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Abberton to Wormingford
Pipeline route:
Colchester Borough

ARCHAEOLOGICAL EVALUATION

Draft

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Colchester Borough

ARCHAEOLOGICAL EVALUATION

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for
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Colchester Borough

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SUMMARY

Birmingham Archaeology was commissioned by Essex and Suffolk Water to undertake a programme of trial trenching ahead of a proposed new pipeline between Wormingford to Abberton. The length of the route between Abberton and Wormingford is approximately 17.50km, although the archaeological evaluation was focused upon four discrete areas along the route (Wormingford, Fordham, Stanway and Birch). These locations were selected by the Archaeological Officer for Colchester Borough Council based on information located within the Sites and Monument Record. The trench locations were targeted on cropmark anomalies where possible.

During construction the methodology requires a working easement approximately 25-30m in width to be stripped of topsoil along the entire route. In addition, further areas will be stripped close to road junctions to allow larger working areas to be established.

The aims of the evaluation was to confirm the nature and date of the cropmark features recorded within the EHER and to clarify the depths of topsoil and subsoil along the route to assist the Colchester and Ipswich Museum Service to develop further mitigation strategies.

The finds assessment provided by the specialists in conjunction with the stratigraphic sequences from the evaluation trenches have resulted in a number of archaeological sites being identified within the four evaluated areas. Although some isolated Roman, Medieval and post-medieval pottery has been recovered, it is the prehistoric evidence which has produced the greatest amount of information and offers significant potential to advance our understanding of the prehistoric periods in this region.

Given the construction methodology associated with this scheme, the evaluation has demonstrated that archaeological remains do exist within the working easement of the pipe route and will be impacted upon during the development phase of the project. It is clear from the results that specific areas along the route contain dense or complex archaeological deposits (for example Wormingford Trenches 7,8 and 14, Stanway Trenches 39-41, Fordham Trench 18 and Birch Trenches 66, 76-81).

However, in most of these areas there may be a significant depth of subsoil to protect the archaeological remains *insitu* during the easement topsoil strip which will be implemented during stage 1 of the works. It is generally accepted that 250mm of subsoil deposit would serve to protect underlying remains during topsoil removal in dry conditions. It is probable that further mitigation may be required in specific areas of the route around Colchester in the form of watching brief, excavation of pipe trench, and controlled strip, map and sample.

1. INTRODUCTION

1.1.1. Birmingham Archaeology was commissioned by Essex and Suffolk Water to undertake a programme of trial trenching ahead of a proposed new pipeline between Wormingford to Abberton (hereinafter referred to as the site).

1.1.2. This report outlines the results of a field evaluation carried out during 2010, and has been prepared in accordance with the Institute for Archaeologists Standards and Guidance for Archaeological Evaluations (IFA 1999).

1.1.3. The evaluation conformed to a brief produced by the Colchester and Ipswich Museum Service, advisors to the Local Planning Authority of Colchester Borough Council (Winter 2009), and a Written Scheme of Investigation (Birmingham Archaeology 2010) which was approved by the Local Planning Authority prior to implementation in accordance with guidelines laid down in Planning Policy Guidance Note 16 (DoE 1990).

2. LOCATION AND GEOLOGY

2.1.1. This section of the proposed pipeline route ran from Abberton Reservoir (NGR TL 97341 18060) to Wormingford Pumping Station (TL 91931 32938). This section of the route covered approximately 17.50km. Much of the route passed through agricultural land consisting of arable and pasture (Fig.1).

2.1.2. Four specific sections of the route required archaeological evaluation work (based on the brief by Colchester Borough Council). These sites are listed below and illustrated as figures.

1. Wormingford Pumping Station (TL 91931 32938 to 93421 32071; EHER 9195)
2. Land at Fordham (TL 93166 28538 to 93229 27056; EHER 11959 and 11973)
3. Land near Stanway (TL 93472 24871 to 93594 23073; EHER 14285 and 11948)
4. Land near Birch (TL 94416 21596 to 94777 20238; EHER 11912 and 11925)

3. ARCHAEOLOGICAL BACKGROUND

3.1. The proposed pipeline route passed through areas of high archaeological significance with a high density of archaeological sites recorded on the Essex Historic Environment record. A full description of the archaeological significance of the area was documented within the Cultural Heritage chapter of the Environmental Statement (Entec 2006) and should be read in conjunction with this report.

3.2. The sites evaluated were located within areas close to extensive cropmarks (Essex Historic Environment Record numbers listed above).

4. AIMS AND OBJECTIVES

4.1.1. The principle aim of this archaeological evaluation was to determine the character, extent, date, state of preservation and the potential significance of any buried

remains within these four areas along the proposed pipe route. The results could then be utilised to help inform and develop further mitigation strategies to limit the impact of the proposed pipeline on the buried remains. More specific project aims objectives were to:

- Confirm the nature and date of the cropmark features recorded within the EHER;
- Clarify the depths of topsoil and subsoil along the route to assist the Colchester and Ipswich Museum Service to develop further mitigation strategies.

5. METHODOLOGY

5.1.1. The length of the route between Abberton and Wormingford is approximately 17.50km, although evaluation work at the four sites represented a small percentage of the route total. The construction methodology requires a working easement 30m in width to be stripped of topsoil along the entire route. In addition, further areas will be stripped close to road junctions to allow larger working areas to be established.

5.1.2. All of the four sites identified in the WSI included trial trenching (coverage below). As outlined in the brief by Colchester Borough Council, Site 1 (Wormingford Pumping Station) had a requirement for fieldwalking and geophysical survey along the pipeline easement route prior to the excavation of the trial trenches. Due to current land use, these surveys were not possible and, after approval from the Colchester Borough Council Archaeologist, Site 1 moved straight into trial trenching.

5.1.3. Each site is outlined below in terms of linear metres, total area, evaluation sample area (based on 4%) and equivalent number of required 50m trenches.

Site 1 - Wormingford pumping station
1130m of pipe easement (5 fields)
33,900m2 total area
4% = 1356m2
14 trenches (50m)

Site 2 – Land at Fordham
1625m of pipe easement
48,750m2 total area
4% = 1959m2
20 trenches (50m)

Site 3 - Land near Stanway
2492m of pipe easement
74,760m2
4% = 2990m2
30 trenches (50m)

Site 4 – Land near Birch
1447m of pipe easement
43,410m2
4% = 1736m2
17 trenches (50m)

5.1.4. The fields and trench locations are illustrated in Figures 2 to 5 and were placed to cover a representative sample of the pipeline easement as well as focusing upon likely locations of buried archaeological deposits and features identified as cropmarks.

5.1.5. Final trench locations were subject to alteration during fieldwork due to the presence of live services, overhead cables or other health and safety considerations. Any alteration to this written scheme of investigation was only made after consultation with the Archaeologist for Colchester Museum Service.

Evaluation Methodology

5.1.6. All trenches were located using Differential GPS with sub-centimetre accuracy and Total Station survey.

5.1.7. All topsoil and modern overburden was removed using a 360° tracked mechanical excavator with a 2m wide toothless ditching bucket, under direct archaeological supervision, down to the top of the uppermost archaeological horizon or the natural geology. Subsequent cleaning and excavation was by hand.

5.1.8. A representative sample of archaeological features and deposits were manually sample excavated to sufficiently define their character and to obtain suitable dating evidence using the following strategy;

- 50% of pits under 1.5m or postholes
- 25% of pits over 1.5m including a complete section
- 20% sample of linear/ curvi-linear features under 5m in length
- 10% sample of linear/ curvi-linear features over 5m in length

5.1.9. Archaeological deposits were not completely excavated unless it was deemed unavoidable. The depth of archaeological deposits across the site was assessed, although the full length of every trench was not necessarily excavated down to natural.

5.1.10. All stratigraphic sequences were recorded, even where no archaeology was present. Features were planned at a scale of 1:20 or 1:50, and sections drawn of all cut features and significant vertical stratigraphy at a scale of 1:20. A comprehensive written record was maintained using a continuous numbered context system on *pro-forma* cards. Written records and scale plans were supplemented by photographs using black and white monochrome, colour slide and digital photography.

5.1.11. Deposits were assessed for preserved biological remains by Birmingham Archaeo-Environmental. The environmental sampling policy followed the guidelines contained in the Birmingham Archaeology Fieldwork Manual and *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2002).

5.1.12. Sampling strategies for wooden structures conformed to guidelines set out in *Waterlogged wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood*. (Brunning 1996).

5.1.13. Recovered finds were cleaned, marked and remedial conservation work undertaken as necessary. Treatment of all finds conformed to guidance contained within the Birmingham Archaeology Fieldwork Manual and *First Aid for Finds* (Watkinson and Neal 1998).

5.1.14. Lifting of human skeletal remains was avoided wherever possible during the evaluation. Burials were recorded *in situ* and subsequently lifted, washed, marked and packed to standards compatible with *Excavation and post-excavation treatment*

of cremated and inhumed human remains (McKinley and Roberts 1993). Excavation of human remains conformed with advice provided in *Church Archaeology: its care and management* (Council for the Care of Churches 1999), *Human bones from Archaeological Sites* (English Heritage 2004) and in *Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England* (English Heritage 2005).

5.1.15. The full site archive includes all artefactual remains recovered from the site. The site archive will be prepared according to guidelines set down in Appendix 3 of the Management of Archaeology Projects (English Heritage, 1991), the Guidelines for the Preparation of Excavation Archives for Long-term Storage (UKIC, 1990) and Standards in the Museum Care of Archaeological collections (Museum and Art Galleries Commission, 1992). The paper archive will be deposited with the appropriate repository subject to permission from the landowner.

6. RESULTS

6.1. Introduction

6.1.1. The following section is arranged in trench order and both feature (cut) and context numbers are highlighted in bold. A representative selection of trench plans and sections are illustrated. Full context details can be found in Appendix 2.

6.2. Site 1 – Wormingford

Trench 7 (Fig. 6)

6.2.1. The natural subsoil (**7002**) was reached at a depth of 0.7m below current ground level and consisted of a mixture of clay and silt with patches of sandy gravel.

6.2.2. Towards the centre of the trench **7002** had been cut by a linear ditch **7004** (Fig. 6, Plate 1). The ditch had a 'V'-shaped profile, it was aligned northwest-southeast and measured 1.15m in width and 0.37m in depth and was filled by a mid greyish brown sandy clay silt **7003** which contained a number of pieces of pottery, possibly dating to the Early Neolithic or Bronze Age and several worked flints.

6.2.3. To the north of **7004** was west-east aligned ditch **7006** (Fig. 6, Plate 2) measuring 1.05m in width and 0.28m in depth. Also with a 'V'-shaped profile, **7006** was filled by a dark greyish brown silty sand **7005** which contained a piece of flint which had possibly been worked and a degraded piece of animal bone.

6.2.4. Three more linear ditches were located to the north of ditch **7006**, each orientated west-east and situated between two and three metres apart. The widest of the ditches **7014** measured 2.20m and 0.36m in depth, it had an irregular profile and had been partially truncated by a disturbance **7012** probably indicating rodent activity. No finds were retrieved from the dark greyish brown silty sand infill of the ditch **7013.**

6.2.5. To the north of ditch **7014** a narrower ditch **7010** was excavated. It measured 0.90m wide and 0.27m deep and was filled with mid greyish brown silty clay sand **7009** which contained one piece of pottery and two flints.

6.2.6. At the extreme northern end of the trench a fifth ditch **7008** (Fig. 6) was excavated. It measured 1.70m wide and 0.28m deep and had a 'U'-shaped profile and was filled by a clayey sand **7009** which contained sherds of prehistoric pottery.

6.2.7. Sealing this ditch and the other features in this trench was an orange–brown silty sand layer of subsoil **7001** which ranged between 0.25m-0.40m in depth which was overlain by 0.25m of topsoil **7000.**

Trench 8 (Fig. 6)

6.2.8. The natural subsoil was reached at a depth of 0.75m below current ground level and consisted of yellow-brown silty clay with flint nodules and coarse gravel and cobble deposits **8002**.

6.2.9. Towards the centre of the trench was a north-south orientated ditch **8004** which measured 2.10m in width and 0.48m in depth. It had steep sides and a 'U'-shaped profile and was filled with mid brown silty clay sand **8003** which contained two pieces of flint and two very small sherds of pottery which were possibly of prehistoric date.

6.2.10. Two possible postholes, one located to the southeast (**8012**) and one to the northwest (**8006**) of **8004**, were located. The postholes were sub-circular in shape and measured 0.50-0.60m in diameter and 0.14m in depth and were filled by a mid brown silty clay, **8011** and **8005** respectively.

6.2.11. Also to the northwest of **8004** was a small north-south aligned gully **8008** which measured 0.34m in width by 0.08m in depth and was filled by a mid brown silty clay **8007**.

6.2.12. At the northwestern end of the trench a possible elongated pit **8010** (Fig. 6, Plate 3) was recorded. The 'elongated pit' appeared to run north-south and continued to the north beyond the edge of excavation, measuring approximately 2.20m wide and 0.45m deep and was filled by a grey-brown gravel sandy silt **8009**.

6.2.13. Sealing these features and the remainder of the trench was an orange-brown silty sand subsoil **8001** 0.49m in depth which was overlain by a topsoil **8000** 0.25m in depth.

Trench 9

6.2.14. The natural subsoil was reached at a depth of 0.55m below present ground level and consisted of yellow-brown silty clay with flint nodules and coarse gravel and cobble deposits **9002**.

6.2.15. Towards the centre of the trench was the western edge of a shallow pit **9004** that consisted of moderately sloping sides measuring 1.5m in width by 0.16m in depth. Filling **9004** was a greyish-brown sandy clay **9003** that contained one piece of possible worked flint.

6.2.16. Sealing **9004** and the remainder of the trench was an orange-brown silty sand subsoil **9001** 0.3m in depth which was overlain by a topsoil **9000** 0.25m in depth.

Trench 10 (Fig. 6)

6.2.17. The natural subsoil was reached at a depth of between 0.7 to 1.65m below present ground level consisted of orange-brown sand and gravel **10002**.

6.2.18. Towards the northwestern end of the trench was a large pit or possible ditch **10004** (Fig. 6), which was aligned north-south and consisted of steep sloping sides with a flat base measuring 3.8m in width by 0.65m in depth. **10004** was filled by a mid brown silty clay sand **10003** which contained a small sherd of possible prehistoric pottery.

6.2.19. Sealing this ditch and the other features in this trench was an orange–brown silty sand layer of subsoil **10001** ranging from 0.4m to 1.35m in depth which was overlain by 0.30m of topsoil **10000.**

Trench 11

6.2.20. This trench was devoid of archaeology.

Trench 12

6.2.21. The natural subsoil was reached at a depth of 0.45 below present ground level and consisted of orange-brown sand and gravel and grey boulder clay **12002**.

6.2.22. Towards the northeastern end of the trench was an east-west aligned gully **12004** measuring 0.62m wide by 0.16m deep and consisting of a U-shaped profile. Filling **12004** was a grey silty clay **12003**.

6.2.23. Sealing this gully and the remainder of the trench was an orange–brown silty sand layer of subsoil **12001** 0.1m in depth which was overlain by 0.35m of topsoil **12000.**

Trench 13

6.2.24. This trench was devoid of archaeology.

Trench 14 (Fig. 6)

6.2.25. The natural subsoil was reached at a depth of 0.55m below present ground level and consisted of orange and white sand and clay **14002**.

6.2.26. At the southeastern end of the trench was a northwest-southeast aligned ditch **14010** (Plate 4) that consisted of steep sloping sides measuring 0.76m in width by 0.45m in depth and which was filled by a brown silty clay **14009** that contained sherds of possible medieval pottery.

6.2.27. To the northwest of **14010** was a northeast-southwest aligned ditch with steep sloping sides and a flat base **14012** that measured 1.80m in width and 0.25m in depth and was filled by a mid grey silty clay sand **14011**. This ditch had been re-cut by **14014** (Plate 6), which was filled by a brown-grey silty clay sand **14013.**

6.2.28. Towards the centre of the trench on a northwest-southeast alignment was a ditch **14008** with associated land drain **14007**.

6.2.29. Towards the northwest end of the trench were two gullies on a northeast-southwest alignment **14004** and **14006**. **14004** measured 0.65m in width by 0.20m in depth and was filled by a light grey silty sand **14003**. Gully **14006** measured 0.65m in width by 0.12m in depth and was also filled by a light grey silty clay **14005**.

6.2.30. Sealing these features and the remainder of the trench was an orange–brown silty sand layer of subsoil **14001** 0.2 to 0.25m in depth which was overlain by 0.20 to 0.3m of topsoil **14000**.

6.3. Site 2 – Fordham

Trench 16

6.3.1. The natural subsoil was reached at a depth of 49.91m AOD to the north of the trench and at 49.38m AOD to the south, and consisted of red-brown clay with flint deposits **16002**.

6.3.2. Towards the northern end of the trench was an east-west aligned drainage ditch **16004** that consisted of moderately sloping sides with a bowl shaped profile measuring 1.20m in width by 0.35m in depth, and which was filled by a grey-brown silty clay **16003**.

6.3.3. Overlying **16003** and the remainder of the trench was a layer of dark brown silty clay **16001** 0.15m in thickness which was overlain by a layer of dark brown clay topsoil **16000** 0.35m in thickness.

Trench 17

6.3.4. This trench was devoid of archaeology.

Trench 18 (Fig. 6)

6.3.5. The natural subsoil was reached at a depth of 48.20m AOD to the north of the trench and at 47.08m AOD to the south, and consisted of yellow-brown silty clay with flint nodules and coarse gravel and cobble deposits **18002**.

6.3.6. Towards the centre of the trench was a large northwest-southeast aligned ditch (**18004**, **18006** and **18008**, Fig. 6, Plates 7 and 8) that consisted of moderately sloping sides with a bowl shaped profile measuring c.11m in width and 0.9m in depth. Filling the ditch was a grey-orange silty clay **18009** that contained sherds of pottery of an amorphous nature. Overlying **18009** was a red-brown silty clay (**18003**, **18005**, **18007**).

6.3.7. Sealing this ditch and the remainder of the trench was a layer of grey-yellow silty clay **18001** 0.11m in depth to the north and 0.40m to the south, which was overlain by a dark brown silty clay topsoil **18000** 0.3m in depth.

Trench 19 (Fig. 7)

6.3.8. The natural subsoil was reached at a depth of 46.18m AOD to the northwest of the trench and at 45.22m AOD to the southeast, and consisted of orange silty clay with **19002**.

6.3.9. Towards the northwest end of the trench was a northeast-southwest aligned ditch **19004** (Fig. 7, Plate 9) consisting of moderately sloping sides with a bowl shaped base measuring 1.8m in width (excavated) by 0.7m in depth and which was filled by a mid brown sandy clay **19003** that contained sherds post-medieval pottery.

