8m. The structure was aligned north-east/south-west. The south-western structural wall was evident, whereas the north-western, south-eastern and north-eastern walls were only partially defined, potentially due to truncation caused by medieval furrow 1206. In total, one posthole 2465, and two internal pit 2451 and 2463, associated with the structure were investigated. Internally, a number of postholes were identified that, according to the original site record, defined internal partition. The archaeological record also suggested that a number of internal pits may have been associated with the structure. These included two large sub-oval pits 2451 and 3561 and one sub-rectangular small pit 2463. Recovered from the fill of pit 2451 was

burnt stone and charcoal, which together with its central location, could indicate a hearth or indeed hearth refuse (Tim Reynolds per. Comm).

Structure E 208 (Figures 13)

Based on the excavation record this was a rectangular structure centred on NGR 510007/311234, which comprised 4 postholes, two larger postholes/small pits, one linear beam slot and one right-angled beam slot defining an area 10m x 5m. None of these features were excavated. The structure appeared to be aligned north-west/south-east. A single posthole 2819 identified internally may indicate remnants of division of the internal space.

Structure E207 (Figures 13)

A square structure centred on NGR 509952/311225 comprised seven postholes which defined an area c. 10 x 10m. The structure appeared to be aligned north-west/south-east. None of the postholes were excavated. However, a single pit 2011 was investigated due to its potential association with the structure. The pit fill contained fragments of charcoal which were considered to have poor environmental potential. As a consequence, the fill sample was not selected for radiocarbon dating (Rackham in Kiberd 1996). This was unfortunate, as the charcoal could have presented an opportunity to date at least one of the structures associated with the Early Neolithic occupation at Stowe Farm.

Structure E160 (Figures 13)

A rectangular structure centred on NGR 510102/311177 comprised nine postholes of varying sizes and four beam slots defining an area c.14m x 8m. The structure was aligned north-east/south-west. In total, two of the postholes were excavated. Features associated with internal division of the structure were not visible, possibly due to truncation by furrow 1647, which had probably obliterated the north-northeast wall, thus explaining the absence of structural remains on this side of the building.

Structure A271 (Figures 13)

A rectangular structure centred on NGR 509858/311158 was defined by 25 postholes of varying sizes, and a further 13 postholes forming what appears to be an internal division c. 14m x 11m. Only one posthole was investigated. The structure was aligned north-east/south-west. In plan it appeared to have a well-defined entrance marked by a series of posts on the western side. Unfortunately, only the southern side of the possible entrance was present, as the northern side appeared to have been truncated by the excavation of ditch Y246 as part of a later Iron Age field system.

Structure A270 (Figures 13)

A rectangular structure centred on NGR 509956/311165 comprised four possible beam slots. The structure was aligned north-east/south-west. A posthole possibly associated with the south-eastern structural wall had been cut by furrow H250. Internally, two postholes, and a possible beam slots appeared to have acted as internal partitions. The smaller of the two internal postholes was cut by furrow H250. None of the features associated with structure A270 were excavated.

Structure G12 (Figure 13)

A rectangular structure centred on NGR 509934/310993 comprised thirty six postholes of varying sizes and shapes defining an area c. 6m x 3m, on a south-west/north-east alignment. Four postholes 345, 346, 348 and 349 belonging to the south-eastern structural wall were investigated. The structure was attributed to the Early Neolithic period due to its shape in plan and general size.

Structures E156 (Figures 13)

E 156 was a rectangular structure centred on NGR 510058/311121 which comprised twenty-two postholes of varying sizes and shapes in plan defining an area c. 14m x 9m. Based on the layout in plan of the south-western structural wall, it is possible to suggest

that the building was roughly aligned north-west/south-east. Furrow 1640 had removed some of the evidence relating to the north-western wall. Some fourteen pits located internally may have been contemporary with the structure. Unfortunately, as none were investigated, the relationship is speculative at best.

Structure E157 (Figures 13)

E157 was a small rectangular structure centred on NGR 510066/311135 comprised five postholes and a possible beam slot defining an area 7m x 3m. Only one posthole was investigated. The structure was aligned northwest/southeast.

Based on size and proximity, it is possible to suggest that E157 was associated with E156 as part of a byre. A possible comparative example was identified at Landwade Road, Fordham (Cambridgeshire). Here a rectangular post-built structure with an associated smaller post - built structure was identified (Connor N.D.). The excavator also suggested that the small structure was the entrance way to the larger one.

5.3 RITUAL AND FUNERARY EVIDENCE

Phase 2: Late Neolithic – Early Bronze Age Transition (2,600 - 2,200) (Figures 15 & 16)

Monumental Features

The monumental landscape at Stowe Farm comprised three ring ditches (E244, E265 and E136) and two enigmatic features that included slightly curvilinear ditches with associated postholes and a ditch complex (Y217 and Y297). One of the ring ditches was interpreted by Francis Pryor as a hengiform enclosure (E244) (Hatton 1994). A similar feature (E136) could also be considered a hengiform enclosure based on form. The third example (E265) represented a possible barrow, based on form rather than on the

presence of human remains. Equally, E265 could have also represented another example of a hengiform monument.

In relation to the development of the landscape, the available evidence would suggest that the Late Neolithic / Early Bronze Age monuments had been intentionally constructed in isolation, as they did not appear to have been associated with domestic or agricultural features of a similar date range in the immediate vicinity.

Ring Ditch E244 (Figure 15)

Ring-ditch E244 was tentatively assigned to the Late Neolithic/Early Bronze Age based on its interpretation as a possible hengiform monument. Centred on NGR 509862/311216, it was ovoid in plan with an external diameter of 8m and an internal diameter of 5m enclosing an area of c. 20m². Centrally located were two pits, both of which had been heavily truncated by a medieval furrow. Due to the extensive damage, the features were not investigated, thus removing the possibility of finding human remains. No disturbed/damaged bones were observed on the surface of the features. Investigation of the ring-ditch involved the excavation of five segments. The ditch width varied between 1.25m and 1.56m and its depth between 0.30m and 0.45m. In profile the ditch sides were moderately steep to steep, and the base concave. A single sherd of possible prehistoric pottery was recovered from the upper ditch fill. The location of the excavated segments could not be identified, as they were not drawn on the original site plan.

Based on the small diameter, it is possible that E244 was a hengiform or mini henge (Harding 2003) a type of ring ditch which is typically less than 15m across. The designation was first introduced by Francis Pryor in 1994 (*pers. comm*, Hatton 1994), who also suggested that the monument had been constructed with entranceways across the ditch to allow entry into the central area, and that the entranceways were removed at a later date. During the excavation, no evidence was uncovered to support Pryor's theory that original entranceways might have been removed. In addition, there was no evidence of remnants of a bank, a design trait associated with mini-henge/henge monuments.

Ring Ditch E265 (Figure 15)

Ring-ditch E265 centred on NGR 509910/311127 was circular in plan with an external diameter of 7m and internal diameter of 5m. A total of four segments were excavated across it revealing a ditch width that ranged between 1m and 0.76m, and a depth between 0.20m and 0.26m. There was no evidence of internal features, possibly due to extensive truncation by medieval furrows. No datable evidence was recovered from any of the segments excavated. The location of the excavated segments could not be identified, as these were not drawn on the original site plan.

Despite the absence of datable material, the feature was tentatively assigned to the Late Neolithic/Early Bronze Age, based on similarities with ring ditch E244, a possible monument identified in this instance as either a barrow or hengiform monument.

Ditch Complex Y297 (Figure 15)

Ditch Y297 was a linear feature with slightly 'bulbous' termini (possibly due to the presence of pits), which were not excavated. The ditch also appeared to bulge in plan halfway, suggesting the possible presence of an earlier pit. Although unproven, it was suggested (Kiberd 1996) that this pit had been dug during the excavation of the ditch to provide construction material for a bank on the north-east side, as the remnants of the pit fills 3873 (same as 3878), 3874 (same as 3879) and 3900 were 'very similar to the natural geology'. The location of the excavated segments could not be identified, as these were not drawn on the original site plan.

The feature was aligned approximately east-west and had a visible length of 30m. A total of eight segments were excavated along the length of the ditch, revealing a width that ranged between 0.69m and 1.7m, and a depth between 0.12m and 0.44m. In profile the ditch displayed steep to moderately steep sides with a concave base. A total of seven sherds of 'prehistoric' pottery was recovered the feature.

No further information was available to ascribe a function to the feature.

Ring Ditch E136 (Figures 15 & 16)

Ring ditch E136 was centred on NGR 510199/311117 with an approximate diameter of 10m and an entrance visible on the southern side. The feature had been heavily truncated, especially towards the north side, by medieval furrow 1213. A series of five postholes were originally interpreted as being associated with E136, as there was no evidence of them cutting, or being cut by, E136, potentially demonstrating some form of internal structure or division. Unfortunately, as none of them were excavated, a direct chronological relationship could not be established. A possible complex feature/features and postholes were located inside the area enclosed by the ring ditch.

Excavation was limited to one segment across the western terminal of the circular ditch, and to one internal posthole. On excavation, the ditch was found to be 0.80m wide and 0.12m deep, with steep sides and flat base. The posthole had no excavation record, so details cannot be added regarding measurements or profile.

The specific function of this feature cannot be easily inferred from the archaeological record. However, comparative information from other archaeological sites in the locality or further afield may shed some light. The size of the feature potentially places E136 within the hengiform/mini henge category. If indeed the structure can be seen as a hengiform/mini henge, it is possible to suggest that the internal postholes housed free standing posts similar to those identified on the Etton Landscape at Site 2 Henge (French & Pryor 2005). However, more convincing is the idea of a small ring ditch associated with a barrow, as it follows the characteristics of an example identified at excavations at Langtoft, Lincolnshire The Glebe Land (Hutton 2008), where a ring with a diameter of approximately 9m was defined by a ditch with a width of c. 0.70m and a shallow depth of c.0.15m. As mentioned above, the presence/absence of human remains could not be ascertained, as none of the internal features were investigated.

Ditch Complex Y127 (Figures 15 & 16)

This was a slightly curvilinear interrupted ditch, aligned northeast-southwest running initially for a distance of 58m, at which point it terminated. After a gap of c.3m the ditch continued, again with a slight curve, for a further c. 18m, before terminating. Three

segments were excavated along the length of the ditch, revealing a width that varied between 0.80m and 1.5m, and a depth between 0.40m and 0.60m. The ditch profile was shallow at the southern end, becoming progressively steeper at the northern end where it displayed a flat base forming what could be considered a gully. A total of seventeen large postholes / post pits were located on either side of the ditch along its entire length with one, 3327, located in the gap, and another just beyond the western terminus, on the same alignment as the ditch. It is possible that more postholes / post pits were originally present, having been subsequently removed by boundary ditches Y122 and Y054, both dated to the Iron Age, together with a series of medieval furrows. Two of the postholes / post pits were excavated and found to have the same measurements (1m x 0.80m x 0.50m deep) and virtually the same profiles, with steep, almost vertical sides, and a flat base.

The function of monument Y127 is not readily apparent, being unusual in form. Thus any theory regarding possible use is speculation. Stratigraphically, it was truncated by a number of features known to date from the Iron Age.

The layout of Y127 implies movement through the presence of a gap between two lengths of ditch. Based on the presence of gravel in the fills, and on the profile of the ditch segments, it is possible to suggest possible foundations for sleeper beams to support wooden uprights for a screen or palisade. This screen would have been further enhanced by spaced uprights identified through the presence of large sub-square postholes / pits that followed the route of the ditches. Interestingly, one of the postholes / pits was located in the gap that acted as an entranceway, thus enabling movement, albeit restricted, between two areas of the landscape.

5.4 ENCLOSURE AND OCCUPATION OF THE LANDSCAPE DURING THE BRONZE AGE

On the basis of the excavated evidence, the initial division of the landscape appears to have started during the Early Bronze Age, a process that continued throughout the Middle and into the Late Bronze Age, with enclosure of the landscape ranging from a rectangular field system to a slightly curvilinear field system. The curvilinear form was also observed at Rectory Farm (Pryor 1996) (*Figure 9*), where the curve of the boundary ditches ran in the opposite direction to that observed at Stowe Farm (*Figure 17 & 18*). It is possible that the curvilinear system at Stowe Farm functioned in a similar way to that at Rectory Farm, acting as what Pryor (1996) termed 'farm stockyards' for the management of large flocks of sheep. This interpretation stems from Pryor's work at Newark Road (Fengate, Peterborough) (Pryor 1980) and at the Welland Bank (Pryor 2002), where series of enclosures were identified. A possible alternative view was proposed by Evans (2009) who, on the basis of the faunal remains from sites such as Newark Road (Pryor 1980), Elliott Site (Fengate) (Beadsmoore 2005) and Tanholt Farm (Eye, Peterborough) (Patten 2002), drew attention to the evidence for cattle as the dominant species in the assemblages from these sites.

Additional evidence of activity on the site included a possible drove way demarcated by two parallel alignments of posts, with a further trackway centrally located along the north-eastern extent of the investigation, where it appeared to continue beyond the limit of the excavation. Although not extensive across the area of investigation, domestic occupation was evident in a series of structures.



Figure 9 Curvilinear Field system at Rectory Farm (After Hunn n.d)

The major issue associated with the excavated features assigned to the Bronze Age is the paucity of artefacts recovered. The impact on absolute dating is undeniable, resulting in a chronology largely based on evidence from comparable sites in the local area.

Phase 3: Early Bronze Age (c. 2,200 – 1,600 BC) (Figures 17& 18)

Post Hole / Pit Alignment G22 (Figures 17 & 18)

A series of large postholes aligned north-east/south-west, with a slight curve towards the south-western extent, ran for a visible distances of 92m. It is possible that the postholes formed a fence line defining two areas of the landscape. Six of the ten postholes identified

were investigated, with two of them, 634 and 637, producing sherds of Early Bronze Age pottery. The width of the postholes ranged from 0.77m to 0.50m, with a depth between 0.21m and 0.09m.

The post alignment G22 bears similarities with examples identified at Barleycroft (Cambridgeshire) (Evans & Knight 2001). In this instance, Evans considered the pit alignment to be forming an axial 'screen' with the same function as the stone-built row discussed by Fleming (1988) at Drizzlecombe (Devon). One element missing from the Stowe Farm alignment when compared with Drizzlecombe, Shaugh Moor (Wainwright, Fleming & Smith) and Barleycroft, is the connection with funerary monuments. At Drizzlecombe a number of stone rows terminated at a stone cairn, at Shaugh Moore the cairn has been located close to the stone row and at Barleycroft the post alignment appeared to enclose the South Over Barrow Group (*Figure 11*).

At Stowe Farm the posthole / pit alignment appeared to continue beyond the south-eastern extent of the site, thus raising the possibility that a monument might have existed beyond the limits of the excavation area. Alternatively, it could be suggested that G22 had a function unrelated to funerary activities, representing either a boundary marker or zoning of the landscape for different uses.

5.5 ENCLOSURES, MOVEMENT AND ACTIVITIES

Phase 3: Middle to Late Bronze Age (1,600 – 700 BC) (*Figures 13 & 14*)

Enclosure Systems

Enclosure 1 (Figures 17 & 18)

Enclosure 1 comprised a number of rather sinuous linear ditches (Y019, Y111, Y018, H019 and Y048) forming an enclosed area of 1725 m². The ditches did not have a consistent profile in section, ranging from steep sided with a V-shaped base, to shallow sides with concave base and, occasionally, steep sides with a flat base. The enclosure

was not regular in plan, being narrower at the north-eastern extent than at the south-western end, and incorporating a slight curve into the design, resembling that identified at Rectory Farm, albeit on a smaller scale (Pryor 1996).

Ditch Y019 formed the north-western boundary of the enclosure with an observable length of c. 64m, and Y111 (a possible continuation of Y019 in a northerly direction) had a length of c.36m. On excavation the profile was found to be lacking continuity, ranging from shallow sides and concave base to steep side and a V-shaped base. There was no observable relationship between Y111 and Y019 due to the presence of medieval furrow 1209. Despite this, lack of direct inter-cutting or re-cutting suggests that the two features were contemporary.

At the southern corner of the enclosure a gap measuring c. 1m between Y018 and H019 was identified. It is possible that this was an entranceway constructed for the movement of people rather than livestock, hence the rather restricted space available for passage. A second large gap was also present in the south-eastern boundary between H019 and Y048, with a visible distance between the two ditches of 16m, possibly more conducive to the passage of livestock. Unfortunately, medieval furrow 1208 had removed the north-eastern extent of H019 and, as a result, the exact distance between the two boundary ditches could not be ascertained.

To the south-east of Y048 was linear H047, originally described as a medieval furrow. However, when considered in relation to Y048 (unexcavated), similarities in alignment and width would suggest that H047 may have been a ditch defining a separate enclosure. Ditch H047 had a visible length of c.56m. The true extent could not be ascertained due to truncation at the northern end by boundary ditch Y110 and the southern end continuing beyond the area of investigation.

Running parallel to the north-western boundary marked by ditch Y019 was ditch Y017 aligned north-east/south-west, potentially associated with Enclosure 1. Rather than one continuous feature running across the landscape, this was split into two segments which overlapped. The layout formed a fairly narrow, restricted passage between two open areas. Although unproven, it is possible that posthole 2909 (unexcavated), located at the intersection of the two ditches, was potentially placed to restricted movement between two open areas, whether of people or animals. The north-eastern segment of the ditch

had well-preserved termini. However, the south-western ditch had only one terminus evident, as the other terminus had been cut by the continuation of ditches 712 (Iron Age phase 4B). In total, three segments were excavated along the length of the ditch Y017. On excavation these were found to have a width that ranged between 0.40m and 0.62m, with a depth between 0.05m and 0.08m.

Based on evidence recovered from the Phase 3 excavation (Hatton 2001), it is possible to suggest that two additional ditches Y411 and Y413 (*Figures 10 & 19*) formed part of the Middle to Late Bronze Age field system and, thus, were associated with Enclosure 1 (see below). On excavation, ditch 411 was found to have a width that ranged between 0.60m and 0.89m and a depth between 0.22m and 0.26m, whereas ditch Y413 was 1m wide and 0.20m deep.

It is not possible to define a direct relation between Y017, Y411 and Y413, due to the presence of a ditch inter-section dated to the Iron Age (*Figures 10 & 19*). However, all of these earlier ditches shared the same north-east/south-west alignment, suggesting a correlation and thus extending the Middle to Late Bronze Age system further across the landscape.

Finally, two linear ditches orientated north-east/south-west, located inside Enclosure 1 (not numbered) might have formed internal boundaries. These were not investigated at the time of the excavation (no number was allocated).

Despite the paucity of artefacts supporting a date for the field system, there is strong comparative evidence from Rectory Farm (Pryor 1996) which would indicate the presence of a dynamic agricultural landscape based on a mixed economy, albeit targeted more towards animal husbandry during the Middle to Late Bronze Age.

Movement across the Landscape

Trackway Ditches Y164 and Y166 (Figure 17)

Two ditches, Y164 and Y166, considered to be contemporary, ran parallel to each other with a visible length of 39m, forming what appears to be a trackway aligned north-east/south-west. Unfortunately, the ditches on excavation produced no datable material.

Stratigraphically, however, both ditches had been truncated by later features known to date to the Iron Age.

With reference to ditch Y164, a total of four segments were excavated across its length. The resulting investigation identified an average width between 0.75m and 0.95m, and a depth between 0.06m and 0.16m with a visible length of 39m. The south-western end of the ditch was truncated by Y163. In profile, the ditch had gradual sloping sides and a concave base. The gradient did not suggest that drainage was the primary role of the feature, nor was there conclusive structural evidence of postholes / slots in the base for uprights forming a fence.

