

# ARCHAEOLOGICAL ASSESSMENT REPORT

---

## **Brandon Bypass**

A REPORT ON THE ARCHAEOLOGICAL ASSESSMENT, 2005  
VERSION 2 (UPDATED MARCH 2005)

John Duffy  
Field Team  
Suffolk C.C. Archaeological Service

© January 2005

Lucy Robinson, County Director of Environment and Transport  
Endeavour House, Russel Road, Ipswich, IP1 2BX

---

SCCAS Report No. 2005/29



# Contents

List of Figures  
List of Contributors  
Acknowledgements  
Summary  
SMR information

- 1 Introduction
- 2 Methodology
- 3 Aerial Photographic Survey
- 4 Historical Survey Summary
- 5 Summary of recent Previous Surveys
- 6 SMR search and Walkover Results
- 7 Discussion
- 8 Conclusion and Recommendations

References

Appendix 1: Brief  
Appendix 2: Aerial Photographic Assessment Report  
Appendix 3: Historical Survey Report  
Appendix 4: SMR summary report for Weeting with Broomhill parish  
Appendix 5: SMR summary report for Santon Downham parish  
Appendix 6: SMR summary report for Brandon parish

## List of Figures

1. Survey location
2. Features identified on digital photographs
3. Current land use
4. Weeting with Broomhill SMR and walkover survey results
5. Santon Downham SMR and walkover survey results
6. 1880 County map for Santon Downham
7. Cadogan Estate Map 1791
8. Brandon SMR and walkover survey results
9. Lingheath aerial photograph

### In Appendices

10. Area to be surveyed
11. Features recorded on aerial photographs, 1946
12. Features recorded on aerial photographs, 1959
13. Map 1 – Ordnance Survey 1:25000 scale Explorer 229
14. Study and RCHME survey areas
15. Principle components of Lingheath Flint Mine Complex
16. 1809 Brandon Enclosure Map showing the Poor's Allotment for Fuel, Lingheath Farm
17. Map 2 – 1928, Edition, sheet VII.13 (Key to Details)
18. Map 3 – Detail:OS Map 7.13, 1884 (surveyed 1881 & 1883)
19. Map 4 – Detail:OS Map 7.13, 1884 (surveyed 1881 & 1883)
20. Map 5 – Detail:OS Map 7.13, 1884 (surveyed 1881 & 1883)
21. Map 6 - 1928, Edition, sheet XIII.1 (Key to Details)
22. Map 7 – Detail:OS Map 13.1, 1882 (surveyed 1881)
23. Map 8 – Detail:OS Map 13.1, 1882 (surveyed 1881)
24. Map 9 – 1905, second edition, sheet XII.4 (Key to details)
25. Map 10 - Detail:OS Map 12.4, 1882 (surveyed 1881)

26. Map 11 – Detail: Ordnance Survey Surveyor’s drawing of 1817, sheet 198
27. Taken from Brandon Enclosure Map
28. 1838 Tithe Plan
29. Geological sections through a ‘typical’ Lingheath Flint Mine: LH – Skertchly 1879; RH – Clarke 1935
30. SMR plot

## **List of Tables**

Table 1	Summary of results of SMR search (excluding ‘misc’ sites) and new observations.
Table 2	Summary of results of SMR search (excluding ‘misc’ sites) and new observations.
Table 3	Summary of results of SMR search (excluding ‘misc’ sites) and new observations.

## **List of Contributors**

All Suffolk C.C. Archaeological Service unless otherwise stated.

John Duffy    Assistant Project Officer  
Rog Palmer    Aerial Photography Specialist (Air Photo Services)  
Leigh Driver    Historical Researcher (Freelance)

## **Acknowledgements**

This project was funded by Environment and Transport Department, Suffolk County Council and the archaeological work was specified and monitored by Jude Plouviez (Suffolk County Council Archaeological Service, Conservation Team).

The SMR search of Suffolk and digital mapping was carried out by John Duffy, the Norfolk SMR search was carried out by Edwin Rose, Norfolk Landscape Archaeology. The walkover survey was conducted by John Duffy and James Rolfe, both of Suffolk County Council Archaeological Service, Field Team. The historical survey was compiled by Leigh Driver. The aerial photographic survey was undertaken by Rog Palmer.

The project was directed by David Gill, and managed by John Newman, who also provided advice during the production of the report.

## Summary

A preliminary desk-top assessment of the corridor for a proposed Brandon by-pass was undertaken; this was designed to provide a basis from which strategies for further archaeological work could be formed. This examined aerial photographs, documentary sources, Suffolk County Council SMR and surveys of the flint mining complexes south and east of Brandon. It also included a rapid walkover survey. The most important sites identified are the nationally important Lingheath post-medieval flint mines, but flint mining activity can be seen to be continuing beyond Lingheath and more work is necessary to establish the date, nature and extent of this. Two Scheduled Ancient Monuments, prehistoric Barrows lie within the survey area and more work would be necessary to establish whether these are isolated features or have other barrows or occupation features associated with them which are not immediately visible. The presence of a possible gallows site on the edge of Brandon and a warren bank on the Santon Downham/Brandon parish boundary provide evidence of activities peripheral to the medieval town which requires further investigation. A Roman site, now under trees, which has previously produced numerous finds also requires examination. Most of this further work needs to be in the field, primarily either geophysical survey or trial trenching.

## SMR information

Date of fieldwork:	January 2005
Grid Reference:	TL 798 860
Funding body:	Environment and Transport Department, Suffolk County Council
Oasis reference	suffolkc1-6390



# 1 Introduction

- 1.1 An assessment was undertaken to establish the archaeological potential along the route of a proposed bypass to the east and south of Brandon, connecting to the A1065 north and south of the town (Figure 1). The brief for this assessment was prepared by Jude Plouviez (Suffolk County Council Archaeological Service, Conservation Team) and is included in this report (Appendix 1). This was designed as a preliminary evaluation of the archaeological potential in order to inform future strategies to deal with threats to the archaeology. The survey area covered an area of approximately 500ha within the counties of Norfolk and Suffolk. Three parishes were covered within this survey, Weeting with Broomhill (Norfolk), Santon Downham (Suffolk), and Brandon (Suffolk).
- 1.2 This assessment has included several forms of research including an aerial photographic search, an historical survey, a Sites and Monuments record search, and a walkover survey. The main focus of interest is the group of Post-medieval flint mines centred on the Lingheath area (BRD 066 and 095). This area of flint mining is a nationally important site and any evidence of prehistoric origins to this mining would also be of interest.
- 1.3 Other sites of importance are two Scheduled Ancient Monuments (SAM 31804, BRD 123 and 21436, STN 005) both of which are prehistoric barrows. One of the two barrows (BRD 123) is scheduled as a 'Bell Barrow' and is one of the largest of its type known in Britain.

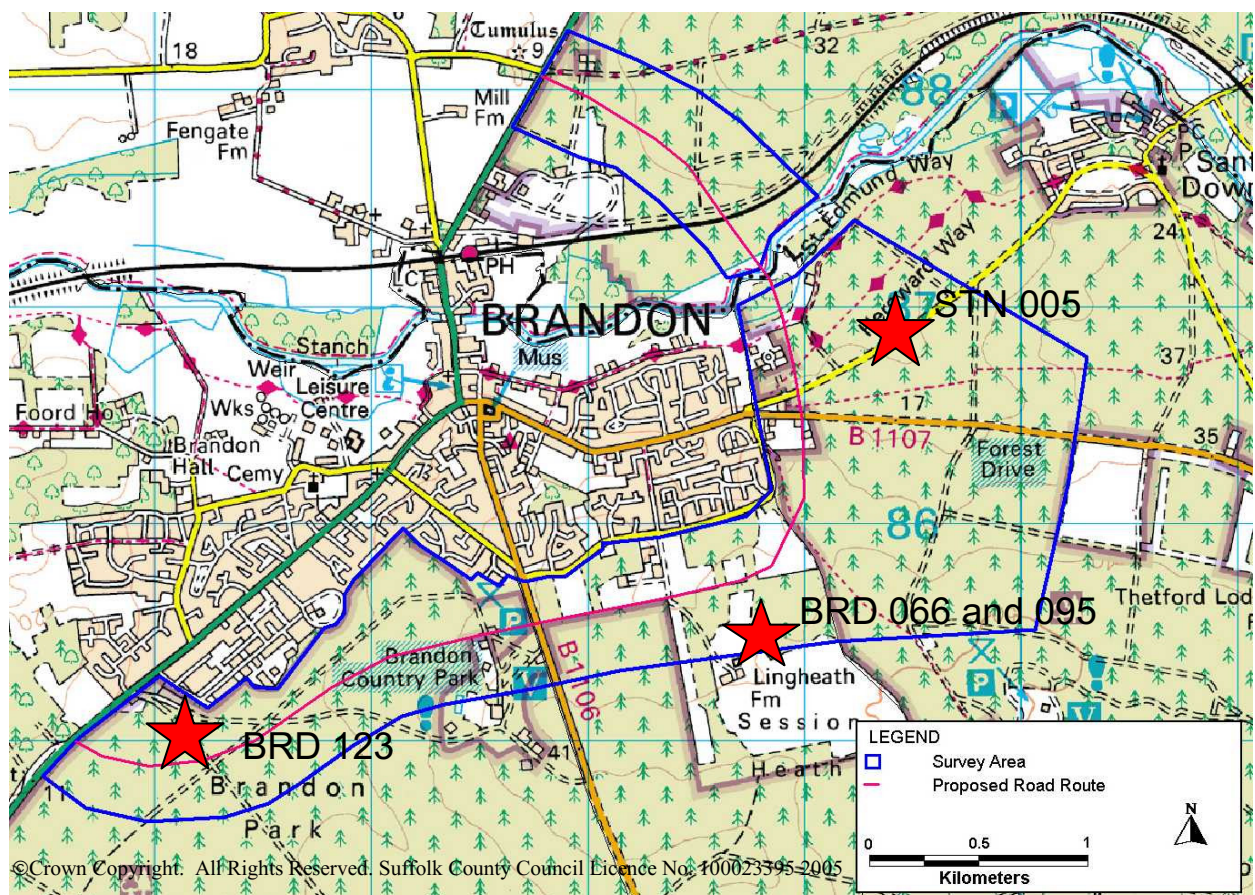


Figure 1. Survey location

## 2 Methodology

- 2.1 The aerial photographic search was undertaken by Rog Palmer (Air Photo Services) using cover searches obtained from Cambridge University Collection of Aerial Photographs (CUCAP) and the National Monuments Record: Air Photographs (NMRAP), Swindon. The full report is included as Appendix 2.
- 2.2 The historical survey was undertaken by Leigh Driver and the full report is included as Appendix 3. The survey looked at all historic maps and documents in the County Record Office, especially from the 19th century. The de Lotbiniere Collection was also consulted. The historic maps were then placed onto the modern OS map using MapInfo.
- 2.3 The Sites and Monuments Record (SMR) search was conducted using the Suffolk SMR database for Brandon and Santon Downham parishes. The results were then plotted onto the OS map using MapInfo. The scanned maps from the pre-digital Suffolk SMR was also consulted. A search of the Norfolk SMR was undertaken by Edwin Rose (Norfolk Landscape Archaeology), for the parish of Weeting with Broomhill and again the results were plotted onto the OS map using MapInfo. The results of the SMR searches are summarised in Appendices 4, 5 and 6.
- 2.4 The walkover survey was conducted by a two man team over three days. Earthworks were identified, where access permitted, and their location recorded using a basic handheld GPS (Global Positioning System) unit. Previously identified sites in the SMR were also visited as part of the survey and a general land use record was made. Where identified, new sites (Suffolk only) were given new SMR numbers and these were marked on the plans (but are not included in the SMR summaries at Appendices 5 and 6). The new sites codes are BRD 175 to BRD 182 and STN 073 to STN 079.
- 2.5 All maps, finds spots, pictures and aerial photographs are digitally recorded and accessible if required.

