



KDK ARCHAEOLOGY LTD

Archaeological Strip, Map and Sample Report

Chamberlains Barn Quarry
Leighton Buzzard
Bedfordshire



Quality Check

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Summary

In September 2017 KDK Archaeology Ltd undertook a Strip, Map and Sample Excavation at Chamberlains Barn Quarry, Leighton Buzzard, Bedfordshire following several phases of archaeological evaluation on the site, which has been granted planning consent for mixed use development (CB/11/01937/OUT). A geophysical survey undertaken within the development area had suggested a number of anomalies of potential archaeological interest (Stratascan 2008). In response to these findings an Archaeological Evaluation was conducted in 2016 which uncovered a suspected medieval triple ditched enclosure (Headland Archaeology 2017a). The Strip, Map and Sample Excavation undertaken by KDK Archaeology revealed a wide but not particularly deep, probably late medieval or early post-medieval ditch, that had subsequently been re-cut and later still consolidated with a post-medieval land drain. A series of ditches and gullies were also present, though other potential features identified in the geophysics survey proved to be variations in the natural geology.

1 Introduction

1.1 In September 2017 KDK Archaeology Ltd undertook a programme of Strip, Map and Sample excavation of Chamberlains Barn Quarry, Leighton Buzzard, Bedfordshire. The project was commissioned by Arnold White Estates, and was carried out according to a Written Scheme of Investigation (WSI) prepared by KDK (Barclay-Jones 2017), and approved by Hannah Firth, Archaeological Advisor (AA) to the Local Planning Authority (LPA), Central Bedfordshire Council Archaeology Team (CBCAT). The relevant planning application reference is CB/11/01937/OUT.

1.2 *Planning Background*

This project has been required under the terms of National Planning Policy Framework (NPPF) in order to inform development proposals.

1.3 *The Site*

Location

The site is located in Leighton Buzzard, in the civil parish of Leighton-Linslade, and the administrative district of Central Bedfordshire. It lies at National Grid Reference (NGR) SP 92580 26746 (Fig. 1).

Description

The site forms an irregular pentagon in shape, sloping from the north to the west and southeast. It is bounded to the east and south by open ground and hedgelines to the north and west (Fig. 2).

Geology & Topography

The geology of the site consists of bedrock of Gault Clay in the north and east parts of the site, while the south and west areas have a bedrock of sandstone, from the Woburn Sands Formation. There are no recorded overlying deposits at the site (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).

Development

The planning application covers a mixed use development including up to 950 dwellings, a site for a lower school, a local centre comprising retail and community uses, informal open space and country park, incorporating allotments, orchards, new tree and shrub planting, and play areas, and a new halt for the Narrow Gauge Railway. This project relates to the play area on the western side of the site only.

