

A Medieval Causeway
at 1A London End, Irchester,
Northamptonshire, NN29 7PS
(NGR 472746, 250024)

Archaeological Excavation Report

Planning App. Ref. WP/20/00057/FUL

HER No. ENN110321

Souterrain Project SOU21-751



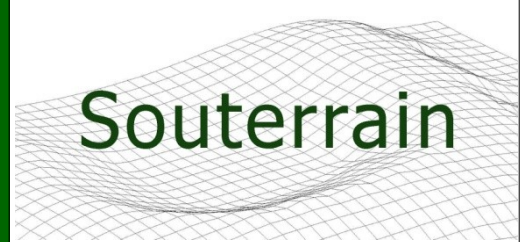
February 2022

Souterrain Archaeological Services Ltd

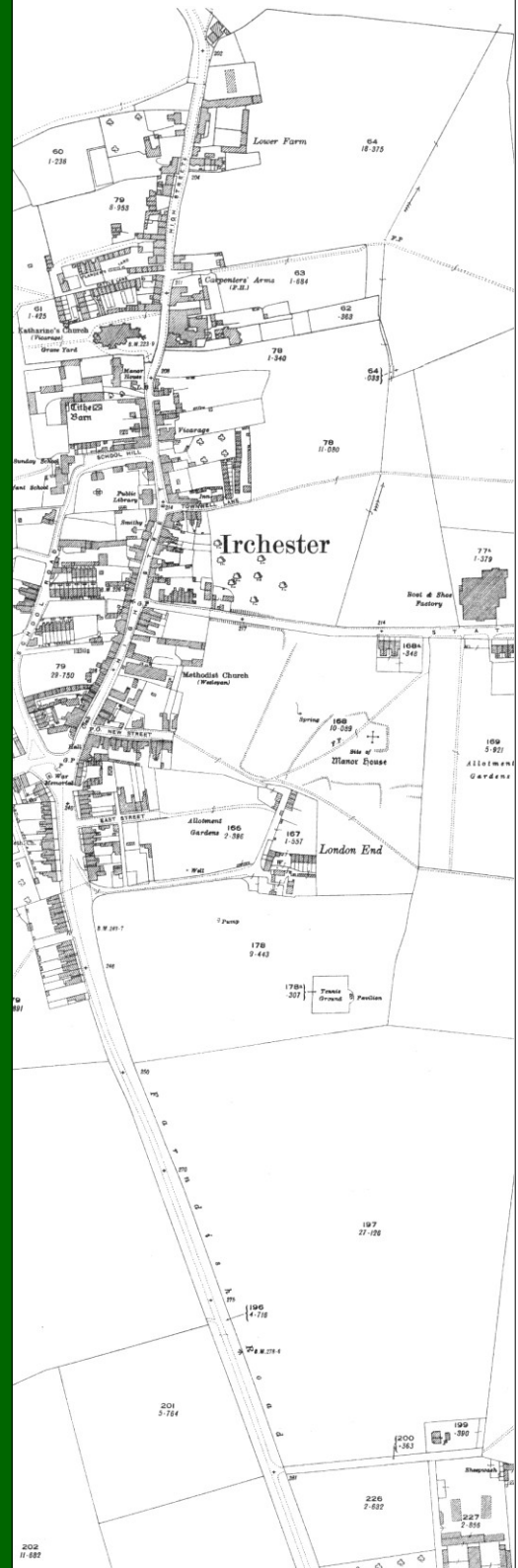
for

A J Bailey

(St Neots, Cambridgeshire)



Archaeological Services Ltd



**A MEDIEVAL CAUSEWAY
AT 1A LONDON END, IRCHESTER,
NORTHAMPTONSHIRE, NN29 7PS
(NGR 492690, 265580)**

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Produced for:

A J Bailey

(St Neots, Cambridgeshire)

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Preface

All statements and opinions in this document are offered in good faith. Souterrain Archaeological Services Ltd (Souterrain) cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

Acknowledgements

The archaeological excavation was commissioned by A J Bailey. The author would like to extend his gratitude to Andrew Bailey and colleague Steve for facilitating the work and for their continued interest and assistance throughout.

Jackie Wells MA (Albion Archaeology) is thanked for the verification of ware-types in the 2021 medieval pottery assemblage and for the identification of the Romano-British and Glapthorn sherds.

Northampton Archives is thanked for permitting the reproduction of the 1845 tithe map of Irchester.

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Summary

In July and August 2021 an archaeological excavation was carried out by Souterrain in the former rear garden of an early 17th century house at 1A London End, Irchester, Northamptonshire, prior to the construction of a new house.

The site lies about 100 m southwest of the former location of a 13th century manor-house and farm. The manorial complex was reportedly excavated prior construction of a housing estate in 1967, although no written, drawn or photographic record is known to have survived. The remains are said to have extended over more than 2 hectares and included the foundations of several buildings.

Given the proximity of the present development area it seemed possible that the garden of the 17th century house would occupy a part of the manorial site. In 2020, two small archaeological trial pits were excavated in the garden. One of these, dug in the proposed footprint of a garage, encountered a possible 13th century midden deposit that was perhaps associated with the manor. The other, dug close to the proposed house footprint, exposed part of a laid surface of limestone rubble, on which a sherd of late medieval pottery was found. The archaeology was buried under layers of post-medieval horticultural soil.

Subsequently, in 2021, an archaeological excavation was carried out in the proposed new building footprint prior to construction groundwork: the subject of this report. The excavation revealed the previously encountered stone surface to be part of a well-built medieval causeway which traversed an ancient tract of marshy ground adjacent to the former course of a brook. The causeway was exposed for a distance of 10 m.

Three distinct phases of causeway construction were identified. It appears to have originated in the late 13th century as a raised track-way of cobbles set in clay, at which time it was flanked by a ditch. A more robust causeway of pitched limestone slabs and kerbing was then built over it in the 13th / 14th century. At some juncture in the same period the causeway seems to have suffered severe erosion and subsequently underwent significant repair and widening. It appears to have continued in use into the 14th / 15th century during which time there was a natural accumulation of soil on either side. When a stone-lined drain was built through it in the 16th century it may have been no more than an earthwork.

The results of the excavation are compared with those obtained from the 2020 trial pits, particularly with respect to palaeo-environmental data and pottery assemblages.

The report explores the historic landscape context of the causeway - its spatial relationship with the manorial complex and its possible route - by means of historic maps and surveys, old aerial photographs and archaeological data. It is hypothesised that the causeway's construction may well have been a direct response to severe climatic anomalies of the period. Finally, an appraisal of research objectives is provided together with a consideration of the potential for any further study / analysis.

1. INTRODUCTION

- 1.1 This report presents an illustrated record of an archaeological excavation which took place in 2021 prior to the construction of a house at the rear of No. 1A London End, Irchester, Northamptonshire. It has been prepared by Souterrain Archaeological Services Ltd (Souterrain) on behalf of **A J Bailey**, of St Neots, Cambridgeshire (the Developer).
- 1.2 At the time of report preparation, the major part of the archaeological fieldwork had been completed, namely the investigation of the new house footprint. Minor works, such as the excavation of service trenches, are to be monitored in due course, the results of which are to be covered by an addendum report. A proposed new garage is temporarily in abeyance to allow for re-design with shallow foundations, which should avoid significant archaeological deposits.
- 1.3 The report integrates the results of a preliminary archaeological evaluation of the site in 2020.
- 1.4 The report and archive are to be available as a public-accessible record.

2. PLANNING BACKGROUND & PURPOSE OF THE INVESTIGATION

- 2.1 In May 2020 an evaluation of the proposed development site was initiated by Liz Mordue, Archaeological Advisor of North Northamptonshire Council, in advance of the determination of a planning application. This was due to the archaeological and historic significance of the locality (*post*, 4). The evaluation revealed the existence of significant buried archaeological remains of medieval date (Souterrain, 2020).
- 2.2 Planning Permission was subsequently granted by the Borough of Wellingborough Council (now North Northamptonshire Council) on the 5th August 2020, for a '*new dwelling including access, parking and amenity space & demolition of existing garage and replacement garage within the curtilage of a listed building*' (WP/20/00057/FUL). Condition 10 of the consent was the requirement for an appropriate programme of archaeological work, which would ensure that buried remains of archaeological significance within the Proposed Development Area (hereafter the 'PDA') were adequately investigated and recorded. This is in accordance with the National Planning Policy Framework (MHCLG, 2019).
- 2.3 A site-specific *Brief* for an archaeological excavation was prepared by the Archaeological Advisor (Mordue, 2021) and issued to the Developer. In turn, an appropriate Written Scheme of Investigation (WSI) was prepared by Souterrain on the behalf of the Developer (Souterrain, 2021) and endorsed by the local planning authority.

3. LOCATION & ASPECT OF THE PROPOSED DEVELOPMENT SITE

- 3.1 The village of Irchester lies in the Borough of Wellingborough, about 2.5 km southeast of Wellingborough town, and 1.3 km to the southwest of Rushden town. The PDA is located at London End, beyond the south-eastern periphery of the historic core of the village (Fig. 1).
- 3.2 The development plot occupies the western part of the Application Site (Fig. 2). It is approximately 650 sq. m. and is centred at NGR 492690, 265580. At the time of the archaeological evaluation in 2020 it was a part of the rear garden of No. 1A London End, an early 17th century cottage which is now a Grade II Listed building¹. The cottage stands on the roadside

1 Historic England List Entry 1190882

at the end of a cul-de-sac, its frontage facing eastwards. The building is single storey with attic. It is constructed of local limestone (now rendered) with a brick stack at one end. Originally thatched, the roof is now covered with corrugated steel sheets. The property is surrounded by houses and gardens, mostly which date from the late 1960s.

- 3.3 The development plot was largely lawn, though with several mature trees and a large custom-built garage of brick and concrete in its southwest corner. The garage was accessed by a driveway which sloped down from the roadside. Topographically, the plot lies within a small localised linear depression which is broadly aligned north-northeast/ south-southwest. The existing ground height is around 67.15 m OD. This is about 1.5 m lower than the roadway to the east and about 1 m lower than the base of the 17th century house, where the ground falls away sharply from a patio area.
- 3.4 The underlying geology is mapped by the British Geological Survey (BGS, 2021) as the Wellingborough Limestone Member of the Rutland Formation, described as '*a massive argillaceous, sandy, shelly and shell-detrital limestone associated with rubbly oyster-rich limestone and marl and mudstones, passing northwards into sandstone*'. It is typically 3 m to 4 m in thickness. The upper boundary of the limestone or sandstone is defined by '*rootleted siltstone or mudstone*'.

4. ARCHAEOLOGICAL BACKGROUND & POTENTIAL

- 4.1 Although the archaeology discovered at the PDA falls wholly within a medieval context, it is considered pertinent to present a wider sense of the known archaeology in the near environs of the site, particularly as this influenced the research objectives of the Written Schemes of Investigation. A broad history of the late post-medieval to modern landscape in the environs of the PDA is also given here, in order to gain an insight to possible site formation processes and factors which have either contributed to, or affected, the survival of archaeology at the PDA.
- 4.2 The archaeological data, précised in this section, is primarily derived from a search of the Northamptonshire Historic Environment Record (HER), from a c. 600 m radius of the PDA. The numbers throughout in square brackets denote the HER UID, the locations of which are shown on Figures 3 and 4. Other sources comprise: archaeological investigation reports; *A History of the County of Northampton* (Salzman, 1937); the RCHME *Inventory of Historical Monuments in Northamptonshire* (RCHME 1982); and historic maps held by Northamptonshire Archives.

Romano-British Period

- 4.3 The PDA lies about 1.3 km to the southeast of a small Roman town² located at the confluence of the rivers Nene and Ise (Fig. 1) which was occupied from the 1st to 5th century AD. The Roman name of the settlement is unknown. Such settlements often developed at the junction of major route-ways or river crossings, where they served an agricultural hinterland. As might be expected, the archaeology of the period is reasonably well-attested in the Study Area (Fig. 3). About 800 m to the west of the PDA, Wollaston Road is believed to follow the same course as the main Roman approach road to the settlement from the south (Margary, 1973). The closest reported discoveries to the PDA have been sherds of *sigillata* (fine tableware imported from Gaul) and *tessera* (pieces used in mosaic), which were found in 1967 prior to housing development in Wantage Road, c. 85 m ENE of the PDA [3149]. Chance finds include a gold coin found somewhere near the village centre in 1904 [3135/0/0] and a disc brooch from Sharwood Terrace on the east side of High Street in 1981 [1640/0/0].

² Scheduled Monument 1003892, known today as the Roman town of Irchester

- 4.4 In 1965, tangible evidence of occupation - ditches and pits with Romano-British pottery - was revealed in a pipe trench on the south-eastern periphery of Irchester [3111/0/1]; c. 400 m SE of the PDA. Less certain evidence was found during groundwork at Townwell Lane in 2017 -shallow ditches [1540/1] and a single sherd of pottery, possibly Roman. Aerial photographs show the presence of ditches and enclosures on the south-western outskirts of the village, some of which may have been part of the Romano-British landscape [3125/0/14], while to the northwest a geophysical survey in 2011 may have detected either a settlement or a funerary site [3126].

Medieval Period

- 4.5 Prior to the Norman Conquest there were two Anglo-Saxon estates at Irchester, the largest held by countess Gytha of Hereford³. By 1086 both estates had become Norman lordships, or manors. William Peverel had taken over the land of the countess, which was by then inhabited by the households of three freemen and a Frenchman. The assets comprised two plough-lands worked by three teams of oxen, ten acres of meadow and a mill. The smaller manor was held by Count Robert of Mortain - one household and three and a half acres of meadow. Although, nothing is known of the layout or extent of either estate, their descent has been traced as far as possible from manuscripts by *Victoria History of the Counties* (VCH). Throughout the medieval period the larger estate was held of the manor of Higham Ferrers by a tenant lord. Its manor house and farm is thought to have been on the site now occupied by Manor Farm (Fig. 4, [3124/6]), which is located at the north end of High Street adjacent to the parish church of St Katherine [3124/5/1]. The oldest surviving building at Manor Farm is a 16th century tithe barn. The descent of the smaller estate was traced to the mid 14th century, after which it becomes uncertain.
- 4.6 The parish church is Irchester's oldest standing structure, its earliest elements stylistically dated to the 12th century, although a much earlier foundation is not doubted. Together, Manor Farm and the church are thought to represent the northernmost extent of the medieval settlement, but tangible archaeological evidence is so far fairly sparse. Before the Victorian period the village was mainly situated along High Street, where the majority of its oldest buildings are today. These largely date from the 17th or 18th century, though a two storey 18th century house known as Manor House is understood to have originated as a 14th century hall⁴. In 1970, a pit or ditch containing 11th to 13th century pottery was found at No. 3 James Street (Fig. 4, [3124/0/19], c. 190 S of the PDA), and in 2013 a possible 12th century tenement boundary gully was found at No. 66 High Street ([3124/0/21], c. 385 NW of the PDA).
- 4.7 Significantly, in 1967, a second manorial focus was confirmed during a major housing development on a large tract of pastureland known as Manor Field, approximately 250 m east of High Street and immediately northeast of the PDA. This is now known as the Wantage Road estate. The field contained various earthworks, including the postulated site of a manor house, the broad extent of which is depicted on the revised OS 25" map of 1925 (Fig. 5). Machine-removal of the earthworks during ground preparation exposed the remains of a 13th century manor house complex. The site is reported to have covered some c. 2.2 hectares and included the foundations of various buildings and an extensive limestone yard.
- 4.8 There is a presumption in the HER entry that the site was archaeologically excavated⁵ although it is uncertain how much investigation and recording actually took place: "*Excavation took place in 1967 during development of the site for housing. Prior to development there had been extensive earthworks and excavation found evidence of Saxon remains overlaid by medieval manorial remains*". However, other than brief 'annual round-up' summaries of archaeological discoveries in the county (e.g. Brown, 1967; Wilson & Hurst 1969, 273) and a collection of pottery sherds

³ see Powell-Smith, 2021, Open Domesday, Irchester, <https://opendomesday.org/place/SP9265/irchester/>

⁴ SP 92574 65885 Grade II List entry 1371728

⁵ c.f. Historic Environment Record data entry

there appears to be no surviving field record, and nothing that might indicate the extent and layout of features. It seems as though only a salvage record was made: *“In June 1967, extensive levelling of Manor Field for building work uncovered a wide range of occupation material. The site was watched, by kind permission of Messrs Pandered Son & Swindall. The following sherds were recorded:- samian fragments, one decorated with impressed small crosses, jar rims in St Neots ware, carinated bowl in shelly reduced fabric, glazed Stamford ware, wide range of 13th century shell wares, and Lyveden type wares. One orange clay tessera and several pieces of bronze were also recovered (R Harper, A Johnson)”* (Brown, 1967). A subsequent summary in *Medieval Archaeology* reads: *“Saxon remains on the site of the manor house were covered by later manorial buildings and an extensive limestone yard. Several other isolated rectangular buildings were found. The kitchen area had a well-preserved oven floor, which had been repaired several times. From a preliminary analysis of the pottery, the manor appears to have been built in the 13th century and to have lasted until the 15th century”* (Wilson & Hurst, 1969, 273). The point shown on Figure 4 for HER record [3124/0/5] is assumed to refer to ‘uncertain Saxon remains’ across the greater part of the area [3124/1].

- 4.9 Mid-20th century air photos show that earthworks also existed on the north side of Station Road, about 180 m north of the PDA (Fig. 4, [3124/0/1 & 3124/0/18]). The earthworks generally tally with a zone of ‘old inclosures’ known from a map of 1845 (NA T183) and are presumed to indicate a further wider extent of medieval settlement, particularly as a handful of pottery sherds was found during field-walking in 1977 (3124/0/0). A large part of this area was investigated in 2014, when twenty-five trial trenches were excavated over three fields (see Morris 2015, 53-4). Medieval remains were revealed in five of the trenches near to the village. They consisted mainly of early 14th century pits, ditches and post-holes, although one trench exposed limestone foundations of a timber-framed building which was thought to be associated with iron-production (Fig. 4, [3124/0/24] & [3124/0/25]). Some of the earthworks previously interpreted as building platforms proved to be spoil heaps alongside medieval iron ore quarries [3124/0/16]. A background scatter of 10th to 12th century pottery indicated a presence of some kind in the late Anglo-Saxon and early Norman periods.

Evaluation of the PDA in 2020

- 4.10 Given the proximity of the aforementioned 13th century manor-house and farm complex discovered in 1967 (*ante*, 4.7-4.8) it was assumed that the early 17th century house and its rear garden (i.e. the PDA) could occupy a part of the manorial site (Fig. 4, [3124/1]). In May 2020, Souterrain excavated two archaeological trial pits (each 2 m x 2 m) in the rear garden, in order to assess the significance of any buried archaeological remains that might be affected by a proposed development (Souterrain 2020).
- 4.11 The trial pits were positioned about 14 m apart (Fig. 6, TP 1& TP2) and with respect to a number of constraints (i.e. suspected routes of live services, extant buildings and mature trees). One of the pits (TP1) revealed a medieval deposit of substantial thickness, which was interpreted as a midden, possibly associated with the manor. The deposit was located 0.3 m - 0.36 m below the existing ground surface and sealed by 17th to 19th century horticultural/garden soils. Broadly dated by pottery to the 13th century, it yielded an extensive range of carbonised plant macrofossils, particularly cereal grain. The other trial pit (TP2) located a layer of limestone fragments in a clay matrix which had the appearance of a building foundation. A single sherd of late medieval pottery was found above the stones. The discoveries were resonant of those made nearby in 1967.