Ditch Y166 had five segments excavated along its length revealing a feature not too dissimilar in basic measurements, with the width varying between 0.94m and 0.60m, and the depth being between 0.11m and 0.25m. The major difference was represented by the length, as Y166 was 74m long from its terminal end (almost twice the length of Y164), extending beyond the north-eastern boundary of the site. A further difference was the profile, as Y166 had steep sides and a consistently flat base. As with Y164, the gradient was not sufficient to indicate a drainage function.

A further observation that may reinforce the interpretation of ditches Y164 and Y165 as marking a trackway is the termination of Y164, possibly to define an entranceway into the route of the trackway. Evidence from Langtoft (Hutton 2008) appears to show a potentially similar arrangement, where the gap in the ditch offered access onto the route of the trackway, thus allowing movement between areas of occupation.

E081 Parallel Fence Lines forming a Trackway (Figures 17 & 18)

Feature E081 comprised 18 postholes running parallel to each other and forming a track way running for a distance of c.55m – potentially not its true extent as the north-western end was truncated by a large medieval furrow. The trackway was aligned north-west/south-east.

As none of the associated postholes were excavated, comparative evidence is worth investigating. In this instance, the Stowe Farm trackway could be considered to be similar to Lines 2 and 3 identified at the Barleycroft site in Cambridgeshire (Evans 2001). Here

Evans suggested that Line 2 formed a 'screen', with Line 3 representing an extension to Line 2. The two lines overlapped, creating what appeared to be a trackway, for a short distance of c.30m. This is potential evidence for a movement away from a less complex subdivision of the landscape to a more simplified but formal layout (Evans & Knight 2001). At South Hornchurch (Essex) (Guttman & Last 2000) (*Figure 11*) identified a trackway dated to the Late Bronze Age, functioning as part of a fully utilised pastoral landscape.

Based on the evidence from the Barleycroft and Hornchurch, it is not unreasonable to suggest that the same formalisation of the landscape and landscape usage was also occurring at Stowe Farm.

Activity Areas

Area D (Structures / Activity Area and Demarcating Fence Line) (Figure 17)

Area D included a group of 35 postholes forming three interconnected curvilinear enclosed areas, extending over an area of 26m in length and 10m wide, together with two lengths of ditch, and associated pits (Kemp 1997).

With reference to the postholes, it is possible that they represented complex structures possibly associated with activities which remain undefined. The investigation of Area D identified two large centrally located postholes, which may have held large wooden uprights, possibly supporting a roof structure (Kemp 1997). Of the 35 postholes identified, ten were excavated. On excavation these were found to range in width between 0.16m and 0.28m, and in depth between 0.06m and 0.12m. One of the central postholes, 135, was found to contain sherds of Bronze Age pottery. The location of the excavated postholes could not be identified as these were not located on the original site plan.

Immediately outside the post-built structures / activity areas was a cluster of six pits considered to be contemporary. As none of the pits was excavated, the possible association could not be proven.

Similarly, ditches Y414 and Y415 were considered contemporary with the post-built curvilinear structures based on the fact that they appeared to respect each other. A gap

c. 3m wide was identified in ditch Y415 some 19m north-west of Area D. It is possible this played a role in some form of livestock management, enabling movement between two areas of the landscape.

Possible Fenced Enclosure Y245 (Figure 17)

Two posthole alignments formed an L shaped fence line, one leg of which was aligned south-west/north-east with a visible distance of c. 31m, and the other aligned approximately north-west/south-east, with a visible distance of c.33m. The two alignments identified near the north-western side of the excavation extent came together to form the south-eastern corner of an enclosure. Unfortunately, no evidence was uncovered for the other two sides. It is possible that shallower postholes originally existed, having been truncated during the overburden removal process.

Collectively, the fence lines comprised 56 postholes of varying sizes of which 16 were excavated. On excavation the postholes varied in width between 0.80m and 0.25m, and in depth between 0.07m and 0.44m. Based on morphological similarities when compared to evidence recovered from the excavation of Chigborough Farm (Waughman 1998a), (*Figures 8 & 11*) and the post-defined enclosures identified at Huntsman's Quarry, Kemerton (Jackson 2015) (*Figure 11*), it may be possible to date the Stowe Farm fenced enclosure Y245 to the Late Bronze Age.

A possibly associated small rectangular structure aligned northeast/southwest, A301 (unexcavated), comprised nine postholes which demarcated an area 12m x 4m. It is possible that A301 had a function similar to a structure identified at Chigborough excavation, where Waughman (1998a) proposed it was used as a refuge for people tending to livestock, a view based on the virtual absence of contemporary finds. The livestock analogy was the main reasoning behind the construction of the post-defined enclosures, acting as a stock control measure (Jackson 2015).

Possible Farmstead G23, G24 & G25 (Figures 17& 18)

Structural remains were identified in the form of one sub-rectangular structure, G23, and one sub-circular structures, G24, both located within boundary fence G25, which had a visible length of c. 25m. Collectively, the features may represent a small farmstead, tenuously dated to the Bronze Age, as they did not align on the Iron Age funnel enclosure (below).

G24, a sub-circular structure centred on NGR 509985/310898 and aligned north/south, comprised 13 postholes, 11 of which were excavated revealing sizes ranging between 0.45 and 0.96 in diameter and between 0.24m and 0.11m in depth, and defining an area c.9.2m x 5.4m. It is possible that the structure was made-up of more posts potentially removed by a medieval furrow. In plan, the south-western corner of the structure appeared to be curved, rather than forming a right-angle, which may be by design or, more likely, due to disturbance during the machining operations.

It is possible that G24 may have been associated with G23, a small rectangular structure centred on NGR 509991/310908 formed by ten postholes, two of which were excavated revealing a size range between 0.32m and 0.19m in diameter, and between 0.25m and 0.16m in depth. It is conceivable that posthole 618 had a dual role, being part of a structural wall of G23, as well being integral to the enclosing boundary fence G25. G23 was marked by a series of postholes forming a rectangular shaped enclosed area comprising ten postholes, of which two or possibly three, if posthole 618 is included (see above), were excavated. Investigation of the two postholes revealed a size range between 0.40m and 0.25m in diameter, and between 0.24m and 0.16m in depth.

G23, 24 and 25, defined an enclosure of around 25m in length comprising a single sub-circular structure, possible dwelling (G24), defined by a series of postholes, and an associated corral (G23), where the postholes formed a rectangular structure with an entrance potentially wider than needed for a dwelling. It is possible that collectively, these structures represent a small farmstead. The farmstead is not aligned to the Iron Age funnell enclosure (below) and is therefore presumed to be of Bronze Age date (Hatton 2001).

5.6 IRON AGE ACTIVITY

Evidence from the Stowe Farm site relating to the Iron Age appears to suggest a sparsely settled landscape. However, there is some evidence for structures, possibly associated with activities that remain uncharacterised due to the lack of finds. The excavated evidence from Stowe Farm would indicate the presence of groups of features which display similarities in terms of form, layout and composition of the fills. Relative chronologies provided by direct stratigraphic relationships suggest a later period of landscape division (*Figures 10*). In comparison with the Bronze Age enclosure system, what is immediately apparent for these groups of features is the presence of extensive enclosures which display both a rectilinear layout in plan – the dominant type for the Lower Welland Valley and the Fen-edge in the Iron Age– and what could be considered to be a more unusual funnel enclosure layout, recorded in the local area and dated to the Iron Age. Collectively, at Stowe Farm the two systems seem to have been integrated, functioning together within the same context as means of managing livestock movement around the Iron Age landscape.

Evidence from the Stowe Farm site relating to the Iron Age appears to suggest a sparsely settled landscape. However, there is some evidence for structures possibly associated with activities which remain uncharacterised due to the lack of finds. In particular, three phases of Iron Age activity were identified by the author (Phases 4A, 4B and 4C) on the basis of direct intercutting relationships and lack of evidence for continuity of use. Earlier ditches associated with remnants of a proto-enclosure system were attributed to Phase 4A. The Phase 4A system was subsequently superseded by a more extensive, 'specialised' system in Phase 4B, including one enclosure associated with a possible roundhouse. The last phase, Phase 4C, was characterised by the abandonment of the ditches and roundhouse of the Phase 4B system, resulting in a more open reorganisation of the landscape.

Abandonment of the enclosed system may have been due to changed environmental conditions, namely water inundation coupled with increased amounts of alluvial silt

deposition potentially resulting in a landscape that could only sustain more 'sporadic' transhumance, with reduced stock control: hence, a more open landscape.

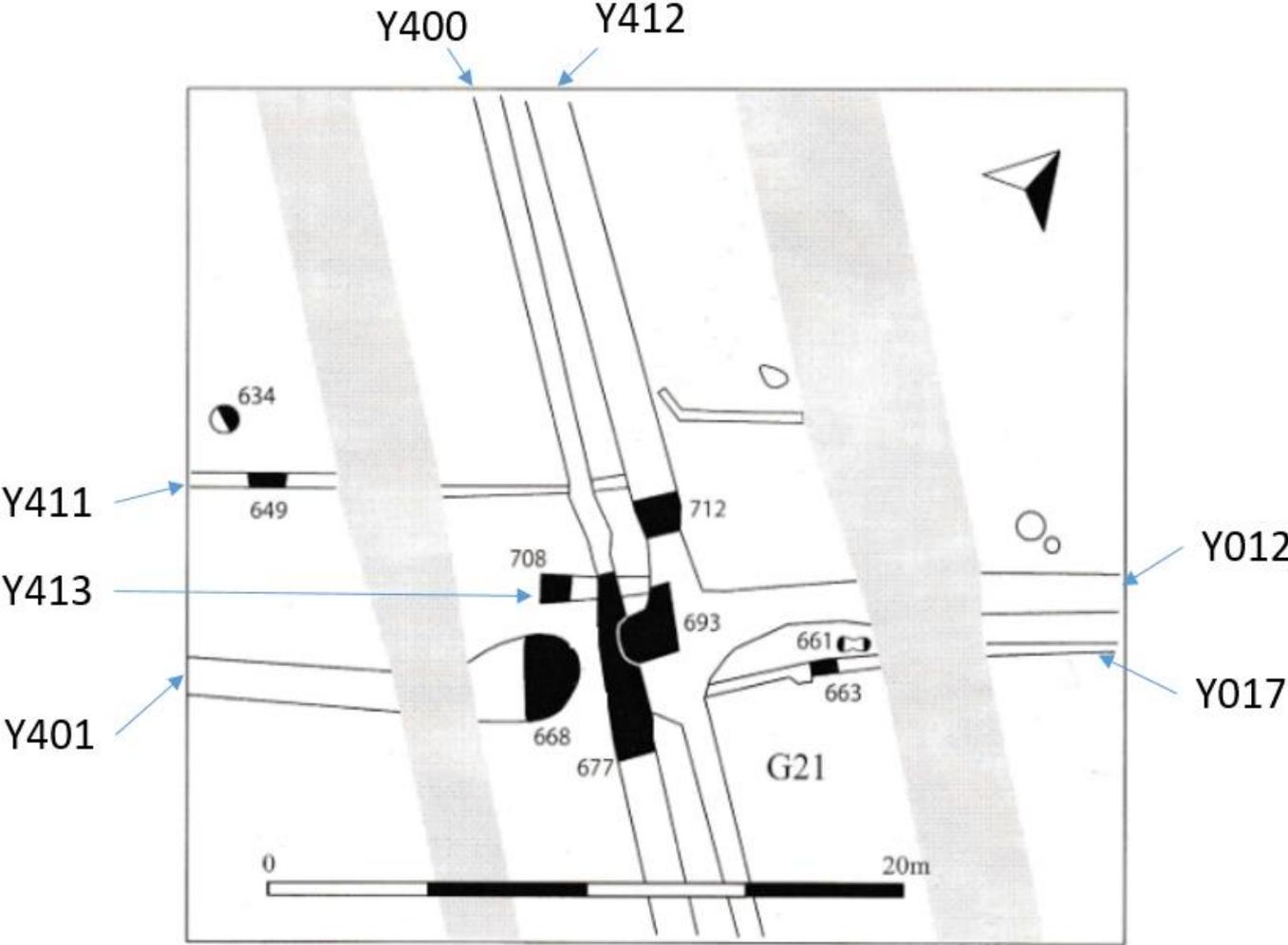


Figure 10 Stratigraphic relationships of Middle Bronze Age ditches (Y017, Y411, Y413) and Iron Age enclosures ditches (Y012, Y400, Y401, Y412). (After Malim, C., 2001)

Phase 4 (800 BC – AD43) (Figures 19, 20, 21 & 22)

5.6.1 Phase 4A: Boundary Ditch Y400 and Possible Associated Enclosures (Figures 19 & 20)

Ditch Y400, represented the major component of an enclosure which included ditches Y405, Y406, Y408 and Y409. Ditch Y400 had a visible length of 94m, being truncated at the north-western end by ditch Y412 dated to the Late Iron Age, continuing beyond the southern baulk in a south-easterly direction. It must be noted that ditch Y400 was also dated to the Iron Age, however, it is not possible to be more specific due to the paucity of finds recovered during its excavation. A single segment was excavated along the length of the ditch revealing a width of 1.30m and a depth of 0.10m, with a profile characterised by shallow sides and a concave base. The profile of the ditch suggests that it was used to house a natural hedge rather than a line of postholes or sleeper beam construction, for which a square cut base would have been more effective.

Based on the evidence, it would appear that Y400 was a continuous ditch, forming the north-eastern boundary of a field system. This system included Y405, a possible boundary ditch with a visible length of c.50m. Located c. 23m from the north-western terminus of ditch Y405 and on approximately the same alignment was ditch Y409 (unexcavated). Dissecting the space between the two ditches was ditch Y408, aligned north-east/south-west, possibly forming the limiting boundary of two enclosed areas of the landscape, as well as marking a possible entranceway. A single segment was excavated along the length of the ditch revealing a width of 0.76m and a depth of 0.16m, with a profile characterised by moderate sides and a flattish base. Located c.30m to the north-east of ditch Y405 was ditch Y406 (unexcavated), forming the north-eastern boundary and enclosing an area 1260m², complete with entranceways. The chronological relationship is drawn from the fact that Y400 and Y405 were truncated by later Iron Age ditches Y404 and Y412, both associated with the major reorganisation of the landscape into larger parcels of land (see below).

What was not apparent from the archaeological record was any further subdivision of the landscape associated with the ditch Y400 enclosure system. Although truncation caused

by ploughing or machining operations prior to excavation should not be discounted, it is possible that subdivisions were never present and the landscape was intentionally divided into large blocks.

5.6.2 Phase 4B: Iron Age Settlement Activity and Associated (Figures 19 & 21)

The remains of three possible structures were identified (Kemp 1997) during the excavation process, each potentially used as temporary / seasonally occupied dwellings around which activities would have taken place. Although all three examples were centrally located within the area of investigation, they did not form a cluster.

Structure G 17 and Activity Area associated with Enclosure 3 (Figures 19 & 21)

A possible roundhouse G17 defined by postholes had a diameter of c. 5m, centred on NGR 510026/311024. The structure was associated with Enclosure 3 (as described at the time of the excavation, Kemp 2000), a large pit, 544. The association of houses and pits is a pattern identified in previous excavation seasons at Stowe Farm. Although the association is tenuous, the presence of Iron Age pottery (as well as residual, abraded Bronze Age pottery), recovered from the pit would suggest domestic activity consistent with the presence of a roundhouse nearby. However, at the time of the investigation the interpretation of the structure as a roundhouse was dubious. In total, four postholes were excavated, of which only two were deemed to have an archaeological origin. As no further work was undertaken regarding the structure, doubt remains as to its interpretation as a roundhouse.

Structure in Activity Area A (Figures 19 & 21)

Area A included a possible circular structure defined by postholes with a diameter of c. 7m centred on NGR 510007/311129 (unnumbered in plan), and a pit, 4. The structure was less well-defined when compared to the example identified in Area B (see below) or

the round house G17 associated with Enclosure 3 (see above). The close proximity of the features and the discrete group they formed does suggest that they were contemporary. A small pit, 4, located near postholes 22 and 26 (unallocated in plan in the interim report) may have been associated with the structure, as at the roundhouse G17 of Enclosure 3 (see above). The fill contained charcoal, which could indicate that the pit was open at the same time as the structure was in use, or backfilled at the same time as the structure was abandoned (Kemp 1997). In total eight postholes were investigated. Interestingly, all of them revealed varying amounts of charcoal within their fills which, coupled with the presence of fragments of burnt stone (post packing) recovered from one of the postholes, is suggestive of wooden uprights being burnt *in-situ*.

Structure in Activity Area B (Figures 19 & 21)

Area B comprised a possible structure centred on NGR 509959/311130 (unnumbered on the original plan for unknown reasons), which was defined by two concentric rings of posts, with the outer ring forming an external wall c. 7m in diameter, and the internal ring, 4m in diameter, possibly acting as roof support. It also included pit 17. As with the possible roundhouse located in Area A and the roundhouse G17 in association with Enclosure 3, respectively (see above), a large pit, 90, was located in close proximity to the structure in Area B. In total, 21 postholes were identified forming the two concentric rings, of which ten were excavated. Two undated postholes 54 and 58 (unallocated in plan in the interim report) were found to contain charcoal the presence of which suggested the existence of a second building nearby or, at the very least, a different constructional phase of the same building (Kemp 1997).

The three possible Iron Age roundhouses were associated with pits. They lacked evidence for eave-drip gullies, although this may be due to truncation caused by ploughing, which would also explain the ephemeral nature of the surviving postholes. It is also possible that an eaves drip gully was never present, as with Structure V at Glede Land at Langtoft (Lincolnshire), which was defined by more substantial postholes but lacked the associated gully (Hutton 2010). At Stowe Farm the absence of eaves-drip gullies may indicate structures that were short lived as domestic dwellings, consistent with seasonal activity. This is in contrast to Iron Age occupation evidence found at Maxey

(Meadows 2009), Langtoft, (Webley 2004) and Tallington (Simpson 1976), where each dwelling identified was surrounded by an eaves-drip gully. Here it is possible to suggest the presence of small groups of people organised in longer-lived settlements, hence the need to build dwellings where provision had been made to secure the structural integrity of the homes.

Rectilinear Enclosures, Partial Enclosures and Funnel Enclosure system (Figures 19 & 21)

An extensive rectilinear field system dated to the Late Iron Age extended across much of the exposed area of investigation. Only two examples were visibly complete, Enclosures 2 formed by ditches Y012, Y054, Y128 and Y079 and Enclosure 3 comprising ditches Y128, Y054 and Y079, which lay adjacent to each other. Both enclosed areas were surrounded by boundary ditches aligned north-east/south-west and north-west/south-east, varying in profile from steep sided to gradual with a consistently concave base. Profile changes along the ditches appeared to be arbitrary, possibly suggesting that they were not constructed for the purpose of drainage but, more likely, for the planting of a natural hedge. Ditch Y128 continued for a distance of c.10m beyond Y054, possibly forming part of the boundary system located towards the north-eastern extent of the investigation.

Enclosure 2 had an area of 7957²m, whereas Enclosure 3 had an area of c. 5652²m. The boundary ditch forming the division between the two enclosed areas comprised two segments. The north-eastern segments Y125 ran for a distance of c.42m before terminating. The south-western segment Y079, located c.10m to the north-west of Y125, continued on the same alignment for a distance of c.67m. The gap probably formed an access point between the two enclosed areas. Located c.56m to the north-west was boundary ditch Y189 forming what appears to be one side of an incomplete enclosure. Ditch Y189 had a visible length of c. 72m with a profile that ranged between gradual to steep sides with a consistently concave base.

