Archaeological Investigation: Sewage Treatment Plant & Foul Drainage Pipeline Heckfield Place Heckfield, Hook, Hampshire (NGR SU 737 616)

Planning Application 12/01367/FUL

October 2013

Souterrain Archaeological Services Ltd

for

Operis Construction Ltd

Souterrain

Archaeological Services Ltd

ARCHAEOLOGICAL INVESTIGATION:
SEWAGE TREATMENT PLANT AND FOUL DRAINAGE PIPELINE
HECKFIELD PLACE

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(NGR SU 737 616)

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Souterrain Archaeological Services Ltd
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on behalf of
Pomegranate Investments Ltd.

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Preface

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Summary

In March 2013, Souterrain Archaeological Services Limited carried out Strip Map and Record investigations during groundwork for a new Sewage Treatment Plant site at Park Farm, Heckfield Place, Hampshire. This was followed in June 2013 by a similar archaeological mitigation during soil stripping of a construction easement for a connecting pipeline, over a distance of around 660m.

The development took place in an area which is considered to have potential for the survival of significant archaeological remains pertaining to the prehistoric and medieval periods.

The report provides an illustrated account of the archaeological investigation.

One of the research objectives was to clarify the site of a purported moated enclosure identified from aerial photographs, which was also known to be the site of a farmstead mapped in 1819. The evidence casts doubt on the presence of a moat, but enables an overall re-interpretation of the site, high-lighting the presence of drift ways, one of which survives as an earthwork.

A total of twenty archaeological features were investigated and recorded, largely comprised of pits and ditches, together with a number of 'finds spreads'. All of the features were either post-medieval in date or 'undated'.

The post-medieval features included a wood-lined channel, which is identified as a fundamental element of the early 19th century water-management features of the landscaped garden; at which time Heckfield Place was in the ownership of Charles Shaw Lefevre.

The excavation results are considered, wherever possible, in conjunction with historic documentary and cartographic sources in order to develop an understanding of major changes made to the landscape over the last 200 years, and the effects that these changes will have had on the buried archaeology of earlier periods.

Of note, the investigation identified two discrete phases of agricultural improvement experiments that are understood to date from the 1830s; these are correlatedwith historical accounts of the efforts of Shaw Lefevre to intensify the crop yield at Heckfield Place.

1. SCOPE OF THE REPORT

1.1 This report documents the results of archaeological observation and investigation carried out during groundworks for the provision of new private sewage treatment facility to the serve the hotel at Heckfield Place Bramshill Road Heckfield Hook Hampshire RG27 0LD (Fig. 1). The archaeological works were conducted in compliance with a condition attached to the planning consent. The investigation took place in March and June 2013.

1.2 The report has been prepared by Souterrain Archaeological Services Ltd (Souterrain) for Operis Construction Ltd on behalf of Pomegranate Investments Ltd.

2. PLANNING BACKGROUND

2.1 Planning permission (Application Ref. 12/01367/FUL) has been granted subject to conditions, by Hart District Council, on the 13th September 2012. In view of the archaeological potential of the site, a Condition (No.5) has been attached to the grant of planning permission for the implementation of a programme of archaeological works. This is in accordance with paragraph 141 of the National Planning Policy Framework (NPPF) and saved policy CON11 of the Hart District Local Plan. The purpose of the Condition is to ensure that features of archaeological interest encountered during construction groundwork are properly examined and recorded.

2.2 A Heritage Statement and Written Scheme of Investigation[1] was prepared by Souterrain on behalf of the planning applicant in June 2012 in support of the planning proposal. The archaeological works were undertaken by Souterrain following approval of the scheme by the Senior Archaeologist of Hampshire County Council.

3. SITE LOCATION AND ASPECT

3.1 The new Sewage Treatment Plant is located at Park Farm in the valley of the River Whitewater (Fig.1). It is about 100m southeast of the farm buildings and around 120m east of the river, at NGR SU737 616. The valley falls gently eastwards from around 80m OD at Heckfield Place to just under 50m OD at the riverside, a distance of approximately 850m. The plant is positioned in a fold in the landscape at around 50m OD, 300m beyond the designated area of the historic park and garden of Heckfield Place.

3.2 Prior to construction groundwork the site of the plant was open land under grass and used for grazing livestock (Figs 8 and 9). Similarly the pipeline was constructed throughout open grazing land of The Park.

3.3 The underlying geology is understood to be Bagshot Beds of Eocene epoch[2], which is comprised of medium dense, locally loose, orange-brown and yellow-brown clayey sand, locally becoming sandy clay[3]. Close to the river these are likely to be overlain by alluvial deposits. The Bagshot Beds are underlain at depth by London Clay formation.

[1] Souterrain Archaeological Services Limited. 2012. *Heritage Statement and Written Scheme of Investigation. Proposed Sewage Treatment Plant and Foul Drainage, Park Farm, Heckfield Place, Heckfield, Hook, Hampshire, (NGR SU 737 616).* 12th June 2012

[2] British Geological Survey Sheet 284, Basingstoke, 1:50,000

[3] c.f. Report on Supplementary Geotechnical Investigations: Proposed New Screening Room Development, Heckfield Place, Hook, Hampshire, RG27 0LD, Integrale Limited, Report 4036, September 2010.

4. OUTLINE HISTORY & ARCHAEOLOGICAL POTENTIAL

4.1 Heckfield Place was built by John Lefevre, a wealthy businessman of Huguenot descent who purchased the land in 1785 for the purpose of building a country house. Lefevre died shortly after the mansion house was completed in 1790, leaving the estate to his daughter Helena. It is understood that Helena and her husband, Charles Shaw (who by marriage assumed the name of Shaw-Lefevre) purchased the manor of Heckfield in 1817 from William Powlett, Lord Bolton[4] and developed the estate to create the setting of a country house[5].

4.2 Heckfield Park is believed to have been created from a part of Heckfield Heath and areas of woodland[6]. The existing farm, known as either Park Farm or Heckfield Park Farm, was formerly the 'home farm' of Heckfield Place. The historic cartographic evidence shows that the farm originated on its present site between the years 1819 and 1840. None of the farm buildings is listed.

Former farmstead

4.3 The site of the present farm was heath land in c.1819 when a detailed and accurate survey of the Heckfield estate was carried out[7] (Fig.2). At that time there was already a substantial farmstead known as 'Home Farm' located to the southeast of the present farm. Figure 3 is a transcription of the layout of the earlier farmstead in relation to Park Farm.

Possible moated site

4.4 The English Heritage aerial mapping programme of 2008 identified the earlier farmstead as a possible moated site[8]. Figure 4 is a transcription the aerial photo plot in relation to Park Farm. Figure 5 shows the farmstead and crop-mark transcriptions super-imposed.

Crop-mark sites

4.5 Crop-marks recorded from aerial photographs (Fig.6) suggest that Park Farm lies in an area of archaeological sensitivity with respect to the prehistoric (Bronze Age/Iron Age) and medieval periods[9]. Apart from the present study, there have been no known archaeological investigations in the vicinity of Park Farm to determine the date and character of any of the crop-mark sites.

5. RESEARCH OBJECTIVES

5.1 The research objectives of the present investigation were:

- To ensure that the archaeological and interest of the historic landscape is safeguarded;
- To gain an understanding of former land-use throughout the development area, particularly with regard to elements of the prehistoric and medieval landscape in this area that are known only from aerial photography;
- To ascertain knowledge about the former farmstead and postulated moated site, particularly with regard to chronology and state of survival.

[4] Page W. (ed.), 1911. Victoria County History, 'Parishes: Heckfield', A History of the County of Hampshire: Vol. 4. 44-51URL: http://www.british-history.ac.uk/report.aspx?compid=56743&strquery=heckfield place Date accessed: 14 Sept. 2013

[5] Ibid.

[6] Robertson, J.G (ed.). 1843. A Tour Round Reading Being a Guide to its Environs, 150

[7] Hampshire Record Office (HRO): 50M63/B73/2, Volume containing a survey of estates in Heckfield, Mattingley, Turgis, Hazeley, Bramshill, Eversley, Sherfield and Hartley Wespall, property of Charles Shaw-Lefevre. Date: 1819, by Francis Hawkes.

[8] Young, A. 2008. The Aggregate Landscape of Hampshire, Results of NMP Mapping, Report No: 2008 R042, Aggregates Levy Sustainability Fund, English Heritage Project Number 4766, p.48, Fig.36

[9] Information from Hampshire County Council' Archaeology & Historic Buildings, Landscape, Planning & Heritage, Environment Department, Accessed 18th April 2012

6 FIELD PROCEDURE

6.1 The investigation was conducted with due consideration to Health and Safety and in accordance with the requirements of the Written Scheme of Investigation and the Institute for Archaeologists' Code of Conduct and *Standard Guidance for Archaeological Watching Briefs and Excavation* (Rev.2008).

6.2 A Strip, Map and Record approach was considered to be the most appropriate form of mitigation. Ground reduction was carried at all times under the guidance of a suitably experienced professional archaeologist. Archaeological features uncovered during the topsoil stripping were investigated and recorded in accordance with the written scheme and features were surveyed to Ordnance Survey National Grid co-ordinates and height datum.

7. INVESTIGATION RESULTS

7.1 In the descriptions which follow, context numbers in square brackets denote 'cuts' (i.e. dug features), whilst those in round brackets denote layers, deposits, fills or structures.

7.2 The pipeline was constructed throughout grazing land. It covered a distance of approximately 660m. It began in The Park c.170m NNE of the mansion house at NGR 473234,161259, and terminated at the new Sewage Treatment Plant site at NGR 473770,161580.

7.3 For ease of description, the results of the investigation are described in four areas: A to D (Fig.7).

AREA A: SEWAGE TREATMENT PLANT

(centre: NGR 473776,161580)

7.3 This area (Fig.10), measuring 743sq.m was stripped of topsoil in March 2013 for the construction of the Sewage Treat Plant. The west side of the area encroached upon the postulated moated site (*ante*.4.4). The topsoil (001) comprised mid-brown sandy soil up to c.0.2m in depth. The underlying geology (002) varied between from gravel, to mid-reddish brown sandy soil and light orange-brown sandy soil. The surface of the geological stratum, where exposed on the north-west side of the site, was notably scored by the action of a subsoil plough.

Pits

7.4 Six pits, or possible post-pits, were exposed in the east part of Area A (Figs.10 to 12). Five of these ([003], [005], [007], [009] and [011]) formed an L-shape, over a distance of about 3m, suggesting that they may have marked the site of small enclosure. The post-holes / pits (Fig.11, Sections 1 to 6) ranged between 0.66m and 1.06m in diameter and 0.2 to 0.32m in depth. Each feature had sides sloping generally between 50° and 85° and relatively flat base. The fills of each feature (004, 006, 008, 010, 012, 014) were similar, consisting of light mid-brown sandy soil with gravel (Fig.13). Occasional finds of red brick and tile fragments and a piece of a horse shoe indicated a post-medieval period date.

Ditches

7.5 **Ditch [018]**, approximately 4.5m wide, was located on the NW-SE alignment of the purported moated enclosure (*ante*.4.4 and Fig.4) recorded from aerial photography and is thus likely to be the same feature. The ditch, cut into geological gravel deposits, was concealed by an accumulation of gravelly soil which was presumably caused by a combination of subsoil ploughing and colluvial processes. It was exposed by a machine-cut trench (Figs. 10, 14 and 15, Sections 7 and 8). The ditch had a wide V-shaped profile with sides sloping at 15 to 20°. It survived to a maximum depth of 0.65m. Three fills were discernible. The primary deposit (019) had accumulated at a level where the cut of the ditch penetrated a geological stratum of orange-

brown clay. This was generally between 0.1 and 0.2m in thickness and was composed of light grey-brown gritty silt with occasional black flecks. The intermediate fill (020) consisted of pale brown clayey sandy soil c.0.09m in thickness, which merged in places with the lower deposit (i.e. (019)).

7.6 Soil samples (*post.* 8) were taken of both primary and second fills - (019) and (020). This revealed the presence of fungal *sclerotia* which could have originated from burnt turves, or may have been present in soil beneath hearth features. A single charcoal fragment present in the sample possibly indicates the input of some hearth ash into the feature. No carbonised plant macrofossils were present. There were a number of un-charred bramble (*Rubus fruticosus*) and elder (*Sambucus nigra*) remains whose condition suggests that they are intrusive rather than preserved by waterlogging. The fill (019) is interpreted as a natural accumulation, containing possible hearth contaminants.

7.7 The upper fill (021) of the ditch, up to 0.4m in thickness, comprised dark brown sandy soil, which may have accumulated largely as a result of down-slope and cross-slope ploughing. The ditch is considered unlikely to have been a moat, but moreover, in the light of both the historic map evidence and site walkover, is most likely to have been a drainage ditch running along the west side of a drift way (commonly a short green lane often used for herding livestock) which also demarcated the boundary of the lane. It is presumed that an up-cast mound also ran along one side of the ditch.

7.8 A second **ditch [017]** shared the same alignment as ditch [018], having been dug along and through the latter's west side (Figs. 10, 14 and 15).This ditch was much narrower and shallower than the first, measuring between 1.5 to 2m in width and c.0.38 in depth. It had a V-shaped profile with sides sloping at 20°. A single fill (018) was discernible comprised of creamy yellow gritty and stony sandy soil; although there may have been more than one event represented. The ditch may have been dug to re-affirm the boundary of the drift way; though, notably, the earlier ditch was completely in-filled by the time the second cut was made.

AREA B: PIPELINE
(NGR 473234,161259 to 473404,161397)

7.9 Area B (Fig.16) covers a 220m stretch of the pipeline easement which ran through the Park (a part formerly known as The Lawn) following the fence line on the west side of Little Binfield Coppice (Figs. 17 and 31). There was gradual slope northwards throughout with a fall in ground height from 75.57m OD to 65.85m OD. The width of the easement varied between approximately 6m and 9m. The topsoil was generally about 0.1m in thickness, beneath which, was a layer of subsoil/topsoil mix of about 0.02 – 0.04m. The geology comprised medium dense orange-brown and yellow-brown clayey sand[10]. There was evidence throughout of usage of a subsoil plough (see Fig.22), showing as deep scarring and striations in the geological stratum.

7.10 There were several localised scatters of archaeological artefacts (post-medieval) corresponding to spreads of discoloured soil. Some of these spreads may have been remains of archaeological features - pits and ditches- dragged out by the ploughing process. The shallow remains of several pits and a ditch were investigated and recorded, as was the remains of a post-medieval drainage system that probably dated to the Lefevre estate. In 1819 this area was pasture land, though was being cultivated from at least 1840.

[10] c.f. Report on Supplementary Geotechnical Investigations: Proposed New Screening Room Development, Heckfield Place, Hook, Hampshire, RG27 0LD, Integrale Limited, Report 4036, September 2010.

7.11 **Feature [030]**. (NGR 473287, 161296). Figure 18, Section 9. This feature was irregular in plan (c.1.7m wide by over 1.5m) with steep irregular sides and a concave base with extrusions. It was partly exposed, the remainder continuing beyond the baulk. It was between 0.1m and 0.5m in depth. It contained a single fill (031) of dark greyish brown silty sand from which small fragments of ceramic building material (probably roof tile) were recovered. It was interpreted as a possible pit of unknown date.

7.12 **Pit [032].** (NGR 473317,161331). Figure 19, section 10. This was a near-circular feature, approximately 0.94m diameter, with sides sloping at around 60° to a flattish base at a depth of 0.1m. It contained a single homogeneous fill (033) of dark brown sandy, pebbly soil. It is likely to have been the remains of a pit which has been severely truncated by agricultural improvement processes, though of uncertain function. Two fragments of tile fragments (probably post-medieval) were recovered from the fill.