Later land-use at the Proposed Development Area

- 4.12 A map produced in 1845 shows that the PDA was once part of an ‘old inclosure’ (i.e. a pre-parliamentary enclosure), which was presumably long set to pasture, though the date of its creation is not known. By 1899 the enclosed field was converted to allotment gardens, which

included a large portion of the PDA. A track-way ran through the allotments between the east end of East Street and London End. This landscape was unchanged in 1925 (Fig. 5). The track became defunct in the late 1960s when houses were built over the allotment site. At the same time, the garden boundary of No 1A London End was greatly extended to the west and to the south, where it enveloped the east end of the track: about 36 m of its length. A brick and concrete garage-workshop was then built in the southwest corner of the new garden, above part of the former track. The remainder of the track became the foundation for a driveway.

- 4.13 A series of sheds/outbuildings and pig pens are recalled to have stood near to the western boundary of the plot in the mid 20th century⁶. At some juncture in the late 1960s or 1970s the garden was cut through for the installation of a substantial storm drain, the flow of which is south to north. This is understood to have been a replacement of an existing culverted brook⁷. The hypothesised line of the storm drain is shown on Figure 6⁸. Subsequent to its installation, the entire garden was raised and landscaped to form a lawn tennis court⁹.

5. RESEARCH PRIORITIES & OBJECTIVES

- 5.1 The primary focus of the archaeological work has been to identify, record and recover data that may contribute to key regional archaeological research themes and priorities, as expounded by Knight, Vyner & Allan (2012) in the *Updated Research Agenda and Strategy for the Historic Environment of the East Midlands* (URS).
- 5.2 In this respect, the proximity of the PDA to the medieval manorial complex discovered in 1967 has been a foremost consideration, as it is presently poorly understood how manorial centres and their estates developed from the early medieval period. It was thus anticipated that excavation might shed light on elements of the manorial chronology or even its structural development (*c.f.* URA Research Objective 7F).
- 5.3 Given the relative proximity of the small Romano-British town south of the confluence of the Nene and the Ise, there was also the possibility that the PDA would yield archaeological information pertaining to the town's relationship with its agrarian hinterland (*c.f.* URA Research Objectives 5H, 5G).
- 5.4 As a matter of course, other essential county objectives were to: a) examine the significance of archaeological remains; b) establish the date, nature and extent of past activity or occupation at the proposed development site; c) recover palaeo-environmental remains to determine local environmental conditions; and d) recover artefacts that may assist in the development of regional type series.
- 5.5 Consideration would be given to the effectiveness of the prior field evaluation in the light of the results of the archaeological investigation.

6. EXCAVATION RESULTS

Note: In the following account of the investigation photographs are prefixed by 'P'. These are combined with the figures at the rear of the report.

⁶ Information from a former occupant

⁷ Event recalled by a senior resident

⁸ After Sidey Design drawing: Site plan 11-03-20

⁹ Event recalled by a senior resident

General

- 6.1 The excavation fieldwork was carried out between the 26th July 2021 and August 8th 2021. The investigation was conducted with due consideration to Health and Safety and observed the Chartered Institute for Archaeologists' Code of Conduct and *Standard and Guidance for Archaeological Excavation* (2020).

Area of Excavation & Constraints

- 6.2 The area of excavation was positioned to provide adequate clearance from known and projected courses of buried services. These comprised two substantial brick-built storm-drain culverts and a foul drain, all of which appeared to be still in use. Their projected courses are shown on Figure 6. The brick culverts came to light after the demolition of the concrete garage which stood in the southwest corner of the site. Notably, the brick type denoted construction in the late 19th century to early 20th century (P. 1). The foul drain was discovered during ground reduction to define the course of the NW/SE-aligned culvert (P. 2 & 3). This was a sectional salt-glazed ceramic type which was common from the late 19th century through to the mid 20th century. Critically, in terms of archaeological potential, a preliminary exploration of this area revealed it to have been wholly disturbed to a depth of at least 1.34 m. In places, the ground reduction above the conduits reached 66.40 to 66.10 m OD.
- 6.3 One of the brick-built culverts, aligned WSW/ENE, was buried beneath rubble make-up layers of the late 19th / mid 20th century track-way (Figs. 5 & 6, P 3). This conduit probably fed into a culverted watercourse, now a storm drain, which flows northwards beneath the lawn at the rear of the existing house (Fig. 6; *ante*, 4.13).
- 6.4 Except for the south-western part of the site where the garage had stood, the area of excavation was previously occupied by a lawn. Here, the existing ground height was between 67.10 m and 67.22 m OD. Two mature trees were felled prior to the investigation. During ground reduction it was decided to leave the tree stumps in place rather than cause unnecessary upheaval to archaeological structures and deposits by their excavation.

Excavation & Recording Methodology

- 6.5 Modern to late post-medieval overburden was carefully removed by a mechanical excavator fitted with a toothless bucket, under archaeological guidance (P 1).
- 6.6 Archaeological deposits and features were cleaned and investigated using hand-tools. An archaeological context recording system was used for registering textual descriptions and stratigraphic relationships. Archaeological features, excavated sections and the limit of excavation were surveyed to Ordnance Survey National Grid co-ordinates and orthometric heights by means of Differential GNSS. The archaeology was then planned by hand in greater detail at 1:20 scale. Measured drawings were made of all key sections and a high resolution digital photographic record was made. A series of representative levels were taken across the site and PDA and relevant non-archaeological hard detail was also surveyed.

Archaeological Phases

- 6.7 In the account which follows, the archaeological deposits and features encountered are described in order of earliest to latest. Where appropriate, and for ease of description, these are ordered by 'phase'. Wherever possible the broad date of each observable stratigraphic event has been determined by the presence of diagnostic pottery sherds.

Geological Stratum

- 6.8 The geological stratum (005) in the area of excavation was encountered at approximately 1.1 m below the existing ground level; around 66.02 m OD. It comprised mid orange-brown sandy clay with very few stone inclusions.

Local Environmental & Ground Conditions in the 13th Century

- 6.9 Overlying the geological stratum was a layer of compact silty clay (019), generally 0.25 - 0.32 m thick. This material was found to extend throughout the area of excavation. During fieldwork it was interpreted on site as the remains of a marshy landscape, presumably adjacent to the aforementioned brook, now culverted (*ante*, 4.13). Pottery sherds from within the layer range in date from the late Saxon period through to the 13th century. Subsequently, the environmental analysis confirmed the on-site interpretation. It revealed the presence of two species of fresh-water snails, one species (*Anisus leucostoma*) common to marshland or standing water, the other (*Lymnaea truncatula*) often found in wet hollows or slow-moving water (see Summers, *post*, 7.23 & 7.26). It also contained a range of carbonised material that reflects local cultivation (and indeed diet) during the medieval period, consisting of cereal grains (free-threshing wheat, hulled barley and oats) and peas or beans. However, the low concentrations of arable weeds and the absence of cereal chaff suggest that the assemblage represents accumulated remains from domestic activity (i.e. food processing and preparation) that took place in the vicinity, as opposed to being by-products of crop processing.

Phase 1: Causeway & Ditch (c. late 13th century)

Contexts 038, 025, 024, [016], 017, 041

- 6.10 The earliest anthropogenic deposits consisted of material put down to form a raised track-way, or causeway, across sodden ground. The causeway was aligned approximately north-south and appears to have been about 2.5 m wide. Initially, a base layer was laid. This consisted of compact mid greenish-brown clay with crushed ironstone fragments (038), generally between 0.08 and 0.2 m in thickness (Fig. 12, Section 4: P13 & P14). Pottery sherds from within the material suggest that the work probably took place in the latter half of the 13th century. Above this was a surface layer (0.05 - 0.08 m) composed of compacted mid orange-brown sandy clay, with frequent small to medium-sized fragments of limestone. Its variable consistency (i.e. contexts 024 & 025) probably reflects alternate barrow-loads of material extracted from a differing local source, but overall represents the same depositional event. Notably, there were no wheel ruts. The causeway was perhaps no more a raised footway or packhorse track.
- 6.11 At some juncture, a ditch [016] was dug along the west side of the causeway, cutting through the marshy ground (019) into the geological stratum below (005) (Figs. 10 & 12: P 13-15 & 21). It is difficult to say whether the ditch was a planned part of the initial causeway construction. In section the ditch appeared to have been cut through the causeway layers (contexts 024 and 038), although this does not rule out erosion, either through natural processes or via periodic manual scouring out of the ditch. Where investigated by excavated segment the ditch proved to have steep smooth sides (45° - 50°) falling to a flat base at a depth of c. 0.5 m (Fig. 12, Section 4; Fig. 15, Section 7, P21). The width across the top of the ditch was c. 1.2 m, while its basal width was c. 0.9 m.
- 6.12 The fill of the ditch (Section 4, 017; Section 7, 041) comprised a homogeneous gley deposit of mid grey-brown sandy clay with occasional small to medium sized stones. Pottery sherds attest to the ditch being open during the 13th and 14th century. The ditch became redundant having silted up (as opposed to having been deliberately in-filled). The environmental evidence (Summers, 2021, *post*, 7.17-17.28) presents an evocative image not only of the use-life and neglect of the ditch, but also of the wider landscape setting of the track-way. The *taxa* assemblage denotes that tall vegetation thrived on the damp ditch margins and, beyond it, was a short-turf calcareous grassland. Snail shells from the ditch include a type which reflects seasonal standing water. Seeds of arable weeds were rare and there was a relatively low density of carbonised cereal grains and seeds. For the most part the carbonised food stuffs comprised hulled barley and free-threshing wheat, but also oats and rye, together with seeds of pea or bean. The absence of chaff suggests that the assemblage was a gradual accumulation of culinary

waste. This hypothesis is supported by the presence of hearth ash, a few fragments of marine shell (from context 017) and very occasional bone fragments of consumed livestock - pig, sheep and cattle, including a dog-chewed bone (see Holmes, *post*, 7.16, Table 5).

- 6.13 Surprisingly, the two excavated segments through the ditch produced only a very small quantity of pottery attributable to its use-life: eight 12th / 13th century sherds and four 13th / 14th century sherds (*post*, 7.4, 7.8 & 7.11, Table 1). The pieces are from seven different vessels. Three residual pieces of late Saxon pottery (10th / 11th century) date were also present. The overall low density of all domestic-derived material suggests that occupation may have been set back some way from the track.
- 6.14 At this point it is interesting to compare the environmental results with those from a trial pit dug in 2020, located 12 m northeast of the excavation area (Fig. 6, TP1). Here, a 'significant' number of carbonised plant macrofossil remains were recovered from a single, but substantial, medieval layer (103). Broadly dated by pottery to the 13th century, the layer was c. 0.58 - 0.6 m thick and directly overlay the geological stratum. There were no discernible depositional horizons or tip lines and it contained occasional angular to sub-angular fragments of limestone (< 60 mm) which were notably unsorted. Of the carbonised plant remains, cereal grains were 'overwhelmingly dominant', in particular free-threshing wheat, then barley, but also pulses (pea or beans seeds). Significantly, however, there was a notable scarcity of chaff and arable seeds, which mirrors the results of samples taken from both the former marshy ground layer (019) and the track-side ditch (017/041). Moreover, since the material also contained a few bone fragments (including fish) and frequent bits of charcoal, probably domestic fuel debris, the deposit was also considered likely to be culinary waste. Appreciating the key-hole nature of the trial pit (2 m x 2 m) it was difficult to determine the exact nature of the deposit, although it is feasible that the pit was centred on a midden mound or a manure heap with domestic waste located on the east side of the former brook. The full environmental analysis from the trial pit is included in this report at Appendix 3.

Phase 2: Stone-built Causeway (13th / 14th Century)

Contexts 020, 009, 008, 007

- 6.15 It is in Phase 2 that the track way is transformed into a well-designed and well-built causeway. Initially, a make-up layer (020) was laid down, up to 0.15 m thick and approximately 3.7 m wide (Figs. 12 & 13). This comprised fragments of limestone and ironstone set in a dark greenish-brown sandy clay matrix. Some of the larger stones appeared to have been arranged, while others randomly-placed. This base layer was laid not only over the existing track-way, but also over the ditch. By then the ditch was completely silted up, which seems to suggest that a considerable length of time, possibly decades, had passed between the filling of the ditch and the construction of the new causeway. There were no artefacts present.
- 6.16 Set above the base layer was a layer of limestone in a matrix of crushed ironstone and sandy clay (009), 0.15 m - 0.25 m thick. A distinct kerb of limestone blocks (007) survived intermittently along its western side (Figs. 7, 12 & 13: P 11 & 17). The centre of the causeway was no more than 1.75 m wide and fairly level, whilst its sides had a marked camber. In total, about 10 m of the causeway's length was exposed in the area of excavation. Figure 8 includes the portion of the causeway that was previously uncovered in Test Pit 2 in 2020.
- 6.17 A meticulous technique had been employed in construction of the causeway surface, elements of which could still be observed throughout its course. This consisted of irregular small slabs of limestone (i.e. fractured along the natural bedding plane), pitched at an angle of 30° – 40° and overlapping (e.g. Fig. 7 (009); P 10). The gaps in-between had then been filled with crushed ironstone, but sometimes fragmented limestone, to achieve a durable and more or less smooth

surface. Over time however, much of the finer in-fill material had washed away. To avoid lateral movement the pitch of the stones was aligned with the course of the causeway: in this case each stone pitched southwards.

- 6.18 Spot heights taken along the causeway surface revealed the southern 6 m or so to be fairly consistent, around 66.70 m OD (Fig. 8). This was comparable with the northern end recorded in Test Pit 1. The exception was a slight dip to around 66.61 m OD, where two distinct rows of flat-laid slabs with roughly-squared facings crossed the causeway, east-west (Fig. 7, (008); P 8 & P 9). The facing edges of the slabs were separated by a gap of c. 0.4 m. Their purpose is uncertain, but it may have been the remains of a culvert, to allow water flowing down from the west to drain over the causeway into the brook. It was clearly an original feature of the causeway, since pitched stones were firmly set against the rear of the southern row.
- 6.19 A very small amount of pottery was found in main upper body of the causeway (i.e. context 009), but sufficient to confirm a broad date of construction: at some time in the 13th / 14th century. The assemblage includes a fairly 'fresh' sherd of Potterspuryware (13th / 14th century), a couple of abraded sherds of shellyware (12th / 13th century) and three much-worn sherds of St Neots ware (10th / 11th century) (*post*, 7.11, Table 1).

Phase 3: Causeway Repair and Widening (13th / 14th Century)

Contexts 043, [039], 027, [029] 026, 018, 010

- 6.20 Two excavated segments through the causeway revealed that its east side had undergone extensive repair and probable widening (Fig. 9; Fig. 12, Section 4; Fig. 14, Section 5; P18 - P21). It appears that the east side of the causeway had suffered considerable erosion, quite possibly washed away in a single flooding event. Either that or it had been deliberately cut down at an angle of c. 30° to 45°. The former explanation seems more plausible. The repair was about 2 m wide. It is assumed that the Phase 2 stone-built causeway also had a line of kerbstones on its east side, which was subsequently lost to erosion.
- 6.21 The repair episode comprised raising the ground on the east side of the causeway. Two distinct layers were identifiable, although it was uncertain whether the lowermost layer was a deliberate deposit, or an erosion product. In Section 4 (Fig. 12) the lowermost layer (026) was directly above the former marshy ground (019). It was composed of very claggy mid-grey-brown clay, with occasional limestone fragments and was around 0.4 m thick. A similar layer (027) was encountered in Section 5, this up to 0.15 m thick (Fig. 14). The most recent pottery sherds from this deposit suggest that it was formed in the 13th / 14th century. Layer (027) appeared to be cut by a rather nebulous feature [028] which was not observable in plan during excavation.
- 6.22 The material forming the surface layer of the repair was composed of small fragments of limestone set in matrix of greyish-brown clay (Section 4, 043; Section 5, 018; P 18). Pieces of limestone were impressed into the top of the layer to create a robust surface. Again, there was no sign of wheel ruts. A small amount of pottery suggests that this layer was put down at sometime in the 13th / 14th century.

Phase 4: Accumulation of soils alongside the causeway (c. 14th / 15th century)

Contexts 015, 014, 004

- 6.23 Lapping up to the causeway on either side was a compact layer of mid yellow- sandy clay with small to medium sized fragments of limestone (004) (Figs. 11 Sections 2 & 3; Fig. 14, Section 5). This was generally c 0.1 - 0.14 m thick and had the appearance of subsoil. It was probably formed through a natural accumulation of soils and vegetation. It contained a small quantity of bones of sheep or goat. A few sherds of 14th / 15th century pottery embedded in the surface of the layer

indicated a rough date of its formation. In particular, four un-abraded adjoining sherds came from the west side of the causeway, seemingly lying where the vessel was dropped and smashed.

- 6.24 Subsequent layers, considered to have been the result of naturally-occurring ground deposits were discernible in Sections 2 and 3 (Fig. 11, contexts 014 & 015). One of these layers (014) appeared as a bank of mid orange-brown sandy pebbly clay with an upper band of pebbles. This was up to c. 0.26 m in thickness. It was possibly a seasonal build-up of material deposited by the brook. It was devoid of no pottery. Directly above it was a layer of dark orange-brown sandy clay, c. 0.25 – 0.28 m thick with occasional small to medium-sized fragments of limestone (015) (Fig. 11). This was also a possible natural build-up of material alongside the watercourse. It contained a few scraps of bone from pig and cattle. Pottery found impressed to the surface of the layer suggested that its formation occurred in the 14th / 15th century. It is uncertain how long the causeway continued in use as a route-way. The latest pottery found between the pitched surface stones dates from the 14th / 15th century.

Phase 5: Early Post-medieval (c. 16th century)

Contexts [030], 037, 012, 011

- 6.25 At some juncture either in the late medieval or the early post-medieval period, a stone-lined and capped drain was built through the causeway to allow water from the west side to drain into the brook (Fig. 7, [030], 011/012: P 6 & P7). Exposed over a distance of c. 7.3 m, it was generally c. 0.28-0.32 m wide and c. 0.3 m deep. There was a bifurcation as it approached the former watercourse.
- 6.26 Although the drainage channel was cut from above the 14th / 15th century ground layers (Fig. 11 Sections 2 & 3, 015) it is difficult to assign a close date for this type of construction which was fairly common prior to the early 19th century. The advent of clay tile field under-drainage in England did not occur much before 1800, and cheap mass production of clay tile or cylinder drains not until the mid 1840s (Darby, 1964, 194-5). Hand-excavation (c. 75%) of the channel revealed no diagnostic pottery. The few artefacts present comprised three brick fragments and a piece of orange clay roof tile (*post*, 7.15, Table 4, 037) all of which appear to have been deposited at the time of construction. However, the bricks provide a rough dating mechanism since their relative thinness (1 $\frac{3}{8}$ " and 1 $\frac{1}{2}$ ") indicate that they may have been made prior to a charter of 1571 which stipulated a brick thickness of 2 $\frac{1}{2}$ ".
- 6.27 A cut feature of indeterminable form and function was partly visible in the south-east corner of the excavation area (Fig. 12, Section 4, [039]), where it was disturbed by the roots and stump of a mature tree. The latest sherd of pottery is probably from a 15th century kiln at Glapthorn, about 22 miles north of Irchester (*post*, 7.11, Table 1).

