

**BURWELL NG SUBSTATION, NEWNHAM DROVE,  
BURWELL CAMBRIDGESHIRE:**

**Archaeological Trial Trench Evaluation Report**

*Prepared by*

**NETWORK ARCHAEOLOGY LTD**

*For*

**NATIONAL GRID**

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# Non-Technical Summary

An Archaeological Trial Trench Evaluation was undertaken on land at Burwell NG substation, Cambridgeshire, during June 2021. The work took place in advance of construction works associated with the installation of two new 225MVAr Switched Capacitors (MSC) within the existing Burwell 400kV main substation in Burwell.

The construction works are classed as permitted development under the Town and Country Planning (General Permitted Development) (England) Order 2015. However, mindful of their commitments under Schedule 9 of the Electricity Act 1989 (which notes that regard should be given to objects of archaeological interest amongst other environmental responsibilities) National Grid commissioned Network Archaeology Limited to undertake the evaluation, with the aim of identifying any archaeological resources that may be threatened by the proposed development, and of informing any additional archaeological mitigation that might be required.

The evaluation revealed a series of linear, segmented features, examples of which were encountered in each of the ten evaluation trenches. The features were arranged in parallel north-east to south-western alignments that extended across the entire evaluation area. These alignments followed the south-west to north-east orientation of the existing field boundaries and the features were interpreted as post-medieval marling pits, associated with the enclosure and improvement of marginal fenland.

# 1 Introduction

## 1.1 Purpose of this report

This report is designed to inform the relevant parties (National Grid, Cambridgeshire County Council) of the results of the archaeological trial trench evaluation that was undertaken in advance of the proposed development at Burwell NG substation. The aim of the report is to evaluate the archaeological resource that may be threatened by the proposed development and to assist in, in devising an appropriate strategy to mitigate the archaeological impact of the proposed development, should this be deemed necessary.

## 1.2 Project Background

### 1.2.1 Proposed development

The proposed development is for the construction and installation of an extension to the existing National Grid electricity substation. In this regard, National Grid is proposing to install two new 225MVAr Switched Capacitors (MSC) within the existing Burwell 400kV main substation in Burwell.

National Grid intend to undertake these works as permitted development under the Town and Country Planning (General Permitted Development) (England) Order 2015. A permitted development notification letter was sent to ECDC to notify them of these works.

The work will include the following main elements:

- **Extension of the existing substation to accommodate the new MSC capacity banks**
- **Construction of two new MSC capacity banks and associated busbars**
- **Construction of a permanent security fence**
- **New access road turn-in off Newnham Drive**

### 1.2.2 Location, description and natural environment

- **Location:** The permitted development area (PDA) is located on the south-western side of Newnham Drive, approximately 1.25km to the north-east of the centre of Burwell (Figure 1, NGR 557760, 267296).
- **Description:** The PDA occupies a single rectangular parcel of land covering an area of c. 2.5ha.
- The PDA is bounded to the west and south by drainage dykes, to the north by Newnham Drive, and to the east by the existing electricity substation complex.
- **Land-use:** The PDA is currently a single arable field.
- **Solid geology:** Cretaceous Lower Chalk (BGS sheet 188 2018);

- **Soils:** Freely draining lime-rich loamy soils: Shallow lime-rich loamy soils (Cranfield University/NSSI, 2018);
- **Ground levels:** 4.75m to 5m AOD.

## 1.3 Planning History

National Grid proposes to extend the western section of the existing 400kV outdoor AIS hybrid five switch Burwell Substation to facilitate the installation of two new 225MVAR Switched Capacitors (MSC). Burwell Substation is located within farmland approximately 1km west of Burwell, Cambridgeshire and the proposed development area (PDA) is centred at National Grid Reference 557760, 267307 and covers an area of approximately 2.3 hectares.

National Grid intend to undertake these works as permitted development under the Town and Country Planning (General Permitted Development) (England) Order 2015. A permitted development notification letter was sent to ECDC to notify them of these works. Whilst the proposed development works would therefore not come under local planning consideration, National Grid have a duty of care to reasonably mitigate any effect on sites of archaeological interest. As such, a desk-based assessment (DBA) was undertaken (Jacobs 2019), which indicated there was potential for remains relating to the prehistoric period in particular to be impacted by this additional phase of work.

In discussion with National Grid, it was agreed the most appropriate mitigation would be undertaking a trial trench evaluation of the proposed development area, with the aim of identifying any archaeological remains that may be threatened by the proposed development, and with the aim of informing any subsequent archaeological mitigation that may be required.

## 1.4 Archaeological Context

This section provides a brief overview of the history and known heritage assets in the vicinity of the PDA. This information is taken from the Cultural Heritage Desk-Based Assessment of the site that was prepared in 2019 (Jacobs 2019).

### 1.4.1 Prehistoric

There are no prehistoric heritage assets recorded within the PDA, however, finds have been recorded within the wider environs of the site, including;



- Mesolithic flint artefacts and possible Early Neolithic pottery (HER MCB24147) found during an archaeological evaluation at Stanford Park approximately 500m to the south-east of the PDA (HER ECB5110). A ditch containing possible Early Neolithic pottery, animal bone and burnt bone and two undated post holes were also identified (Edwards 2017);
- Evidence of Late Neolithic and Early Bronze Age activity (HER MCB8123) and an Iron Age ditch system (HER MCB8124) identified during excavation work carried-out to investigate the findspot of a hoard of Roman bronze vessels (HER ECB1733) approximately 550m to the north-east of the PDA;
- A concentration of Neolithic and Early Bronze Age flint artefacts (HER MCB7752) recovered from Hallard's Fen approximately 700m to the west of the PDA. These are interpreted to relate to a possible settlement site;
- A small number of worked Prehistoric flints and undated pits and post holes (HER MCB18147) recorded during excavation work (HER ECB2594) at Kingfisher Drive approximately 750m to the north-east of the PDA; •
- Two undated pits (HER MCB14590) which may be of Iron Age date, identified during a watching brief (HER ECB377) approximately 850m to the south-east of the PDA.
- Prehistoric findspots have been recorded in the vicinity of the PDA. These can be sub-divided into two clusters: three findspots are identified within the historic settlement core of Burwell to the east of the Scheme and include a Mesolithic axe (HER MCB7850) and a Neolithic axe and knife (HER MCB17752 and MCB2780). The remainder of the findspots are recorded within the fenland to the west and south-west of the PDA and include Mesolithic, Neolithic and Bronze Age artefacts (HER MCB7779, MCB7805, MCB7806, MCB7819, MCB7822, MCB8110, MCB8111, MCB8117, MCB8118, MCB8120 and MCB8189).

### 1.4.2 Roman

There are no Roman assets recorded within the PDA. However, Roman assets have been identified on the higher ground in Burwell to the east including:

- A hoard of 15 Roman bronze vessels (HER MCB8122) dating to the fourth century, were discovered during the bulldozing of a natural knoll in 1967 approximately 550m to the north-east of the PDA. A subsequent trial excavation on the site revealed evidence of two confirmed ditch systems, one of which was Roman in date (Browne 1976).
- Roman pottery and ditches (HER MCB7852) found in 1969 approximately 650m to the north-east of the PDA;
- Further Roman pottery, trackways and ditches/land divisions (HER MCB14114) were identified at Low Road during a programme of archaeological evaluation (HER ECB1434 and ECB1435) approximately 970m to the south-east of the PDA.
- In addition, the PAS records three Roman findspots including two coins and part of a stone cosmetic mortar, close to the location of two of the above noted assets (HER MCB8122 and MCB7852) approximately 600m to the north-east of the PDA.

### 1.4.3 Saxon and Medieval

There are no Saxon assets within the PDA. However, an Anglo-Saxon cemetery dating to circa 7th century was discovered at Victoria Lime pits Burwell in 1884, approximately 1.3km to the south-east of the PDA (CHER no 06764). The cemetery indicates Saxon settlement in the vicinity of the modern village, and the village itself is first recorded in 1060; the name meaning 'spring by the burg'. It is unclear what the burg referred to in the name relates to as there are no dominant topographic features within the area and Burwell Castle (NHLE 1015596) was not built until the mid-12th century (Hall 1996, 102).

There are no medieval (AD 1066 – AD 1550) assets recorded within the PDA, but 11 assets of this period have been identified on the higher ground in Burwell to the east including:

- The findspot of a pilgrim's lead ampulla (HER MCB14759) found approximately 500m to the south-east of the PDA;
- Medieval and Post-medieval ditches, pits and post holes (HER MCB17397) dating from the 12th to 16th centuries, were identified during archaeological works (HER ECB2443 and ECB2446) at Brown's Yard approximately 720m to the east of the PDA;
- The site of a medieval port (HER MCB16583) on Burwell Lode (HER MCB8229) approximately 740m to the north-east of the PDA;
- Medieval and Post-medieval ditches, pits and post holes (HER MCB17940) identified during an archaeological evaluation (HER ECB2473 and ECB2594) at Kingfisher Drive approximately 750m to the north-east of the PDA;
- A house platform (HER MCB13382) and associated enclosure recorded approximately 760m to the east of the PDA;
- Tunbridge Farm (HER MCB1428), a Post-medieval farmstead located on an earlier medieval moated site, approximately 820m to the south-east of the PDA;
- The findspot of architectural fragments (HER MCB7855) found in the garden of Burwell House approximately 880m to the north-east;
- The remains of the Priory of St John (HER MCB8286) founded in c.1100 and located approximately 940m to the south-east of the PDA;
- The Causeway (HER MCB8119) which comprises a low ridge or bank running parallel to the existing road of the same name and probably represents a former plough headland. The asset is located approximately 940m to the east of the PDA;
- A moat at The Hall (HER MCB1429) located approximately 1km to the south-east of the PDA.

### 1.4.4 Post-medieval and early modern

There are no Post-medieval assets recorded within the PDA, although 13 Post-medieval assets are known in the wider vicinity of the site. These mostly relate to former buildings identified from historic mapping. However, assets of note include:

- A series of canals and basins extending along the eastern side of Burwell (HER MCB27337) located approximately 300m to the east of the PDA;
- Cropmark features comprising trackways and enclosures (HER MCB23990) identified approximately 530m to the south of the PDA. These assets are of low value at best.

### **1.4.5 Historical mapping**

Analysis of the earliest available historic mapping (1806 Burwell Estate map, 1842 Burwell Tithe map, 1886 Ordnance Survey map) shows that the PDA is located in an area of reclaimed and drained fen that was in use as agricultural land since at least the mid 19<sup>th</sup> century. The PDA remains undeveloped agricultural land at the present time.

## **1.5 Archaeological potential of the PDA**

### **1.5.1 Assessed potential**

No archaeological work has been previously carried out within the PDA and only limited investigation has taken place within the immediate vicinity, consequently making an accurate assessment of archaeological and environmental potential problematical.

There is a moderate risk that previously unknown archaeological assets dating from the Prehistoric period are present within the PDA. There is clear evidence that the fen to the west of the PDA was exploited during the Neolithic to Bronze Age prior to becoming covered by peat and it is possible that similar evidence survives within the PDA. This is likely to comprise isolated unstratified finds and truncated below-ground features.

The risk of unknown archaeological assets from all other periods being present within the Scheme is considered to be low. Given the topographic position of the PDA, away from the historic settlement core and within low-lying fen, it would have been unsuitable for settlement and agriculture until it was drained and improved in the Post-medieval period.