A second possible gap may have been indicated by the presence of a large posthole, 1229, located in the base of ditch Y012, possibly for an upright defining a gated through-

route between enclosed spaces. The presence of posthole 1229 may equally indicate a fenced system, possibly pre-dating the construction of the ditches. Unfortunately, no further investigation was undertaken to confirm or exclude this interpretation (Hatton 2001). The presence of numerous medieval furrows truncating the enclosure ditches may have obliterated further entrances.

To the north-east of ditch Y054 the enclosed landscape continued, extending beyond the area of investigation. Partial enclosures were formed by ditches Y109, Y110, Y149 and Y188. Surviving in the archaeological record was a single entranceway between areas of the landscape evidence by Y110 not connecting with Y054. On excavation it was found that the profiles of ditches Y110 and Y109 appeared to be more consistent, displaying steep sides and a concave base, present in all segments excavated, in contrast with ditch Y149, where the excavated segments revealed moderate sides and a concave base. Located 131m to the north-west of Y149 was evidence of a further land division in the form of boundary ditch Y188, with a visible length of c. 37m. To the north-east the ditch runs beyond the baulk and to the south-west it appears to link into Y054 forming a T-junction. To the north-east Y188 continued beyond the extent of the excavation. On excavation, the profile of the ditch ranged between gradual and moderate sides with a consistently concave base. The depth of the ditches varied randomly along their length, suggesting, as with Enclosures 2 and 3 (see above), that drainage was not the intended function, and that the ditches may have accommodated a natural hedge.

What is absent from the archaeological record within the area of investigation is the presence of trackways as a means of moving livestock around the landscape.

Funnel Enclosure (Figures 19 & 21)

Although difficult to prove beyond reasonable doubt, there is a possibility that the rectilinear field system (see above) functioned at the same time as a funnel enclosure which was formed by ditches Y217 and Y403 as a means of controlling livestock.

Ditch Y217 was a sinuous boundary that was first established during the Bronze Age in the form of a series of a segmented ditch of uncertain function. The ditch appeared to have been redefined during the Late Iron Age, when the original ditch segments were

connected to form a continuous ditch for a distance of c.222m from the northern extent of the excavation in a southerly direction. Towards the south-western end a gap of 2m was left, before the ditch continued. The gap was interpreted as a gateway between two areas of the landscape, one enclosed and the other unenclosed. The ditch continued in the form of a shorter segment with a length of c.18m before being interrupted after c. 7m by another gap again interpreted as a gateway linking two areas of the landscape. The ditch continued on the same alignment for a distance c. 60m before being interrupted. After a gap of 2m, it continued for a further c.76m before moving beyond the limit of the excavation area.

A total of 17 segments were excavated along the length of boundary ditch Y217. The width varied between 1m and 2.3m, and the depth between 0.20m and 0.40m. Moving in a southerly direction for a distance of 100m, the profile of the ditch changed from moderate sides with a concave base to moderate sides with a flat base. The reason for the profile change is not apparent in the archaeological record. Beyond 100m the width remained within the parameters described above, although the profile reverted back to that identified towards the northern extent namely moderate sides with a concave base.

Located either side of the gateways and running parallel to Y217 was a series of ditches that included Y418, which, on excavation, was found to have a width that varied between 0.45m and 0.33m, and a depth between 0.09m and 0.13m. In profile the various ditches had shallow sides and a concave base. Two further ditches were also identified to the south of Y418, namely Y428 and Y429, neither of which were excavated.

Boundary Ditch Y403 (Figures 19 & 21)

Boundary ditch Y403 appeared to be, after a gap of c.1.8m, a continuation of the Y012 south-eastern boundary of Enclosure 2. It was a slightly sinuous ditch aligned south-west/north-east with a visible length of c. 167m. Two segments were excavated, one being located at the north-western terminus. Excavation of the terminus revealed the ditch profile to be gradual, progressing to steep sides with a concave base. The width was measured at 2.7m and depth at 0.68m. The excessive size of the north-eastern terminus associated with Y403, although unproven, may have housed a wooden upright,

thus potentially mirroring the terminus of Y012. One further segment was excavated along the line of Y403, which identified the ditch as having a width measurement of c. 1m and a depth of c. 0.40m. The profile displayed moderate sides and flat base.

What is not apparent in the archaeological record is evidence of gateways through Y403, enabling passage from one area into another. This may be due to the evidence having been removed by one of the many medieval furrows truncating Y403. However, on the basis of location and alignment, ditches Y401 and Y402, may have performed a stock control role, displaying a similar function to that of the ditches located externally to gateways associated with boundary ditch Y217. The archaeological record also demonstrated the existence of an internal ditch Y404 running parallel to Y403 potentially performing the same function.

Collectively, the boundary ditches and associated features formed what appears to be a funnel-shaped field system, with added internal stock control measures similar to 'crushes' (Chadwick 2009). The aim of the funnel shaped field would have been to control livestock movement in a south-westerly direction.

It was not possible to access the full extent of the funnel system, as it continued beyond the limit of the area under investigation.

Ritual Activity (Figures 19 & 21)

Located within Enclosure 3 was a small structure E084, identified as a possible shrine. In plan E084 consisted of two short ditches measuring c. 1m in length which formed the two sides of the structure, and a rear ditch measuring 2m in length forming a three sided structure. One terminus were excavated and found to have a width 0.38m and a depth of 0.21m. In profile the ditch had moderate side with a concave base. Located at a distance of 0.40m to the south-east of the three sided structure were three postholes that may have been associated by proximity, as none were excavated to confirm a possible relation.

The shrine interpretation is based on an example identified during the excavation of Danebury Hill fort (Cunliffe 2003), where RS3, (dated to the middle Iron Age and of similar size and plan), was a three sided ditched structure with what appears to be a fourth ditch

albeit detached. The detached fourth ditch of the structure RS3 found at Danebury is similarly represented through positioning of postholes at Stowe Farm.

5.6.3 Phase C: Later Iron Age Field System (*Figures 19 & 22*)

Evidence for Iron Age land division associated with Phase 4C is somewhat limited, consisting of three linear ditches possibly demarcating the landscape into larger areas potentially used for agricultural purposes.

Based on visible evidence, ditches Y122, Y163 and Y165 (also known as G1) formed a later phase (Phase 4C) of Iron Age activity relating to the landscape division. The stratigraphic relationship between Y163 and Y165 was not determined due to the homogenous nature of the ditch fills. Phasing was based on both ditches cutting ditch Y054 (Iron Age Phase 4B) which in turn was found to cut ditch Y127 (Iron Age Phase 4A). Stratified pottery dated to the Iron Age was recovered from Y163, and Roman pottery from Y165. The Roman pottery was abraded and found close to the surface of the feature, allowing for the suggestion that it was intrusive.

Ditch Y122 had a visible length of c.206m and was aligned north-west/south-east. The south-eastern end of the ditch was removed by medieval furrow 1212, thus masking the true extent of the ditch. At the north-western end it appeared to link into Y163, (visible length of c.70m), aligned north-east/south-west, thus forming a T-junction.

Running in a south-westerly direction for c. 20m from the baulk at the north-east end, ditch 165 merged with ditch 163, both then continued on the same alignment. At the point where the two ditches merged a section was excavated, with the purpose of identifying a chronology for the two features. The excavation revealed that both ditch contained a single mid yellowish brown clay silt fill, suggesting that they were potentially open and functioning at the same time. It is not immediately obvious why the short spur Y165, with a visible length of c.58m, was excavated. However, it is possible that it functioned as a form of stock control, or indicated a correction to the ditch alignment.

Y122 and Y163 had concave bases, although their sides varied between steep, moderate and gradual. Investigation also revealed that the depth of the ditches varied randomly

along the length, thus indicating that they had not been excavated for the purpose of drainage.

Ditch Y165 on excavation was found to be more uniform in profile, having gradual sides and a flat base. However, its depth did differ along its length. Although no evidence was identified as part of the archaeological record, it is possible a natural hedge occupied the ditch in order to create a fence line. On the basis of the available evidence it is not possible to suggest how the fence line may have functioned in the context of the ditch system.

As a whole, the Iron Age ditch system allowed for a more open landscape, less encumbered by subdivisions, potentially allowing for greater agricultural productivity, or possibly suggesting a decline in livestock management. Unfortunately, the environmental evidence from the processed baulk samples was inconclusive, so unresponsive of either of the suggestions made.

5.7 ROMAN ACTIVITY

Evidence for Roman activity at Stowe Farm is limited, but nonetheless interesting. The evidence would appear to suggest abandonment of the divisions associated with the Late Iron Age, as evidenced by the absence of 'cleaning out' and subsequent re-cutting of the earlier ditches. It is possible that the reason was to open up the landscape.

Also dating to the Roman period was a single structure, possibly constructed for the purpose of religious ceremonial practises, as it displayed the same form in plan, albeit on a smaller scale, as a building found at Maxey and interpreted as representing a temple (Pryor et al. 1985). It is difficult to corroborate this interpretation, as none of the features associated with the structure at Stowe Farm, which may have even been incomplete, were investigated, thus preventing a confident interpretation.

Phase 5 (43-410AD) (Figure 23)

Roman Boundary Ditch Y246 (Figure 23)

Roman field boundary evidence was limited to a linear ditch Y246 aligned north-east/south-west with a visible length of 137m. A single gap in the ditch was identified during the investigation, and interpreted as a gateway between two open areas. On excavation the ditch profile was found to vary between steep, moderate and shallow sides with a consistently concave base. Variation in the ditch profile does suggest that the feature was excavated in a fairly haphazard manner.

Interpretation regarding the function of Y246 has been drawn from comparative evidence identified at Maxey (Meadows 2009) where excavation revealed evidence of a Roman co-axial field system, extending across the landscape. The comparative evidence comes from the length of the boundary ditches found at Maxey, one of which was in excess of 100m (Meadows 2009) and included a single interruption, possible functioning as a gateway between to enclosed areas. It is possible that boundary ditch Y228 had a similar function.

Roman Ritual Activity (Figure 23)

Structure E086 (unexcavated) consisted of three ditches linked to form three sides of a rectangular shape in plan. The two short sides measured c. 12.5m and the longer side, presumably the rear to the structure, measured c.16m. The width of the interconnected ditches was reasonably consistent at 1.5m.

There is the possibility, albeit unproven, that E086 was only partially completed, and that, as a finished structure, would have resembled the example identified at Maxey and interpreted as a shrine / Romano-Celtic temple (Pryor *et al.* 1985).

5.8 MEDIEVAL AGRICULTURAL ACTIVITY

Removal of the overburden revealed extensive evidence of agricultural activity in the form of a series of wide furrows dated to the medieval period. On excavation the wider furrows were found to be obscuring evidence of earlier ploughing activity in the form of narrower furrows, possibly dated to the earlier medieval period. What was not present in the archaeological record was any form of physical boundary dividing the landscape into parcels of land. The preferred system appears to have been open, reflecting the dominant method employed across the central belt of England, and very noticeably south of the River Welland at Bainton (Ashby, Gosling and McClain, 2017). This method of farming is suggestive of a landscape used exclusively for the growth of crops and not for the rearing of livestock.

Phase 6 (Post 410 AD) (*Figure 24*)

The medieval period at Stowe Farm was represented by an extensive pattern of furrows from ploughing activity. The ridges that would normally be associated with the furrows were not evident in the archaeological record, possibly as the result of truncation by modern ploughing or by machining during removal of the overburden when the site was exposed prior to archaeological investigation.

The furrows were aligned north-west/south-east across the site, with the exception of a small area located towards the north-western limit of the excavation where the furrow alignment was north-east/south-west.

On excavation, the furrows were found to have an average depth between 0.15m and 0.25m and a width that varied considerably, being between 1.5m and 6.5m. The length of the furrow also varied, depending on the location of the headlands, although the majority of the furrows continued beyond the extent of the site. On the north-east side of the site the average furrow length was 203m and on the south-western side 297m. In the

north-west corner of the site the furrow average length was 83m, but the majority of them continued beyond the edge of the excavation area.

What is not present is any evidence for the control of livestock in the form of physical features i.e. the creation of enclosed areas, suggestive of animal husbandry. The absence of stock-control features at Stowe farm appears to reflect a more arable-based economy. Evidence for this stretches from Yorkshire to Dorset, including the landscape both north and south of the Welland, where the open field system dominated (Ashby, Gosling and McClain, 2017).

5.9 SYNTHESIS

In synthesis, the excavated evidence at Stowe Farm indicates activity dating from the Early Neolithic period, when what appears to have been established, was a relatively short-lived but sizeable settlement.

The Late Neolithic / Early Bronze Age transition witnessed a shift of emphasis from domestic to ritual and funerary activities. It is during this period that environmental changes contributed to the appearance of a wetter landscape.

In the course of the Bronze Age and Iron Age the landscape saw the creation of extensive field systems and associated droveways indicative of a pastoral economy, with some evidence of short-lived, possibly seasonal occupation, consistent with a periodically flooded landscape which was becoming increasingly wet.

Roman activity was confined to a boundary ditch and a possible shrine, indicating a trend towards a more open landscape or contraction of acclivity.

During the medieval (and post-medieval) period the site witnessed the creation of open fields and the intensification of farming, as evidenced by remnants of furrows scarring the earlier landscape.

CHAPTER 6

DISCUSSION

6.1 SYNOPSIS

The analysis of the excavated remains from Stowe Farm has revealed a landscape that was shaped by human actions over at least six millennia.

The earliest evidence for human occupation dated to the Early Neolithic and was characterised by the presence of at least twenty-one rectangular and sub-rectangular dwellings. Land use during this period remains uncharacterised, as environmental remains are scant. Therefore, it is difficult to establish with a satisfactory degree of confidence whether the occupying population was predominantly involved in crop cultivation or animal husbandry.

The landscape appears to have remained unoccupied during the Middle Neolithic period, probably due to local environmental conditions (Table 2) being characterised by increased episodes of seasonal flooding associated with the changed behavioural regime of the River Welland (French 2003).

Absence of settlement was also apparent during the Late Neolithic / Early Bronze Age transition. During this period human activity on the landscape was evident in the form of monumental structures taking the form of ring ditches and an enigmatic structure consisting of two segments of ditch associated with a postholes. The Middle Bronze witnessed a shift of emphasis from the construction of the monumental landscape towards management through land division, as evidence by the presence of a segmented ditch and the construction of a post-built fence line. Possibly towards the end of the Middle Bronze Age limited domestic activity was indicated by the appearance of circular dwellings associated with land division.



1. Castle Menzies Neolithic Cursus Monument
2. Normanton Iron Age Funnel Enclosure
3. Lismore Fields Neolithic Long House
4. Stowe Farm
5. Barleycroft/Over Prehistoric Sites
6. Landwade Road Neolithic Structure/Dwelling
7. Chapel Brampton Iron Age Funnel Enclosure
8. Harlestone Iron Age Funnel Enclosure
9. Rainsborough Iron Age Funnel Enclosure
10. Newbottle Iron Age Funnel Enclosure
11. Yarnton Neolithic Long House
12. Huntsman Quarry, Kemerton, Bronze Age Post-Defined Enclosure
13. Hazelton North Neolithic Long Cairn
14. Kingsmead Quarry Neolithic Long House
15. Danebury Iron Age Hillfort
16. Chigborough Farm Bronze Age Post-Defined Enclosure
17. South Hornchurch Bronze Age Landscape
18. Shaugh Moor (Dartmoore Reaves) Pre-historic Landscape
19. Drizzlecombe Bronze Age Stone Row
20. Inch Early Neolithic Long Houses
21. Corbally Neolithic Long Houses
22. Kilcullen Neolithic Long Houses

Figure 11 Monuments referred to in the text

The process of land division into individual parcels of land continued into the Iron Age, with the appearance of intercutting ditch systems indicative of a series of phased divisions. Domestic occupation evidence for this period was limited to three possible dwellings, one of which was potentially associated with an individual plot of land. The lack of occupation evidence may be due to the land being given over almost exclusively to livestock management, with only a small element of crop cultivation. This seems to be evidenced by the presence of a complex system of enclosures and livestock control measures designed to control stock movement across the landscape. Also dating to this period was a structure which was interpreted as a possible Iron Age temple.

The Roman period was represented by a single field boundary ditch and what appeared to be a temple structure located in close proximity to the possible Iron Age shrine. However, occupation evidence in the form of dwellings was not present within the boundaries of the site, pointing to a predominantly ritual use of the landscape, or open pasture.

Occupation evidence remained absent throughout the Early Medieval and later periods, where the only indication of human activity was the presence of plough furrows associated with the farming of the open fields.

For the purpose of clarity, the following discussion is presented in chronological order, with emphasis being placed on key characteristics related to the development of the landscape as the result of human interaction.

6.2 EARLY NEOLITHIC (4000 - 3300 BC)

6.2.1 Introduction

At Stowe Farm evidence for human activity dating to the Early Neolithic took the form of rectangular and sub-rectangular structures (*Figures 13, 14 & Table 6*), which appeared

to form a small, nucleated group located to the south-east of a larger structure E029/E030, potentially of a similar Early Neolithic date.

Structure No / Grid	Alignment	Shape in Plan	Number of Postholes / Beam slots	Area (length x width)	Internal Division / Features
E035/ NGR 510220/311025	north-west/ south-east	rectangular	14	12m x 10m	No
A020/ NGR 510154/310975	north-east/south-west	rectangular	9	13m x 7m	Yes
<i>E031</i> NGR 510180/310992	north-west/south-east	rectangular	19	14m x 9m	yes
E022/ NGR 510195/310980	north-east/south-west	rectangular	13	14m x 10m	yes
<i>E036 and E037/NGR</i> 510200/310897	north-west/south-east	rectangular	18	14m wide,	Possible hearth
A050/ NGR 510244/311032	north-west/south-east	rectangular	5	12m x 7m	No
A056/ NGR 510170/311018	north-west/south-east	rectangular	15	15m x 8m	Yes
<i>E029 and E030/</i> NGR 510187/311019	north-east/south-west	rectangular	15 postholes and 5 beam slots	24m x 8m	Yes
E130/ NGR 510176/311064	north-east/south-west.	rectangular	9	6m x 4m	Yes
E131/ NGR 510170/311092	north-east/south-west	rectangular	8	8m x 6m	Yes

Table 6 Early Neolithic Structures: Main Characteristics

Structure No / Grid	Alignment	Shape in Plan	Number of Postholes / Beam slots	Area (length x width)	Internal Division / Features
E105/ NGR 510740/311080		square	5 posthole and 3 beam slots	10m x 10m	Yes
E100/ NGR 510260/3110		square	4 posthole and 3 beam slots	8m x 8m	Yes
E080/ NGR 311057/51011	north-west/south-east	rectangular	21	15m x 8m	Possible hearth
E208/ NGR 510007/311234	north-west/south-east	rectangular	6 postholes and 1 beam slot	10m x 5m	Yes
E207/ NGR 509952/311225		square	7	10m x 10m	No
E160/510102/311177	north-west/south-east	rectangular	9 postholes and 4 beam slots	14m x 8m	No
A271/ NGR 509858/311158	north-east/south-west	rectangular	13 postholes	14m x 11m	Yes
A270/ NGR 509956/311165	north-east/south-west	rectangular	1 posthole and 4 beam slots	8m x 4.5m	Yes
G12/ NGR 509934/310993	north-west/south-east	rectangular	36	6m x 3m	No
E156/ NGR 510058/311121	North-east/south-west	rectangular	22	14m x 9m	Yes?
E 157/NGR 510066/311135	North-east/south-west	rectangular	5	7m x 3m	No

Table 6 (cont') Early Neolithic Structures: Main Characteristics

There was also a number of what may have represented more isolated dwellings, scattered across the site (*Figure 13*) (see Table 3, below for a summary of the main characteristics). With the exception of four structures, E105, E100, A207 and E029/E030, which were predominantly constructed using planks, the dwellings were post-built, similar in plan, albeit not in size, to examples identified at Yarnton, Oxfordshire (Hey, *et al.* 2016), Lismore Fields, Derbyshire (Garton, 1991) (*Figure 8*). Both of which were larger in size, one example from Landwade Road, Fordham, Cambridgeshire (Connor n.d.), smaller in size, and from the Padholme Road site, Fengate, Peterborough (Cambs.) (Pryor, 1974, 2005), which displayed a close similarity in size.