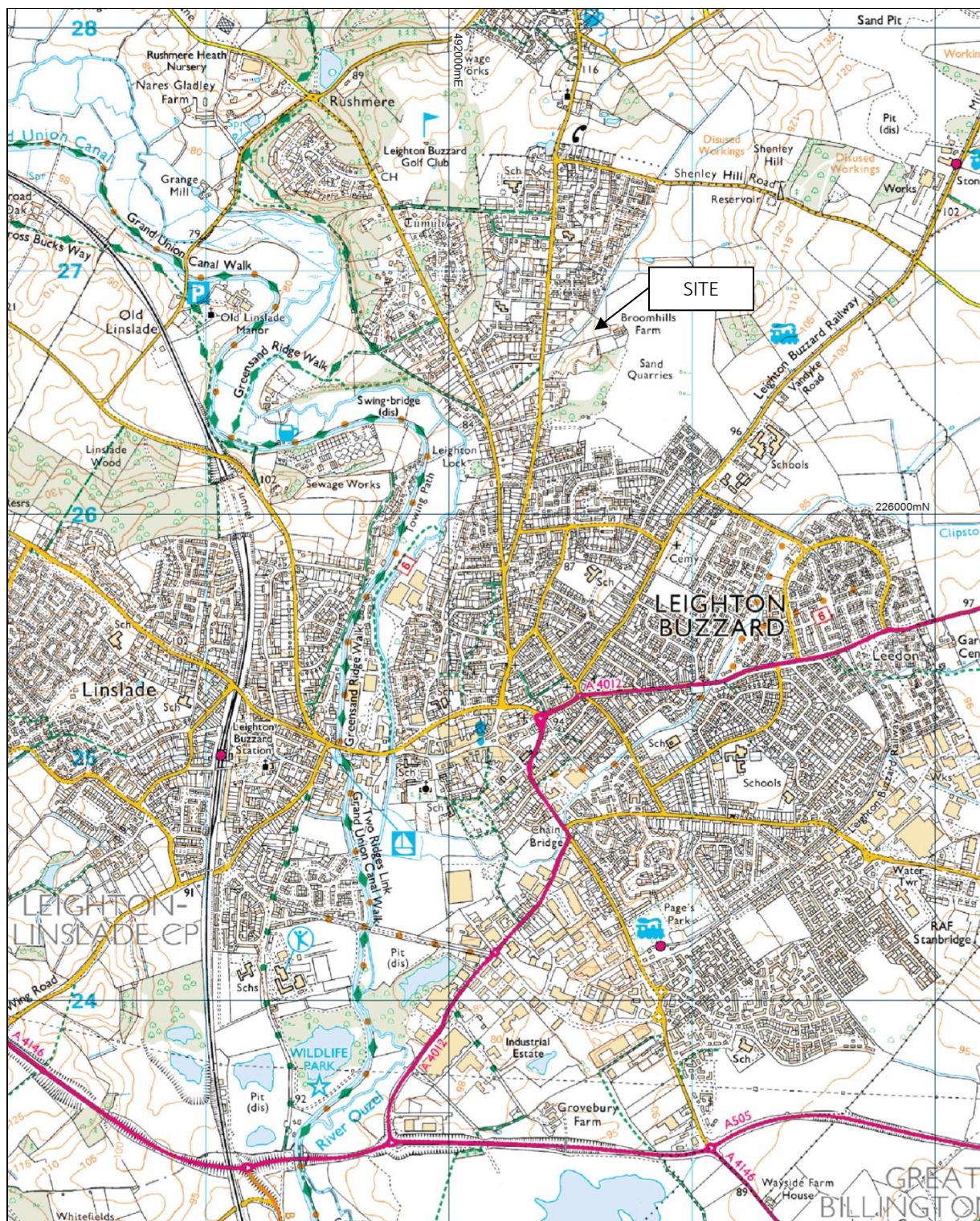


Figure 1: General location (scale 1:25,000)

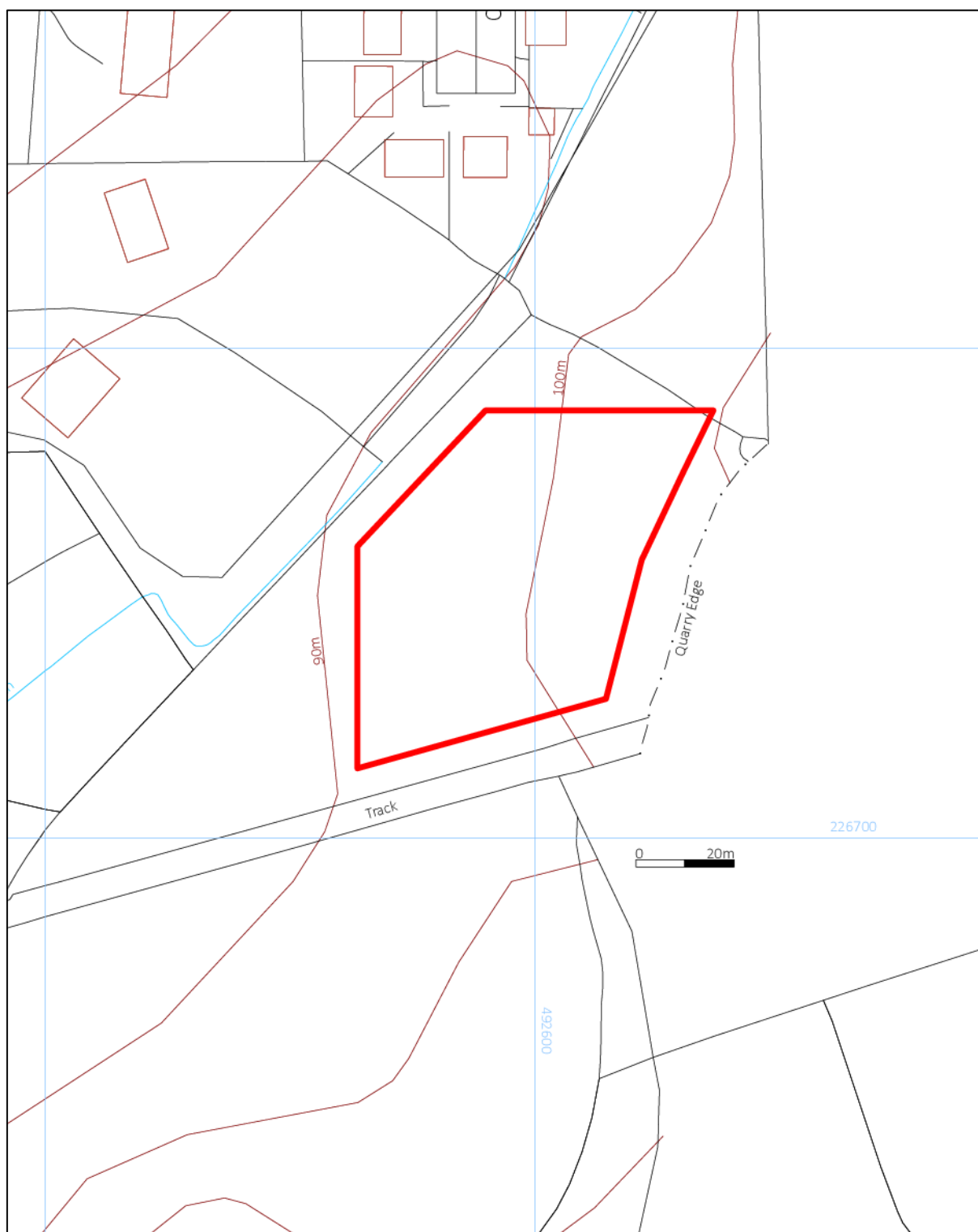


Figure 2: Site location (scale 1:1250)