Table 1.1 presents the likelihood of encountering different 'functional classifications' or 'site types' and the overall potential by period. A fully comprehensive suite of categories is not presented, only those deemed most relevant to the present Study Area.

Table 1: Potential encounter rate by period

CLASSIFICATION PERIOD	Agricultural	Boundaries	Communications	Funerary	Industrial	Lithic scatters	Settlement	Overall Potential
Early Prehistoric				●		●	●	Moderate
Late prehistoric	●			●		●	●	
Romano-British/Roman	●							Low
Anglo-Saxon	●							Low
Medieval		●					●	Low
Post-Medieval	●	●						Low
Modern								Low

Blank = negligible potential, ● = low to medium potential, ● = medium to high potential

## 1.6 Aims and objectives.

### 1.6.1 General objectives

The general objectives of the trial trench evaluation were:

- to confirm the presence or absence of surviving archaeological remains within the development areas of the site.
- to determine the location, nature, extent, date, condition, state of preservation, significance, and complexity of any archaeological remains.
- to determine the likely range, quality, and quantity of artefactual and environmental evidence present.
- to inform a strategy for the recording, preservation and/or management of the identified assets.
- to interpret the archaeology of the site within its local, regional, and national archaeological context.

## 1.7 Methods

The evaluation was undertaken in accordance with the methodology laid out in the WSI (NAL 2021).

A total of 10 trial trenches were excavated, representing a circa 4% sample of the development area. Each trench measured 1.80m x 50m. The trenches were aligned randomly to cover the full extent of the development area.

## **1.8 Resources**

The evaluation was carried out by a team of up to four archaeologists and took place in the week 10<sup>th</sup> June 2 to 15<sup>th</sup> June 2021.

## 2 Results

### 2.1 Introduction and general stratigraphy

This chapter presents the archaeological results of the trial trench evaluation. All works were undertaken in accordance with the Written Scheme of Investigation (WSI) for the Project (Network Archaeology 2021).

A total of 10 no. evaluation trenches were excavated within the PDA. The trenches were arranged in a random distribution across the PDA and each trench measured 1.80m x 50m.

A similar stratigraphy was observed in each trench, consisting of weathered chalk bedrock at a depth of circa 0.35m- 0.45m below existing ground level. Sondage excavations were cut into the bedrock in Trenches 3, 4, 5, 6, and 9. These were dug to a mean depth of 1.0m below existing ground level and established that there were no significant variations in the chalk bedrock. In particular, there was no evidence in any trench of any buried soils or palaeochannels.

A weathered chalk subsoil was observed in Trenches 1, 2, 3, 4, 5, and 9, sealing the weathered chalk bedrock. The bedrock was sealed by a modern silty ploughsoil.

A series of linear, segmented features, interpreted as post-medieval marling pits, were encountered in each of the ten evaluation trenches. These were cut into the weathered chalk subsoil (where present), or directly into the underlying chalk bedrock in trenches where no subsoil was evident. The features were sample excavated within each trench in order to establish morphology and to recover any finds from within their fills.

The results from each trench are presented by below; a summary table of trench data is presented in Appendix A and a summary table of contexts is presented in Appendix B.

In the following text, features and deposits are referred to by unique context numbers. A convention has been adopted whereby cut features and structures are referenced in **bold** type, whilst deposits such as fills, and layers are referenced in plain type.

### 2.2 Trench 1 (Figure 3)

Trench 1 was aligned east to west and was situated at the northern end of the PDA.

Excavation revealed a total of nine features, all of which followed the same south-west to

north-west orientation. Several of the features terminated within the trench and one such feature, **103**, was sample excavated.

Cut **103** was 0.85m wide and was sub-rectangular in plan, with a very clearly -defined rectangular north-western terminal. The feature was 0.10m deep and had an irregular, shallow, concave profile. Two fill deposits were noted; a basal fill of very peaty, loose silt, 104, and a slightly darker upper fill of similar material, 105. Deposit 105 was sealed by modern ploughsoil 102.

### 2.3 Trench 2 (Figure 3)

Trench 2 was aligned north to south and was situated 14m to the south of Trench 1. A total of seven features, all of which followed the same south-west to north-west orientation, were noted within the trench. As can be seen in Figure 1, these represented continuation of the linear alignments previously noted in Trench 1. Several of the features terminated within the trench and one feature, **203**, was sample excavated.

Cut **203** was 0.81m wide and 0.18m deep, with a vertical-sided, flat based profile, and ended in well-defined rectangular north-eastern terminal. It was filled by a single deposit of very peaty silt 204. Deposit 204 was sealed by modern ploughsoil 200.



Plate 1: North-east facing section of Cut 203

## 2.4 Trench 3 (Figure 3)

Trench 3 was aligned south-west to north-east and was situated 16m to the west of Trench 2. A total of 15 features were noted within the trench, the majority of which followed the same south-west to north-west orientation. One feature, **305**, appeared to follow a slightly different alignment and a sample excavation was conducted at the intersection between **305** and feature **303**, which followed the prevailing orientation.

Cut **305** was 1.30m wide and 0.06m deep, with a shallow -sloping, concave profile. It was filled by a single deposit of pale grey chalky silt, 306, and was interpreted as a naturally-formed hollow or depression containing weathered chalk bedrock.

Deposit 306 was truncated by Cut **303**. This feature was 0.83m wide and 0.35m deep, with roughly vertical sides and a concave base. The single fill 304 consisted of very peaty silt which yielded one fragment of CBM and one pottery sherd of 19<sup>th</sup> - 20<sup>th</sup> century date (Table 2). Deposit 304 was sealed by modern ploughsoil 200.

A single fragment of bone was recovered from the fill 311 of a feature, **310**, which was situated to the south-east of Cut **303**. The feature was otherwise not excavated.



Plate 2: Trench 3, facing north-east.

## 2.5 Trench 4 (Figure 4)

Trench 4 was aligned east to west and was situated 13.5m to the south of Trench 3. Excavation revealed a total of nine features. Again, these followed the prevailing south-west



to north-west orientation noted in the previous trenches, with the Trench 4 features representing a southern continuation of the alignments noted in Trench 3. One feature, **403**, was sample excavated.

Cut **403** was 0.95m wide and 0.34m deep, with a roughly vertical sides and a concave base. It was filled by dark, peaty silt 404, which contained fragments of animal bone and a sherd of 19<sup>th</sup> - 20<sup>th</sup> century pottery (Table 2). Deposit 404 was sealed by modern ploughsoil 400.



Plate 3: Trench 4, facing east.



Plate 4: South-west facing section of Cut 403.

## 2.6 Trench 5 (Figure 4)

Trench 5 was aligned north to south and was situated 12m to the south of Trench 4. A total of six features were identified, which again followed the prevailing south-west to north-west orientation noted in the previous trenches. One feature which appeared slightly anomalous in plan, **503**, was sample excavated.

Cut **503** was roughly subcircular in plan, with a diameter of 1.65m. The profile was broadly bowl-shaped, with moderately-sloping sides and a maximum depth of 0.35m deep. The single fill, 504, consisted of mixed weathered chalk fragments and sandy silt. The feature was interpreted as a tree throw. Deposit 504 was sealed by modern ploughsoil 500.

## 2.7 Trench 6 (Figure 4)

Trench 6 was aligned north-west to south-east and was situated 10m to the west of Trench 5. A total of 12 features were noted, all followed the prevailing south-west to north-west orientation noted in the previous trenches. One feature, **602**, was sample excavated.

Cut **602** was sub rectangular in plan, with a well-defined sub rectangular south-western terminal. The feature was 0.85m wide and 0.22m deep with a vertical-sided, flat-bottomed profile very similar to that of Cut **103**. It was filled with a deposit of peaty silt 606. Deposit 606 was sealed by modern ploughsoil 600.



Plate 5: South-west facing section of Cut 602.

## 2.8 Trench 7 (Figure 5)

Trench 7 was aligned west to east and was situated 10m to the south of Trench 6. A total of 15 features were noted within the trench, representing a continuation to the south of the south-west to north-west aligned features previously noted in Trench 6. One feature, **702**, was sample excavated.

Cut **702** was 0.70m wide and 0.17m deep, with vertical sides and a concave base. It was filled with a deposit of peaty silt 703. This yielded a single iron nail (Table 2). Deposit 606 was sealed by modern ploughsoil 700.



Plate 6: South-east facing section of Cut 702.

## 2.9 Trench 8 (Figure 5)

Trench 8 was aligned north to south and was situated 8m to the south of Trench 6. A total of six features were noted within the trench, following the same south-west to north-west orientation seen in the other trenches. One feature, **802**, was sample excavated.

Cut **802** was 0.82m wide and 0.30m deep, with vertical sides and a concave base. However, the feature was somewhat unusual in that it appeared to have a deeper, vertical-sided slot cut along its north-western edge. The slot was 0.30m wide and was excavated to a depth of 0.50m (i.e. 0.20m below the level of the main cut), at which depth excavation was abandoned due to inundation by groundwater. It is possible that the slot represents a later feature, possibly a field drain, truncating the original feature. However, no differences could be discerned between the silty fill of the main cut and that of the deeper slot (deposit 803=804) and no cut or recut was observed in section. Deposit 803=804 was sealed by modern ploughsoil 800.

## 2.10 Trench 9 (Figure 5)

Trench 9 was aligned south-west to north-east to south and was situated 6m to the west of Trench 8. A total of 11 features were noted within the trench, following the same south-west to north-west orientation seen in the other trenches. Two features, **902** and **903** were sample excavated. A sherd of Late 19<sup>th</sup> - 20<sup>th</sup> century pottery was recovered from the fill 914 of a third feature, **913**, which was otherwise not excavated.

Cut **902** was 0.78m wide and 0.15m deep, with vertical sides and an irregular base. It was again filled by dark, peaty silt 901. Cut **903** was situated immediately to the north-east of **902**, with both features forming part of the same linear alignment. Cut **903** was 0.72 m wide and 0.08m deep, with steeply-sloping sides and a flat base. It was filled by peaty silt 904. Deposits 901 and 904 were sealed by modern ploughsoil 900.



Plate 7: Trench 9, facing south-west.



Plate 8: South-west facing section of Cut 902.

## 2.11 Trench 10 (Figure 6)

Trench 10 was the southernmost of the evaluation trenches and was aligned west to east. It was situated 16m to the south of Trench 9. A total of 14 features were noted within the trench, most following the same south-west to north-west orientation seen in the other trenches. A total of six features, **1002**, **1004**, **1006**, **1008**, **1012** and **1014** were sample excavated.

Cut **1002** was situated in the western end of the trench and was 0.70m wide and 0.25m deep. The feature had a vertical-sided, flat bottomed profile and was filled by peaty silt 1003. An iron nail was recovered from this deposit (Table 2).

Cut **1004** was situated immediately to the west of **1002**. Unlike **1002**, which continued to north and south of the trench, **1004** terminated within the trench, with a well-defined sub-rectangular north-eastern terminal. The feature was 0.46m wide and 0.16m deep, with a concave, bowl shaped profile that was markedly different to that of **1002**. This raised the possibility that the feature represented a different episode of pit cutting, although the peaty silty fill, 1005, was similar to those previously noted and contained a single iron nail.

A number of apparently intercutting features were investigated in the central portion of the trench. The earliest of these, **1006**, was an elongated feature which followed the same south-west to north-east orientation seen in the previous trenches. Cut **1006** was 0.70m wide and 0.16m deep, with a vertical-sided, flat based profile. It was filled by peaty silt 1007.