6.2.2 Domestication of the Landscape

The evidence from Stowe Farm contributes to the discussion relating to domestication of the British Neolithic landscape, which places emphasis on the shift from a mobile to a more sedentary lifestyle (Davies, 2009). What is not readily apparent is the level of sedentism that people practised at Stowe Farm. Various arguments relating to the adoption of a more sedentary existence within Early Neolithic society have been proposed, all of which are based on limited archaeological evidence (Neil *et al.* 2016), at least from a British perspective. All arguments have their merits. What is in question regarding Stowe Farm is which model can be considered to be the 'best fit' to explain the existence of the structures.

As a means of compensating for the ambiguities in the evidence for Early Neolithic occupation practices in Britain, which usually takes the form of pits, postholes, stakeholes, lithic scatters and middens (Pollard 1999), various interpretational frameworks were considered, based on a European perspective. One perspective advanced by Rowley-Conwy (2004) identified the arrival of peoples already versed in the skills of mixed agricultural practices into Britain. Rowley-Conwy (2004) also suggested that the presence of long houses demonstrates permanency, a view supported by Jones (2005), whose research identified the necessity to remain in one place in order to achieve successful

crop growth, as well as maintaining a small number of animals. In essence, knowing the commitment needed to farm successfully, people arriving in Britain during the Early Neolithic would have continued with their sedentary lifestyle. There is also evidence from the East Midlands region, as at Lismore Fields, Buxton, Derbyshire (Jones & Bogaard 2017) which strongly suggests storage of cereals more consistent with permanent occupation.

By contrast, Whittle (1999) and Jenson (2001) support the 'shifting cultivation' model, whereby agricultural success was reliant on cultivation periods that lasted one or two years followed by longer periods where the fields remained fallow within a landscape of forest clearance (Boserup, 2017), potentially implying short-lived occupation by 'semi-nomadic' populations. This would account for the lack of substantial domestic structural remains dating to the Early Neolithic in Britain. The idea of a semi-nomadic society was reinforced through the research conducted by Neil (Neil *et al* 2016). On the basis of strontium and oxygen analysis on tooth enamel taken from 18 individuals (14 adults and 4 sub-adults) recovered from the Hazelton North long cairn near Chltenham in Gloucestershire, Neil determined that in Southern Britain, people accessed their food sources from two geographically different locations, thus indicating a degree of residential mobility.

Based on the structural evidence from Stowe Farm which point to durable domestic buildings with evidence of structural repairs, the tendency would be to incline towards the model of permanent residency based on the need to continually work the soil and tend livestock, as suggested by Rowley.

6.2.3 Lifespan of the Dwellings

Besides the interpretation of patterns of occupation (permanency versus semi-nomadism and seasonality) during the Neolithic period, in the course of this research attempts have also been made to determine lifespan of the dwellings. Of particular interest is the research conducted on Irish sites where 100 radiocarbon dates from short lived materials (*i.e.* cereal grains and hazelnut shells) were analysed. The results from the environmental

remains indicated that occupation at the Irish sites was short lived, possibly 80 years per dwelling, although this is still unproven (Smyth, 2013). The implication of short lived occupation has led Smyth (2013) to address a number of questions, namely why were the dwellings built, how were they used, and why were they abandoned? She speculated that settlement was the result of formation of new social domestic groups moving away from parental ties, and that the reason for internal divisions in the dwellings was associated with the production of stone tools and ceramics in specific demarcated zones. Abandonment appeared to have contained a ritualistic element, an idea based on charred remains of structural timbers, suggesting 'ritual killing' of the dwellings (Smyth, 2013).

At Stowe Farm the research enquiry followed by Smyth in relation to the Irish dwellings, *i.e.* length of occupation, development of the settlement and method of abandonment, is fraught with difficulty, due to limited evidence. For instance, the dwellings investigated showed no indication of cultural build-up through remnants of buried floor layers. However, rather than indicating absence of prolonged occupation, lack of evidence may have resulted from truncation over time by later agricultural practices and, subsequently, by accidental damage caused during the removal of the overburden prior to the various phases of archaeological investigation.

Evidence pertaining to landscape development is also absent, as is a form of ritualistic behaviour that may have indicated the 'killing' of the Stowe Farm domestic structures. Above all, the available evidence does not offer any hints as to the primary reasons for abandonment of the structures.

One strand of information that may be taken as an indicator of the dwellings' longevity is the presence of intercutting postholes, potentially demonstrating continual occupation (or periodic re-occupation), based on the need to maintain the structures. At Stowe Farm the evidence for post replacement was very limited, with only the occasional upright being replaced (*Figure 14*). The Early Neolithic longhouses at Yarnton (Hey, *et al.* 2016) and Lismore Fields (Garton 1991) (*Figure 8*) also show minimal evidence for the re-cutting of postholes resulting in upright replacement. What tends to be more common, as identified at Stowe Farm, is the idea of 'post clusters', which may indicate not replacement, but additional support for a failing, but not completely failed, wooden upright, to secure the

structural integrity of the dwelling which could be compromised through the process of replacement. This evidence potentially demonstrates repair but does not indicate the lifespan of the structures found at Stowe Farm.

6.2.4 Lifespan of the Settlement

It has been suggested (Smyth 2013; Whittle *et al* 2011) that on average, a Neolithic settlement lasted about 150 years during the 300-year period that witnessed the spread of domestication originating in the southwest of Britain after 4000 cal. BC. At Stowe Farm it is difficult to establish whether the dwellings were occupied simultaneously and continuously, or in separate phases and intermittently. The evidence appears to indicate that each dwelling was positioned in its own space. This space was not encroached upon by later structures, possibly suggesting simultaneous occupation.

By combining the evidence from sites from Ireland and Southern Britain, it can be tentatively suggested that the Stowe Farm settlement was occupied by four to five generations, whether continuously or seasonally, and that the interior spatial organisation of the dwellings may have reflected multiple activities, including practical, as well as ritualistic, uses.

6.2.5 Layout of the Dwellings

At Stowe Farm, seven rectangular structures (A020, A022, E029/30, E130, E271, E270 and E156) were north-east/south-west oriented, and of the remaining 14, ten were rectangular structures aligned north-west/south-east with the others being square structures (*Figure 13*). The structures aligned north-west/south-east appear to corroborate the suggestion made by Topping (1996) that a north-west/south-east alignment may have been dictated by topographic factors, such as the need to ensure greater structural stability against the prevailing winds, or to provide the largest possible roof area to face the longest period of the sun's path in the sky to maximise heat, as well as light, through a south-facing entrance. Although this explanation offers a possible

reason for the north-west/south-east structural alignment, it would not apply to the seven rectangular structures north-east/south-west oriented, which may have been erected at a different time of year, being aligned to the different path of the sun (Smyth 2006). The alignments identified at Stowe Farm appear to mirror, at least on a smaller scale, the orientation of 29 of the 51 examples of Irish rectangular structures (the remainder of the examples varied in their alignment with 12 structures being aligned east/west, 3 north-south, 2 north-northeast/south-southwest, 1 east-northeast/west-southwest and 2 west-north-west/east-south-east), suggesting no preference regarding structure alignment (Smyth 2006). Although topographic and environmental considerations may have played a role in determining a dwelling's alignment; tradition and beliefs may have also been important factors (Pasztor and Barna, 2015). For instance, investigating the Danubian longhouses and comparing them with the contemporary tombs of Central Europe, Hodder (1990) has suggested that natural factors were less important when set against the symbolic. Hodder (1990) and, later, Thomas (1996, 2007) have postulated that the dwellings were 'special' structures where ritualistic activities were performed amongst the more domestic ones. Similarly, Brophy (2007) has suggested a change in form and function of the traditional timber hall in Scotland, with the roofed 'big houses' being replaced by ceremonial and mortuary 'cult houses'.

At Stowe Farm it is not readily apparent how the internal space of the dwellings may have been used. Although the internal space was sub-divided, the function of each demarcated area is not clear. Therefore, the application of the ritualistic model is problematic, as the size in plan of the dwellings at Stowe Farm is considerably smaller in comparison to the longhouses found at Lismore Fields and Yarnton (*Figure 8*), for which a ritual function has been postulated. There is one potential exception at Stowe Farm, Structure E029/E030, measuring c. 24m x 8m (*Figure 14*), which had been constructed using a combination of post and, possibly, split plank building techniques for the walls, unlike the post-built technique used on the other structures. The available evidence would suggest that the rear of Structure E029/E030 had been built using the plank construction method, with the sides displaying a combination of plank and post construction techniques; by contrast, the front had been built using posts. Internally there was some evidence of division at the north-eastern end of the structure. What appears to be very limited internal division may have allowed for the creation of a large uncluttered space with multiple uses.

Thomas (1996) argues that this type of longhouse is an example of a 'special place', being used occasionally for ceremonial purposes. Equally, the structure could be used for the storage of foodstuffs, activity areas and a place to shelter animal stock over winter (Thomas 1996, Hey *et al* 2016). In essence, the exceptional longhouse at Stowe Farm could have had a communal, multifunctional role. Indirectly, this may support Rowley-Conwy's (2004) argument for a more settled society involved, as in the case of Stowe Farm, in a predominantly low intensity agricultural production, combined with limited transhumant animal husbandry (Hatton, 2001).

6.3 PHASE 2: LATE NEOLITHIC – EARLY BRONZE AGE MONUMENTAL LANDSCAPE (c. 2,600 – 2,200)

What appears to be a fairly common trait for the Late Neolithic to Middle Bronze Age transition in the vicinity of Stowe Farm, is the appearance of ceremonial monuments in the form of ring ditches, barrows (some with and some without fragmentary human remains), what have been classed as 'hengiform' monuments, and isolated cremations and cremation cemeteries, either close to, or located within, the various field systems. At Stowe Farm four features (*Figure 15*) that could be considered non-domestic were discovered. They were circular or sub-circular in plan and contained undated internal features, which had been damaged by extensive agricultural practices. What did survive in three instances was the uninterrupted ditch ranging in diameter between 7 and 10 meters. It was suggested by Pryor (*pers comm*) that these may have been hengiform monuments based on their size. At the Pode Hole and Willow Hall Quarry Sites (Thorney, Cambridgeshire) there was also evidence for small, circular 'hengiform' monuments within Bronze Age and Iron Age field systems (Rebecca Casa, *pers. comm.*), the interpretation of which, in the absence of dating evidence, remains open to speculation. This is a situation found at Barnack, where a slightly larger hengiform monument some 15m in diameter was identified. No dating evidence was retrieved during its excavation

(Reynolds 1982). The fourth feature, Y127 (*Figures 15 & 16*), comprised two very slightly curving lengths of ditch, the longest being c.58m and after a gap of three meters a further segment (on the same alignment) measuring c. 18m in length was identified. A total of 17 postholes of varying size in plan were located on either side of the ditches, one of which was located in the three meter gap between the two segment of ditch and another beyond the western terminus. An explanation for the construction and use of this feature is not readily apparent. However, it has been suggested it may have functioned as a form of cursus (Parker – Pearson, pers. comm.).

Using the cursus analogy, it may be possible to compare Y127 with the post built cursus monument identified at Castle Menzies, Aberfeldy, Perthshire (Halliday 2002) (*Figure 11*), not in its form but function. Castle Menzies comprised a single line of timber uprights creating a sinuous division in the landscape. This form of structure was considered by Thomas (2006) to be more suited towards inclusivity, being temporary in nature, rather than marking the landscape with a structure that could be considered a vehicle of long term remembrance.

6.4 PHASE 3: EARLY, MIDDLE AND LATE BRONZE AGE (c. 2,600 - 700 BC)

6.4.1 Early Bronze Age (c. 2,200 – 1,600 BC)

The scant evidence from Stowe Farm appears to suggest that, after the abandonment of the Early Neolithic structures, the landscape remained unsettled fallow land. This may have been due to changing environmental conditions (Table 2) as the river system became increasingly active, with the main channel moving some 500m to the north over time. The effect of what is considered to be a low-energy river system was the creation of areas of ponding and fresh water flooding in the Maxey-Etton flood plain (French 1990, 2003) A contributing factor to this change may have been land clearing in the Neolithic

period (Nye 2005a, 2005b). At Stowe Farm there was a movement away from the construction of monuments (Phase 2) towards an early attempt at landscape division represented by the excavation of an Early to Middle Bronze Age linear segmented ditch, Y217, which was largely removed by the construction of the Iron Age western boundary of a funnel enclosure, (Phase 4B). Ditch Y217 would have been of little use for the purpose of drainage, but could be seen as the first phase of formal land division.

Land division also took the form of a post-built fence line, G22, demarcating the landscape into possible zones for specific, albeit uncharacterised, use. A similar use of post-built fence-like structures was identified towards the north-western extent of the Saddleborough Reave investigation area (Smith et al. 1981).

As a whole, the Early Bronze Age at Stowe Farm appears to reflect what Pryor (1980) has described as the beginning of 'land management' associated with animal husbandry in its early form.

6.4.2 Middle to Late Bronze Age (1,600 – 700 BC)

The Field System

After the Early Bronze Age the evidence of landscape exploitation and development are not readily apparent in the archaeological record. This has resulted in a level of uncertainty regarding the date range of a group of what appear to be boundary ditches, collectively comprising the field system located to the north of the Early Bronze Age post-built fence line, G22 (above) (*Figure 17 & 18*). Evidence from the excavation at Rectory Farm (Hunn nd.), does suggest a Middle Bronze Age date for the systems which continued into the Late Bronze Age. The system at Rectory Farm featured a series of curvilinear droeways (*Figure 9*), where the distances between each droeway narrowed towards the south, at which point the system appeared to continue onto the floodplain, terminating before the river. Series of small enclosures and paddocks, all possibly aimed at marshalling the movement of stock, were incorporated into the system (Evans *et al.*

2009, Pryor 1996). A number of barrows/ring ditches was also identified in association with the same field system (Hunn nd.).

At Stowe Farm the field boundary system with a possible droveway to the north-west was aligned north-east/south-west and comprised a series of shallow concave based boundary ditches demarcating an area of some 1,730m² (*Figures 17 & 18*). In plan the boundary system was slightly curvilinear and contained a single internal division. The north-eastern half of the system was narrower covering an area of 690m² and the larger south-western half of the field system covered an area of 1,040m². The field boundary system resembles the example identified at Rectory Farm (Pryor 1996), with one distinct difference in the curvature of the field boundary ditches which, at Stowe Farm, are the opposite of the system at Rectory Farm. No conclusive explanation can be offered for the curvature and 'funnelling' of the systems at Stowe Farm and at Rectory Farm, other than to suggest a local trait or the possible influence of topographic factors, as evidenced at Rectory Farm. What is apparent is the very limited evidence for curvilinear field systems in areas along the Lower Welland Valley, suggesting a layout possibly dictated by local needs (see below). What is not evident in plan is the original extent of the system, which may have continued beyond the limits of the excavation area. The recorded features are likely to represent a small element of what could have originally been a much more complex series of enclosed spaces.

Despite the limitations of the available evidence, it is possible to suggest a Middle to Late Bronze Age date for the layout of the field system and possible droveway by using comparative information obtained from the investigation of similar sites located along the western fen-edge (Yates 2007), namely Pode Hole Quarry (Daniel 2009) (Thorney, Cambs.), Tower's Fen (Mudd and Pears 2008) (Thorney, Cambs.), Briggs Farm (Pickstone and Mortimer (2011) (Thorney, Cambs.), Eye Quarry (Patten 2004) (Eye, Cambs.), Rectory Farm (Savage, 2008) (West Deeping, Lincs.), and Langtoft (Hutton, 2007, 2008a, 2008b; Hutton and Dickens 2010) (Lincs.). All the aforementioned sites exhibit evidence of a formally laid out landscape dating to the Middle and, in some cases, Late Bronze Age. In the past there may have been a tendency to view Middle to Late Bronze Age fields as part of a system of stock enclosures and paddocks. This interpretation has been traditionally based on direct comparisons with the discoveries at

the Newark Road site, Fengate, Peterborough (Cambs.) (Pryor 1980), a situation that is not necessarily reflected in the more recent discoveries made along the western fen-edge north-east of Peterborough, as at Pode Hole Quarry (Thorney, Cambs.) and Tower's Fen (Thorney, Cambs.) or, indeed, at many of the sites located along the Lower Welland Valley and Lincolnshire south-western fen-edge, as at Rectory Farm (Savage, 2008) (West Deeping, Lincs.), and Langtoft (Hutton, 2007, 2008a, 2008b; Hutton and Dickens 2010) (Lincs.). These sites seem to have had a mixed agricultural economy, based on environmental evidence which confirms the presences of dry grassland and cultivated fields, together with evidence for pastoral activities indicated by stockyards, waterholes and droveways associated with extensive co-axial field systems and movement of livestock.

Stock Control

The system identified at Rectory Farm appears to have been constructed predominantly for the control of livestock, consisting of small paddocks and enclosures, all within a landscape that has a curvilinear form, wide towards the north and narrower to the south, possibly heading towards a crossing point of the River Welland (Evans *et al.* 2009).

With regards to Stowe Farm, the enclosure layout is similar to that identified at Rectory Farm's, 'curvilinear form, suggesting, as with Rectory Farm, that the field system at Stowe Farm was predominately used for stock control. For Stowe Farm this interpretation is based on morphological similarities in the layout, as the environmental data were inconclusive due to the poor state of preservation of the organic remains. Further evidence that may suggest stock control at Stowe Farm was represented by the presence of small entranceways to the enclosed fields, alongside wider ones. It is possible that the narrower gaps located at the southern and north-eastern corners, which would not have been suitable for large numbers of animals, were used as secondary entrances/exits by the people managing the livestock, also providing the means of controlling access for selected individual animals. Pryor (1996) has argued that entrances located in the corners of field were used to allow for the movement of rams being moved out of a field or collecting yard prior to the arrival of ewes. This explanation could be applied to the

smaller north-eastern enclosure at Stowe Farm. The entrance/exit between the two larger enclosed areas is not visible within the archaeological record, due to the internal boundary ditch being truncated by a medieval furrow. However, it may be tentatively suggested that a small gap acting as a means of stock control originally existed in the corner. At Stowe Farm this notion of stock control/management is further corroborated by the discovery of two post alignments forming a right-angle. The postholes were relatively evenly spaced, with an approximate gap of one metre between each upright. Although there was no direct evidence, it is reasonable to assume that the gap between each posthole was closed with a form of fencing, e.g. hurdles. A similar situation was recorded at The Glebe Land site, Langtoft (Lincs.), where a posthole alignment was identified running parallel, and then perpendicular, to an enclosure ditch. There, the presence of a waterhole added weight to the idea of the fence-line forming part of an enclosed space used for the control of livestock (Hutton 2008).