## 3 Aerial photographic survey by Rog Palmer (Air Photo Services)

This is an extract from the full Aerial Photographic Survey which can be found at Appendix 2.

### 3.1 Soils

The Soil Survey of England and Wales (SSEW 1983) shows the area to have pockets of chalky drift (soil association 521: METHWOLD) within a larger expanse of glaciofluvial drift (soil associations 551g: NEWPORT 4 and 554b: WORLINGTON). The Soil Survey Legend noted that 554b sometimes shows 'widespread small-scale polygonal soil patterns' in crops which may react similarly to sub-surface archaeological features.

### 3.2 Possible archaeological features

No definite archaeological features were identified on the photographs examined but three groups of possible features have been included on the map (Figure 2).

- 3.2.1 **TL793858.** A small area of parallel ridges. These were suspect as archaeological and may be of natural origin. Similar 'stripes' were noted in the wider area, some of which are now under recently-built houses.
- 3.2.2 **Area centred TL798852.** A large number of small pits survived in earthwork form between 1946 and 1959 (see photograph in Figure 2 and Figures 11 and 12 in Appendix 2) but had been ploughed by 1971. Each pit had an associated bank (?of spoil) that usually had been formed in a horseshoe shape, as if access was by means of the unbanked part. In places their distributions seems to be unplanned while in other parts they appear to form lines. Both include examples where banks are superimposed, suggesting that the working of the pits was spread over at least a small time span.



Brandon Bypass,  
Suffolk:

Figure Features  
identified on aerial  
photographs

- Area examined
- Hollows
- Ridges
- Quarried 1971

The photograph shows  
possible flint mines (1959).  
See Figures 2 and 3.

Original photo interpretation  
and mapping at 1:2500 level  
based on photographs at  
CUCAP and NMRC.  
Air Photo Services Cambridge  
November 2004  
Drawing: 0430Bran.dwg

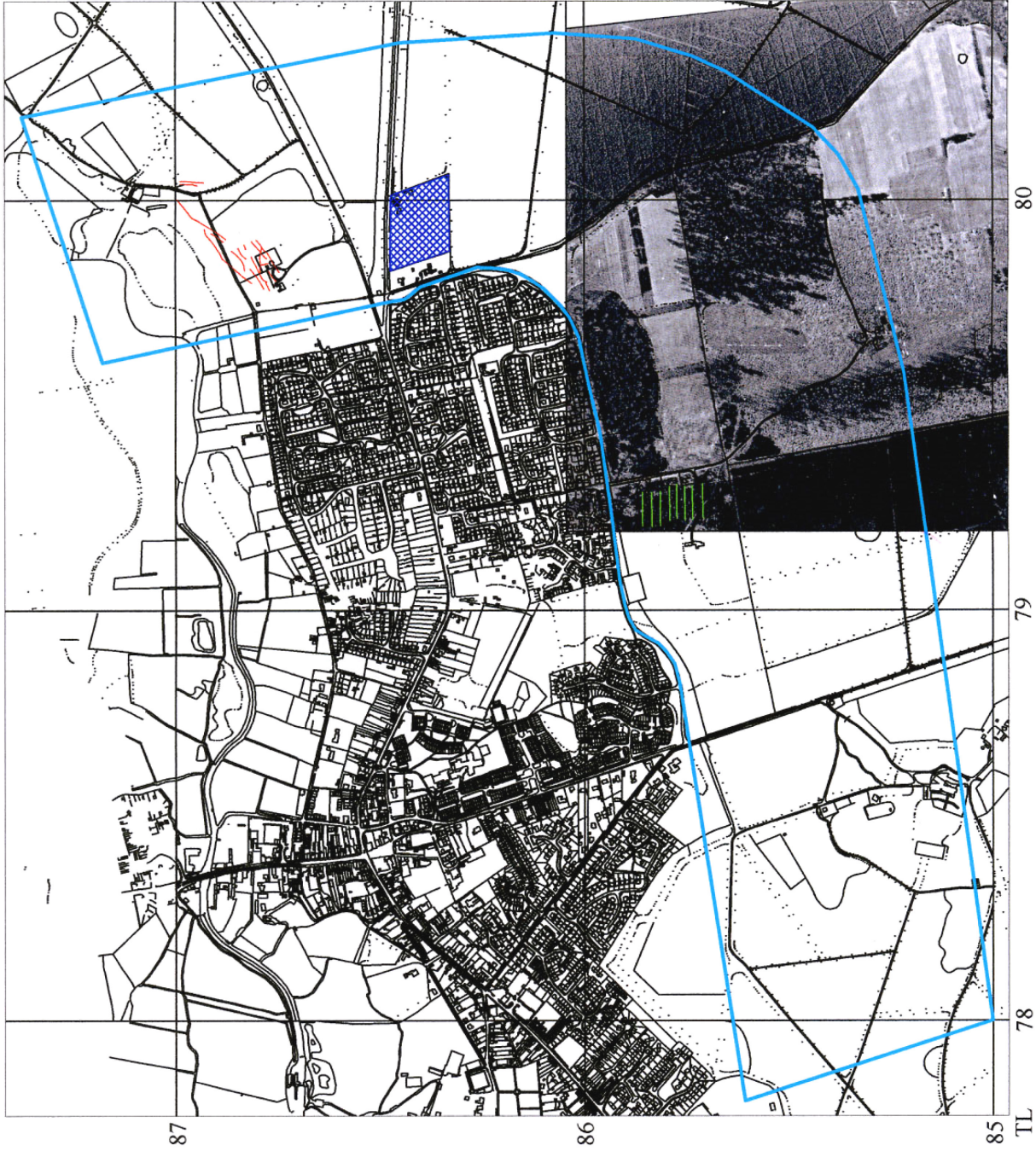


Figure 2 Features identified on Aerial Photographs

Their origin and purpose is unknown as is the reason for their survival in upstanding form in the 1940s in an area that otherwise seems to be intensively farmed or wooded. Judging by the small and regular amount of spoil the pits seem unlikely to be very deep but, if they are contenders for flint mines, they may be seeking material close to the surface. But if that was the case it would seem more efficient to clear a larger area rather than dig a series of small pits. An alternative explanation may link them with forestry, but this seems even less likely.

Figures 11 and 12 (in Appendix 2) are both transformed photographs that show the area in June 1946 and January 1959. At first glance it appears that there are more pits in 1959 but this seems likely to be an effect of the low winter sunlight and its ability to enhance the appearance of slight earthwork features. Both photographs show what look like plough-levelled examples of pits at TL794857, just south-west of the small wood and north of the main group of pits. Other levelled pits may remain unrecorded on the photographs examined.

- 3.2.4 **TL798868.** A spread of hollowed features were photographed in January 1947. These may indicate former paths but may be less structured examples of the ridges noted at TL793858.

### **3.3 Non-archaeological features**

- 3.3.1 **TL798870.** A small number of loosely-scattered trees were noted in this area. These had been removed by the time the area was photographed on military obliques in 1953, which showed the tree positions as small pits that might be thought to be of archaeological significance if these photographs are examined in isolation.

- 3.3.2 **TL799864.** One small field was a quarry in 1971.

### **3.4 Land use**

- 3.4.1 The area has a high percentage of woodland with small arable fields. This mixture may have discouraged any airborne archaeologist from close examination of the ground and past features may be under-represented as a result.

## **4 Historical survey summary** by Leigh Driver

This is an extract from the full Historical Survey Report which can be found at Appendix 3.

- 4.1 A report by the Royal Commission on the Historical Monuments of England (RCHME), published in 1996, argues that while Sydney Skertchly's assertion that Brandon was an "outlier of the stone age" (1879, 69) might be described as "fanciful", the notion that flint could have been taken from the area in Neolithic times should not be discounted; "since it shares a common geology with Grime's Graves and any Neolithic workings could have been subsumed by those of later date" (Pearson 1996, 3). Support for a likely Neolithic presence can be found in the Suffolk County Council Sites and Monuments record for Brandon Parish, which notes several surface scatters of worked Neolithic flints. Just outside the corridor of land under consideration in this report, locations with names such as White Hill Plantation and The Mount suggest the presence of possible prehistoric monuments while numerous, though as yet largely undated, earthworks e.g. BRD 106 Mount Plantation SF15369 Round Barrow - located in Mount Plantation to the west of Lingheath Farm (TL79298498), attest to a long history of human activity in the area.

- 4.2 Evidence of early activity may have been ploughed out of existence in the more heavily cultivated areas of the parish, while on the poorer ground, once barren heathland suitable only for the rearing of sheep and rabbits, devastating sand blows such as that recorded in 1668, which choked the River Little Ouse and buried houses at nearby Santon Downham (SRO HD 1321/2), could conceivably have covered all traces of both pre-historic and post-medieval flint extraction; as the partly covered Neolithic mining site at Buckenham Toft, Norfolk (an outlier of Grime's Graves), clearly demonstrates (Barber *et al* 1999, 27-28).
- 4.3 In addition the steady expansion of the busy market town of Brandon, not to mention centuries of quarrying activity within the parish for chalk and gravel, as well as the extensive early 19th century forest plantations of the Brandon Park Estate, followed a century later by those of the Forestry Commission (since 1922), may all have played a part in obscuring whatever sites might once have existed on the flint-rich chalk belt upon which the town was built (Barber *et al.* 1999, 31, 33; Forrest 1983, 6).
- 4.4 For this reason, the partially preserved complex of post-medieval flint mines to be found at Lingheath Farm, Brandon, (a section of which falls within the designated area of study) is of immense interest and historical importance, being a rare relic of a now vanished industry. Close by, scattered clusters of pits have been discovered, possibly also flint-mines, some of which may pre-date the Lingheath complex, and which lie on both sides of the parish boundary with neighbouring Santon Downham; although only a full survey will be able to determine the age and extent of such workings (trees and undergrowth permitting).
- 4.5 Considered together with its proximity to Grime's Graves, the largest known complex of prehistoric flint mines in Britain, less than 3 miles (5km) to the north (Forrest 1983, 2), and with the possibility of Neolithic activity at Icklingham 12 miles (19km) to the south (Forrest, 1983, 97), which, like Brandon, was the site of 19<sup>th</sup>-century flint extraction for the production of gunflints, it is clear that a wide area, but particularly that to the north of Lingheath Farm and the stretch of woodland between Lingheath and the River Little Ouse at Santon Downham, will require further, extensive examination. For, although a great deal is known about Brandon's long dominance of the industry through the production of its world-famous 'Brandon Black' gunflints, surprisingly little information is available regarding the origins and development of the various workings from which the raw material was extracted.