Fill 1007 was cut to the east by a second feature **1008**, which was remarkable in being aligned south-east to north-west, against the prevailing trend noted on the rest of the site. Cut **1008** was sub-rectangular in plan, with a width of 0.89m and a depth of 0.18m. The feature had a shallow V-shaped profile and was filled by peaty silt 1009.

Situated to the east of 1008 was the remnant of a further feature, **1012**, which probably represented the remaining north-eastern terminal of an elongated feature, similar to **1004**. Cut **1012** survived to a width of 0.53m and was 0.24m deep. The steep-sided, bowl shaped profile was similar to that of **1004** and the feature was filled by peaty silt 1013.

Deposits 1009 and 1013 were cut by a later feature, **1010**. Cut **1010** was 0.40m wide and 0.37m deep. It appeared to be the north-eastern terminal of an elongated feature aligned south-west to north-east, and possibly represents a re-cut of **1012**. The feature had steep to vertical sides and a flat base. It was filled by peaty silt 1011 which contained one sherd of late 19<sup>th</sup>-20<sup>th</sup> century pottery (Table 2).

Cut **1014** was situated in the eastern part of the trench and was the final feature investigated within Trench 10. Like **1004**, this feature terminated within the trench. Excavation showed **1014** to be 1.20m wide and 0.28m deep, with an irregular base and moderate to steeply-sloping sides and filled by peaty silt 1015.

All the features in Trench 10 were sealed by modern ploughsoil 1000.



Plate 9: Trench 10, facing east.



Plate 10: North-east facing section of Cut 1002.

## 3 Discussion

### 3.1 General

The trial trench evaluation was successful in that it revealed considerable archaeological activity, in the form of linear alignments of elongated, sub-rectangular pits which extended across the whole site.

Few dateable finds were recovered from the features, but the small assemblage of pottery sherds was indicative of a post-medieval date.

No earlier phases of activity were noted on the site.

The peaty, organic fill of the features suggested a function related to cultivation, as did the fact that the features were aligned in relation to the existing post-medieval field boundaries. Following discussion of the evaluation results with Kasia Gdaniec, Senior Archaeologist, Cambridgeshire County Council Historic Environment Team, the features were confirmed to be post-medieval marling pits.

The historical importance and widespread utilisation of marling as an agricultural technique in Britain has largely been overlooked and, as W.M. Mathew notes, the actual chemical processes involved and the purpose of marling itself have frequently been misunderstood (Mathew 1993). In general, though, the process involved adding calcareous clayey material to cultivation soils to reduce soil acidity, with the added benefit of thickening and improving the soil structure of thin soils. Given the location of the Burwell site on the relatively thin, acidic peaty soils at the former fen edge, the evidence for the practise is perhaps unsurprising.

At Burwell, the lines of elongated pits thus represent the excavation of weathered chalk bedrock, prior to its possible admixing with other ingredients and reapplication to the topsoil. It is likely that the features were immediately backfilled with the then extant topsoil, hence the peat rich fills which are now markedly different to the existing improved modern ploughsoil. Whilst there is some evidence of intercutting pits, the overall orientation of the features suggests that the majority were excavated at around the same time- perhaps in a single campaign of work- with the slight variations in size and morphology evident between the individual features being a result of hand excavation rather than design.

Other local examples of marling pits have been noted during a recent trial trench evaluation on land to the east of Chear Fen Farms, Ely Road, Chittering, Cambridgeshire, where the features had clear parallels to those seen at Burwell (Sommers 2021). At Chittering, the pits were generally sub-rectangular and measured c. 2m by 1m in plan and 0.3m–0.6m in depth, with near vertical or undercutting sides and roughly flat bases. The majority of the pits were arranged in straight alignments, although some apparently random examples were also present. As at Burwell, all were all infilled with redeposited topsoil, whilst the limited pottery assemblage recovered from the fills consisted of single sherds of late 18th to early 20th century pottery from two separate features (Sommers 2021).



In regard to the dating of the Burwell pits, historical evidence shows that the drainage of the fenland commenced in the 17<sup>th</sup> century and the area to the south of Burwell Lode (encompassing the current site) is thought to have been drained by 1720 (HMSO 1972). However, the agricultural improvement and cultivation of the drained land did not always immediately follow; the Victoria County History, for example, reports that as late as 1800, the supposedly drained fens were constantly inundated due to the poor maintenance of the drainage channels. This appears to have been by design rather than by accident, as the flooded fen was utilised by the poor for both turf-cutting and for the cutting of sedge, which could be used as fodder or sold in the uplands as fuel to dry malt (Wareham and Wright 2002). The final area of fen in the vicinity of Burwell thus utilised, Poor's Fen (to the north of the current site), was finally let out for agriculture in 1851, precipitating a land occupation by 500 people who had previously exercised common rights to gather sedge and turf there.

Several sherds of post-medieval to modern pottery were recovered from the fills of the features at Burwell. With the particular history of the village in mind, it is likely that the marling pit-cutting activity on site, and the agricultural improvement that it represents, took place in the first half of the 19<sup>th</sup> century.

## 3.2 Research Aims

The agenda and research aims for archaeological projects within Cambridgeshire are covered by the East of England Regional Research Framework (<https://researchframeworks.org/eoe/>).

The results of the trial trench evaluation at Burwell Substation have the potential to contribute to the following specific regional research question, as laid out in the research framework:

### **Post-medieval Research Agenda**

**P-Med 14: How can we characterise the post-medieval historic landscape and the factors which affected it?**

The evidence of marling pits at Burwell is significant in helping to characterise the post-medieval development of the town, its agricultural history and its relationship to the surrounding landscape, including the former fenland. It also adds to the regional corpus of knowledge regarding these features, their distribution, and the agricultural regimes that they represent.

## 4 Conclusion

The evaluation was successful in identifying a series of post-medieval features associated with agricultural improvement. No earlier features were identified during the evaluation and no palaeochannels or buried soils were noted.

The form, extent and morphology of these features were preserved by record and will add to a growing corpus of knowledge regarding the post-medieval landscape in Cambridgeshire.

Given the lack of earlier features, further archaeological works within the proposed development area are unlikely to significantly increase archaeological knowledge and understanding of the site.

## 5 Finds

A total of 34 finds were collected from ten trenches, as seen in Table 2 below.

The majority of finds comprised pottery sherds, but occasional flint, CBM and iron nails were also recovered. The pottery sherds were assessed and preliminary spot-dates were obtained from NAL's regular external post-medieval pottery specialist. These spot dates are presented in Table 2 below. The full pottery assessment is given in Appendix 3.

The preliminary pottery spot-dates for the finds range from the medieval to the modern periods. However, finds recovered from secure contexts were all of late 18<sup>th</sup> to 19<sup>th</sup> century date.

A full assessment of the finds has been made and is presented in Appendices 3 and 4 below. The finds have served their purpose in regard to relative dating and are otherwise not significant. Therefore the discard of the finds has been approved by CHET and they will not be retained in the site archive.

Table 2: Finds quantification and spot-dates

Trench	Context	Material	Description	Count	Weight (g)	Provisional date
1	105	Pottery		1	34	L18-19 <sup>th</sup> century
2	200	Pottery	Brown glaze, slipware	3	22	L18-20 <sup>th</sup> century
3	300	Clay pipe	Stem	1	1	Post-medieval
3	300	Pottery	Ceramic beverage bottle rim	1	22	L19-20 <sup>th</sup> century
3	304	CBM	Tile	1	16	Medieval-modern
3	304	Pottery	Blue and white transfer print	1	10	L18-19 <sup>th</sup> century
3	311	Bone		1	2	Uncertain
4	401	Flint		1	8	Uncertain
4	401	Pottery		1	6	L18-19 <sup>th</sup> century
4	404	Bone		5	4	Uncertain
4	404	Pottery	Blue and white transfer print	1	10	19 <sup>th</sup> century?
7	703	Iron	Nail	1	2	Modern
9	914	Pottery		1	8	L18-19 <sup>th</sup> century
10	1000	CBM	Tile	2	20	Modern
10	1000	Flint		2	20	Uncertain
10	1000	Iron	Iron rod	1	70	Modern
10	1000	Pottery	Blue and white transfer print	4	4	19 <sup>th</sup> century?
10	1003	Iron	Nail	2	8	Modern
10	1005	Iron	Nail	2	10	Modern
10	1011	Pottery		1	1	L18-19 <sup>th</sup> century

## 6 Archive

On the completion of the project, the physical archive will be prepared to the standards laid out in the Cambridgeshire County Council *Guidelines for Deposition of Archaeological Archives in Cambridgeshire* Version 5 (May 2020).

Local and national guidelines, prior to deposition. Transfer of title for all artefacts will be sought from the landowners. Artefacts for retention in the site archive will be packed in standard archive boxes and checked against the catalogues. The documentary archive will contain all the site records, including original context sheets and other recording sheets, hand-drawn site plans, as well as copies of the assessment report and the analysis report. Digital data, including survey data and digital plans, and spreadsheets of site data, catalogues and specialist analysis data, will be deposited with the Archaeological Data Service (OASIS - ADS).

The paper archive components are listed below in Table 3. The digital archive comprised survey data and digital images.

Table 3: Archive quantification

Archive component	Count
Trench Sheets	10
Context indices	4
Context records	72
Drawing indices	1
Sample indices	0
Sample Sheets	2
Permatrace sheets	2
Photographic indices	3

## 7 Reference

AAP	2007	Archaeological Archives: A Guide to best practice in creation, compilation, transfer and curation	
Association for Environmental Archaeology,	1995	Environmental archaeology and archaeological evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England.	Working Papers of the Association for Environmental Archaeology 2, 8 ff. York: Association for Environmental Archaeology
Cambridgeshire County Council	2020	Guidelines for Deposition of Archaeological Archives in Cambridgeshire Version 5	
ClfA Rev 2008a	(Oct 1994, Rev. Sept 2001 & Oct 2008)	Standards and Guidance for Archaeological Monitoring	
ClfA Rev 2008b	(Oct 1994, Rev. Sept 2001, Oct 2008)	Standards and Guidance for Archaeological Excavation	
ClfA Rev 2008c	(Sept 2001, Rev. Oct 2008)	Standard and guidance for the collection, documentation, conservation and research of archaeological materials	
Dobney, K., Hall, A., Kenward, H. and Milles, A.	1992	A working classification of sample types for environmental archaeology	Circaea 9.1 (1992 for 1991), pg. 24-26
English Heritage	1997	English Heritage Archaeology Division Research Agenda (Unpublished draft)	London
English Heritage	2001	Centre for Archaeology Guidelines: Archaeometallurgy	London
English Heritage	2008	Investigative Conservation: Guidance on How the Detailed Examination of Artefacts from Archaeological Sites Can Shed Light on Their Manufacture and Use	
English Heritage	2009	Management of Research Projects in the Historic Environment and MoRPHE Project Planning Note 3: Excavation	London
Jacobs	2019	Burwell Main 400kV Substation Cultural Heritage Desk-Based Assessment	
Mathew, W.M.	1993	'Marling in British Agriculture: A Case Partial Identity'	<i>Agricultural History Review</i> Vol. 41, no. II, pp 97-110
Network Archaeology	2021	Burwell NG Substation, Newnham Drove, Burwell: Written Scheme of Investigation for Archaeological Trenched Evaluation	

Protheroe, R.E.	1912	English Farming: Past and Present	London, Longmans, Green & Co. Ltd
Somers, M.	2021	Site East of Chear Fen Farms, Ely Road, Chittering, Cambridgeshire: Archaeological Evaluation	Cotswold Archaeology Report no. MK0272_1 (HER reference: ECB6300)
Wareham, A.F & Wright, A.P.M	2002	'Burwell: Economic History' in <i>Victoria County History of the County of Cambridge and the Isle of Ely: Volume 10, Cheveley, Flendish, Staine and Staploe Hundreds (North-Eastern Cambridgeshire)</i> , pp. 347-356.	VCH, London.