Phase 6: Later Post-medieval Land-use

Contexts [031], [033], [035], [208], 003, 002, 001

- 6.28 The entire site was buried under a substantial layer of loose dark brown gritty silty soil (003), 0.3 - 0.4 m deep. This contained frequent a high content of charcoal /coal flecks and occasional pottery sherds which range in date from the 18th to 19th century. The topsoil comprised loose dark grey-brown, gritty loam, generally 0.2 m to 0.28 m in thickness. There were no artefacts present.
- 6.29 As previously mentioned, the development plot is known to have been part of a pre-parliamentary enclosed field of pasture long before 1845 (Fig. 16). By the late 19th century the field had been converted to allotment gardens with a track-way passing through the middle

which linked the cul-de-sac of East Street with that of London End. This landscape was unchanged in 1925 (Fig. 5), and presumably altered little until housing developments in the late 1960s. The investigation of 2021 revealed the rubble remains of the track just beyond the southern baulk of the excavated area and a brick-built culvert (*ante*, 6.3) beneath it. A series of early-modern post-holes found in the northern part of the causeway (Fig. 7, [031], [033], [035] & [208]) were quite feasibly associated with a clutch of outbuildings and pig pens that are known to have once stood in the north part of the garden (*ante*, 4.13).

7. THE FINDS

- 7.1 The earliest artefact from the excavation is a single body-sherd of possible Romano-British shelly coarseware (12 g), similar to wares produced at Harrold (Beds), c. 8.8 km to the southeast. The sherd was recovered from the former marshy ground layer underlying the late 13th century raised track (Phase 1).

Medieval Pottery by Martin Wilson

(Confirmation of fabric-type was carried out by Jackie Wells MA)

- 7.2 A total of 87 sherds of medieval pottery were recovered from the excavation, with an aggregate weight of 739 grams. The estimated minimum number of vessels represented is 57. The sherds are listed by context in Table 1 and quantification by context is given in Table 2.

Early medieval period (9th – 11th century)

- 7.3 The earliest wares are predominantly **St Neots-type** (fabric F100), a fine-walled black pottery with reduced core which date from the Late Saxon / early medieval period (9th – 11th century). In all, nine pieces were found in contexts ranging from c. 13th century through to the 14th / 15th century (contexts 004, 018, 038, 041). All of the pieces are much-abraded and from different vessels. In addition, a possible **Stamford-type** ware (fabric F205) (c. 10th / 11th century) was recovered from the fill of the trackside ditch; a probable late 13th century deposit (041). The residual Saxon material makes up c. 11.5% of the total assemblage, with an overall weight of 46g. It clearly reflects activity, perhaps even occupation, in the vicinity during the Late Saxon period.

High Medieval period (12th – 13th century)

- 7.4 **Shelly limestone-tempered coarsewares** (fabric 330) make up c. 35.6% of the pottery assemblage: 37 sherds. These are unglazed vessels with surface colour varying from grey or buff to light orange and a light grey reduced core. They date to the 12th / 13th century. Most of the assemblage has light to medium abrasion, suggesting exposure to the elements, or even re-deposition. Ten pieces came from the marshy ground layer (019), the stratigraphically-earliest deposit. Another sherd was found in track make-up layer (038) and a further seven pieces were recovered from the fill of track-side ditch (041). Notably, all of the sherds from the former marshy ground layer (019) have signs of weathering, as do other 13th century wares from the same context (i.e. Lyveden-Stanion ware). In contrast, there are some 13th / 14th century sherds (Potterspury ware) from the same context with slight abrasion, although this may be on account of their superior quality.
- 7.5 Most of the shelly coarseware sherds are too small to determine vessel forms, although the assemblage includes two rim sherds from cooking pots or jars (009 & 026), a jug rim (041) and a plain jug handle (009). There are three known production centres for this type of pottery in the wider locality: Yardley Hastings (Northants), c. 13 km¹⁰ to the southwest; Olney-Hyde (Bucks), c.13 km to the south-southwest, and; Harrold (Beds) c. 11.5 km to the southeast. Notably, the jug rim from context (009) has a close resemblance with vessels produced at Harrold in the 13th century (c.f. Hall, 1972, f. 5, J.1).
- 7.6 In addition, the assemblage includes eight sherds of **Sand-tempered, unglazed, coarse-ware** (fabric 360), possibly from cooking pots. These broadly date to the 13th century, although they cannot be attributed to any specific provenance. They include two decorated body sherds from different vessels. One of these came from the marshy ground layer (019) and is lightly abraded.

¹⁰ Distances given by former roads

It has a grey outer surface with an applied horizontal band of light orange clay, and an oxidised inner surface, the fabric with fine sand inclusions. The other piece has incised horizontal bands on its outer surface. Notably unabraded, it came from the base of the repair layer (018) on the east side of the causeway (Fig. 14, Section 5).

High Medieval period (13th – 14th century)

- 7.7 Seventeen sherds of **Potterspury-ware** (fabric F329) were recovered from the excavation, representing c. 17% of the total pottery assemblage with an aggregate weight of 135 g. They are from 11 individual vessels and date to the 13th / 14th century. They were made at Potterspury (Bucks), c. 28 km to the southwest, where pottery production is understood to have begun in the middle of the 13th century. Typically, the vessels are fine and relatively thin-walled having been wheel-thrown. They are of superior quality to the shelly limestone tempered wares. Although frequently glazed or partially glazed, all of the recovered sherds are unglazed. Significantly, a piece was found in the earliest context, the marshy ground layer (019), along with a number of sherds of shellyware (*ante*, 7.4). It is quite possible, therefore that the track-way was constructed in the latter half of the 13th century. Sherds of this type subsequently occurred in each structural phase of the track-way and causeway.
- 7.8 Other sherds of 13th / 14th century date comprise of 10 pieces of **Lyveden and Stanion ware** (fabric F319) which originate from north-eastern Northamptonshire. These comprise c. 11.5% of the total assemblage and are from 7 individual vessels, probably jugs. All are unglazed body sherds with relatively thin-walls and generally poorly finished surfaces. The fabric is calcite-tempered with oxidised outer surface (buff to light orange) with light grey reduced core. They are considered to be late 13th century in date although close dating of these wares is uncertain. The products have a mainly localized distribution in the East Midlands and East Anglia (Blinkhorn, 2018, 286). Sherds of this type were present in marshy ground layer (019), the track layers, trackside ditch (017) and (041). Moreover, the fresh appearance of the pieces from the track layers would seem to support a late 13th century date for its construction.
- 7.9 The rarer 13th / 14th century wares in the assemblage were two very small pieces of **Brill/Boarstall ware** (fabric F324). Both are thin-walled with outer green-glaze and are probably from jugs. They originate from the locality of the two Buckinghamshire villages (c. 60 km to the southwest). One sherd was found in the surface layer of the causeway repair (018), while the other was from a probable late 15th century context (010).

Later Medieval period (14th – 15th century)

- 7.10 The assemblage includes eight pieces of **Late medieval oxidised ware** (fabrics F325/F378/F401) four of which are considered to be of 14th / 15th century date. All have a light orange oxidised surface and a grey core. Although their origin is uncertain, they provide a reasonably secure dating mechanism for the continued usage of the causeway and the accumulation of soils (004) along its sides. Four sherds from the same vessel were found impressed into the old ground surface (004) and have unabraded historic fractures. The latest piece of this category is an unabraded rimsherd from an unglazed vessel with an upright neck, which has a slight trace of a handle; perhaps a jug or even a bung-hole jar. It has light orange fabric with light grey reduced core, abundant both rounded and sub-rounded grains of quartz. The fabric and form has similarities to vessel types from the 'Leacroft' and 'Gypsy Lane' kiln sites at Glapthorn near Oundle, Northants (*c.f.* Johnstone *et al.* 1997, Nos. 13 & 21)

7.11 Table 1. Medieval Pottery Types and Chronology

(Note: Fabric codes denote Northamptonshire Type Series)

Context No.	Common name	Remarks	Fabric Code	Period	Wt. (g)
003	St Neots-type ware	x 2 small small sherds, inc. rim of jar, everted, rounded slightly undercut. Much-abraded. From surface of causeway (009)	F100	C9- C11	6
	Sandy coarse-ware	x 1 body sherd, fine sand inclusions. Orange fabric with reduced core: Grey unglazed outer surface (slip) with faint incised horizontal bands. Only lightly abraded. From surface of causeway (009)	F360	C12 /C13	23
	St Neots-type ware	x 1 small rim sherd, bowl, Much-abraded	F100	C9- C11	9
		Sherd count = 4; MNV= 4			38
004	Late medieval oxidised ware	x 4 body sherds. Light orange oxidised surface, grey core, 'fresh' historic fractures. Found laying flat at interface of (003) & (004), on W side of causeway at S end	F325/ F378/ F401	C14- C15	37
	St Neots-type ware	x 1 small rim sherd, Prob. bowl. Abraded. From SW side of causeway surface	F100	C9- C11	6
	Late medieval oxidised ware	x 1 small rim sherd. Jar. Light orange oxidised surface, grey core Abraded. From SW side of causeway surface	F325/ F378/ F401	C14-/C15	5
		Sherd count = 6; MNV= 3			48
009	Shelly coarse-ware	x 2 sherds. Moderately abraded. Inc. rim of jar, ext. dia. 250mm. Orange-pink fabric with light grey core, moderately heavy well-sorted fine crushed shelly limestone <1mm (form- c.f Blinkhorn, 2018, 272, fig. 10.7, 59 - 64).	F330	C12 /C13	27
	Potterspury ware	x 1 body sherd. Quite abraded	F329	C13/ C14	6
	Sandy coarse-ware	x 1 body sherd. Sand-tempered. Grey with light brown outer surface	F360	c. C13	5
	Late medieval oxidised ware	x 1, body sherd, grey with buff outer surface. ?rouletted decoration	F325/ F378/ F401	C14- late C15	8
	Late medieval oxidised ware	x 1 body sherd. Light orange oxidised surface, grey core. Abraded. From interface of old ground layer (004) & causeway surface stone (009), towards SE end of causeway	F325/ F378/ F401	C14- C15	11
		Sherd count = 6; MNV= 5			57
010	Brill/ Boarstall ware	x 1 body sherd, mottled olive green glazed, buff unglazed inner surface, grey reduced core	F324	C13 /C14	5
	Potterspury ware	x 2 body sherds. Light orange with dark grey reduced core. Unabraded	F329	C13 /C14	9
	Late medieval oxidised ware	x 1 rimsherd, jug 8 (trace of handle). Unglazed. Light orange fabric with light grey reduced core, abundant quartz grains, rounded and sub-rounded. Unabraded. Poss. from Glapthorn, Oundle, Northants. Form similar to jar with upright neck (c.f. Johnstone et al. 1997, Nos 13 &21), or possibly	F325/ F378/ F401	C14- late C15	12
	? Glapthorn ware				

Context No.	Common name	Remarks	Fabric Code	Period	Wt. (g)
		a jug (? bung-hole jar)			
	Poss. Lyveden/ Stanion ware Sandy coarse-ware	x 1 body sherd. Light orange/buff with light grey reduced core, thin-walled. Unabraded x 2 body sherds, fine sandy. Grey with orange inner surface. Light abrasion. MNV 2 Sherd count = 7; MNV= 5	?F319 F360	C13 c. C13	9 7 42
015	Late medieval oxidised ware Potterspurry ware Shelly coarse-ware	x1 body sherd, fine sandy. Orange with grey reduced core and grey outer surface (slip) x 1 rim sherd. Hooked / flanged rim, flat top. Light orange with dark grey reduced core x 3, in rim of pitcher, triangular section (c.f Blinkhorn, 283, fig. 10.16, 108) MNV 2 Sherd count = 5; MNV= 4	F329 F330	C14 - C15 C13 / 14 C12 /C13	13 8 23 44
017	Potterspurry ware Poss. Lyveden/ Stanion ware	x 2 body sherds. Light orange with dark grey reduced core. Unabraded x 2 body sherds, buff and light orange, light gry reduced core. lightly abraded. MNV 2 Sherd count = 4; MNV= 3	F329 ?F319	C13 /C14 C13	6 12 18
018	St Neots-type ware Shelly coarse-ware Sandy coarse-ware Potterspurry ware Brill/Boarstall-type ware	x 2 body sherds. Abraded X 4 sherds, body/ base. Some lightly abraded x 2 body sherds, fine sand inclusions. Lightly abraded X 1 unglazed with reduced core x 1 body sherd , fine thin-walled, light pink-orange fabric with thin transparent light green outer glaze Sherd count = 10; MNV= 6	F100 F330 F360 F329 F324	C9- C11 C12 / 13 c. C13 C13 /C14 C13 /C14	9 45 13 14 4 85
019	Potterspurry ware Lyveden/ Stanion ware Shelly coarse-ware Potterspurry ware Sandy coarse-ware Shelly coarse-ware	x 7 body sherds, inc. 5 adjoining from light green lead-glazed jug. 'Fresh' historic breaks. MNV 2 x 3 body sherds, unglazed calcite-tempered ware, oxidised outer surface, thin-walled x 1 sherd, body. shell-tempered coarse-ware. ?finger-impressed decoration. Much-abraded x 1 strap handle, ?wire-drawn, random-sparse incised/stabbed decoration (c.f. Brown A E, 1968, 52-3, figs 13 -16) x 1 body sherd, fine sand inclusions. Grey unglazed exterior with applied horizontal decorative band of light orange clay and oxidised inner surface. Lightly abraded x 9 sherds, body, base and handle. shell-tempered coarse-ware, largely lightly abraded. MNV 2	F329 F319 F330 F329 F360 F330	C13 /C14 C13 C12/ C13 C13 /C14 C12 /C13 C12 /C13	43 11 13 47 13 103

Context No.	Common name	Remarks	Fabric Code	Period	Wt. (g)
		Sherd count = 23; MNV= 10			230
021	Sandy coarse-ware	x 1 body sherd, fine sand inclusions. Grey unglazed outer surface with 3 incised horizontal bands c. 9 mm apart. Unabraded. From from the upper E slope of the causeway	F360	C12 / C13	23
		Sherd count = 1; MNV= 1			23
024	Potterspurgy ware	x 1 body sherd. Light orange surfaces, dark grey core. Only very lightly abraded fractures Sherd count = 1; MNV= 1	F329	C13 /C14	4 4
026	Shelly coarse-ware	x 4 sherds, inc. rim sherd. Shell-tempered coarse-ware. All fairly abraded. MNV 4. Note: they would appear to have been re-deposited. Rim sherd is from a necked jar with everted rim and squared profile. Ext. dia. c.230 mm (c. 8%). Moderately heavy crushed limestone <2mm. grey fabric with light pinkish-buff exterior. (c.f. Blinkhorn, 2018, 272, fig. 10.7, 56 & 63)	F330	C12 / 13	56
	Lyveden/ Stanion ware	X 1body sherd. Light orange-buff surfaces, light grey core, thin-walled, 'fresh' historic fractures Sherd count = 5; MNV= 5	F319	C13	4 60
038	St Neots-type ware	x 1 body sherd. Grey with brown surfaces. Much-abraded	F100	C9- C11	5
	Shelly coarse-ware	x 1 body sherd, thin-walled. Abraded	F330	C12 / 13	2
	Potterspurgy ware	x 1 body sherd. buff surfaces, light grey core. Unabraded	F329	C13 /C14	6
	Lyveden/ Stanion ware	x 2 body sherds. Light orange-buff surfaces, light grey core, thin-walled, 'fresh' historic fractures MNV 1 Sherd count = 5; MNV= 4	F319	C13	15 28
041	St Neots-type ware	x 1 body/base sherd. Abraded	F100	C9- C11	9
	St Neots-type ware	x 1 rim sherd with rounded profile. Poss. bowl. Thick-walled, light greyish-brown outer surface, dark orange inner surface, grey reduced core	F100	C9- C11	
	Poss. Stamford-type ware	x 1 body sherd, thin-walled, buff fabric, faint trace of thin light green lead glaze on outer surface. Recovered from the extreme base of the ditch	F205	C10 /C11	2
	Shelly coarse-ware	x 5 body sherds, shell-tempered coarse-ware. thin-walled. MNV1	F330	C12 / 13	27
	Lyveden/ Stanion ware	X1 body sherd, unglazed calcite-tempered ware, oxidised outer surface, grey reduced core, thin-walled	F319	C13	2

Context No.	Common name	Remarks	Fabric Code	Period	Wt. (g)
	Shelly coarse-ware	X 1 small everted rim sherd from a jar. Unglazed calcite-tempered ware. Abraded (c.f. Hall, 1972 , Fig. 5, J.1 (C13): Blinkhorn, 2018, 272, fig. 10.7, 61 -63)	F330	C12 /C13	6
	Shelly coarse-ware	X 1 sherd, rim of lid-seated jar or jug, triangular section. Only lightly abraded. Note: this piece was pitched on the W side of the causeway/upper E side of the ditch	F330	C12 / 13	16
		Sherd count = 11; MNV= 7			62

7.12 Table 2. Medieval Pottery Quantification 2021

(EMNV= estimated minimum number of vessels)

Context	No. of sherds	Weight (grams)	EMNV
003	4	38	4
004	6	48	3
009	6	57	5
010	7	42	5
015	5	44	4
017	4	18	3
018	10	85	6
019	22	230	9
021	1	23	1
024	1	4	1
026	5	60	5
038	5	28	4
041	11	62	7
Totals	87	739	57

Post-medieval Pottery by Martin Wilson

7.13 A somewhat surprisingly small amount of post-medieval pottery (7 sherds) was present. All date from the 18th/19th century. They were recovered from a dark brown silty gritty subsoil (003) with high charcoal content which extended over the site, interpreted as a former horticultural soil. The majority of pieces came from either the interface of this layer with the causeway (007)/(009) or its interface with an old ground surface of 14th / 15th century date (004) alongside the causeway.

7.14 **Table 3. Post-medieval Pottery Types and Chronology**

Context No.	Common name	Remarks	Fabric Code	Period
003	Brown salt-glazed stoneware	X 2 sherds, jars inc ,rim/ neck. From 003/ 009 interface. MNV 2	F417	C18/C19
	Non-specific post med oxidised earthenware	X 1 sherd ?plant pot. From 009/003 interface NW side MNV 1	-	C19
	Black-glazed earthenware	X 3 sherds. From 009/003 interface NW side. MNV 3	F426	C19
	Glazed red earthenware	X 1 sherd. From 007/003 interface	F407	C18/C19
	Brown salt-glazed stoneware White salt-glazed stoneware	X 1 sherd. From 007/003 interface X 1 sherd. From South Section (4)	F417	C18/C19 C18/C19

7.15 **Table 4. Ceramic building material**

Context No.	Description	Suggested Period	Weight (grams)
037	Brick fragment: thickness 1 3/8", dark red-orange with occasional ironstone inclusions <8mm and rare limestone inclusions, partial reduced core	C16	652
	Brick fragment: thickness 1 3/8", dark red-orange with occasional ironstone inclusions <8mm	C16	311
	Brick fragment: thickness 1 1/2" Dark red-orange	C16	254
	Roof tile fragment, light orange	C16	142

Animal Bones by Matilda Holmes PhD

7.16 A small assemblage of animal remains was recovered from the excavation, a summary of which is given in Table 5. Six pieces came from excavated segments through a ditch (contexts 017 & 041) which is considered to date to the late 13th century. Other pieces were recovered from later medieval deposits above a causeway. *Canid* gnawing was observed on bones from layer (006), ditch fill (017) and post-hole fill (032) indicating that these elements were not buried immediately following discard, but were available for dogs to chew. Sheep/ goat and cattle were most common, with a few pig and *equid* remains also recorded. The sample is too small for further comment.