## **5 Summary of Previous Recent Surveys**

There have been several extensive surveys of the flint mining areas carried out in the last ten years. (An earlier report by Skertchly in 1879 is mentioned in the documentary study). The current survey area falls into only a small part of these surveys.

### **5.1 Flint Mines: Rapid Survey**

- 5.1.1 A rapid survey of the flint mining areas within Brandon, Santon Downham and Wangford was carried out by Colin Pendleton (SCC SMR Officer) in 1996. This work in conjunction with earlier surveys (RCHM and Breckland Archaeological Survey) has identified 4 main types of mine earthwork, horseshoe, large circular, small circular and gully. The survey area was examined in forest blocks, the mine type present recorded and the preservation and apparent density graded.

- 5.1.2 The initial results of this survey showed up to ten separate areas of mining in the Brandon and Santon Downham areas, five of which, STN 32/39, STN 30, STN 38/18, BRD 095 (Lingheath) and BRD 095 west of Lingheath lie within the current survey area. Although some areas were levelled most of these were observed to survive as visible earthworks to some degree, eg. part of BRD 095 Lingheath, STN 018/38, STN 030 and STN 032. The exact boundaries of these areas are not certain although it is presumed that these relate to property or land boundaries.
- 5.1.3 The survey showed that both a mixture of mine types and single type sites were present. It was not determined whether the variation in mine type was chronological but suggests that the horseshoe type is the latest, up to the 1930's. It also raises the possibility that the variation in mine type may reflect different minerals being mined alongside, or instead of flint. These are all important issues that require further investigation.

## **5.2 RCHME Survey of Lingheath Farm**

- 5.2.1 A survey of Lingheath Farm was carried out by Trevor Pearson and Alastair Oswald for RCHME in 1996. This recorded a brief history of the Brandon post-medieval flint mining industry and the history of the site. Much of the area was heathland or forest where mines survived as earthworks until WWII since when c.22ha of pits have been levelled as land was brought into cultivation. Earthworks still survive in the unploughed areas but no remains could be seen in the agricultural areas, although they are recorded prior to levelling on mid 20th century aerial photographs. Anecdotal evidence records accessible shafts being entered by various groups and backfilled shafts have been known to subside under the ploughed fields.
- 5.2.2 An area west of the farm is no longer visible as it has been obscured by soil dumps and building debris but examination of the surviving visible areas shows variations in the distribution and appearance of the pits. To the north-west there are circular or semi-circular, tightly packed but randomly placed hollows c.5m across and 0.5m deep and to the south and east there are horseshoe shaped spoil heaps accompanying more widely spaced pits, laid out in east-west and north-south rows with the spoil heaps surviving to a height of 0.5-1m.
- 5.2.3 This survey records detailed description of the pits by area as well as other earthworks comprising boundary banks, linear hollows and routeways. It establishes that the boundaries of the Lingheath Trust allotments ( 1791 shown on Figure 7) are marked by banks which are post-dated by the mines. No pre enclosure mines were identified although they could exist if contained entirely within the enclosed areas.
- 5.2.4 RCHME survey areas 3 and 4 lie within the current survey area. Area 3 contains some of the best preserved earthworks at Lingheath, including shallow linear hollows and an apparently unstructured layout to the pits. Area 4 has circular or semi-circular shafts but with three pits with horseshoe shaped spoil heaps. The pits are not laid out in a regular pattern and the area contains a range of surviving chronological evidence. Both these of these areas represent important samples of the mining complex and identify the significance of the areas lying within the proposed road corridor.

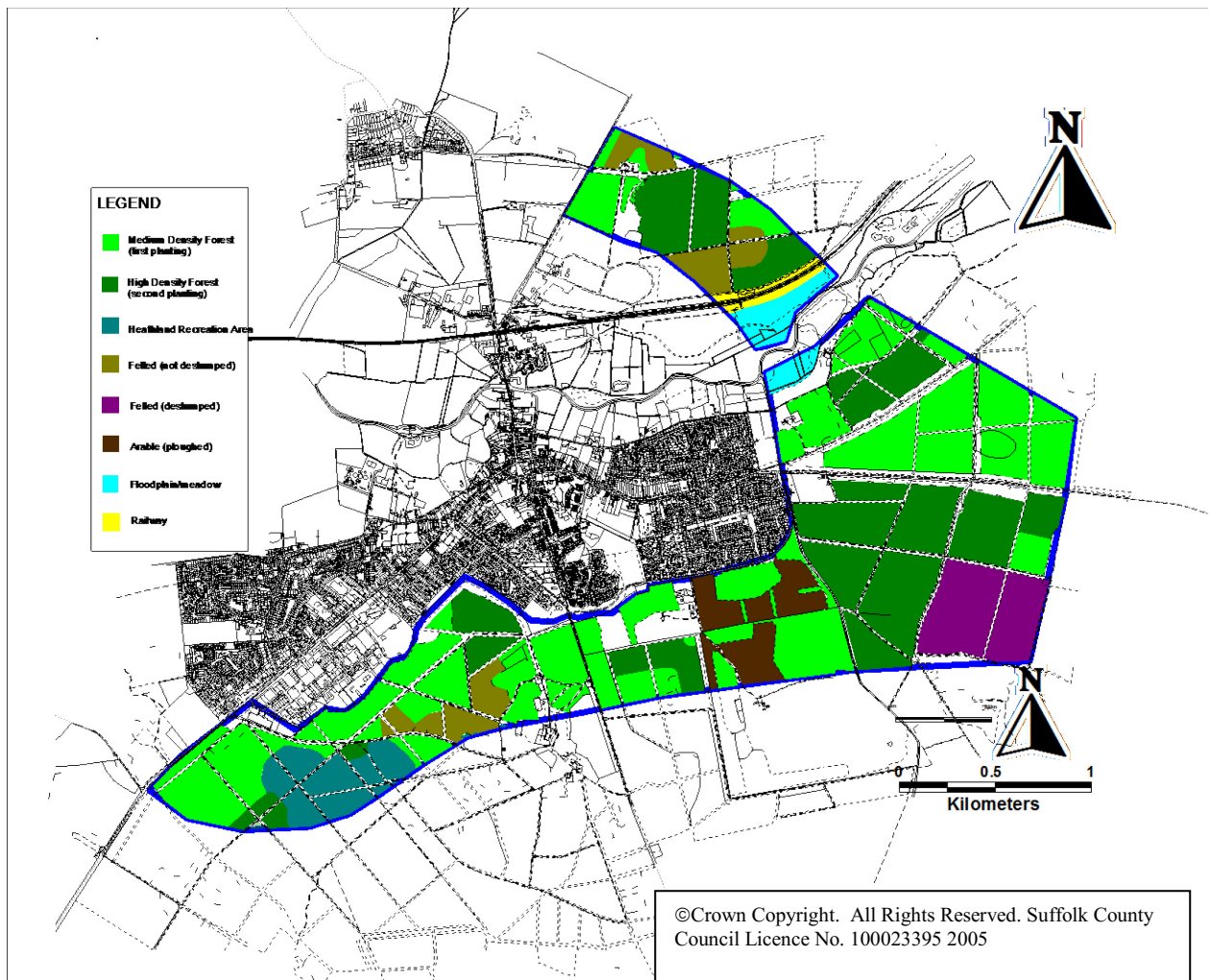
## **5.3 SCCAS Forest Surveys.**

SCCAS have been carrying out systematic surveys of forestry land in Suffolk and South Norfolk since 1998 working with the Forestry Commission to identify potential surviving

earthworks prior to destumping and replanting work. However to date none of the current survey area has been routinely covered during this work

## 6 Sites and Monuments Record search and walkover survey

6.1 The results of the walkover survey and the SMR search are presented here. However, it must be noted that the walkover survey was very coarse due to low visibility and accessibility as a result of modern land use and the limited time available. The results are by no means a comprehensive survey of the surviving earthworks within the area of the survey. There are also substantial areas where the ground has been flattened (through forest replanting and ploughing). As part of the walkover survey a simple plot of the present land use was drawn indicating areas where earthworks would no longer be visible (Figure 3). The results are presented by parish.



Some of the areas marked have been previously subject to de-stumping, which will impact on the potential survival of earthworks. Maps showing these areas are held by the Forestry Commission, but have not been consulted during this assessment.

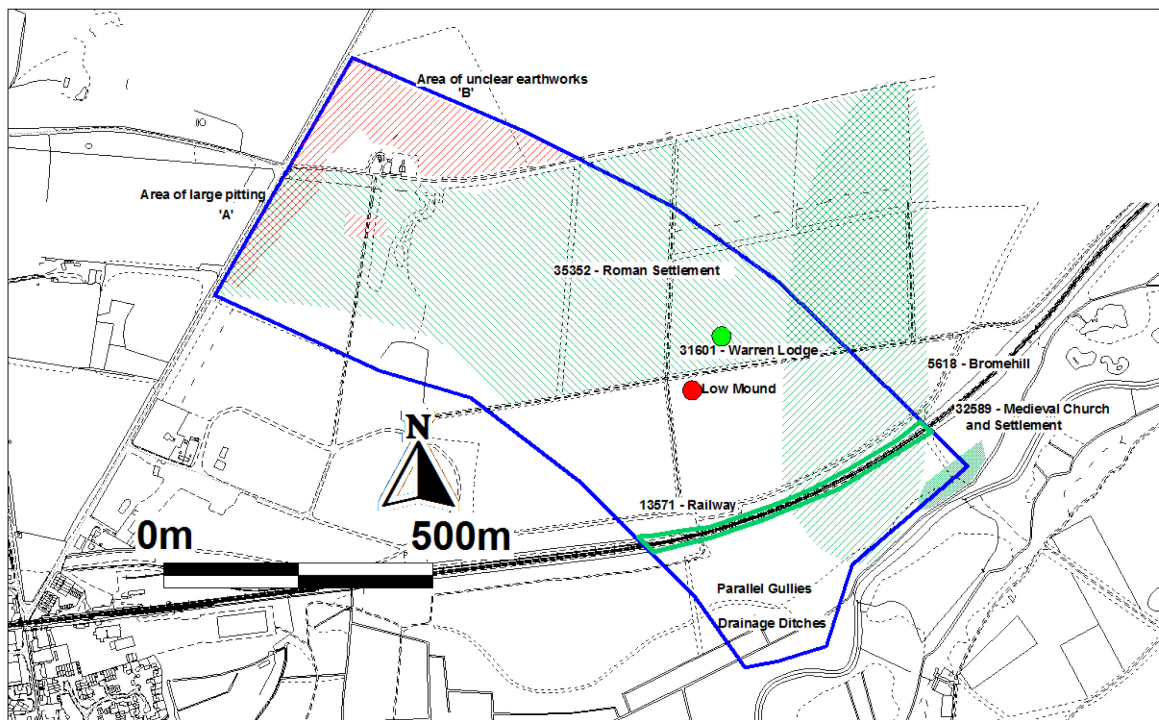
Figure 3. Current land use

### 6.2 Weeting with Broomhill, Norfolk (Figure 4)

6.2.1 A small area within the parish of Weeting with Broomhill, Norfolk was included in the survey. This extended from the A1065 north of Brandon to the river on the east of the town. For this area both a SMR search and a walkover survey were conducted.