6.3.10. Sealing this ditch and the remainder of the trench was a layer of orange brown silty clay **19001** 0.25m in depth which was overlain by a dark brown silty clay topsoil **19000** 0.25m in depth.

Trench 20

6.3.11. The natural subsoil was reached at a depth of 44.13m AOD to the north of the trench and at 42.58m AOD to the south, and consisted of orange silty clay with **20002**.

6.3.12. Towards the southern end of the trench was a heavily truncated (by modern pipe trench) northeast-southwest aligned ditch **20005** measuring 0.85m in width by 0.58m in depth and which was filled by a orange-brown sandy silty clay **20004** overlain by a dark grey silty sandy clay **20003** that contained fragments of tile.

6.3.13. Sealing this ditch and the remainder of the trench was a layer of orange brown silty clay **20001** 0.20m in depth which was overlain by a dark brown silty clay topsoil **20000** 0.25m in depth.

Trench 21

6.3.14. The natural subsoil was reached at a depth of 41.18m AOD to the north of the trench and at 39.12m AOD to the south, and consisted of orange silty clay with **21002**.

6.3.15. Towards the southern end of the trench was a large probable pond feature **21004** consisting of steeply sloping sides with a bowl shaped base measuring 1.28m in width (excavated) by 0.78m in depth and which was filled by a mid brown sandy clay **21003**.

6.3.16. Sealing this pond and the remainder of the trench was a layer of orange brown silty clay **21001** 0.15m in depth which was overlain by a dark brown silty clay topsoil **21000** 0.25m in depth.

Trench 22

6.3.17. This trench was devoid of archaeology.

Trench 23

6.3.18. The natural subsoil was reached at a depth of 34.44m AOD to the west of the trench and at 34.25m AOD to the east, and consisted of chalky sandy clay with sand and gravel **23002**.

6.3.19. Towards the western end of the trench was a north-south aligned ditch **23004** consisting of moderately sloping sides with a U-shaped profile measuring 1.4m in width by 0.28m in depth and which was filled by a mid grey silty sandy clay **23003** that contained sherds of prehistoric pottery.

6.3.20. Sealing this ditch and the remainder of the trench was a layer of grey-brown silty sandy clay **23001** 0.28m in depth which was overlain by a dark brown silty clay topsoil **23000** 0.28m in depth.

Trench 24

6.3.21. The natural subsoil was reached at a depth of 31.26m AOD to the northwest of the trench and at 29.10m AOD to the southeast, and consisted of chalky silty sandy clay with sand and gravel **24002**.

6.3.22. Towards the centre of the trench was a northeast-southwest aligned ditch **24004** consisting of moderately sloping sides with a bowl shaped profile measuring 1.4m in width by 0.30m in depth and which was filled by a grey-brown silty clay **24003**.

6.3.23. Sealing this ditch and the remainder of the trench was a layer of grey-brown silty sandy clay **24001** 0.45 in depth which was overlain by a dark brown silty clay topsoil **24000** 0.25m in depth.

Trench 25-36

6.3.24. These trenches were devoid of archaeology. Trenches 28 to 35 contained a colluvial layer 0.45m in thickness sealing the natural geology in these areas. This layer remained constant throughout and sterile of artefacts.

6.4. Site 3 – Stanway

Trench 36

6.4.1. This trench was devoid of archaeology.

Trench 37

6.4.2. The natural subsoil was reached at a depth of 31.80m AOD to the west of the trench and at 32.22m AOD to the east, and consisted of orange sandy clay and sand and gravel **37002**.

6.4.3. Towards the eastern end of the trench was a north-south aligned ditch **37005** measuring 2.3m in width by 0.32m in depth and was filled by two fills (**37003** and **37004**) the latter lower context contained post-medieval pottery.

6.4.4. Sealing **37005** and the remainder of the trench was a red-brown subsoil **37001** 0.35m in depth which was overlain by a topsoil **37000** 0.35m in depth.

Trench 38

6.4.5. This trench was devoid of archaeology.

Trench 39

6.4.6. The natural subsoil was reached at a depth of 33.51m AOD to the north of the trench and at 33.67m AOD to the south and consisted of brownish red and yellow clay **39002**.

6.4.7. Towards the centre of the trench was an east-west aligned ditch **39007** measuring 1.43m in width by 0.43m in depth and consisting of steep sides with a flat base which was filled by a greyish brown silty clay **39006**.

6.4.8. To the south of **39007** was a northwest-southeast aligned curvi-linear ditch **39009** which measured 1.26m in width by 0.36m in depth.

6.4.9. Sealing these features and the remainder of the trench was a reddish-brown subsoil **39001** 0.25m in depth which was overlain by a topsoil **39000** 0.30m in depth.

Trench 40 (Fig. 7)

6.4.10. The natural subsoil was reached at a depth of 33.37m AOD to the east of the trench and at 32.81m AOD to the west and consisted of reddish orange silty clay and sand and gravel **40002**.

6.4.11. Towards the western end of the trench was a north-south aligned drainage ditch **40014** (Fig. 7, Plate 10) measuring 3.9m in width by 0.45m in depth and consisting of gradually sloping sides which was filled by a greyish brown silty sandy clay **40013** which contained a number of possible prehistoric pottery sherds. The ditch had truncated a small pit **40016** (Fig. 7) which measured approximately 0.40m in width by 0.38m in depth and was filled with dark grey silty sandy clay **40015** containing one possible flint flake.

6.4.12. To the immediate east of **40014** was a second possible north-south aligned ditch **40012**/**40010** (Fig. 7, Plate 11) which consisted of gradual sloping sides with a flat base measuring 3.2m in width by 0.42m in depth.

6.4.13. To the east of **40014** a large northwest-southeast aligned ditch **40004**/**40006**/**40008** (Fig. 7) was exposed that consisted of gradual sloping sides with a flattish base measuring around 8m in width by 0.4m in depth, and which was filled by a mid brownish grey charcoal flecked silty sandy clay **40003**/**40005**/**40007**.

6.4.14. Sealing these features and the remainder of the trench was a reddish-brown subsoil **40001** 0.25m in depth which was overlain by a topsoil **40000** 0.15m in depth.

Trench 41 (Fig. 7)

6.4.15. The natural subsoil was reached at a depth of 32.92m AOD to the east of the trench and at 32.47m AOD to the west and consisted of orange silty sandy clay and sand and gravel **41002**.

6.4.16. Towards the centre of the trench two small circular post-holes **41004** and **41006** (Fig. 7) were excavated. The undated post-holes measured between 0.10-0.18m in diameter and 0.26m in depth. The latter cut contained dark brown silty clay with charcoal flecking **41005** and had steep sides and a 'V'-shaped profile.

6.4.17. To the immediate east of the postholes was a northwest-southeast aligned ditch **41009** (Fig. 7, Plate 12) that consisted of gradual sloping sides with a U-shaped profile measuring 0.8m in width by 0.18m in depth and which was filled by two fills **41007** and **41008**.

6.4.18. Sealing these features and the remainder of the trench was a reddish-brown subsoil **41001** 0.30m in depth which was overlain by a topsoil **41000** 0.25m in depth.

Trench 42

6.4.19. The natural subsoil was reached at a depth of 32.61m AOD to the northeast of the trench and at 31.94m AOD to the southwest and consisted of red sand and gravel **42002**.

6.4.20. Towards the southwestern end of the trench was an east-west aligned ditch with steep sloping sides **42006** measuring 5.9m in width by 0.8m in depth which was filled by three fills **42003**, **42004** and **42005**. The only piece of datable pottery was recovered from the light brown silty clay upper fill **42003**.

6.4.21. Sealing **42006** and the remainder of the trench was a yellowish-brown subsoil **42001** 0.34m in depth which was overlain by a topsoil **42000** 0.40m in depth.

Trench 43

6.4.22. The natural subsoil was reached at a depth of 28.35m AOD to the east of the trench and at 25.17m AOD to the west and consisted of light grey mottled clay **43002**.

6.4.23. Towards the centre of the trench was a large north-south aligned ditch **43005** measuring 10m in width by 0.92m in depth from which the upper fill **43003** contained possible post-medieval pottery.

6.4.24. To the east of **43005** was a large pit **43007** measuring 6.2m in width by 0.97m in depth which consisted of steeply sloping sides with an irregular profile and which was filled by a grey-brown silty clay **43006** containing small fragments of pottery.

6.4.25. Sealing these features and the remainder of the trench was a grey-brown subsoil **43001** 0.25-0.40m in depth which was overlain by a topsoil **43000** 0.38m in depth.

Trench 44-47

6.4.26. These trenches were devoid of archaeology.

Trench 48

6.4.27. The natural subsoil was reached at a depth of 26.83m AOD to the northwest of the trench and at 27.8m AOD to the southeast and consisted of red-orange clay sand and gravel **48002**.

6.4.28. Towards the southeast end of the trench was a large north-south aligned ditch **48004** which consisted of a steep sided U-shaped profile measuring +8.5m in width by 1.05m in depth and which was filled by a mid grey-brown silty sandy clay **48003.**

6.4.29. To the south of **48004** was a small posthole measuring **48006** 0.3m in width by 0.25m in depth and which was filled by a white silty clay sand **48005**.

6.4.30. Sealing these features and the remainder of the trench was a grey-brown subsoil **48001** 0.38m in depth which was overlain by a topsoil **48000** 0.30m in depth.

Trench 49 and 50

6.4.31. These trenches were devoid of archaeology.

Trench 51 (Fig. 8)

6.4.32. The natural subsoil was reached at a depth of 28.63m AOD to the north of the trench and at 29.33m AOD to the south and consisted of red gravel sand **51002**.

6.4.33. Towards the northern end of the trench were two large pits **51007** (Fig. 8, Plate 13) and **51009** (Fig. 8, Plate 14). **51007** consisted of moderately sloping sides with a bowl shaped profile measuring 1.22m in width by 0.33m in depth and was filled by a grey silt **51006** which was overlain by a grey-black silty clay **51005** and a brown silty clay **51004**.

6.4.34. **51009** was located to the immediate west of **51007** and consisted of moderately sloping sides with a bowl shaped profile measuring 1.8 in width by 0.53 in depth which was filled by a grey-brown silty clay gravel **51008**.

6.4.35. Sealing these features and the remainder of the trench was a subsoil **51001** 0.3m in depth which was overlain by a topsoil **51000** 0.3m in depth.

Trenches 52-60

6.4.36. These trenches were devoid of archaeology.

Trench 61

6.4.37. The natural subsoil was reached at a depth of 31.92m AOD to the northeast of the trench and at 30.41m AOD to the southwest and consisted of orange brown silty clay **61002**.

6.4.38. Towards the northeastern end of the trench was a north-south aligned ditch **61004** that consisted of moderately sloping sides with a bowl shaped profile measuring 1.18m in width by 0.34m in depth, and which was filled by a grey-brown silty clay gravel **61003**.

6.4.39. Sealing **61004** and the remainder of the trench was a subsoil **61001** 0.08m in depth which was overlain by a topsoil **61000** 0.27m in depth.

Trench 62

6.4.40. This trench was devoid of archaeology.

Trench 63

6.4.41. The natural subsoil was reached at a depth of 23.16m AOD to the northwest of the trench and at 23.20m AOD to the southeast and consisted of red brown silty clay **63002**.

6.4.42. Towards the northwestern end of the trench was a northeast-southwest aligned ditch **63003** that consisted of steeply sloping sides with a V-shaped profile measuring 1.8m in width by 0.50m in depth, and which was filled by a dark brown sandy clay **63004**.

6.4.43. Sealing **63003** and the remainder of the trench was a subsoil **63001** 0.15m in depth which was overlain by a topsoil **63000** 0.20m in depth.

Trench 64 and 65

6.4.44. These trenches were devoid of archaeology.

6.5. Site 4 – Birch

Trench 66 (Fig. 8)

6.5.1. The natural subsoil was reached at a depth of 30.02m AOD to the northeast of the trench and at 31.0m AOD to the southwest and consisted of orange-brown sandy gravel **66002**.

6.5.2. Towards the northeast of the trench was a possible elongated shallow stepped pit **66004** measuring 1.6m in width by 0.2m in depth and which was filled by a dark brown clay sand **66005**. Adjacent to **66004** was a small bowl shaped gully **66007** (Plate 15) measuring 0.9m in width by 0.25m in depth and which was filled by a dark brown clay sand **66006**.

6.5.3. To the northeast of **66007** was an east-west aligned U-shaped ditch **66010** (Fig. 8, Plate 16) measuring 1.84m in width by 0.52m in depth and which was filled by a dark grey-brown silty clay gravel **66009**/**66012**. Cutting **66007** was a steep sided bowl shaped ditch re-cut **66013** measuring 0.96m in width by 0.3m in depth and which was filled by a dark grey-brown silty clay **66008**.

6.5.4. To the northeast of **66010** was a northeast-southwest aligned steep sided ditch **66018** (Fig. 8) 1.24m in width by 0.45m in depth filled by a grey clay gravel **66017**. Cutting **66018** was a steep sided V-shaped ditch **66021** 0.58m in width by 0.3m in depth and which was filled by a dark grey brown silty clay gravel **66016,** and a moderately sloping bowl shaped ditch **66015** (Fig. 8) 1.68m in width by 0.42m in depth which was filled by a dark grey brown silty clay **66014**.

6.5.5. Adjacent to **66018** was a curvilinear moderately sloping sided bowl shaped ditch **66020** (Fig. 8) measuring 1.2m in width by 0.56m in depth and which was filled by a grey-brown silty clay **66019**.

6.5.6. Sealing these features and the remainder of the trench was a mid-brown stony clay sand subsoil **66001** 0.23m in depth which was overlain by a topsoil **66000** 0.20m in depth.

Trench 67

6.5.7. The natural subsoil was reached at a depth of 31.93m AOD to the north of the trench and at 32.6m AOD to the south and consisted of orange brown clay sand gravel **67002**.

6.5.8. Towards the south end of the trench was a east-west aligned field boundary **67004** measuring 1m in width by 0.20m in depth and which was filled by a mid brown sandy silt clay **67003**.

6.5.9. To the north of **67004** was a sub-circular steep sided "U" shaped post-hole **67006** measuring 0.54m in width by 0.26m in depth and which was filled by a dark grey brown sandy silt clay **67005**.

6.5.10. Sealing these features and the remainder of the trench was a mid-brown subsoil **67001** 0.2m in depth which was overlain by a topsoil **67000** 0.30m in depth.

Trenches 68 and 69

6.5.11. This trench was devoid of archaeology.

Trench 70

6.5.12. The natural subsoil was reached at a depth of 32.65m AOD to the north of the trench and at 32.66m AOD to the south and consisted of brown-orange gravel sand **70002**.

6.5.13. Towards the southern end of the trench was a steep sided drainage ditch **70004** measuring 1.1m in width by 0.40m in depth and which was filled by a mid brown silty clay **70003**. To the north of **70004** was a field boundary **70006** measuring 2.96m in width by 0.54m in depth which was filled by a dark grey brown silty clay **70005**.

6.5.14. To the north of **70006** and overlying the natural subsoil was a layer of light brown-grey sandy silt clay **70009**. Cutting this was a bowl shaped pit **70008** measuring 0.88m in width by 0.42m in depth and whch was filled by a brown-black silty clay with charcoal inclusions **70007**.

6.5.15. Sealing these features and the remainder of the trench was a light brown clay sand subsoil **70001** 0.1m in depth which was overlain by a topsoil **70000** 0.35m in depth.

Trench 71 and 72

6.5.16. These trenches were devoid of archaeology.

Trench 73

6.5.17. The natural subsoil was reached at a depth of 32.35m AOD to the southwest of the trench and at 32.37m AOD to the northeast and consisted of red-orange gravel sand **73002**.

6.5.18. Towards the northeastern end of the trench on an east-west alignment was a steep sided ditch **73004** with a V-shaped profile measuring 1.98m in width by 0.58m in depth, and which was filled by a dark brown silty clay gravel **73003**.

6.5.19. Sealing **73004** and the remainder of the trench was a brown-grey silt sand clay subsoil **73001** 0.1m in depth which was overlain by a topsoil **73000** 0.2m in depth.

Trench 74 and 75

6.5.20. These trenches were devoid of archaeology.

Trench 76 (Fig. 8)

6.5.21. The natural subsoil was reached at a depth of 30.26m AOD to the north of the trench and at 31.34m AOD to the south and consisted of brown-orange gravel sand **76002**.

6.5.22. Towards the northern end of the trench on an east-west alignment were two parallel gullies **76004** and **76006** (Fig. 8). The northernmost of the two gullies, **76004**, consisted of moderately sloping sides with a flat base measuring 1.3m in width by 0.26m in depth and was filled by a mid-brown silty sand **76003**. To the south of **76004** was gully **76006** (Plate 17) which consisted of steep sloping sides with a flat base measuring 1.5m in width by 0.42m in depth and was filled by mid-brown silty clay **76005**. To the south of **76006** was a subcircular pit **76008** (Fig. 8) which measured 0.7m in width by 0.17m in depth and was filled by a light brown-orange sandy silt **76007**.

6.5.23. Towards the centre of the trench was a northeast-southwest aligned ditch **76010** (Fig. 8) which measured 0.96m in width by 0.17m in depth and which was filled by a light red-brown silty sand **76009**.

6.5.24. At the southern end of the trench was another northeast-southwest aligned ditch **76012** (Fig. 8, Plate 18) similar in form to that of **76010**. Filling **76012** was a mid-brown silty sand **76011**.

6.5.25. Sealing these features and the remainder of the trench was a light brown silt clay subsoil **76001** 0.25m in depth which was overlain by a topsoil **76000** 0.35m in depth.

Trench 77

6.5.26. The natural subsoil was reached at a depth of 31.81m AOD to the southeast of the trench and at 32.04m AOD to the northwest and consisted of orange-brown sand gravel **77002**.

6.5.27. Towards the centre of the trench was a large circular pit **77010** that consisted of a steep sided, U-shaped profile measuring 0.6m in width by 0.52m in depth and which was filled by a mid brown grey silty sand **77009**.

6.5.28. Overlying **77010** and the remainder of the trench was a light-mid brown sand silt clay subsoil **77001** 0.15m in depth, which was overlain by a mid brown silt clay topsoil **77000** 0.2m in depth.

Trench 78

6.5.29. This trench was devoid of archaeology.

Trench 79 (Fig. 8)

6.5.30. The natural subsoil was reached at a depth of 27.63m AOD to the southeast of the trench and at 25.39m AOD to the northwest and consisted of yellow orange silt sand gravel **79002**.

6.5.31. Towards the southeastern end of the trench was a small circular posthole **79004** (Fig. 8) with very shallow sides measuring 0.22m in width by 0.07m in depth and which was filled by a dark brown sandy silt **79003**.