2 Aims & Methods

2.1 The aims of this project as defined in the approved WSI (Barclay-Jones 2017) were:

- To establish the date, nature and extent of activity or occupation within the development area
- To establish the relationship of any remains found to the surrounding contemporary landscape
- To recover palaeo-environmental remains to determine local environmental conditions.

In addition, the following regional research objectives were considered:

- Understanding landscape development and settlement patterns, the relationship between settlement and enclosure (Going and Plouviez 2000, 21 and Oake et al 2007, 11 - 12) and the ritual codes underlying the later prehistoric and Roman periods are regional archaeological research objectives (Oake et al 2007, 12 and Medlycott 2011, 48).
- The investigation of rural Saxon and medieval settlements to examine diversity, characterise settlement forms and understand how they appear, grow, shift and disappear (Wade 2000, 24-25, Oake 2007, 14 and Medlycott 2011, 70).
- It is also recognised that while Bedfordshire has a number of early Saxon cemeteries the majority were not excavated under modern conditions and many (include those at Chamberlains Barn) can at best be described as “salvage excavations”. As a result there is little information on the context of these important sites and the finds recovered from them or the organisation of the cemeteries themselves. Therefore, opportunity to investigate a possible early Saxon cemetery and its landscape context was of considerable importance (Oake 2007, 13).

2.2 Methods

In line with the requirements of the brief, the methods used were as follows:

- The open area excavation concentrated on a 0.4h area around Trenches 11 and 12 from Headland Archaeology’s 2016 evaluation (Headland 2017a) and incorporated nearby anomalies identified in the programme of geophysics carried out on the site in 2008 (Stratascan 2008) (Fig. 3).

2.3 Standards

The work conformed to the following requirements:

- The design brief
- The relevant sections of the Chartered Institute for Archaeologists’ *Standard & Guidance Notes* (CIfA 2014)
- The Chartered Institute for Archaeologists’ *Code of Conduct* (CIfA 2014)
- Current English Heritage guidelines (HE 2015, EH 2008)
- The Association of Local Government Archaeological Officers East of England Region *Standards for Field Archaeology in the East of England* (ALGAO 2003)



3 Archaeological and Historical Background

3.1 *Introduction*

Chamberlains Barn sand quarry site has been operated by J. Arnold & Sons Limited since c1860, having been founded by John Arnold. After his death in 1880, Arnold's three sons, Joseph, John Alfred and George took over the running of the company. The brothers also owned another quarry in Flitwick between 1902 and 1922, but after Joseph's death in 1911 the firm was run by his two sons Albert and Ernest, becoming Joseph Arnold & Sons in 1918, and a limited company in 1937.

A large proportion of the area has been quarried, but there remains undisturbed land on the periphery, part of which forms the land parcel related to this planning consent. The development site lies within a landscape that has produced archaeological remains dating from the prehistoric through to the post medieval periods.

There have been several stages of archaeological investigation of the site starting with a geophysical survey of 240 hectares (Stratascan 2008). This identified various features of probable archaeological origin (EBD 1056).

In 2012 Albion Archaeology carried out a 12 trench evaluation of the north-eastern side of the quarry site. Three boreholes were also sunk into the present area of investigation in order to assess the depth and nature of the deposits overlying the natural geology (Albion Archaeology 2012).

Most of the trenches produced negative results or evidence for medieval and post-medieval agricultural cultivation practises. The exception was Trench 12 which was targeted on a geophysics anomaly and indicates it was a prehistoric double ditched enclosure (HER 19594). Early Iron Age pottery was recovered from three excavated slots in the feature, which may have represented either the remains of funerary monument or something more ritualistic in nature.

Two further evaluations were undertaken in 2016 on the remaining parts of the development site, which included some targeting of geophysical anomalies that had not been investigated in 2012. Of the twenty-eight trenches opened, half contained archaeological remains. The majority of the remains recorded were of medieval and post-medieval agricultural features (Headland Archaeology 2017a and 2017b). However, Trenches 11 and 12 were located in the current area of investigation on the western side of the quarry site, and contained what has been interpreted as a medieval banked enclosure and associated ditches, dated to the later medieval period (Fig. 3).

This section has been compiled with information from Central Bedfordshire HER (search no. 201718/141, Fig. 4), KDK's own library and reliable online sources.