## 8 Acknowledgements

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Kasia Gdaniec, Senior Archaeologist, Cambridgeshire County Council Historic Environment Team, provided advice and guidance throughout the project. Network Archaeology would also like to thank her for kindly forwarding reference literature on the marling pits.

We would also like to acknowledge the hard work of the Network Archaeology staff. The project was managed for Network Archaeology by Nigel Cavanagh and resourced by Kealey Manvell. Fieldwork was directed by Andrew Hunn, with the assistance of Daniel Sendek, Matt Gault, Paolo Cabornari and Peter Townend.

## 9 Appendix 1: Trench Summary

Table 4: Trench summary

Trench No.	Orientation	Trench Coordinates		Dimensions (m)	Depth/Thickness (m)					Archaeology	Finds
		Point 1	Point 2		Overall	Topsoil	Subsoil	Palaeochannel	Buried soil		
1	E-W	557790.842, 267392.077	557840.009, 267392.621	50m x 1.80m	0.5	0.35	0.15	no	no	linear-aligned marling pits	pot
2	N-S	557809.104, 267376.944	557809.097, 267327.677	50m x 1.80m	0.5	0.3	0.2	no	no	linear-aligned marling pits	pot, clay pipe
3	SW-NE	557795.078, 267380.387	557754.018, 267353.535	50m x 1.80m	0.42	0.25	0.17	no	no	linear-aligned marling pits	pot,CBM, bone
4	E-W	557743.947, 267338.97	557793.966, 267337.378	50m x 1.80m	0.44	0.34	0.1	no	no	linear-aligned marling pits	pot, bone, flint
5	N-S	557775.471, 267324.212	557774.844, 267274.188	50m x 1.80m	0.45	0.3	0.15	no	no	linear-aligned marling pits	none
6	NW-SE	557763.326, 267278.295	557731.331, 267315.089	50m x 1.80m	0.35	0.35	n/a	no	no	linear-aligned marling pits	none
7	E-W	557753.954, 267276.862	557704.021, 267276.718	50m x 1.80m	0.35	0.35	n/a	no	no	linear-aligned marling pits	Fe
8	SW-NE	557733.575, 267261.297	557695.987, 267226.839	50m x 1.80m	0.4	0.4	n/a	no	no	linear-aligned marling pits	none
9	N-S	557740.413, 267217.984	557739.743, 267268.077	50m x 1.80m	0.4	0.3	0.1	no	no	linear-aligned marling pits	pot
10	E-W	55768.045, 267208.712	557732.349, 267209.232	50m x 1.80m	0.35	0.35	n/a	no	no	linear-aligned marling pits	CBM, Fe, flint, pot



# 10 Appendix 2: Context Listing

Table 5: Context Listing

Trench	Context	Type	Description	Dimensions (m)	Earlier than	Later than	Fill of
1	100	Layer	Topsoil; dark brown silty loam; modern ploughsoil	n/a	n/a	105	n/a
1	101	Layer	Subsoil; weathered grey clayey chalk	n/a	103	102	n/a
1	102	Layer	Natural; weathered chalk bedrock	n/a	101	nfe	n/a
1	103	Cut	Pit; sub-rectangular, marl pit	1.16+ x 0.85 x 0.10	104	101	n/a
1	104	Fill	Dark peaty silt; primary fill of 103	1.16+ x 0.82 x 0.05	105	103	103
1	105	Fill	Mid grey/brown silty clay ; upper fill of 103	1.16+ x 0.82 x 0.05	100	104	103
2	200	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	204	n/a
2	201	Layer	Subsoil; weathered grey clayey chalk	n/a	203	202	n/a
2	202	Layer	Natural; weathered chalk bedrock	n/a	201	nfe	n/a
2	203	Cut	Pit; sub-rectangular, marl pit	3.0+ x 0.91 x 0.18	204	201	n/a
2	204	Fill	Dark peaty silt; fill of 203	3.0+ x 0.91 x 0.18	200	203	203
3	300	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	304, 306	n/a
3	301	Layer	Subsoil; weathered grey clayey chalk	n/a	303,305	302	n/a
3	302	Layer	Natural; weathered chalk bedrock	n/a	301	n/a	n/a
3	303	Cut	Pit; sub-rectangular, marl pit	3.80+ x 0.91 x 0.18	304	301	n/a
3	304	Fill	Dark peaty silt; fill of 303	3.80+ x 0.91 x 0.18	300	303	303
3	305	Cut	Pit; sub-rectangular, marl pit	1.50 x 0.40 x 0.06	306	301	n/a
3	306	Fill	Dark peaty silt; fill of 305	1.50 x 0.40 x 0.06	300	305	305
3	307	Layer	Natural; weathered chalk bedrock	n/a	301	n/a	n/a
3	308	Layer	Natural; weathered chalk bedrock	n/a	301	n/a	n/a
3	309	Layer	Natural; weathered chalk bedrock	n/a	301	n/a	n/a
3	310	Cut	Pit; sub-rectangular, marl pit; unexcav	2.30+ x 0.73 x unexcav	311	301	n/a
3	311	Fill	Dark peaty silt; fill of 310	2.30+ x 0.73 x unexcav	300	310	310
4	400	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	404	n/a
4	401	Layer	Subsoil; weathered grey clayey chalk	n/a	403	402	n/a
4	402	Layer	Natural; weathered chalk bedrock	n/a	401	n/a	n/a
4	403	Cut	Pit; sub-rectangular, marl pit	1.80+ x 0.95 x 0.34	404	401	n/a
4	404	Fill	Dark peaty silt; fill of 403	1.80+ x 0.95 x 0.34	400	403	403
5	500	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	504	n/a

Trench	Context	Type	Description	Dimensions (m)	Earlier than	Later than	Fill of
5	501	Layer	Subsoil; weathered grey clayey chalk	n/a	503	502	n/a
5	502	Layer	Natural; weathered chalk bedrock	n/a	501	n/a	n/a
5	503	Cut	Pit; sub-circular, tree throw	1.65 dia x 0.35	504	501	n/a
5	504	Fill	Sandy silt; fill of 503	1.65 dia x 0.35	500	503	503
6	600	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	606	n/a
6	601	Layer	Subsoil; weathered grey clayey chalk	n/a	602	603,604,605	n/a
6	602	Cut	Pit; sub-rectangular, marl pit	1.80+ x 0.85 x 0.22	606	601	n/a
6	603	Layer	Natural; weathered chalk bedrock	n/a	601	n/a	n/a
6	604	Layer	Natural; sand	n/a	601	n/a	n/a
6	605	Layer	Duplicate number same as 603	n/a	n/a	n/a	n/a
6	606	Fill	Dark peaty silt; fill of 602	1.80+ x 0.85 x 0.22	600	602	602
7	700	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	703	n/a
7	701	Layer	Natural; weathered chalk bedrock	n/a	702	n/a	n/a
7	702	Cut	Pit; sub-rectangular, marl pit	1.8+ x 0.80 x 0.17	703	701	n/a
7	703	Fill	Dark peaty silt; fill of 702	1.8+ x 0.80 x 0.17	700	702	702
8	800	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	803	n/a
8	801	Layer	Natural; weathered chalk bedrock	n/a	802	n/a	n/a
8	802	Cut	Pit; sub-rectangular, marl pit	1.80+ x 0.82 x 0.30	803	801	n/a
8	803	Fill	Dark peaty silt; secondary fill of 802	1.80+ x 0.55 x 0.50	800	804	802
8	804	Fill	Dark peaty silt; primary fill of 802	1.80+ x 0.30 x 0.30	803	802	802
9	900	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	901, 904, 914	n/a
9	901	Fill	Dark peaty silt; fill of 902	2.50 x 0.78 x 0.15m	900	902	902
9	902	Cut	Pit; sub-rectangular, marl pit	2.50 x 0.78 x 0.15m	901	910	n/a
9	903	Cut	Pit; sub-rectangular, marl pit	2.83 x 0.72 x 0.08	904	910	n/a
9	904	Fill	Dark peaty silt; fill of 903	2.83 x 0.72 x 0.08	900	903	903
9	905	Layer	Duplicate number; same as 900	n/a	n/a	n/a	n/a
9	906	void	n/a	n/a	n/a	n/a	n/a
9	907	void	n/a	n/a	n/a	n/a	n/a
9	908	void	n/a	n/a	n/a	n/a	n/a
9	909	void	n/a	n/a	n/a	n/a	n/a
9	910	Layer	Natural; weathered chalk bedrock	n/a	902, 903, 913	n/a	n/a
9	911	Layer	Duplicate number; same as 910	n/a	n/a	n/a	n/a
9	912	Layer	Duplicate number; same as 910	n/a	n/a	n/a	n/a
9	913	Cut	Pit; sub-rectangular, marl pit; unexcav	2.35 x 0.70 x not excav	914	910	n/a
9	914	Fill	Dark peaty silt; fill of 913	2.35 x 0.70 x not excav	900	913	913

Trench	Context	Type	Description	Dimensions (m)	Earlier than	Later than	Fill of
10	1000	Layer	Topsoil; dark brown silty silt; modern ploughsoil	n/a	n/a	1003, 1005, 1007, 1011, 1015	n/a
10	1001	Layer	Natural; weathered chalk bedrock	n/a	1004, 1006, 1012, 1014	nfe	n/a
10	1002	Cut	Pit; sub-rectangular, marl pit	1.80+ x 0.70 x 0.25	1003	1000	n/a
10	1003	Fill	Dark peaty silt; fill of 1002	1.80+ x 0.70 x 0.25	1000	1002	1002
10	1004	Cut	Pit; sub-rectangular, marl pit	1.40+ x 0.46 x 0.16	1005	1001	n/a
10	1005	Fill	Dark peaty silt; fill of 1004	1.40+ x 0.46 x 0.16	1000	1004	1004
10	1006	Cut	Pit; sub-rectangular, marl pit	1.0 x 0.7 x 0.16	1007	1001	n/a
10	1007	Fill	Dark peaty silt; fill of 1006	1.0 x 0.7 x 0.16	1008	1006	1006
10	1008	Cut	Pit; sub-rectangular, marl pit	1.20 x 0.89 x 0.18	1009	1007	n/a
10	1009	Fill	Dark peaty silt; fill of 1008	1.20 x 0.89 x 0.18	1010	1008	1008
10	1010	Cut	Pit; sub-rectangular, marl pit	1.13+ x 0.40 x 0.37	1011	1013, 1019	n/a
10	1011	Fill	Dark peaty silt; fill of 1010	1.13+ x 0.40 x 0.37	1000	1010	1010
10	1012	Cut	Pit; sub-rectangular, marl pit	0.60 x 0.53 x 0.24	1013	1001	n/a
10	1013	Fill	Dark peaty silt; fill of 1012	0.60 x 0.53 x 0.24	1010	1012	1012
10	1014	Cut	Pit; sub-rectangular, marl pit	1.40+ x 1.2 x 0.28	1015	1001	n/a
10	1015	Fill	Dark peaty silt; fill of 1014	1.40+ x 1.2 x 0.28	1000	1014	1014

# 11 Appendix 3: Pottery Assessment

## Burwell NG Substation, Newnham Drive, Burwell, Cambs (BSS14): post-medieval pottery

Sue Anderson, July 2021.