6.5.32. To the northwest of **79004** was a north-south aligned ditch **79006** (Fig. 8) that consisted of a U-shaped profile measuring 0.66m in width by 0.3m in depth and which was filled by a light-dark red silty sand **79005**.

6.5.33. Overlying the natural subsoil to the northwestern end of the trench was a colluvial layer **79007**, which was c.2m in depth. Sealing this and the remainder of the trench was a mid brown silt clay sand **79001** 0.39m in depth, which was overlain by a grey brown topsoil **79000** 0.27m in thickness.

Trench 80

6.5.34. The natural subsoil was reached at a depth of 27.56m AOD to the north of the trench and at 25.46m AOD to the south and consisted of red-brown silty clay **80002**.

6.5.35. Towards the centre of the trench was a shallow sub circular pit **80004** with a bowl shaped profile measuring 0.76m in width by 0.3m in depth and which was filled by a light grey-brown sandy silt clay **80003**.

6.5.36. To the north of **80004** was a northwest-southeast aligned shallow curvilinear ditch **80006** with a bowl shaped profile measuring 0.44m in width by 0.16m in depth, and which was filled by a light grey-brown sandy silt **80005**.

6.5.37. Overlying these features and the remainder of the trench was a mid grey brown silty clay **80001** 0.40m in depth, which was overlain by a red-brown topsoil **80000** 0.5m in thickness.

Trench 81 (Fig. 8)

6.5.38. The natural subsoil was reached at a depth of 24.36m AOD to the northeast of the trench and at 23.32m AOD to the southwest and consisted of orange-brown sandy gravel **81002**.

6.5.39. Towards the southwestern end of the trench was a northwest-southeast aligned ditch **81004** (Fig.8, Plate 19) that consisted of moderately sloping sides with a bowl shaped profile measuring 1.12m in width by 0.24m in depth and which was filled by a grey brown silty clay **81003**.

6.5.40. To the northeast of **81004** was a steep sided ditch **81006** (Fig.8, Plate 20) with a V-shaped profile measuring 0.28m in width by 0.22m in depth and which was filled by mid brown silty clay **81005**.

6.5.41. Overlying these features and the remainder of the trench was a mid grey silty clay **81001** 0.3m in depth, which was overlain by a brown clay topsoil **81000** 0.2m in thickness.

Trench 82

6.5.42. This trench was devoid of archaeology.

7. THE FINDS

7.1. **The flint** by Barry Bishop

Introduction

7.1.1. Archaeological Investigations along the pipeline route resulted in the recovery of 22 struck flints and 0.1kg of unworked burnt flint. This report quantifies and briefly describes the material (see Table 1), offers some comments on its significance and recommends any further work needed for it to attain its full research potential.

Methodology

7.1.2. Each piece of struck flint was examined by eye and X10 magnification and catalogued by context according to a basic typological/technological scheme. Details of raw materials, condition and, where possible, dating are also provided (see Table 1). All metrical descriptions follow the methodology of Saville (1980).

Quantification

Decortication Flake	Chip	Flake	Broken Flake/Blade	Blade-like flake	Prismatic Blade	Non-prismatic Blade	Core	Burnt Flint (no.)	Burnt Flint (wt:g)
2	2	4	1	4	3	4	2	9	103

Table 1: Quantification of Lithic Material

Struck flint was recovered from Trenches 7, 8, 9, 18, 20, 40 and 48, whilst unworked burnt flint was recovered from Trenches 10, 18, 20 and 40. The struck flint includes flakes, blades and cores but no retouched pieces were identified.

7.2. **Burnt flint**

7.2.1. Nine pieces of unworked burnt flint weighing a total of 103g were recovered from four separate trenches. The flint is variably burnt but all to the degree that it has changed colour and become 'fire-crazed', consistent with burning in a hearth. It was distributed widely and in only small quantities, and probably represents general residual 'background' waste. No concentrations that might be suggestive of intensive or prolonged settlement activities are present.

7.3. **Struck Flint**

Raw Materials

7.3.1. The raw materials used for the struck assemblage include fine-grained opaque grey and translucent grey, black and brown flint. Most of the pieces are small, rarely measuring more than 30-40mm in greatest dimension. The medial blade segment from context [9003] is notable in this respect as it measures 53mm in length and,

when complete, was probably significantly larger than this. Remnant cortex and the presence of heavily recorticated thermal surfaces indicate that the raw materials were obtained from glacial boulder clay deposits and alluvial sources, both of which are present in the locality

Condition

7.3.2. The struck flint is in a variable but frequently chipped and abraded condition although this is rarely very pronounced. The majority of flakes also exhibit some degree of edge breakage. This suggests that overall there may be a high degree of residuality amongst the assemblage but it has not experienced any extensive post-depositional damage and was probably recovered from close to where it was originally discarded.

7.3.3. A few pieces had recorticated and others show the first indications of incipient recortication.

Description

7.3.4. No retouched pieces are present although technologically the assemblage is dominated by blades and blade-like flakes, which suggests that the bulk of it can be dated to the Mesolithic or Early Neolithic periods. One of the two cores recovered is an opposed platform type that had produced non-prismatic blades. Most of the flakes would also sit comfortably within Mesolithic or Neolithic industries although a few, which are more crudely produced with wide, oblique striking platforms , could date to the later second or first millennium BC (cf Martingell 1990).

Context

7.3.5. The largest collection of struck flint was recovered from Trench 7, which produced 10 pieces. Trenches 40 and 48 both provided four pieces whilst the other flint-containing trenches produced only single pieces. The material from Trench 7 mostly came from ditches of prehistoric date although there was little homogeneity amongst these assemblages and their condition may indicate that they were at least predominantly residually deposited.

7.3.6. Overall, the flintwork represents a very low-density scatter and is probably best interpreted as representing low-level activity by transient groups moving through a much more widely inhabited landscape

Significance and Potential

7.3.7. The lithic assemblage is small and widely distributed in low densities, but represents activity that can be broadly dated to the Mesolithic or Neolithic periods. It probably indicates intermittent activity occurring at the site although its potential for contributing to an in-depth understanding of the nature, dating and duration of that occupation is limited by the small size of the assemblage, the paucity of diagnostic implements and the lack of secure contextual associations.

7.4. **The pottery** by Emily Edwards

7.4.1. A total of 81 (320 g) sherds of pottery were recovered from the evaluation trenches across the four main areas of the pipeline: Wormingford, Fordham, Stanway and Birch. The Table 2 below gives a breakdown of pottery by feature and site, giving general fabrics, dates and quantifications.

CONTEXT	FEATURE	SITE	COUNT	WEIGHT	FABRIC	DATE
7001	Ditch	Wormingford	1	3	AF1	PREH
7003	Ditch	Wormingford	19	25	F3	PREH
7003	Ditch	Wormingford	1	7	F2	EN? BA?
7007	Ditch	Wormingford	7	26	AF2	PREH
7009	Ditch	Wormingford	1	7	AMF1	PREH
8003	Ditch	Wormingford	5	2	F1	PREH
9001	Subsoil	Wormingford	1	7	F1	PREH
10003	Ditch	Wormingford	1	1	x	amorphous
14009	Ditch	Wormingford	4	14	X	amorphous
18009	Ditch	Fordham	2	1	x	amorphous
19003	Ditch	Fordham	2	20		late Med/post med
23003	Ditch	Fordham	1	4	F2	PREH
40013	Ditch	Stanway	8	27	AMF1	PREH
43003	Ditch	Stanway	3	3	F	PREH
43010	Ditch	Stanway	1	1	A	RO or MED
66009	Ditch	Birch	12	95	F2	PREH
66009	Ditch	Birch	3	7	F2	EN?
66011	Ditch	Birch	16	105	F2	PREH
70008	Ditch	Birch	1	2	x	Post Medieval
Total			***89***	***357***		

Table 2: Table showing quantifications by feature and sub site.
Codes: F; flint, A; sand. M; mica

Methodology

7.4.2. The assemblage was quantified using sherd count and weight. Fabric and form were briefly identified and vessel identification based on featured sherds. Fabrics were given alphanumerical codes relating to the size of the principal inclusion. Generally speaking, in excess of 20 sherds (or several diagnostic sherds) are required from a single prehistoric feature to allow some precision of dating which takes residuality into account. This must be taken into account with the spot dating especially where there are less than five sherds.

Summary of Assemblages

Wormingford

7.4.3. Of the 36 sherds (78), all were recovered from ditches. The fabrics all contained flint and although most were merely plain body sherds, a coarse flint tempered

sherd from context 7003 was decorated with a finger tip impression and bore either the remnants of a cordon or a lug. A tiny, simple, rounded rim sherd from context 7007 was manufactured from a flint and sand fabric. These two featured sherds need to be studied and dated more accurately. Plasticated decoration, finger tipping and heavily flint tempered fabrics are both consistent with types of early Neolithic bowl, middle Bronze Age and late Bronze Age pottery.

Fordham

7.4.4. Ditch fill 23003 contained flint tempered pottery of prehistoric date, possibly early Neolithic.

Stanway

7.4.5. Ditch fill 40013 contained flint tempered pottery of prehistoric date. The internal faces of the sherds from ditch 40013 were covered with charred residue. These were all plain body sherds and it was not possible to date them more specifically.

7.4.6. The remainder of the material from Stanway was of a later date (Table 1).

Birch

7.4.7. Ditches 66009 and 66011 contained 30 sherds (207 g) of flint tempered pottery, including rims (66009). The rims from 66009 were tiny, simple, rolled rims, possibly from early Neolithic Plain Bowls. The lug/cordon, which is either finger tip formed or decorated, may also be early Neolithic.

Discussion – Potential and Significance

7.4.8. The group comprises small and broken sherds; beyond establishing forms and fabric parallels, in order to confirm dates, there is little more information to be extracted.

7.4.9. Both Stanway and Wormingford have Cursus Monuments; there are also crop marks suggesting middle Bronze Age activity at Wormingford. Although the assemblage comprised small and broken fragments, the featured sherds and the flint and sand fabrics strongly suggest a middle or late Bronze Age date for the Wormingford pottery, although it is also possible that the lug and rim are earlier. The assemblage from Birch is strongly suggestive of an early Neolithic date. Should further fieldwork be necessary, full excavation of those features with good potential might result in the retrieval of an informative assemblage.

7.5. **The animal bone** by Matilda Holmes

Summary of material recovered

7.5.1. Bones were recovered by hand from trenches 7, 10, 14, 20, 21, 23 and 43. No phasing was available at this stage.

Quantification of material

7.5.2. Samples were very small (Table 1), and came from cattle and hare or rabbit.

Species	**Trench**						
	7	**10**	**14**	**20**	**21**	**23**	**43**
Cattle				2		1	1
Horse			1				
Hare/Rabbit	1			1			
Unidentified Mammal		1			1		
Large Mammal					1		
Total	1	1	1	3	2	1	1

Table 3: Species Representation (fragment count)

Potential and significance

7.5.3. The condition of the material was poor (Table 2), and highly fragmented. There was very little potential for fusion, metrical or tooth wear data to be recovered.

Condition		**Trench**						
		7	**10**	**14**	**20**	**21**	**23**	**43**
Excellent	1							
Good	2							
Fair	3	1			1			
Poor	4			1	2		1	1
Very Bad	5							

Table 2: Condition of bones identified to species or anatomy

Discussion of the material in regional setting

7.5.4. The condition of the assemblage suggests that any further bones recovered will be poorly preserved, and produce minimal data for further work.

7.6. **Other finds** by Emma Collins

Introduction

7.6.1. Other finds recovered from the fieldwork consist of a single iron object, slag, shell and Ceramic Building Material (CBM). The assemblage was quantified by count and weight, and examined macroscopically for the purposes of this assessment.

Iron

7.6.2. A single iron object was recovered from the single fill (**19003**) of ditch 19004. The object is broken in two and is unidentifiable. Medieval pottery was also found from context 19003 so it is possible the object is Medieval.

Slag

7.6.3. Slag was recovered from **18009**, the primary fill of ditch 18006. A total of five pieces of slag weighing five grams with one small piece of coke weighing two grams were recovered through hand excavation. All the slag was unmagnetic.

Shell

7.6.4. Intact shells and shell fragments were recovered from four contexts. All of the shells (three whole) and fragments have been identified as snail shell. None of the shell was worked.

Ceramic Building Material (CBM)

7.6.5. The evaluation recovered 53 fragments of CBA weighing a total of 1909 grams. Brick fragments made up seven of the 53 count, the rest being tile. The totals can be seen in Table 3 below.

Context	Type	Qty	Wgt (g)	comments
19003	Tile	8	178	All flat roof tile
20003	Tile	8	49	2 flat roof tile, 6 too small/abraded to tell if even tile
20004	Tile	12	517	11 flat roof, 1 with square hole and 1 with partial round hole. One thicker possible floor tile
20004	Brick	6	435	Handmade
21005	Tile	5	81	All flat roof tile
21006	Tile	4	161	All flat roof tile
21006	Brick	1	82	Handmade, very crude
23003	Tile	1	76	Very crude, 20mm thick
37004	Tile	3	100	All flat roof tile
43003	Tile	4	201	2 flat roof tile and 2 heavily abraded pieces
54004	Tile	1	29	Flat roof tile
	Total	**53**	**1909**	

Table 3. Quantification of CBM

Recommendations for further work

7.6.6. All of the unidentified iron pieces will require x-ray to see if their shape or function can be determined. No further work is recommended for the shell. The very small quantity of slag means no further work is necessary as no useful information will be gained. The CBA could have fabric analysis done to establish if it is all coming from the same production site and the fabrics could be compared to a local fabric series

8. DISCUSSION

8.1.1. The finds assessment provided by the specialists in conjunction with the stratigraphic sequences from the evaluation trenches have resulted in a number of archaeological sites being identified along the pipe route. Although some isolated Roman, Medieval and post-medieval pottery has been recovered, it is the prehistoric evidence which has produced the greatest amount of information and offers significant potential to advance our understanding of the prehistoric periods in this region.

8.1.2. In the Wormingford area the two trenches (7 and 8) which specifically targeted a number of cropmark features contained archaeological evidence indicating a series of ditches dating to the prehistoric period. In Trench 7, two of the northwest-southeast aligned ditches (**7004** and **7008**) contained prehistoric pottery, the former possibly of early Neolithic or Bronze Age date (**7003**). The suggested date for the pottery assemblage from Wormingford was middle –late Bronze Age (Emily Edwards 2010). Ten pieces of struck flint were recovered from Trench 7, the vast majority of which were blades and blade like flakes dating to the Mesolithic or Early Neolithic period. The condition of the flints may indicate that they were largely residually deposited (Barry Bishop 2010). The results from trench 8 corresponded with those from Trench 7 as the targeted cropmark feature; a northeast-southwest aligned ditch (8004) also contained pottery indicating a prehistoric date (8003).

8.1.3. The remainder of the trenches which were excavated in the area (Trenches 9-14) were positioned speculatively and did not provide any further datable archaeological evidence. Pottery was retrieved from a possible north-south aligned ditch (**10004**) in Trench 10 and a northwest-southeast aligned ditch (**14010**) in Trench 14 however it was of indeterminable date. An undated gully **14004** and a ditch and re-cut (**14012** and **14014**) were also excavated but contained no datable evidence.

8.1.4. A number of trenches were excavated in the area of Fordham (Trenches 16-27) with the resulting archaeological evidence coming exclusively from the trenches which had targeted a series of cropmarks. The exposure of a large undated east-west aligned ditch (**18006**) in Trench 18 may have represented the continuation of the northern side of a large rectangular enclosure visible as a cropmark further to the east. The excavation of trenches 23 and 24 revealed a northwest-southeast aligned ditch (**23004**/**24004**) which apparently formed the eastern side of a large rectangular enclosure. Pottery retrieved from the fill of one of the ditch sections (**23003**) indicated a prehistoric date.

8.1.5. Trenches were excavated in the area of Stanway (numbered 36-44, 46-48 and 50-65. Trench 40 was situated in a position to intercept a series of cropmarks. Two northwest-southeast aligned ditches (**40014** and **40008**) and a north-south orientated ditch (**40004**) were partially exposed. The finds from one of the probable ditches (**40014**) suggested an area of prehistoric activity. The potential of the surviving archaeology perhaps with regard to a settlement was highlighted by the concentration of linear ditches and presence of a small pit or post-hole (**40016**) which contained flint and had been truncated by the possible prehistoric ditch (**40014**). Further potential for uncovering evidence of activity during the prehistoric period was illustrated by the excavation of Trenches 42 and 43. Despite being positioned speculatively a number of archaeological features were uncovered. A large undated east-west aligned ditch (**42006**) was partially excavated in Trench 42 and a large north-south aligned ditch (**43005**) which contained prehistoric pottery sherds was sampled in Trench 43. The excavation of another speculatively

positioned trench (48) perhaps provided more signs of prehistoric activity away from the known cropmarks. The northern side of a potentially large ditch (**48004**) was exposed at the extreme southeastern end of the trench; it contained a number of flints.

8.1.6. A series of trenches were opened up in the area of Birch (numbered 66-82). The most significant findings resulted from the excavation of Trench 66 and related to a number of intercutting archaeological features perhaps representative of activity associated with prehistoric settlement. A northeast-southwest aligned ditch (**66018**) had been cut by one of a number of east-west orientated ditches (**66015**). The aforementioned ditch ran parallel to ditch **66020** which was also undated. However another east-west aligned ditch (**66010**) which had been re-cut (**66013**) contained an assemblage of pottery (66009) which was 'suggestive of an early Neolithic date' (Emily Edwards 2010).

8.1.7. Therefore a number of the trial trenches in each of the four sites have provided archaeological evidence of activity in the prehistoric period. The presence of early Neolithic pottery in the assemblages from Wormingford and Birch suggests a period of activity in the areas prior to the establishment of a series of ditched enclosures and associated field systems during the Bronze Age. A research agenda topic could entail further work regarding this transitional period.

8.1.8. Geophysical surveys completed by Colchester University (Tim Dennis pers. comm.), illustrated as Figure 13, at Birch have identified the presence of probable anomalies of archaeological origin immediately to the west of the pipeline easement. A number of pits and ditches were identified by the evaluation in trenches 80 and 81, however no dating evidence was recovered. Worked flint recovered during fieldwalking in this area in 1987 (Appendix 3) identified a significant number of Neolithic artefacts.

Considerations for mitigation

8.1.9. Given the construction methodology associated with this scheme, the evaluation has demonstrated that archaeological remains do exist within the working easement of the pipe route and will be impacted upon during the development phase of the project. It is clear from the results that specific areas along the route contain dense or complex archaeological deposits (for example Wormingford Trenches 7,8 and 14, Stanway Trenches 39-41, Fordham Trench 18 and Birch Trenches 66, 76-81).