7.13 **Finds spot (034)**. (NGR 473372, 161370). Figure 16. In an area of deep scarring of the geological stratum, this was a localized sub-circular patch (c.4.7 x 4.5m) of discoloured soil containing ceramic building material and an iron peg. It was either the remains of an archaeological feature dragged out by the plough, or material accumulated (from topsoil or from archaeological features) by the plough which was subsequently sloughed off by the intersection of gradings, or the change in plough direction.

7.14 **Finds spot (035)**. (NGR 473395, 161348). Figure 16. This was a spread of dark brown sandy soil c.3m in diameter, in an area of deep striations caused by sub-soil ploughing. It contained pieces of red tile and brick and sherds of mid- 19th century pottery.

7.15 **Finds spot (036)**. (NGR 473397, 161391). Figure 16. This was a linear spread of dark brown soil, c. 0.12m thick and c.5.75m in width, containing post-medieval artefacts - tile and brick fragments, pottery and iron nails. It was aligned NW-SE and, where exposed, covered an area of c. 50sq.m. Initially thought to be the remains of a ploughed-out ditch, this probably marked the point at which debris has been released from the subsoil plough at the end of a plough-run. The area concealed an intact remnant of post-medieval herring bone underdrainage (see [038]), and the remains of a pit and a ditch of an earlier date.

7.16 **Finds spot [037]**. (NGR 473318, 161329). Figure 16. Similar to contexts (034) and (035), this was a localized patch of dark brown sandy soil. It contained two sherds of 18th century pottery (Staffordshire slipware and lead glazed orange ware).

7.17 **Post-medieval drainage system [038].** (NGR 473387, 161380 to 473402, 161395). Figures 16 and 20, Sections 11 and 12. Exposed over an area of c.165sq.m, this was a remnant of herringbone underdrainage system. It was concealed beneath a layer of soil (036) which was presumably deposited in the turning area a horse-drawn plough team at the end of each subsoiling plough-run. The remains were evidently part of a much more extensive drainage system which has not survived. They comprised two parallel drains, each 0.2m in width, aligned NE-SW, which were fed from a series of lateral drains.

7.18 Each drain contained un-mortared red brick rubble in a matrix of dark brown silty soil (064). Some of the bricks had vitrified /glazed faces, not dissimilar to those used the original part of the stable block at Heckfield Place, and of a type found elsewhere in the estate[11]. Despite the great quamtity

[11] C.f. Wilson. M.D. 2011 'Archaeological Watching Brief Report. Proposed Screening Room, Heckfield Place, Bramshill Road Heckfield, Hook, Hampshire RG27 0LD', Souterrain Archaeological Services Ltd, SOU10/144, 6.5.

of brick rubble exposed, only two dimensions could be determined (all were broken): 105mm (4¼“) x 58mm (2¼“), these measurements were fairly consistent. Notably, the dimensions of bricks used in the stable block are comparable: 215m (8½”) to 220mm (8⅝“) x 100mm/ 105mm (c.4”/ 4¼“) x c.58mm (2¼”). The bricks used in Heckfield Place mansion house, however, generally measure 220mm (8⅝“) to 224mm (9½“) x c.105mm (4¼“) x c.68mm (2⅝”), none of which are vitrified. It is therefore quite likely that the bricks used for in-filling underdrainage (i.e. context [038]) represent material left over from the construction of farm buildings. The land drainage rubble also contained occasional fragments of red ceramic roof tile. The drainage system is likely to have been created sometime between 1819 and 1840 since it does not appear in the detailed drainage plan of the earlier date, at which time this area appears as open shrubland. The original depth of each drain is likely to have been 30 inches (0.762m) (*post*.9.7). Where sectioned (Figs.20 and 21), they survived to depths between c.0.14 and c.0.25m, thus demonstrating the severity of impact of agricultural land improvement processes in this part of The Park.

7.19 **Ditch [039]**. (NGR 473388, 161390 to 473396, 161386). Figures 20 and 21, Section 11. The lower remains of a ditch, aligned NW-SE was cut by the mid-19th century drainage system [039]. Where sectioned, it was c.0.6m wide, with a concave profile, and survived to a depth of c.0.2m; the ditch was presumably dug from a much higher level. Its date could not be determined. There were no finds present. It does not appear on the 1819 estate map which is understood to preserve an earlier field system (*post.* 9). It was presumably either a field boundary or a drainage ditch.

7.20 **Pit [041]**. (NGR 473394, 1613910). Figure 20, Section 12. This was a truncated a pit, c.0.1m in depth which was presumably originally cut from a much higher level. It was cut by the mid-19th century drainage system. A single fill (042) was discernible comprised of dark brown to black sandy silty soil. There were no finds present and its date could not be determined.

AREA C: PIPELINE
(NGR 473462, 161447 to 473560, 161450)

7.21 This area (Fig.23) covers a 110m long E-W stretch of the pipeline easement which ran through the Park on the north side of Little Binfield Coppice[12]. This area, formerly known as Little Pinfold’s Coppice, was cultivated in 1819. There was fall in height eastwards from 62.5m OD to 0.53m OD. There was evidence throughout of soilsoil ploughing.

7.22 **Pit [043]**. (NGR 473468, 161453). Figure 24. This was a sub-circular feature, 1.52m in diameter and up to 02.m in depth, with irregular sides and a stepped base. It contained a single fill (044) of dark greyish-brown silty sand, from which pieces of ceramic building material (probably post-medieval) were recovered. It was possibly a pit, although the root bowl of a tree or bush cannot be precluded.

7.23 **Wood-lined Channel [045]**. (NGR 473553, 161447 to 473564, 161456). Figures 23 and 25. Located approximately 30m northeast of the perimeter fence of Little Binfield Coppice[13], this was a steep-sided linear cut, c.1.1m in width and 0.43m in depth, which ran across the width of the stripped easement on a NE-SW alignment. The lower sides of the feature were lined with wooden planks. It contained two fills. The primary fill (046) was very compact dark blue-grey silty sand, up to 0.33m in thickness. The upper fill (047) was c.0.19m in thickness and generally about 1.1m in width, spreading outwards beyond the north side of the cut of the channel. It comprised mid-greyish-brown silty sand with abundant sub-angular stones, (<0.01m), which was probably a

[12] 1840 Tithe Map & schedule, No.37 HRO 2/M65/F7/114/2
[13] Ditto.

deliberate backfill. The site of the channel corresponds to a line recorded on the 1840 tithe map. It was most likely a sluice, which had controlled the water level and rate of flow to the two 'fishponds', or lakes to the east and south of Little Binfield Coppice (Fig.26) which are main features of the Heckfield Place landscaped garden. The map evidence shows that the channel was constructed at sometime between 1819 and 1840. It is not shown on the Ordnance Survey map of 1871, or later editions.

7.24 **Feature [048]**. (NGR 473480, 161454). Figure.23. This was a circular feature, 2.2m in diameter, located about 13m east of feature [043]. Investigation by quarter section revealed a depth of up to 0.3m of mid-greyish brown silty sand with inclusions of clay and gravel (049). A concave profile and the presence of tree roots suggested that it was a tree root bowl. It was photographed though not drawn. It contained a few small fragments of red brick or tile.

AREA D: PIPELINE
(NGR 473585, 161480 to 473725, 161575).

7.25 This area (Fig.27) covers a NE-SW stretch of the pipeline approximately 140m in length, which runs along the base of a dry valley towards the Sewage Treatment plant at Area A. This area, also part of The Park, was formerly known as Little Pinfold's Coppice. Evidently former woodland, as the name implies, this land had become arable by 1819. It may have been improved with land drainage and brought in cultivation in the late 18th / early 19th century.

7.26 **Linear feature [052]** (NGR 473680, 161552 to 473675, 161542). Figure 28. This feature crossed the easement on a NE-SW alignment. Where sectioned, it was 1.2m wide with steep sides falling to a flat base at depth of 1.34m. Its fill (053) consisted of mottled mid-brown and mid-yellow clay. A single large piece of post-medieval roof tile was present. It appears to correspond to the boundary ditch of an elliptical piece of coppiced woodland (parcel No.33) shown on the 1840 tithe map to the southwest of Park Farm, which was evidently created at some juncture after 1819.

7.27 **Linear feature [054] (**NGR 473719, 161565 to 473720, 161572). Figure 29. This was a linear feature spanning the width of the stripped easement on a NNE-SSW alignment. The excavated section revealed a width of 0.89m, with steep sides falling to a flat base at a depth of 0.11m. It contained a single fill (055) of mid-grey silty sand and gravel. There were no artefacts present. Its position does not correspond with any features recorded on 19th century mapping.

7.28 **Linear features [056]** (NGR 473629,161517 to 473623, 161510) and **[062]** (NGR 473627,161518 to 473610, 161505) Figure 30. These were two parallel narrow linear features in the valley bottom. Feature [056] was 0.42m wide with steep convex sides and a flat base at a depth of 0.2m, while feature [062] had a width of 0.48m, vertical sides and flat base. Their fills differed: the fill of [056] comprised mid-yellowish brown sandy silty clay, while that of [062] consisted of dark greyish-brown loam with gravel. Both features terminated close together. Initially thought to be part of a trackway, they were interpreted as possible drainage channels or ditches.

8. Environmental Samples *by Dr John Summers*

Introduction

8.1 Two bulk soil samples for environmental archaeological analysis from Strip Map and Sample excavations at Heckfield Place by Souterrain Archaeological Services Ltd were submitted to Archaeological Solutions Ltd for analysis. Both samples were from a possible moat feature of

medieval/ post-medieval date and were analysed for potential charred plant macrofossils. This report presents the results from the analysis of the bulk sample light fractions and discusses the potential and significance of the material.

Methods

8.2 Samples were processed at the Archaeological Solutions Ltd facilities in Bury St. Edmunds using a Siraf style flotation tank. The light fractions were washed onto a mesh of 250µm (microns), while the heavy fractions were sieved to 500µm. The dried light fractions were sorted under a low power stereomicroscope (x10 - x30 magnification) and all botanical remains were identified and fully recorded. Reference literature (Cappers *et al.* 2006; Jacomet 2006) and a reference collection of modern seeds were consulted where necessary. Potential contaminants, such as modern roots, seeds and invertebrate fauna were also recorded in order to gain an insight into possible disturbance of the deposits.

Results

8.3 The results from the analysis of the bulk sample light fractions are presented in Table 1.

Plant macrofossils

8.4 No carbonised plant macrofossils were present in either sample. A number of un-charred bramble (*Rubus fruticosus*) and elder (*Sambucus nigra*) were recorded but their condition suggests that they are intrusive rather than preserved by waterlogging. Both samples contained a large number of apparently carbonised fungal *sclerotia*. These are essentially the fruiting bodies of soil fungi and the cause of their carbonisation is unclear at present. A single charcoal fragment was noted in the heavy fraction of sample (019), which may indicate the input of some hearth ash into the feature. Fungal *sclerotia* could have originated from burnt turves or may have been present in soil beneath hearth features.

Contaminants

8.5 A small number of modern rootlets and burrowing molluscs (*Cecilioides acicula*) were present in the samples and a single earthworm egg capsule was noted in sample (020). The low density of such remains indicates that little biological disturbance of the deposits is likely to have occurred.

Remarks

8.6 No carbonised remains of any significance were present in the bulk samples from the fills of the possible moat feature. The input of some ash or burnt material is indicated by the low concentration of charcoal fragments and numerous carbonised fungal *sclerotia.* However, the actual source of these remains is uncertain at present. No further work on these samples is necessary.

Table 1: Results from the analysis of bulk sample light fractions 019 and 020 from Park Farm, Heckfield Place.

Site code	Sample number	Feature type	Volume (litres)	% processed	Cereals			Non-cereal taxa	Charcoal	Molluscs	Contaminants					Other remains
					Cereal grains	Cereal chaff	Grain preservation	Seeds	Charcoal>2mm	Molluscs	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules	
SOU10-144	019	Possible moat primary fill	10	50	-	-	-	-	-	-	X	X	X	-	-	Fungal sclerotia (XXX)
SOU10-144	020	Possible moat second fill	10	100	-	-	-	-	-	-	X	X	X	-	X	Fungal sclerotia (XXX)

9. DISCUSSION AND SIGNIFICANCE OF RESULTS

The Early 19th Century Landscape

9.1 The layout of the modern landscape (Fig.1) bears very little resemblance to that of the early 19th century (Fig.31). Very few former land divisions survive. An accurate survey of the estate using Gunter chain was commissioned Charles Shaw-Lefevre in 1819[14] and executed by Francis Hawkes. The mapped land divisions at that time appear to reflect a more ancient regime of land-use, possibly medieval, with many of the fields having the irregular appearance of clearances or 'assarts'. Roughly half of the estate was under cultivation at the time of Hawkes' survey. Some field names attest to moorland having been turned into pasture and meadow. Several other tracts of arable land were known as 'piddle', which is a probable local corruption of 'pightle'[15], suggesting that at some earlier time these closes (small enclosed areas) might have been attached to individual homesteads.

9.2 The southwest and central parts of the sewage pipeline passed through land which, in 1819, was largely pasture: (The Lawn[16]) and woodland (Little Pinfold's Coppice[17]). The northeast section of the pipeline passed through the enclosed grounds the original estate farm known as 'Home Farm'[18], which was situated about 100m south east of Park Farm. The schedule which accompanies the map lists the components of the earlier 'homestead' which covered an area of over 3 acres: "Home Farm, House, Barns, Stables, Outbuildings, Kennel, Dovecote, Yards, Gardens, Drift Roads and pasture adjoining". The soil-stripped working area of the new sewage treatment plant straddled one of the former drift ways and a part of 'Home Moor' to the east.

9.3 Little Pinfold's Coppice was cleared by Shaw-Lefevre at some time between 1819 and 1840, (probably during the 1830s) who allocated it for the site of a new home farm complex,now known as Park Farm.

The Impact of Agricultural Improvement

9.4 Significantly, the present archaeological investigation identified two techniques of land improvement that were being developed in Britain the early 19th century. These techniques enable us to develop an understanding of historic changes to the landscape of the Heckfield Place estate and the impact they will have had on the archaeology of earlier periods.

Underdrainage

9.5 The first of these improvements was the implementation of a comprehensive system of field underdrainage, for all of the land intended for cultivation on the Heckfield Place estate. It will be seen that Shaw-Lefevre's 1819 map of estate (Fig.2) shows a drainage system which became known as 'Thorough Draining'. This system had been in use throughout Scotland since the turn of the 19th century, where it had been first developed. 'Thorough Draining' *"may be defined as that land which removes surface water from subsoil by placing shallow, though substantially constructed drains in parallel lines, as such distances and in such a position, as thoroughly to dry the soil without injury to their structure"*[19]. Since the system is understood to have been first

[14] Hampshire Record Office (HRO): 50M63/B73/2, Volume containing a survey of estates in Heckfield, Mattingley, Turgis, Hazeley, Bramshill, Eversley, Sherfield and Hartley Wespall, property of Charles Shaw-Lefevre. Date: 1819, by Francis Hawkes

[15] A small close of pasture, either attached to a cottage homestead or for keeping livestock.

[16] HRO 50M63/B73/2, no. 11

[17] HRO 50M63/B73/2, no.17

[18] HRO 50M63/B73/2, no.16

[19] 'Thoughts on Draining as the Speediest definition of Thorough Draining: fertilizing the soil', *The Farmer's Magazine*, 1836, Vol 4, 1836.

introduced to England as late as 1834[20] (on the Duke of Portland's estates), it is assumed that the drainage plans marked on Shaw-Lefevre's map of the Heckfield estate were added after this date. It is also assumed that the drainage layout on the map represents an 'as built' plan, particularly as the map includes new routes and field boundaries which evidently came into being.