### 11.1 Introduction

Fourteen sherds of pottery weighing 123g were collected from nine contexts. Table 6 shows the quantification by fabric; a summary catalogue by context is included as Appendix 1.

Table 6: Pottery quantification by fabric

Description	Fabric	Date range	No	Wt/g	Eve	MNV
Glazed red earthenware	GRE	M.16th-18th c.	1	6		1
Post-medieval slipware	PMSW	17th c.	1	9	0.06	1
Nottingham-type stoneware	ESWN	L.17th-E.19th c.	1	7		1
English stoneware	ESW	17th-20th c.	1	24	1.00	1
Pearlware	PEW	L.18th-19th c.	2	13		2
Yellow ware	YELW	L.18th-E.20th c.	4	50	0.07	4
Refined factory-made whiteware	REFW	19th-20th c.	4	14	0.19	4
<i>Totals</i>			<i>14</i>	<i>123</i>	<i>1.32</i>	<i>14</i>

### 11.2 Methodology

Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve).

The minimum number of vessels (MNV) within each context was also recorded, but cross-fitting

was not attempted unless particularly distinctive vessels were observed in more than one context. Methods follow MPRG recommendations (MPRG 2001) and form terminology follows MPRG classifications (1998). Fabrics were identified based on Spoerry (2008 and 2016) and Anderson (2020). The data were input directly onto an MS Access database, which forms the archive catalogue.

### 11.3 The assemblage

Two sherds of post-medieval glazed redwares were recovered. One was certainly decorated with slip (PMSW) and the other one may have been, but any traces were lost (GRE). Both fragments were rims of bowls in typical thickened everted forms. The PMSW sherd had concentric lines of white slip on the inner rim, although most of it was lost. A strip without glaze on the GRE sherd could also have been caused by loss of a slip line. Both came from topsoil (200) and are likely to be of 17th-century date.

A body fragment of Nottingham-type stoneware was also recovered from (200), and there was a 19th-century bottle rim from (300), in a grey fabric with brown glaze which may be a Derbyshire product.

The remainder of the assemblage comprised factory-made earthenwares. These included a pearlware plate rim with a willow pattern transfer-printed border, a small rim fragment of refined whiteware also with a willow pattern border, two tiny sherds of pearlware/refined whiteware with flow blue and ?transfer-printed decoration, and a large fragment of a refined whiteware bowl rim with a blue transfer-printed colonial (?Indian) scene externally and fancy border internally. Several sherds of yellow ware utilitarian bowls were also recovered. This group is broadly of 19th-century date.

### 11.4 Pottery by context

Table 7 shows the distribution of pottery by context, with spotdates.

Table 7: Pottery by trench and feature

Trench	Feature	Context	Type	Fabric	Spotdate
1	103	105	Pit	YELW	L.18th-19th c.
2	-	200	Topsoil	GRE PMSW ESWN	L.17th-19th c.
3	-	300	Topsoil	ESW	19th c.
	303	304	Pit	PEW	L.18th-19th c.
4	-	401	Subsoil	YELW	L.18th-19th c.
	403	404	Pit	REFW	19th c.?
9	913	914	Pit	YELW	L.18th-19th c.
10	-	1000	Topsoil	PEW REFW	19th c.?
	1010	1011	Pit	YELW	L.18th-19th c.

The majority of sherds were recovered from topsoil and marling pits, but all contexts contained either single sherds or a few small sherds.

## 11.5 Discussion

This small assemblage is largely of recent date, although it does include two slightly earlier post-medieval redwares, one or both of which were slip-decorated and may be products of the Broad Street kiln in Ely. Although a few sherds were relatively large and may represent local occupation of this period, there were also small and abraded sherds which would be more typical of nightsoil dispersal on open fields during manuring.

## 11.6 References

Anderson, S., 2020, *Suffolk Medieval Pottery Fabric Series*, Online resource, available:

<https://www.suffolkmedpot.co.uk/> accessed 14.7.21

MPRG, 1998, *A Guide to the Classification of Medieval Ceramic Forms*. Medieval Pottery Research Group Occasional Paper 1.

MPRG, 2001, *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics*. Medieval Pottery Research Group Occasional Paper 2.

Spoerry, P., 2016, The Production and Distribution of Medieval Pottery in Cambridgeshire, E. Anglian Archaeol. 159

# 12 Appendix 4: Small Finds Assessment

## Burwell NG Substation, Newnham Drove, Burwell, Cambs (BSS14): Small Finds

Adam Daubney PhD FSA, September 2021

### 12.1 Introduction

Four iron artefacts were recovered during works at Burwell NG Substation, Burwell, Cambridgeshire. Three artefacts were nails of post-medieval to modern date, while one was a modern threaded bolt.

### 12.2 Methodology

The finds were laid out by context and then recorded onto an excel spreadsheet. Measurements were taken from the maximum points on the external corrosion; no x-rays were available at the time of assessment. The assemblage was recorded according to the CifA Toolkit for Specialist Reporting (CifA 2021).

### 12.3 The assemblage

Four artefacts were recovered from a total of four contexts (table 8). All four artefacts are highly corroded and in poor condition. All three nails appear to have flat circular heads and tapering shanks of circular section. The nails are in a poor condition and do not allow observation of any evidence of manufacturing techniques. Owing to the longevity of nail forms, it is only possibly to suggest a post-medieval to modern date for the three nails. Context 1000 produced a threaded bolt with a hexagonal head, which is clearly modern.



Table 8: Catalogue of small finds

Context	Object	Material	Description	L (mm)	W (mm)	T (mm)	Diam (mm)	Weight (g)	Period
703	Nail	Iron	Incomplete nail with ?flat circular head and ?circular shank	31			9	5	Post-med to modern
1000	Bolt	Iron	Threaded bolt with flat hexagonal head	61	23	13		67	Modern
1003	Nail	Iron	Complete nail with flat circular head and circular shank. In two pieces.	52			13	9	Post-med to modern
1005	Nail	Iron	Complete nail with flat circular head and circular shank. In three pieces.	70			12	10	Post-med to modern

## 12.4 Discussion

The small finds assemblage from Burwell NG Substation is of recent date. X-radiography is highly unlikely to add to our knowledge of the form, function and dating of the nails. The assemblage could be considered for discard if all relevant parties agree. No further work is recommended.

## 12.5 References

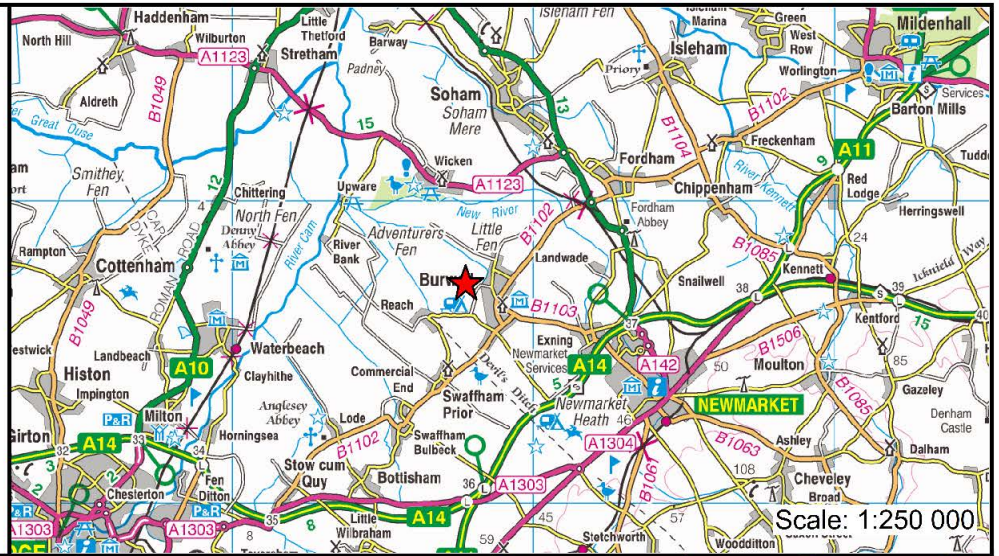
Cifa 2021. Toolkit for specialist reporting. Online at <https://www.archaeologists.net/reporting-toolkit>.