Table 5: Summary of Animal Remains by Context

Context	N0.	Element	Taxon
004	1	Mandible	Cattle
004	1	Metacarpal	Sheep/ goat
004	1	Femur	Sheep/ goat
004	1	Tibia	Sheep/ goat
004	1	Tibia	Sheep/ goat
004	1	Pelvis	Cattle
006	1	Incisor	Equid
006	1	Horn core	Sheep
006	1	Tibia	Sheep/ goat
006	1	Calcaneus	Cattle
015	1	Tibia	Equid
015	1	Calcaneus	Pig
015	1	1 st cervical vertebra	Cattle
015	1	Longbone fragment	Medium mammal
017	1	Tibia	Cattle
017	1	Tibia	Cattle
017	1	Longbone fragment	Large mammal
032	1	Longbone fragment	Medium mammal
041	1	Rib	Medium mammal
041	1	Tibia	Sheep/ goat
041	1	Incisor (lower)	Pig

Environmental Samples *by John Summers PhD¹¹*

Introduction

- 7.17 Three bulk samples for environmental archaeological investigation were taken and submitted to Wardell Armstrong LLP (WA) for analysis and reporting. The samples were from a causeway ditch of possible late 13th century date (contexts (016) & (040) and a former ground layer (019) underlying the causeway. This section of the report presents the results from the analysis of the bulk sample light fractions, and discusses the nature and significance of the remains recovered.

Methods

- 7.18 Samples were processed at the WA facilities in Bury St. Edmunds using standard flotation methods. The light fractions were washed onto a mesh of 500µm (microns), while the heavy fractions were sieved to 1mm. The dried light fractions were sorted under a low power stereomicroscope (x 10 – x 30 magnification). Botanical and molluscan remains were identified and recorded using reference literature (Cappers *et al.* 2006; Jacomet 2006; Kerney and Cameron 1979; Kerney 1999) and a reference collection of modern seeds was available as 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

- 7.19 The data from the bulk sample light fractions are presented in Table 6. Preservation of plant macrofossil remains was by carbonisation only, with no evidence for anaerobic water-logging or mineralisation. Shells of terrestrial and aquatic molluscs were frequent and well preserved, which is in keeping with the local lime-rich soils (Soilscapes 2021).

Ditch fills (017) and (041)

- 7.20 Carbonised plant macrofossils were recorded as common in both sampled causeway ditch fills, predominantly in the form of carbonised cereal grains. Hulled barley (*Hordeum* sp.), free-threshing type wheat (*Triticum aestivum/ turgidum* type), oats (*Avena* sp.) and rye (*Secale cereale*) were recorded, with barley and wheat the most numerous. Seeds of pea/ bean (large *Fabaceae*) were also present in both samples. A single fragment of hazelnut shell (*Corylus avellana*) in (017)/ [016] could represent food debris but could equally have been burned with fuel wood.
- 7.21 Seeds of probable arable weeds were only recorded in (041), being represented by goosefoot family (*Amaranthaceae*), stinking chamomile (*Anthemis cotula*) and large-seeded wild grass (*Poaceae*). Stinking chamomile was a common medieval arable weed and is more common on heavy loam and clay soils, although the local soils are predominantly recorded as free-draining. However, it is possible that stinking chamomile was more widespread across a wider ecological range during the medieval period than it is today (e.g. de Moulins 2007).
- 7.22 The density of carbonised macrofossil remains in (017) and (041) was between 0.5 and 1.2 items per litre, which is relatively low and likely indicates gradual accumulation of material from mixed sources. The absence of chaff and limited occurrence of arable weeds indicates that predominantly clean grain was present, most likely from domestic culinary waste. It is probable that the remains in the ditch fills accumulated as a result of domestic occupation in the vicinity, being deposited with hearth ash and other domestic residues. A few fragments of marine shell in (017)/ [016] are likely to also be derived from culinary waste, while small mammal bones probably result from natural deposition.

¹¹ Archaeological Solutions Ltd, Bury St Edmunds

7.23 Mollusc shells included aquatic taxa *Anisus leucostoma* and *Lymnaea truncatula*, which are able to survive seasonal desiccation and likely reflect standing water in the ditches on a seasonal basis. Taxa indicative of tall damp vegetation and ground litter included *Carychium* sp., *Cochlicopa* sp., *Oxychilus* sp. and *Trichia hispida* group, which likely indicate tall vegetation on the ditch margins. *Pupilla muscorum* and some *Vallonia* sp. inhabit short-turf calcareous grassland, which probably have existed in the vicinity.

Former Ground Layer (019)

7.24 The sample from Former Ground Layer (019) was slightly richer than those from the causeway ditch fills at 3.7 items per litre, although is still probably derived from mixed sources of carbonised material. Carbonised cereal grains of free-threshing type wheat, hulled barley and oat were again most numerous, with wheat making up the majority of identified specimens. Also present were pea/ bean (large *Fabaceae*) seeds, which are likely to have made a contribution to the medieval diet. A single seed of flax (*Linum usitatissimum*) points towards the local cultivation of this useful crop that can be used for fibre or oil. However, it is not possible to understand the local economic role of flax from a single seed.

7.25 Other non-cereal taxa included knotgrass family (Polygonaceae), brome grass (*Bromus* sp.) and indeterminate wild grasses (Poaceae). These probably originated as arable weeds but in low concentrations and the absence of cereal chaff do not indicate a significant contribution from crop processing by-products in the sample. Seeds of sedge (*Carex* sp.) may have been derived from wetland or marsh habitats, although could also have grown in marginal areas of cultivated land.

7.26 Standing water and marshy ground is attested by *Anisus leucostoma* and *Lymnaea truncatula*, which support the archaeological interpretation of a possible former marshy ground layer underlying the causeway. Shells of *Carychium* sp., *Cochlicopa* sp. and *Trichia hispida* group may probably indicate tall damp vegetation at this location, although detailed identifications were not made during the assessment to allow more detail.

7.27 Small numbers of coal and clinker (coal ash) fragments were present throughout the assemblage, which could be debris from later (post-medieval) activity on the site.

Conclusions

7.28 The carbonised plant remains from 1A London End are likely derived from domestic activity in the near vicinity, representing accumulated remains from food processing and preparation activities. Cereal grains were predominant, with free-threshing type wheat and hulled barley the most numerous. However, the assemblage reflects a typical medieval mixed arable economy incorporating cereals (wheat, barley, oats and rye), pulses and flax (c.f. Moffett 2006). Mollusc shells support the archaeological interpretation that the causeway was laid over marshy ground and the causeway ditch is likely to have held standing water, at least on a seasonal basis.

Table 6. Data from the bulk sample light fractions

Sample number	Context	Feature	Description	Spot date	Volume (litres)	Flot (g)	Carbonised cereals			Carbonised non-cereal taxa		Carbonised hazelnut shell	Char coal Charcoal>2mm	Molluscs		Contaminants					Other remains
							Cereal grains	Cereal chaff	Notes	Seeds	Notes			Molluscs	Notes	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules	
1	017	016	Fill of Ditch	13 C	30	4	XX	-	HB (1), Hord (1), FTW (2), Trit (5), NFI (5)	X	Large Fabaceae (1)	1	X	X X	<i>Anisus leucostoma</i> , <i>Trichia hispida</i> group, <i>Vallonia</i> sp.	X	-	X	X	-	Small mammal bone (X), Marine shell fragments (X), Coal (X), Clinker (X)
2	041	040	Fill of Ditch	13 C	20	8	XX	-	HB (3), Hord (4), Trit (3), Oat (3), Rye (1), NFI (6)	X	Large Fabaceae (1), Amaranthaceae (1), <i>Anthemis cotula</i> (1), Large Poaceae (1)	-	X	X X	<i>Carychium</i> sp., <i>Cochlicopa</i> sp., <i>Lymnaea truncatula</i> , <i>Oxychilus</i> sp., <i>Pupilla muscorum</i> , <i>Trichia hispida</i> group, <i>Vallonia</i> sp., <i>Vertigo</i> sp.	XX	X	X	-	-	Coal (X), Clinker (XX)
3	019	-	Former Ground Layer	13C	10	4	XX	-	HB (1), Hord (2), FTW (3), Trit (10), Oat (2), NFI (9)	XX	Large Fabaceae (2), <i>Linum usitatissimum</i> (1), Polygonaceae (1), <i>Carex</i> sp. (2), <i>Bromus</i> sp. (2), Large Poaceae (2)	-	X	X X	<i>Anisus leucostoma</i> , <i>Carychium</i> sp., <i>Cochlicopa</i> sp., <i>Lymnaea truncatula</i> , <i>Trichia hispida</i> group, <i>Vallonia</i> sp.	XX	-	X	-	-	Coal (X), Clinker (X)

8. ARCHAEOLOGICAL SIGNIFICANCE & REVIEW OF RESEARCH OBJECTIVES

Historic Context of the Causeway

- 8.1 Both the physical and environmental evidence shows that the causeway was initially laid as a raised track-way above wet ground. The pottery assemblage suggests that this took place in the late 13th century. It is highly plausible that the construction of a higher, more robust causeway (i.e. Phase 2) was a direct response to severe climatic changes which occurred during the 13th / 14th century, the period which in recent years is referred to as the Medieval Climate Anomaly, or MCA. The causeway then underwent extensive repair (Phase 3), the pottery evidence showing that this occurred broadly in the same period. The weather in England during this period is well known to us through the accounts of chroniclers (e.g. grange records), and the reliability of this evidence has long been the subject of much scrutiny by economic historians, particularly in relation to harvest yields and rural depopulation (e.g. Lamb, 1967, Hallam 1984). In more recent years the veracity of the chroniclers' accounts has been attested by the examination of the MCA via the application of proxy records (Diaz *et al*, 2011).
- 8.2 Undoubtedly, the period from 1250 to 1350 was a time of climatic extremes, in which there were episodes of successive, excessively wet seasons and floods. According to Hallam the worst wettest weather occurred during the years 1250-1260, 1289-1295, and then 1312-1330 (Hallam 1984, 128). In a study of 34 of Northamptonshire's deserted medieval villages Lamb demonstrated that only 10% of settlement abandonment could be attributable to plague – "*the dates are much more noticeably related to the worst climate shocks than to the Black Death. All appear to have suffered decline in the years of disastrous summers and famine between 1314 and 1327*", with a population decline of 67% by 1327 (Lamb, 1967, 459).
- 8.3 The stratigraphy of Sections 1 to 3 appears to show that soil and sediment continued to be washed down and deposited by the brook into the 14th / 15th century. To illustrate the proximity of the former brook, its approximate course has been plotted from the 1845 map in relation to the excavation areas: this is shown on Figures 16 and 17. This might explain the origin of the bank of sandy pebbly clay recorded in Sections 2 and 3 (Fig. 11, contexts 014 & 26), as an alluvial deposit on a left bank bend of the watercourse.
- 8.4 Arguably, the fact that the causeway underwent substantial repair demonstrates that it continued to be an important route-way throughout the period. But from where, and to where? It would have seemed more sensible to have followed the higher ground on either side, unless this was not physically possible (e.g. land-use or different manorial ownership). It is indeed probable that the causeway was associated with a medieval manorial complex located 100 -125 m northeast of the excavation site, the existence of which was confirmed during construction of the Wantage Road estate in 1967. The complex would have been on the opposite side of a former watercourse (a brook) mapped in 1845, its remains buried under pasture for centuries until the housing development. Fortunately, an earthwork survey of the site was undertaken by Ordnance Survey in, or prior to, 1923 (*ante*, 4.7). But it is unfortunate that there are no known surviving written or drawn records of the later archaeological investigation, the only written account being a terse summary (Brown, 1967) which makes no mention of a limestone track-way, causeway or former watercourse. Pottery was recovered from the building site but the physical archive has not yet been released by its present owner for consultation. Without reference to archaeological features located on the ground the usefulness of the material is extremely limited.

- 8.5 Notwithstanding the above, it is significant that a preliminary analysis of pottery (*ante*, 4.8) concluded that the manor appeared to have been built in the 13th century and continued in use until the 15th century, which confirms the causeway's co-existence. If *VCH* is correct in its assumption that the larger of the two Irchester manors was located at the north end of High Street, then it is likely that the manorial site to the northeast of London End was the smaller manor held in 1086 by Count Robert of Mortain, which originated in the Anglo-Saxon period. By the 12th century this manor was held Nicholas Sauvage. The Sauvage family are known to have held land at Irchester in the 13th and 14th centuries, although at some time prior to 1346 had conveyed some of this to Thomas de Pabenhams, who held the larger manor. Thereafter, the descent of the smaller manor is uncertain, though may have been a so-called manor in the possession of Richard Bletsoe in 1565, who is known to have held it of the Duchy of Lancaster in 1591 (see Salzman, 1937). The spatial relationship of the causeway at London End and the manorial focus (based on the OS earthwork survey) is shown on Figure 18.
- 8.6 With regard to the causeway's direction beyond the excavated site, there is inferred evidence of its continuation northwards, whereby it would have passed to the west of the manorial complex. The first indication of this is found on a series of oblique aerial photographs taken in the 1970s (now held by the Northamptonshire HER) of land to the north of Station Road. The photographs reveal a major linear earthwork, c. 135 m long showing as parched or worn ground in pasture land to the west of the brook (canalised since 1845). The feature, aligned northeast-southwest, is feasibly a continuation of a linear earthwork, 140 m long, surveyed by OS on the south side of Station Road in 1923, which in turn, may be a continuation of the causeway found at London End. Figure 18 shows the location of the former earthwork (rectified and geo-referenced) in relation to other landscape features. Examination of current available LIDAR imagery¹² revealed no trace of the feature as a surface phenomenon: the earthwork appears to have suffered from the construction of a series of pipelines and has subsequently been ploughed out.
- 8.7 An evaluation trench excavated in 2014 (one of a series excavated in advance of a housing proposal) appears to have encountered a remnant of the former linear earthwork shown on the aerial photographs. It was described as "*a compact spread of brownish-grey silty-clay and limestone (17), possibly the remains of a roughly laid metalled surface*", from which three sherds of shelly coarseware of 12th / 13th century date were recovered (*c.f.* Morris, 2014, Trench 2, pp. 5 & 12, fig. 12 & 25).
- 8.8 Notably, the pitch-stone construction technique of the Irchester causeway is particularly resonant of internal and external surfaces of medieval manorial complexes found elsewhere in Northamptonshire. Examples include: floors and foundation of 13th century buildings at West Cotton, Raunds; a large yard surface bounded by a wall at Midland Road, Raunds, which was constructed at some time in the 14th century (Elston, 2018, 30-31); and at another Midland Road site in Raunds, remnants of internal and external surfaces including an extensive yard constructed of large cobbles with pitched stone repair patches, all of which appear to be broadly of 13th century date (Emra, Leslie & Carrol, 2022, 20; pers. comm. Iain Leslie 2022).

Appraisal of Research Objectives

- 8.9 Overall, the investigation has provided a rare and significant insight to the medieval landscape in this neighbourhood of Irchester. Since one of the key regional archaeological research themes is to understand how manorial centres and their estates developed from the early medieval period, it was anticipated that investigation at 1A London End might shed light on the chronology of the nearby manorial complex or its structural development (*ante*, 5.2; *c.f.* *URA* Research Objective 7F). Given the proximity of the manorial focus, and in the light of the above discussion of the various strands of circumstantial evidence, it is probably fair to say that the investigation at

¹² Environmental Agency 1m DSM data [accessed 12.2021]

London End revealed an integral structural component of the 13th / 14th century manor, the chronology of which broadly corresponds with what is known, both archaeologically and historically of the smaller manor at Irchester. Analysis of the physical archive from the 1967 site is beyond the scope of the present study, but any future separate study of the material may well benefit from cross-reference to the London End causeway results.

- 8.10 The investigation was also successful with respect to other research objectives. Moreover, it comprehensively examined the significance of the archaeological remains within the area of excavation and established the nature and extent of past ground usage, providing a broad date for activity and ground formation (*ante*, 5.4, a & b). In particular, the palaeo-environmental evidence has provided an evocative glimpse of local ground conditions and ground-use in the locality (*ante* 5.4, c), which together with the structural evidence may be viewed in the context of climatic anomalies of the mid 13th to mid 14th century. The preceding evaluation has also provided an insight to the potential significance of archaeological deposits buried beneath the retained garden of 1A London End and its level of preservation.
- 8.11 With regard to finds, the pottery assemblage was fairly meagre with no new forms, types or fabrics that may assist in the development of regional type series (*ante*, 5.4, d). There is no potential for further analysis of artefacts, faunal remains and environmental data.
- 8.12 Apart from residual pottery of 9th- 11th century date, which forms a broad background signature of activity of the period in the vicinity, there was no firm evidence of occupation or land-use earlier than the 13th century. A single sherd of possible Romano-British coarseware was recovered from the former marshy ground layer beneath the causeway, but considering the site's proximity to the small Romano-British town at Irchester, the investigation provided no information that might contribute to understanding the relationship of the Romano-British town with its agrarian hinterland (*ante*, 5.3; *c.f.* URA Research Objectives 5H, 5G).

9. ARCHIVE

- 9.1 The resultant archaeological archive from the development project (including both artefacts/ecofacts and project documentation) is to be dealt in accordance with the Northamptonshire Archaeological Archives Standard of Northamptonshire Archaeological Resource Centre –NARC (Jan 2020).
- 9.2 The Northamptonshire Historic Environment Record Event UID **ENN110321** is the Archive Accessions Number for the main excavation. The HER UID for the evaluation record is **ENN109871**.
- 9.3 Artefacts from archaeologically significant features are temporarily retained by Souterrain. The artefacts will remain the property of the landowner although the landowner will be invited to transfer finds ownership to the NARC. The landowner will be responsible for costs pertaining to long-term museum storage of the archaeological archive.
- 9.4 The OASIS (Online Access to the Index of Archaeological Investigations) record UID for this project is **souterra1-504965**.
- 9.5 In due course, the report is to be uploaded to the Archaeological Data Service (ADS) website and is to become a publically-accessible record, in accordance with the NPPF.
- 9.6 A hard copy and a digital copy of the report are to be issued to the held by Northamptonshire Historic Environment Record, which is to be made available via Northamptonshire Archives.