8.1.10. However, in most of these areas there may be a significant depth of subsoil to protect the archaeological remains *insitu* during the easement topsoil strip which will be implemented during stage 1 of the works. It is generally accepted that 250mm of subsoil deposit would serve to protect underlying remains during topsoil removal in dry conditions. Table 4 represents an overview of the trench results in conjunction with the topsoil and subsoil depths.

8.1.11. It is probable that further mitigation may be required in specific areas of the route around Colchester in the form of watching brief, excavation of pipe trench, and controlled strip, map and sample.

Site	Trench	Archaeology	Date (ceramics)	Topsoil/Subsoil (m)
Worm'fd				
	7	Five ditches	Prehistoric (EN/BA?)	0.25/ 0.25 to 0.40
	8	One ditch, two post-holes, one gully and a pit	Prehistoric	0.25/ 0.49
	9	One pit	-	0.25/ 0.30
	10	One pit or ditch	Undiagnostic	0.30/ 0.40 to 1.35
	12	One gully	-	0.35/ 0.10
	14	Three ditches and two gullies	Undiagnostic	0.20 to 0.30/ 0.20 to 0.25
Fordham				
	16	One ditch (drainage)	-	0.35/ 0.15
	18	One large ditch	Undiagnostic	0.30/ 0.11
	19	One ditch	Late Med/ Post Med	0.25/ 0.25
	20	One ditch	Post/ Med?	0.25/ 0.20
	21	Pond?	Post/ Med?	0.25/ 0.15
	23	One ditch	Prehistoric	0.28/ 0.28
	24	One ditch	-	0.25/ 0.45
Stanway				
	37	One ditch	Post/ Med?	0.35/ 0.35
	39	Two ditches (one curvilinear)	-	0.30/ 0.25
	40	Three ditches and a pit	Prehistoric	0.15/ 0.25
	41	One ditch and two postholes	-	0.25/ 0.30
	42	One ditch	-	0.40/ 0.34
	43	One ditch and one pit	Prehistoric/ Roman/Med	0.38/ 0.25 to 0.40
	48	One ditch and one posthole	-	0.30/ 0.38
	51	Two large pits	-	0.30/ 0.30
	61	One ditch	-	0.27/ 0.08
	63	One dtich	-	0.20/ 0.15
Birch				
	66	Three ditches, one gully and a pit	Prehistoric (EN/BA?)	0.20/ 0.23
	67	Ditch (Field boundary), one posthole	Post med?	0.30/ 0.20
	70	Ditch (furrow), tree bole	Post med?	0.35/ 0.1
	73	One ditch	-	0.20/ 0.10
	76	Two ditches and two parallel gullies	-	0.35/ 0.25
	77	Large pit	-	0.20/ 0.15
	79	One ditch and a posthole	-	0.27/ 0.39 and 0.2 colluvium
	80	Curvilinear ditch and pit	-	0.50/ 0.40
	81	Two ditches	-	0.20/ 0.30

Table 4. Overview of trench results showing overburden depths

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Appendix 2

Contents database

Context	Context Type	Associated Context(s)	Associated Cut	Colour	Composition	Width/Diameter	Thickness/Depth/Height	Interpretation
7000	Layer			dark brown/grey	silt/loam	2m	0.20-0.30m	Topsoil
7001	Layer			mid orange/brown	silt/sand/gravel	2m	0.25-0.40m	Subsoil
7002	Natural			mid orange/brown	clay/silt/sand/gravel	2m		Natural
7003	Fill		7004	mid grey/brown	clay/silt	1.15m	0.37m	build up deposit with in ditch
7004	Cut	7003				1.15m	0.37m	boundary/drainage ditch
7005	Fill		7006	dark grey/brown	silt/sand	1.05m	0.25m	fill of ditch
7006	Cut	7005				1.05m	0.25m	possible boundary ditch
7007	Fill		7008	mid brown	silt/clay/sand	1.70m	0.28m	fill of linear ditch
7008	Cut	7007				1.70m	0.28m	possible drainage ditch
7009	Fill		7010	mid grey/brown	clay/silt/sand	0.90m	0.27m	fill of ditch
7010	Cut	7009				0.90m	0.27m	linear ditch
7011	Fill		7012	dark grey/brown	sand/silt/clay	0.48m	0.12m	back-fill deposit
7012	Cut	7011				0.48m	0.12m	animal burrow
7013	Fill		7014	dark grey/brown	sand/silt	2.36m	0.38m	fill of ditch

7014	Cut	7013				2.36m	0.38m	linear ditch
8000	Layer			dark brown/grey	sand/silt/clay	2.10m	0.25m	Topsoil
8001	Layer			mid orange/brown	silt/sand	2.10m	0.49m	Subsoil
8002	Natural			brown/orange	sand/clay	2.10m		Natural
8003	Fill		8004	mid brown	silt/clay/sand	2.20m	0.48m	fill of ditch
8004	Cut	8003				2.20m	0.48m	linear ditch
8005	Fill		8006	mid brown	silt/clay/sand	0.50m	0.14m	fill of shallow post-hole
8006	Cut	8005				0.50m	0.14m	possible post-hole
8007	Fill		8008	mid brown	silt/clay/sand	0.50m	0.14m	fill of shallow gully
8008	Cut	8007				0.50m	0.14m	shallow gully
8009	Fill		8010	dark grey/brown	sand/silt		0.45m	build up deposit
8010	Cut	8009					0.45m	possible pit/ditch end
8011	Fill		8012	mid brown	silt/clay/sand	0.46m	0.14m	fill of shallow pit
8012	Cut	8011				0.46m	0.14m	shallow pit
9000	Layer			dark grey/brown	silt/loam	2m	0.25m	Topsoil
9001	Layer			mid-dark orange/brown	silt/sand	2m	0.30m	Subsoil
9002	Natural			mid orange/brown	silt/sand	2m		Natural

9003	Fill		9004	mid grey/brown	sand/clay/silt	0.70m	0.18m	fill of pit
9004	Cut	9003				0.70m	0.18m	possible pit
10000	Layer			dark grey/brown	sand/silt/clay	2m	0.30m	Topsoil
10001	Layer			mid brown	silt/clay	2m	0.35m	Subsoil
10002	Natural			orange/brown	gravel	2m		Natural
10003	Fill		10004	mid brown	silt/clay/sand	3.80m	0.65m	back-fill deposit?
10004	Cut	10003				3.80m	0.65m	possible linear ditch
11000	Layer			dark grey/brown	sand/silt/clay	2m	0.30m	Topsoil
11001	Layer			mid brown	silt/clay	2m	0.30m	Subsoil
11002	Natural			orange and grey	gravel and boulder clay	2m		Natural
11003	Fill		11004	mid brown	silt/clay			fill of land drain
11004	Cut	11003						land drain
12000	Layer			dark grey/brown	sand/silt/clay	1.85m	0.35m	Topsoil
12001	Layer			light brown	silt/clay	1.85m	0.10m	Subsoil
12002	Natural			orange and grey	gravel and boulder clay	1.85m		Natural
12003	Fill		12004	grey	silt/clay	0.62	0.16m	fill of gully
12004	Cut	12003				0.62m	0.16m	gully

13000	Layer			dark grey/brown	sand/silt/clay	2m	0.30m	Topsoil
13001	Layer			mid brown	silt/clay	2m	0.40-0.55m	Subsoil
13002	Natural			orange/brown	sand and gravel with patches of clay	2m		Natural
14000	Layer			dark grey/brown	sand/silt/clay	2m	0.20-0.30m	Topsoil
14001	Layer			mid brown	silt/clay	2m	0.20-0.25m	Subsoil
14002	Natural			yellow/orange and white	silt/clay	2m		Natural
14003	Fill		14004	light grey	silt/sand/clay	0.68m	0.20m	fill of gully
14004	Cut	14003				0.68m	0.20m	shallow gully
14005	Fill		14006	light grey	silt/sand/clay	0.60m	0.11m	fill of gully
14006	Cut	14005				0.60m	0.11m	drainage gully
14007	Fill		14008	mid grey/brown	silt/sand/clay	0.70m	1m	fill of drain
14008	Cut	14007				0.70m	1m	field drain
14009	Fill		14010	mid grey/brown	silt/sand/clay	0.75m	0.45m	fill of ditch
14010	Cut	14009				0.75m	0.45m	ditch
14011	Fill		14012	mid grey	silt/clay/sand	1.80m	0.25m	fill of ditch
14012	Cut	14011				1.80m	0.25m	drainage ditch
14013	Fill		14014	mid brown/grey	silt/clay/sand	0.65m	0.25m	fill of ditch

14014	Cut	14013				0.65m	0.25m	drainage ditch
14015	Fill		14016					fill of drain
14016	Cut	14015						field drain
16000	Layer					1.80m	0.35m	Topsoil
16001	Layer					1.80m	0.15m	Subsoil
16002	Natural			red/brown	silt/clay	1.80m		Natural
16003	Fill		16004	brown/grey	silt/clay	1.20m	0.35m	fill of ditch
16004	Cut	16003				1.20m	0.35m	ditch
17000	Layer					1.80m	0.35m	Topsoil
17001	Layer					1.80m	0.15m	Subsoil
17002	Natural			red/brown	clay	1.80m		Natural
18000	Layer			grey/brown	silt/clay	2.20m	0.32m	Topsoil
18001	Layer			grey/yellow	silt/clay	2.20m	0.40m	Subsoil
18002	Natural			yellow/brown	silt/clay	2.20m		Natural
18003	Fill		18004	red/brown	silt/clay	1.30m	0.60m	fill of ditch
18004	Cut	18003				1.30m	0.60m	ditch
18005	Fill		18006	red/brown	silt/clay	1m	0.46m	secondary fill of ditch

18006	Cut	18005,18009				1m	0.46m	ditch
18007	Fill		18008	red/brown	silt/clay	1.90m	0.56m	fill of ditch
18008	Cut	18007				1.90m	0.56m	ditch
18009	Fill		18006	grey/orange/brown	silt/clay		0.44m	primary fill of ditch
19000	Layer					2m	0.25m	Topsoil
19001	Layer			orange/brown	silt/sand/clay	2m	0.25m	Subsoil
19002	Natural			orange/brown	clay	2m		Natural
19003	Fill		19004	mid brown	sand/clay	1.90m	0.70m	fill of ditch
19004	Cut	19003				1.90m	0.70m	ditch
20000	Layer					2m	0.25m	Topsoil
20001	Layer					2m	0.20m	Subsoil
20002	Natural			yellow/orange	silt/clay/sand	2m		Natural
20003	Fill		20005	dark grey	silt/sand/clay	0.55m	0.38m	secondary fill of ditch
20004	Fill		20005	brown/orange	sand/silt/clay	0.80m	0.40m	primary fill of ditch
20005	Cut	20003,20004				0.85m	0.58m	possible ditch
20006	Fill		20007	brown	silt/sand/clay	0.80m		fill of drain
20007	Cut	20006				0.80m		drain

21000	Layer					1.80m	0.25m	Topsoil
21001	Layer					1.80m	0.15m	Subsoil
21002	Natural					1.80m		Natural
21003	Fill		21004	mid brown	sand/clay	1.20m	0.78m	fill of pond
21004	Cut	21003				1.20m	0.78m	possible pond
21005	Fill		21008	grey/brown	silt/clay			fill of ditch
21006	Fill		21008	dark grey	clay/gravel			secondary fill of ditch
21007	Fill		21008	grey	clay	0.67m	0.20m	primary silting fill of ditch
21008	Cut	21005,21006,21007						possible drainage ditch
22000	Layer					2m	0.30m	Topsoil
22001	Layer			brown/orange	silt/sand/clay	2m	0.18m	Subsoil
22002	Natural			yellow	sand/clay	2m		Natural
23000	Layer					2m	0.25m	Topsoil
23001	Layer			brown/orange	silt/sand/clay	2m	0.30m	Subsoil
23002	Natural				sand/clay	2m		Natural
23003	Fill		23004	mid grey	silt/sand/clay	1.40m	0.28m	fill of ditch
23004	Cut	23003				1.40m	0.28m	ditch

24000	Layer					2m	0.25m	Topsoil
24001	Layer			grey/brown	silt/sand/clay	2m	0.45m	Subsoil
24002	Natural					2m		Natural
24003	Fill		24004	grey/brown	silt/clay	1m	0.44m	fill of ditch
24004	Cut	24003				1m	0.44m	ditch
25000	Layer					2m	0.30m	Topsoil
25001	Layer			brown/orange	silt/sand/clay	2m	0.35m	Subsoil
25002	Natural				silt/sand/clay	2m		Natural
26000	Layer					2m	0.25m	Topsoil
26001	Layer			red/brown	silt/sand/clay	2m	0.25-0.35	Subsoil
26002	Natural				sand/gravel	2m		Natural
27000	Layer					2m	0.30m	Topsoil
27001	Layer			brown/orange	silt/sand/clay	2m	0.20-0.30m	Subsoil
27002	Natural			orange	sand/gravel	2m		Natural
36000	Layer					2.10m	0.35m	Topsoil
36001	Layer					2.10m	0.35m	Subsoil
36002	Natural			yellow/grey	sand/clay	2.10m		Natural

37000	Layer					2m	0.40m	Topsoil
37001	Layer			red/brown	sand/clay	2m	0.30m	Subsoil
37002	Natural			red	sand/gravel	2m		Natural
37003	Fill		37005	brown	silt/clay	0.44m	0.21m	seconary fill of ditch
37004	Fill		37005	grey/brown	silt/clay	2.28m	0.32m	primary fill of ditch
37005	Cut	37003,37004				2.28m	0.32m	ditch
38000	Layer					2m	0.35m	Topsoil
38001	Layer					2m	0.05m	Subsoil
38002	Layer			red/orange	clay	2m	0.60m	Alluvium
38003	Natural			red	sand/clay	2m		Natural
39000	Layer			light grey/brown	silt/clay	2m	0.33m	Topsoil
39001	Layer			light red/brown		2m	0.27m	Subsoil
39002	Natural			mottled yellow/brown and red/brown	silt/clay	2m		Natural
39003	Fill		39005	grey/brown	silt/clay	1.24m	0.23m	secondary fill of tree bowl
39004	Fill		39005	grey/black	silt/clay	1.24m	0.08m	primary fill of tree bowl
39005	Cut	39003,39004				1.24m	0.32m	tree bowl
39006	Fill		39007	mottled grey/brown and orange/grey	silt/clay	1.43m	0.43m	fill of ditch

39007	Cut	39008				1.43m	0.43m	ditch
39008	Fill		39009	mottled grey/brown and orange/grey	silt/clay	1.26m	0.36m	fill of ditch
39009	Cut	39010				1.26m	0.36m	ditch
39010	Fill		39011	black/brown	silt/clay	0.19m	0.10m	fill of root bowl
39011	Cut					0.19m	0.10m	root bowl
40000	Layer					2.10m	0.15m	Topsoil
40001	Layer			grey/brown	silt/sand/clay	2.10m	0.15-0.25m	Subsoil
40002	Natural			red/yellow	sand/clay	2.10m		Natural
40003	Fill		40004	red/brown	silt/clay	1.10m	0.20m	fill of ditch
40004	Cut	40003				1.10m	0.20m	drainage ditch
40005	Fill		40006	mid brown/grey	silt/clay		0.40m	fill of ditch
40006	Cut	40005				6-8m	0.40m	ditch
40007	Fill		40008	mid brown/grey	silt/clay	0.20m	0.40m	fill of ditch
40008	Cut	40007				0.20m	0.40m	drainage ditch
40009	Fill		40010	mid grey/brown	silt/sand/clay	3.20m	0.45m	fill of ditch
40010	Cut	40009				3.20m	0.45m	ditch
40011	Fill		40012	mid grey/brown	silt/sand/clay	3.20m	0.40m	fill of ditch

40012	Cut	40011				3.20m	0.40m	ditch
40013	Fill		40014	grey/brown	silt/sand/clay	3.90m	0.45m	fill of ditch
40014	Cut	40013				3.90m	0.45m	drainage ditch
40015	Fill		40016	mid/dark grey	silt/sand/clay	0.40m	0.38m	fill of pit
40016	Cut	40015				0.40m	0.38m	pit
41000	Layer					2.10m	0.25m	Topsoil
41001	Layer			red/brown	silt/sand/clay	2.10m	0.20-0.30m	Subsoil
41002	Natural			orange	silt/sand/clay	2.10m		Natural
41003	Fill		41004	mid brown/red	silt/clay	0.18m	0.20m	fill of post-hole
41004	Cut	41003				0.18m	0.20m	post-hole
41005	Fill		41006	mid/dark brown	silt/clay	0.10m	0.26m	fill of post-hole
41006	Cut	41005				0.10m	0.26m	post-hole
41007	Fill		41009	orange/brown	sand/clay	0.90m	0.14m	secondary fill of ditch
41008	Fill		41009	light grey	sand/clay	0.64m	0.05m	primary fill of ditch
41009	Cut	41007,41008				0.90m	0.18m	ditch
42000	Layer			light grey/brown	silt/clay	2m	0.27-0.47m	Topsoil
42001	Layer			yellow/brown	clay	2m	0.10-0.34m	Subsoil

42002	Natural			red	silt/clay	2m		Natural
42003	Fill		42006	light yellow/brown	silt/clay	5.30m	0.81m	fill of ditch
42004	Fill		42006	grey/brown	silt/clay	2.92m	0.46m	secondary fill of ditch
42005	Fill		42006	grey/brown	sand/silt/clay	1.30m	0.26m	primary fill of ditch
42006	Cut	42003,42004,42005				5.90m	0.81m	ditch
43000	Layer			grey/brown		2m	0.38-0.45m	Topsoil
43001	Layer			grey/red/brown		2m	0.25-0.40m	Subsoil
43002	Natural			red/orange	silt/clay	2m		Natural
43003	Fill		43005	light grey/brown	silt/clay	1.90m	1.24m	secondary fill of ditch
43004	Fill		43005	dark brown/red	sand/gravel	1.40m	0.46m	primary fill of ditch
43005	Cut	43003,43004				1.90m	1.32m	ditch
43006	Fill		43007	grey/brown	silt/clay	1.50m	0.97m	fill of pit
43007	Cut	43006				1.50m	0.97m	pit
43008	Fill		43009	grey/brown	silt/clay	1.12m	0.33m	fill of pit
43009	Cut	43008				1.12m	0.33m	pit
43010	Fill		43011	light grey/brown	silt/clay			fill
43011	Cut	43010						test pit