# 13 Appendix 5: OASIS Summary

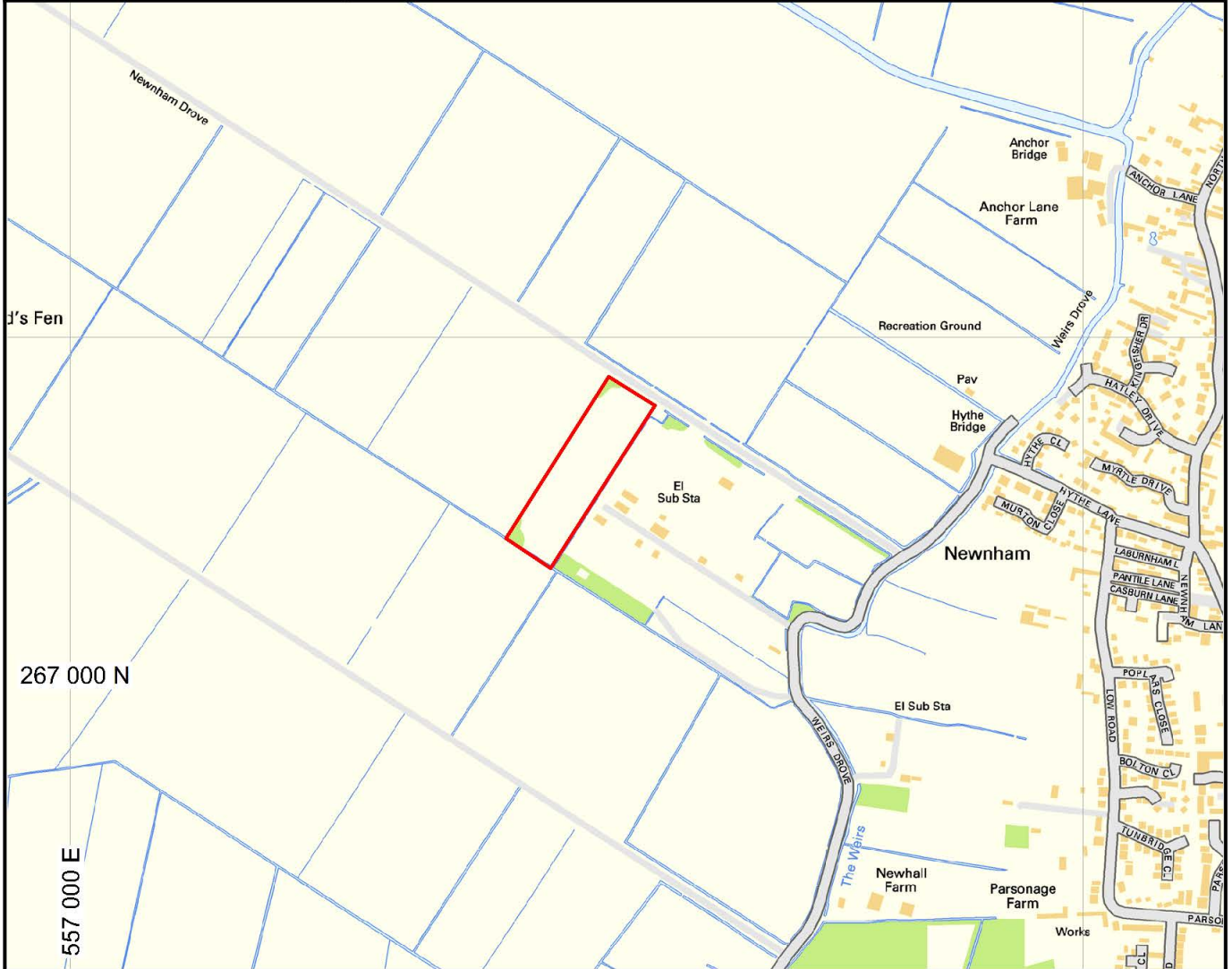
## Summary for networka2-502252

OASIS ID (UID)	networka2-502252
Project Name	Evaluation at Burwell NG Substation
Activity type	Evaluation
Project Identifier(s)	
Planning Id	
Reason For Investigation	Heritage management
Organisation Responsible for work	Network Archaeology Ltd
Project Dates	07-Jun-2021 - 11-Jun-2021
Location	Burwell NG Substation NGR : TL 57760 67307 LL : 52.2812682673935, 0.311204565233884 12 Fig : 557760,267307
Administrative Areas	Country : England County : Cambridgeshire District : East Cambridgeshire Parish : Burwell
Project Methodology	Trial Trench Evaluation
Project Results	The evaluation revealed a series of linear, segmented features, arranged in parallel north-east to south-western alignments that extended across the entire evaluation area. These alignments followed the south-west to north-east orientation of the existing field boundaries and the features were interpreted as post-medieval marling pits (similar to claying trenches), associated with the enclosure and improvement of marginal fenland. The features were dated to the early 19th century.
Keywords	Agriculture And Subsistence - POST MEDIEVAL - FISH Thesaurus of Monument Types
HER	Cambridgeshire Historic Environment Record - unRev - STANDARD
HER Identifiers	ECB6727
Archives	Digital Archive - to be deposited with Cambridgeshire County Council County Archaeological Store

# 14 Appendix 6: Figures



Scale: 1:250 000



Development area

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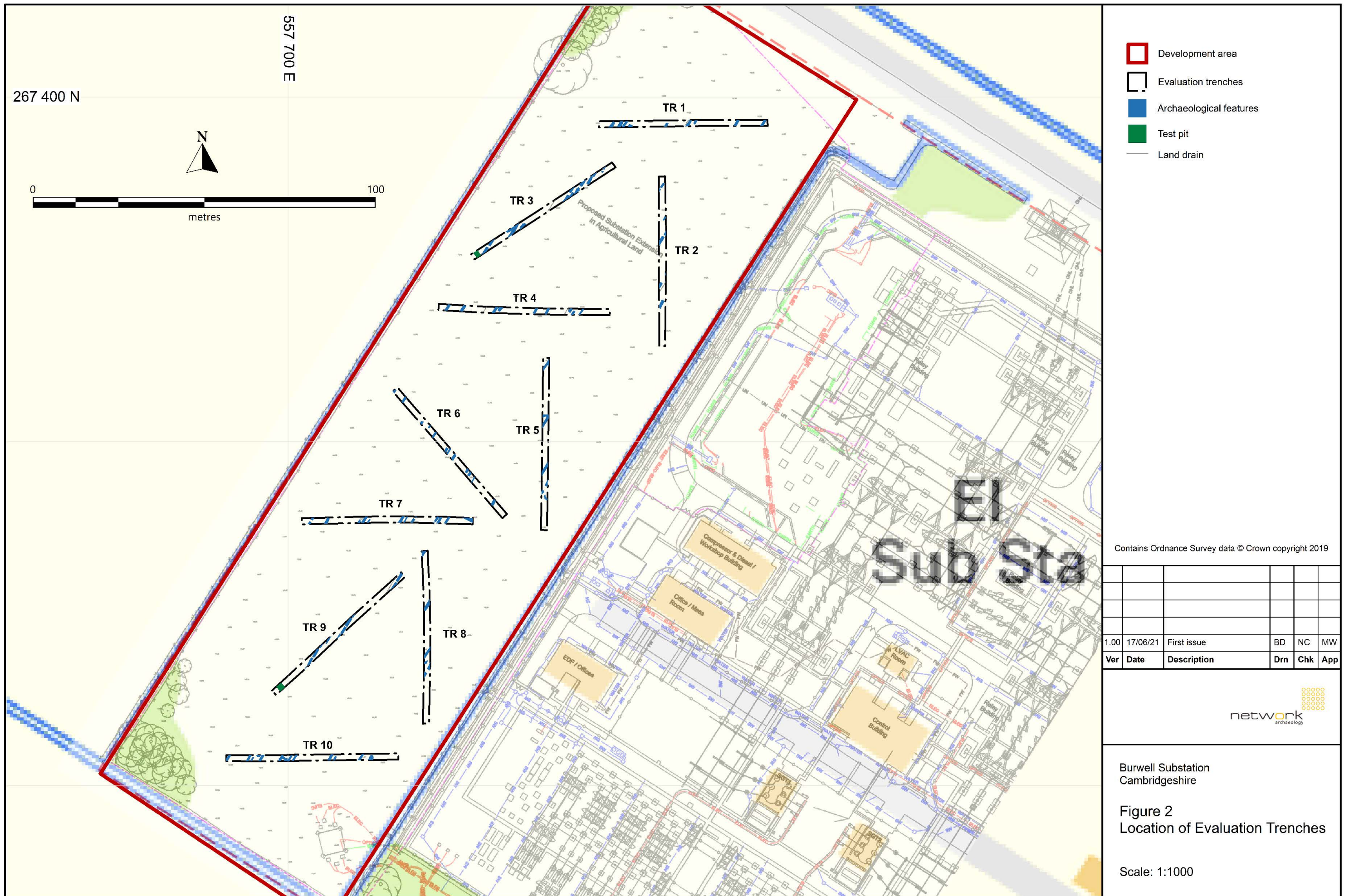
Burwell Substation  
Cambridgeshire

Figure 1  
Location of development  
area

Scale: 1:10 000

[Contains Ordnance Survey data  
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- Development area
- Evaluation trenches
- Archaeological features
- Test pit
- Land drain

Contains Ordnance Survey data © Crown copyright 2019

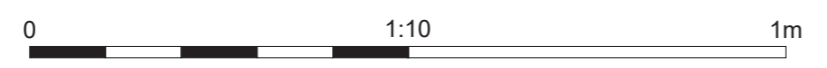
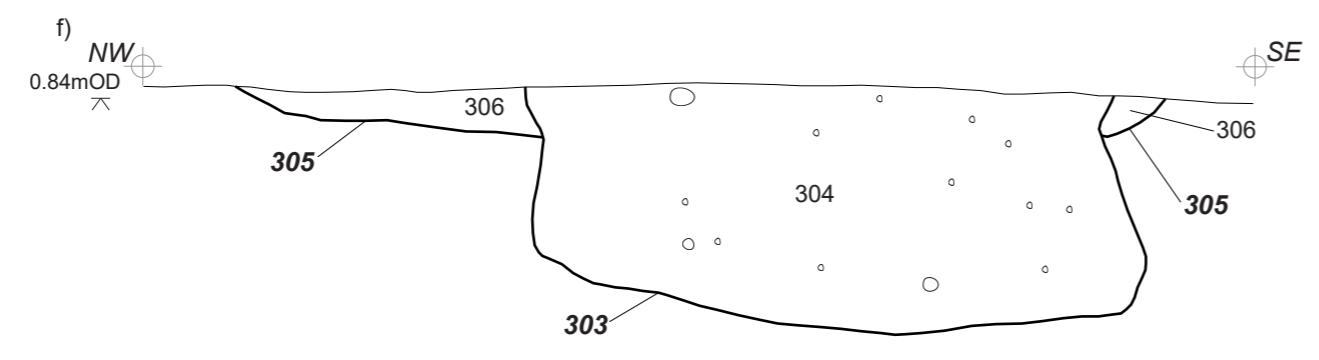
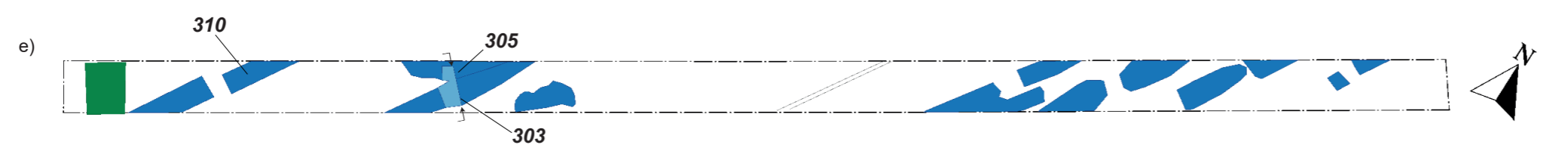
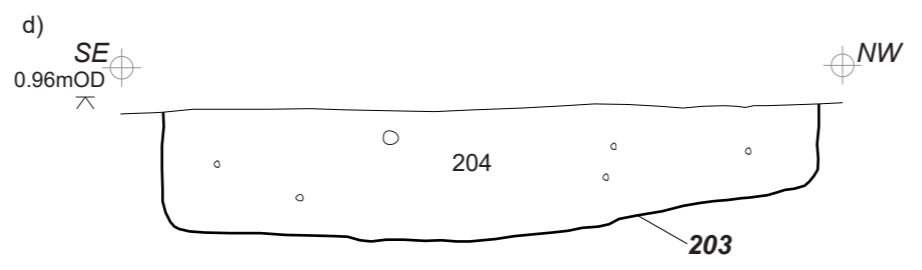
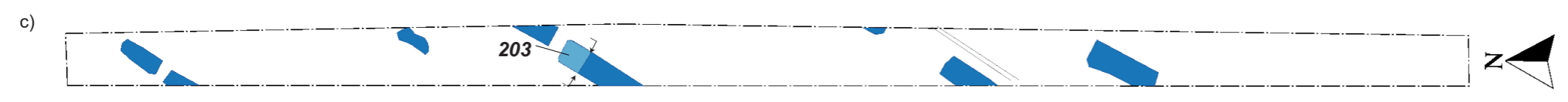
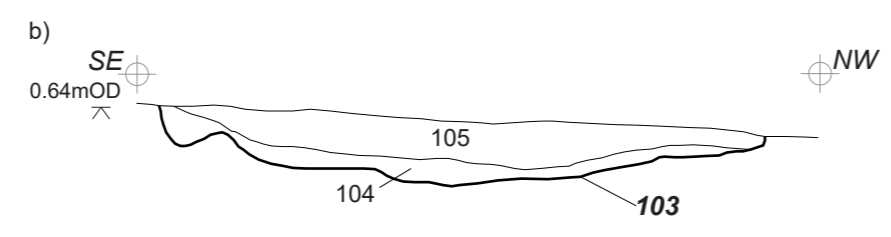
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Cambridgeshire

Figure 2  
Location of Evaluation Trenches

Scale: 1:1000



- Evaluation trenches
- Archaeological features
- Excavated part
- Test pit
- Land drain
- 1234** Cut number
- 1234 Layer/fill number
- Chalk