9.6 The archaeological investigation along the pipeline easement identified a relict portion of a system of herring bone underdrainage (*ante*.7.17, Figs. 16 and 20, context [038]). In this type of system, a series of parallel lateral drains run at an angle into the parallel main drains. It was located in a part of The Park, formerly known as The Lawn (Fig.31), which in 1819 was open shrubland used for pasture. The drains correspond to a tract of arable which in 1840 comprised just over 7 acres. It is thus presumed to be a later phase of work carried out by Shaw-Lefevre, which probably took place in the mid 1830s, for after this date documentary sources attest to his experimentation with a new technique of draining – that of subsoil ploughing.

9.7 The structure of each drain recorded during the archaeological investigation belonged to a type known as 'Rubble Drain', in this case, filled with unused broken bricks. Such drains of the period were constructed to standard measurements: 30 inches (c.0.762m) deep and 5 inches (0.127m) wide at the bottom[21]. The rubble layer was laid 1 foot (c.0.3m) thick, following which 1 to 2 inches (0.025-0.05m) were allowed "*for sods to be placed on the surface to prevent earth from filling the drains and 16 inches [0.4m] for clearing the drain for tillage*"[22].

Subsoil Ploughing

9.8 In the late 18th and early 19th century, the underlying geology of the region presented a particular hindrance to those landowners whose desire it was to intensify crop yield. Indeed, experiments to determine suitable land drainage depths were in progress in the first half of the 19th century[23] on the neighbouring estate of Strathfieldsaye, the Duke of Wellington's estate. In the 1830s and 1840s, the comparative merits of Thorough Draining and Subsoil Ploughing were continually debated by those in the upper tier of society who were engaged in the pursuit of agricultural improvement[24]. Shaw-Lefevre, a member of the Agricultural Society of England, was likewise engaged. In 1836, he carried out what was probably one of the first experiments to test the effects of a subsoil plough on 'soil of a dry character'. In a communication to the society's journal[25] three years later he described his successful test on a 6 acre field at Heckfield Place, a field *"which for many years has been scarcely worth cultivating...light sandy soil from 5 to 7 inches in depth covering a stratum of hard gravel"*. The crop yield was astounding:

"...which is best explained by a short statement of the produce of the field, for a series of years, up to the present period:-

Year	*Crop*	*Produce per Acre*
1832	*Oats*	*4 sacks*
1833	*Turnips*	*Not quite 3 tons*
1834	*Barley*	*Not quite 4 sacks*
1835	*Clover*	*2 tons on the whole field*
1836	*Wheat*	*3 sacks*

[20] Phillips, A.D.P. 1989. *The Underdraining of Farmland in England during the Nineteenth Century*, p.161. (Cambridge).
[21] C.f. Owen Roberts, O. 1843. *Observations on Thorough Drainage as the Basis of Agricultural Prosperity*, p.37. (London
[22] Ibid.p.21
[23] c.f. Parkes, J, 1847. 'On Draining', *The Farmers Friend. A Record of Recent Discoveries, Improvements and Practical Suggestions in Agriculture* (London), Art. XXVI, 82; The Farmers Magazine, Vol 9, 3rd ser. 1856
[24] e.g. Blackwood, W, 1840. *Quartlerly Journal of Agriculture*, Vol. X 1839-1840.
[25] 1840 C.S. Lefevre, Esq. M.P, "Account of Subsoil Ploughing on a Dry soil, Heckfield, Hants, Journal *of the Royal Society of England,* Vol I, Part IV, 346.; *Journal of the English Agricultural Society*, Vol.5, Feb 13th, 1839.

"In the Autumn of 1836 it was ploughed with a sub-soil plough at a cost of 30s per acre

1837	*Turnips*	*8 tons per acre*
1838	*Barley*	*10 sacks per acre"*

9.9 Notably, the remnant of underdrainage system that was exposed during the archaeological investigation was severely truncated as a result of subsoil ploughing. Where examined by hand excavation the maximum depth was between 0.14m and 0.25m. The survival of this remnant may be the result of being buried under an accumulation of soil produced in the turning area of horse-drawn plough-teams. Elsewhere along the pipeline easement, there was no trace of underdrainage other than occasional brick fragments in the topsoil; including where the easement crossed a series of parallel drains that are shown on the map of 1819 (i.e. at the junction of Areas B and C).

9.10 The scars left by subsoil ploughing were evident along the length of the sewage pipeline. Truncation of archaeological features was particularly severe throughout Area B (between, NGR 473234, 161259 to 473404,161397). Given the recommended depths for underdrainage of the type found it is also inferred that the depth of soil depletion in parts of The Park, as a result of subsoil ploughing and erosion since the 1830s, amounts to between 0.5 and 0.7m. It is presumed that subsoil ploughing gained ascendancy over underdrainage throughout most the cultivated areas on the Heckfield Place estate, and that the practice continued well into the latter part of the 19th century. (Land-use mapping show that these areas of the estate had reverted to pasture by the early 1940s). If this is indeed the case, then the potential for the survival of significant archaeological remains is likely to be low.

The Site of the Previous 'Home Farm'

9.11 The site of the farmstead which was mapped in 1819 is likely to have been severely damaged by 19th century agriculture: it is recorded as arable land in 1840. There was no trace of buildings associated with the ancient farmstead in the area of development. However, several small linear earthworks and amorphous mounds in low relief were observable in March 2012 on the higher ground to the immediate south; some of these features may correspond to the site of the structures recorded in 1819. The most prominent surviving earthwork is the main drift way of the farmstead, which appears as a hollow-way. An aerial mapping survey interpreted this feature as a possible moated site, but investigations at the site of the new sewage treatment plant found no evidence of a moat. Instead, the linear feature found at this location is more likely to be the remains of a wide, shallow ditch demarcating the boundary of the drift way. There were no artefacts found to suggest the foundation or lifespan of the farmstead.

10. ARCHIVE

10.1 All artefacts will remain the property of the landowner although the landowner will be invited to transfer finds ownership to the Hampshire County Council Museums Service. The receiving museum for the district is Hampshire County Council Museums Service and the Site Code and Accessions Number is **A2010.78**.

10.2 The English Heritage OASIS Data Collection Form ID for this project is **souterra1-162439**

11. COPYRIGHT AND CONFIDENTIALITY

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11.2 Souterrain undertakes to respect all requirements for confidentiality about the planning applicant's proposals provided that these are clearly stated. It is expected that owners respect Souterrain's and the Institute for Archaeologists' general ethical obligations not to suppress significant archaeological data for an unreasonable period.

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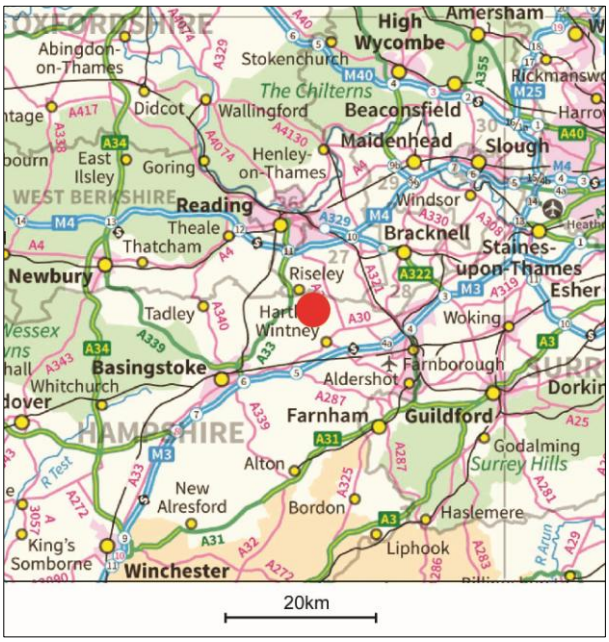
1840 Tithe Map & schedule, No.37 Hampshire Record Office 2/M65/F7/114/2)

Figure.1. Location of Site



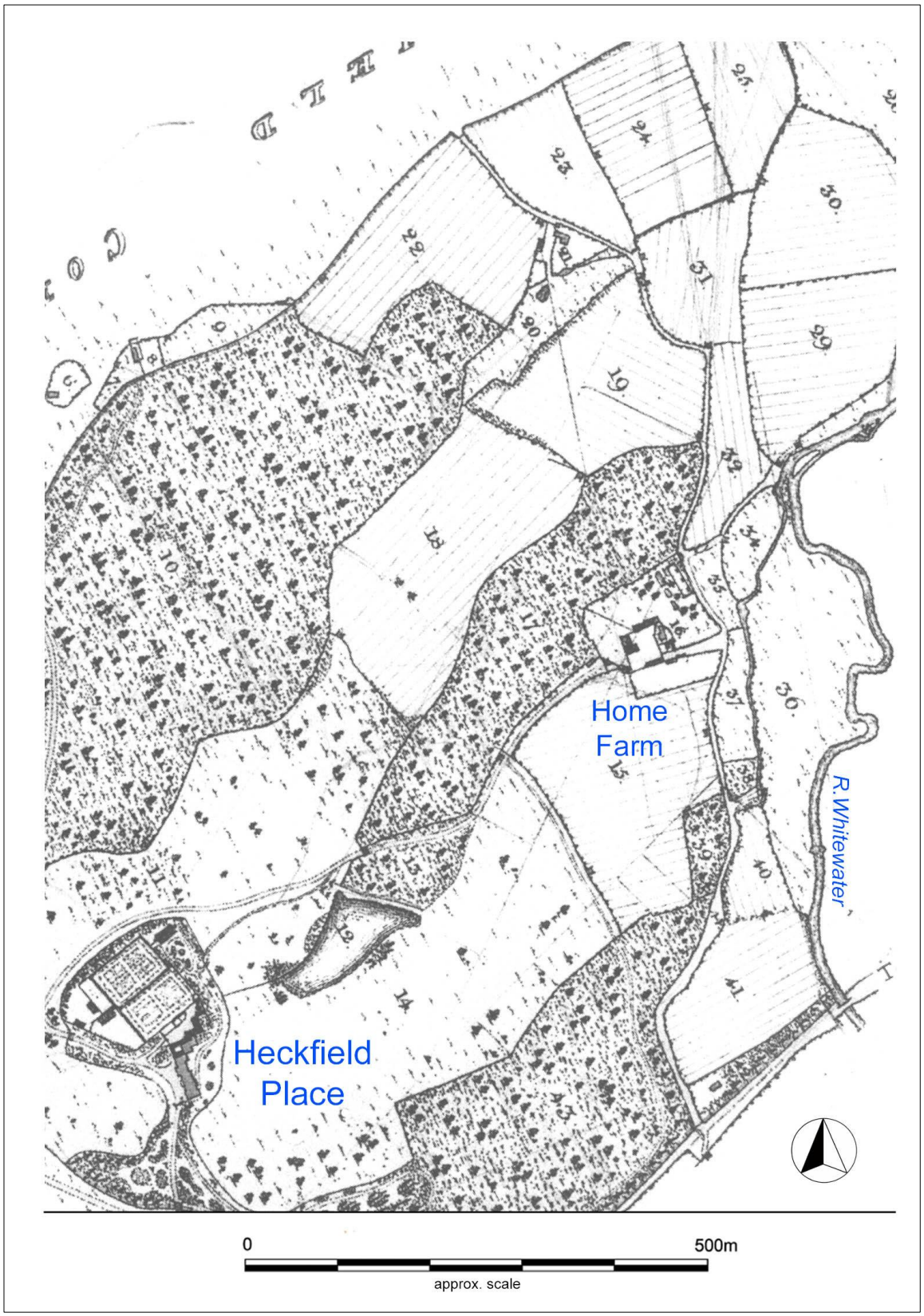


Figure 2. Extract from Francis Hawkes' map of Heckfield Park estate, 1819.

(Courtesy of Hampshire Record Office, HRO 50M63/B73/2)

Figure 3.
Approximate layout of the former Home Farm in relation to Park, showing location of drift ways and old field boundaries.

Transcription from 1819 map surveyed by Francis Hawkes (HRO 50M63/B73/2); also based on OS mapping, Crown Copyright Licence No. AL 100015565)

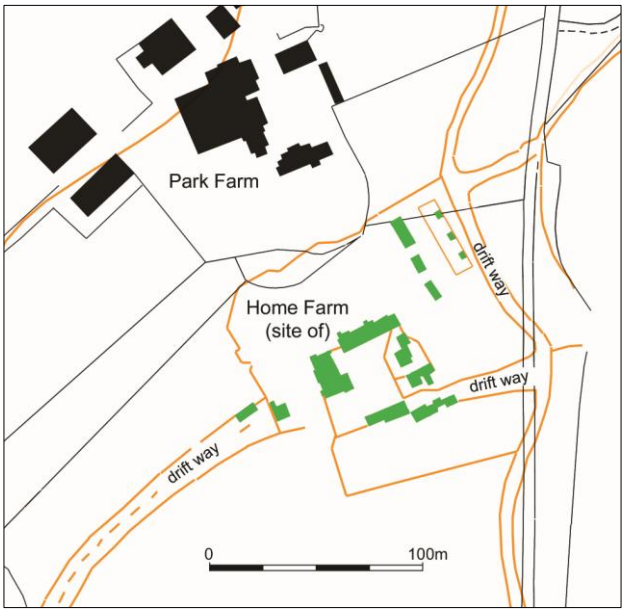


Figure 4.
Location of possible moated site recorded by English Heritage Aerial Mapping Survey (dark green)

(based on OS mapping, Crown Copyright Licence No. AL 100015565)

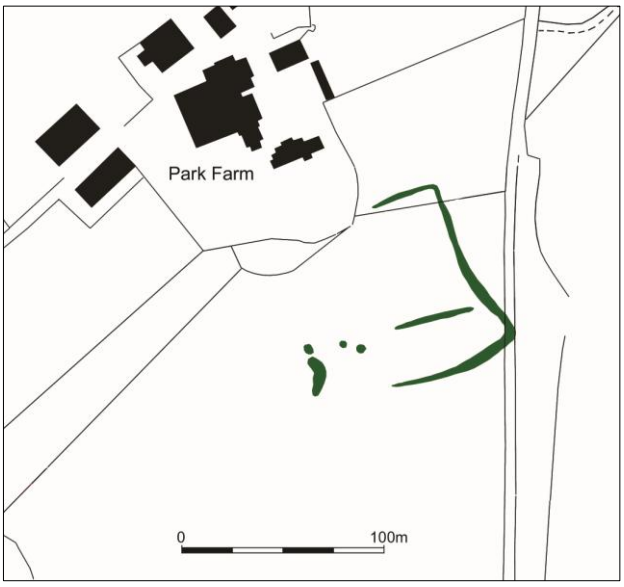
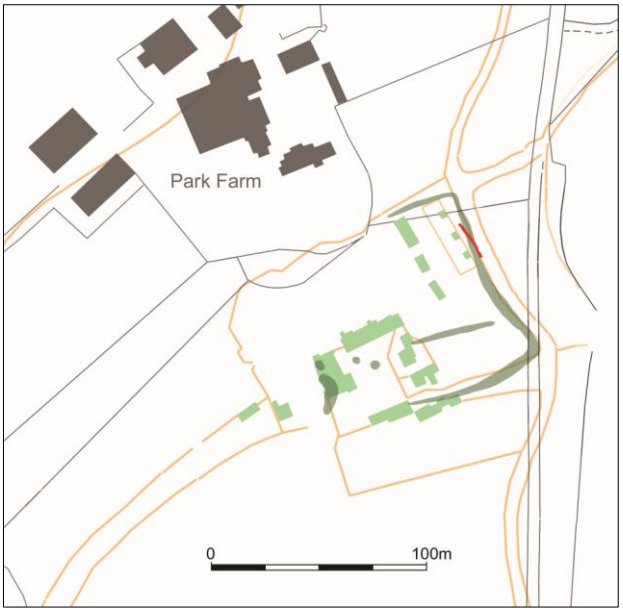


Figure 5.
All features super-imposed, showing location of excavated ditches [017] and [018] (in red)

(based on OS mapping, Crown Copyright Licence No. AL 100015565)