44000	Layer					2.10m	0.25m	Topsoil
44001	Layer			grey/brown	silt/clay	2.10m	0.20-0.25m	Subsoil
44002	Natural			orange	silt/clay	2.10m		Natural
46000	Layer					2.10m	0.20-0.25m	Topsoil
46001	Layer			red/brown	silt/sand/clay	2.10m	0.80-0.90m	Subsoil
46002	Natural			white/yellow	sand/clay	2.10m		Natural
46003	Spread			brown	silt/clay			
46004	Spread			brown	silt/clay			
47000	Layer					2.10m	0.25m	Topsoil
47001	Layer			orange/brown	silt/sand	2.10m	0.60m	Subsoil
47002	Natural				silt/clay	2.10m		Natural
48000	Layer					2.10m	0.80m	Topsoil
48001	Layer			grey/brown	silt/sand/clay	2.10m	0.38m	Subsoil
48002	Natural			red/orange	sand/clay	2.10m		Natural
48003	Fill		48004	mid grey/brown	silt/sand/clay	8.50m	1m	fill of ditch
48004	Cut	48003				8.50m	1m	ditch
48005	Fill		48006	white	silt/clay/sand	0.30m		fill of post-hole

48006	Cut	48005				0.30m		post-hole
50000	Layer					2m	0.28m	Topsoil
50001	Layer			grey/brown	silt/sand/clay	2m	0.42m	Subsoil
50002	Natural			orange	sand/gravel	2m		Natural
50003	Fill		50004	grey	sand/gravel	0.65m	0.42m	fill of ditch
50004	Cut	50003				0.65m	0.42m	drainage ditch
51000	Layer					1.80m	0.30m	Topsoil
51001	Layer					1.80m	0.30m	Subsoil
51002	Layer					1.80m	0.40m	Colluvium
51003	Natural			red	sand/gravel	1.80m		Natural
51004	Fill		51007	brown	silt/clay	0.98m	0.12m	silty build-up deposit
51005	Fill		51007	grey/black	silt/clay	1.22m	0.14m	secondary backfill deposit
51006	Fill		51007	grey	silt	1.22m	0.11m	primary backfill deposit
51007	Cut	51004,51005,51006				1.22m	0.33m	fire pit
51008	Fill		51009	grey/brown	silt/clay	1.80m	0.53m	backfill deposit
51009	Cut	51008				1.80m	0.53m	waste pit
52000	Layer					1.80m		Topsoil

52001	Layer					1.80m		Subsoil
52002	Layer					1.80m		Colluvium
52003	Natural			orange/yellow	silt/sand	1.80m		Natural
52004	Cut	52005				1.70m	0.70m	hedge boundary
52005	Fill		52004	mid brown/grey	clay/sand	1.70m	0.70m	build-up deposit
53000	Layer					1.80m	0.15m	Topsoil
53001	Layer					1.80m	0.13m	Subsoil
53002	Layer					1.80m		Colluvium
53003	Natural				silt/clay	1.80m		Natural
54000	Layer					1.80m	0.26m	Topsoil
54001	Layer					1.80m	0.13m	Subsoil
54002	Natural			orange/brown	sand/gravel	1.80m		Natural
54003	Fill		54006	light grey/brown	silt/clay	2.20m	0.74m	final fill of pit
54004	Fill		54006	green/black	matted organic matter	2.20m	0.10m	secondary organic fill
54005	Fill		54006	grey	clay	2.20m	0.08m	primary fill of pit
54006	Cut	54003,54004,54005				2.20m	0.97m	large pit
55000	Layer					1.80m		Topsoil

55001	Layer					1.80m		Subsoil
55002	Natural			orange/yellow	silt/clay	1.80m		Natural
55003	Layer			grey	gravel	1.80m		Colluvium
55004	Layer			red/orange	clay	1.80m		Colluvium
55005	Fill		55006	dark brown/black	silt/clay	0.70m	0.24m	fill of tree bowl
55006	Cut	55005				0.70m	0.24m	tree bowl
56000	Layer					1.80m	0.05m	Topsoil
56001	Layer					1.80m	0.35m	Subsoil
56002	Natural			mottled light orange and red/brown	sand/clay	1.80m		Natural
57000	Layer					1.80m	0.35m	Topsoil
57001	Layer					1.80m	0.10m	Subsoil
57002	Natural			red/orange	sand/gravel	1.80m		Natural
58000	Layer					1.80m	0.35m	Topsoil
58001	Layer					1.80m	0.02m	Subsoil
58002	Natural			red/brown	silt/sand	1.80m		Natural
59000	Layer					1.80m	0.35m	Topsoil
59001	Layer					1.80m	0.05m	Subsoil

59002	Natural			red/brown	sand/clay	1.80m		Natural
60000	Layer					1.80m	0.35m	Topsoil
60001	Layer					1.80m	0.05m	Subsoil
60002	Natural			red/orange	sand/clay	1.80		Natural
61000	Layer					2m	0.27m	Topsoil
61001	Layer					2m	0.08m	Subsoil
61002	Natural			orange/brown	sand/silt/clay	2m		Natural
61003	Fill		61004	grey/brown	silt/clay	1.18m	0.34m	fill of boundary
61004	Cut	61003				1.18m	0.34m	field boundary
62000	Layer					1.80m		Topsoil
62001	Layer					1.80m		Subsoil
62002	Natural			red/brown	silt/clay	1.80m		Natural
63000	Layer					1.80m		Topsoil
63001	Layer					1.80m		Subsoil
63002	Natural			red/brown	silt/clay	1.80m		Natural
63003	Cut	63004				1.80m	0.50m	field boundary
63004	Fill		63003	dark brown	sand/clay	1.80m	0.50m	fill of ditch

64000	Layer					1.80m		Topsoil
64001	Layer					1.80m		Subsoil
64002	Natural			red with patches of yellow/grey	sand/clay	1.80m		Natural
65000	Layer					1.80m		Topsoil
65001	Layer					1.80m		Subsoil
65002	Natural			light brown/yellow	clay	1.80m		Natural
66000	Layer			dark brown	clay/sand	1.80m	0.20m	Topsoil
66001	Layer			mid brown	clay/sand	1.80m	0.23m	Subsoil
66002	Natural			orange/brown	sand/gravel	1.80m		Natural
66003	Layer			light brown	sand/clay	1.80m	1.40m	layer of colluvium
66004	Cut	66005				0.84m	0.20m	elongated pit
66005	Fill		66004	dark brown	clay/sand	0.84m	0.20m	build up deposit
66006	Fill	66007		dark brown	clay/sand	0.90m	0.25m	fill of gully
66007	Cut		66006			0.90m	0.25m	gully/field boundary ditch
66008	Fill		66013	dark grey/brown	silt/clay	0.96m	0.30m	fill of ditch re-cut
66009	Fill		66010	dark grey/brown	silt/clay/gravel	1.80m	0.52m	fill of ditch
66010	Cut	66009,66011,66012				1.80m	0.52m	ditch

66011	Fill		66010	orange/yellow	sand/gravel	0.12m	0.42m	secondary fill of ditch
66012	Fill		66010	dark grey/brown	silt/clay/gravel	0.20m	0.42m	primary fill of ditch
66013	Cut	66008				0.94m	0.28m	ditch re-cut
66014	Fill		66015	dark grey/brown	silt/clay	1.65m	0.42m	fill of ditch
66015	Cut	66014				1.65m	0.42m	linear ditch
66016	Fill		66021	dark grey/brown	silt/clay/gravel	0.56m	0.29m	secondary fill of ditch
66017	Fill		66018	grey	clay/gravel	1.24m	0.45m	primary fill of ditch
66018	Cut	66017				1.24m	0.45m	linear ditch
66019	Fill		66020	grey/brown	silt/clay	1.20m	0.54m	fill of ditch
66020	Cut	66019				1.20m	0.54m	ditch
66021	Cut	66016				0.56m	0.29m	ditch re-cut
67000	Layer			dark grey/brown	sand/silt/clay	2m	0.30m	Topsoil
67001	Layer			mid brown	silt/clay	2m	0.20m	Subsoil
67002	Natural			orange/brown	clay/sand	2m		Natural
67003	Fill		67004	mid brown	sand/silt/clay	0.88m	0.20m	fill of gully
67004	Cut	67003				0.88m	0.20m	field boundary
67005	Fill		67006	dark grey/brown	sand/silt/clay	0.54m	0.27m	fill of post-hole

67006	Cut	67005				0.54m	0.27m	post-hole
68000	Layer			mid brown	clay/sand	1.85m	0.45m	Topsoil
68001	Layer			light brown	sand/clay	1.85m	0.60m	Subsoil
68002	Natural			orange/brown	sand/gravel	1.85m		Natural
69000	Layer			mid grey	clay/sand	2m	0.24m	Topsoil
69001	Layer			dark grey/brown	silt/clay/sand	2m	0.12m	Subsoil
69002	Natural			orange/brown	silt/sand/gravel	2m		Natural
69003	Fill		69004	dark brown	silt/sand/clay	0.60m	0.08m	fill of pit/root ball
69004	Cut	69003				0.60m	0.08m	possible pit
69005	Fill		69006	light brown	silt/clay	0.30m	0.05m	fill of plough furrow
69006	Cut	69005				0.30m	0.05m	plough furrow
69007	Fill		69008	light brown	sand/clay	0.40m	0.06m	fill of plough furrow
69008	Cut	69007				0.40m	0.06m	plough furrow
70000	Layer			mid brown	clay/sand	1.85m	0.30m	Topsoil
70001	Layer			light brown	sand/clay	1.85m	0.21m	Subsoil
70002	Natural			brown/orange	sand/gravel	1.85m		Natural
70003	Fill		70004	mid brown	silt/clay	1.10m	0.40m	fill of ditch

70004	Cut	70003				1.10m	0.40m	drainage ditch
70005	Fill		70006	dark grey/brown	silt/clay	3.60m	0.52m	fill of boundary feature
70006	Cut	70005				3.60m	0.52m	hedge line/field boundary
70007	Fill		70008	brown/black	silt/clay	0.88m	0.42m	fill of pit
70008	Cut	70007				0.88m	0.42m	pit
70009	Layer			light brown/grey/orange	sand/silt/clay	2m	0.34m	spread of material
71000	Layer			mid brown	clay/sand	1.85m	0.35m	Topsoil
71001	Layer			light brown	clay/sand	1.85m	0.10m	Subsoil
71002	Natural			brown/orange	sand/gravel	1.85m		Natural
71003	Fill		71004	mid brown	clay/sand	1.06m	0.20m	fill of pit
71004	Cut	71003				1.06m	0.20m	possible pit
71005	Fill		71006	mid brown	clay/sand	2.30m	0.22m	fill of drain
71006	Cut	71005				2.30m	0.22m	field drain
72000	Layer			mid brown	clay/sand	1.85m	0.40m	Topsoil
72001	Layer			light brown	clay/sand	1.85m	0.08m	Subsoil
72002	Natural			brown/orange	sand/gravel	1.85m		Natural
72003	Fill		72004	mid/dark brown	clay/sand	1.65m	0.33m	fill of tree bowl

72004	Cut	72003				1.65m	0.33m	tree bowl
72005	Fill		72006	mid/dark brown	sand/silt	0.90m	0.36m	fill of pit
72006	Cut	72005				0.90m	0.36m	possible pit
73000	Layer			brown/grey	silt/clay	1.90m	0.20m	Topsoil
73001	Layer			brown/grey	sand/silt	1.90m	0.10m	Subsoil
73002	Natural			orange/red/brown	sand/gravel	1.90m		Natural
73003	Fill		73004	dark brown	silt/clay/gravel	1.98m	0.58m	fill of ditch
73004	Cut	73003				1.98m	0.58m	ditch
74000	Layer			grey/brown	sand/silt/clay	1.90m	0.15m	Topsoil
74001	Layer			grey/brown	silt/clay	1.90m	0.20m	Subsoil
74002	Natural			orange/brown	silt/sand/gravel	1.90m		Natural
74003	Fill		74004	mid brown	silt/clay/sand	0.70m	0.10m	fill of tree bowl
74004	Cut	74003				0.70m	0.10m	tree bowl
75000	Layer			grey/brown	silt/clay	1.90m	0.30m	Topsoil
75001	Layer			light brown	sand/silt	1.90m	0.20m	Subsoil
75002	Natural			orange/brown	sand/gravel	1.90m		Natural
75003	Layer			brown	silt/clay	13.50m	0.32m	spread of material

75004	Layer			light grey/brown	silt/clay	3.60m	0.21m	culluvial layer
75005	Layer			red/orange	clay	1.76m	0.30m	spread of material
76000	Layer			brown	silt/clay	1.90m	0.35m	Topsoil
76001	Layer			light brown	silt/clay	1.90m	0.25m	Subsoil
76002	Natural			orange/brown	sand/gravel	1.90m		Natural
76003	Fill		76004	mid brown	silt/sand		0.26m	fill of ditch
76004	Cut	76003					0.26m	ditch/field boundary
76005	Fill		76006	mid brown	silt/sand		0.42m	fill of ditch
76006	Cut	76005					0.42m	ditch/field boundary
76007	Fill		76008	light brown/orange	sand/silt	0.70m	0.17m	fill of pit
76008	Cut	76007				0.70m	0.17m	shallow pit
76009	Fill		76010	light brown/red	silt/sand		0.17m	fill of ditch
76010	Cut	76009					0.17m	ditch
76011	Fill		76012	mid brown	silt/sand		0.30m	fill of ditch
76012	Cut	76011					0.30m	ditch
77000	Layer			mid brown	silt/clay	1.90m	0.20m	Topsoil
77001	Layer			light/mid brown	sand/silt/clay	1.90m	0.15m	Subsoil

77002	Natural			orange/brown	sand/gravel	1.90m		Natural
77003	Fill		77004	mid brown	silt/sand		0.24m	fill of pit
77004	Cut	77003					0.24m	pit/tree bowl
77005	Fill		77006	dark brown	sand/silt/clay	0.54m	0.18m	fill of pit
77006	Cut	77005				0.54m	0.18m	small pit
77007	Fill		77008	brown	sand/silt/clay	0.90m	0.28m	fill of tree bowl
77008	Cut	77007				0.90m	0.28m	tree bowl
77009	Fill		77010	mid brown/grey	silt/sand	0.60m	0.52m	fill of pit
77010	Cut	77009				0.60m	0.52m	pit
77011	Fill		77012	mid brown	silt/sand	1m	0.20m	fill of pit
77012	Cut	77011				1m	0.20m	pit
77013	Fill		77014	grey/brown	silt/clay	0.70m	0.20m	fill of pit
77014	Cut	77013				0.70m	0.20m	pit/possible tree bowl
77015	Fill		77016	grey/yellow/brown	sand/silt/clay	0.80m	0.32m	fill of pit
77016	Cut	77015				0.80m	0.32m	pit/possible tree bowl
78000	Layer			mid brown	clay/sand	1.90m	0.20m	Topsoil
78001	Layer			mid/dark brown/grey	silt/sand	1.90m	0.15m	Subsoil

78002	Natural			orange/yellow	silt/sand/gravel	1.90m		Natural
78003	Layer			mid brown	silt/sand	1.90m		Colluvium
78004	Fill		78005	grey/brown	sand/silt	1.32m	0.17m	fill of ditch
78005	Cut	78004				1.32m	0.17m	ditch
79000	Layer			grey/brown	silt/clay	1.90m	0.27m	Topsoil
79001	Layer			mid brown	silt/sand/clay	1.90m	0.39m	Subsoil
79002	Natural			yellow/orange	silt/sand	1.90m		Natural
79003	Fill		79004	dark brown	sand/silt	0.22m	0.07m	fill of post-hole
79004	Cut	79003				0.22m	0.07m	post-hole
79005	Fill		79006	mid/dark red	silt/sand	0.66m	0.30m	fill of ditch
79006	Cut	79005				0.66m	0.30m	boundary ditch
80000	Layer			mid grey/brown	silt/clay	1.90m	0.50m	Topsoil
80001	Layer			light grey/brown	silt/clay	1.90m	0.90m	Subsoil
80002	Natural			red/brown	silt/clay	1.90m		Natural
80003	Fill		80004	light grey/brown	sand/silt/clay	0.76m	0.30m	fill of pit
80004	Cut	80003				0.76m	0.30m	pit
80005	Fill		80006	light grey/brown	sand/silt/clay	0.44m	0.16m	fill of ditch

80006	Cut	80005				0.44m	0.16m	ditch
80007	Fill		80008	light brown/grey	silt/clay		0.13m	fill of pit
80008	Cut	80007					0.13m	pit/tree bowl
81000	Layer			mid brown/grey	silt/clay	1.90m	0.20m	Topsoil
81001	Layer			mid grey	silt/clay	1.90m	0.30m	Subsoil
81002	Natural			orange/brown	sand/gravel	1.90m		Natural
81003	Fill		81004	grey/brown	silt/clay	1.12m	0.24m	fill of ditch
81004	Cut	81003				1.12m	0.24m	linear ditch
81005	Fill		81006	mid brown/grey	silt/clay	0.20m	0.22m	fill of ditch
81006	Cut	81005				0.20m	0.22m	ditch
82000	Layer			mid brown/grey	sand/silt/clay	1.90m	0.30m	Topsoil
82001	Layer			red/brown	silt/clay	1.90m	0.30m	Subsoil
82002	Natural			orange/brown	sand/silt/clay	1.90m	2.15m	Natural
82003	Layer			brown/orange	silt	1.90m		Colluvium

Appendix 3

Colchester Archaeological Group

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Neolithic Flint from Birch, near Colchester

P S Spencer & N J Dennis

Introduction

In 1974, one of us (NJD) recognised the presence of flint implements that occurred in abundance in the vicinity of the village of Birch. The implements were picked up from the surface of several fields after they had been ploughed and harrowed, and a collection of over 300 pieces was eventually amassed after extensive field walking. In 1975 the collection was borrowed by the Castle museum to be photographically recorded, but at that time, no report on the finds was published. Between January and April 1987, with renewed interest in the material by the authors, collecting was resumed, and in order to investigate the geographic range of the sites, the new finds were each provided with eight figure grid references. From this work it soon became apparent that at least three discrete flint scatters existed and this report is based on a preliminary study of these sites and the material collected to date. The presently recognized tool categories and the scheme of classification proposed by Clark *(1934)* have been used where possible to describe the morphology and possible function of the artefacts.

Location and Geology

The sites lie within the parish of Birch with Layer Breton, approximately 6km south-west of Colchester (fig. 1). The south-western and south-eastern margins of the area are bounded by Eocene deposits of London Clay and these include silty clays and clayey silts which regionally form an extensive bedrock. Outcrops of Unit D of the formation occur approximately 10km south- west of Birch in association with the high level gravels of the Danebury - Tiptree Ridge, an enigmatic structure of uncertain origin. The surface geology and topography are, however, defined by extensive spreads of Chalky Boulder Clay (the Springfield Till) together with underlying sand and gravel (Chelmsford Gravel). Fluctuations in the thickness of both these units have imparted the low lying and gently undulating relief typical of the district.