3.2 *Prehistoric-Roman* (before 600BC – c.AD 450)

The very earliest people to use this landscape are represented by scattered finds of Palaeolithic flints, found during clay and gravel extraction near Leighton Buzzard. This was followed by Mesolithic settlement at the Grove Priory site (HER 3289), two kilometres south of the town. This multi-phase site also contained a Neolithic 'Beaker' settlement and additional Neolithic material has come from around find spots and excavations around the town (Albion Archaeology 2005: 13). Three Bronze Age barrows have been identified, all approximately two kilometres from the town centre (HER 2). A few Iron Age coins have been found, and there is one Roman burial and some scattered Roman pottery, but in general, it appears that the area had only limited use during the Iron Age and Roman periods.



An early Iron Age double ditch enclosure was recorded on the northeast side of Chamberlains Barn quarry during an evaluation in 2012 (Albion 2012). The feature consisted of an approximately 63m diameter, fragmentary outer ditch and a 50m inner ditch which was possibly dual-phased in construction (HER 19594).

Saxon (c.450 - 1066)

By the Saxon period (c.450-1066), more people began to settle in the area of Leighton Buzzard. The town is situated near several ancient trade routes, such as Roman Watling Street. The *Salt Way*, also known as the *Thioweg* or *Theed Way*, crossed the River Ousel at *Yttingaford* (HER 10843). The *Theed Way* is believed to be a Neolithic routeway that diverged from the Icknield Way just north of Luton. It is known to have been important in the Saxon and medieval periods, when it was used to transport salt from East Anglia and formed the boundary of a number of parishes and townships in Bedfordshire.

Yttingaford is associated with Linslade, which lies opposite Leighton Buzzard on the River Ousel. According to the Anglo Saxon Chronicle for 906, Edward the Elder made peace with the Danes at *Yttingaford* (cf <http://omacl.org/Anglo/part2.html>).

By the end of the Saxon period, the Royal Manor of Leighton is recorded in the Domesday Survey in the Hundred of Manshead. It was a 30 hide estate in 1066 but in 1086 it had 47 hides (4 held by the church) with arable land for 55 ploughs, meadowland for 47 plough teams, woodland for 100 swine and two mills. The Leighton Buzzard market was already attached to the manor in 1086 and remained a part of the manor (Page 1912). The whereabouts of the Saxon manorial centre is not currently known, but the church may have been on the same spot as the surviving 13th century structure.

In the 1880s, several Anglo-Saxon cremation burials were discovered at Deadman's Slade, about 500m to the north-west of Chamberlains Barn (Hyslop 1963: 162), where in the 1930s, two Anglo-Saxon cemeteries (HER 3) were uncovered during sand-quarrying. The cemeteries were found just to the south of the development site, and consisted of a large number of inhumation burials and three cremations (EBD 1336). They were excavated between 1931 and 1936 in an attempt to preserve the information before the site was destroyed by commercial operations (Hyslop 1963: 161). They were carried out largely by one man Frederick Gurney, who recovered grave goods which included, amongst other items, buckles and knives, glass beads, an iron shield boss, pottery, spindle whorls and necklaces made from of silver rings tied together and strung with beads.

3.3 **Medieval** (1066-1500)

In the latter part of the 12th century, the Royal Manor of Leighton was granted to the abbey of Fontevrault, who founded a priory at Grovebury, south of the town. The town also has a connection to Lincoln Cathedral, as a prebend supporting the canon of the cathedral (Page 1912).

It has been suggested that Leighton Buzzard was re-organized in the 12th century with the creation of a Y-shaped formation of streets, with the High Street, North Street and Lake Street, funnelling traffic to the triangular market place. This formed the basis of the modern town layout.

This prosperous market was encircled by large common fields, some of whose field names survive on 19th century maps (e.g. 'Town Land'). Medieval iron smelting also took place outside the north end of the town (HER 10845). An area of ridge and furrow (HER 2589) also survives in the southern part of the town, near Tiddenfoot, and a large area of uncultivated



open heathland (The Heath; HER 11095) remained in the northern part of the town (to the north-west of the development site) until the mid-19th century when it was finally sold and developed.

Several archaeological interventions in the medieval core of the town have retrieved finds, along with a few pit/ditch features but no structural evidence (Albion Archaeology 2006; Murray 2000); antiquarian finds of a 15th century coin hoard have also been made in High Street (HER 11067). A recent open area excavation at 16 North Street revealed four north to south orientated ditches and three pits. All were interpreted as relating to phases of late Saxo-Norman to early medieval activity (Morgan-Shelbourne 2014).

The quarry site has yielded evidence of medieval or post-medieval ridge and furrow (EBD 1308 & 1025) and what has been interpreted as a later medieval banked enclosure and associated ditches are located within the current area of investigation (Headland Archaeology 2017a). Pottery was recovered from the material making up the bank.

3.4 *Post-Medieval* (1500-1900)

During the post-medieval period, the centre of town remained the medieval core, but development spread to the northwest by the 18th century. West Street (originally called Friday Street) seems to have originated in the last half of the 18th century and first half of the 19th century. Jeffrey's Map of 1765 shows buildings along the streets forming the Y-shaped centre of the town, and spreading out from the centre onto the frontages of North End (now North Street), High Street and West Street. The area north and west of West Street was still open countryside as far as Leighton Mills and the River Ouzel.