Approximately fifty percent of the survey area had the potential for preserved earthworks with areas of first generation pine trees, open felled areas, and meadow/floodplain.

- 6.2.2 Along the A1065 at the northern limit of the survey area a series of very large pits were identified (see 'A' on Figure 4). The pits measured up to fifty metres across and in places were up to three metres deep. The group extended along most of the length of the A1065 within the survey area. The function of these pits was unclear, though their use as extraction pits is likely. If this is the case then the number and size of the pits indicate work on a fairly large scale. The date of these pits may be post-medieval but could be evidence of more recent activity.
- 6.2.3 Further earthworks were identified to the east of the pits though these were fairly ambiguous and it is unclear if these were even archaeological, let alone associated with the pits (see 'B' on Figure 4).



©Crown Copyright. All Rights Reserved. Suffolk County Council Licence No. 100023395 2005

#### Key to Map

Green hatching, circle and line are sites known from the existing SMR

Red hatching and circle are new observations from walkover survey

Figure 4. Weeting with Broomhill SMR and walkover survey results

- 6.2.4 There were no visible earthworks for the Roman settlement identified in the SMR search (35352) though the area was still under its first generation of trees. The site has previously been identified by fieldwalking and the high quantity of finds suggests good archaeological potential on this site. The date range of the finds is also wide, suggesting activity on the site from the prehistoric period onwards.
- 6.2.5 Identified as the possible site of Bromehill Warren Lodge (31601) from the 1791 Cadogan Estate map. No visible earthworks survive for this site though the area has not been flattened. Only further work (geophysical survey or excavation) would be able to determine whether this was the location of the lodge.

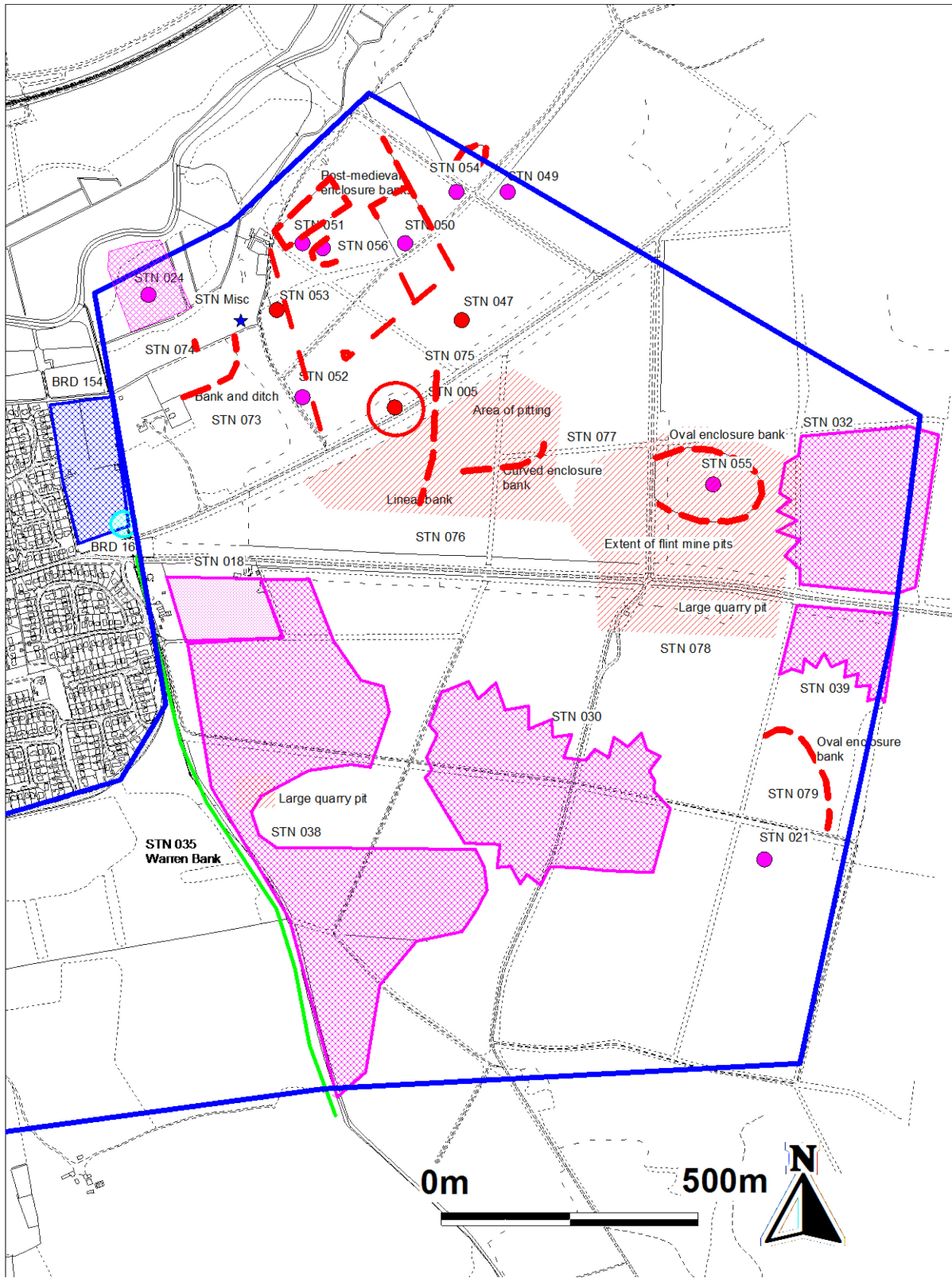
- 6.2.6 To the south of the possible lodge site a low mound was identified measuring approximately five metres across. The function and date of this mound is unclear.
- 6.2.7 The railway line from Brandon to Norwich runs further to the south. This is part of the historic Norfolk railway system which includes listed buildings. Only the track runs through the survey area with no associated buildings or workings of historic importance.
- 6.2.8 Two parallel gullies were located to the south of the railway and are marked on the modern OS map. These gullies appear to be either side of a trackway running parallel to the river. The date is uncertain though probably post-medieval. This trackway may have functioned as access to the meadow land within the floodplain of the river. This area is characterised by a series of drainage ditches still visible on modern OS maps, also possibly post-medieval in date. These drainage channels are indicators of land management along the river floodplain.

Site	Grid ref	Period	Summary info	Condition	Designation and/or comment
13571		Pmed	Railway line, opened 1844. Listed buildings along its course.	Still in use.	
5618	TL 7970 8760	Mixed	IA and Roman pottery, LSax strap end found metal detecting.		
35352	TL 7960 8790	Roman	Roman settlement identified from extensive finds spreads recovered during fieldwalking and metal detecting.	Under first generation of trees.	Potential for intensive 'fen-edge' type settlement
31601	TL 7960 8775	Pmed	Bromehill warren lodge, possible site marked on 1791 Cadogan map	No visible earthworks, but not levelled.	

Table 1 Summary of results of SMR search (excluding 'misc' sites) and new observations.

### 6.3 Santon Downham, Suffolk (Figure 5)

- 6.3.1 Less than fifty per cent of the survey area had the potential for surviving earthworks, the rest had been flattened during the replanting process. However, in many of these areas some survey had already been conducted and recorded in the SMR.
- 6.3.2. The area immediately south of the river is similar to that on the north with a network of drainage ditches still visible on the modern OS map. Again the date for these ditches is unclear. This area also contained evidence for a floated water meadow, STN 024, which may give a picture of land use and management of the river floodplain.
- 6.3.3 Located to the south of STN 024 and on the edge of the floodplain, is an area of earthworks, STN 074. Although the earthworks are clearly visible on the ground it is impossible to discern their form or assess whether or not they are archaeological. Slightly further to the south a large curvilinear bank, STN 073, and ditch were identified along with other less distinguishable earthworks including a low wide bank. The date and function of these features are unclear, though they may relate to features visible on the 1880 County map (Figure 6).



©Crown Copyright. All Rights Reserved. Suffolk County Council Licence No. 100023395 200