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Figure 1. General Location of the Application Site

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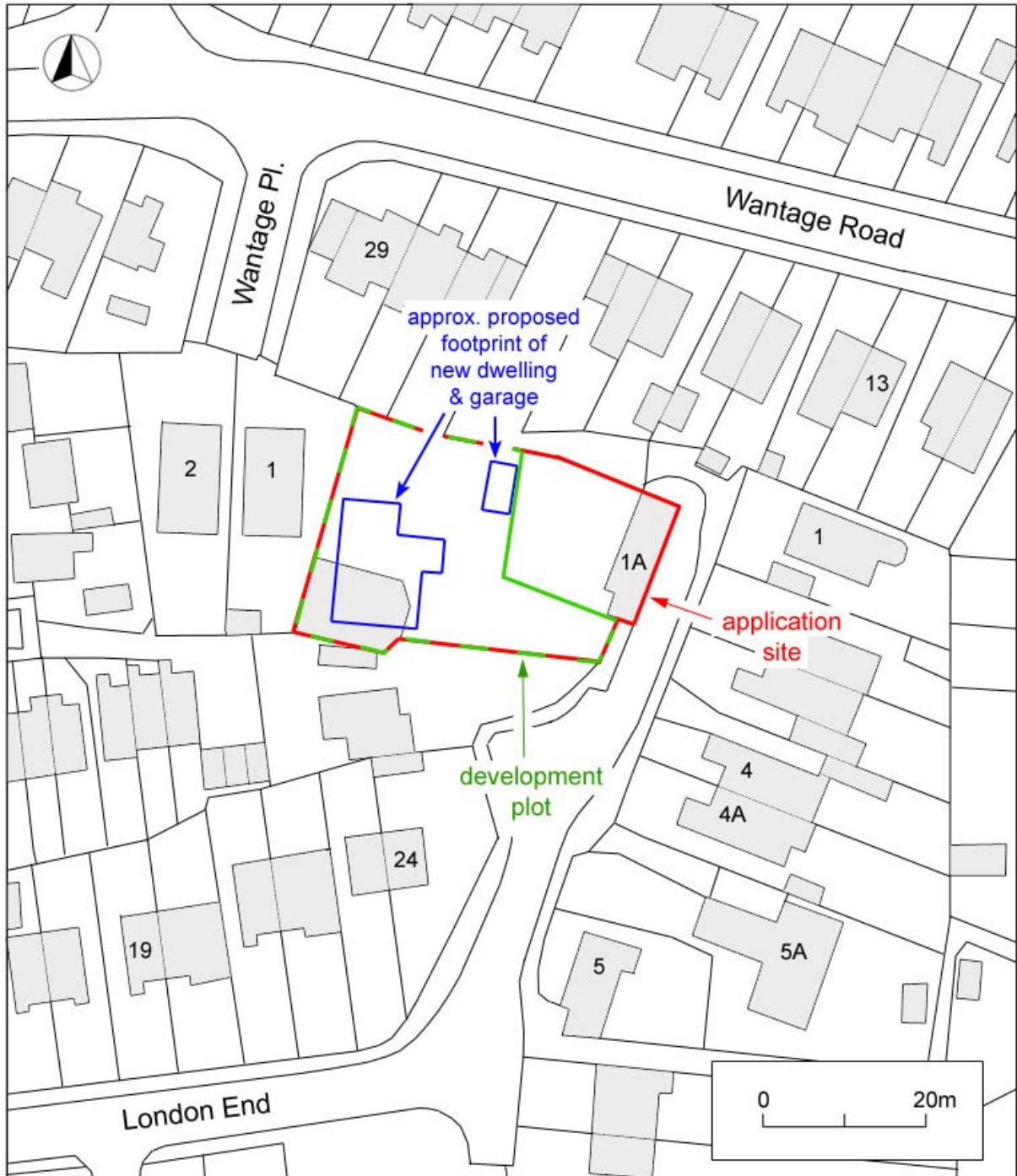


Figure 2. Extent of the development plot with proposed location of house and garage

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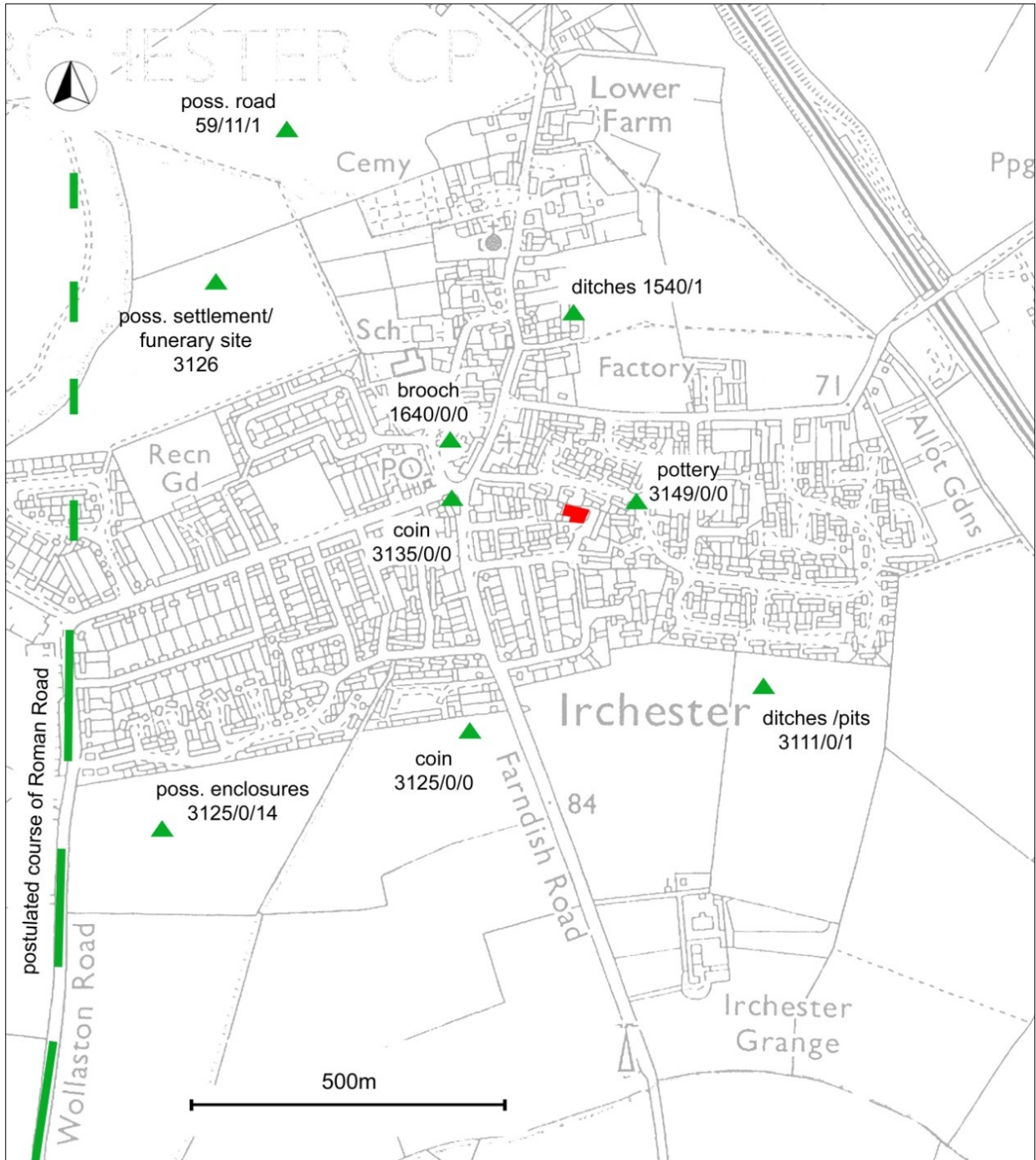


Figure 3. Location of known Roman period sites and find-spots within the Study Area

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Figure 4. Location of known medieval sites, buildings & find-spots within the Study Area

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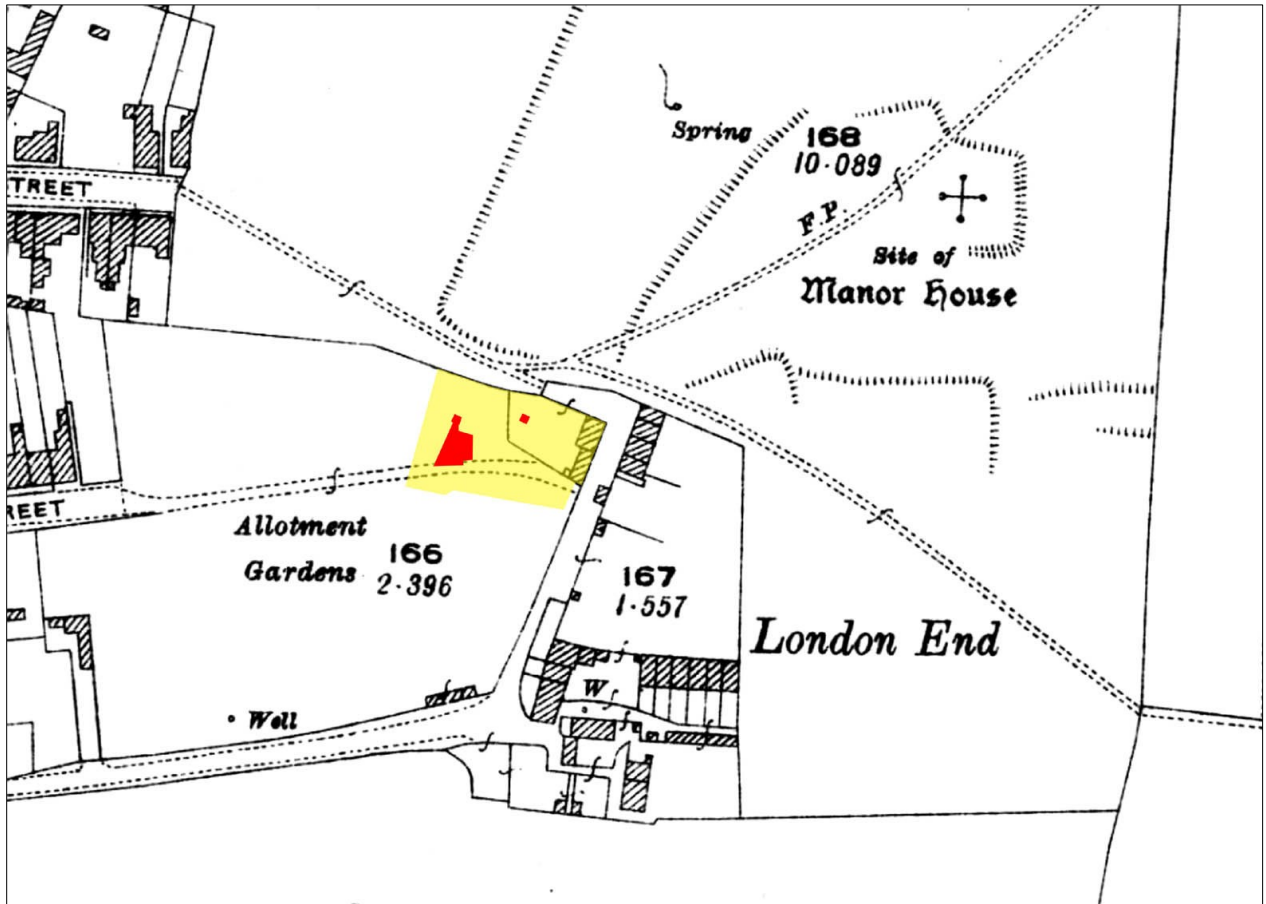
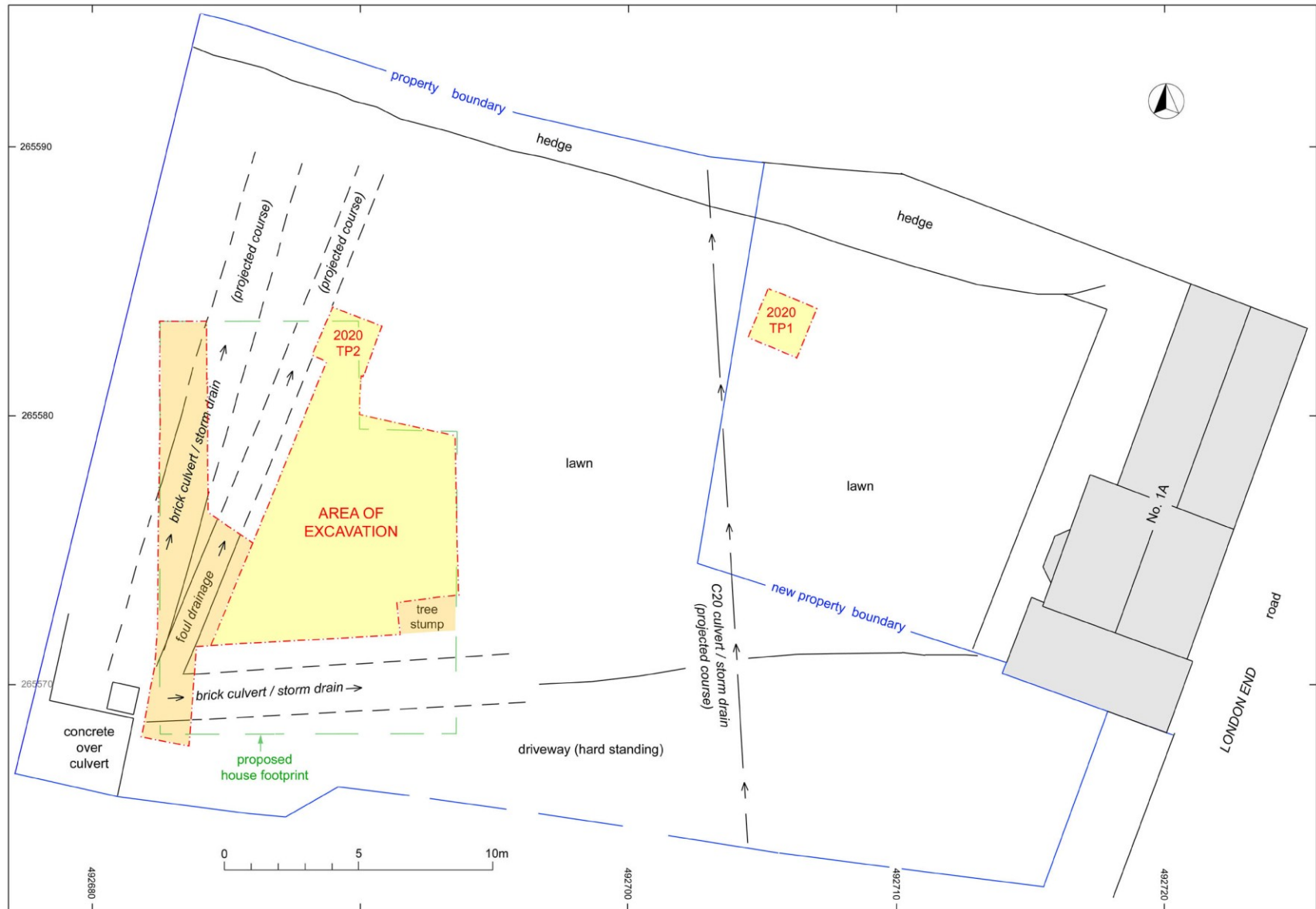


Figure 5. Extract of the OS 25" maps showing London End in 1925, with the approximate location of the Application Site (yellow) and the areas of excavation (red) super-imposed

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Figure 6.

Areas of archaeological investigation & projected courses of culverts and other drainage





P1. Soil strip in progress, facing NE. No.1A London End in rear ground



P2. Initial trench on W side with course of culverts exposed, facing NNE. Location of Test Pit 2 in rear ground