A great deal of damage to the centre of Leighton Buzzard was caused by a great fire in 1645, when the Parliamentary Army was encamped in the town (Page 1912) and only scant remains of settlement features and structures have come to light in archaeological works in the town centre in recent decades (Albion Archaeology 2006; Murray 2000).

The economy of Leighton Buzzard continued to be dependent on agriculture well into the post-medieval period. Early maps show that the area around the development site were agricultural fields through the mid-late 19th century, including a large Town Field just south of the site. By the 19th century, however, other industries developed in Leighton Buzzard. These include Iron production, straw plaiting, brick making and basket making, and there was extensive trade due to the town's location on the Grand Junction canal (<http://www.leightonlinlade-tc.gov.uk/your-town/history/>).

3.5 *Previous Archaeological Investigations*

The first phase was a geophysical survey, which identified several potential archaeological features (Stratscan 2008), and an archaeological evaluation was conducted in response to these findings in 2016 (Headland Archaeology 2017a). This exercise uncovered a number of linear features interpreted as a series of medieval enclosure ditches and a bank; however, the investigation outlined within this Strip, Map and Record programme has shown the interpretation concluded in the trial trenching to be incorrect placing the features observed firmly in the post-medieval period. Furthermore, the archaeological features identified in the geophysical survey appear to be anomalies caused by the natural geology (i.e. the bands of ironstone).