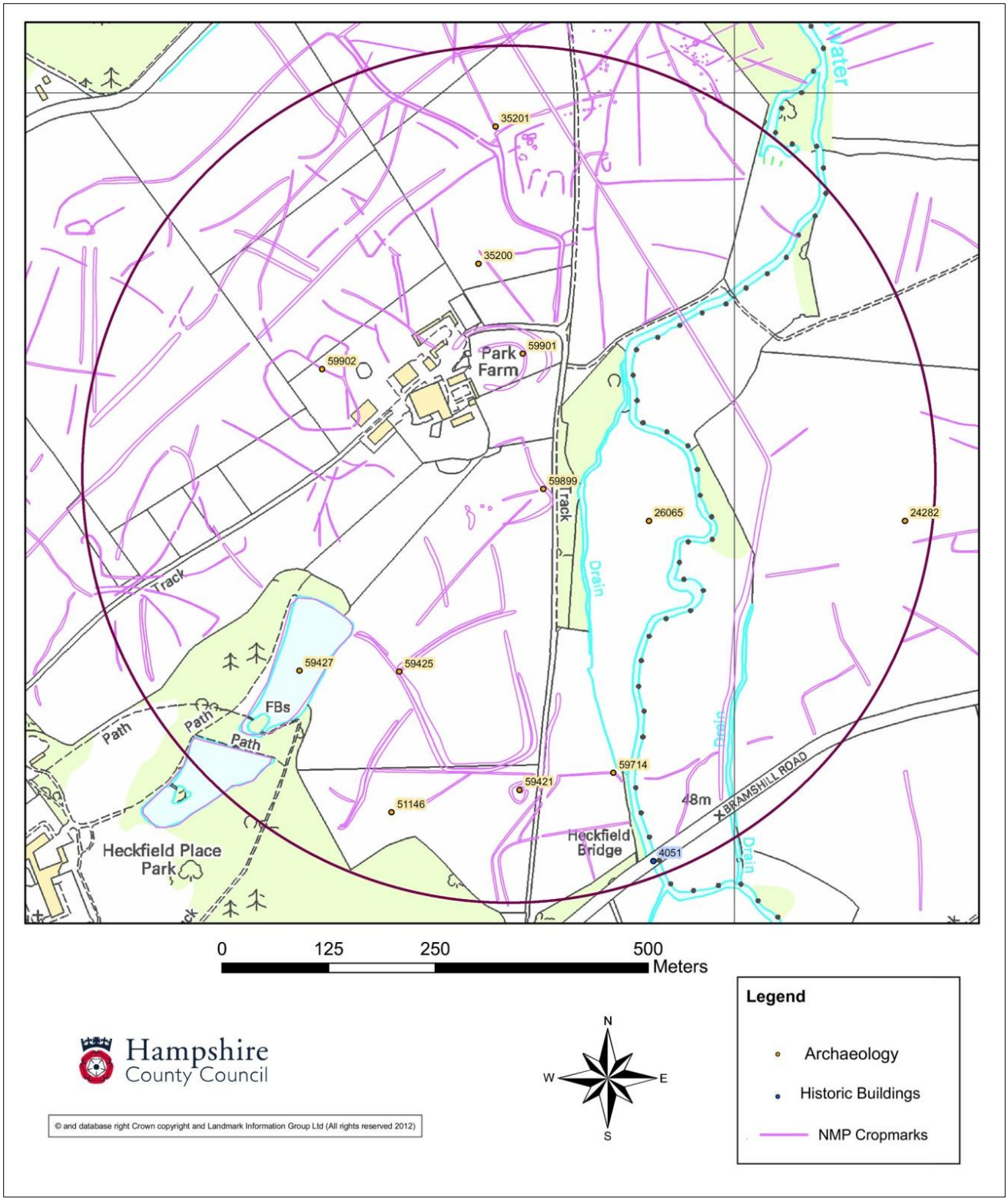


Figure 6. Archaeology and Historic Buildings in the vicinity of Heckfield Place and Park Farm

Hampshire County Council Archaeology and Historic Buildings Record, Accessed 18th April 2012.
Crown Copyright Licence No. AL 100015565

Figure 7.

Areas of Investigation

(pipeline easement and plant area in red)

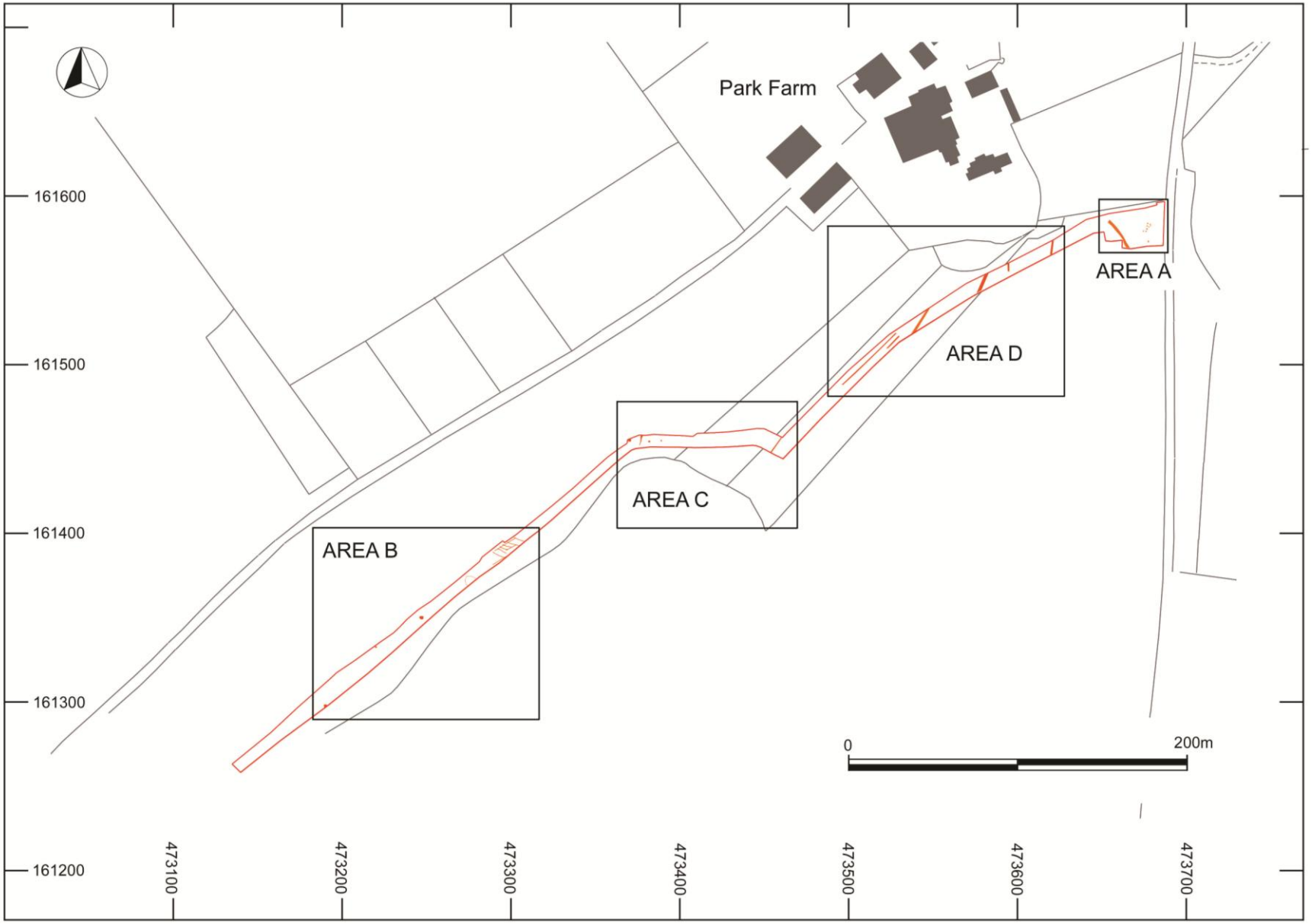


Figure 8.

Pre-excavation view of Area A, March 2013, Facing S

Figure 9.

Pre-excavation view of Area A, March 2013, Facing N; Park Farm to left

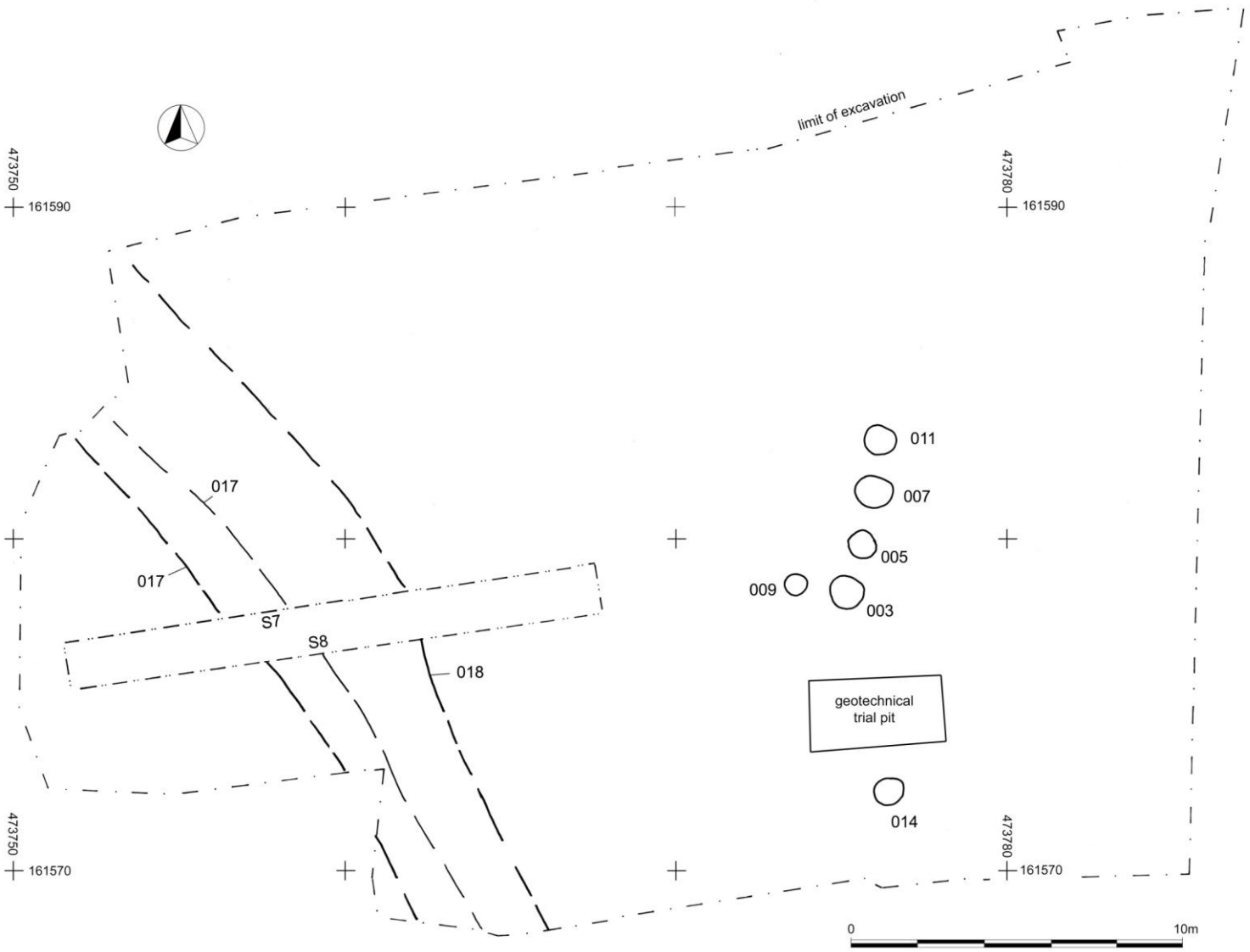


Figure. 10. Area A, showing location of Sections 7 and 8 through ditches [017] and [018]. Inset: overview, facing NW