P3. Junction of brick culverts in SW corner of site, Facing NE



P4. Medieval causeway. Facing NE



P5. Medieval causeway. Facing SSW



P6. Medieval causeway cut by early post-medieval drain [030] / (012). Facing SE



P7. Early post-medieval drainage through medieval causeway. Facing WNW

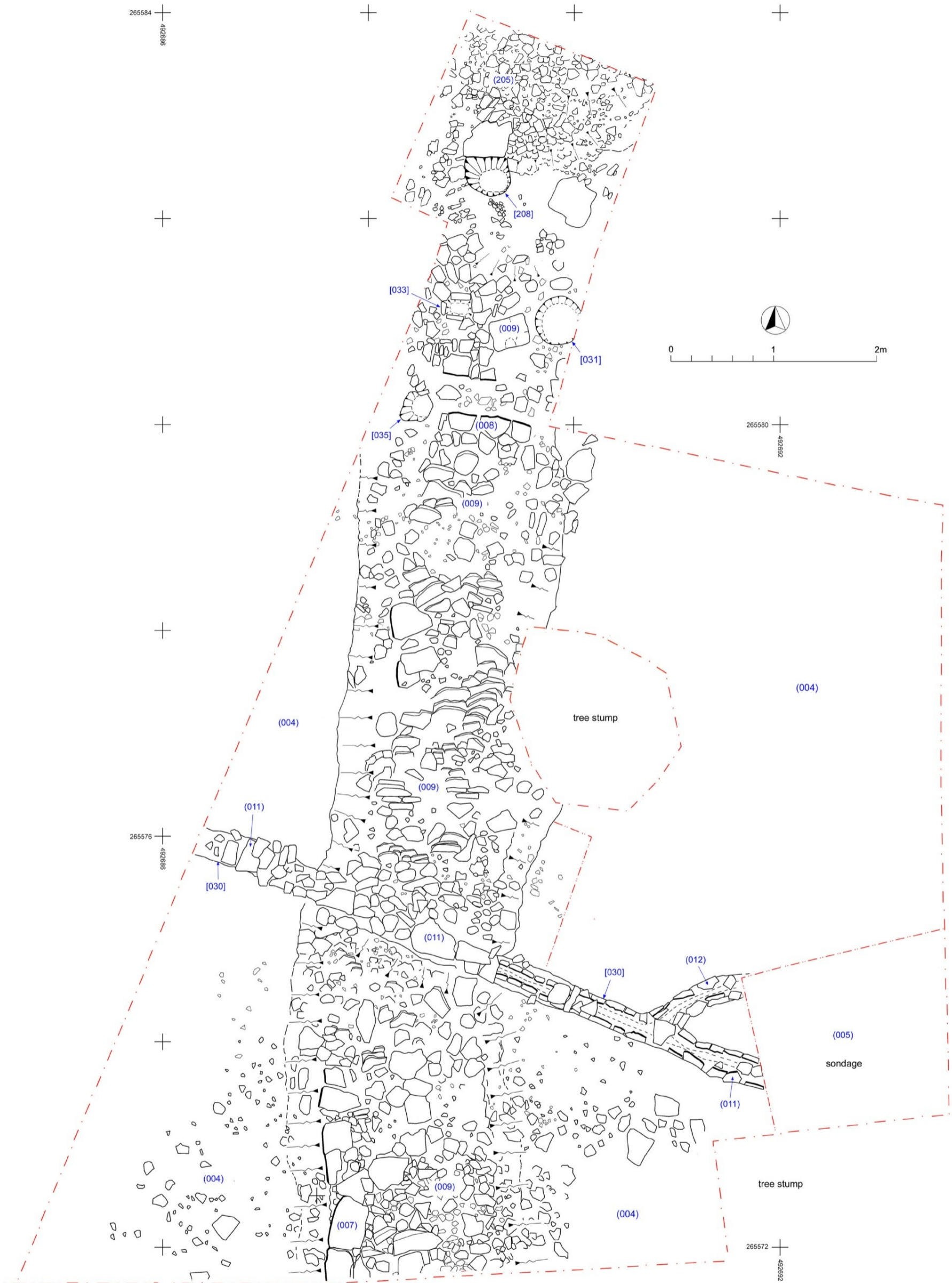


Figure 7. Pre-excavation plan of medieval causeway with context numbers

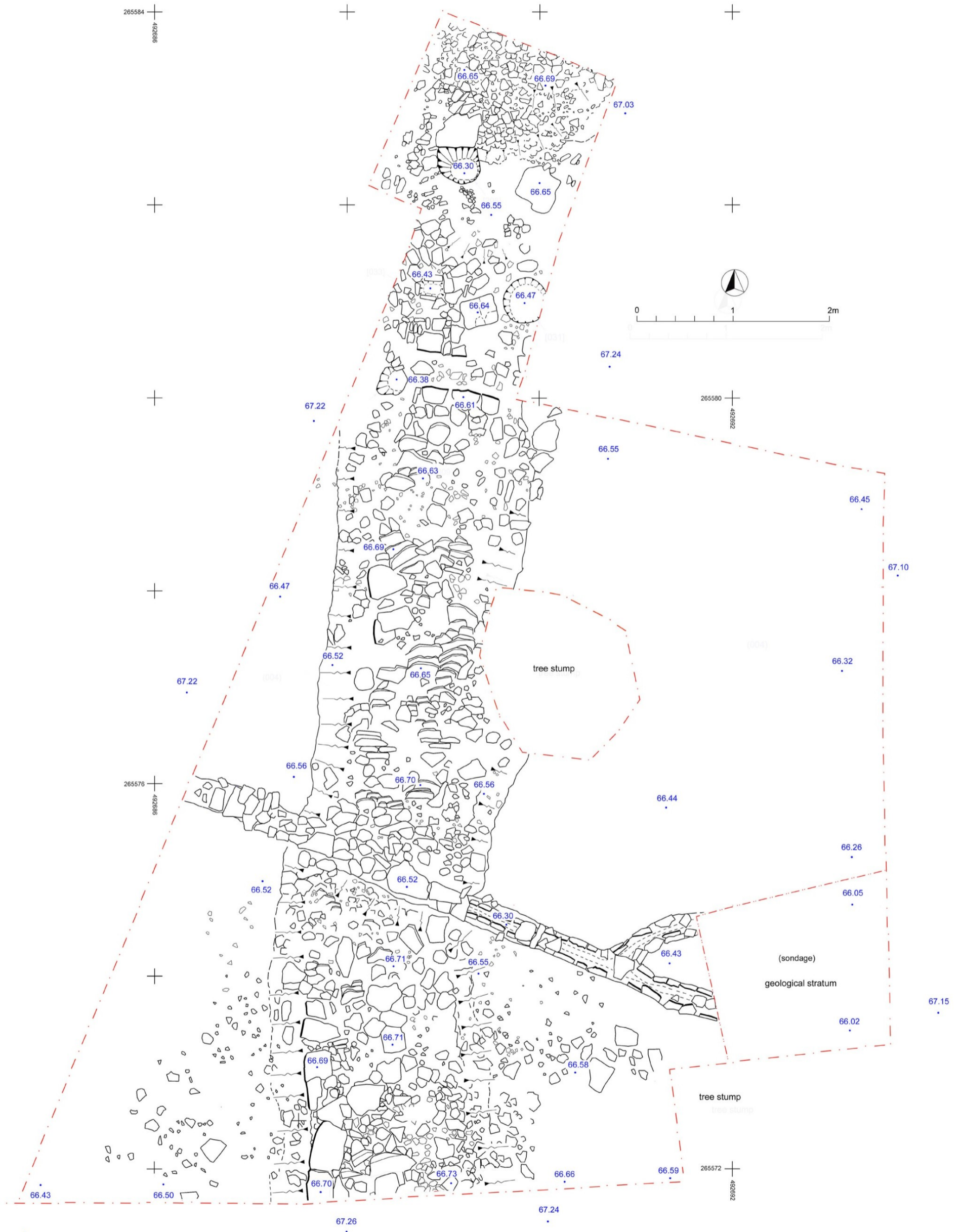


Figure 8. Pre-excitation plan of medieval causeway with relative heights (m OD)



P8. Medieval causeway Facing S. Unexcavated early modern post-holes in foreground



P9. Early modern post-hole through N-end of medieval causeway. Facing SSE



P10. Detail of pitched and flat surface stone in the central part of causeway. Facing SE



P11. The southern section through the causeway under excavation (Sections 4 & 6, showing remains of kerbing (007) and upper layer of surface stone (009). The larger, disordered stones were possibly a repair. Facing ENE



P12. The southern section through the causeway under excavation (Sections 4 & 6), facing SE

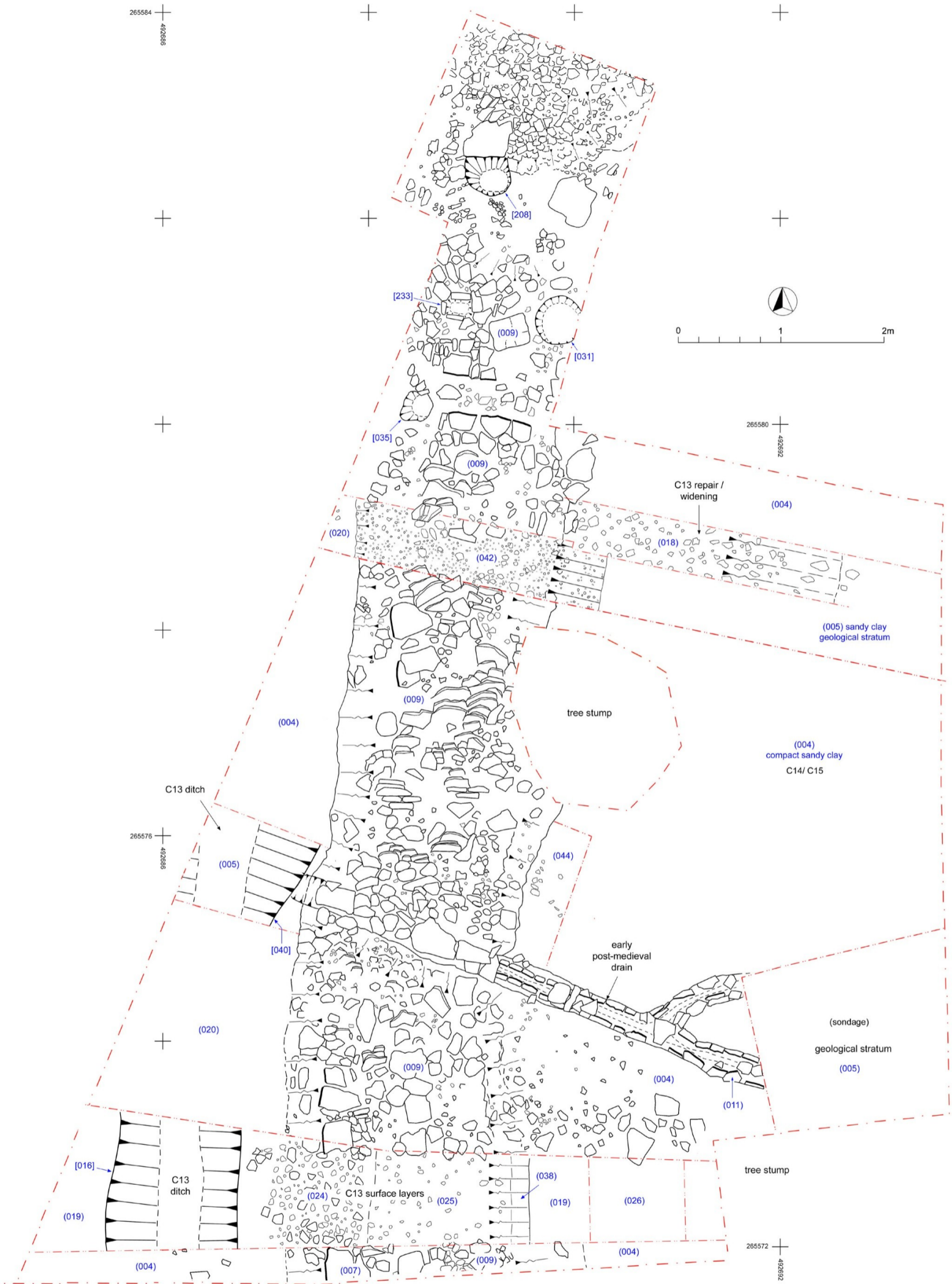


Figure 9. Plan of medieval causeway: location of excavated segments with context numbers

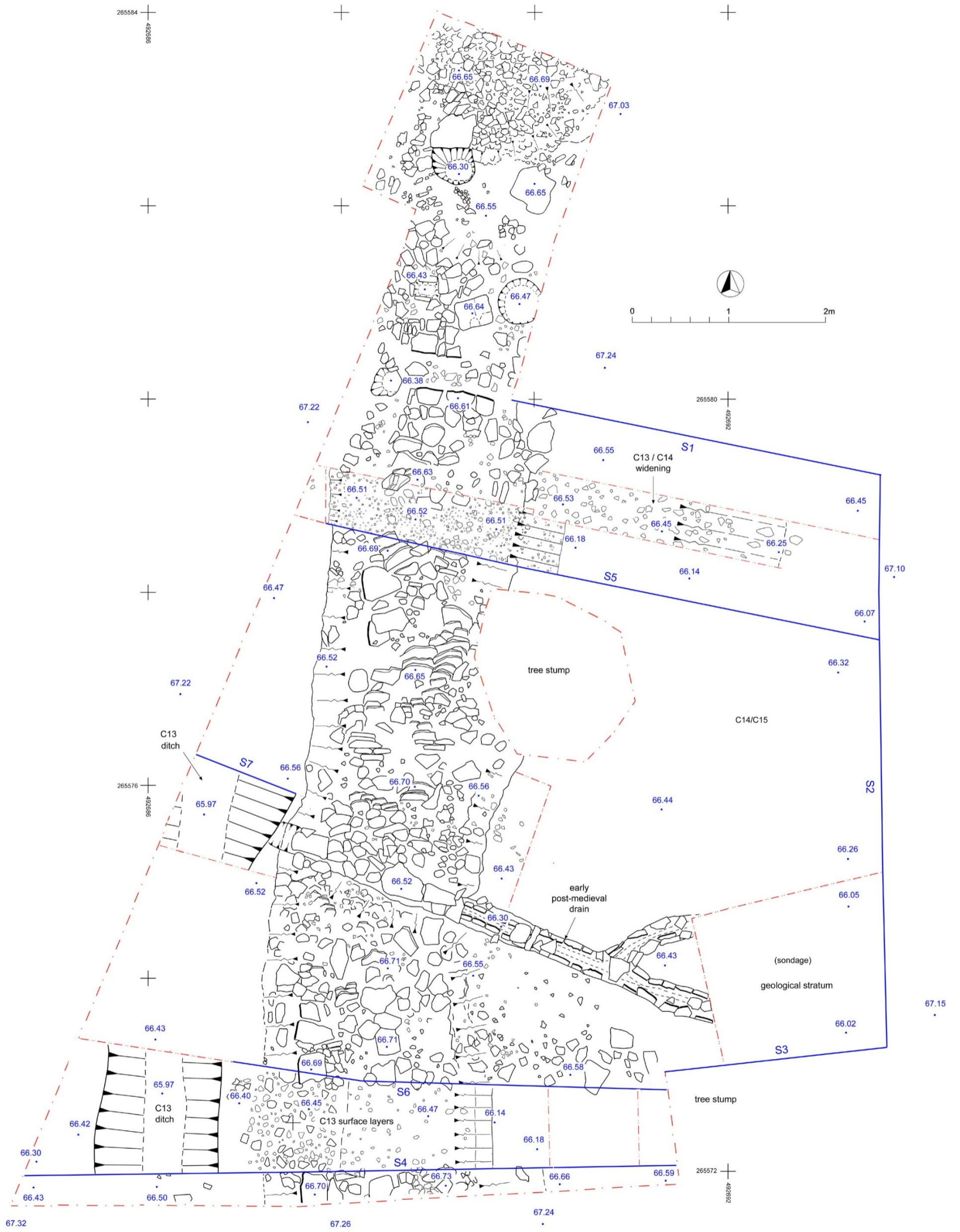


Figure 10. Plan of medieval causeway, with relative heights (m OD) and location of drawn sections 1 to 7



P13. The southern section through the causeway under excavation (Sections 4 & 6). This shows the upper layers of the initial causeway and ditch [016]. The former marshy ground layer (019) is visible in the side of the ditch. Facing ESE



P15. Overview of Causeway and Section 6. In the foreground the causeway is stripped down to the former marshy ground layer (019)



P14. The southern section through the causeway under excavation (Sections 4 & 6): partial removal of the initial causeway layers (024 & 038). Facing SE

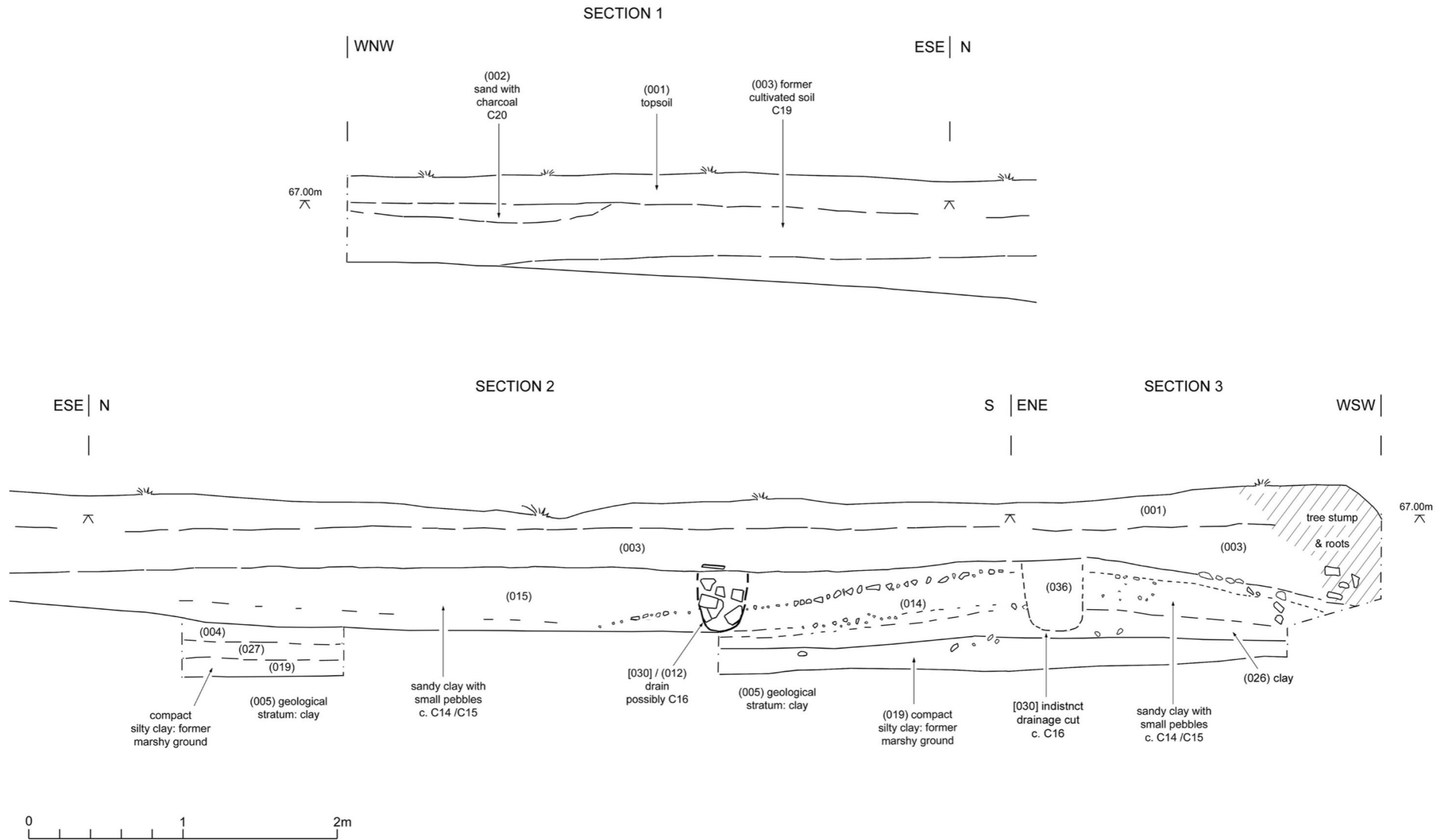


Figure 11. Sections 1 to 3

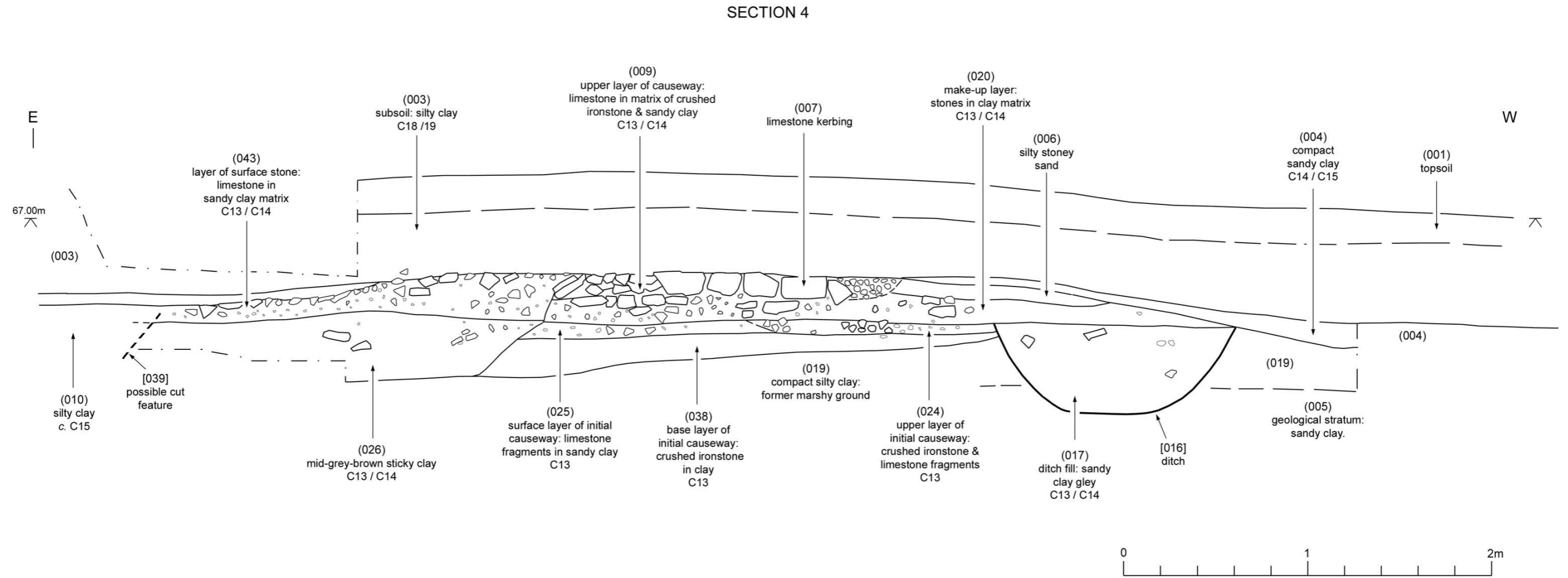
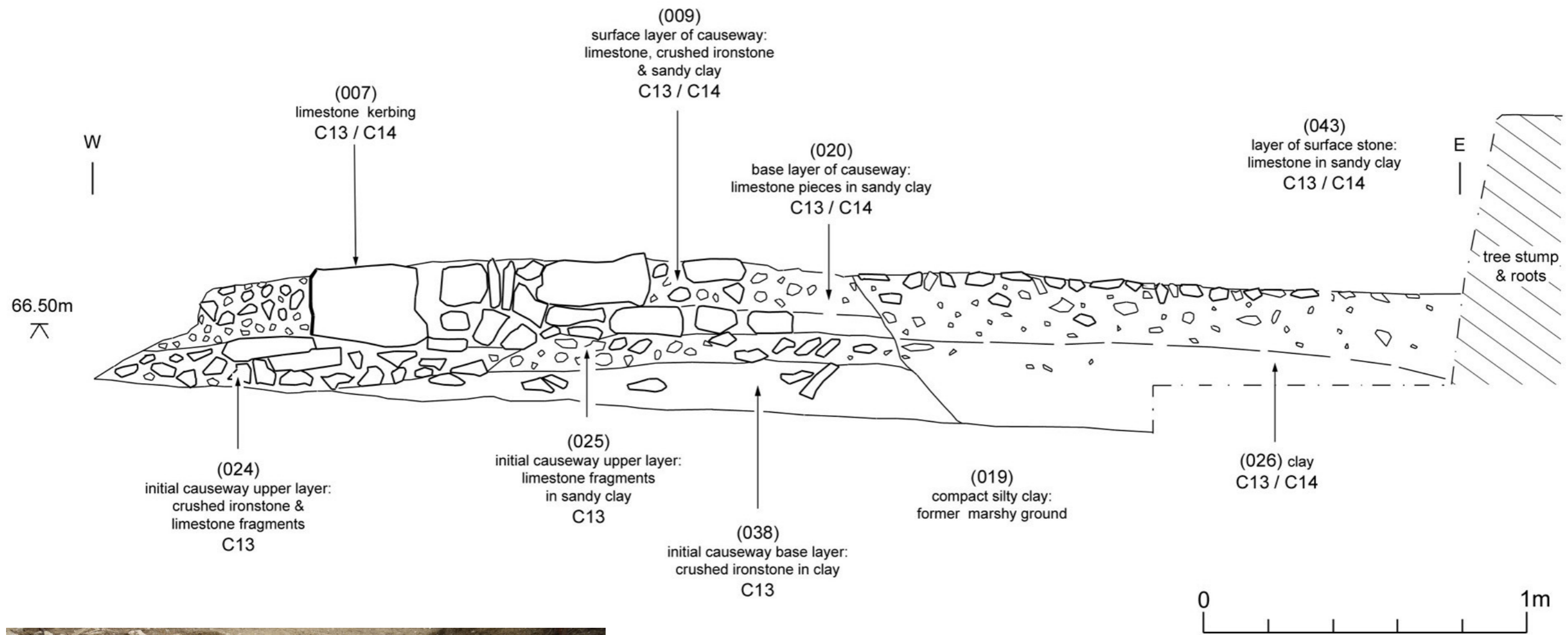