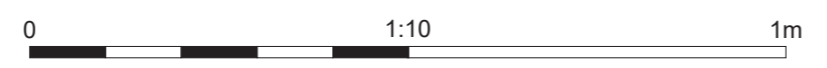
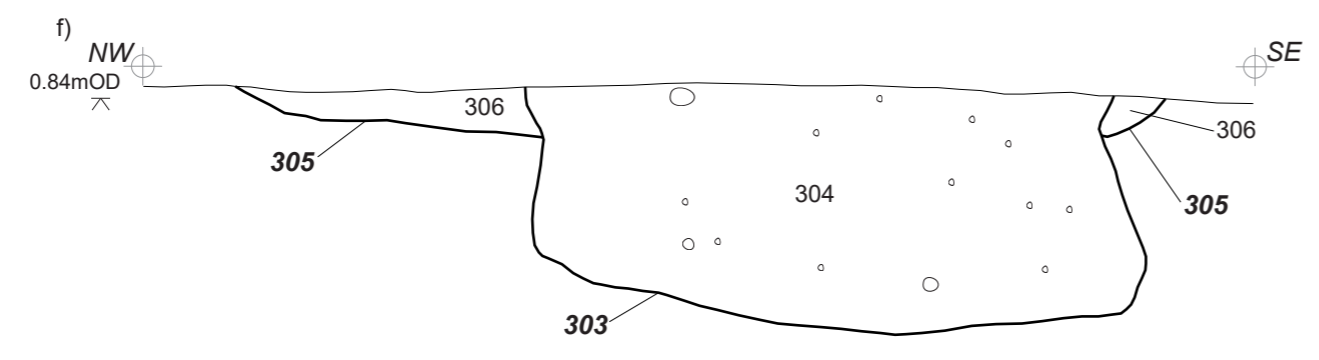
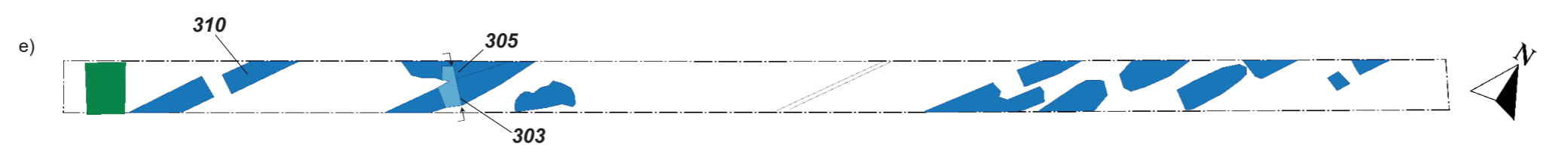
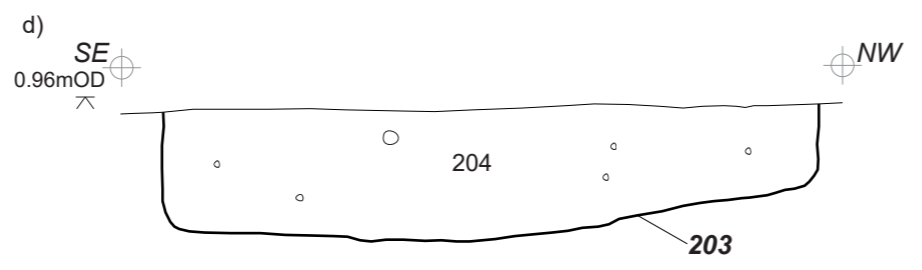
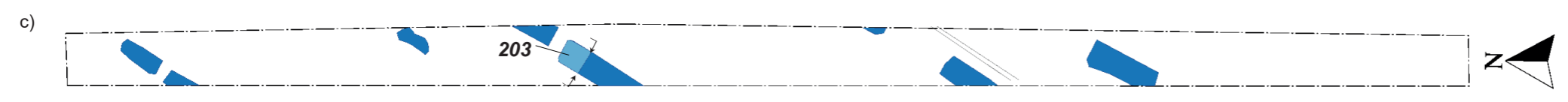
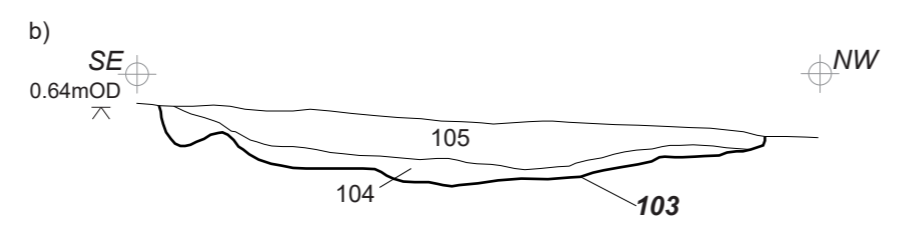
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Burwell Substation  
Cambridgeshire

**Figure 3**  
Trench plans with associated sections

Scale 1:200 (plans a, c, e)  
Scale 1:10 (sections b, d, f)



- Evaluation trenches
- Archaeological features
- Excavated part
- Test pit
- Land drain
- 1234** Cut number
- 1234 Layer/fill number
- Chalk

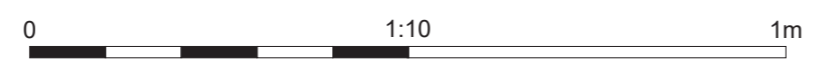
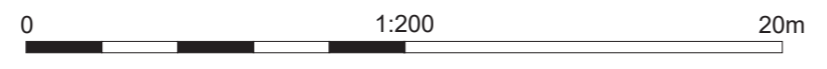
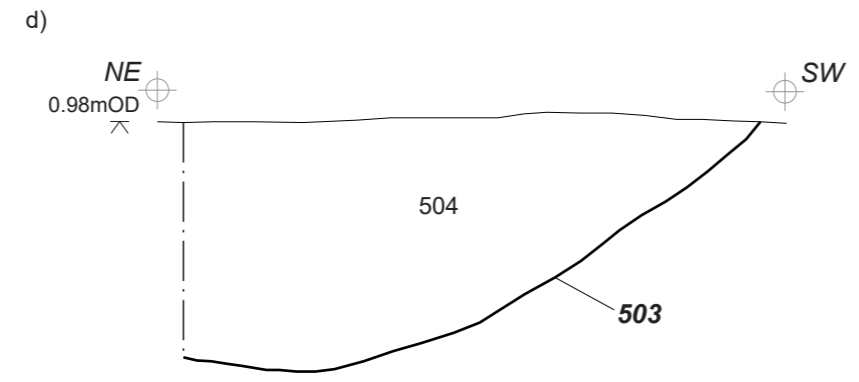
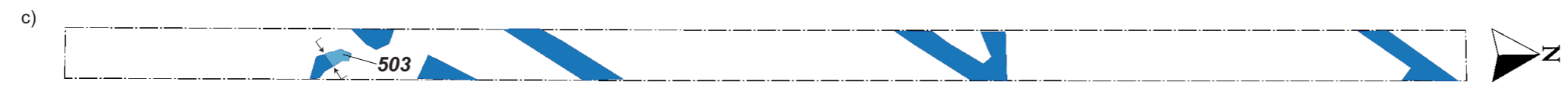
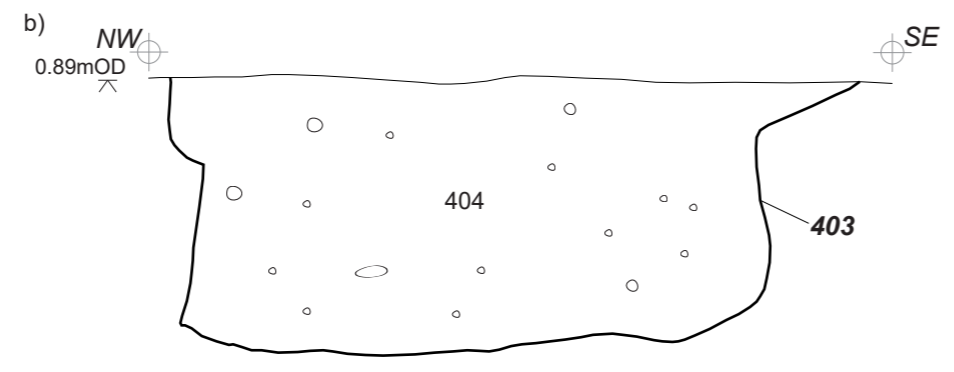
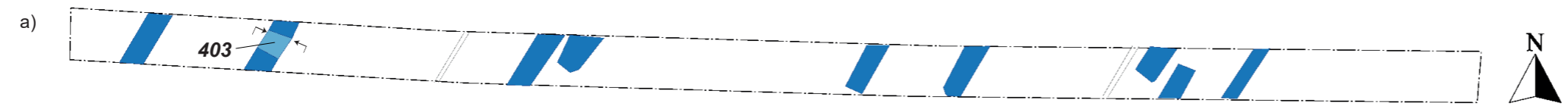
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Burwell Substation  
Cambridgeshire

**Figure 3**  
Trench plans with associated sections

Scale 1:200 (plans a, c, e)  
Scale 1:10 (sections b, d, f)



- Evaluation trenches
- Archaeological features
- Excavated part
- Land drain
- 1234** Cut number
- 1234 Layer/fill number
- Chalk