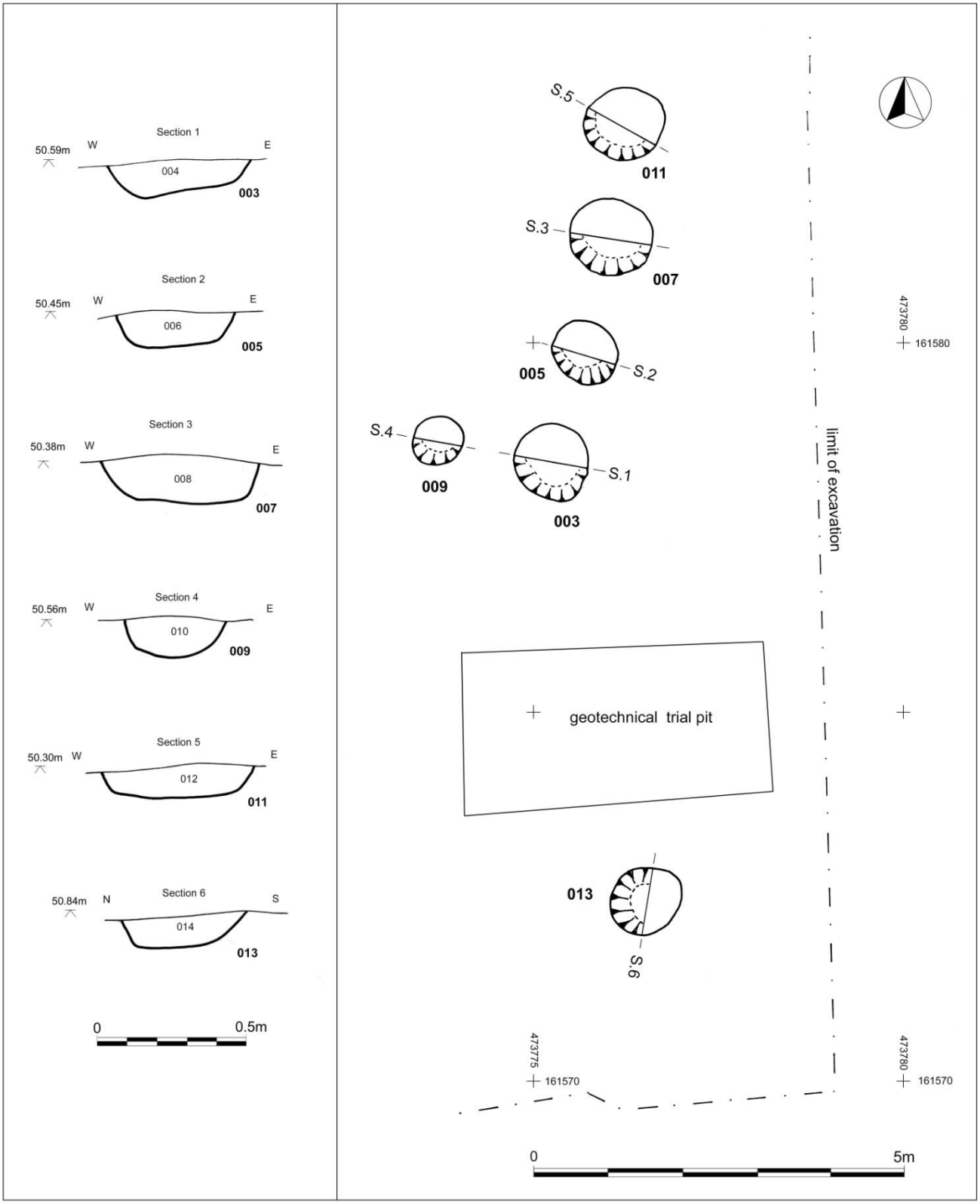


Figure. 11. Pits 003, 005, 007, 009 and 011

Figure. 12. Overview of pits 003, 005, 007, 009 and 011, facing NE

Figure. 13.Pit [011] Section 5, showing typical fill

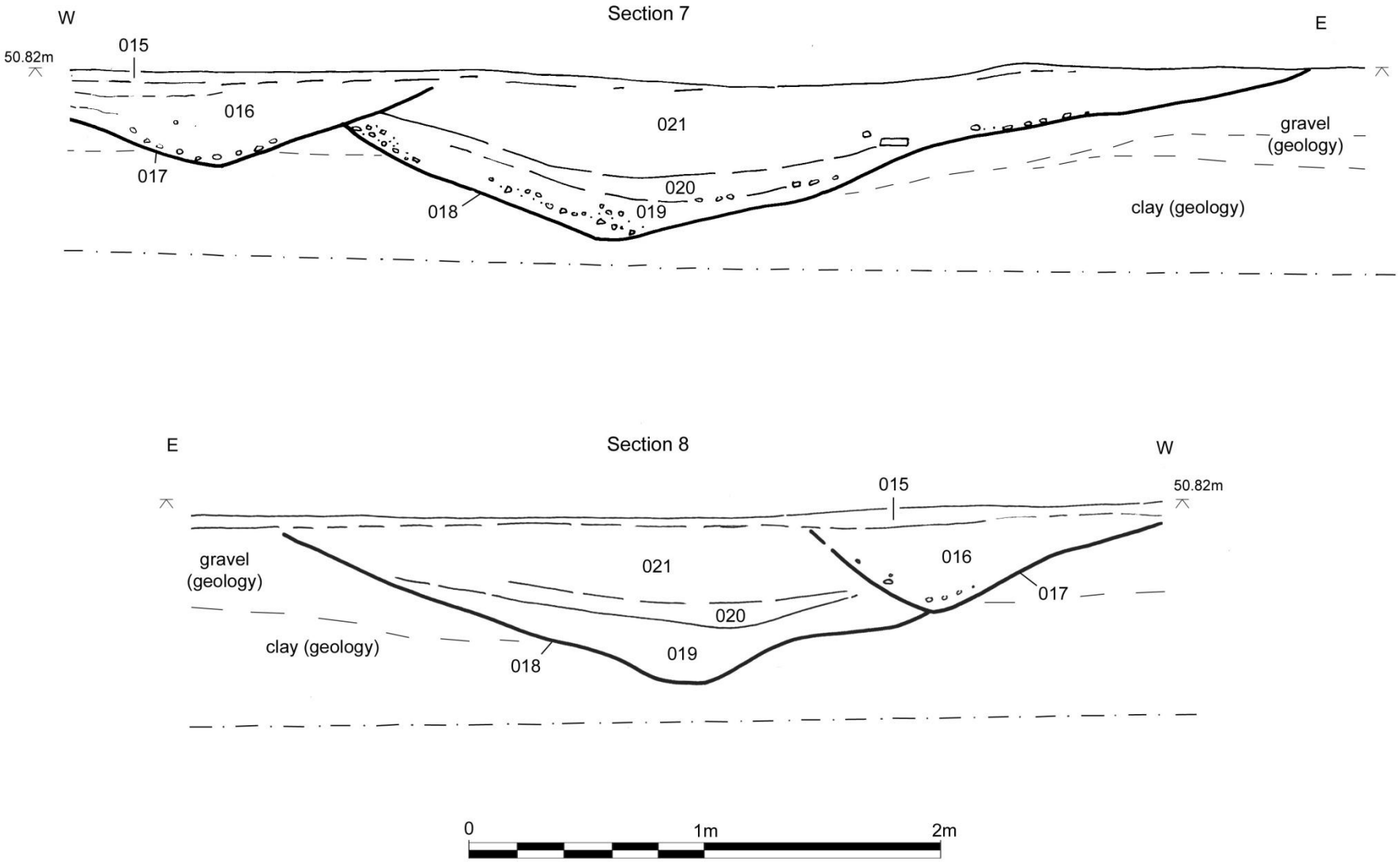


Figure.14. Area A. Section 7 and 8 through ditches [017] and [018]

Figure. 15. Area A. Ditches [017]and [018]. Top: Section 7, facing NW. Bottom: Section 8, facing SE

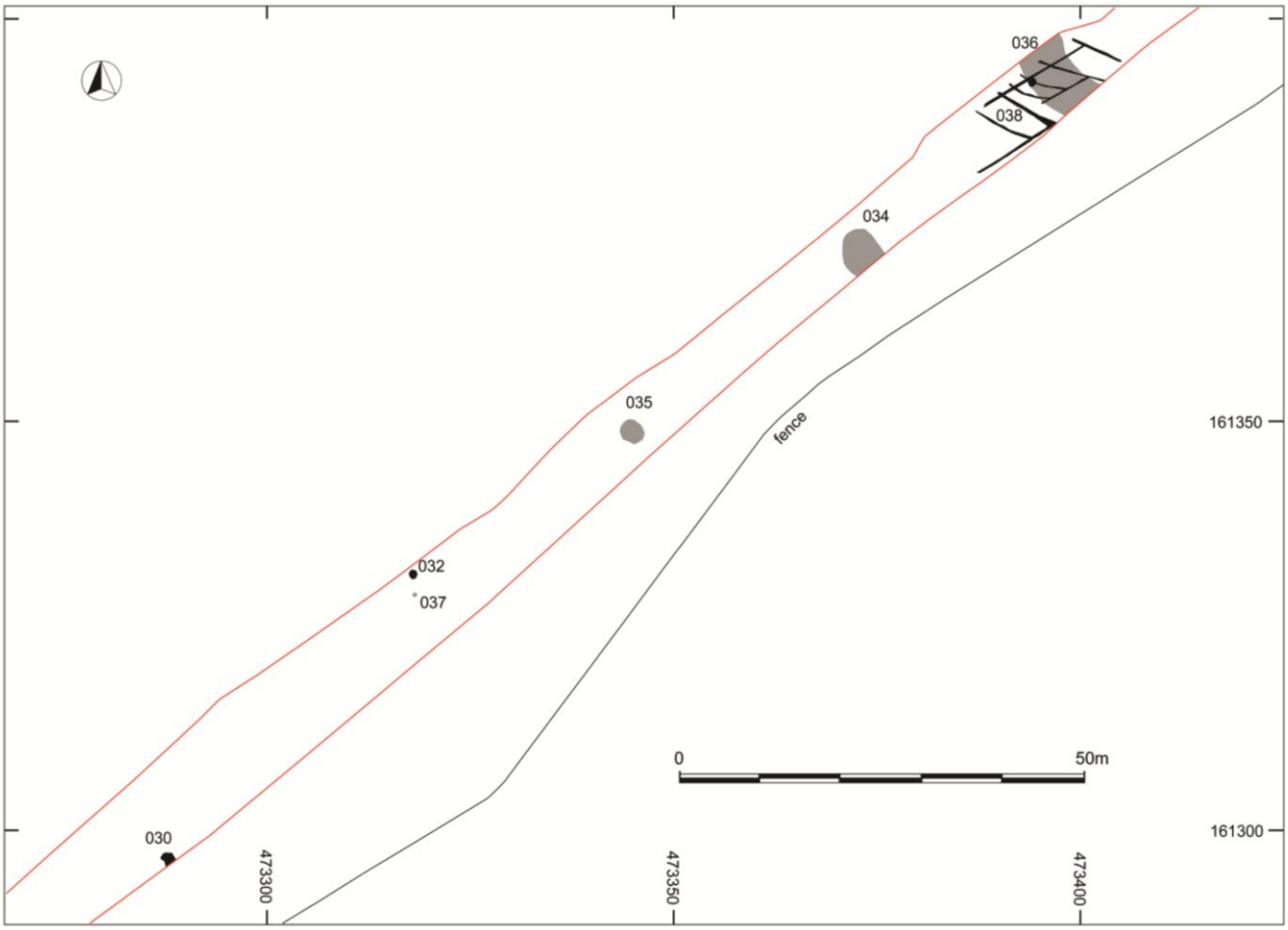


Figure. 16. Area B

Figure. 17. Overview of Area B from mid-way along the easement, facing SW

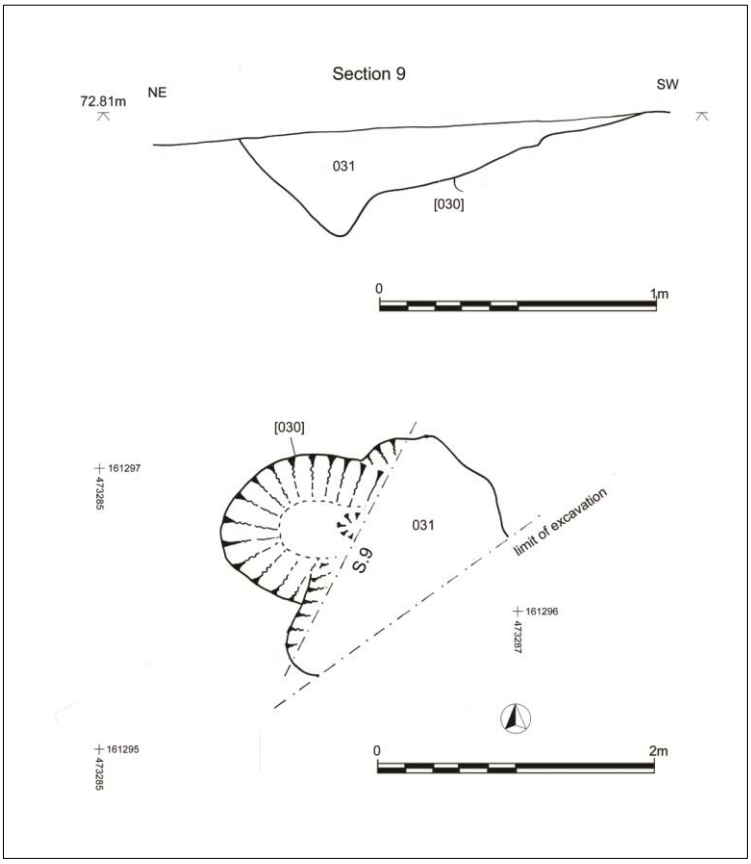
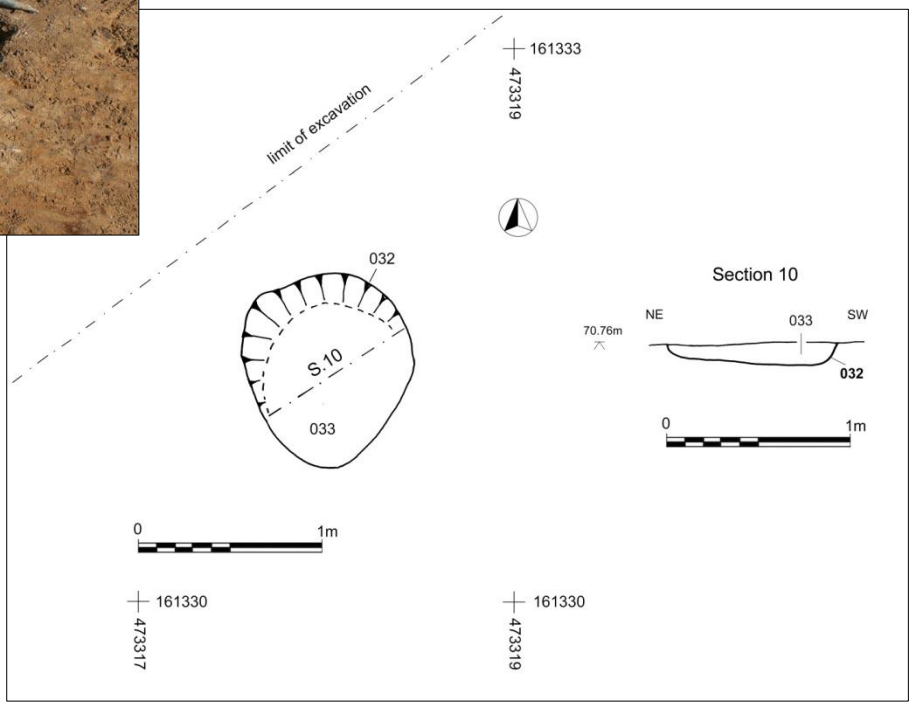


Figure. 18. Feature [030], Section 9

Figure. 19.
Pit [032], Section 10



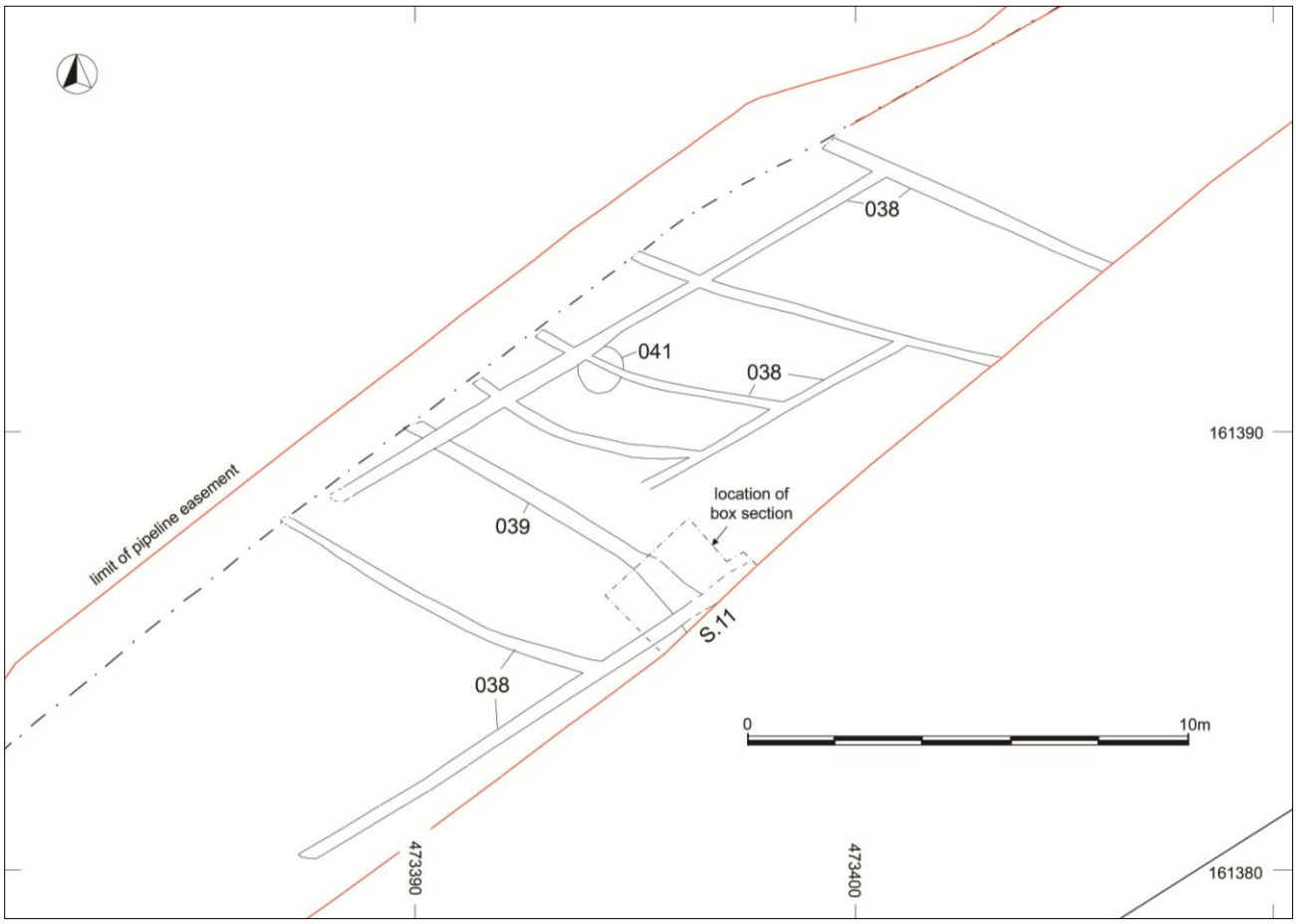


Figure. 20. Area B. Top: Post medieval drainage [038], showing location of Ditch [039] (Section 11) and pit [034]. Bottom left: overview. Bottom right: Pit [041], Section 12