Figure 12. Section 4: Stratigraphic relationship of the track and ditch and the later causeway

SECTION 6



P17. Section 6. Facing SE

Figure 13. Section 6: Stratigraphy of medieval causeway

SECTION 5

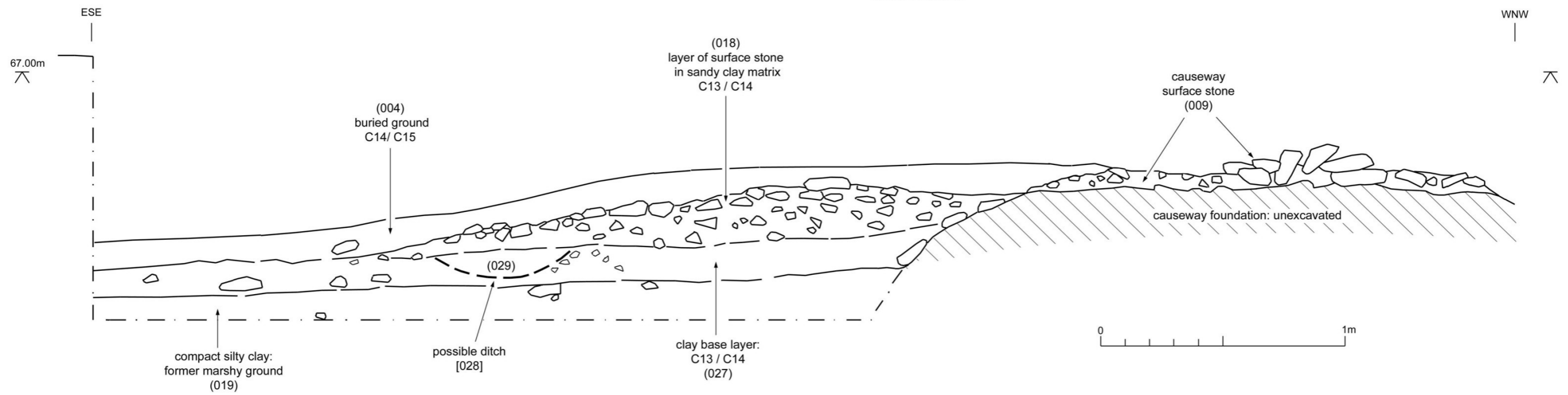


Figure 14. Section 5: Stratigraphy of causeway repairs / widening (13th / 14th century)



P18. The northern section through the causeway (Section 5) under excavation: exposure of the upper repair /widening layer (018) . Facing SW



P19. The northern section through the causeway (Section 5), facing ENE. In the foreground. The surface stone (009) has been removed, exposing the make-up layer (042)



P20. The northern section through the causeway (Section 5): removal of repair /widening layers (018 & 027) . Facing WSW



P21. Section 7. Ditch [040] alongside initial causeway. Facing NE

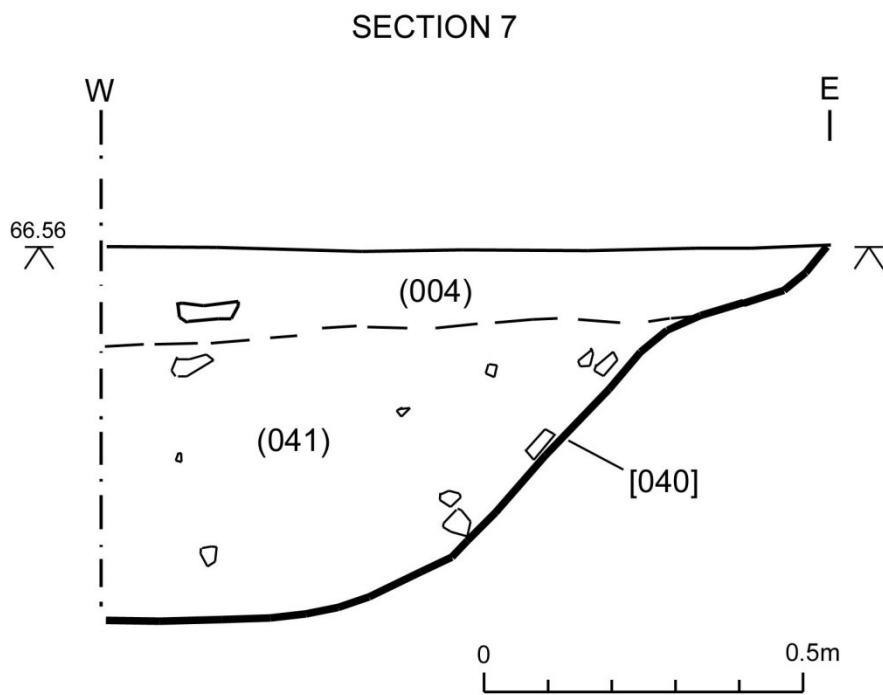


Figure 15. Section 7: ditch alongside initial causeway



P21. Overview of excavated causeway and ditch. Facing NNE



P22. Overview of the area of excavation within the former garden of 1A London End. Facing WNW

Figure 16.

Extract of the 1845 'Map of Old Inclosures in the Parish of Irchester Liable to Tithes' (NA T183) with areas of excavation superimposed (red)

This shows the meandering course of the brook at London End to the west of the early 17th century cottage (blue). South of the house the course of the brook is uncertain



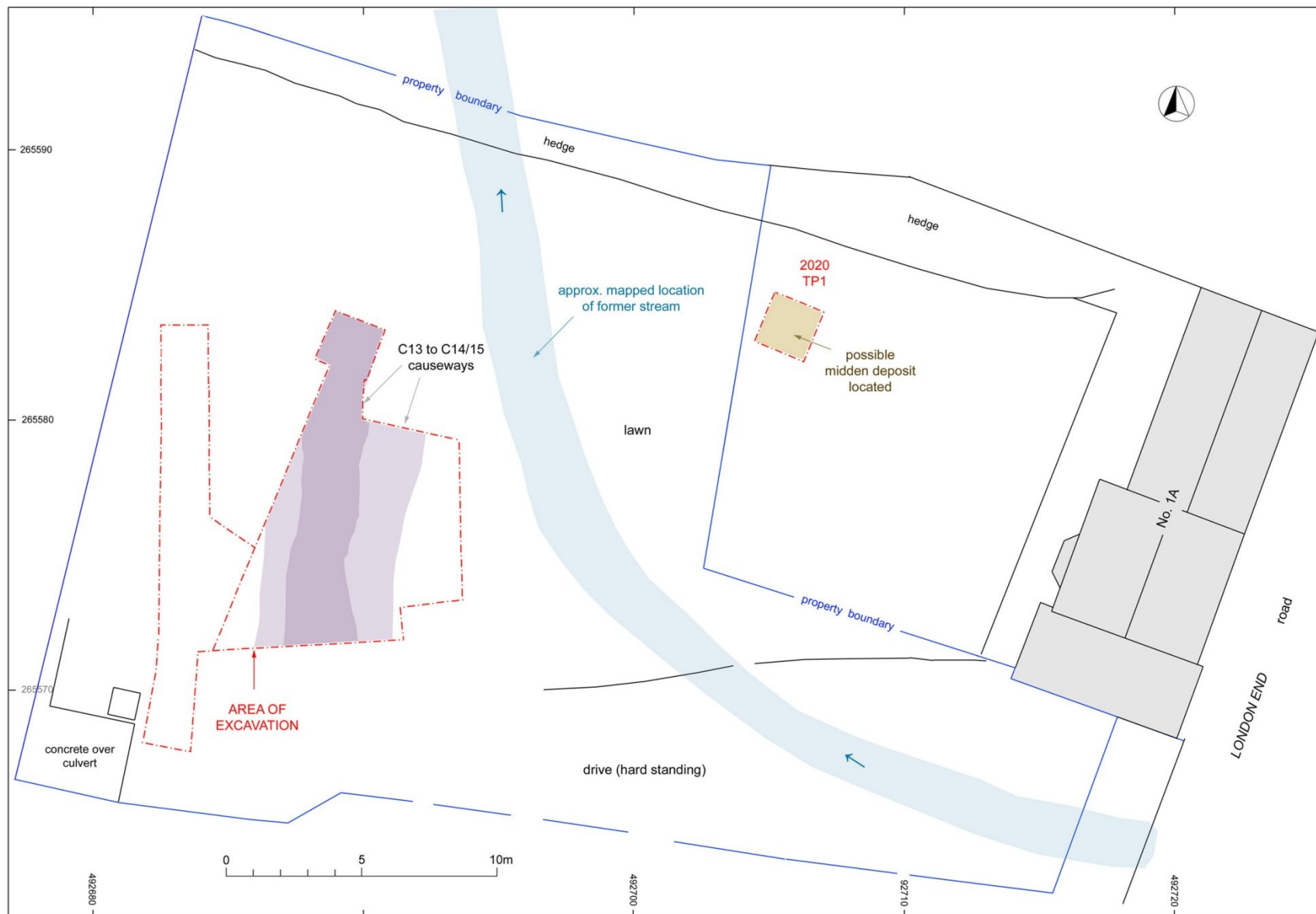
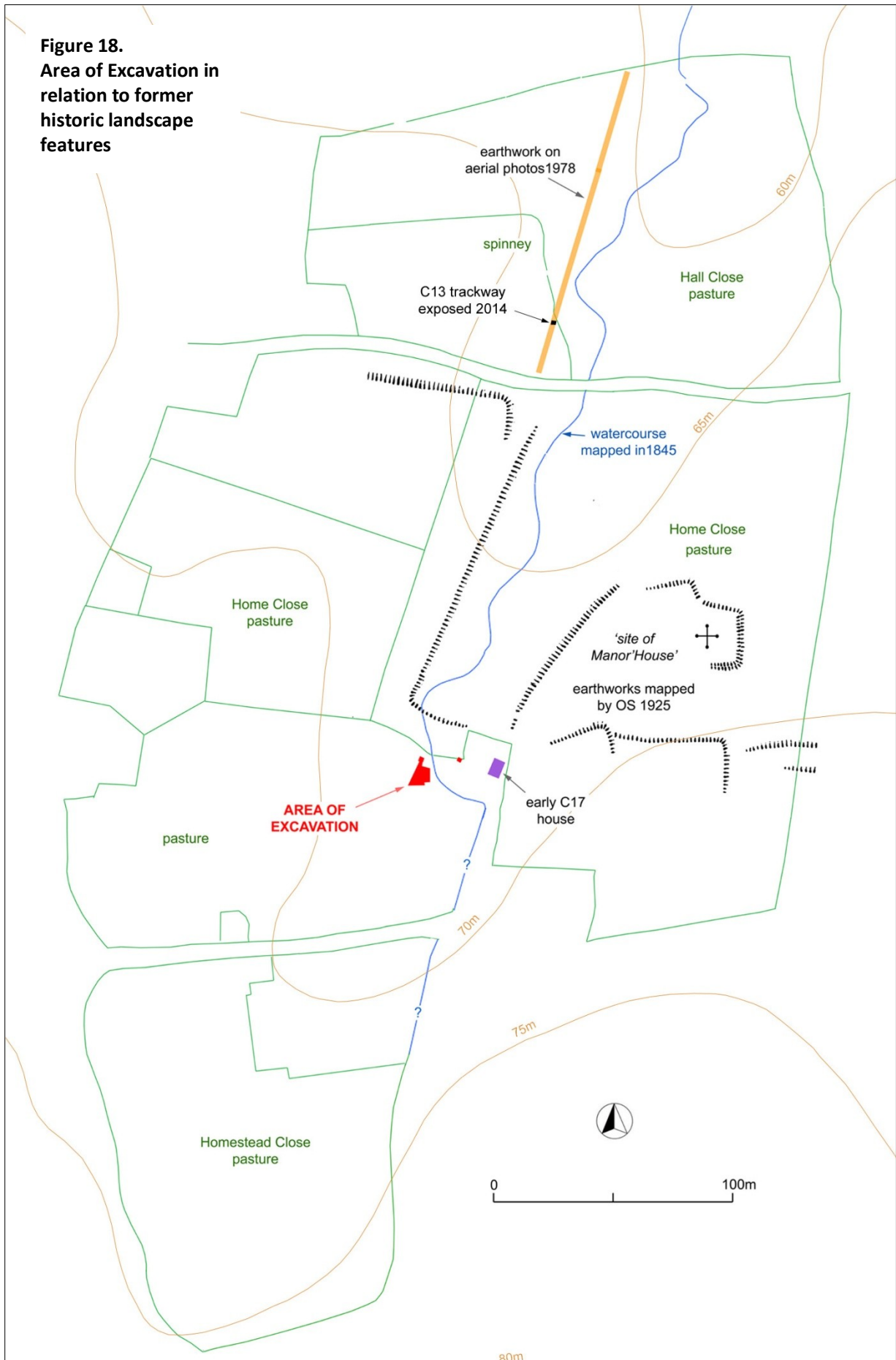


Figure 17. Location of medieval causeway and possible midden shown in relation to the approximate course of the former brook at 1A London End (based on the 1845 map)

Figure 18.
Area of Excavation in
relation to former
historic landscape
features



Appendix 1: List of Contexts

KEY: Relationships: **a.** above; **abt.** abuts; **adj.** adjoins; **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 Interprétation	relationships	dimensions	drawing	Finds	Suggested period	Soil Sample	Date of record
001	layer	Topsoil. Loose dark brown/black loamy garden soil, turfed. Above subsoils (002) & (013).	a.(002), (013)	th. 0.2-0.25m	S1, S2, S3, S4	-	Modern	-	28.07.2021
002	layer	Subsoil. Loose mid orange brown sand. Contains flecks of charcoal, modern pottery. Not extensive over whole site, mainly N area.	b.(001) a.(003)	th. c.0.1m	S1	-	Modern	-	28.07.2021
003	layer	Subsoil. Loose dark brown silty gritty soil. High charcoal content. 18 th /19 th century pottery found. Extensive over whole site. Above causeway surface stones (007), (008), (009) & layer (004).	b.(002) a. (004), (007), (008), (009)	th. 0.3-0.4m	S1, S2, S3, S4	Pottery: Late Saxon / early medieval, C12 / C13 & C19	C19	-	28.07.2021
004	layer	Subsoil. Compact mid yellow- sandy clay with small to medium sized fragments of limestone. Not proper natural	b. (003) a.(005)	th. 0.1-0.3m	Plans 1, 3, 4 S1, S2, S3, S5, S7	Pottery: Late Saxon / early medieval & C14-/C15	C14/ C15	-	28.07.2021
005	layer	Geological stratum. Mid orange-brown sandy clay. Very few stone inclusions. Encountered in sondage in E part of excavation area, but must be present under (004) over whole of the site.	b. (019) cub.[016]	-	S2, S3, S4, S5 Plan 3	-	-	-	28.07.2021
006	layer	Very localised deposit of loose mid orange/yellow-brown silty sand with frequent small to medium-sized stones. Located at the S end of site in Section 4 Material either accumulated or dumped at the side of the causeway	b.(004) a. (020) abt. (009)	th. 0.08m	S4, Plan1	animal bone	Late medieval	-	29.07.2021
007	structure	Line of stones. N-S aligned. Road surface.	b.(003)	le. c. 10m	S4, S5, S6	-	Medieval	-	29.07.2021

Context No.	type	Description and Interprétation	relationships	dimensions	drawing	Finds	Suggested period	Soil Sample	Date of record
		Initially thought to be a wall foundation, but turned out to be the kerbstones of a causeway	a.(020), (024) ?same as (009)		Plans 1 - 5		Prob. C13		
008	structure	Line of stones. Road surface. Initially thought to be a short wall foundation E-W aligned, but turned out to be a break in the construction of a road. Notably, the stones to the S have been pitched against it, in a manner which shows that construction of this section began from N to S. Possibly a culvert through the causeway	b. (003)	le. c. 0.85	Plan 3	-	Medieval Prob. C13	-	29.07.2021
009	structure	Causeway surface. Consisting mostly of quarried limestone slabs, with a few large glacial pebbles lumps of ironstone and crushed ironstone. Soil matrix similar to (004) i.e. mid yellow- sandy clay. Initially thought to be demolition debris of a building.	b. (003) a.(020)	th. up to 0.25m	Plans 3, 4, 5 S4, S5, S6	Pottery: C12 to C14/ late C15 from causeway surface	Medieval Prob. C13/ C14	-	29.07.2021
010	fill	Possible fill of a cut feature [039] in SE corner of site. Mid yellowish-brown silty clay. Lighter than surrounding material into which the feature is cut. Not fully excavated on account of a tree stump	b.(004) a. [039]	de. 0.2m+	S 4, plan 1	Pottery – latest sherd C15	C15 or later	-	29.07.2021
011	structure	Drain (stones of). Stone-lined drain W to E-running drain. Cuts (007). Comprised of material derived from (007). Side stones set on edge with capstones surviving in places. Forks into two (see 012) Cut of drain = [030], fill = (037)	Wi. [030] b. (037), (003)	wid. up to 0.3 le. c. 5m	Plan 4 S2		Post-medieval	-	29.07.2021
012	structure	Drain (stones of). Stone-lined drain SW to NE portion of drain. Side drain off (011). Cuts (007). Comprised of material derived from (007). Side stones set on edge with	Wi. [030] b. (037), (003)	le.< 1m	Plan 4 S2	-	Post-medieval	-	29.07.2021