At Stowe Farm the samples of faunal remains recovered during the various seasons of excavation were too small and fragmented to be of any significance. Therefore, in order to offer a reasoned argument for the species of animal being managed as part of a pastoral economy, comparative information from other sites has been used in this thesis.

In 1996 Francis Pryor proposed that the Newark Road site (Fengate, Peterborough) exhibited evidence relating to 'community stockyards' used for the handling of flocks of sheep on a large scale (Pryor 1996). Pryor later used the evidence from Newark Road to interpret other sites which exhibited evidence for extensive field divisions, such as Rectory Farm (West Deeping, Lincs.). There, a comparison with the various stockyard compounds was drawn to suggest land use predominately devoted to the rearing and management of sheep (*Id.* 1996). Following a review of the evidence from sites along the Welland Valley, including Rectory Farm and the Welland Bank, Pryor (2002) later acknowledged that farming during the Bronze Age was not exclusively centred on sheep management, but also included cattle, as indicated by the faunal remains. Accordingly, the keeping of sheep and cattle, as in multi-species farming, would have been advantageous, as they graze at different levels, the cattle taking the longer grass and the sheep grazing at a lower level, collectively keeping the grassland in good order. This interpretation is supported by the faunal evidence collected from a series of revisited sites

at Fengate and in the Cambridgeshire Fens, which revealed a higher percentage of cattle bone to sheep/goat (*Table 7*), thus shifting the emphasis from sheep to cattle farming (Evans 2009).

Species	Barleycroft Farm	Newark Road	Elliott Site	The Holms, Earith	Bradlay Fen
Cattle	58.5	73	78	81.4	86.1
Sheep/goat	2.9	18.8	17	13.2	1.7

Table 7 Showing percentage difference between cattle and sheep/goat (After Evans 2009)

At Stowe Farm, absence of faunal remains makes it impossible to support any specific argument. However, moving away from the sheep versus cattle debate, it may be useful to focus instead on the trend identified at other sites situated along the Welland Valley, such as the Etton Landscape (Ainsley 2005), and Fen-edge in Cambridgeshire, and Baston Quarry, Langtoft (Webley 2004), and Glebe Land, Langtoft (Hutton 2008) in Lincolnshire, where both animal species are evident to a lesser or greater degree. It may be possible to speculate that, if present, a mixed method of animal husbandry at Stowe Farm would have made economic sense, with cattle servicing a dairy industry and sheep supplying wool, meat and, possibly, milk (Legge 1981; Serjeantson 2007).

Extensive Field Systems as Means of Controlling Space

It is possible that the division of the landscape at Stowe Farm during the Middle to Late Bronze Age followed a trend indicating an economic rationale but also possible socio-political factors enabling greater productivity. Increased productivity would have given the individual or group the opportunity to trade in order to sustain themselves in what arguably was becoming a more sedentary society, as well as allowing them to build alliances (Yates 2007). A form of positive reciprocity could then ensue (Mauss 1925;

Renfrew and Bahn 2016). By contrast, with reference to the Barleycroft/Over site, Evans & Knight (2001) has argued that the imposition of a rectilinear/blocking field system on the landscape did not necessarily imply increased productivity, especially when considering the lack of substantial occupation evidence. The 'carving-up' of the landscape into 'manageable chunks' may have implied a new social order, one where space was controlled, potentially demonstrating social hierarchy and not necessarily implying the need to increase output (Brück 2002). In essence, division of the landscape and subsequent 'ownership' would have been based on the ability to demonstrate longevity of occupation in a particular location (Johnston 2002). In the case of Stowe Farm, in the absence of conclusive evidence, it is not possible to apply any of the aforementioned models with a satisfactory degree of confidence.

There is, however, the potential for a further option to be explored, that of regional identity. Both Rectory Farm and, to a lesser degree, Stowe Farm (based on the archaeological record), exhibit the same field system layout focused on stock control (Pryor 1996, 2002). This is not necessarily moving away from the idea of a mixed economy, but a situation where less emphasis was given to crop growth and more to the rearing of stock and stock control. This is demonstrated at Rectory Farm where the presence of several 'farm stockyards', located within a larger stockyard pointed to animal pens. For the enclosures identified at the Newark road site, Fengate (Pryor 1980), Pryor (1996) suggested that each stockyard was in the ownership, and for the benefit, of a single group, rather than for community use. Although the evidence from Stowe Farm is less well defined on the landscape, morphological similarities may allow the same interpretation to be put forward.

When compared to the various systems located along the western fen-edge a difference can be discerned. At Tower's Fen, Eye Quarry, Pode Hole (Thorney, Cambs.), and Langtoft (Lincs.), for instance, the fields are more rectilinear in plan, formed around a number of axes, potentially accounting for a mixed economy, where the landscape is divided more evenly between crop growth and the rearing of animals. Using similarities in field layout and orientation along the fen-edge, Hutton and Dickens (2010) have suggested a link between the Langtoft system and those identified at Fengate, Pode Hole, and Thorney in Cambridgeshire, and West Deeping in Lincolnshire. However, the inclusion of West Deeping (Rectory Farm) and, by association, Stowe Farm, does not fit

into the rectilinear field system observed along the fen-edge, being curvilinear in plan. What can be seen as a local trait could potentially be evidence of a disassociation from the community farming activity, which was taking place along the fen-edge, with the Stowe Farm/Rectory Farm settlers in the Lower Welland Valley removing themselves from an interconnected socio-egalitarian community field and driveway systems extending along the fen-edge (Evans *et al.* 2009). If indeed this does prove to be the case, the socio-political argument put forward by Brück and Yates to explain the emergence of systematic land division in the Bronze Age, with disregard to the type of economy, has added value.

Occupation Evidence

There is no conclusive archaeological evidence that a settlement occupied the same space in close proximity to, or within, the initial field system. However, across the Stowe Farm site there were semi-circular structures which were either discrete or inter-linked, together with isolated pits, indicative of domestic activity. However, the pottery and lithic materials recovered during the investigations were too sparse to be the product of permanent occupation. It is more likely that the Stowe Farm landscape was dotted with small structures providing shelter on a seasonal basis (Kemp 1997). The relative lack of material culture from Stowe Farm is not exceptional. Evidence from sites such as Pode Hole Quarry (Daniel 2009), Tower's Fen (Mudd and Pears 2008), Eye Quarry (Patten 2004), Rectory Farm (Savage, 2008) and the Thorney Borrow Pit site (Mudd 2007) has only offered a glimpse into the lives of the people who occupied the land. There are, however, a few exceptional sites, like The Glebe Land, Langtoft (Lincs.) (Hutton 2008). There post-built structures were identified within an enclosed farmstead, together with watering holes and a midden deposit. Although difficult to prove due to the site having been extensively truncated through agricultural activity, the evidence from The Glebe Land site may indicate some degree of settlement permanency. Briggs Farm, Thorney (Cambs.), has also produced evidence of post-built structures within what was considered to be purpose built enclosed areas, located on the higher ground away from the fen-edge (Pickstone and Mortimer 2011). One might also add the Welland Bank archaeological

investigation (Dymond *et al* n.d.) where a relative wealth of domestic refuse was recovered, some of it in the form of pottery dating to the Middle and Late Bronze Age, with the majority being Late Bronze Age, with Early Iron Age pottery being also recovered (Evans *et al.* 2009), suggesting a landscape that was occupied on a more permanent basis than Stowe Farm.

6.5 PHASE 4: IRON AGE (800 TO AD 43)

What is apparent from the archaeological evidence from Stowe Farm is that by the end of the Bronze Age the curvilinear field system had been abandoned in favour of a more formalised Iron Age rectilinear field system (*Figure 19*). The Stowe Farm site demonstrated continual development indicated by three phases of field system (*Figures 20, 21 & 22*), not a trait identified at other sites located either along the Lower Welland Valley or the western fen-edge. What was not so obvious at the Stowe Farm site was the evidence for extensive occupation, with only one example of a possible dwelling present. There was also an absence of evidence suggesting the presence of small enclosures, a form of enclosure known to have existed in the locality, as evidenced by examples from Plant's Farm, Maxey (Cambs.) (Gurney, Neve and Pryor 1993), Rectory Farm (Hunn, nd), and The Glebe Land site (Lincs.) (Hutton 2008).

6.5.1 Phase 4A

Phase 4A of the land division (*Figure 20*), attributed to the Iron Age, comprised a series of linear ditches demarcating an area of the landscape located towards the southern corner of the Stowe Farm site. The layout of the ditches demonstrates organisation albeit on a small scale, when compared with Phase 4B (below). The north-west/south-east alignment of the fields of Phase 4A does not follow the same alignment of the Bronze

Age system located to the north-east. This suggests that the earlier system no longer functioned as a viable means of stock control and was replaced by a new field system.

6.5.2 Phase 4B

The Field System

In contrast with the situation for Phase 4A, during Phase 4B larger areas of the Stowe Farm landscape were developed into field systems (*Figure 21*). Evidence from the site appears to suggest that the system attributed to this phase was more extensive, as it continued beyond the limits of the excavated area, potentially indicating a more formalised and systematic intervention on larger portions of the landscape. As a whole, Iron Age field systems located along the Welland Valley are reasonably well represented, as at Rectory Farm (Lincs.) and at Etton-Maxey (Cambs.), with a combination of irregular fields and enclosures (Dymond *et al* n.d.). Interestingly, the field system at Stowe Farm displays a high degree of organisation, with regular rectilinear field divisions, linked through a number of gaps in the enclosure ditches, more in keeping with what appears to be the more formal layout located to the south of Borough Fen Ring Fort (Cambs.) (Pryor 2002).

The new system at Stowe Farm was devoid of settlement. However, environmental evidence recovered from the local area offers some insight into the use of the landscape in the Lower Welland Valley. At Rectory Farm (Lincs.) and Etton A 15 Site (Cambs.), the evidence suggests that from the Early to Late Iron Age the landscape along the Lower Welland Valley remained unchanged. The evidence demonstrated limited cereal growth, with the pollen records showing pasture/grassland being dominant (Rackham in Hunn n.d. and in French 2003). When used in conjunction with the high dung beetle element, the emphasis is drawn towards extensive pastoral activity, in essence a continuation of stock management/animal husbandry suggested by the layout of the systems put in place during the Middle to Late Bronze Age (above). However, those sites located along the western fen-edge that exhibited extensive Bronze Age activity in the form of field systems

appear to have been less favoured for agricultural practices during the Iron Age. The reason, as suggested by Daniel (2009) in relation to Pode Hole Quarry (Cambs.), was that the landscape had become too wet and, therefore, less favourable for occupation and land exploitation. The same can possibly be said for Thorney Borrow Pit (Cambs.) (Mudd 2007), a site where the Iron Age was conspicuous by its absence. The changing environment would have affected all groups living and working along the fen-edge. The water inundated fen-edge appears to have encouraged a shift of activity to the higher grounds to the west which would have been more suitable for farming practices. Corroborating evidence is provided by the Middle to Late Iron Age settlement sites at Wesleyan Road (Thatcher 2009) and at Itter Park (Henley, Lyons and Pickstone 2012) both in Peterborough, (Cambs.), where the enclosures and settlement evidence were located on relatively flat areas at 11mOD. To this end, the Stowe Farm landscape, being topographically slightly raised, would have been attractive to the displaced settlers. Alternatively, what is indicated at Stowe Farm is the presence of a group or groups who decided to farm but not inhabit the location, preferring to occupy land close to the Fen-edge to be involved in salt production, as evidenced by the industrial activity dated to the Middle Iron Age at the Lincolnshire sites at The Glebe Land (Lane and Morris 2002; Hutton 2008) and at Baston Quarry (Webley 2004).

At Stowe Farm the field system associated with Phase 4B displayed a rectilinear division through a series of boundary ditches defining smaller parcels of land within a larger divided landscape. Each field boundary appeared to be interrupted by a causeway, possibly gated, allowing passage between fields. As previously stated (above), the environmental evidence for the Iron Age in general suggested a pasture rich and cereal poor landscape, indicating an economy that was more reliant of livestock rather than crop growth. It is possible that animal husbandry increased in importance within the local economy, which may account for the presence of the only known Iron Age structure at Stowe Farm. It was within this phase of landscape development that ditch Y217 was once again reaffirmed as a functioning element of the landscape. Having possibly started life in the Early Bronze Age (above), it was reused in the Middle to Late Bronze Age, and in the Iron Age as an integral part of a stock control system. The newly re-excavated Y217 formed one of two axes of a funnel-shaped enclosure, with the other one being a section of newly excavated ditch Y403 (*Figure 21*). Both axes were characterised by the

presence of a series of gaps acting as passageways for the movement of stock from a more open area of the landscape to one that was more restrictive within the funnel enclosure. Although this is potentially the only example known to date to exist along the Lower Welland Valley, there have been other examples dated to the same period identified further afield. Deegan and Foard's paper (2013) identified

a number of field systems in Northamptonshire that incorporated a funnelled entrance or trackways with examples at Harlestone, Chapel Brampton and Rainsborough Newbottle (*Figure 11*). At the Normanton Golf Course site, West Yorkshire (Timms 2005) (*Figure 11*), posts were used to form fenced funnel entrances, which eventually opened out into an enclosure.

The aim of this type of field system was to create a rigid structure to control the movement of stock. Stowe Farm is no exception. However, what is the different is the level of complexity. Running parallel to the two main axes, a series of short segments of ditch located on either side of the various entrances was observed. The purpose of the short segments of ditch may have been to further facilitate the level of control of stock movement into the funnel enclosure. The internal ditch segments could have had a dual role. The narrow passage aligned north/south appeared to be more complex in its construction than the example aligned south-east/north-west. Construction of the inner boundary associated with ditch Y217 consisted of a series of smaller ditches that initially functioned as an elongated holding pen. Through the use of a secondary ditch located within the passage, animals singled out for treatment could have been dealt with (Beamish and Shore 2008). The animals would then be reintroduced into the main flow shortly before encountering a further control, evidenced by the narrowing of the passage using a ditch curving towards Y217 after which the passage would open out slightly. Moving in a southerly direction towards the south-western end of the enclosure, the stock would encounter a further control with the narrowing of the passageways to half of its original width forming a 'crush'. At this point a gap in the inner ditch was identified, potentially used to extract animals, or for the movement of the herders. Located to the west of the gap, a short length of ditch ran two meters from, and parallel to, the internal edge of Y217, possibly acting as the final check point to inspect the stock, as required. There is also the possibility that the system worked in reverse, with the introduction of

new stock from the south-western entrance to the enclosure. The stock could then be controlled whilst within the enclosure by the use of the internal ditches, which would have functioned in a similar way to those earlier examples at Fengate (Cambs.) (Pryor 1980), allowing differentiation of stock to take place.

The inner ditch running parallel to Y403 at a distance of some 10m did appear to be less complex than the example identified running parallel to Y217, consisting only of a single ditch running for a distance of 69m. The lack of complexity may indicate a single use as a narrow passage for a quick inspection of livestock to separate diseased animals, or animals destined for slaughter or mating (Pryor 1996), thus playing no part in the staged herding of livestock.

The evidence from Stowe Farm suggests a highly structured landscape, where the aim was to control the movement of a large stock. What is clear from the archaeological evidence is that, during this period, Stowe Farm was a working landscape almost exclusively dedicated to the rearing and, possibly, trading of livestock.

Ceremonial Activity

Located within, and possibly associated with, an enclosure (Enclosure 3) was evidence of a small shrine E084 (*Figure 21*). The shape in plan resembles three sides of a rectangle, with the fourth side being defined by three postholes located 0.30m south-east of the main structure. In the absence of datable material recovered during the investigation comparisons have been made with evidence from Danebury Hill, Hampshire (Cunliffe 2003). There four structures were discovered, one of which, RS3, bears similarities with the Stowe Farm example E084, with the difference that at Danebury Hill an additional ditch, instead of the line of postholes, was offset from the main structure.

6.5.3 Phase 4C

Phase 4C can be seen as a re-definition of the landscape through the excavation of three ditches (Y122, Y163, Y165 and Y410) (*Figure 22*) replacing the funnel enclosure stock control system of Phase 4B which, by then, had become obsolete and completely infilled.

However, some of the rectilinear enclosures (namely Enclosures 2 and 3 of Phase 4b) may have continued to function as part of a Late Iron Age system associated with livestock management. Environmental evidence recovered from the nearby site at Rectory Farm indicated a continued domination of the pastoral landscape, with limited evidence of cultivation, thus continuing the trend identified for the previous periods (see above). Further division of the landscape during the Late Iron Age appears to be a common trait of the river plains, based on the evidence gained from the Welland Valley (French 2003), Lower Nene (Pryor 1980), Lower Ouse (Evans & Knight 1997) and the Upper Thames Valley (Lambrick 1992).

Stock Control during the Iron Age

Progressing towards the end of the Bronze Age into the Early Iron Age, the archaeological evidence at Stowe Farm suggests a move from organised field systems to a more open system able to accommodate a more mobile pastoral economy (Evans 2009). This trend is evidenced by the rather limited system of field division identified as Phase 4A at Stowe Farm (*Figure 20*), possibly reflecting a deteriorating climate in the earlier Iron Age (*Table 2*).

As with the Bronze Age, faunal evidence related to the Iron Age is absent from the archaeological record. Therefore, comparative data from sites in the immediate locality have been used to inform a narrative for the reconstruction of animal husbandry practises at Stowe Farm during the Iron Age.

Faunal evidence from sites located along the Welland Valley namely Maxey Quarry (Meadows 2009), and the western fen-edge, as at Baston Quarry, Langtoft (Webley 2004) and Glebe Land, Langtoft (Hutton 2008), seems to suggest that cattle was commonly the dominant species throughout the Iron Age, followed by sheep/goat (Swaysland 2004). What is also evident from the faunal record is the reduced disparity in number between cattle and sheep/goat during the Early Iron Age, when compared with evidence related to the Bronze Age (above), possibly indicating that sheep/goat were now being reared for meat (Swaysland 2004) (*Table 8*).

	Langtoft Areas B and C EIA	Langtoft Area A LBA	Billingborough Phase 2 LBA/EIA
Cattle	40.8	45.8	40
Sheep/goat	36.7	14.36	41

Table 8 Major species relative proportions, early first millennium BC sites. Comparative assemblages: Langtoft Area A (Higbee 1998), Billingborough (Ilies 1992), (After Swaysland 2004)

Interestingly, the faunal record associated with the Middle to Late Iron Age along the western fen-edge would indicate a continuation of the husbandry methods identified during the Early Iron Age, where cattle were the dominate species with sheep/goat a close second (*Table 9*). Analysis of the faunal remains indicates an absence of large-scale slaughter and butchery of juvenile cattle, showing that the animals were predominantly used for traction and, when their work life ended, as meat (Swaysland 2004). Sheep/goat on the other hand seem to have been raised for meat and wool.

Site	Cattle	Sheep/goat
Langtoft Phase 3	47	27
Billingborough Phase 3	46	36
Market Deeping	41	37
Cowbit	68	20
Cat's Water, Fengate	45	39

Table 9. Percentages of main species at Langtoft and other fen-edge Middle – Late Iron Age sites

Intensification of farming practices at Stowe Farm is seen in Phase 4B (*Figure 21*), with the division of the landscape by series of ditches forming rectangular and funnel shaped enclosures possibly associated with seasonal transhumance to move livestock to the

summer grazing pastures of the river flood plain. It is possible that these divisions would have also functioned as means of segregating cattle and sheep, thus moving away from the Bronze Age method of keeping the two species in the same space, to reduce the risk of transferring diseases, according to a practice commonly followed by modern farmers (Pryor 2002).