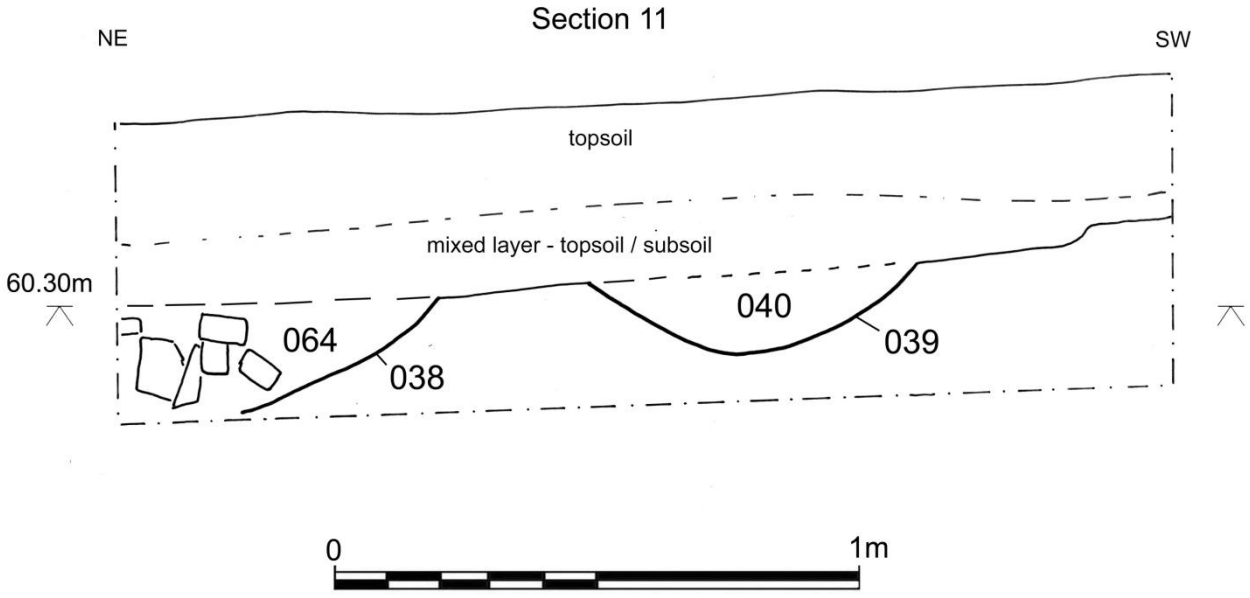


Figure. 21. Section (11) through ditch [039] and post-medieval drainage [038]

Figure. 22. Area B

Overviews of pipeline easement showing impact of subsoil ploughing.
Top: facing SW.
Bottom: facing NE

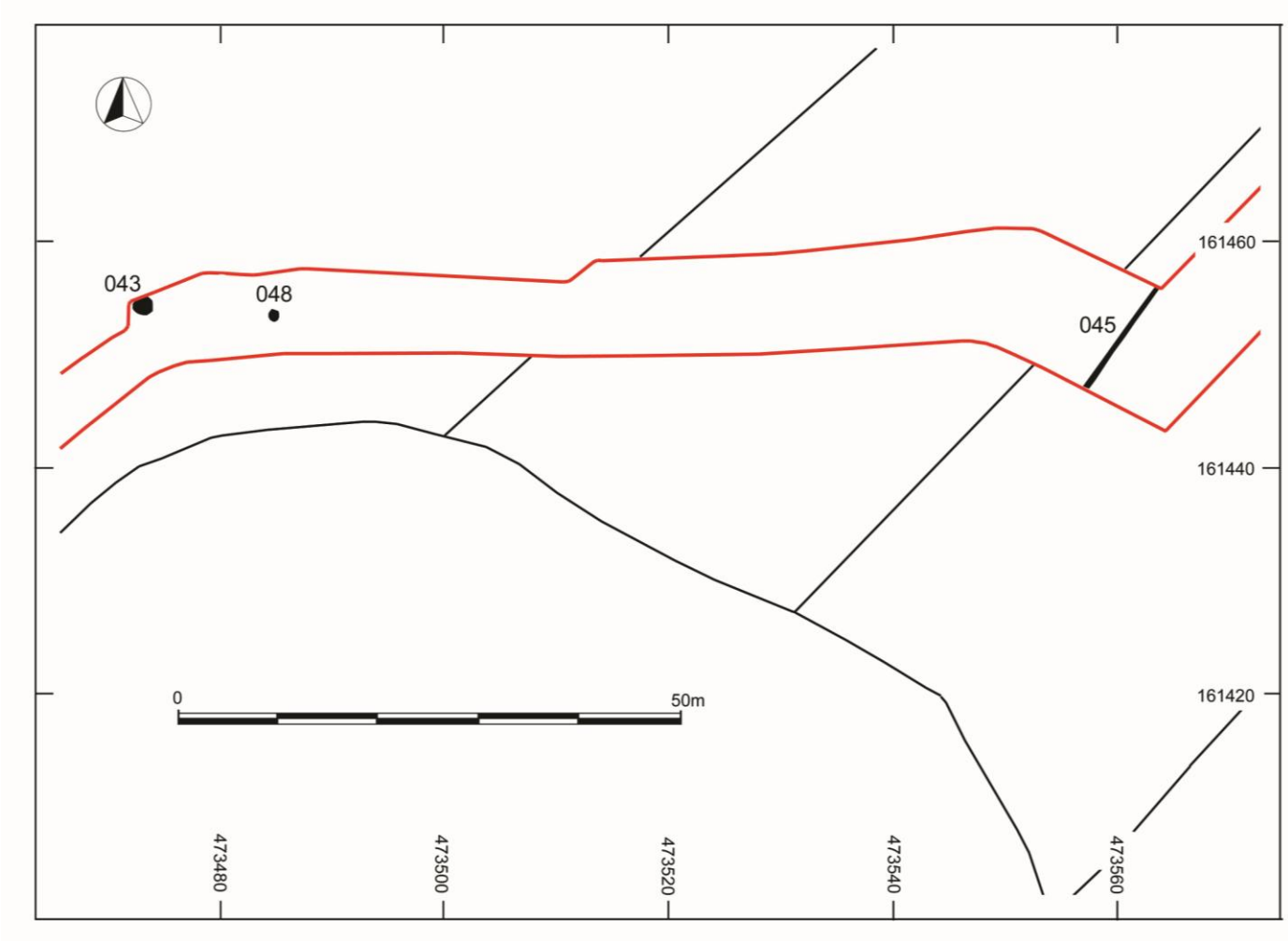


Figure. 23. Area C

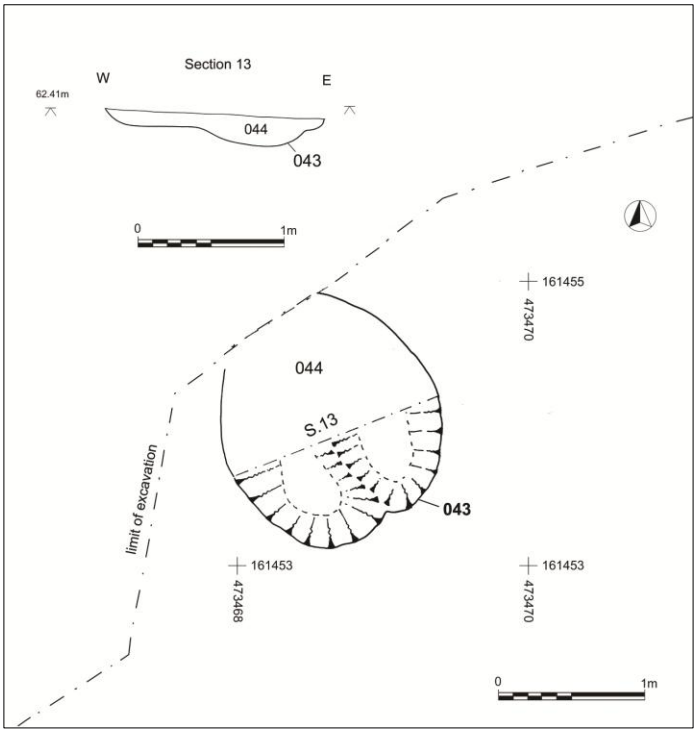


Figure. 24.
Area C. Feature [043], Section 13

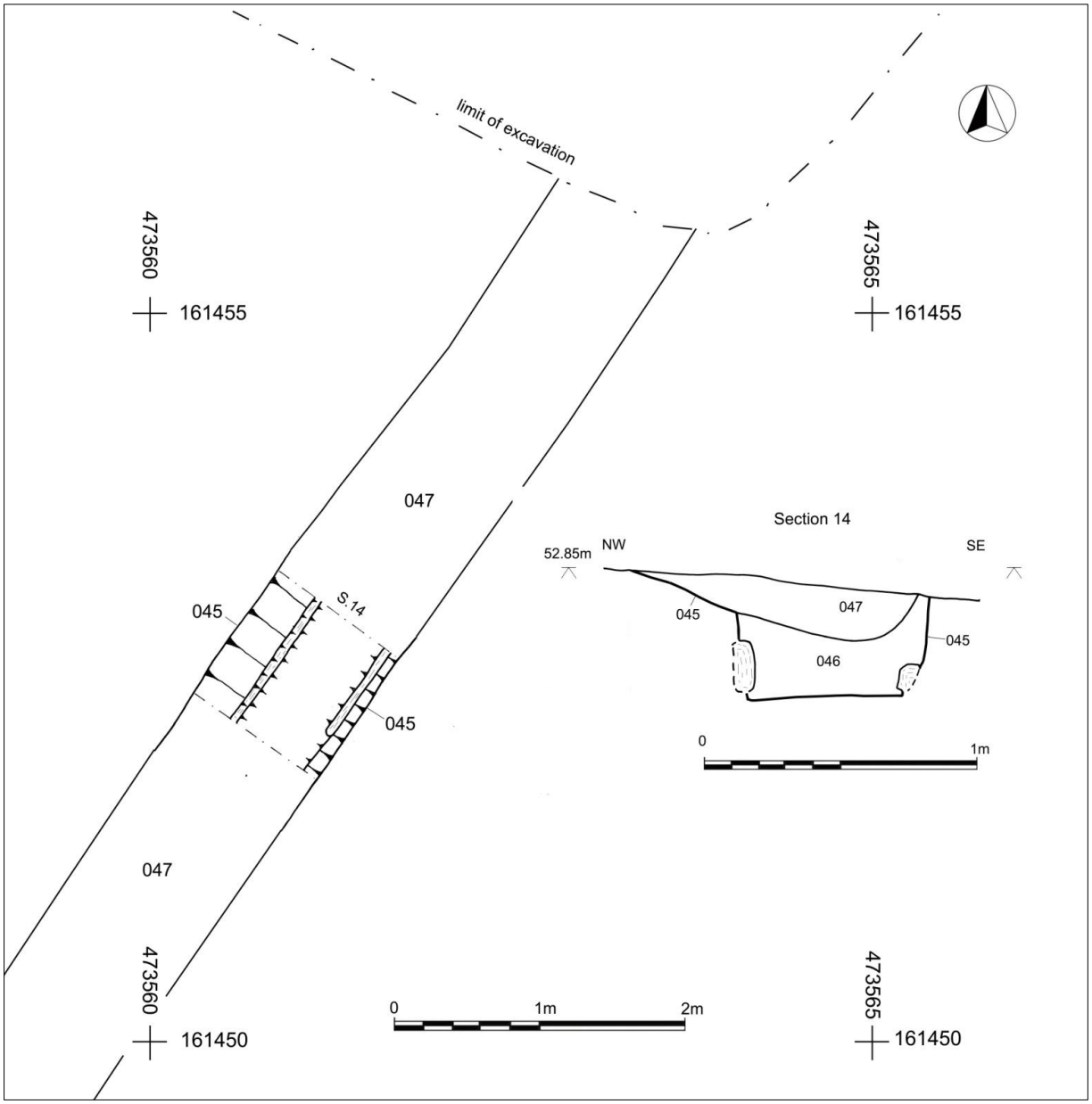
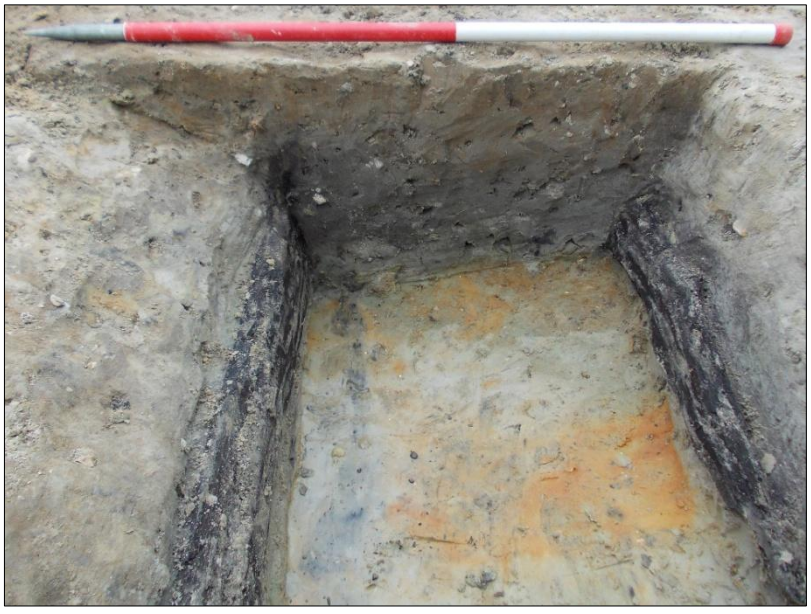


Figure. 25. Area C. Wood-lined water channel [045], Section 14. Right: Section 14, facing NE