**Key to Map**

Cross hatching = extent of sites from SMR

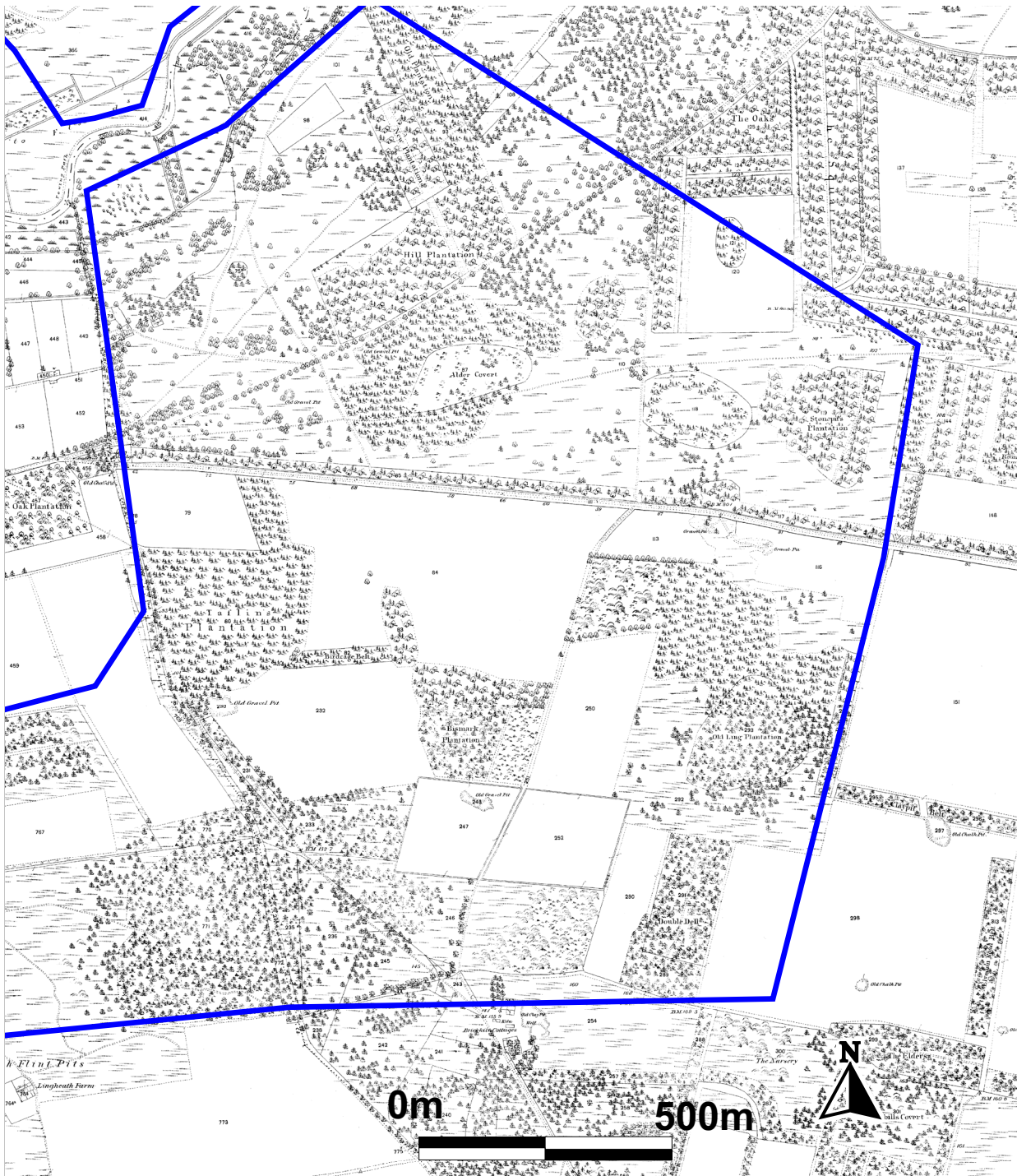
Hatching = new observations from walkover survey

Figure 5. Santon Downham SMR and walkover survey results



- 6.3.4 Sites BRD 154 and 165, although just outside the survey area, have shown the presence of activity on the eastern edge of Brandon. An excavation at BRD 154 indicated Late Bronze Age occupation of the area, with some finds dating to the Neolithic (Gibson et al, 2004). Post-medieval finds and features were also present and it is possible that further activity relating to this may continue into the survey area. At BRD 165 the remains of three inhumations were excavated; these were radiocarbon dated to 1150-1270AD (68% probability, GU-11459) and it is postulated that lying on the parish boundary, away from a church and north-south aligned these may represent burials from a nearby gallows site (Tester 2004). It is therefore possible that further burials may continue east into the survey area.
- 6.3.5 STN 053 is a long low mound approximately eighty metres by twenty metres, and is overlain by bank STN 052. Both features were identified in 1996 after felling, but ahead of de-stumping of the area. At present the two features are difficult to see as the area has been generally flattened for replanting. STN 053 appears to still survive though STN 052 was not visible during the walkover survey. These features are undated, but probably relate to other post-medieval activity in the vicinity.
- 6.3.6 Further to the east a series of post-medieval earthworks survive. These include two oval plantations, STN 054 and 056 and a series of linear banks and enclosures, STN 049, 050 and 051. These banks and enclosures are visible on the 1880 County map and relate to features on the Cadogan Estate Map from 1791 (Figure 7). During the walkover survey all of these sites were visited and all have surviving earthworks.
- 6.3.7 STN 047 is recorded as a 25-30m wide mound and possible round barrow. During the walkover survey this area was inaccessible due to the density of young pine trees. It was also noted that the area had been flattened but it is unknown whether the mound has survived.
- 6.3.8 To the south-west of STN 047 another barrow, STN 005 survives as a clearly visible mound, approximately 18m wide and 1m high, with a surrounding ditch. This is a Scheduled Ancient Monument (SAM 21436).
- 6.3.9 Located to the east of STN 005, and extending to the south across the road, is a long low bank with ditches on both sides, STN 075. The total length of the bank is approximately 250m, with a width of 1-2m. The function and date of this bank are unknown.
- 6.3.10 Located further to the east is a large group of pits (at least 20) STN 076. These pits vary in depth from very shallow to over 0.5m, some reach a width of up to 10m. Alongside these pits is a wide, linear hollow way running north-east south-west which then forks at its western end with one hollow carrying on its original course and one heading south. This pit group and hollow ways appear to form a small mining or extraction complex probably of a post-medieval date.
- 6.3.11 A curvilinear bank, STN 077, was located to the south of this complex which appears to relate to an oval enclosure visible on the 1880 County map. Another oval enclosure, STN 055, is visible to the east which survives as a 2m wide bank, and a similar sized outer ditch.
- 6.3.12 Large groups of post-medieval features suggestive of flint mining, STN 032 and 039, were located to the south and east of STN 055. These sites consist of large numbers of pits and trackways indicating a fairly extensive industrial site. During the walkover

survey STN 032 was visited and surviving earthworks were recorded. An attempt was made to locate the western edge of the site and pits were found to extend at least 350 to 400m to the west, though becoming more dispersed further west. Site STN 039 is now no longer visible as earthworks as the area has been levelled and replanted. The area to the west of STN 039 has also been levelled and no earthworks are visible except for a large quarry pit alongside the main road. This quarry pit, STN 039 and STN 032 all appear to be part of one large post-medieval industrial complex, probably for flint mining.



©Crown Copyright. All Rights Reserved. Suffolk County Council Licence No. 100023395 200

Figure 6. 1880 County map for Santon Downham

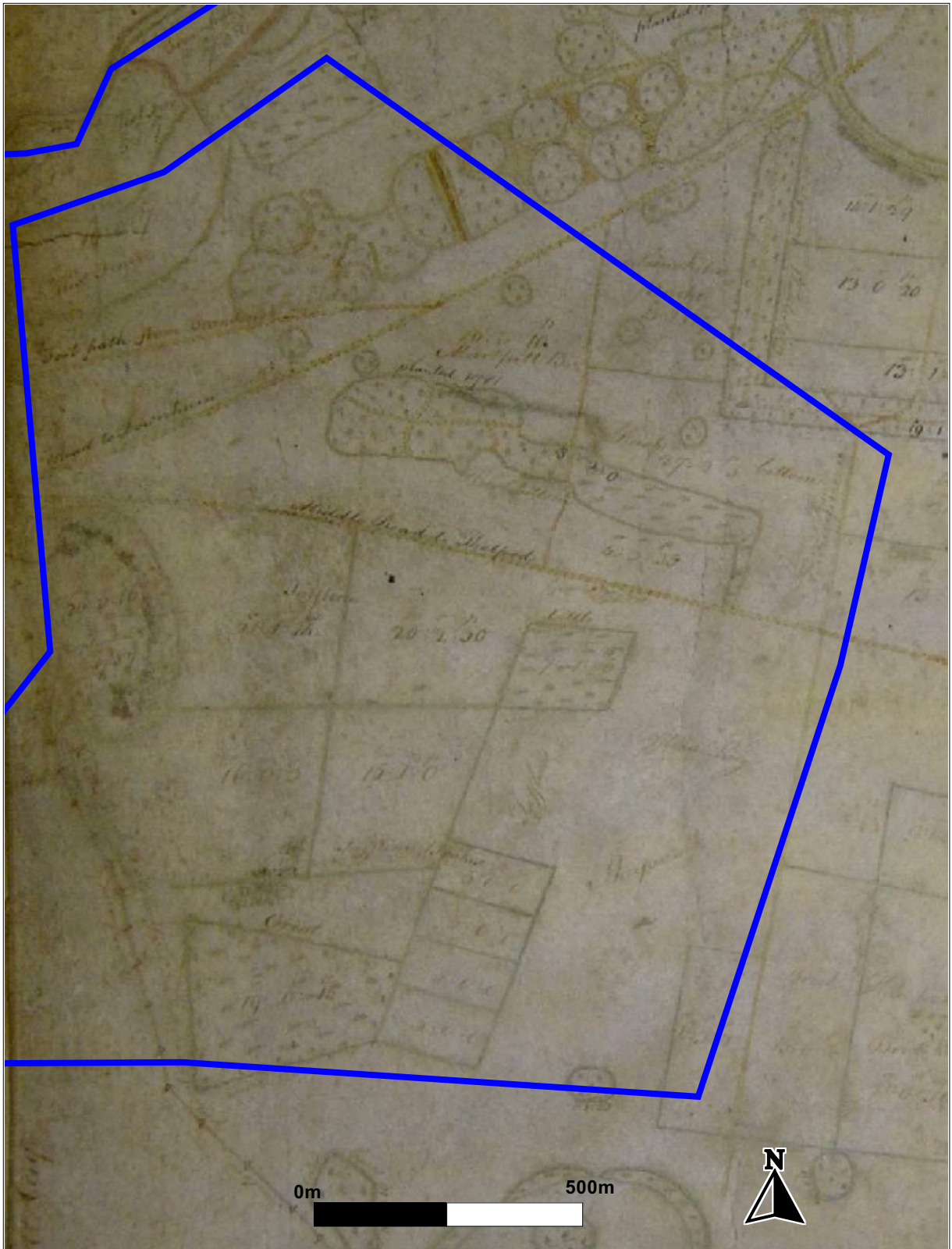


Figure 7. Cadogan Estate Map 1791

6.3.13 A section of curvilinear bank, STN 079, was identified to the south of STN 039, however, its extent was unknown as it continued to the west and south into flattened and replanted areas. This bank corresponds to an oval enclosure visible on the 1880 County map and may well be associated with STN 021 which is defined as an area of “Old gun flint industries” by Rainbird Clarke on the 6 inch record map. Apart from the section of bank most of the area had recently been de-stumped, flattened and replanted.

6.3.14 The majority of the south-west corner of the Santon Downham survey area is covered by three sites, STN 018, 030 and 038. These are a series of post-medieval industrial sites focused largely around the flint mining industry of the 19th century. These sites appear to continue into Brandon parish as the well known post-medieval flint mining site of Lingheath. STN038 has evidence of chalk spoil in aerial photographs and knapped flint was recovered during a rapid field survey by Colin Pendleton in 1996 (Pendleton 1996). STN 018 comprises small vertical shafts with ‘pick’ marks in the chalk, these were originally reported as antler pick marks but a visit by SCC identified them as probably post-medieval tool marks. During the walkover survey only one large quarry pit was identified within the area of STN 038, no other earthworks were visible as the area has been flattened and replanted and part of it is a modern chalk quarry (STN 018).

6.3.15 The western boundary bank, STN 035, of the Downham Warren runs north-south along the Brandon-Santon Downham parish boundary in the survey area. This survives intermittently as an earthwork bank around the western, southern and eastern edges of the warren, beyond the survey area. South of Lingheath the exact course of it is unknown but it is still visible along the west edge of the STN 018 and 038 mining complexes.