Phase 4C at Stowe Farm (*Figure 22*), with its reduced number of ditches, is suggestive of a return to the more open method of farming, possibly indicating reintegration of sheep and cattle. There is also the possibility that wetter environment conditions through periodic flooding (Table 2) played a part affecting seasonal land use and choice of animal farming strategy at a more localised level.

6.6 PHASE 5: THE ROMAN LANDSCAPE (AD 43 - 410)

Boundary Ditch 246

Phase 5 (*Figure 23*) saw the excavation of a causewayed ditch, 246, north-east/south-west aligned dated to the Roman period, which appeared to divide the landscape, but showed no conclusive evidence of being associated with stock control or any other form of land use. The ditch dissected the western corner of the excavation area and continued beyond its boundaries. A single narrow entrance some 2m wide was located near the western side of the site. During this period there is no evidence of domestic settlement. However, the lack of occupation evidence at Stowe Farm is not representative of the surrounding landscape. Extensive remains have been discovered at Tallington (Lincs.) (Simpson 1966) consisting of two enclosures, a larger one dating to the Late Iron Age and a smaller example to the Early Roman period. Further evidence of Late Iron Age / Early Roman occupation comes from the excavation at Plant's Farm (Cambs.) (Gurney, Neve and Pryor 1993), in the form of two farmsteads which were joined by a ditched road. These are just two examples of occupation in a landscape dotted with small farmsteads, as evidenced by those identified in the vicinity of West Deeping (Lincs.) (Simpson 1966),

and Maxey (Cambs.) (Pryor *et al.* 1985) with evidence of Iron Age or, more commonly, Early Roman farms (Simpson 1966).

What is not clear from the archaeological evidence at Stowe Farm is the longevity of the Early Roman boundary. The material culture associated with the aforementioned farms suggest that occupation was relatively short lived, the Tallington example having been abandoned by c 90 AD and Maxey by the 3rd century AD. The abandonment of the Tallington/West Deeping farms may correspond with the initial growth of the Roman Villa at Rectory Farm and change in land ownership (Gregson 1988), which may also be the reason why the landscape became less enclosed, as evidenced at Stowe Farm.

Roman Ceremonial Activity

E083, was a rectangular structure forming what could be interpreted as three sides of a shrine. This suggestion is based on the shape in plan which resembles, at least in part, the Romano-Celtic temple excavated at Maxey, Bardyke Field (Phase 8) (Cambs.) (Pryor *et al.* 1985). As E083 was not excavated, it is not possible to confirm this interpretation and explain the absence of the fourth side. It is possible that this was truncated by subsequent ploughing or machining operations during the removal of the soil overburden in advance of gravel extraction. It is tempting to suggest that the structure appears to be three-sided as its construction was never completed.

6.7 PHASE 6: EARLY MEDIEVAL (ANGLO-SAXON) TO MODERN (AD 410 - 1901)

At fairly regular intervals plough striations possibly dating to the early medieval period were identified under the later medieval furrows. It is possible that early striations are the result of increased agricultural production practices through the use of the mouldboard

plough (*Figure 24*) (Oosthuizen 2011). What is absent from the Stowe Farm site is any evidence that relates to division of the landscape through the use of field boundaries. This implies a change in landscape use, with a movement away from a mixed economy, with an emphasis on livestock, towards arable cultivation in open fields. The site remained in use as arable until it was excavated for gravel in the 20th century.

6.8 SYNTHESIS

Collectively, the evidence gathered from Stowe Farm has painted a picture of a working and dynamic landscape settled as early as the Early Neolithic period. After the Early Neolithic the landscape appears to have remained fallow, possibly due to changing environmental conditions associated with riverine activity and landscape clearing resulting in episodic flooding. The Late Neolithic-Early Bronze Age transition witnessed a re-occupation of the landscape for ritual and funerary activities. During the Middle to Late Bronze Age renewed interest in the landscape is evidenced by the laying out of an extensive field system that would cater for the rearing of livestock, as well as limited crop growth. Evidence for settlement for this period was limited to a few structures. A similar trend continued into, and throughout, the Iron Age, where the only possible change was indicated by increasing emphasis being placed on stock management within a well ordered landscape of enclosures extending over a larger portion of the landscape, and the reappearance of the ritual element in the form of a possible Romano-Celtic temple. During the Roman period the site witnessed much more reduced activity, possibly still associated with animal husbandry in open pasture, together with the continuation of the ritual element also in the form of a possible shrine. It is only from the post-Roman/Early Medieval period that the landscape began to be used exclusively as arable, possibly to feed a burgeoning population. Stowe Farm remained in use as arable until the 20th century, when the landscape was changed dramatically as the result of gravel extraction.

CHAPTER 7

CONCLUSIONS

7.1 PROJECT AIMS

The analysis of the evidence gathered during the excavations of the Stowe Farm site has offered the opportunity to gain further insight into the spatial and chronological development of the Lower Welland Valley landscape during the later prehistoric period.

Stowe Farm was one of the many projects completed in advance of gravel extraction and funded by the quarry operator. However, the investigation and analysis of Stowe Farm were not completed and disseminated, as only interim reports were produced, and the archive was not integrated and assessed to its full potential.

This MPhil project has collated the Stowe Farm archival material and completed the work that was started back in 1994. It has produced an informed site narrative for the subject site, and contributed to further enhance the characterisation of the rich archaeological landscape of the Lower Welland Valley.

7.2 THE WELAND VALLEY AND STOWE FARM

The significance of this landscape was originally highlighted in a survey conducted by the Royal Commission on the Historical Monuments of England (RCHME) during the late 1950s. Following the survey, the Lower Welland Valley was declared as being under threat from the process of gravel extraction. The results of the survey were published in *A Matter of Time* in 1960. Gravel extraction along the Lower Welland Valley was not a

new phenomenon, and many archaeological sites had already been destroyed, having only been investigated under rescue conditions by archaeologists who were constrained by time and finances. The publication of *A Matter of Time* was pivotal in giving impetus to the newly formed Welland Valley Research Committee (WVRC) into constructing a framework for the investigation of archaeological sites with the aim to preserve them by record, by determining the character, date, form, function and extent of preservation of excavated archaeological remains in advance of quarrying operations.

After the 1960 archaeological investigations along the Lower Welland Valley progressed with ever increasing levels of professionalism, incorporating new investigative techniques that enabled to provide a more complete and contextualised picture of the investigated sites. A major development was represented by the inclusion of environmental evidence to understand the conditions of the area at the time of occupation and its changes over time, as the result of human impact and/or natural causes. The Etton Landscape environmental survey, in combination with results from the Etton causewayed enclosure and the A15 bypass and, latterly Rectory Farm, have provided the most significant datasets regarding landscape development, reference to which has been crucial to the interpretation of Stowe Farm in this thesis.

7.3 THE STOWE FARM ARCHIVE

Interpretation of the Stowe Farm site has been based on the archival materials generated during the original investigations carried out from 1994 to 2000. It has also included comparative information from sites in the immediate locality, as well as in the wider landscape, the recourse to which has offered the opportunity to construct an informed narrative complemented by relevant environmental information. In particular, the use of comparative sites has enabled a chronological framework to be developed for Stowe Farm.

In fact, one of the major difficulties encountered during the investigation of Stowe Farm was represented by the paucity of dating evidence. In addition, the loss of the finds archive meant that, at least in some cases, the original generic date range offered for ceramic assemblages could not be reassessed.

Despite the issues encountered during this MPhil research project, a cohesive narrative of the site of Stowe Farm has been constructed.

7.4 RESULTS AND THEIR IMPLICATIONS

Environmental evidence suggests that the Neolithic landscape along the Lower Welland Valley was open, verging on treeless. It is into this open landscape that a series of post-built dwellings first appeared in the Early Neolithic period at Stowe Farm, their construction technique suggesting occupation of the landscape on a more permanent basis, rather than short term seasonal occupation. What was not readily apparent within the archaeological record was the evidence of land use, mainly due to the absence of deposits suitable for paleo-environmental assessment, as well as the paucity of artefactual evidence from excavated features. Therefore, the economic regime of these early settlers remains uncharacterised. It is during the reinterpretation of the excavated evidence in the course of this research that the author was able to identify conclusive evidence for settlement. This represents a major regional contribution to the study of the Lower Welland Valley with national implications, as evidence for Early Neolithic settlement in Britain is scanty and debatable. The Stowe Farm site has produced evidence for at least 21 rectangular post-built dwellings, of which the majority appeared to be clustered towards the south-eastern boundary of the excavation area, with occasional outer buildings predominantly scattered across the north-eastern part of the site. There is insufficient evidence to suggest that topographic factors influenced the location of the dwellings, as the site is fairly even and flat. Slight changes in orientation may have been the result of seasonal variation determined by climatic factors, or the attempt to differentiate between family groups, or slight shifts in settlement over time.

With the abandonment of the Early Neolithic dwellings, the Stowe Farm landscape became fallow, and it was not until the Late Neolithic / Early Bronze Age transition that it was brought back into use. Based on comparative evidence, this period was characterised by a shift in emphasis from the domestic, possibly associated with some form of agriculture, to the ritual and funerary, where the construction of monumental ring ditches, interpreted as representing possible barrows and/or hengiform enclosures, appeared. Unfortunately, the absence of artefactual evidence, including human remains, from the limited excavation, has hampered the possibility to characterise many of these monuments, the use and function of which remains speculative.

The Early Bronze Age bore witness to the earliest form of land division in the construction of a post-built fence line dated by means of stratified pottery, and a segmented ditch on a north-south alignment, bisecting the excavated area. The author of this research has suggested that these features may have represented the starting point for the division of a landscape which became more extensively demarcated as time progressed, thus marking a transition in land use.

During the Middle to Late Bronze Age a more extensive system of ditched field divisions on a north-east/south-west alignment with associated droveways was established, potentially as a means of livestock control, coupled with crop growth. Further evidence of a move towards agricultural practises was provided by the construction of two trackways, together with a small number of possible dwellings that incorporated activity areas, all adding to the view that the Stowe Farm landscape was emerging as a viable source of sustained agricultural output. The author has suggested that the evidence for the Middle to Late Bronze Age curvilinear field system identified at Stowe Farm is a local, but not site-specific, variation of the regional field system, as it bears similarities with the field system identified at Rectory Farm (Pryor 1996), but differs from the commonly recorded pattern of rectilinear ditches in the region.

Sometime in the course of the Iron Age, the Bronze Age field system was superseded by the excavation of boundary ditches that enclosed and managed a larger portion of the Stowe Farm landscape. The new field system was realigned on a north-west/south-east axis. This process continued throughout the Iron Age with ever more complex systems

being inscribed on the landscape, and taking the form of a series of rectilinear enclosures according to a pattern commonly encountered along the river valleys. This system appears to have operated at the same time as an unusual funnel enclosure for controlling livestock movement with evidence for crushes to differentiate livestock for different uses, but no droveways to allow movement. The funnel enclosure and associated crushes as livestock management devices appear to represent features unique to Stowe Farm, as no comparative material has been excavated to date. The presence of these features and the extension of the field system over a wider area could indicate that the site had become more specialised in livestock, possibly indicating increased demand or increased local specialisation to supply a wider catchment area. Although the main aim of this division appears to have been associated with livestock management, growth of crops may also have taken place on the site, based on environmental evidence acquired during the excavation of the nearby site at Rectory Farm (Hunn n.d), thus indicating a mixed economy. During this period occupation evidence across the site of Stowe Farm was limited to the presence of at least three dwellings, thus continuing the trend from the previous period which had already seen a decrease in evidence for occupation and an increase for evidence of land use, although settlement may have been located outside the excavation area.

At some point during the Late Iron Age new field boundaries were superimposed on the former rectilinear and funnel systems, which seemed to be less complex in organisation, but on a similar alignment. Whether elements of the old system may have still functioned, enabling livestock management to continue is uncertain. A possible shrine dating to this period was also identified, indicating the reappearance of the ritual component which had already been encountered during the Late Neolithic / Early Bronze Age.

During the Early Roman period activity took the form of a single ditch which, in itself, is not evidence of extensive reorganisation of the landscape but may indicate that the previous system was still functioning to a certain extent. Also dating to the Roman period was a rectangular building which was not excavated. It was interpreted as a possible Romano-Celtic shrine based on comparisons with the Bardyke Field at Maxey, Cambridgeshire (Pryor *et al.* 1985). Interestingly, it was located to the east of the possible Iron Age shrine, potentially showing ritual continuity.

The site at Stowe Farm appears to have been abandoned during the Roman period to be reused as arable in the course of the medieval and post-medieval periods.

To conclude, the analysis of the evidence from Stowe Farm has offered the opportunity to identify Neolithic settlement, Bronze Age ritual, funerary and agricultural activities and possible specialisation in livestock management during the Iron Age. Economic factors and environmental conditions may have been partly responsible for some of the changes identified at Stowe Farm, with evidence for increased seasonal flooding which would have made the area more suitable for a pastoral economy providing lush grassland, as indicated by environmental evidence (French 2003). Whether evidence for the appearance of regular field systems necessarily reflects periods of increased pressure being placed on the landscape is debatable. However, it is difficult to ignore the fact that in the course of the later prehistoric period productivity increased, and this would have had economic and social implications.

7.5 FINAL REFLECTIONS AND FUTURE RESEARCH AGENDA

Present models of Neolithic settlement in Britain tend to emphasise mobility and seasonal occupation based on the proficient work carried out by Alasdair Whittle, in contrast with the evidence from the Continent and Ireland (Cooney 2003). However, there is also evidence from the East Midlands region, as at Lismore Fields, Buxton, Derbyshire (Jones & Bogaard 2017), which strongly suggests storage of cereals more consistent with permanent occupation. The time of the transition to more intensive farming is still debated. However, from the second millennium BC large areas of the landscape became more apparently managed through the imposition of field systems, which would imply the need for more permanent settlement. However, work along the river valleys has indicated that the economy was predominately pastoral, and that settlement was not necessarily more permanent, in comparison with the Neolithic period, as evidenced by settlement at Stowe Farm, although the first millennium BC was undoubtedly a period of economic and social change.

What this research has highlighted is that the archaeological record from Stowe Farm shows patterns of local and regional variations, as well as patterns of similarities with sites distributed across Britain and Ireland, the interaction of which contributes to the distinct character of the Lower Welland Valley.

Further investigation into the synergy between the local / regional and national trends identified at Stowe Farm within the environs of the Lower Welland Valley should be considered for the future research agenda.

Given the importance of the Stowe Farm, it is also recommended that, for future research, additional data collection from the currently unavailable material archive is carried out to enhance the interpretation of features which have only been generically dated, thus allowing more refined chronologies and phasing.

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Appendix 1: Details of Excavated Features

Early Neolithic Structures

Structure E035

Posthole 2460, was excavated and found to contain a single fill, 2459, a very dark grey bro

Structure A020

Posthole 1235, was excavated and found to contain a single fill 1236, a dark grey silty clay. Overall measurements were 0.53m x 0.10m (deep). Posthole 1237 was found to contain a single fill 1238, a dark greyish-brown sandy silt. The feature measured c. 0.30m in diameter. Posthole 1255 contained a single fill 1254, a dark greyish-brown sandy silt. The feature measured 0.30m in diameter. Although no direct evidence was available via the excavation record, it is possible to suggest, based on locality, that Pit 1222 was associated with structure A020. When excavated Pit 1222 was found to contain a single fill 1223, a mid-dark orange brown sandy silt. Overall measurements were 2.10m x 0.90m+ x 0.37m (deep). Internal Pit/large posthole 1573 (unexcavated) was found to contain dark yellowish brown clay silt and measured in plan 0.90m x 0.60m.

Structure E031

Posthole 1395 was excavated and found to contain a single fill 1394, a dark yellowish brown compacted silt. Overall measurements of the feature were 0.35 x 0.35m x 0.07m (deep).

Structure E022

Posthole/pit 1318 contained a single fill 1319, a dark grey-brown sandy silt, possibly cut by posthole 1320. Overall measurements were 1.10m x 0.50m x 0.32m (deep). Posthole 1320 contained a single fill 1321, a mid-dark grey brown sandy silt. Overall measurements were 0.60m x 0.60m x 0.32m (deep).

Structure A050

A single internal posthole/pit 1361 contained a single fill 1362, a dark greyish-brown sandy silt. Overall measurements were 1.10m x 0.60m x 0.08m (deep). Two postholes 1359 and 1381 that formed part of the north-eastern structural wall were also investigated. Posthole 1359 contained a single fill 1360, a yellowish brown clay silt. Overall measurements were 1.00m x 0.10m (deep). Posthole 1381 contained a dark yellowish brown clay silt deposit 1382. Overall measurements were 0.90m x 0.06m (deep). A large pit 1293 was found to contain two fills: basal fill 1295, was a dark grey clay silt, above this was fill 1294, a dark greyish brown clay silt. Overall measurements of the feature

were 1.50m x 0.70m (deep). Fill 1295 contained organic material towards the base, which had survived due to the high water table.

Structure E029 and E030

Posthole 1399 was excavated and found to contain a dark yellowish grey brown compacted silt deposit 1398. Overall measurements of the feature were 0.50m x 0.40m x 0.07m (deep). Two postholes associated with the south-eastern structural wall: posthole 1329 contained a dark yellow brown compacted silt deposit 1328. Overall measurements of the feature were 0.40m x 0.35m x 0.08m (deep). Posthole 1371 contained a mid-dark grey brown sandy silt deposit 1372. Overall measurements of the feature were 1.0m x 0.43m x 0.20m (deep). Both gullies/beam slots associated with the north-western structural wall were investigated: gully 1373 contained a single fill 1372, a mid-dark grey brown sandy silt. Overall measurements of the feature were 5.5m x 0.26m x 0.10m (deep). Gully 1397 also contained a single fill 1394, a dark yellow-brown compacted silt. Overall measurements were 6m x 0.40m x 0.08m (deep). A single posthole 1395, external to the structure was identified (according to the excavation record) as being potentially contemporary, based on soil colour and composition. Posthole 1395 contained a single fill 1394, a dark yellow brown compacted silt. Overall measurements were 0.35m x 0.35m x 0.07m (deep).

Structure E100

Posthole 1925 was excavated and was found to contain a single fill 1926, a mid-reddish brown sandy silt. Overall measurements of the feature were 1m x 0.40m x 0.20m (deep).

Structure E080

Posthole 2465 was excavated and was found to contain a single fill 2466, a red orange-brown sandy silt. Overall measurements of the feature were 0.50m x 0.10m. Pit 2451 was excavated and found to contain a single fill 2452, a mid-dark grey brown sandy clay silt. Overall measurements of the feature were 1.5m x 1.50m x 0.27m (deep). Pit 2463 also excavated, contained a single fill 2464, a reddish brown sandy silt. Overall measurements of the feature were 0.45 x 0.12m (deep).

Structure E207

Pit 2011 was found to contain a single fill 2010, a light reddish brown sandy silt. Overall measurements of the feature were 2.25m x 1m x 0.20m (deep).

Structure E160

Posthole 2233 was found to contain a single fill 2234, a mid-yellowish brown sandy silt. Overall measurements for the feature were 0.60m x 0.54m x 0.13m (deep). Posthole 2235 contained two fills, with the basal fill 2236 consisting of a mid-yellowish brown sandy silt and above this fill 2237, a mid-yellowish greyish brown sandy silt. Overall measurements of the feature were 1.22m x 0.74m x 0.18m (deep).