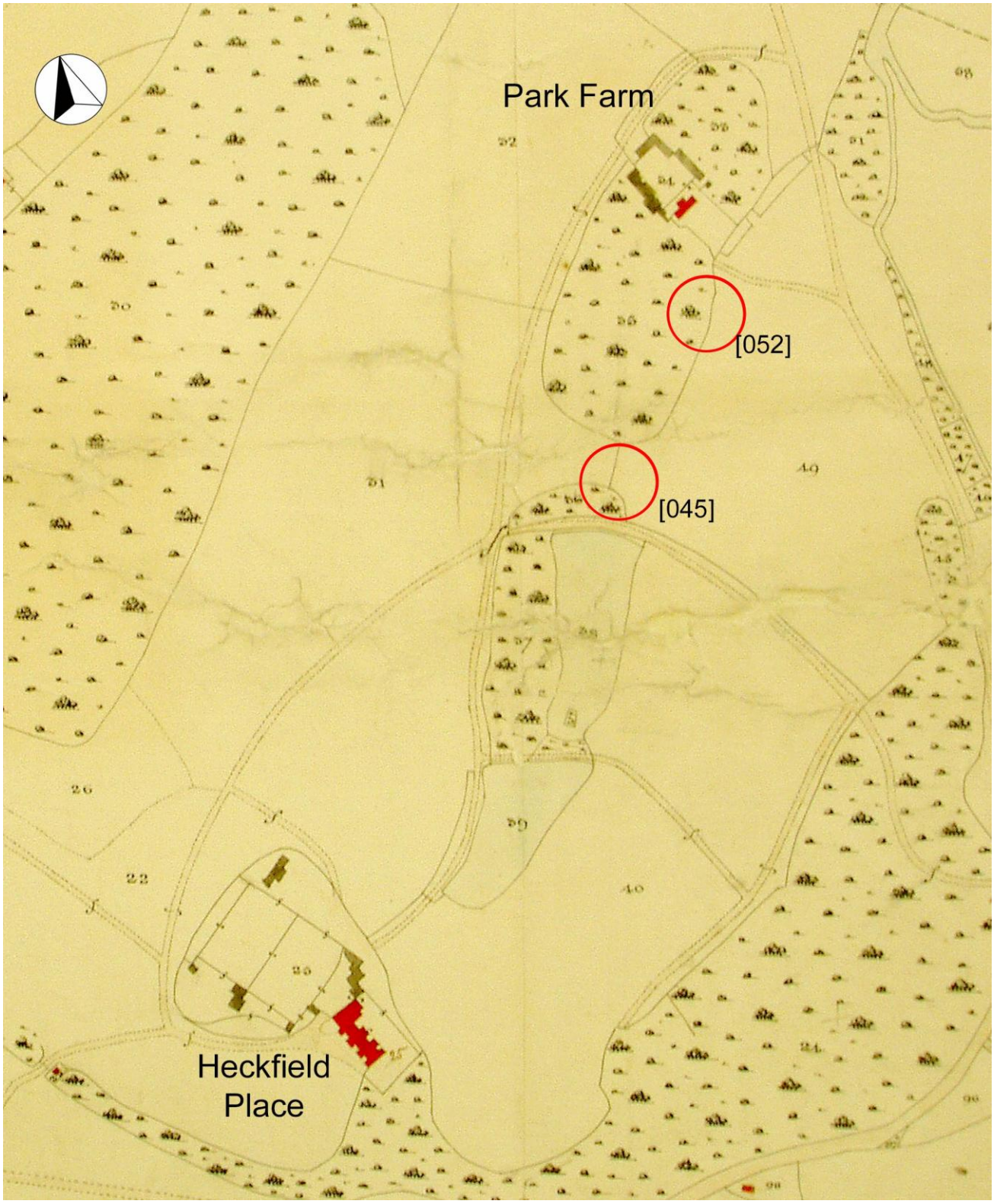


Figure. 26. Extract from Tithe Map 1840 showing position of features [045] (Area B) and [052] (Area D)

(Courtesy of Hampshire Record Office, HRO 2/M65/F7/114/2)

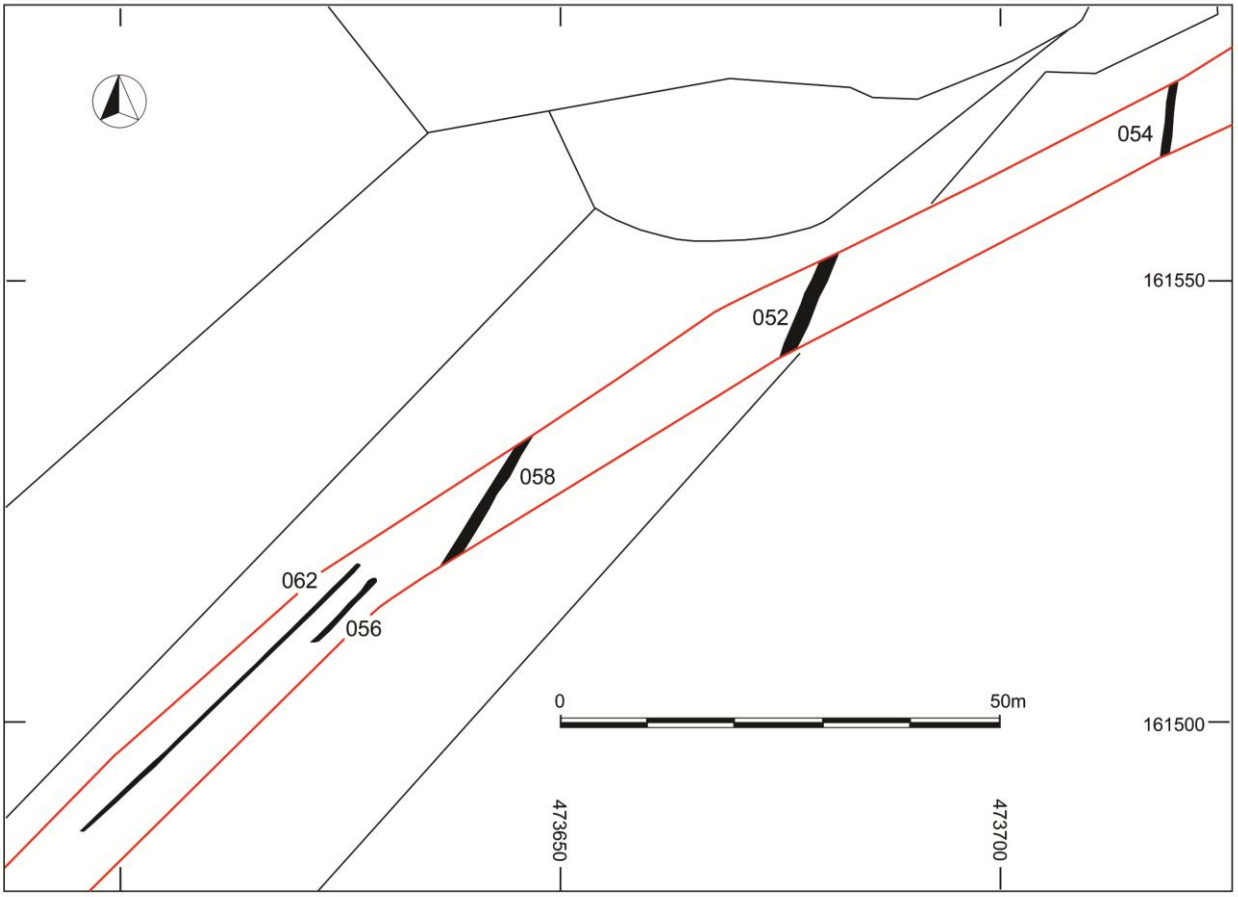


Figure. 27. Area D

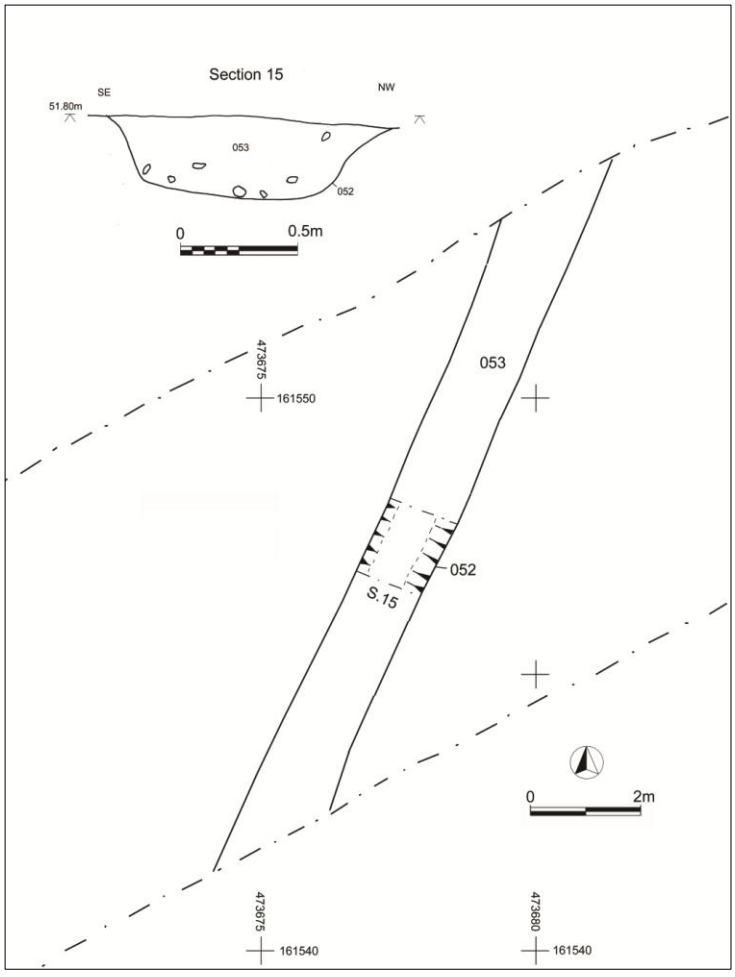


Figure.28. Linear feature [052], Section 15.

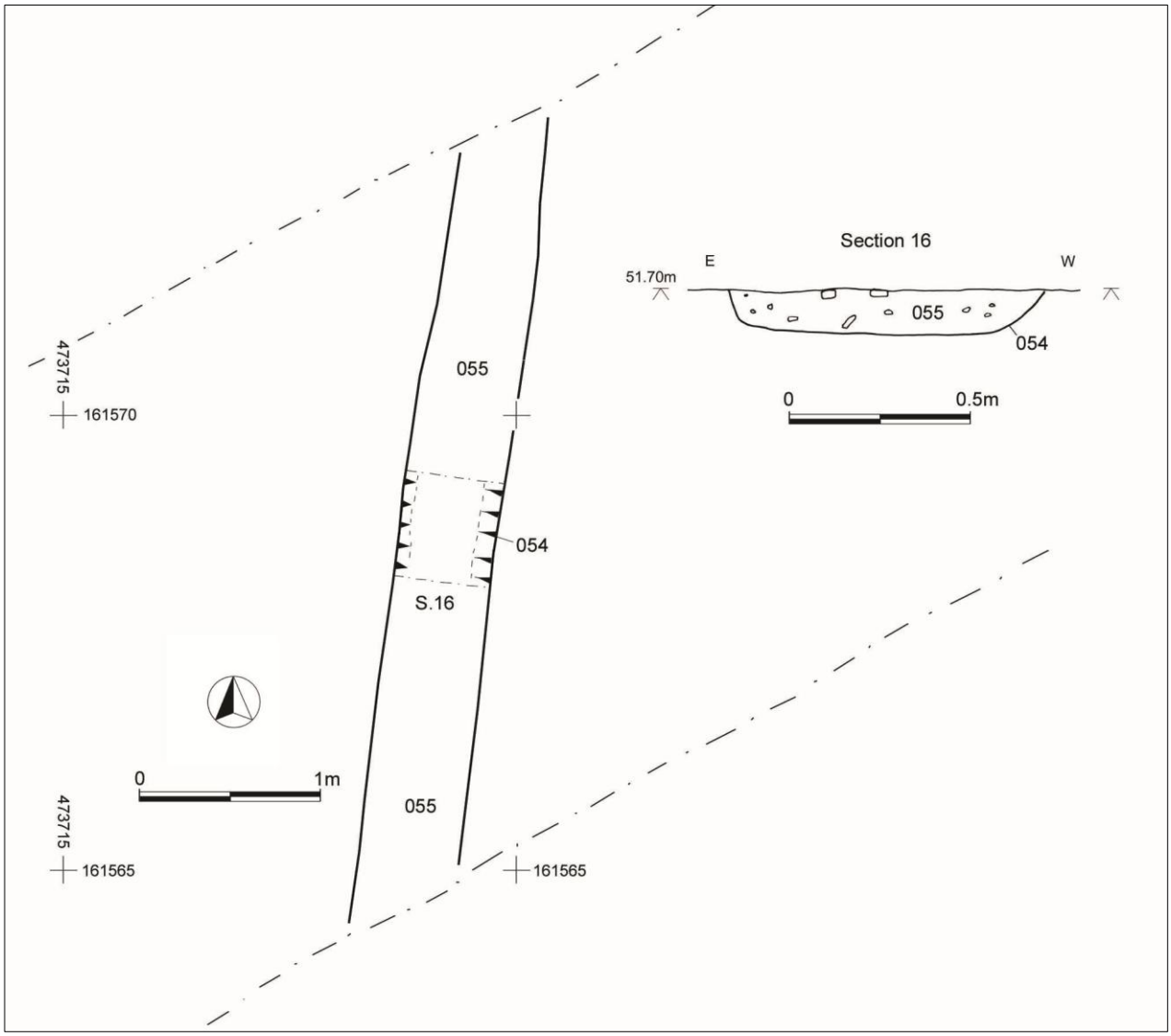


Figure. 29. Linear feature [054], Section 16.
Left: overview facing E

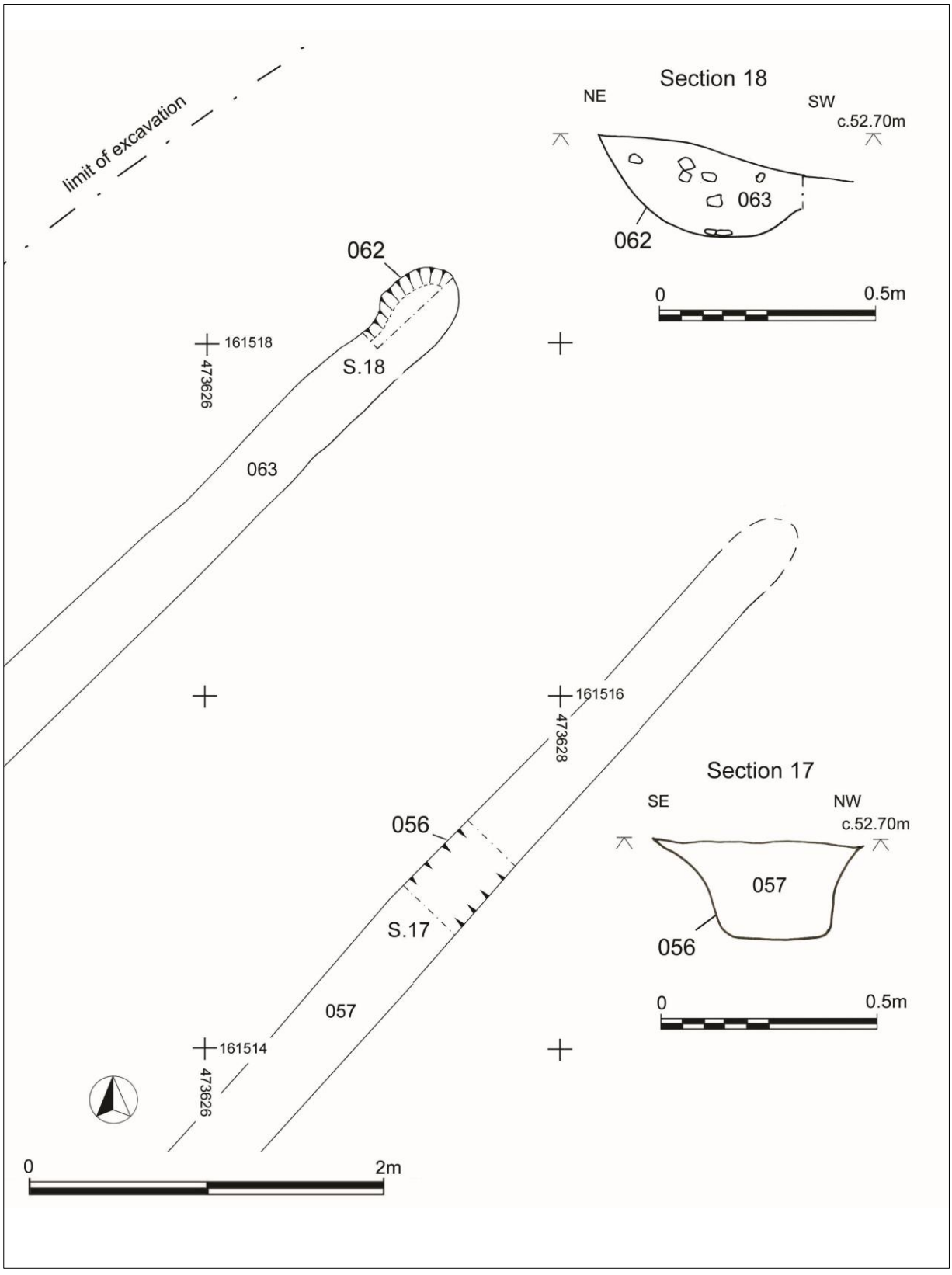
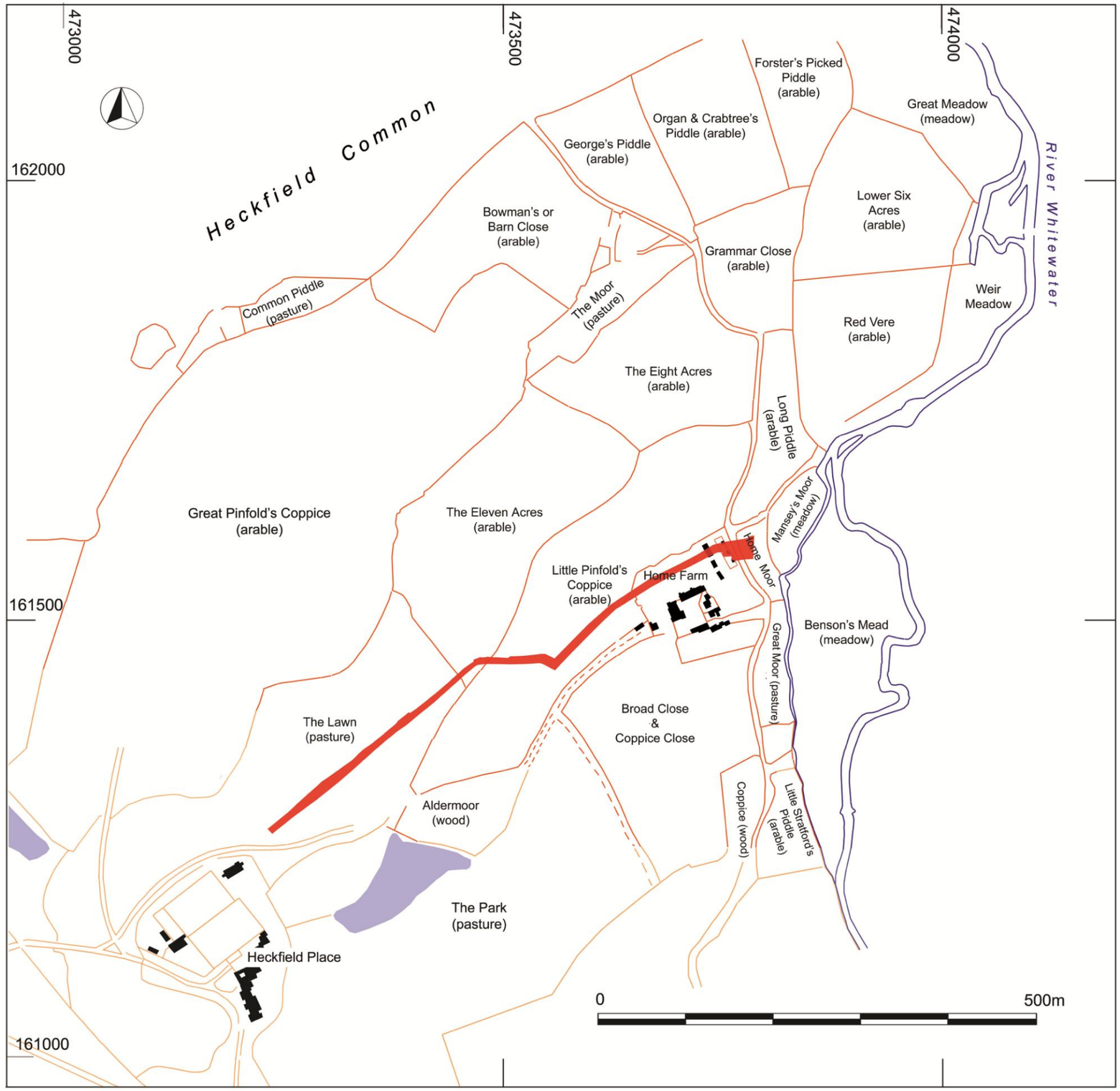