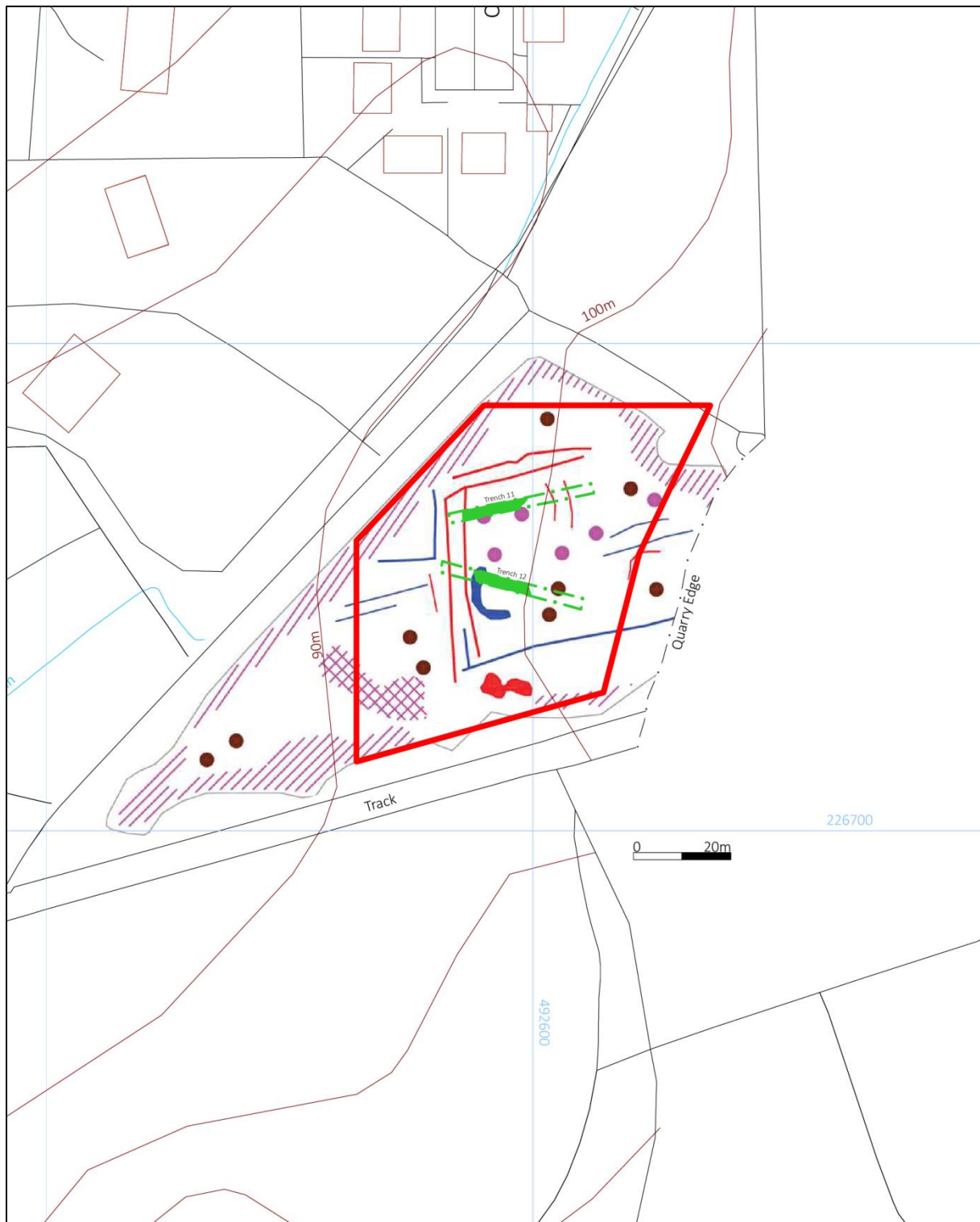
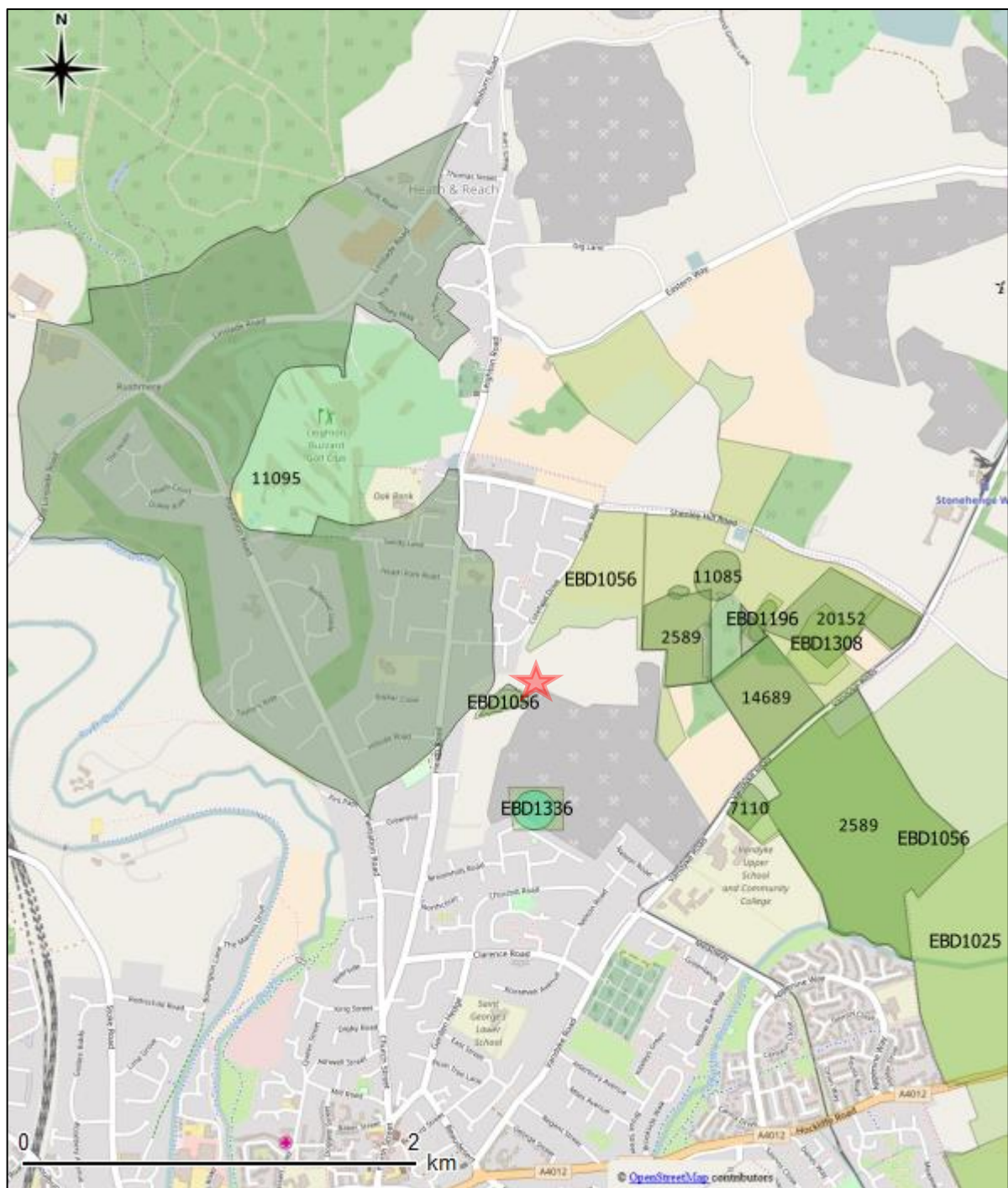


Figure 3: Previous geophysics and evaluation trenches (scale 1:1250)





4 Results

4.1 *Site Stripping*

An area of 2758 sq m was mechanically stripped of topsoil and overburden (Plates 1-3). This was done under close archaeological supervision, as required in the brief, using a 23 tonne machine fitted with a toothless ditching bucket. The stratigraphy encountered comprised:

- Topsoil. Mid brownish grey very loose sandy loam. This contained occasional sub-angular stones and flecks of charcoal. Iron and CBM were recovered from this layer. The depth of this layer varied between 0.15-0.28m in depth.
- Subsoil. Mid brownish grey, slightly clayey sand, which contained occasional flecks of charcoal as well as rounded and sub-angular stones. Subsoil was not present consistently throughout the site whereas elsewhere it reached a depth of 0.35m (Fig. 5, Plate 4)