Context No.	type	Description and Interprétation	relationships	dimensions	drawing	Finds	Suggested period	Soil Sample	Date of record
		capstones surviving in places. E portion has been lost Cut of drain = [030], fill = (037)							
013 void									
014	layer	Subsoil. Visible in section of machine sondage. Mid orange-brown sandy clay with frequent small pebbles, esp. along top of layer. A banked deposit - slopes down to N & W	a.(004) b.(015) c. [030]	th. up to c. 0.26m	Plan 2, S2	-	Late medieval	-	29.07.2021
015	layer	Subsoil. Compact dark orange-brown sandy clay with occasional fragments of small to medium-sized limestone. Visible in S part of E-W section. Probably an accumulation of soil and vegetation alongside former watercourse. C14/ C15 sherd from surface	b.(003) a.(014), (004) cub. [030]	th. c. 0.25 - .0.28m	S2, S3	Pottery: C12 / C13 / C14 C14/ C15	C14/ C15	-	29.07.2021
016	cut	Cut of trackside ditch, W side of road. Steep smooth sides to flat base.	b.(020)c. (024), (038), (019), (005) Co.(017)	Wid. c.1.2m De. c. 0.5m	Plans 2, 4	-	C13/ C14	-	02.08.2021
017	fill	Fill of trackside ditch on W side of road. Mid grey-brown sandy clay with occasional small to medium sized stones. A gley deposit.	b. (020) wi. [016]	de. c. 0.5m	S4	Pottery: C13 & C13/ C14	C13/ C14	①	02.08.2021
018	layer	Upper layer of surface stones to E of road as worked by MDW 02.08.21. Limestone fragment and small pieces of ironstone set in matrix of greyish-brown clay. Layer is equal to (043) in Section 4	b. (004) a. (027)	th. up to 0.25m	Plan 3 S5	Pottery: Late Saxon / early medieval; C12 / C13 & C13/ C14	C14	-	02.08.2021
019	layer	Dark grey brown, compact silty clay. 'wet' soil under (018) as worked by MDW, 02.08.21. This deposit turns out to extend right across the site. Considered to be remains of a marshy landscape next to a	b. (004), (027), (038) a. (005) cub.[016]	th. btwn c.0.25 m & 0.32m	Plan 2, S2, S4	Pottery: possible Roman; C12/ C13 & C13/ C14	C13 & earlier	③	02.08.2021

Context No.	type	Description and Interprétation	relationships	dimensions	drawing	Finds	Suggested period	Soil Sample	Date of record
		stream. Underlies all road layers.							
020	layer	Lower, second level of road-stones, as visible in N-facing Section 4. Dark greenish-brown sandy clay matrix. Some stones laid, others randomly-placed. Clay matrix extends over ditch fill (017)	b.(020) a. (024), (025) cub.[016]	th. gen. up to 0.15m	S4, S6	-	C13	-	03.08.2021
021	layer	Second level of stones (under (009) in trench/section 5	b.(009)	th. up to 0.15m	S5	Pottery: C12 / C13	C12 / C13	-	03.08.2021
022-023	not used	-	-	-	-	-	-	-	-
024	layer	Road construction layer. Medium-sized stones, mostly limestone fragments, some pounded-down/ compacted ironstone	b. (020) a.(038) abt. (025)	th. 0.05m	Plans 2, 4 S4	-	C13	-	03.02.2021
025	layer	Road/track construction layer. Mid orange-brown sandy clay, frequent small to medium-sized stones, limestone fragments, compacted	b. (009) abt. (024) a. (038)	th. gen. 0.06-0.07m	Plans 2, 4 S4, S6	-	C13	-	03.02.2021
026	layer	Mid-grey-brown clay, very claggy, with occasional limestone fragments. Under (009) in SE part of trench. Possibly a repair, though more likely a natural accumulation through erosion. Poss. same as (027)	a.(025), (019), (038) b.(043) cub. [039]	th. up to c.0.4m	Plan 2, S4, S6	Pottery: C12 / C13, C13 / C14	C13/ C14	-	04.08.2021
027	layer	Dark brown clay with occasional fragments of limestone. Poss. same as (026). Possibly a later repair, though more likely a natural accumulation through erosion	b.(018) a.(019) cub. [029]	th. up to 0.15m	S5	Pottery: C12 / C13 to C14/ C15	C13/ C14	-	05.08.2021
028	cut	Possible cut/base of ditch on E side of road. Very indefinable, showing in section only	c. (027) b.(018) co.(029)	De. up to 0.15m	S5	-	Medieval	-	05.08.2021
029	fill	Possible fill of ditch [028]. Lighter than surrounding and underlying soil (027), though same constituents	Wi. [028] b.(018)	th. up to 0.15m	S5	-	“ “ “	-	05.08.2021

Context No.	type	Description and Interprétation	relationships	dimensions	drawing	Finds	Suggested period	Soil Sample	Date of record
030	cut	Cut of drain. Cuts across the road (009). Lined with vertical side slabs of limestone (011) and capped with horizontal slabs. Fill = (037)	Co.(011), (037) c. (015), (014), (004), (009)	De. c. 0.3m wid. c.0.28- 0.32m Le. 7.3m	Plan 4	-	Post-medieval	-	05.08.2021
031	cut	Cut of post-medieval post-hole. Sub-circular	c. (009) co. (032)	Dia. c.0.5m De. c.0.2m	Plan 3	-	Late post-medieval/ modern	-	05.08.2021
032	fill	Fill of a post-hole [031]. Dark brown silty clay, very loose, contains small fragments of coal.	Wi. [031]	th. c.0.2m	Plan 3	Tile/ brick frag, clay tobacco pipe stem	“ “ “	-	05.08.2021
033	cut	Cut of post-medieval post-hole. Sub-rectangular	c. (009) co.(034)	0.25 x 0.1m De. c. 0.15 m	Plan 3	-	Late post-medieval/ modern	-	05.08.2021
034	fill	Fill of post-hole [033]. Dark brown silty clay, very loose, contains small fragments of coal.	Wi. [033]	th. c. 0.15m	Plan 3	-	“ “ “	-	05.08.2021
035	cut	Cut of post-hole, sub-oval	c. (009) co.(036)	0.3m x 0.25m De. 0.15m	Plan 3	-	Late post-medieval/ modern	-	05.08.2021
036	fill	Fill of post-hole [035]. Dark brown silty clay, very loose, contains small fragments of coal.	Wi. [035]	th. 0.15m	Plan 3	-	“ “ “	-	05.08.2021
037	fill	Fill of drain [030] stone-lining = (011)	Wi. (011) b.(003)	th. c. 0.3m	Plan 4	-	Post-medieval	-	05.08.2021
038	layer	Layer under road, part of road foundation. Compact mid greenish brown clay with crushed ironstone fragments. Base layer of road construction. Increases in thickness to the east	cub.[016] b. (024), (025)	Th. gen. c.0.08 - 0.2m	S4, S6	Pottery: Late Saxon / early medieval; C12 / C13, C13 & C13/ C14	C13	-	05.08.2021
039	cut	Possible cut feature of on E side of road. Very indefinite, disturbed by tree roots – only partially visible. Possibly cuts through layer (009)	c. (026) & poss. (009) Co.(010)	De. c. 0.25m	S4	-	Medieval	-	05.08.2021

Context No.	type	Description and Interpretation	relationships	dimensions	drawing	Finds	Suggested period	Soil Sample	Date of record
040	cut	Cut of ditch (segment) on W side of road. Steep smooth sides to flat base. Same construction as [016]	b. (019) c.(041)	De. c.0.5m Wid.c. 1.2m	S7	-	Medieval Prob. C13	-	06.08.2021
041	fill	Homogeneous fill of ditch [040]. Mid grey-brown sandy clay	Wi. [040] b.(004), (020)	th. c.0.5m	S7	Pottery: C10/ C11 & C12/ C13	" " "	②	06.08.2021
042	layer	Compacted ironstone and small (occasional medium) fragments of limestone. Road construction layer exposed (and unexcavated) in Section 5.	b.(009), (004), (018)	Th. U/K	S5		" " "		06.08.2021
043	layer	Causeway surface layer revealed in Section 4. The surface layer of compacted fragments and limestone, and small lumps of ironstone. This in soil matrix of mid yellow- sandy clay. The layer tapers down and thins out to the east. A western extension to the causeway. This layer is probably equal to later (018) in Section 7	b.(003) a.(026) , (009), (020) cub. [039]	Th.c. 0.26 m > c.0.16 m	S4	pottery	C13/C14	-	28.07.2021
044	layer	Same as (043) & (018). Small area exposed ?confirmed between N side of drain [030] and tree stump.	b.(004)	u.k	Plan 4	-	C13/C14	-	05.08.2021

Appendix 2: Medieval Pottery Recovered from the 2020 Test Pits

by Martin Wilson

- 1.1 Layer (103) in Trench 1 produced 20 sherds of medieval unglazed, shelly limestone-tempered coarse-ware (fabric 330), which date from the 12th / 13th century (Table 1). The pieces were generally small in size, with a total weight of 260 g and a minimum vessel count of 9. Surface colour varies from grey or buff to light orange and they have a light grey reduced core. Most sherds are too small to determine vessel forms, although the assemblage includes 5 rim sherds (130 g) from jars and bowls (Fig. 11, 1 - 5). Approximately half of the assemblage has light to medium abrasion, suggesting exposure to the elements, or even re-deposition. An additional sherd of was found at the interface of layer (103) and a probable 17th /18th century layer (102). There are three known production centres of medieval shelly coarse-ware in the southern vicinity of Irchester: Yardley Hastings (Northants), c. 13 km¹³ to the south west; Olney-Hyde (Bucks), c. 13 km to the south-southwest, and; Harrold (Beds) c. 11.5 km to the southeast.
- 1.2 Four sherds of Potterspurry-ware (fabric 329) were recovered from layer (103) (Table 1). These were all unglazed body sherds, of small size, yet seemingly representing four individual vessels; a total weight of 22 g. This type of pottery was being produced in the 13th / 14th century. In addition, two body sherds of medieval sand-tempered, unglazed, coarse-ware (prob. fabric 360) were recovered from layer (103); with an overall weight of 46 g. They derive from two different vessels, probably cooking pots. A further two body sherds of unglazed Potterspurry-ware were recovered from a post-medieval context (102).
- 1.3 In Trench 2, a single body sherd of probable late medieval oxidised ware (c. 14- 15th century) was recovered from a clay layer (204) covering a probable building foundation layer (205/206).

Chronology

- 1.4 The presence of Potterspurry-ware seems to suggest that deposition (i.e. layer 103) took place in the 13th century.

1.5 Table 1. Medieval pottery types and chronology

(Note: Fabric codes used in descriptions refer to the Northamptonshire Type Series).

Context No.	Remarks	Common name	Fabric Code	Period
102	x 2 body sherds, unglazed sand-tempered coarse-ware with reduced core. Abraded. Residual	Potterspurry ware	F.329	C13 – C14
102/103 interface	x 1 body sherd Shell-tempered coarse-ware. Much abraded. Residual.	Shelly coarse-ware	F330	C12 - C13
103	x 14 base & body sherds, x 6 rim sherds. Shell-tempered coarse-ware. Buff to orange-grey, reduced core, some with light to medium abrasion; sherds. Rim sherds comprise: x 3 jars (Fig.11, 1-3) x 2 bowls (Fig. 11, 4 - 5)	Shelly coarse-ware	F330	C12 - C13

¹³ Distances given by former roads

Context No.	Remarks	Common name	Fabric Code	Period
	x 2 body sherds, fine sand inclusions	Sandy coarse-ware	F360	c. C13
	x 4 body sherds, unglazed sand-tempered coarse-ware with reduced core, 3 with sooted outer	Potterspury ware	F.329	C13 – C14
204	X 1 body sherd, lightly abraded, sooted exterior	Late medieval oxidised	F401	C14 – C15

1.6 **Table 2. Medieval Pottery Quantification**

(EMNV= estimated minimum number of vessels)

Context	No. of sherds	Weight (grams)	EMNV
102	1	11	1
102/103 interface	2	7	2
103	26	535	15
204	1	9	1
Totals	30	562	19

Appendix 3: Environmental Samples from the 2020 Test Pits

by Dr John Summers¹⁴

- 1.1 A bulk sample was taken from medieval layer (103) for environmental archaeological assessment. The sample was taken in order to provide further information on the nature of the deposit, and its potential origin and formation.

Methodology

- 1.2 The sample was processed at the Archaeological Solutions Ltd facilities in Bury St. Edmunds using standard flotation methods. The light fraction was washed onto a mesh of 500µm (microns), while the heavy fraction was sieved to 1 mm. The dried light fraction was scanned under a low power stereomicroscope (x 10 - x 30 magnification). Botanical remains were identified and recorded using reference literature (Cappers *et al.* 2006; Jacomet 2006) and a reference collection of modern seeds. The heavy fraction was also sorted for the recovery of archaeological materials. 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

- 1.3 The data from the bulk sample light fraction are presented in Table 1. Material recovered from the heavy fraction is detailed in Table 2. Preservation of plant remains was by carbonisation only, with no evidence of anaerobic water-logging or mineralisation. A small number of terrestrial mollusc shells and bone fragments were present, which may have been influenced by the free-draining nature of the sediment. A significant number of modern rootlets dominated the light fraction and, although every effort was made to disaggregate the root masses, some items may have been obscured and overlooked.
- 1.4 The sample contained a significant number of carbonised plant macrofossil remains, with cereal grains being overwhelmingly dominant. Wheat grains, many of which were identifiable as free-threshing type wheat (*Triticum aestivum/ turgidum* type), were most numerous. A small number of free-threshing type wheat rachis internodes were also present but were too fragmentary to identify to species. Barley, including a number of hulled grains (*Hordeum* sp.), were also numerous, followed by a smaller number of oat grains (*Avena* sp.) and two rye grains (*Secale cereale*). As noted, a small number of wheat rachis internodes were present, along with two cereal-sized culm nodes (straw). However, the number of chaff elements was low and likely to indicate predominantly clean grain in the deposit. In addition to cereals were seven pea/ bean seeds (large *Fabaceae*), although preservation was insufficient for precise identification.
- 1.5 The remaining non-cereal *taxa* were largely those that are likely to have grown as arable weeds. These included vetch/ tare (*Vicia/ Lathyrus* sp.), medick-type (*Medicago* sp. type), common chickweed (*Stellaria media*), dock (*Rumex* sp.), red bartsia (*Odontites vernus*), plantain (*Plantago* sp.), stinking chamomile (*Anthemis cotula*) and wild grasses (*Poaceae*). These are likely to be associated with the cereal and pulse crops. The number of non-cereal arable weed seeds was considerably lower than the number of cereal grains and again suggests a deposit of predominantly clean grain. Common vetch (*Vicia sativa*) was a common fodder crop during the medieval period (e.g. Moffett 2006) but precise identification of the medium-seeded legumes in the sample was not possible.

¹⁴ Archaeological Solutions Ltd, Bury St Edmunds

- 1.6 The plant macrofossils in the sample are indicative of domestic material, most likely culinary waste. The predominance of wheat, which was the primary bread grain of the medieval period (e.g. Stone 2006), further supports this hypothesis. Other remains in the deposit included oak (*Quercus* sp.) charcoal, which is likely to represent fuel debris. Remains of coal and clinker (coal ash) were also present, which is perhaps less consistent with a 12th - 13th century date and may suggest the intermixing of post-medieval material in the deposit. How this may have affected the composition of the carbonised plant macrofossil assemblage is uncertain because medieval and pre-industrial post-medieval arable economies can be quite similar, especially when seen only as carbonised debris. The remains of fish bone in the light fraction and a small number of other bone fragments from the heavy fraction would also suggest the presence of domestic culinary waste. An iron nail and a small amount of slag were also recorded in the heavy fraction (Table 2).

Conclusions

- 1.7 The carbonised plant remains from layer (103) were dominated by carbonised cereal grains, in particular those of free-threshing type wheat (likely bread wheat). The dominance of cereal grains and pulses, and the associated limited presence of chaff and arable weed seeds indicate a deposit of primarily clean grain from a domestic origin. The remains are consistent with the medieval date, although the presence of coal and coal ash may indicate intermixing of later material. It is difficult to separate medieval and pre-industrial post-medieval arable economies using carbonised remains, particularly a single grain-dominated deposit such as this.
- 1.8 When considered in combination with the presence of fuel residues (charcoal, coal and clinker) and the small amount of bone, the remains in the sample indicate the deposition of domestic refuse, with an emphasis on debris from food preparation activities. As noted above, there were very few shells from terrestrial molluscs in the sample and it would seem likely that the deposit was unfavourable for the preservation of calcium based materials (i.e. bone and shell). It is probable that such remains are under-represented within this deposit, most likely due to its free-draining composition, which could have caused mineral leaching.

1.9 Table 1: Results from the bulk sample light fraction

Abbreviations: HB = hulled barley (*Hordeum* sp.); Hord = barley (*Hordeum* sp.); FTW = free-threshing type wheat (*Triticum aestivum/ turgidum*); Trit = wheat (*Triticum* sp.); Oat (*Avena* sp.); Rye (*Secale cereale*); NFI = not formally identified (indeterminate cereal grain). X - present, XX - common, XXX - abundant.

Context	Description	Spot date	Volume taken (litres)	Volume processed (litres)	% processed	Flot (ml)	Cereals			Non-cereal taxa		Charcoal		Molluscs		Contaminants					Other remains
							Cereal grains	Cereal chaff	Notes	Seeds	Notes	Charcoal>2mm	Notes	Molluscs	Notes	Roots	Molluscs	Modern seeds	Insects	Earthworm capsules	
103	Layer	C12 - C13	40	40	100	104	XXX	X	HB (11), Hord (22), FTW (74), Trit (84), Oat (16), Rye (2), NFI (75), FTW rachis (2), Culm (2)	XX	Large Fabaceae (7), <i>Vicia/Lathyrus</i> sp. (2), Medium Fabaceae (5), <i>Medicago</i> sp. type (5), <i>Stellaria media</i> (1), <i>Rumex</i> sp. (1), <i>Odontites vernus</i> (1), <i>Plantago</i> sp. (1), <i>Anthemis cotula</i> (1), Large Poaceae (4), Medium Poaceae (1), Small Poaceae (2)	XX	<i>Quercus</i> sp.	X	<i>Vallonia</i> sp.	XXX	X	-	-	-	Fish bone (X), Coal (XX), Clinker (XX)

1.10 **Table 2: Archaeological remains in the heavy fraction**

Sample	Context	Pot Qty	Pot (g)	A. Bone (g)	Other (g)
1	103	6	34	9	Fe Nail - 5g Slag - 62g