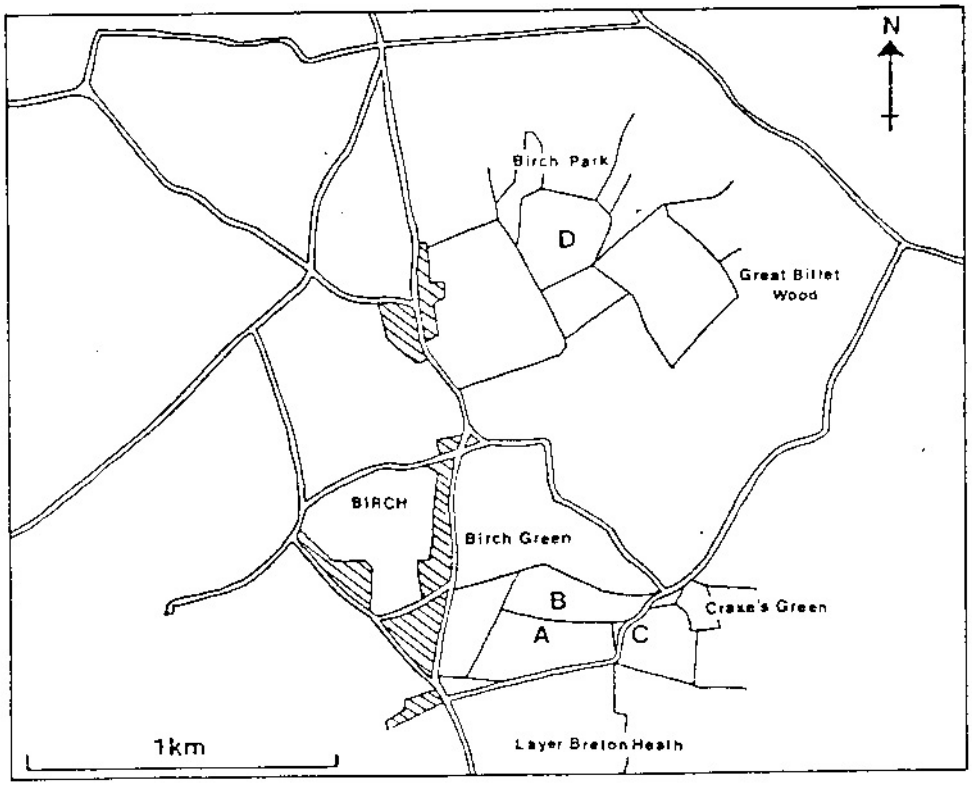

Figure 1. Site Localities

The flint scatters lie on an area of generally flat land devoted mainly to arable farming. The glacial material superficially forms an unconsolidated deposit, the top of which consists of a reddish-brown clayey soil. The soils found in the area have been subjected to continuous ploughing and it is within them that the flints have been found.

The Sites

Most of the artefacts collected came from four sites located at c 30m OD. These sites include: Site A, Site B, and Site C, to the south and south- east of Birch Green, and Site D which is about 1.4km to the north, near Birch Park.

Site A is a moderately large scatter of material, covering an area of approximately 100m west to east and 40m north to south on flat land near to Layer Breton Heath. The majority of the finds were made near to the edge of an open drainage channel which forms the field boundary.

At Site B, a flint scatter occurs in an area of nearly 150m south-west to north-west by approximately 100m south-eat to north-west. The centre of the site appears to be restricted to a low poorly defined ridge which lies in close juxtaposition to Site A. A few artefacts have been collected from beyond the boundary of the main concentration suggesting that Sites A and B may represent a single large site.

A large amount of lithic material has been collected from Site C which occurs south-west of Craxe's Green on an area of flat land approximately 70m square. This particular scatter was confined to the northern boundary of a ploughed field.

Site D, the largest scatter of lithic material, covers an area of approximately 350 metres square on the gentle south facing flank of a hill. Finds have been made across the entire area, the majority occurring at the foot of the slope on an area of flat lying ground bordering a small stream.

Artefacts were also recovered in small quantities from two additional sites: within the north-east portion of a field adjacent to the site of Birch Castle, and on a shallow rise of land to the west of Great Billet Wood. A similar rarity of material occurs in the fields adjoining the sites listed above where despite regular annual ploughing, very few finds have been made.

Raw Materials

In general terms the lithic material employed at all localities consists mainly of small flint nodules usually having a thin cortex, which have been subjected to some thermal shattering. The quality of the flint used for flaking is fairly good with few inclusions present. Some variation in the colour of uncortiated parent flint is evident but this does not preclude a restricted collecting source for raw material since flint of this type is locally abundant in the soil and would have been freely available on site.

The types of flint from sites A-D may be conveniently be subdivided into the following categories:

1. Coloured flint: The colour of this flint ranges from a dark grey-brown through to light reddish-brown. In translucence it varies from poor to medium. It is shiny on broken surfaces, fine grained and of good flaking quality. The cortex, where present, is distinct and moderately abraded with iron staining.

2. Grey flint: The majority of flint recovered from sites A-D is of this type. It is semi-opaque and ranges from dark buff-grey to light grey and is fine to medium grained. Coarser textured opaque flint occurs in most instances as light coloured mottled patches and bands.

3. Mottled grey flint: Heterogeneous flint enveloping numerous inclusions. The translucency ranges from medium to good. It is found in small quantities only.

The colour and nature of the majority of flint recovered has been altered to a greater or lesser extent by the post-depositional formation of a secondary cortex (patina). This enhances opacity by producing surface discolouration ranging from bluish-grey to dense white. In the majority of cases, however, cortification is only mild and the true nature of the matrix may be seen in a strong light. The degree of cortification in all sites appears unrelated to the type of flint, although only some of type 3 flint appears to be affected.

Two of the artefacts have been rendered opaque by thermal alteration and may represent `pot boilers.' They both exhibit surface cracking with the original colour and texture obscured.

The flint implements

Cores (fig. 2, 11-13) - Cores occur in quantity on all sites and represent an important artefact type. They have apparently been worked on site as a basis of flake and blade production. Most are made on flint nodules of small to moderate size, are normally complete and dominated by the single platformed variety, although a small proportion had a pronounced bipolar appearance. The majority have an average of five flakes struck from them, only a few, such as no. 13, have been systematically flaked down to the point of exhaustion, having been worked around their circumference.

In addition to the predominant varieties above, two nodules bore random flake scars and one only had three removals. The only discoid core represented (no. 13) was collected from site B. Core rejuvenation flakes were found commonly on most sites.

Core scrapers - The tendency to retouch cores for use as scrapers is rare, possible re-use as a scraper occurred only on two pieces. The illustrated example, no. 14, is made on a very thick flake.

Flakes - Unretouched flakes discarded without any apparent utilization are common on all sites, accounting for c 55% of all the artefacts recovered. Only a small proportion could, with any certainty, be classified as blades. Although these tools are strictly speaking unretouched, many exhibited chipping from use on all edges and may have served a cutting or sawing function. Several examples showed battering on the proximal and distal ends which may have resulted from pressure against a resistant material.

Despite the wide ranging morphology evident in the flake sample, the following analysis of the complete flakes was prepared with the intention of providing useful technical information.

Length (cms)	Number	Breadth/length ratio	Number
1-2	2	1:5	25
2-3	11	2:5	29
3-4	26	3:5	27
4-5	18	4:5	4
5-6	13	5:5	-
6-7	4	6:5 plus	-
Total	**75**	**Total**	**75**

These figures provide the following information: firstly that large, intact flakes are the predominant variety, and secondly, the extreme rarity of narrow flakes. The date of the flakes would appear to be difficult to define from these figures but they may be useful for comparison with other local industries.

Scrapers (fig. 3,15-18) - Amongst the flake scrapers it is possible to distinguish end scrapers, end-and-side scrapers and side scrapers. All use predominantly decorticated flakes with the retouched scraper edge normally convex. The retouch is of typical scraper type ranging from coarse & steep to light & shallow, although inverse retouch is often met. No. 18 has had flakes removed to thin and prepare the butt. A minority exhibit chipping on the ventral indicating a two-way scraper motion on some hard substance and some appeared to be heavily abraded.

Laurel leaf (fig. 3, 21) - This finished flake, discovered on the east boundary of site B, may be described as a Laurel Leaf in accordance with the scheme of Piggott *(*1954). Although ventrally, marginal retouch is limited to one side only, its sub-triangular morphology, blunted point and randomly executed coarse flat flaking are typical of this tool type.

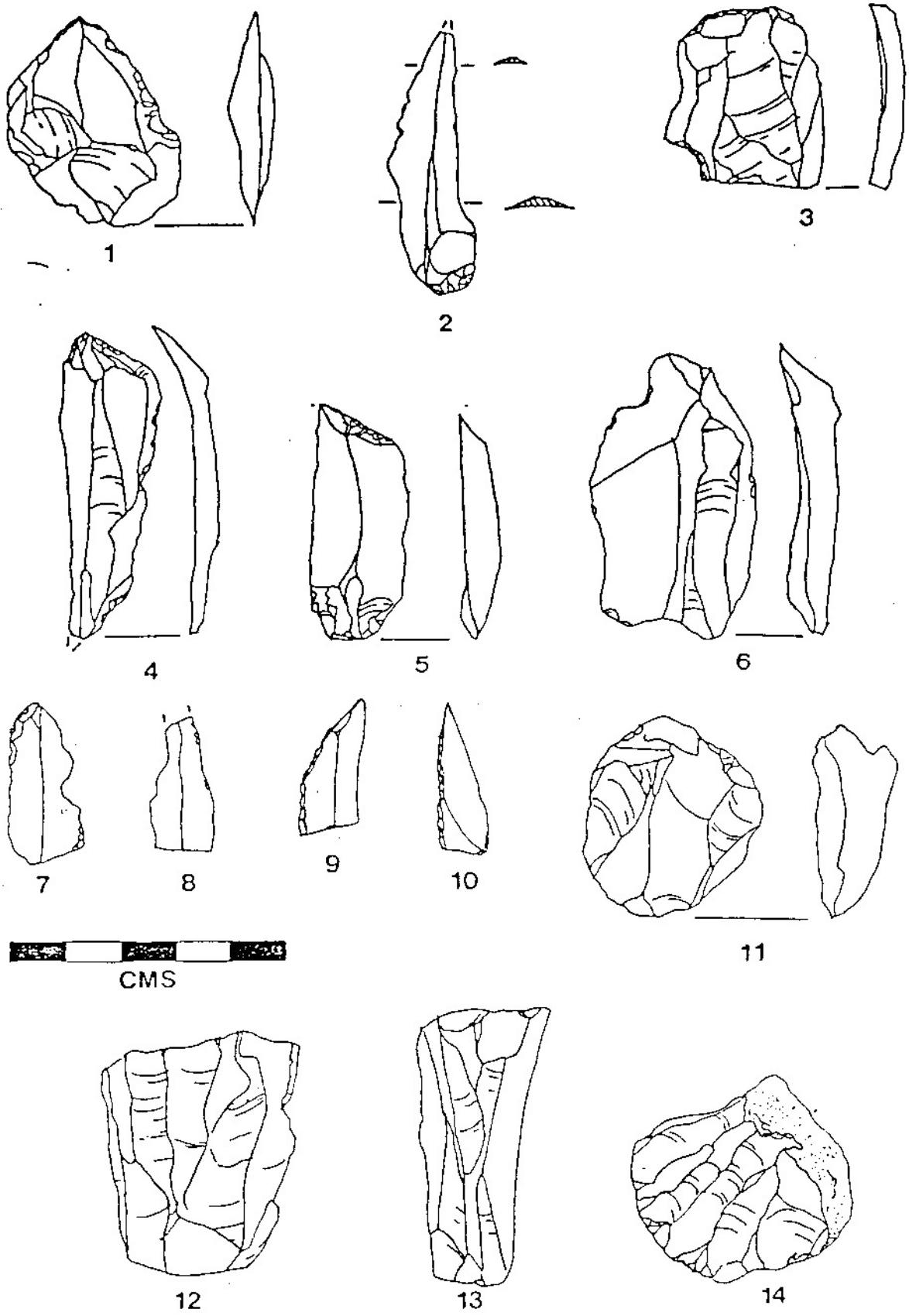

Figure 2.

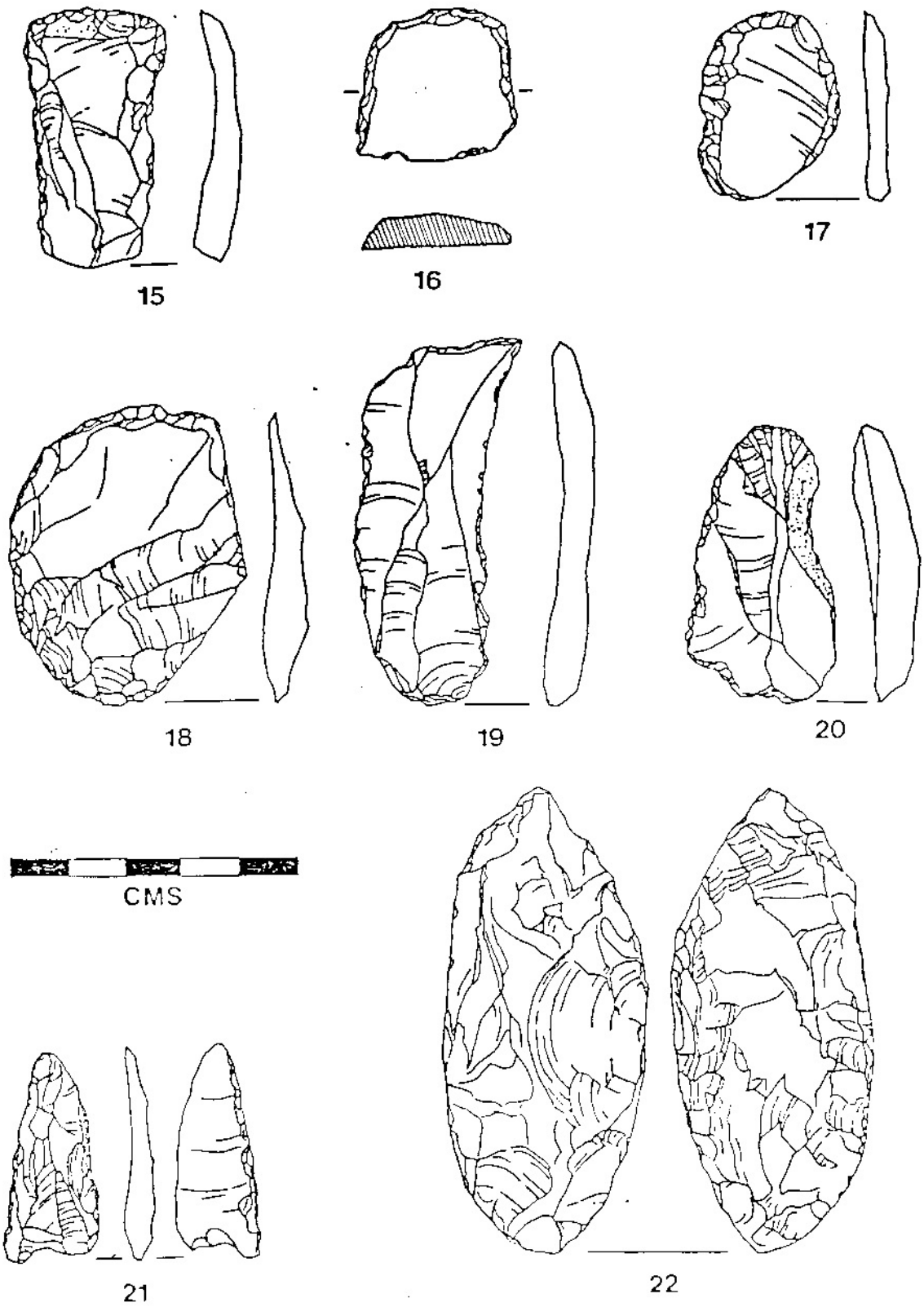

Figure 3.

Knives (fig. 3, 19-20}- These are a heterogeneous group lacking any uniform characteristics. They are found in all sites. Generally they are made on large tabular flakes with a wedge-shaped profile having at least one side retouched. The retouch may be light and irregular to intense, extending around most of the perimeter of the blank. Two examples are made on large robust flakes with retouch limited to one side; on no. 20 a thick area of cortex has been left opposite to the functional edge and it may be classified as a blunt-back knife. Many pieces demonstrated step fracturing on bifacially worked surfaces.

Reaping knife (fig. 3, 22) - This artefact from site B has invasive flat flaking on both surfaces producing a characteristic lenticular cross-section.

Awls and Piercing tools (fig. 2, 1-5) - These implements made either on long and narrow or thick tabular flakes are of rather varied form, but the Birch examples can conveniently be subdivided into the following categories:

a) Flint points of rudimentary type with minimal retouch at the tip on a suitably pointed blank. The retouch hardly modifies the blank which is symmetrically triangular in the case of no.1, and in no. 2 it is formed on a pointed keeled flake.

b) Points that are markedly asymmetric and obliquely truncate one or both sides of the blank, having heavier retouch (Nos. 3-5). The points are deliberately shaped by retouch unifacially or bifacially, though light marginal retouch may also be employed.

The purpose of these tools is uncertain, but No. 4 and No. 5 could clearly have functioned as points or awls. No. 4 has additional lateral retouch and may have had a combined use. In artefact No. 3 the point occurs at the side of the flake toward the proximal end. The proximal end is truncated by classic 'scraper retouch' and it too may have had a combined functional relationship.

Miscellaneous Retouched tools - Of the 21 artefacts included in this category only a small proportion can with certainty be grouped with any of the conventional tool types. The majority are broken and therefore unclassifiable.

Notched Flakes (fig. 2, 6-8) -This type of artefact was uncommon on all sites, the majority occurring on site D. They are flakes of widely varying morphology that have in the common a worked concave area ranging from 5-11 mm in width to 1.3-4mm in depth, usually being twice as long as they are deep. Double notches also occur as on No. 8, but these may have been formed accidentally, perhaps as a result of rough fabrication. The long edge of these tools may also be retouched giving a double use.

Microliths (fig. 2, 9-10) - Two microliths were recovered from site D. Both are conveniently categorized below using a simplified version of Clark's scheme *(1934).* LHS indicates touch on the left-hand side.

Type/Illust. No.	Length (cm)	Breadth (cm)	Width (cm)
Blunted all down one side.			
LHS (No. 9)	2.6	1.15	3.0
LHS (No. 10)	2.8	0.90	0.3

Although these specimens are classified in the same way, they differ markedly in the morphology of the retouched area; No. 9 has a strongly convex blunted side while on No. 10 the same area is entirely straight.