The underlying natural strata varied greatly throughout the site. The primary natural comprised loose sand (003) in various shades of yellow, brown and orange. In addition, large deposits of ironstone (004) were present. The ironstone was observed throughout the site appearing as large lenses which became more prevalent to the southwest of the site. The excavated area had also been affected heavily by rooting and animal activity. This, combined with the varying composition of the natural made many of the features difficult to see in plan and several sondages were dug in order to locate and chase features

4.2 *Sampling Strategy*

The sampling strategy was carried out in accordance with the WSI. The only variation was that, with the agreement of the AA, a final slot was not excavated across the land drain as it had already been comprehensively characterised and site conditions were deteriorating.

4.3 *Description*

Group [060]: This group of ditch cuts formed the principal feature on this site. They were recorded in 5 slots excavated across its width and consisted of [010], [013], [017], [019], [030], [031], [035], [049], [053], [055], and [057]-[059] (Fig. 6).

The widest part of the group was formed by cuts [013], [017], [031], [035], [049], [053], [055], [057] and [058] which were all related to a wide but not particularly deep ditch orientated approximately north-south and present across the entire site. It varied in width from 0.76 to 1.23m and was up to 0.36 in depth, though it was irregular in section, suggesting it may have been re-cut at some point in order to deepen it. This was best seen in Slot 4 (Plate 5). However, there was no supporting evidence of this either within the fills or the recovered artefacts. Most of the variation within the fills was a result of different types of material making up the backfill. It is likely that the ditch and its probable re-cut were open at the same time and backfilled as a single event, with mid brown silty clay or yellowish brown sandy clay, within contexts (015), (019), (020), (034), (036), (052), (054), (056) and (059). A fragment of clay-pipe was recovered from this ditch as well as modern CBM.

Land Drain: A land drain formed part of Group [060] and was recorded in Slots 1, 2, 4 and 5. Slot 3 was not fully excavated but the drain was present both to the north and to the south. It was orientated north-south and probably terminated in a small stream to the north of the current land boundary (Figs. 6-11; Plate 6-9).



The cut for the drain was steep or sheer sided, though still clearly dug by hand, and the structure of the pipes themselves consisted of hand-made ceramic horse-shoe shaped tiles 0.31m wide and 0.14m high. The backfill within these cuts was mainly a mid-orangey brown slightly clayey sand, which was in large part redeposited natural geology.

The pipes were stacked in a pyramid formation, the lower course resting on an intermittent layer of flat ceramic tiles. The land drain was post-medieval in date and post-medieval pottery and a piece of clay-pipe were recovered from the fill. Modern and late-medieval CBM was also recovered.

Ditch [044]: A 1.08m wide ditch orientated north-south was observed towards the centre of the site (Fig.9; Plate 7-8). The cut contained a single fill (045) which produced fragments of possible Romano-British roof tile and several fragments of daub. It is possible that this feature widens and deepens to join either Ditch [024] or Ditch [022] to the north.

Ditch [022]: This small ditch, c.0.76m wide and 0.25m deep, was visible 0.66m to the east of the land drain, and could be most clearly seen in the north and south facing baulk (Fig.10; Plate 9-10). A similar shaped feature was observed to the north by Headland Archaeology and it is possibly picked up again in the slot to the south [050]; however, by this point the ditch became very shallow and possibly terminated. No datable material was recovered from within the fill.

Ditch [024]: Ditch [022] cut and ran parallel to larger ditch [024] to the east. (Fig.10; Plate 9-10). Once more it was orientated north-south and was picked up in the evaluation trench to the north. The ditch, which measured 0.84m in width and 0.33m in depth, contained three fills, (026), (027) and (028), none of which produced datable material.

Gully [005]: A narrow gully, 0.23m in width and 0.09m in depth, and orientated north northwest- south southeast was observed to the east of the ditches (Fig.14; Plate 11-12). Due to site and geological conditions the full extent of the feature is unknown. No dating material was recovered from within the fill.

Gullies [039] and [042]: Two narrow gullies were observed running parallel to the land drain (Fig.13; Plate 13-16). They were orientated roughly north-south and contained a stony fill not observed elsewhere on site. As with Gully [005] its fully extent could not be traced, but they were at least 6 metres long and very shallow. A single piece of degraded animal tooth was recovered from the fill of [039]. Like the land drain, these features were orientated towards the small stream to the north of the site and it is most likely that these gullies were used for drainage purposes.