Site	Grid ref	Period	Summary info	Condition	Designation and/or comment
STN 005	TL 8028 8680	Undated	Round barrow by the side of the road, in woodland..	Still visible c. 18m in diameter x 1m high	SAM 21436
STN 018	TL 7994 8648	Pmed	Flint workings consisting of small vertical shafts seen in chalk quarry face, with probably post-medieval pick marks on the walls of the shaft.	No earthworks visible, forested and chalk quarry.	
STN 021	TL 8100 8589	Pmed	Area of ‘old gun flint’ industries defined by Rainbird Clarke on 6 inch record map.	No earthworks surviving	
STN 024	TL 7980 8700	Pmed	Straight ‘ridge and furrow’ like earthworks, identified as probable floated water meadow, similar to those at Lynford and West Tofts	Still visible	
STN 030	TL 8056 8604	Pmed	Large area of chalk and worked flint expose on cleared surface beside forest track. Probable flint workings. Includes bank on west side.	Medium to high density woodland. No earthworks visible, area flattened and replanted	
STN 032	TL 8110 8650	Pmed	Extensive area of pits and spoil visible in woodland in 1993 with earthwork bank and ditch on north edge.	Medium to high density woodland. No earthworks visible, area flattened and replanted	
STN 035	TL 7990 8590	Pmed	Part of the Downham warren boundary, a bank surviving intermittently around the west south and east sides of the warren.	Earthworks still visible in places.	

Site	Grid ref	Period	Summary info	Condition	Designation and/or comment
STN 038	TL 8000 8590	Pmed	Flint mine complex, extending to Lingheath and may extend to STN 030. Rapid survey in 1996 revealed knapped and quartered flint.	One large quarry pit visible, otherwise, medium to high density woodland. No earthworks visible, area flattened and replanted	
STN 039	TL 8110 8630	Pmed	Further area of flint mines, possibly linked with STN 030 and STN 032 (and also with STN 031, knapping waste). Part west of forest track survived as visible pits in 1996, but part flattened by levelling and planting.	Both areas now levelled and flattened, no earthworks visible, except for one large quarry pit, alongside the main road.	
STN 047	TL 8041 8695	Undated	Possible round barrow, in area of STN 005 but also of natural sand hummocks. 25-30m across.	Inaccessible, due to density of young trees, but area generally flattened. Survival of the earthwork is unknown	
STN 049	TL 8050 8720	Pmed	Long earthwork bank which connects to STN 050.	Earthworks surviving.	
STN 050	TL 8030 8710	Pmed	Series of banks in rectilinear layout, linked to STN 049 and probably 051 and 052.	Earthworks surviving	
STN 051	TL 8010 8710	Pmed	Rectilinear block of earthwork banks, probably defining a plantation.	Earthworks surviving	
STN 052	TL 8010 8680	Pmed	Slight linear earthwork visible in cleared forestry in 1996. Part of STN 050 etc, group.	Not visible within the trees now, levelled and planted	
STN 053	TL 8005 8697	Pmed	Long low mound c. 80m x 20m defined by visible ditches. Overlain by bank 052.	Earthworks still visible.	
STN 054	TL 8040 8720	Pmed	Oval enclosure bank defining plantation shown on OS maps of 1824.	Earthworks still visible	
STN 055	TL 8090 8663	Pmed	Large oval plantation defined by mostly surviving outer banks	Survives as 2m wide bank and similar sized ditch.	
STN 056	TL 8014 8709	Pmed	Oval enclosure defining small plantation, shown on OS 1928 map.	Earthworks visible.	
STN 073	TL 7995 8688	Undated	Large curvilinear bank and ditch identified during walkover survey amongst other less well defined earthworks	Earth works visible	New observation
STN 074	TL 7988 8691	Undated	Clearly visible earthworks in floodplain, however difficult to define or confirm that these are really archaeological.	Earth works visible	New observation
STN 075	TL 8036 8671	Undated	Linear bank running north-south on east side of STN 005	Earth works visible	New observation
STN 076	TL 8042 8670	Pmed?	Large group of pits, at least 20, up to 10m wide and 0.5m deep. Also includes a forked Hollow Way. Probably relates to flint mining.	Earth works visible	New observation

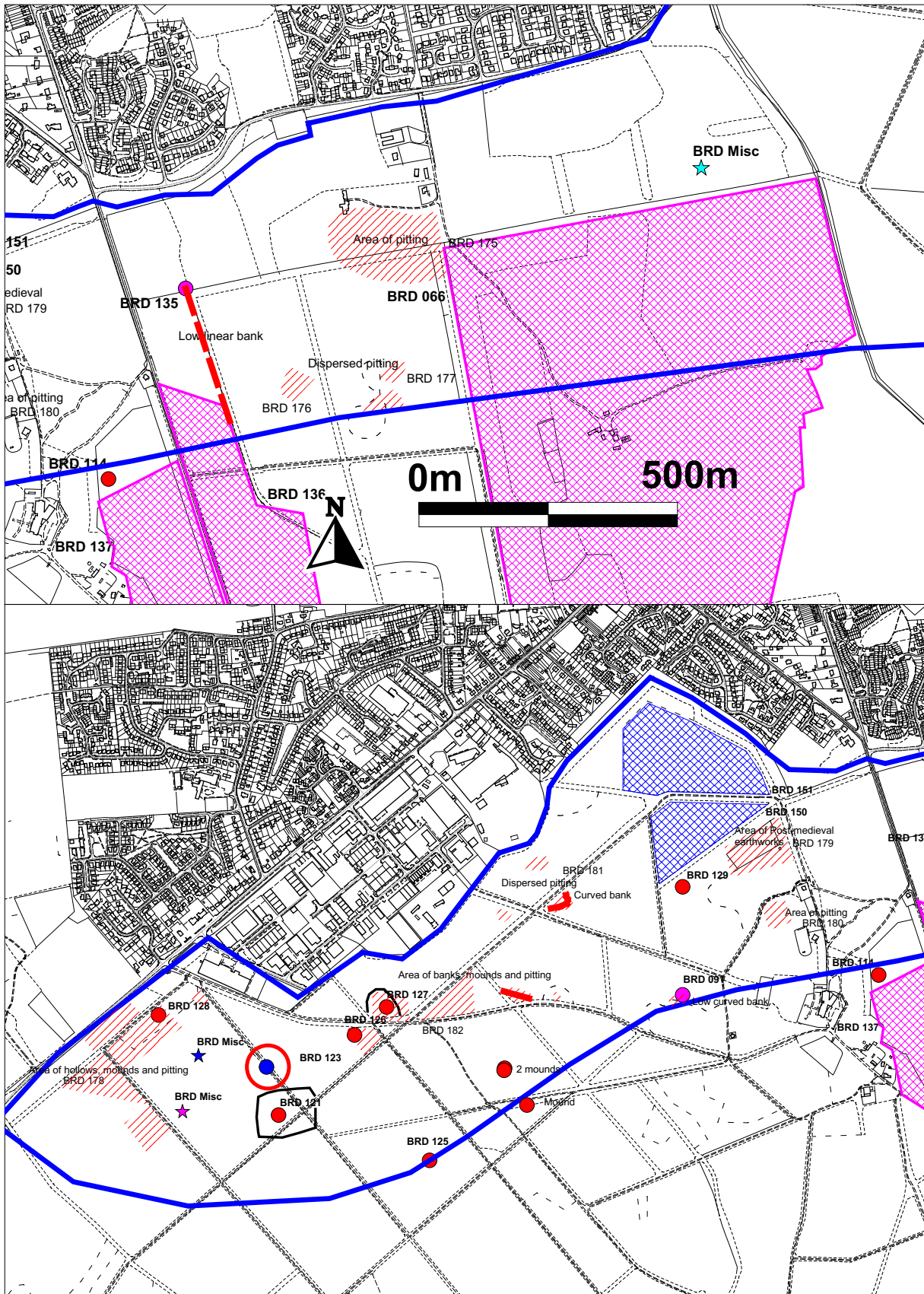
Site	Grid ref	Period	Summary info	Condition	Designation and/or comment
STN 077	TL 8052 8670	Pmed?	Curvilinear bank which appears to relate to an enclosure on the 19 <sup>th</sup> century OS map	Earth works visible	New observation
STN 078	TL 8087 8649	Pmed	Extension to already marked flint mining areas of STN 032 and 039. Extends c. 350-400m west of limits of STN 032/039 although becoming more dispersed to the west.	Earth works visible	New observation
STN 079	TL 8111 8610	Pmed?	Oval enclosure bank north of STN 021. Corresponds with enclosure on 19 <sup>th</sup> century OS map and probably relates to STN 021 flint mines.	Earth works visible	New observation

Table 2 Summary of results of SMR search (excluding ‘misc’ sites) and new observations.

## 6.4 Brandon, Suffolk (Figure 8)

- 6.4.1 Approximately 70 per cent of the area surveyed within Brandon parish had the potential for surviving earthworks. Modern land use varied considerably across the area including ploughing, first planting pine trees, new planting pine trees, felled areas not yet destumped, cleared areas, and a heathland recreation site. The Brandon parish survey area is easily split into two general areas to the east and west of the B1106 to Bury St Edmunds.
- 6.4.2 To the east of the B1106 the recorded archaeology is dominated by the post-medieval flint mining industry. However, there are some industrial areas located on the western side of the B1106, BRD 137.
- 6.4.3 The main focus of the flint mining area is that of Lingheath, BRD 066 and 095. This area has been subject to some previous work (RCHM in 1996, see Appendix 3, and Sussams, 1996). This site is well served in both historical and cartographic evidence. A limited survey of the area has also been undertaken (RCHM) giving detailed earthwork surveys of limited areas of Lingheath. Air photographs also provide good evidence of the Lingheath area providing clear images of the extent and density of the mining. However, at present large areas of Lingheath are now arable and as such the earthworks are no longer visible except in the limited areas of surviving woodland.
- 6.4.4 During the walkover survey several pits, BRD 175, were identified to the north west of the defined Lingheath site suggesting a continuation in that direction. However, there is no clear link to the identified sites, BRD 135 and 136, to the west with only scattered hollows visible in the forest, BRD 176 and BRD 177. Both the linear bank, BRD 135, and the area of flint mine hollows and associated gullies were still visible. There was also no visible extension to the flint mine site immediately to the west of the B1106, BRD 137.
- 6.4.5 To the west of the B1106, Brandon Country Park, the archaeological landscape appears different with the notable absence of post-medieval flint mining and extraction sites.
- 6.4.6 A 17m diameter mound, BRD 114, on the southern edge of the Brandon parish survey area has been identified and appears to be related to the 19th century Brandon Park House. Several other features appear connected to the house including the clearly visible