Discussion

In the main, the material described is acceptable in a neolithic context. Some types however should be assigned to the period with some degree of caution. The scrapers, knives and probably the Laurel Leaf may only serve as poor chronological indicators. The two microliths are more readily datable and represent the only evidence of much earlier activity. They are of broad blade type and can tentatively be assigned to the earlier mesolithic period. There is good reason to regard their occurrence in the area as representing casual hunting losses, since the paucity of much earlier material of this type would not seem to support an

occupational interpretation.

It may be concluded that the Birch flint scatters appear to generally represent neolithic sites of long term occupation. This interpretation is supported by: the low lying setting which would have been compatible with settled domestic use; the abundant supply of moderate to good flint for flaking, probably derived from approximately the same geographic area and abundance of cores and associated implements, the physical evidence of domestic activity.

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Note on the Cropmark of a possible Salt Road near Great Braxted, Essex

Ida McMaster

The Winter edition of the *Essex Archaeology and History newsletter no. 101* recorded the possible existence of a Roman road which had appeared briefly during the 1984 flying season. Cropmarks of parallel linear ditches were seen to emerge from woodland east of Braxted Park. The ditches pre- dated the existing road to Great Braxted since they could be seen faintly also in the field to the south-east beyond the road.

The common parish boundaries of Tolleshunt D'Arcy/Tolleshunt Major were later observed on the O/S map to project the alignment of the cropmark ditches for some three kilometres in a south-easterly direction. It was therefore conjectured that such a road, if continued, would have served mainly to transport salt from the prolific `Red Hill' salt-making sites at Goldhanger and Tollesbury.

Pat Adkins flying in 1988, picked up another parallel ditched cropmark of a possible road, this time travelling north-west from the Rolls Farm red hill sites at Tollesbury. These ditches are virtually on the same alignment as the previous pair, needing only a slight veering to join the original route a little way inland, closer to Wycke Farm. In fact the St Osyth Roman road from Elmstead has been shown to veer slightly at its termination at St Osyth's cemetery.

Any further stretches of parallel-ditched cropmarks recorded at a future date in the vicinity of Hole Farm, Rivenhall on the A12 and travelling along a line to just west of Rolls Farm, Tollesbury should therefore provide tangible proof of this possible Roman road.

Ewart Russell

As we go to press we learn, with regret, of the death of Ewart Russell who was a member of the group for many years. He made special studies of ironwork (lamp-posts, railings etc.) and heraldry, and wrote several articles on these topics for the *Bulletin.* He also gave lectures to the group on several occasions and was due to speak at this year's group activities meeting, when he was suddenly taken ill.

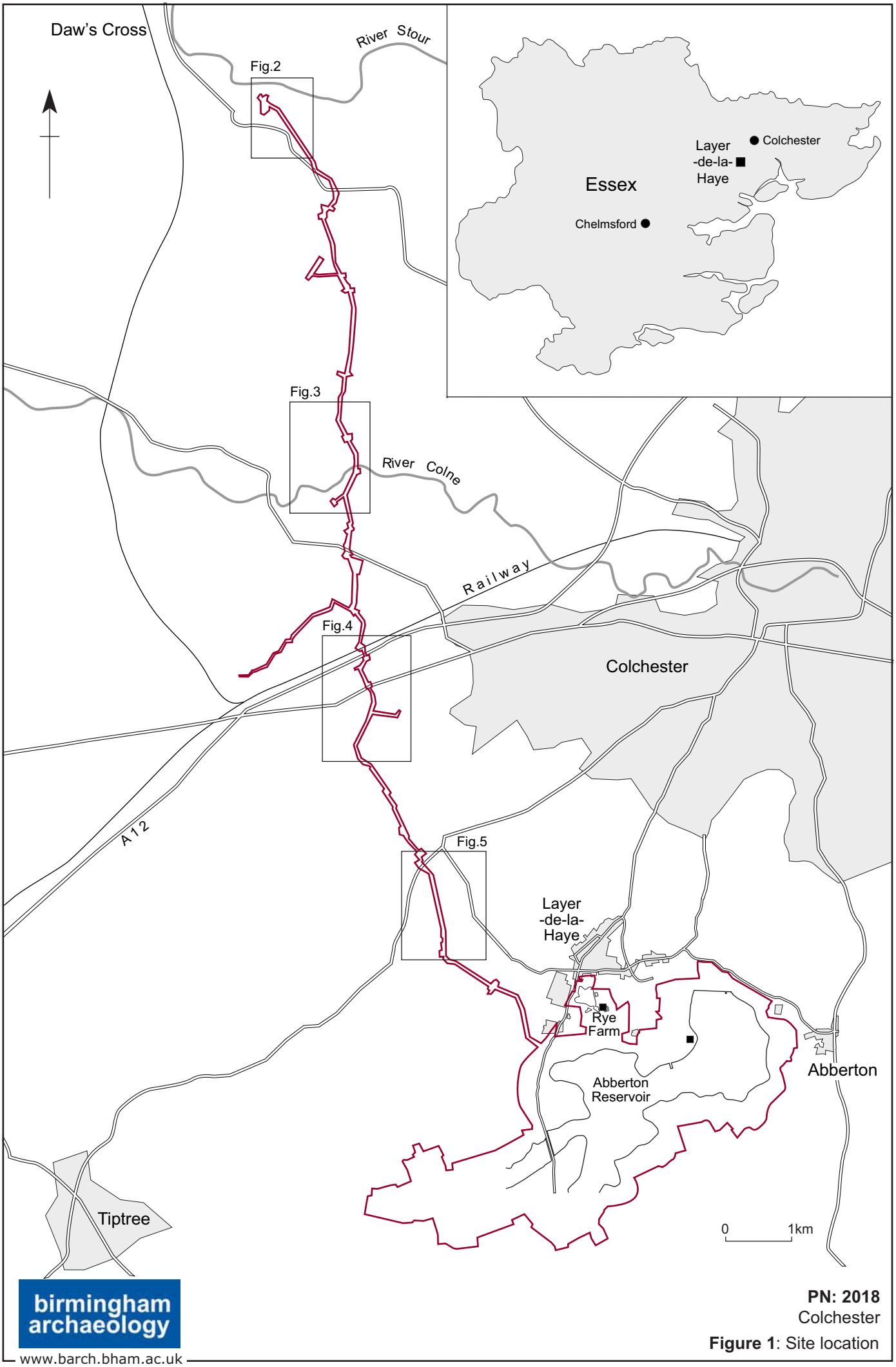

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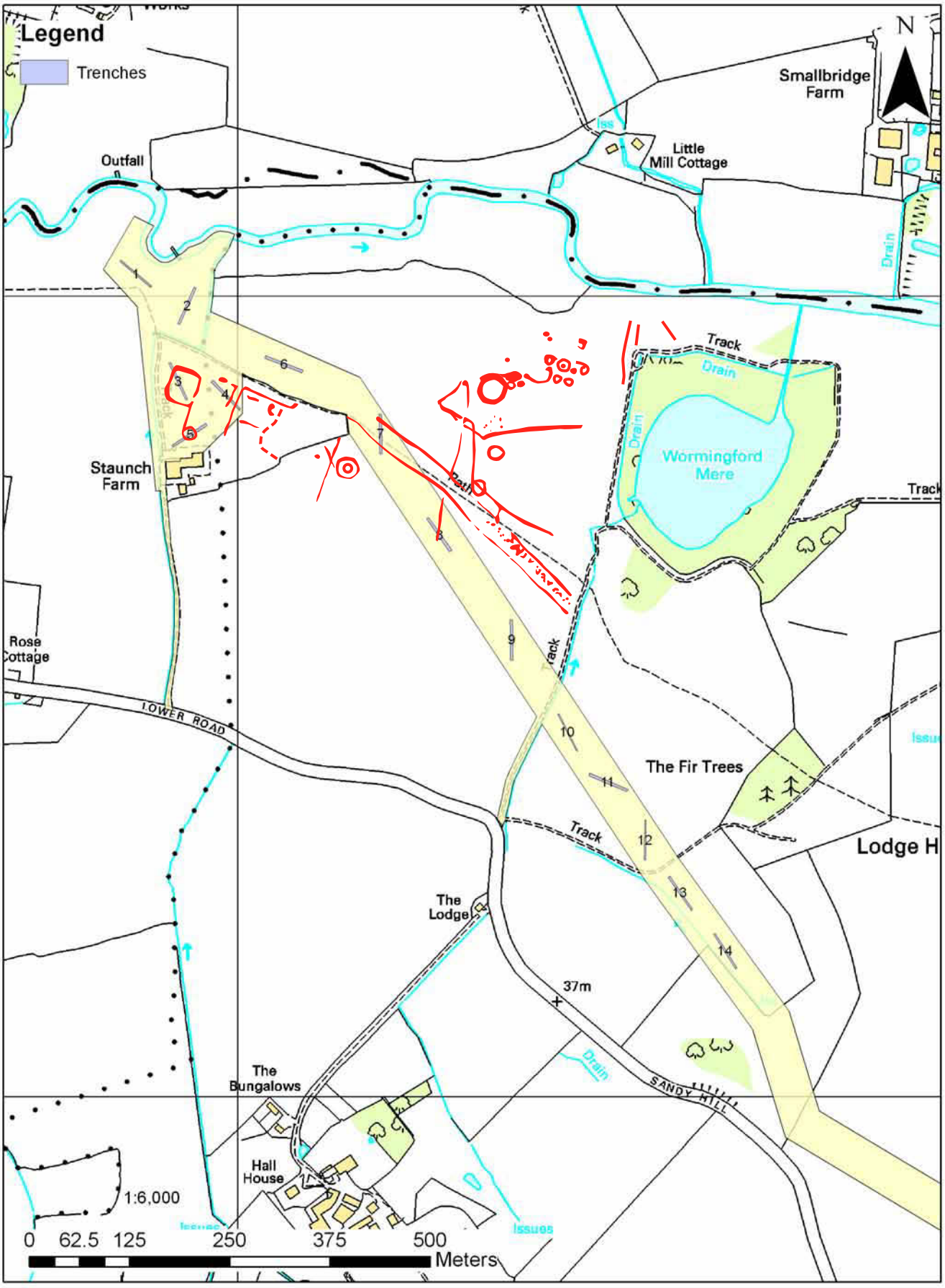
Figure 1: Site location



Cropmark

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Figure 2: Trenches at Wormingford

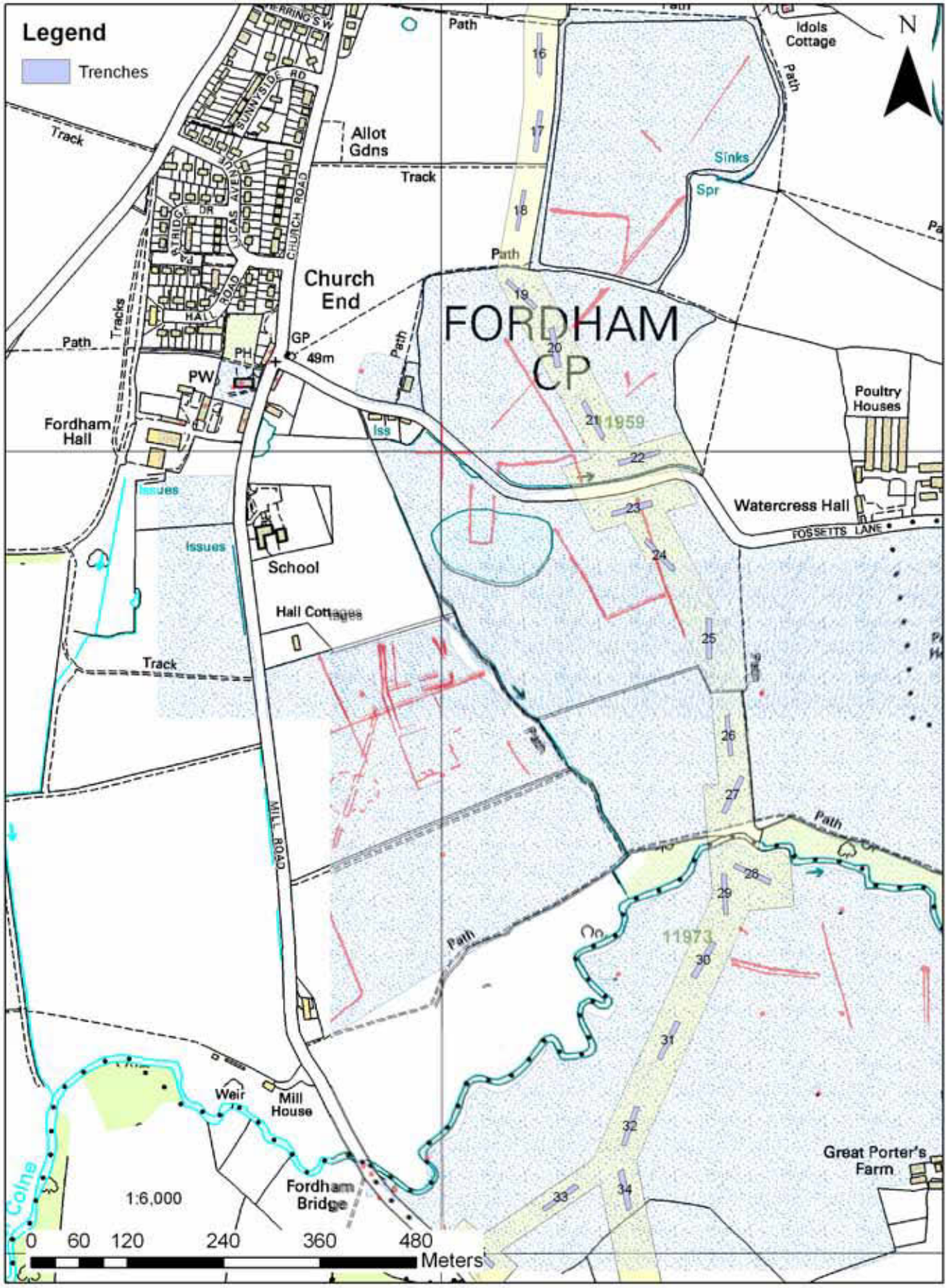

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Figure 3: Trenches at Fordham

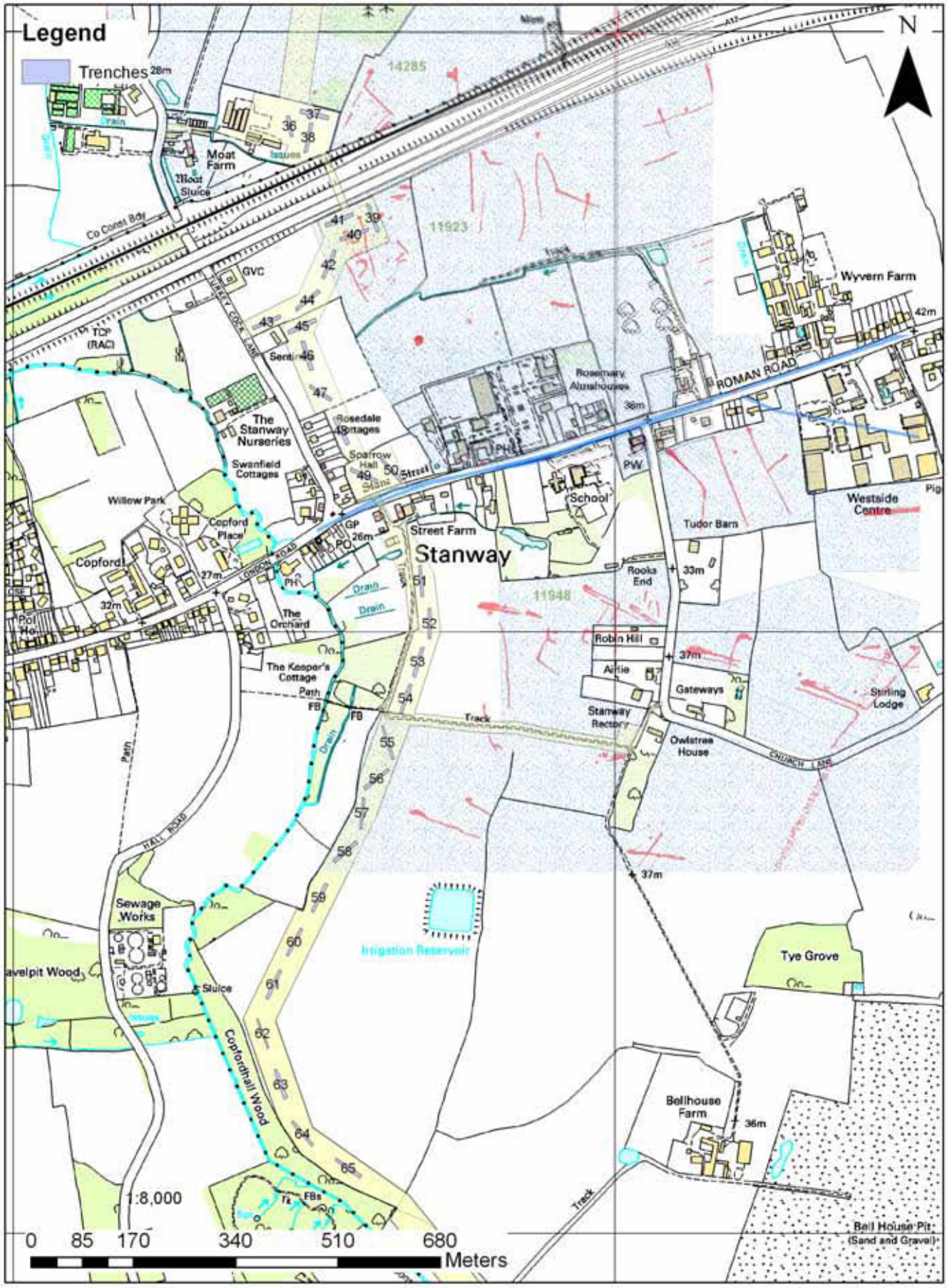

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Figure 4: Trenches at Stanway