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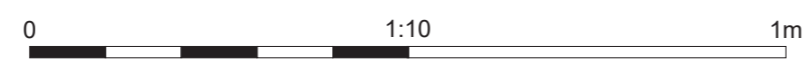
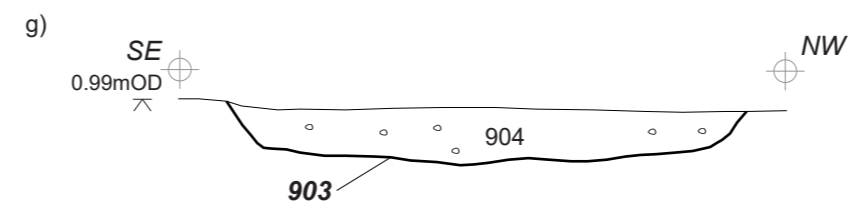
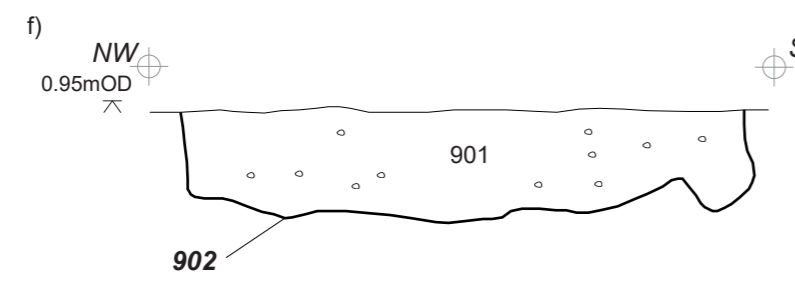
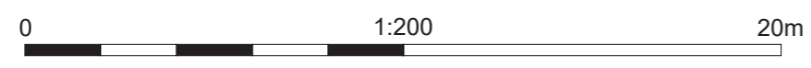
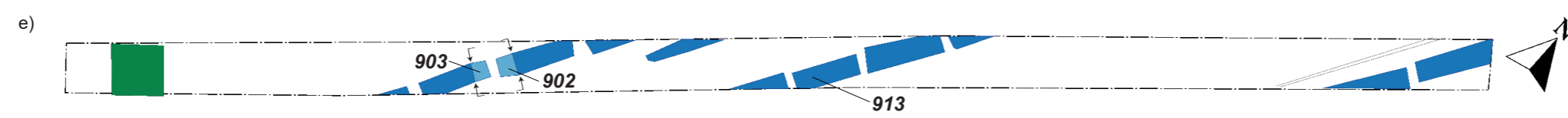
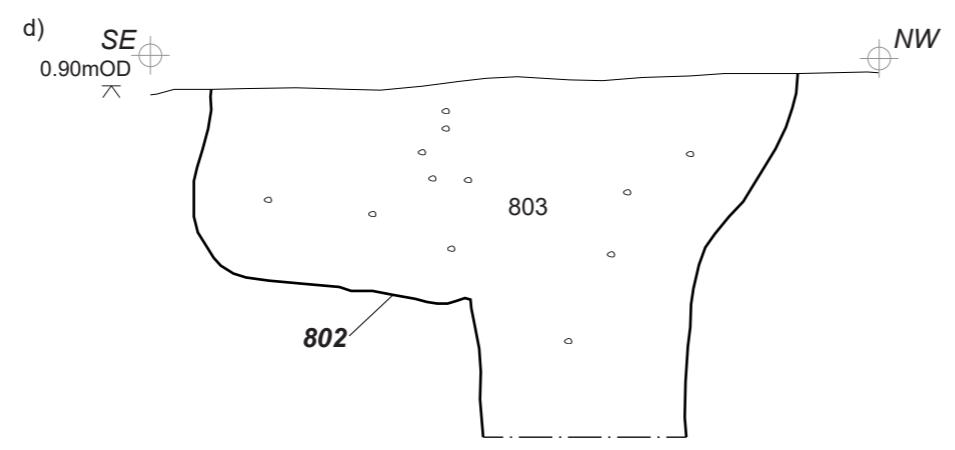
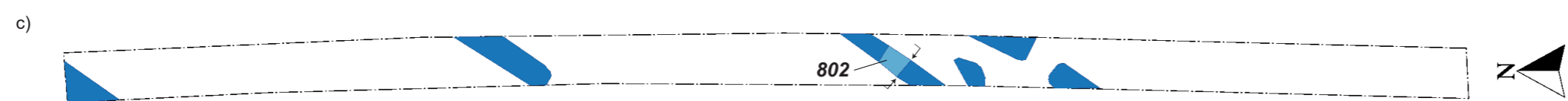
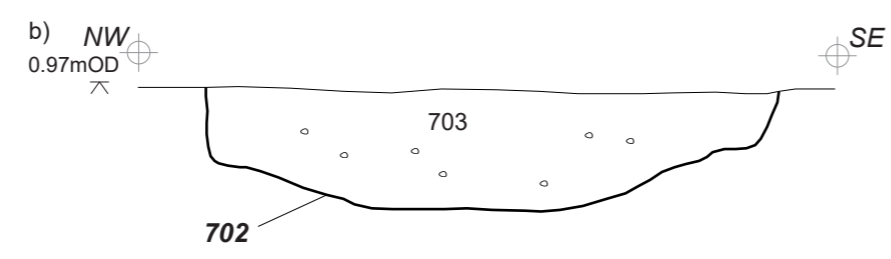


Burwell Substation  
Cambridgeshire

**Figure 4**  
Trench plans with associated sections

Scale 1:200 (plans a, c, e)  
Scale 1:10 (sections b, d, f)





- Evaluation trenches
- Archaeological features
- Excavated part
- Test pit
- Land drain
- 1234** Cut number
- 1234 Layer/fill number
- Chalk
- Limit of excavation

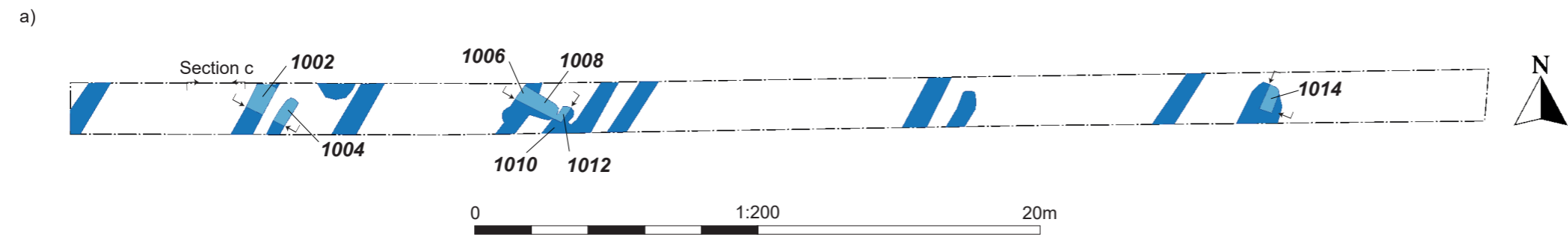
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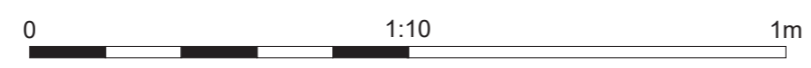
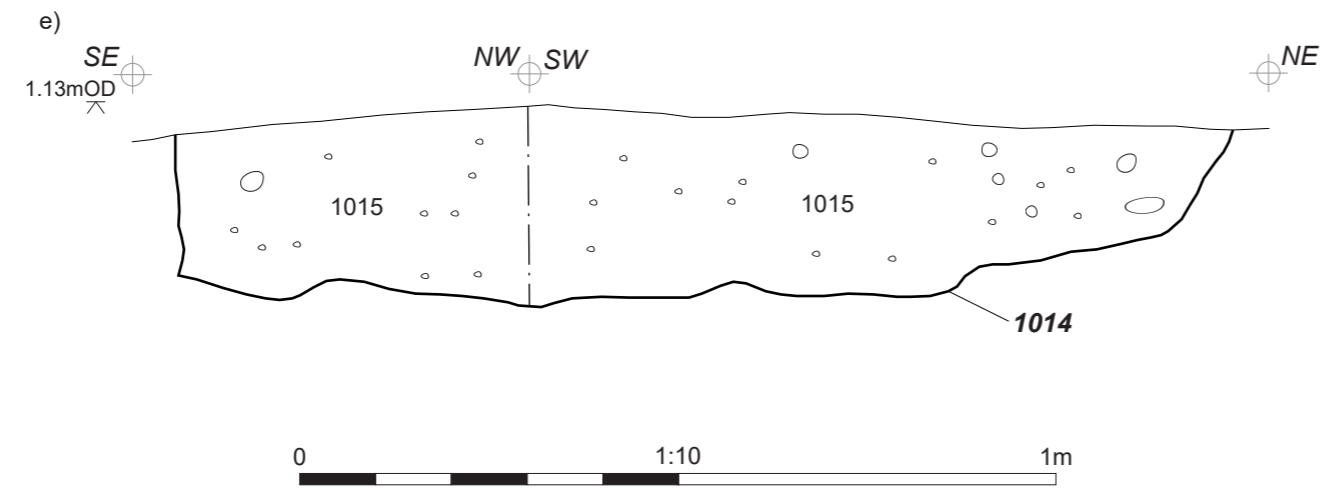
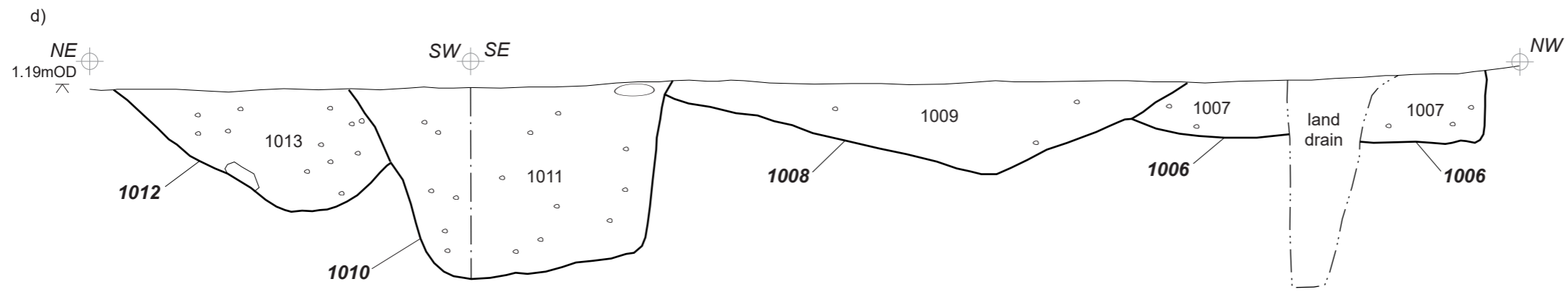
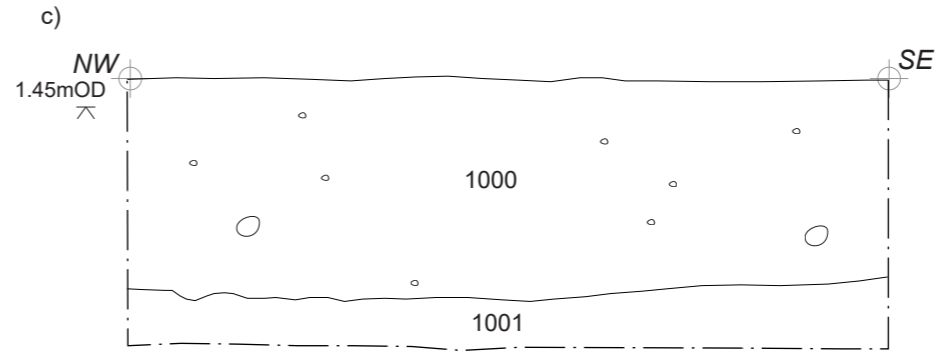
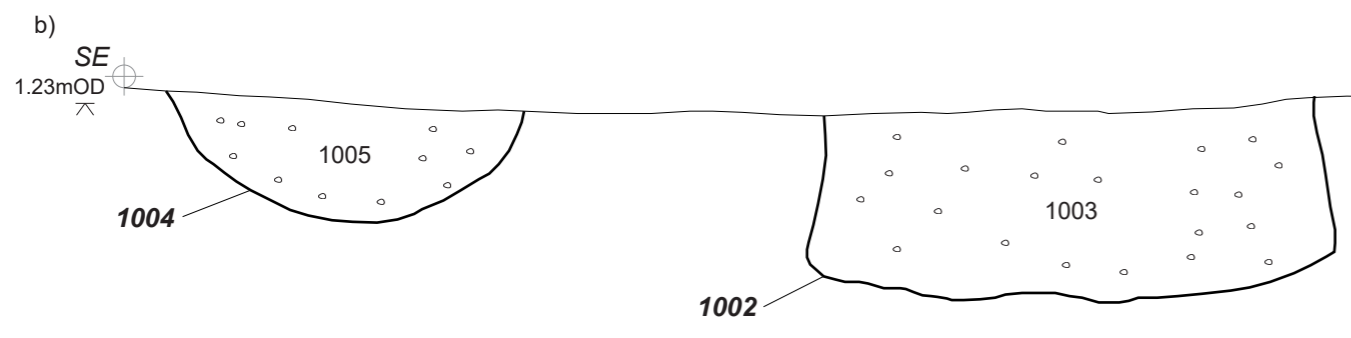
Burwell Substation  
Cambridgeshire

**Figure 5**  
Trench plans with associated sections

Scale 1:200 (plans a, c, e)  
Scale 1:10 (sections b, d, f, g)



- Evaluation trenches
- Archaeological features
- Excavated part
- Land drain
- 1234** Cut number
- 1234 Layer/fill number
- Chalk



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Cambridgeshire

**Figure 6**  
Trench plans with associated sections

Scale 1:200 (plan a)  
Scale 1:10 (sections b - e)