- road line extending from the A1065, BRD 120, and various enclosures, BRD 091, of which at least part of one was identified during the walkover survey. A small group of fairly large (15-20m) irregular pits were also identified, BRD 180. These were located to the north-east of BRD 091 and again may well be associated with Brandon Park House.
- 6.4.7 Located to the north west of Brandon Park House were a series of features, BRD 129, including a linear bank, circular bank and trackway associated with 'The Cottage' on the 1905 OS map. A rectangular enclosure, BRD 179, still marked on the modern OS map and still partially visible on the ground, may well be also associated with these features.
- 6.4.8 Two areas, BRD 151 and 150, are identified in the SMR as having been fieldwalked ahead of new planting. This fieldwalking recovered over one hundred worked and burnt flints of a late prehistoric date. This area is now inaccessible due to dense forest.
- 6.4.9 Located to the south west of BRD 150 and 151 is an area of dispersed pitting and a curvilinear bank possibly forming an oval enclosure, BRD 181. Further to the south west is an oval enclosure with associated mounds and pits, BRD 182. These features are similar to other identified post-medieval enclosures and small extraction sites within the survey area. Post medieval earthworks, BRD 179, were also identified during the walkover survey south of BRD 150
- 6.4.10 Located immediately to the west is BRD 127 which appears as a slightly raised area with a wide gully running around the outside. Occasional pits are visible on the raised area as well as outside the surrounding gully along with traces of further gullies and hollows.
- 6.4.11 To the south is a mound, BRD 126, at least 2m high with at least two associated pits. This mound appears fairly recent and may be associated with military buildings to the north identified on aerial photographs.
- 6.4.12 Several features appear to the south of BRD 126 within the area now established as a heathland recreation area. These include a trapezoid enclosure, BRD 121, aligned with BRD 120, a road associated with Brandon Park House, and a linear bank, BRD 125, identified on the 1905 OS map. Located on the eastern edge of this area are a series of low (0.5-1m high) mounds. At least three were clearly identifiable during the walkover survey. The date and function of these mounds are not identified.
- 6.4.13 Also located within the heathland recreation area is a possible Bronze Age 'Bell Barrow', BRD 123, known as 'White Hill'. The mound is approximately 50-60m wide with a berm of 15-20m and an outer ditch of approximately 15m. This site is possibly the largest example in Britain and has been scheduled (SAM 31084).
- 6.4.14 Located at the western limit of the survey area alongside the A1065 is a low linear bank probably part of a post-medieval plantation bank, BRD 128. To the south of this feature are a series of large pits, mounds, banks and deep hollow ways (c.2-3m deep), BRD 178. These features extend parallel to the A1065 for most of the survey area. These features may be the remains of a further post-medieval extraction site.



©Crown Copyright. All Rights Reserved. Suffolk County Council Licence No. 100023395 200

**Key to Map**

Cross hatching = extent of sites from SMR

Hatching = new observations from walkover survey

Figure 8. Brandon SMR and walkover survey results – eastern area (top) and western area (bottom)



Site	Grid ref	Period	Summary info	Condition	Designation and/or comment
BRD 066	TL 7975 8528	Pmed	Extensive area of post med flint mines, surviving as earthworks although 22ha min. gone under the plough since WWII	Earthworks only visible in limited areas of woodland.	Lingheath flint mines, earthworks of schedulable quality.
BRD 091	TL 7821 8515	Pmed	Garden associated with Brandon Park House. Earthwork enclosures, circular and irregular plantations.	Earthworks still surviving.	
BRD 114	TL 7870 8520	Undated	Roughly circular mound c.18m in diameter x 1m high. A possible ornamental garden feature in the park.	Just outside survey area and not seen visited during walkover.	
BRD 120	TL 7634 8462	Pmed	Line of former road to Brandon Park House from A 1065	Still clearly visible	
BRD 121	Tl 7720 8486	Undated	Trapezoid enclosure partly damaged by forest planting in 1997.	Now under recreational heathland. Some earthworks still visible.	
BRD 122	TL 7630 8450	Undated	Linear bank, c. 30cm high, adjacent to road to Brandon Park House, BRD 120. Possible formal splayed entrance feature.	Still visible	
BRD 123	TL 7717 8497	Undated	'Bell Barrow' 50-60m across with berm of 15-20m and outer ditch of approximately 15m. Possibly Bronze Age	Still visible	SAM 31084
BRD 125	TL 7750 8470	Undated	Linear bank, delineated on 1905 OS map.	On the edge of the survey area, not visited?	
BRD 126	TL 7739 8505	Undated	Small oval mound 9m x 6m x 2m high with slight surrounding ditch.	Still surviving with at least two associated pits.	
BRD 127	TL 7747 8512	Undated	Slight circular gully defining circular ridge with mature beech trees. Other more prominent, similar features have been identified as post-med circular plantations in Brandon Park.	Still surviving as visible earthwork.	
BRD 128	TL 7690 8510	Undated	Low linear bank c. 30cm high x 2m wide. Probably pmed plantation bank.	Still survives. Extensive pitting noticed during the walkover in this area – possible post-med extraction site?	
BRD 129	TL 7821 8542	Undated	Straight linear bank within Brandon Park.	Partially visible with ?associated rectangular enclosure.	
BRD 135	TL 7885 8557	Pmed	Low bank of unknown date but which largely defines eastern limits of 19th/20th century mining complex, BRD 134 and 136.	Earthwork still visible.	
BRD 136	TL 7900 8490	Pmed	Group of well preserved flint mine earthworks. Small and large circular pits and gullies. May relate to BRD 137.	Still visible	
BRD 137	TL 7880 8500	Pmed	Group of well preserved flint mine earthworks. May be part of Lingheath complex as referred to by Skertchly.	Just outside the survey area and not visited. However no earthworks identified to indicate continuation	

Site	Grid ref	Period	Summary info	Condition	Designation and/or comment
				of 136 to 137.	
BRD 150	TL 7820 8550	Preh	Flint scatter seen in tree planting furrows.	Dense forest, inaccessible	
BRD 151	TL 7820 8570	Preh	Flint scatter seen in tree planting furrows.	Dense forest, inaccessible	
BRD 154	TL 7960 8660	Preh	Late Bronze Age site excavated in advance of new housing uncovered pits, postholes, structures, cremations.	Excavated	
BRD 165	TL 7976 8654	Med	Three inhumations uncovered during garden terracing in new houses on the south edge of BRD 154. C.12th-13th century and may be possible gallows site.	Excavated, but close to road edge, so potential for more	Human remains
BRD 175	TL 7925 8566	Pmed	Several pits identified during walkover survey lying at north-west edge of Lingheath. Probably part of Lingheath mines.	Earthworks visible	New observation
BRD 176	TL 7907 8540	Pmed?	Small area of scattered hollows between Lingheath and BRD 136.	Earthworks visible	New observation
BRD 177	TL 7925 8537	Pmed?	Small area of scattered hollows between Lingheath and BRD 136.	Earthworks visible	New observation
BRD 178	TL 7676 8498	Pmed?	Large pits, mounds, hollow ways and banks around bank BRD 128. Probably evidence of a further pmed extraction site.	Earthworks visible	New observation
BRD 179	TL 7841 8551	Pmed	Rectilinear post-medieval earthwork enclosure.	Earthworks visible	New observation
BRD 180	TL 7845 8536	Pmed?	Small group of fairly large irregular pits, possibly associated with Brandon Park.	Earthworks visible	New observation
BRD 181	TL 7785 8548	Pmed?	Curvilinear bank and dispersed pitting, possibly an oval enclosure. ? Post medieval extraction site	Earthworks visible	New observation
BRD 182	TL 7766 8514	Pmed?	Pits gullies and hollows around ditched platform, BRD 127.	Earthworks visible	New observation

Table 3 Summary of results of SMR search (excluding ‘misc’ sites) and new observations.

## 7 Discussion

- 7.1 The archaeology of the survey area is very diverse ranging in date from the prehistoric to the 19th century. However, it is during the post-medieval period and the advent of the Brandon gun flint industry that the area sees its most intensive use.
- 7.2 The prehistoric period is visible in the archaeological record and surviving earthworks within the survey area in several forms. Two adjacent fieldwalked areas (BRD 150 and 151) showed a fairly dense scatter of worked and burnt flint indicating possible activity in the area. Two burials mounds within the survey area are scheduled (STN 005 and BRD 123) with one being possibly the largest known 'Bell Barrow' in Britain (BRD 123). Prehistoric occupation, mainly late Bronze Age, is known on the eastern edge of the modern town (BRD 154) and although outside the survey area activity may continue east. Barrows are often found in groups and the presence of extant barrows allows the possibility of other, now levelled, barrows nearby. In addition prehistoric monuments often become the focus for other, later, ritual activities (eg. Anglo-Saxon cemeteries).
- 7.3 Although there are no identifiable remains of prehistoric flint mines within the survey area this does not necessarily indicate their absence. The site of Grimes Graves to the north shows evidence of prehistoric flint mining in the immediate vicinity. The presence of high quality flint around Brandon may well have attracted early mining as well. However, the intensive post-medieval flint mining industry in this area could well hide any early pits. On the surface it would be very difficult to clearly distinguish a prehistoric from a post-medieval mine.
- 7.4 Little Roman archaeology is known from within the survey area apart from scattered finds. The only recorded Roman settlement is a settlement to the north east of the modern town in the parish Weeting with Broomhill (Norfolk SMR 35352). However, other associated finds from this area indicate activity from the Neolithic to the Post-medieval period.
- 7.5 Medieval activity is dominated by the presence of warrens over much of this part of Breckland. In this area a surviving warren bank runs down the Brandon/Santon Downham parish boundary, and will inevitably be crossed by the road at some point. Three early medieval burials (BRD165) may represent a gallows site, and further evidence of this may be present along the parish boundary by the B1107.
- 7.6 The majority of the surviving earthworks are post-medieval in date and mainly relate to the flint mining industry of Brandon. The focus of the flint mining industry is the area centred on Lingheath (BRD 066 and 095). This area has been fairly well studied in the past and is well covered in the historical survey commission for this assessment (Appendix 3). The survey by the Royal Commission for Historic Monuments (RCHM) has highlighted the nature of the surviving earthworks and the aerial photographs show the intensity of the mining (Figure 9). However, the Lingheath site is only one part of a much larger post-medieval industrial landscape. Surviving earthworks from flint mining can be seen to extend across the whole southern survey area from the B1106, in Brandon parish, across the southern half of Santon Downham parish. Although breaks appear between the various mining sites within the survey area these sites form parts of a whole post-medieval mining landscape. The exact limits of the mining sites is very difficult to distinguish as pits become dispersed and may easily be missed during a coarse walkover survey such as that conducted for this assessment. A rapid survey carried out in 1996 (Pendleton 1996) identified five groups of mines within this area whose limits

appeared to relate to existing field boundaries, but this cannot be confirmed. The area immediately to the north of Lingheath also needs further work to understand whether the mines continue. Both the documentary and aerial photographic (Figure 9) searches found evidence of the pits within now ploughed land.