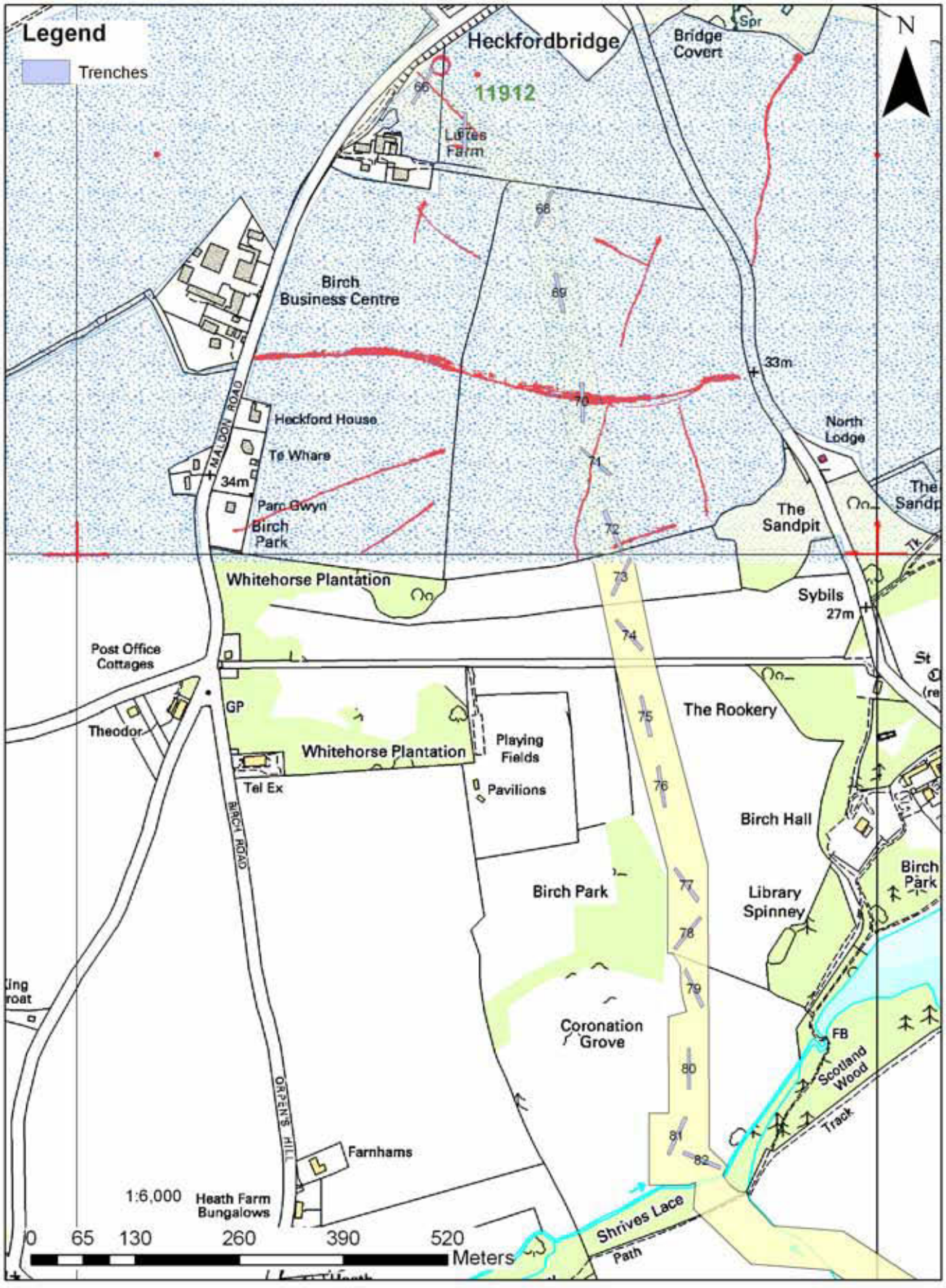

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Figure 5: Trenches at Birch

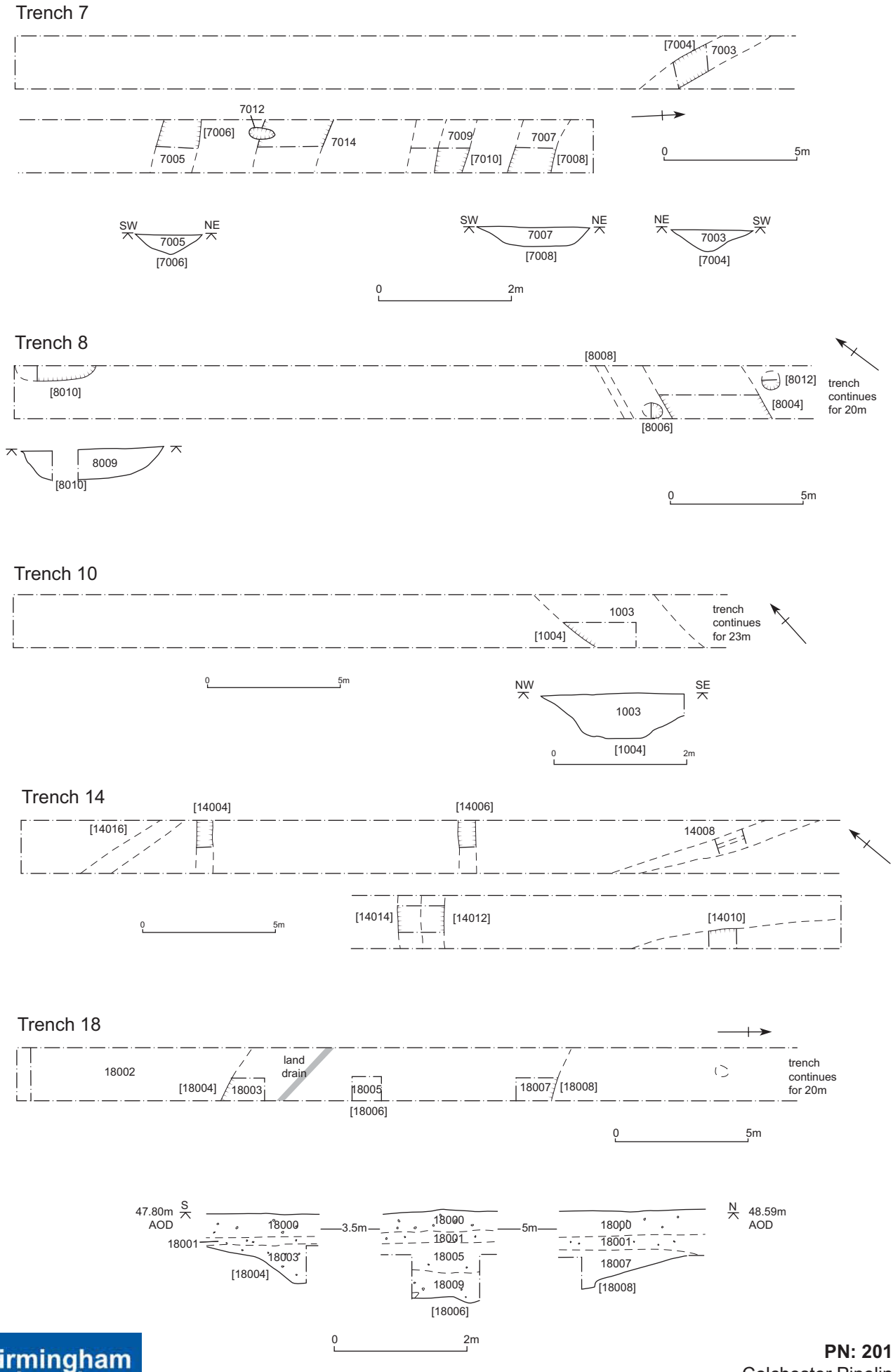

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Figure 6: Plans & Sections

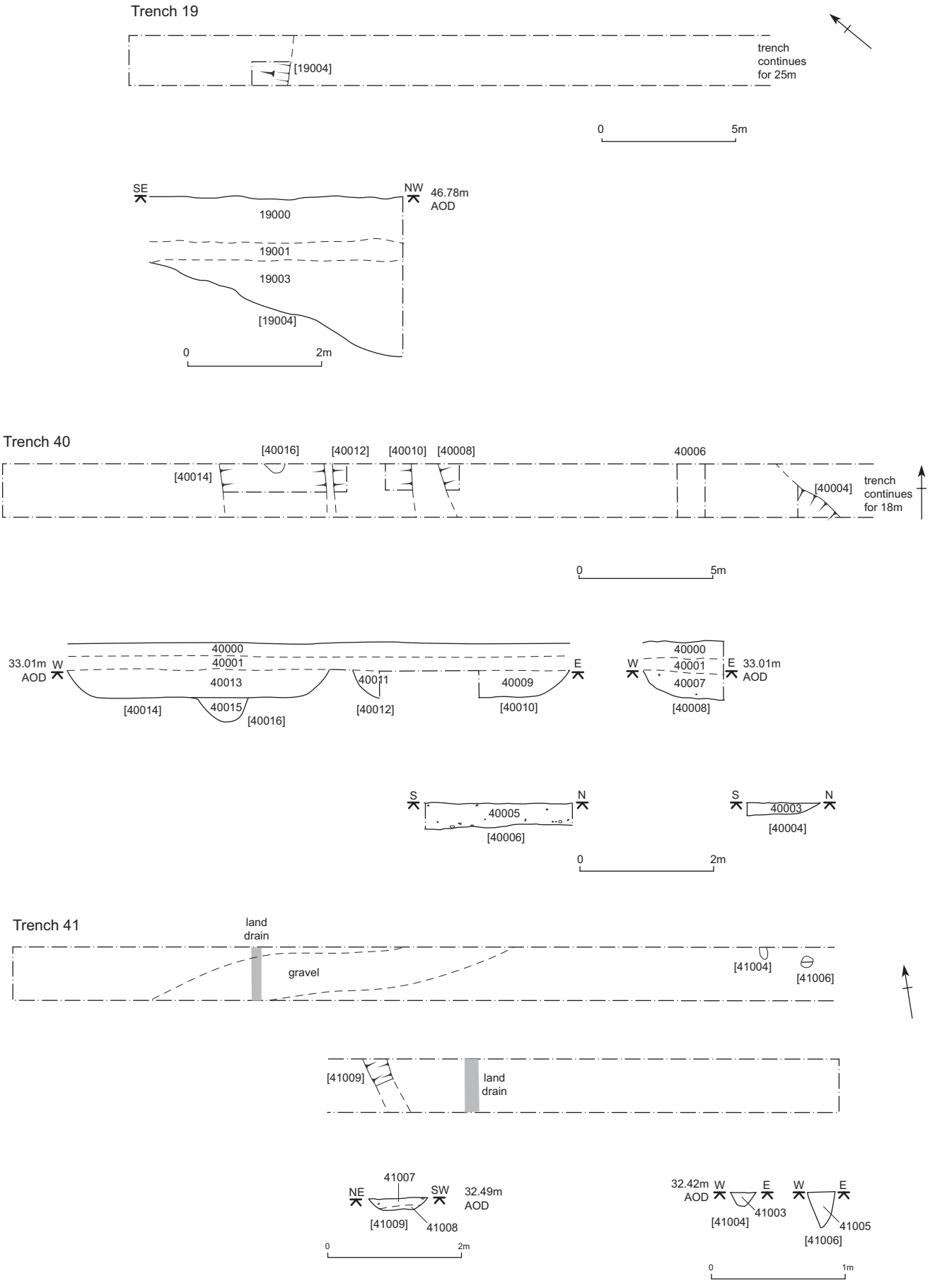

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Figure 7: Plans & Sections

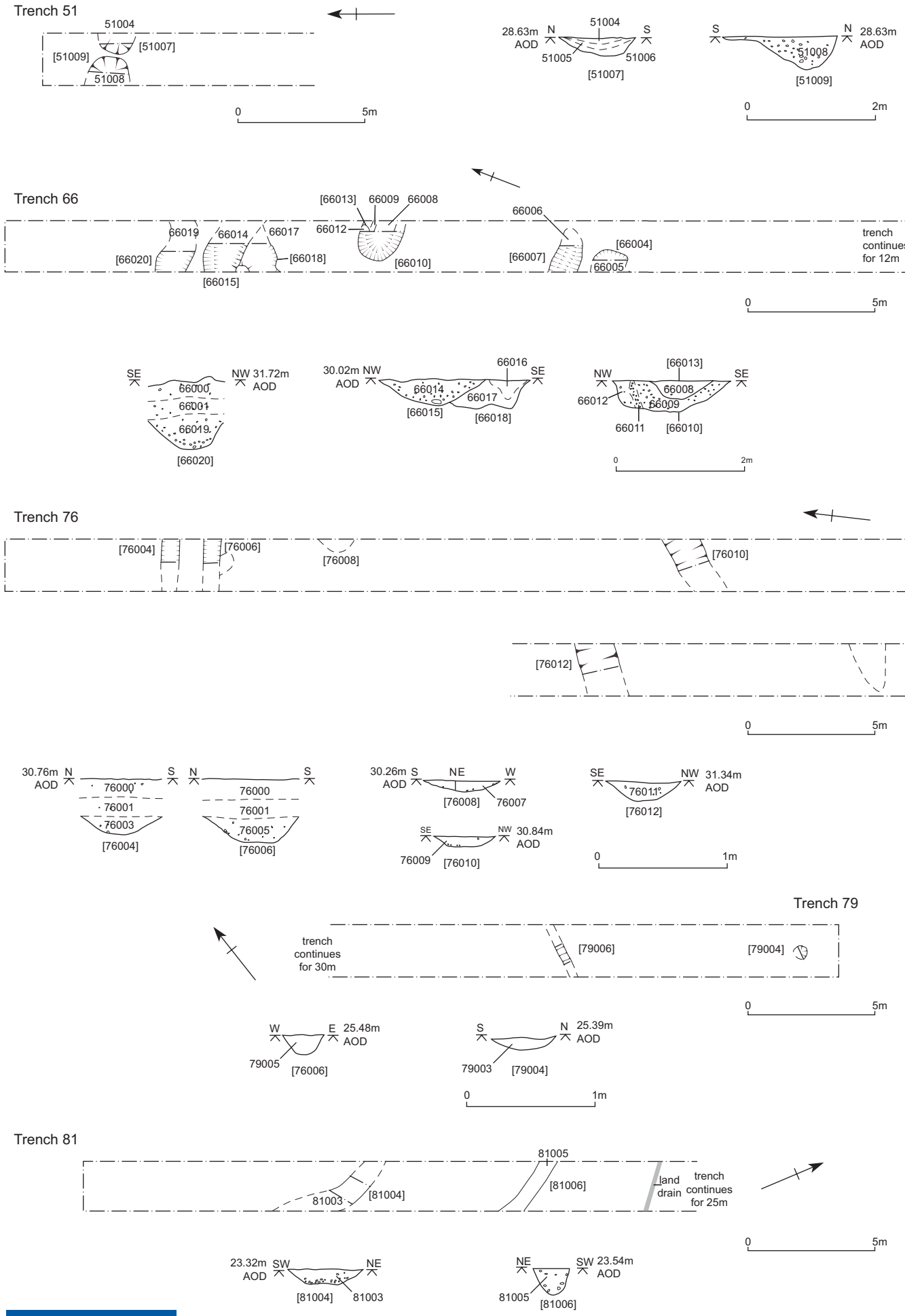

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Figure 8: Plans & Sections

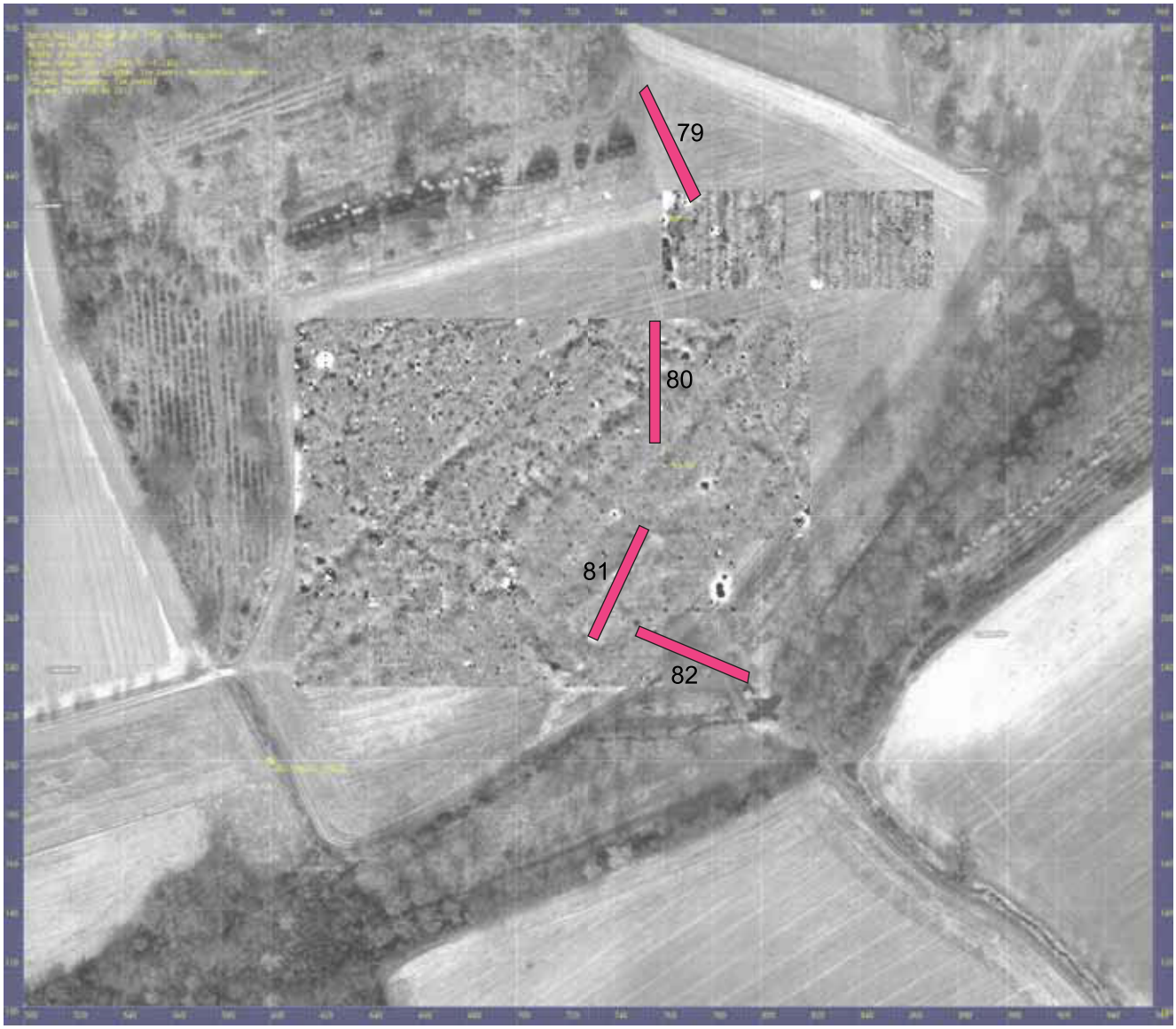

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Figure 9: Geophysics

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Plates 3 and 4