Structure E156

Three post holes relating to the structural walls were investigated: posthole 2201 contained a single fill 2202, a mid-yellowish brown sandy silt. Overall measurements of the feature were 0.53m x 0.39m x 0.14m (deep). Posthole 2205 contained a single fill 2206, a mid-yellowish brown sandy silt. Overall measurements of the feature were 0.44m x 0.40m x 0.21m (deep). Posthole 2013 contained a single fill 2014, a mid-yellowish brown sandy silt. Overall measurements of the feature were 0.40m x 0.38m x 0.25m (deep). Postholes 2207 and 2010 were also investigated based on their proximity to structure E156. Posthole 2207 was found to contain a single fill 2208, a mid-yellowish brown sandy silt. Overall measurements of the feature were 0.32m x 0.30m x 0.07m (deep). Posthole 2010 was found on excavation to contain two fills with the basal fill 2211 consisting of a mid-yellowish brown sandy silt and above this was fill 2212, a mid-yellowish greyish brown sandy. Overall measurements of the feature were 0.33m x 0.29m x 0.23m (deep). Two internal postholes 2203 and 2213, possibly dividing the internal space were also investigated. Posthole 2203 contained a single fill 2204, a mid-yellowish brown sandy silt. Overall measurements of the feature were 0.32m x 0.32m x 0.20m (deep). Posthole 2213 contained a single fill 2214, a mid-yellowish brown sandy silt.

Structure E157

Posthole 2217 was investigated and found to contain a single fill 2218, a mid-yellowish brown sandy silt. Overall measurements of the feature were 0.46m x 0.36m x 0.11m (deep).

Structure G12

Posthole 345 contained a single fill 401, a yellow brown sandy. Overall measurements were 0.35m x 0.11m (deep). Posthole 346 contained two fills with the basal fill 403 consisting of a yellowish brown clay silt, above this was fill 402, a yellowish brown clay silt. Overall measurements of the feature were 0.76 x 0.25m (deep). Posthole 348 contained a single fill 405, a yellow brown sandy. Overall measurements were 0.25 x 0.19m (deep). Posthole 349 contained a single fill 407, a yellow brown sandy. Three postholes 343, 344 and 347, associated with the north-western structural wall were also investigated. Posthole 343 contained two deposits 398 and 399, however a lack of detail on the site context sheet does offer little opportunity to elaborate on the differences between to the two. However, it has been suggested in the interim report (Kemp 1999), that 343 was largely filled by a yellowish brown sandy silt. Posthole 344 contained a single fill 400, a yellowish brown sandy silt. Overall measurements were 0.34m x 0.10m (deep). Posthole 347 contained a single fill 404, a yellowish brown sandy silt.

Structure A271

Posthole 3809 was excavated and found to contain a single fill 3808 a dark greyish brown silt. Overall measurements for the feature were 0.20 x 0.40m (deep).

Structure E160

Description

Two features were excavated: posthole 2233 was found to contain a single fill 2234, a mid-yellowish brown sandy silt. Overall measurements for the feature were 0.60m x 0.54m x 0.13m (deep). Posthole 2235 contained two fills, with the basal fill 2236 consisting of a mid-yellowish brown sandy silt and above this fill 2237, a mid-yellowish greyish brown sandy silt. Overall measurements of the feature were 1.22m x 0.74m x 0.18m (deep).

Dating

None of the excavated features produced any datable material.

Structure E035

Description

Only one posthole, 2460, was excavated and found to contain a single fill, 2459, a very dark grey brown sandy silt. The feature was 0.64m x 0.16m (deep). A substantial amount of burnt stone was also recovered, which was interpreted as originating from either domestic or industrial processes. Alternatively, the stone could have been used for post-packing. One large pit, 3092, also located internally, was interpreted as being potentially contemporary with the structure. Two pits, 3104 and 3101 (truncated by H053), located to the north-west of the structure, and a series of pits, 1463, 1464, 1466, 1467, 1468 and 1469 located to south-southeast of E035 (change) could all be evidence of some form of domestic activity.

Dating

No datable material was recovered from posthole 2460.

Structure E031

Description

A single posthole 1395 was excavated and found to contain a single fill 1394, a dark yellowish brown compacted silt. Overall measurements of the feature were 0.35 x 0.35m x 0.07m (deep). The posthole was truncated by furrow 1206. The north-western wall of the structure is partially absent, which could be the result of being truncated by the furrow 1206. It is possible that evidence for the southern corner has been removed with the construction of features 2919 and 2918.

Dating

No datable material was recovered the excavated feature.

Bronze Age

Possible Bronze Age Fence Line G22

Description of Features

(631, 632, 633, 634, 635, 636, 637, 638, 639, 665, 715, 664, 667, 666, 703, 704, 705, 706).

Posthole 631 was found to contain two fills with the basal fill 632, comprising of a mid-brown silty sand and above this was fill 633 a greyish brown sandy silt. Overall measurements were 0.50m x 0.10m (deep). Posthole 634 was found to contain two fills with the basal fill 635 comprising of a mid-brown silty sand and above this was fill 636 a greyish brown sandy silt. Overall measurements were 0.77m x 0.21m (deep). Posthole 637 was found to contain two fills with the basal fill 638, comprising of a mid-brown silty sand and above this was fill 639 a greyish brown sandy silt. Overall measurements were 0.75m x 0.11m (deep). Posthole 665 was found to contain two fills with the basal fill 715 comprising of a mid-brown silty sand and above this was fill 664 an olive brown sandy silt. Overall measurements were 0.75m x 0.11m (deep). Posthole 667 contained a single fill 666, comprising of a brown sandy silt. Overall measurements were 0.45m x 0.24m (deep). Posthole 703 contained a single fill 704, comprising of a mid-brown silty sand. Overall measurements were 0.50m x 0.09m (deep). Posthole 705 contained a single fill 706, comprising of a greyish-brown sandy silt. Overall measurements were 0.75m x 0.21m (deep).

Dating

Fragments of Early Bronze Age pottery was recovered from Postholes 634 and 637.

G24

In total, six of the thirteen postholes were excavated as part of the investigation of G24. Posthole 602 (cuts 603 fill of 604) was found to contain two fills, with the basal fill 601, a light brown sandy silt and above this was fill 600 a light greyish-brown very fine silt. Overall measurements for the feature were 0.96 x 0.18m (deep). Posthole 604 contained a single fill 603 (cut by 602), a light brown sandy silt. No measurements for diameter could be taken because it had be cut by 602. However, a depth measurement of 0.16m could be taken. Posthole 606 contained a single fill 605, a light brown sandy silt. Overall measurements for the feature were 0.78 x 0.11m (deep). Posthole 610 was found to contain a single fill 609, a light brown silty sand. Overall measurements for the feature were 0.28 x 0.10m (deep). Posthole 612 was found to contain a single fill 611, a light

brown silty sand. Overall measurements for the feature were 0.30 x 0.10m (deep). Posthole 614 was found to contain a single fill 613, a light brown silty sand. Overall measurements for the feature were 0.37 x 0.10m (deep).

G23

Ten postholes were associated with G23, three were excavated. Posthole 618 was found to contain two fills, with the basal fill 619 a mid-brown silty sand, above this was fill 620, a greyish brown silty sand. Overall measurements for the feature were 0.32 x 0.25m (deep). Posthole 621 contained a single fill 622 a greyish brown sandy silt. Overall measurements for the feature were 0.19 x 0.16m (deep). Posthole 623 contained two fills, with the basal fill 624 a mid-brown silty sand, above this was fill 625 a greyish brown sandy silt. Overall measurements for the feature were 0.40 x 0.24m (deep).

Area D (Possible Bronze Age Structure/Activity Area)

Description of Features

(134, 135, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160 and 161)

All postholes investigated were found to contain a single fill, with varying colour and composition. Those postholes found to have the same colour and composition have been grouped together to avoid unnecessary repetition. Postholes 147, 155, 159 and 161 had overall width measurements ranging between 0.16m and 0.28m and depth measurements of 0.06 and 0.12m. All postholes contained a dark yellowish brown sandy silt. Postholes 149 and 153 had overall width measurements ranging between 0.25m and 0.27m and depth measurements of 0.08 and 0.10m. All postholes contained a yellowish brown sandy silt. Posthole 135 measured 0.49m x 0.30m (deep) and contained a dark greyish brown clay silt. Posthole 145 measured 0.24m x 0.09m and contained a yellowish brown sandy silt. Posthole 151 measured 0.28m x 0.15 (deep) and contained a brown silt. Posthole 157 measured 0.31m x 0.10m (deep) and contained a yellowish brown clay silt.

Dating

Fragments of Bronze Age pottery were recovered from centrally located posthole 135.

Possible Fenced Enclosure Y245

Description of Features

(3711, 3712, 3713, 3714, 3716, 3715, 3718, 3717, 3720, 3719, 3722, 3721, 3726, 3725, 3728, 3727, 3730, 3729, 3732, 3731, 3734, 3733, 3736, 3735, 3738, 3737, 3740, 3739, 3848 (cuts 3849), 2847, 3758, 3759, 3798, 3799.

All postholes investigated were found to contain a single fill, with varying colour and composition. Those postholes found to have the same colour and composition have been

grouped together to avoid unnecessary repetition. Posthole 3711 had overall measurements of 0.60m x 0.40m x 0.10m (deep), whereas the overall measurements for Posthole 3758 was 0.75m x 0.55m x 0.12m (deep). Both contained a mid-yellowish brown sandy silt. Postholes 3713, 3716, 3726, and 3728 had overall diameter measurements ranging between 0.25m and 0.80, width measurements between 0.22m and 0.50m and depth measurements between 0.08m and 0.23m. All postholes contained a mid-dark brown sandy silt. Posthole 3848 measured 0.60m x 0.40m x 0.20m (deep) and contained a dark grey silty sand. Postholes 3730, 3732, 3734, 3736, 3738 and 3740 had overall diameter measurements ranging between 0.43m and 0.60m, width measurements between 0.44m and 0.66m and depth measurement between 0.07m and 0.29m. All postholes contained a dark brown sandy silt. Posthole 3798 measured 0.60m x 0.40m x 0.37m (deep) and contained a mid-greyish brown sandy silt. Postholes 3718, 3720 and 3722 had overall diameters ranging between 0.41m and 0.45m, width measurements between 0.20 and 0.44m and depth measurements between 0.13m and 0.45m. All postholes contained a grey brown sandy silt. The fill of 3722 was truncated by ditch 3724.

Dating

No dating material was recovered from any of the features excavated.

Enclosure 1: Mid to Late Bronze Age

Four segments were excavated along Y019, segment 1323 was found to contain a single fill 1322, a single orange brown sandy silt. Overall measurements were 0.57m x 0.08m (deep). In profile, the ditch had gradual sloping sides and a concave base. Segment 1353 contained a single fill 1352, an orange brown clayey silt. Overall measurements were 0.24m x 0.12m (deep). In profile the ditch had steeply sloping sides and a v-shaped base. Segment 1351 was only partially excavated, revealing a single fill 1350, a brown clayey silt fill. Overall measurements were 0.32m x 0.30m (excavated depth). In profile the ditch had steeply sloping sides. Due to the excavation of the feature not being completed, the base cannot be described. Segment 1347 contained a single fill 1346, a pale brown clayey silt, which had been truncated by 1206 a medieval furrow. Overall measurements were 0.90m x 0.45m (deep). The profile showed a return to that identified in segment 1375 (see above), gradually sloping sides and a concave base. At a distance of c.4m South-southwest of segment 1347, the ditch butts up against Y018. The relationship between the two ditches was not investigated during the excavated thus removing the possibility of phasing the two features. Ditch Y018 formed the South-western boundary of the enclosure, with a length of 30m. Segment 1375 contained a single fill, a dark grey-brown sandy silty clay fill. Overall measurements were 0.27m x 0.10m (deep). In profile the ditch had near vertical sides and a flat base. Segment 1289 contained a single fill 1288, a brownish yellow sandy. Overall measurements were 0.20m x 0.10m (deep). In profile the ditch had moderately sloping sides with a concave base. At c. 11.5m from Segment 1289 the ditch terminates leaving a gap of 1m before the

commencement of H019, the South-Eastern boundary marker of the enclosure. It is possible that the gap between the two ditches formed a small gateway into and out of the enclosure. Ditch H019 (not excavated) had a visible length of c. 17m and was on average 0.40m wide. There was no evidence for the ditch continuing beyond the medieval furrow 1208. Two possible reasons, firstly the ditch terminates under the furrow or secondly, it was removed during the machining process of the evaluation. Despite the issues with truncated features the evidence does suggest the presence of a gap before the boundary ditch continues as Y048, which ran for a distance of c. 33m. The single segment excavated 1367 contained a single fill, 1368, a dark yellowish-brown clay silt (cut by 1365). Overall measurements were 0.56m x 0.13m (deep). In profile the ditch had gently sloping sides and a concave base.

Ditch Y166

(2259, 2258, 2257, 2256, 2255, 2254, 2251, 2250 and 2323, 2322)

A total of five segments were excavated across the ditch. The width of the ditch varied between 0.94m and 0.60m and its depth from 0.11 to 0.25m. The ditch sides ranged between gradual, identified in segments 2259 (terminal), 2250 and 2323, whereas segments 2257 and 2255 revealed a feature with steep sides. The base was consistently flat. All the segments excavated revealed evidence of a single fill comprising of a mid-yellowish brown sandy silty clay (2258, 2256, 2254, 2250 and 2322).

Ditch Y164

(2317, 2316, 2301, 2300, 2281, 2280 and 2274, 2275)

A total of four segments were excavated across the ditch. The width of the ditch varied between 0.75m and 0.95m and its depth from 0.06m to 0.16m and had a visible length of c. 39m, terminates c.10m from the north-eastern extent of the investigation and truncated by **Y163** at its south-western end. All the segments excavated revealed evidence of a single fill comprising of a mid-yellowish brown sandy silty clay (2316, 2300, 2280 and 2275).

Ditch Y017

(1378 - terminus), 1377, 1214, 1215 and 663, 662)

In total three segments were excavated along the length of the ditch. The width of the ditch varied between 0.40m and 0.62m and the depth from 0.05m to 0.08m, with a visual length of the north-eastern segment being c.67m. All the segments excavated revealed evidence of a single fill, which varied in colour and composition. Fill 1377 was a mid-orange brown silty clay. Fill 1215 was an orange-brown silt, whereas fill 662 was a grey sandy silt. The ditch sides were gradual with a concave base. The continuation of Y017 was located 1m to the south-east, from where it continued on the same alignment for a distance of c. 61m.

Dating

No datable material was recovered.

Iron Age

Structure Associated with Enclosure G17

Posthole 532 contained a single fill 533, a mid-orange brown clayey silt. Overall measurements for the feature were 0.30 x 0.14m (deep). Posthole 534 contained a single fill 535, a mid-orange brown clayey silt. Overall measurements for the feature were 0.34 x 0.08m (deep).

Pit 544 contained two fills, with the basal fill 543 a light yellow brown sandy clay silt, above this was fill 542 a mid-yellow brown sandy clayey silt. Overall measurements for the feature were 1.50 x 0.29m (deep).

Iron Age structure and Activity Area A

(7, 8, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 26, 27, 37, 28)

The postholes varied in diameter between 0.25m and 0.47m and in depth from 0.08m to 0.16m. Fills 7, 19, 23, 25 and 27 comprised of a dark brown silty clay, whereas fills 13, 15, 21 and 37 comprised of a brown silty clay. All the fills contained a small percentage of charcoal with the exception of fills 25 and 27 where the percentage was higher.

The small circular associated pit 4 was found to contain a single fill 3, a greyish brown clayey silt. Overall measurements for the feature were 0.70m x 0.70m x 0.13m (deep). No datable artefacts were obtained from the various features excavated. However, animal bone and cereal grains were recovered from postholes 8 and 24 as well as pit 4.

Iron Age structure and Activity Area B

(51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 91 and 92)

The postholes were all circular in plan and varied in diameter between 0.25m and 0.45m and in depth from 0.08m to 0.20m. Fills 51, 53, 55, 61, 65 and 67 comprised a yellow brown clay silt, whereas fills 57, 59, 63 and 91 comprised a dark yellow brown clay silt.

Pit 90 was found to contain a single fill 89, a dark greyish yellow clay silt. No datable artefacts were obtained from the various features excavated. However, cereal grains were recovered from pit **90**.

Multiphase boundary ditch system

Description of Features

Ditch Y217 (2123, 2124, 2119, 2120, 2113, 2116, 2106, 2108, 2102, 2103, 2098, 2099, 2095, 2096, 1801, 1802, 2086, 2087, 2083, 2084, 1771, 1770, G3 10, and 29, G4, 165, 164, G14, 330, 332, 331 and G19 phase 1: 541, 548, 540, 523, 524, 525 and 573, 572, 571. Phase 2: 526, 527, 528, 547, 546, 545 and 570, 569, 568 and 567.

The width of the boundary ditch Y217 varied between 1m and 2.3m and its depth from 0.20m to 0.40m for the first 100m. The ditch sides had a moderate slope with a concave base. However, further south the profile changes with the ditch base becoming flat as opposed to concave. The first seven segments provided evidence for three fills; the basal fill consisted of a light greyish white sandy silt, 2124, 2120, 2016, 2108, 2103 and 2099, above this was a yellowish brown sandy silt, 2125, 2121, 2117, 2109, 2104 and 2100. The latest fill consisted of a mid-yellowish brown sandy silt, 2126, 2122, 2118, 2105 and 2101, with the exception of fill 2110, which was dark grey clay, with a component of burnt material that included burnt flint and charcoal, which had washed into the ditch.

Ditch Y217 continued in a southerly direction for a distance of 110m, at which point it terminates. There was then a 2m gap that could be considered an entranceway, before the boundary was continued by Y418. One further segment was excavated along the boundary ditch labelled Y217 within the area excavated 1997 (Kemp 1997). The excavation revealed two phases of ditches; 29, was found to contain fill 30 a yellowish brown sandy clay. Overall measurement was c. 1.4m x 0.22m (deep). Fill 30 was re-cut by ditch 10, which was c. 0.98m x 0.19m (deep) and contained two fill with the primary fill 12, a yellowish brown silty sandy clay, and above this was fill 11, an olive brown silty clay with charcoal 11, which was cut by Y416. Overall measurements were 0.98m x 0.19m (deep). As previously stated the boundary ditch continues in a southerly direction after a 2m gap, now identified as Y418 which ran for a further c. 15.5m. A single segment 165, which incorporated the northern terminal of Y418 was excavated revealing a single ditch, containing a single fill 164, an olive brown silty clay. Although no datable evidence was recovered 164 did produce through the flotation process evidence of cereal grains (Rackham in Kemp 1997). Also evidence that Y418 cut Y414 was identified (see above). Located 1m to the east and parallel to Y217 and Y418 was a 9m meter length of ditch Y421, through which one segment 177 was excavated. It was found to contain a single fill 176, a yellowish brown sandy silty clay Overall measurements were 0.50m x 0.17m (deep). Boundary ditch Y423, continued south after a gap of ten meters for a further c.60m before terminating. It is possible gap between Y418 and Y423 formed an entrance way between two enclosed areas of the landscape. One segment 330 was excavated through the northern terminal end of the ditch Y423, on the original alignment. On excavation 330 was found to contain two fills with the basal fill 332, a yellowish brown sandy silty clay and above this was fill 331, an olive brown clayey sandy silt. Environmental samples were taken from both deposits, each demonstrating the presence

of charcoal, ostracod and various species of mollusc (Rackham in Kemp 1999). Profile of the ditch reverted back to that identified towards the northern extent: moderately sloping sides and a concave base. Overall measurements were 1.1m x 0.34m min and 0.53m maximum at the section. At a distance of 2m the boundary ditch continues as Y422 for a visible distance of c. 76m, at which point it moves beyond the excavation area. Four segments were excavated revealing two phases of use.