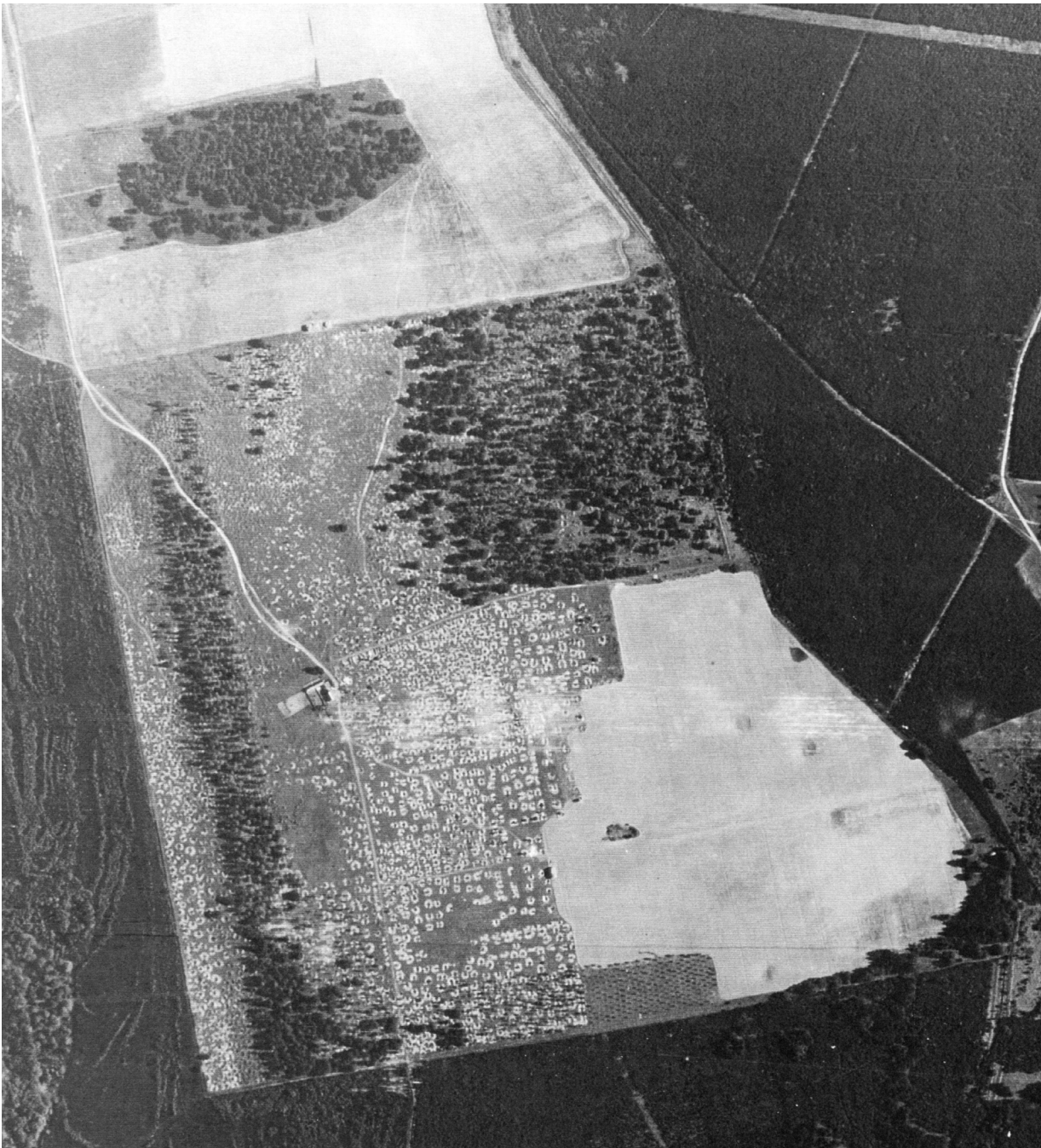


Figure 9. Lingheath aerial photograph (RAF photograph 106G-1557-4008)

- 7.7 The Lingheath and STN 038 mining complexes are separated by the parish boundary, along which also runs the surviving post-medieval warren bank. The STN 038 mines are earlier than Lingheath (C.Pendleton pers comm) and belonged to the Cadogan Estate, however the documentary search records that the parish boundary has moved slightly eastwards (encroaching on Cadogan land?), with mines apparent between the old and new lines. It is suggested (Pearson 1996) that this shift was to bring more land into the Lingheath ownership for the sinking of new mines.

- 7.8 As well as the flint mining industry there is also evidence for other extraction industries. Chalk and gravel extraction is evidence by large quarry pits of which at least two are visible in Santon Downham parish. The series of large pits at the northern limit of the survey area in Weeting with Broomhill parish may also represent large scale extraction. These other forms of post-medieval activity indicate the area around Brandon is a complex industrial landscape.

## **8. Conclusion and Recommendations**

- 8.1 Although a great deal of information is known about the area covered in this survey there is more archaeological work that would be necessary before road construction could get under way. The work undertaken for this assessment can only be taken as a preliminary evaluation of the archaeology within the area of the proposed bypass route, in order to identify major constraints.
- 8.2 The area of Lingheath and its immediate vicinity undoubtedly needs further study. This archaeological site is of national importance as it is the focus of the British gunflint industry of the 19th century. Although limits of the pitting have been roughly established to the west and east of Lingheath the ploughed area to the north needs further study. More detailed fieldwalking than was possible in the walkover survey may help to establish a northern limit though visibility on the ground is very poor in this area. Geophysical survey or trial trenching would probably be a more appropriate strategy in this area. This could also help to establish the relationship between the flint mines and land and property boundaries, and look at the relationship between the groups of mines identified in previous surveys.
- 8.3 The exact nature and date of these flint mines also needs further examination. Dating of these pits is very difficult from a surface inspection and areas of prehistoric pits may survive within the areas dominated by the post-medieval pits. Detailed examination of the pits might also help form a post-medieval chronology for pit types that could be used to help date other sites.
- 8.4 No evidence of Neolithic mining has so far been identified in this area, however it would be difficult to distinguish prehistoric shafts from post-medieval ones from earthworks or aerial photographs, particularly because if close to the post-medieval mines, the pre-existing shafts are likely to have been filled with upcast soil. It is, however, likely that Neolithic mining would take place in roughly the same areas as the post-medieval works as these represent the best flint seams. It is not probable that Neolithic mines will survive in the areas of greatest density of post-medieval mines, as the presence of pre-existing shafts would destabilise the ground for adjacent mines, unless the earlier shafts were reused. In addition the existence of a high density of later mines implies that the flint deposits have not been previously extracted. Therefore it seems more likely that examination of areas of sporadic post-medieval mining or just beyond the edges of the known mines might have greater potential for revealing prehistoric activity. The most accessible difference between the prehistoric and post-medieval flint mining is the nature of the knapping debris; fieldwalking of ploughed areas around Lingheath would be a simple way of establishing the possibilities for the presence of prehistoric mining. This could be followed by targeted trial trenching if the results looked promising.

- 8.5 Any prehistoric flint mines identified need to be examined on a broad landscape scale as well as in detail in order to aid comparison with Grimes Graves and to give it greater landscape context.
- 8.6 A project designed to plot digitally Skertchly's evidence of the flint mining industry in 1879 would be of great benefit to the study of the flint mines.
- 8.7 The archaeology within the survey area is diverse. Although dominated by the post-medieval flint mining industry, Roman and prehistoric settlements, as well as prehistoric barrows, are visible within the survey area.
- 8.8 The proposed road line passes very close to the largest known example of a Bell Barrow in Britain, a Scheduled Ancient Monument and therefore, a site of national importance, which lies within a heathland recreation area. If threatened, further survey work would be necessary in this area, geophysical, topographical and/or trial trenching to establish a landscape context for this monument. As the land is currently heathland, fieldwalking alone would be insufficient.
- 8.9 High quantities of finds have been recovered from the Roman site in Weeting, and although now covered in trees evidence from sites with similar tree cover (for example. at Mildenhall) has shown that significant remains can survive. Trial trenching would be necessary to establish the density of state of preservation of this site.
- 8.10 Further field evaluation, in the form of targeted trial trenching, near the possible gallows site at BRD 165 will be necessary if the route of the road passes close to here. Extensive excavation has identified Middle Saxon origins for Brandon with evidence of population shift to the current town in the Late Saxon period. This outlying site has the potential to contribute to the body of evidence already held about medieval life in Brandon.
- 8.11 This site lies on the southern edge of a prehistoric occupation site and the possibility of features relating to this continuing into the development area would also need investigating by trial trenching.
- 8.12 Rabbit farming was a very important industry in Breckland from the 12th century onwards and the line of this route travels through known warren land. Although over much of the area little can be expected to be found relating to these, the route is likely to cross at least one warren bank (Santon Downham parish boundary) and runs close to a the Warren Lodge at Bromehill, marked on an 18th century map. Further work, either geophysical survey or trial trenching will be necessary to establish the existence of this.
- 8.13 The parish boundary between Brandon and Santon Downham, between Lingheath and the outskirts of Brandon shifted in the 19th century. To the east of it lie the earlier flint mines belonging to the Cadogan Estate and to the west, the probably later mines of Lingheath. A post-medieval warren bank runs along the current line. The movement of this parish boundary, its relationship with the medieval and post-medieval warren and the earlier and later flint mining industry needs further examination. This could probably be best achieved by examination of any further documentary sources relating to the Cadogan Estate should they survive, followed by trial trenching through the Cadogan mines, across the boundary and into the Lingheath area. This could only responsibly be carried out if it was confirmed that this area was under direct threat as it would be a destructive intrusion into a site of schedulable quality.

- 8.14 The area to the south and east of Brandon is therefore an archaeologically sensitive area into which the proposed road scheme would have a serious impact. The post-medieval and prehistoric archaeology is of national importance, and the potential evidence for medieval life from study of the possible gallows area and the warrens is of regional importance when seen alongside previous work.

John Duffy  
January 2005

## Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Division alone. The need for further work will be determined by the Local Planning Authority and its archaeological advisors when a planning application is registered. Suffolk County Council's archaeological contracting service cannot accept responsibility for inconvenience caused to clients should the Planning Authority take a different view to that expressed in the report.

## References

- Gibson, C., 2004 *Lines in the Sand: Middle to Late Bronze Age settlement at Game Farm, Brandon*. EAA Occasional Paper 19.
- Pearson, T., 1996 *Lingheath Farm, Brandon, Suffolk*, Archaeological Field Survey Report, RCHME
- Pendleton, C., 1996 *Rapid Survey: Flint Mines* Unpublished
- Sussams, K., 1996 *The Breckland Archaeological Survey*, Suffolk County Council
- Tester, A., 2004 *BRD 165, Archaeological Excavation Report*. Unpublished, SCCAS Report no. 2004/35