Figure. 30. Plan of linear features [056] and [062]; Sections 17 and 18

Fig. 31.
Location of the pipeline and sewage treatment plant in relation to the landscape of 1819.

(Field boundaries transcribed from the 1819 map by Francis Hawkes; field names from the accompanying schedule (HRO 50M63/B73/2).



APPENDIX 1: List of Contexts

KEY: Relationships: **a.** above; **abt.** abuts; **b.** below; **c.** cuts; **cub.** cut by; **co.** contains; **wi** within
Dimensions: **le.** length; **wid.** width; **de.** depth; **th.** thickness

Context No.	Type	Description and Interpretation	Relationships	Dimensions	Drawing	Suggested Period	Date of investigation
001	Layer	Topsoil. Dark brown, sandy or sandy clayey.	-	c.0.15-0.25m	-	-	12:03:2013
002	layer	Geological stratum. Ranging from mid to dark brown gravel and sand to reddish-brown sandy soil to light orange-brown sandy soil.	-	-	-	-	12:03:2013
003	Cut	Pit, shallow, steep sides 65-75°, relatively flat base, part of an alignment of four regularly-spaced pits. Possible structure or else an alignment of trees.	b.(001)c.(002);co.(004)	dia.c.0.94m; de.0.18-0.24m	S.1	Post-med	12:03:2013
004	fill	Mid-brown sandy silt with gravel	wi.[003]	th. 0.18-0.24m	S.1	Post-med	12:03:2013
005	Cut	Pit, shallow, steep sides 70°, relatively flat base, part of an alignment of four regularly-spaced pits. Possible structure or else an alignment of trees.	b.(001)c.(002);co.(006)	dia.c0.83; de.c.0.24m	S.2	Post-med	12:03:2013
006	fill	Mid-brown sandy silt with gravel	wi.[005]		S.2	Post-med	12:03:2013
007	Cut	Pit, shallow, steep sides65-80°, relatively flat base, part of an alignment of four pits. Possible structure or else an alignment of trees.	b.(001)c.(002);co.(008)	dia.c.1.06m; de.c.0.3m	S.3	Post-med	12:03:2013
008	fill	Mid-brown sandy silt with gravel	wi.[007]	th.c.0.3m	S.3	Post-med	12:03:2013
009	Cut	Pit, shallow, steep sidesc.70°, slightly concave base. Forms an-L-shape with pits [003], [005], [007 and 011] Possible structure or else an alignment of trees.	b.(001)c.(002);co.(010)	dia.c.0.67m; de.c.0.26m	S.4	Post-med	12:03:2013
010	fill	Mid-brown sandy silt with gravel	wi.[009]	th.c.0.26m	S.4	Post-med	12:03:2013
011	Cut	Pit, shallow, steep sides c.65°, relatively flat base, part of an alignment of four regularly-spaced pits. Possible structure or else an alignment of trees.	b.(001)c.(002);co.(012)	dia.c.1.03m; de.c.0.2m	S.5	Post-med	12:03:2013
012	fill	Mid-brown sandy silt with gravel. Finds: CBM fragments, horse shoe fragments and nondescript piece of iron bar.	wi.[011]	th.c.0.2m	S.5	Post-med	12:03:2013
013	Cut	Pit, shallow, steep sides, relatively flat base. Possible structure. Isolated from other pits, although a modern geotechnical pit between these will have removed other pits	b.(001)c.(002);co.(014)	dia.c.0.82m; de.c.0.22m	S.6	Post-med	12:03:2013

Context No.	Type	Description and Interpretation	Relationships	Dimensions	Drawing	Suggested Period	Date of investigation
		if they existed.					
014	fill	Mid-brown sandy silt with gravel	wi.[013]		S.6	Post-med	12:03:2013
015	Layer/ deposit	Gravel. Similar in colour and structure to geological stratum. Accumulation of gravelly soil, presumably ploughwash and colluvial.	b.(001); a.[017], (016), [018], (021)	th. 0.08 – 0.1m	S.7, S.8	Post-med	13:03:2013
016	Fill	Light creamy yellow gritty sandy soil. Single discernible fill of ditch [017]. No finds.	wi.[017], b.(015)	th. up to c.0.38m	S.7, S.8	Post-med	13:03:2013
017	Cut	Ditch, aligned NW-SE. V- profile, sides sloping 20°.Located on the of the purported moated enclosure.	b.(015); co.(016)	wid. 1.5-2m; de.c.0.38	S.7, S.8	Post-med	13:03:2013
018	cut	Ditch. wide-V profile, sides sloping 15 to 20°.	b.(015); co.(019), (020), (021); cub. [017]	de.max.0.65m	S.7, S.8	Post-med	13:03:2013
019	fill	Primary fill of ditch [018]. Grey-brown gritty silt with occasional black flecks, Soil sample taken. No finds.	wi.[018]; b.(020); cub.[017]	wid.c.0.45m; th.0.1 - 0.2m	S.7, S.8	Post-med	13:03:2013
020	Fill	Secondary fill of ditch [018]. Soil sample taken. Pale brown clayey, sandy soil merges with (019. No finds.	wi.[018]; a.(019); b. (021); cub.[017]	th.c.0.09m	S.7, S.8	Post-med	13:03:2013
021	fill	Upper fill. Dark brown sandy stony soil. No finds. Probable accumulation as a result of ploughing.	wi.[018]; a.(020); b. (015); cub.[017]	th.up to 0.4m	S.7, S.8	Post-med	13:03:2013
022-029	unused	-	-	-	-	-	-
030	Cut	Circular feature or terminus, possibly natural. Irregular sides, concave base with extrusions continues beyond the baulk.	b.(001); co.(031)	wid.c.1.7 le. >1.5m; de.0.1m-0.5m	S.9	uncertain	05:06:2013
031	fill	Dark greyish-brown silty sand. Finds: CBM (roof tile).	wi.[030]	th.0.1m-0.5m	S.9	uncertain	05:06:2013
032	Cut	Circular feature, pit. Sides sloping c.60° to flattish base	c.(001); wi.[033]	dia.c.0.94m de.c.0.1m	S.10	C 19th	05:06:2013
033	Fill	Homogeneous, dark brown sandy, pebbly soil. Finds: 2 fragments of CBM	wi.[032]	th.c.0.1m	S.10	C 19th	06:06:2013
034	Deposit	Finds spread. Sub-circular patch of discoloured soil. Finds: CBM, iron peg, pottery. Probably a result of sloughing off by the plough.	b.(001); a.(002)	area c.4.7 x c.4.5m	-	C 19th	07:06:2013
035	Deposit	Linear Finds spread. Dark brown soil, aligned NW-SE. Pottery (18th C), iron fragments and CBM. Possibly released from plough.	b.(001); a. (002)	dia.c3m; th.c.0.04m	-	C 19th	07:06:2013
036	Deposit	Wide band of dark soil, possibly the remains of a ditch and bank spread by the plough, though possibly an accumulation of material as a result of being at the end of the plough-run, i.e. turning area for plough team. Contains a scatter of post med pottery, CBM, non-descript iron objects. Conceals	b.(001) a.[038], [041]	th.c. 0.12m; wid.c.5.75m area.c. 50sq.m.C.	-	C 19th	07:06:2013

Context No.	Type	Description and Interpretation	Relationships	Dimensions	Drawing	Suggested Period	Date of investigation
		remnants of post-med drainage system [038] and undated pit [041].					
037	Deposit	Finds spread. Pottery (2 two sherds 18th -Staffordshire slipware and lead glazed orange ware) & CBM	b.(001)	area.c.1 s.qm; th.c.0.02m	-	C 19th	06:06:2013
038	Structure	Remnants of heavily truncated herring bone under-drainage system. Rubble filled (Consists of 2 parallel drains aligned NE-SW, and a series of lateral drains at angle.	b.(037); co. (064); cu [041]	area. c.165sq.m drains: wid. 0.2m; de. 0.14-0.25m	S.11, S.12	C 19th	07:06:2013
039	Cut	Linear feature NW-SE, crossing easement. Severely truncated by plough. Cut by the mid 19thC underdrainage system [039].	co.(040)	wid.c.0.6m de.c.0.17m	S.11	uncertain	07:06:2013
040	Fill	Dark greyish-brown silty clayey soil	wi.[039]	th.c.0.17m	S.11	uncertain	07:06:2013
041	Cut	Circular feature. Pit. Severely truncated by plough. Pre-dates herringbone drainage system.	b.(036); co.(042)	dia. 1.2m de.c.0.1m	S.12	Early C 19th	07:06:2013
042	Fill	Dark brown to black gritty sandy silty soil. No finds	wi.[041]	th..c.0.1m	S.12		07:06:2013
043	Cut	Pit or a tree bowl. Irregular sides, stepped base. Finds: CBM. Possibly a pit.	b.(001); co.(044)	dia. 1.52m de.up to c.0.2m	Sketch on context sheet	C 19th	10:06:2013
044	Fill	Mid to dark brown sandy soil, fairly loose, with tree roots. Contains CBM fragments	wi.[043]	th.c.0.2m	Sketch on context sheet	C 19th	10:06:2013
045	Cut	Wood-lined channel. Located approx. 30m NE of the perimeter fence (Little Binfield Coppice), Vertical sides. Crosses easement NE-SW. Lower sides lined with remains of wooden planks. Probable sluice/feeder channel for fish ponds.	b.(001); co.(046), (047)	wid.c.1.1m; de.0.43m	S.14	Early C 19th	10:06:2013
046	Fill	Primary fill, very compact dark blue-grey silty sand. Contains CBM fragments.	wi.[045]	th. up to 0.33m	S.14	Early C 19th	10:06:2013
047	Fill	Upper fill of channel. Mid-greyish-brown silty sand, abundant sub-angular stones, (<0.01m), Probably a deliberate backfill. Spreads out beyond the N side of channel side. Find: CBM fragments	wi.[045]	th.c.0.19m; wid. 1.1m	S.14	Early C 19th	10:06:2013
048	Cut	Probably a tree bowl. Concave profile	b.(001); co.(049)	dia. 2.2m de.0.3m	-	uncertain	11:06:2013
049	Fill	Mid-greyish brown silty sand, inclusions of clay and gravel. Finds: CBM fragments	wi.[048]	th.0.3m	-	uncertain	11:06:2013
050-051	unused	-	-	-	-	-	-

Context No.	Type	Description and Interpretation	Relationships	Dimensions	Drawing	Suggested Period	Date of investigation
052	Cut	Ditch. Crosses easement, aligned NE-SW Steep sides.	b.(001); co.(053)	wid.1.2m; de.0.34m	S.15	C 19th	11:06:2013
053	Fill	Mottled mid-brown and mid-yellow clay. Finds: one piece of post-medieval roof tile	wi.[052]	th.1.34m	S.15	C 19th	11:06:2013
054	Cut	Ditch. Spans easement, aligned NNE-SSW Steep sides, flat base. It contained a single fill (055) of	b.(001); co.(055)	wid.0.89m de.0.11m	S.16	C 19th	12:06:2013
055	Fill	Mid-grey silty sand and gravel. No artefacts.	wi.[054]	th.0.11m	S16	C 19th	12:06:2013
056	Cut	Ditch. One of two parallel narrow linear features (i.e. with [062]) in the valley bottom. Steep convex sides, flat base, possible drainage channel.	b.(001); co.(057)	wid.0.42m de. 0.2m	S.17	C 19th	12:06:2013
057	Fill	Mid-yellowish brown sandy silty clay	wi.[056]	th.0.21m	S17	C 19th	12:06:2013
058-062	unused	-	-	-	-	-	-
062	Cut	Ditch. One of two parallel narrow linear features (i.e. with [056]) in the valley bottom. Vertical sides, flat base, possible drainage channel..	b.(001); co.(063)	wid.0.48m de.0.25m	S.18	C 19th	13:06:2013
063	Fill	Dark greyish brown loam with gravel.	wi.[062]	th.0.25	S.18	C 19th	13:06:2013
064	Fill	Rubble fill of under drainage system (red un-mortared brick fragments, some with vitrified/glazed faces).	wi.[038]	th.0.14-0.25m	S.11, S.12	Early C 19th	07:06:2013