Segment 541 was found to contain two deposits, with basal fill comprised a light olive brown sandy silt, with occasional stone/gravel inclusions (548). Above this was a light olive brown silty sand with frequent stones inclusions (540). In profile segment 541 showed the ditch to slope gradually on the eastern side and steeply on the western with a concave base. Overall measurements were 1.2m x 0.45m (deep). Fill 540 was cut by 549 which on excavation was found to contain two fills, with the basal fill 539, a light olive brown silty sand, above this was fill 538, a light olive brown silty sand. In profile the ditch had a moderate slope and concave base. Overall measurements were 0.9m x 0.45m (deep). On excavation segment 547 was found to contain two deposits, with the basal fill 546, a yellowish brown sandy silt, above this was fill 545, a yellowish brown silty sand. Overall measurements were 0.85m x 0.33m (deep). The deposits showed no evidence of being cut. The profile of the ditch showed it have a moderate slope changing in character near the base where the inclination of the slope increased, suggestive of a beam slot. On partial excavation segment 573 was found to contain two deposits, with the basal fill 572 a yellowish brown clayey sandy silt, above this was fill 572 a yellowish brown sandy silt, which was cut by 570. No datable material was recovered from either of the two deposits identified. Segment 570 was found on excavation to contain three deposits, with the basal fill 569, a yellowish brown silty sand, above this was fill 568 an olive grey fine silt. The latest fill 567 was an olive yellow sandy silt. Overall measurements were 1m x 0.35m (deep). The profile of the ditch showed it have a moderate slope on the eastern side and a slightly steeper inclination on the western side of the ditch. Towards the base the inclination of the slope increases becoming almost vertical. The reason for the change in profile may be similar to that proposed for ditch cut 547 (see above). No datable material was recovered from either of the fills identified. On partial excavation segment 523 was found to contain two fills, with the basal fill 524, a light brown sandy silt, above this was fill 525 a dark brown sandy silt clay, which was cut by 526. Segment 526 was found on excavation to contain two fills with the basal fill 527, a yellowish brown sandy silty clay, above this was fill 528, a dark brown silty sandy clay. Overall measurements were 0.91m x 0.20m (deep). The profile of the ditch showed it to have moderate to steep sloping sides with a flat base. Located 6m to the east and running parallel to ditch Y423, was ditch Y424, which ran for c.27m before terminating, possibly forming the eastern marker of a driveway. Two segments were excavated through ditch Y424: 327 located at the northern terminal and 329, located at the southern terminal. Segment 327 was found to contain a single fill 326, a yellowish brown clayey silt. Overall measurements were 0.33m x 0.09m (deep). Segment 329 was also found to contain a

single fill 328, a yellowish brown clayey silt. Overall measurements were 0.45m x 0.13m (deep). Located 10m to the south on the same alignment was a continuation of the boundary in the form of ditch Y426, which ran for a further 23m before once again terminating. The gap created between the two ditches can potentially be seen as form of entranceway through the boundary into and out of a drove way. One segment 355 was excavated at the northern terminal end and found to contain a single fill 354, a yellowish brown clayey silt, which had been cut by ditch Y427, evidenced through the excavation of a single segment 323, which was found to contain a single fill 323, a yellowish brown silty sand. Located c.4m to the east of Y426 was another ditch Y428 (unexcavated), aligned north-south, running for a distance of 30m, with a slight curve at the southern end before terminating. Ditch Y429 (unexcavated) again aligned north-south, running for c.35m before terminating. This segment appears to continue defining the possible drove way. Located 3m to the east of G19 was a small linear ditch, running in a southerly direction for a distance of c. 14m before moving beyond the excavation area. One segment 521 that included the northern terminal was excavated. The ditch was found to contain a single fill 522, a dark brown silty sandy clay. Overall measurements were 0.40m x 0.12m (deep). In profile the ditch had moderately sloping sides with a flat base. No datable material was recovered. Located c. 5m to the east of cut 521 were two small linear ditches aligned northeast/southwest. The most northerly of the two ditches had been truncated by a medieval furrow. One segment 514, which included the southern terminal was excavated. The ditch was found to contain a single fill 515, a mid-brown silty sandy clay. Overall measurements were 0.82m x 0.28m (deep). In profile the ditch slope on the western side was moderate and at the half-way point the inclination steepened. On the eastern side of the ditch the slope was moderate with a slight steeping towards the base moving down to a flat base. Located c. 3m to the south of segment 514 was a further short length of ditch which ran for a distance of c. 5m. One segment 516, which included the terminal was excavated. The ditch was found to contain a single fill 517, a mid-brown silty sandy clay. Overall measurements were 0.45m x 0.19m (deep). In profile the ditch had a steep slope on the south-eastern side leading to a flat base. The north-western slope was moderate initially, however at the half-way point the inclination increases becoming almost vertical. It is possible that the gap between the stretches of ditch offered a route into and out of a possible drove way which in turn has the potential to be part of the same drove way identified further north. Approximately 2m south of the southern terminal of cut 516 was the location of a large posthole 518, which on excavation was found to contain two deposits with the basal fill 519, a light mid-brown silty sand, above this was fill 520, a mid-brown silty sandy clay. No post-pipe was evident in the section, suggesting that the post was removed together with any possible packing material, it was then left to infill naturally. Alternatively, the posthole was infilled rapidly. The position of the posthole does allow for the suggestion that it functioned together with the two stretches of ditch 516 and 514 as a means of stock control (Kemp 2000).

Dating

Fill 2124 contained a flint waste flake and core fragment possibly dated to the Bronze Age. Fill 2120 also contained a waste flake of possible Bronze Age date. A single sherd of Bronze Age pottery was recovered from fill 540. A late Iron Age/Roman loom weight was recovered from fill 11.

Earlier Iron Age Ditch system incorporating ditches Y411 and Y413

Ditch Y413 (708 - Terminus, 707)

The width of the ditch was 1m and the depth 0.20m, with a visual length of c. 3m. The segment revealed evidence a single fill 707, a mid-pale faintly orange greyish/brown silty sandy.

Dating

No datable material was recovered.

Boundary Ditch Y411

(649, 648, 647, 646, 645 and 644)

In total two segments were excavated along the length of the ditch. The width of the ditch Y411 varied between 0.60m and 0.89m and in depth from 0.22m to 0.26m, with a visual length of c. 23m. All the segments excavated revealed evidence of a two fills, which varied in colour and composition. Basal fill 648 was a mid-brown silty sand, above this was fill 647, a brown silty sand. Basal fill 645, was a mid-brown sandy silt, above this was fill 644, a mid-brown sandy silt.

Dating

No datable material was recovered.

Iron Age Rectilinear Enclosed Landscape

Ditch Y403

(668 - terminus, 674, 673, 672, 671, 670, 669, 657, 658)

The width of the ditch varied between 2.7m and 1.1m and in depth from 0.20m to 0.67m, with a visible length of c.167m. Segment 668, revealed the profile of the ditch to be initially gradual moving towards steep with a concave base. The ditch profile identified in Segment 657 (which truncates pit fill 658), was moderate with a flat base. Segment 668 contained six fills, with the basal fill 674 comprising a mid-pale brown sand, above this was fill 673, a mid-brownish yellow sandy silt. This in turn was sealed by fill 672 (same

as 671), a pale yellow/brown silty sand. Above this was fill 670, a mid-pale greyish yellow silt sand. The uppermost fill 669, a mid-yellowish brown very sandy silt. On excavation segment 657 was found to contain a single fill 658, a light greyish brown sandy silt.

Dating

Fill 669 produced a struck flint of unknown date and use.

Ditch Y054

(1149, 1147, 2279, 2278, 2283, 2282, 2269, 2268, 1897, 1898, 1899, 1900, 1901 and 1902),

The width of the ditch varied between 0.80m and 1.40m and its depth from 0.17m to 0.35m, with a visible length of c. 310m. The ditch sides ranged from Shallow identified in segment 1901 (north-western terminus) to moderate identified in segments 1149, 1897 and 1899 to steep in segments 2279, 2283 and 2269. The base was consistently flat. All segments excavated revealed evidence of a single fill, with some variation in colour, but the composition remained constant. Fill 1147 was a mid-dark grey brown clay silt. Fills 2278, 2282 and 2268 was a mid-yellow brown clay silt. Fills 1998, 1900 and 1902 was a light greyish brown clay silt.

Enclosure ditch Y128

(1149, 1447 and 2446, 2445), G15 (311, 313, 301, 302), same as G16 (530, 531 and 510, 509),

The width of the ditch varied between 1.26m and 1m and its depth from 0.33m to 0.22m, with a visible length of c. 166m, moving 17m beyond Y054 the north-eastern extent of the enclosure before the terminus is removed by furrow 1212. The ditch sides ranged from moderate identified in segments 1149 and 2446 to steep in segments 311 and 301. The base was consistently concave. All the segments excavated revealed evidence of a single fill, which varied in colour as well as composition, fill 1447 was a dark brown sandy silt, fill 2445 was a dark yellowish grey-brown silt and 313 (cut by 312) and 302 were yellowish brown silty clays. No datable evidence was recovered. Unlike enclosure ditches Y079 and Y125 (see below), Y128 and G15 do not appear to have any interruptions forming possible gateways. Two possible reasons: they never existed or the large number of medieval furrows that truncate the ditch have removed the evidence. To the south-West of 301, G15 makes a right-angled turn to form the south-western enclosure ditch and in the process becoming G16 (different excavation season).

Two segments were excavated: 530, 531 and 510, 509. Segment 510 was extended to include the T-junction between enclosure ditches G16 and G17 with a view to identifying the chronological relationship.

The width of the ditch varied between 0.65m and 0.92m and its depth 0.09 and 0.16m with a visible length of c. 56m. The ditch sides were moderate and the base flat. All the

segments excavated revealed evidence of a single fill comprising of a yellowish brown sandy silty clay (531 and 509). The excavation of segment 510 did not reveal the chronological relationship with only one phase evident. This is counter to the evidence identified in plan which clearly demonstrated the presence of ditch 677 (see below) on virtually the same alignment.

At the junction between G16 and G17, the enclosure ditch turns northeast as Y079 (1138, 1137 and 1181 (north-eastern terminal), 1182, forming not only the south-eastern boundary, but also the north-western boundary, along with Y125 of the enclosure located to the south-east.

The width of the ditch varied between 0.90m and 0.80 and its depth from 0.24m to 0.19m, with a visible length of 42m. The ditch sides ranged from steep identified in segment 1138, to gradual evident in segment 1182. All the segments excavated revealed evidence of a single fill, which varied in colour as well as composition, fill 1137 was a light brown sandy clay, fill 1182 was an orange brown silty clay. The base was consistently concave.

Located 8m to the south-East of terminal end of Y079 was the continuation of the enclosure ditch in the form of Y125. It is possible that the gap created between the two sections of enclosure ditch formed a gateway between two enclosed areas.

Dating

One un-datable fragment of pottery was recovered from fill 509.

Enclosure ditch Y125

(1188 (south-western terminal), 1189, 1139, 1140, 2442, 2441 and 1701, 1700, 1699)

In total four segments were excavated along the length of the ditch. The width of the ditch varied between 0.95m and 0.85m and its depth from 0.32 to 0.18, with a visible length of 93m, moving 9m beyond Y054 the north-eastern extent of the enclosure. The ditch sides were consistently gradual with a concave base. All segments excavated revealed evidence of a single fill, with the exception of segment 1701 which contained two. The majority of fills varied in colour as well as composition, fills 1189 and 1140 was an orange brown sandy silty clay, fill 2443, was a mid-yellowish brown sandy silt, fill 2441 was a yellowish brown silt. Segment 1701 contained two fills with the basal fill 1700, a yellow grey sandy silt, above this was fill 1699, a grey clay silt.

Dating

A fragment of Roman pottery was recovered from fill 2076. Fragments of bone were recovered from 1182, which were considered at the time of excavation to be intrusive.

Boundary Ditch Y412 (G16)

(712, 711, 710, 709, 693, 689,690, 691,692, 713, 714 and Posthole 697, 696,695,694).

In total two segments were excavated along the length of the ditch. Excavation of Segment 712 revealed the width of the ditch to be 1.25m with a depth 0.32m. The ditch sides had a moderate slope with a concave base. The segment was found to contain three fills, with basal fill 711, a mid-pale brown silty sand. Above this was fill 710, a pale yellowish brown sandy fill. The latest fill 709, was a pale orange-brown silty sand.

Excavated segment 693 was located at the junction of a complex of features in order to ascertain their chronological relationships. Segment 693 was a quarter quadrant and as a result only a measurement for the depth can be given, which in this case is 0.80m. The sides were moderate to the point when posthole 697 provided evidence for a more vertical side. The section appeared to suggest that ditch 693 was excavated too deeply on the north-western side; followed by rapidly infilling, enabling posthole 697 to be completed. The evidence would appear to suggest ditch 963 and posthole 697 were contemporary (Hatton, 2001). Collectively 963 and 697 contained nine fills which varied in colour and composition. Fills 692,691, 690 and 689 consisted of a greyish brown silty sand. Fill 696 was an orange brown sand. Fill 694 was a dark brown silty sand. Whereas fills 713 and 714 comprised of orange-brown silty sand.

Dating

No datable evidence was recovered.

Ditch Y109

(1390, 1391)

The width of the ditch was 1m and its depth 0.28m with a visible length of c. 55m. The ditch sides were steep with a concave base. Fill 1391, a mid-dark orange brown sandy silt.

Dating

Fill 1391 contained fragments of animal bone, however, no datable material was recovered.

Ditch Y110

(1412, 1413, 1408, 1409, 1405, 1404, 1425, 1424)

The width of the ditch varied between 0.90m and 1.5m and its depth from 0.10m to 0.30m with a visible length of c. 51m. The ditch sides ranged between gradual, identified in segment 1412 to steep identified in segments 1408, 1405 and 1425. The base was consistently slightly concave. All the segments excavated revealed evidence of a single

fill, which varied in colour and composition. Fill 1413 and 1409 was a dark-yellowish brown clay silt. Fill 1404 was a light grey clay silt and fill 1424 was a dark grey-brown silt.

Dating

No datable was recovered.

Ditch Y012

(1226, 1227, 1228, 1384, 1383, 1291, 1290 and 1327, 1326),

Four segments were excavated across the ditch. The width of the ditch varied between 1.25 and 1.80m and its depth from 0.28m to 0.38m, with a visible length of c. 127m. At the north-eastern extent of ditch Y012 it appears to tie into Y054, and as with enclosure 1 forms the north-eastern boundary. The ditch sides ranged from moderate, identified in segments 1226 and 1291 to steep in segments 1384 and 1327. The base was consistently concave. All segments excavated revealed evidence of a single fill, with the exception of segment 1226 which contained two. The majority of fills varied in colour as well as composition, fill 1383 comprised of brownish yellow sandy silt with some clay. Fill 1290 was a dark yellow-brown silt. Segment 1226 contained two fills with the basal fill 1228, a blackish-brown sandy silt with gravel, above this fill 1227, an orange brown sandy silty clay. In the base on 1226 a single posthole was discovered 1229, which was found to contain a single fill 1230 comprising mainly of gravel.

Ditch Y188

(2132, 2131, 2134, 2133 and 2130, 2129)

The width of the ditch varied between 1.30m and 1.15m and its depth from 0.20 to 0.24m with a visible length of c. 37m. The ditch sides ranged between gradual, identified in segments 2132 and 2134, whereas segment 2130 revealed the feature to have moderate sides. The base was consistently concave. All the segments excavated revealed evidence of a single fill that remain consistent in colour and composition. Fills 2131, 2133 and 2129 was a mid-yellowish brown sandy silt.

Late Iron Age Field system

Ditch Y122

(2486, 2485)

Segment 2486 was excavated, revealing the ditch to have gradual sloping sides with a concave base. The width of the ditch was 1.7m and depth 0.13m, with a visible length of c.206m. The segment contained a single fill 2485, a grey brown silt.

Dating

No datable material was recovered.

Ditch Y165

(2321, 2320, 2319, 2318, 2315, 2314, 2307, 2306, 2293, 2292, 2271, 2270, 2267, 2266 and 2247, 2246)

In total eight segments were excavated along the length of the ditch. The width of the ditch varied between 0.95m and 1.8m and its depth from 0.10m to 0.48m, with a visual length of 58m. The ditch sides had a gradual slope with a flat base. All the segments excavated revealed evidence of a single fill, which varied in colour as well as composition, fills 2320 and 2318 was a mid-orange brown silty sand, fills 2314, 2306, 2292, 2270, 2266 and 2246 was a mid-yellow brown clay silty.

Dating

Pottery recovered from fill 2266 was identified as Roman.

Ditch 163

(2313, 2312, 2319, 2318, 2295, 2294, 2275, 2274, 2265, 2264, 2261, 2260, 2263, 2262, G1, 45, 46, 316, 315 and 312 (south-western terminus of ditch), 314).

In total six segments were excavated along the length of the ditch. Width of the ditch varied between 0.75m and 1.50m and its depth from 0.10m to 0.54m, with a visual length of c. 70m. The profile ranged between gradual, identified in segments 2313, 2318, 2295, 2275, 2265, 2261, 2263 and 45, to steep identified in segment 316 to moderate found in segment 312, terminus of the ditch. The base was consistently concave. All the segments excavated revealed evidence of a single fill, which varied in colour and composition. Fills 2312, 2318, 2294, 2274, 2264, 2260 and 314 was a mid-yellowish brown clay silt. Fills 2262, 46 and 315 was a dark-yellowish brown sandy silt clay. The majority of the segments identified the ditch has having a concave base, with the exception of segments 2295 and 2275, where the base was found to be flat.

Dating

Pottery dated to the Iron Age was recovered from in fills 46 and 314.

Appendix 2: List of Datable Material from Excavated Features

Pottery

Context – Cut Number	Fill Number	Feature Type	Pottery	Date
1146	1147	Pit	Yes	Bronze Age?
1152	1151	Pit	Yes	Unknown
1261	1262 1259 1258	Pit	Yes	Bronze Age?
1764	1681	Pit	Yes	Unknown
2194	2198	Pit	Yes	Iron Age?
3667	3665	Pit	Yes	Unknown
3669	3668	Pit	Yes	Unknown
3764	3765	Pit	Yes	Prehistoric?
3805	3804	Pit	Yes	Roman
3763	3762	Pit	Yes	Prehistoric
3789	3771	Pit	Yes	Prehistoric
3790	3755 3768	Pit	Yes	Prehistoric
3854	3853 3853 3856	Pit	Yes	Prehistoric
3898	3889	Pit	Yes	Prehistoric
3906	3908 3899	Pit	Yes	Prehistoric
3919	3915	Pit	Yes	Prehistoric

Flint

Context – Cut Number	Fill Number	Feature Type	Flint	Date
2137	2136	Posthole (disturbed)	Yes	Bronze Age
3898	3889	Pit	Yes	Prehistoric

Radiocarbon Dated Samples of Organic Material

Context – Cut Number	Fill Number	Feature Type	Trench	Date
0245	0269	Curvilinear ditch	18	1935 to 1420 cal BC (Beta-77929, 3380 +/- 110BP)
0273	0272	Pit	18	1404 – 930 cal BC (Beta-77931, 2970 +/- 80BP)