Plate 1: Aerial photograph of site



Plate 2: Overview of site looking northeast



Plate 3: Overview of site looking southwest



Plate 4: Site stratigraphy

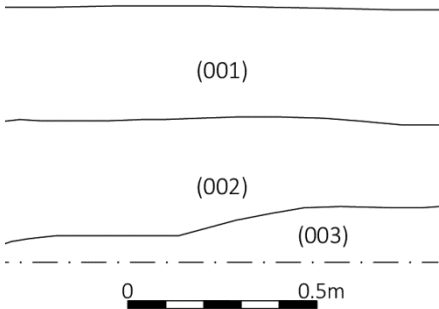


Figure 5: Representative stratigraphy (scale 1:20)



Plate 5: Land drain cut through ditches



Plate 6: Slot 1 south facing section of Land Drain



Plate 7: Slot 3, Land Drain looking east



Plate 8: Slot 3 south facing section



Plate 9: Slot 4, Land Drain and Ditches [017], [022] and [024] looking north



Plate 10: Slot 4. [022] and [024] south facing section



Plate 11: Gully [005] facing east



Plate 12: South southeast facing section of [005]



Plate 13: Gullies [039] and [043] facing south



Plate 14: Gully [039] facing west



Plate 15: North facing section of [039]



Plate 16: Gully [043] facing west



Plate 17: North facing section of [043]

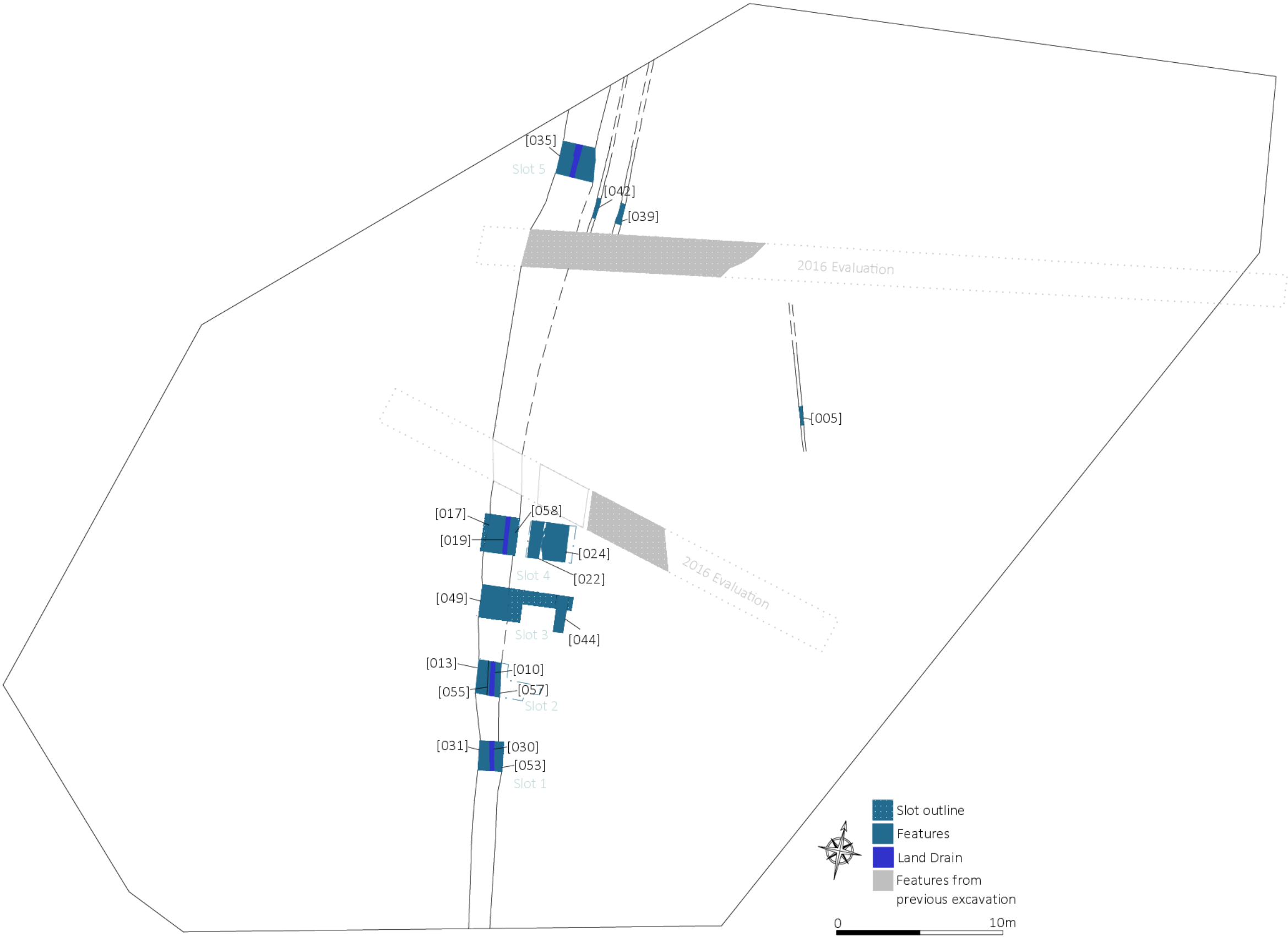


Figure 6: Feature location plan (scale 1:250)

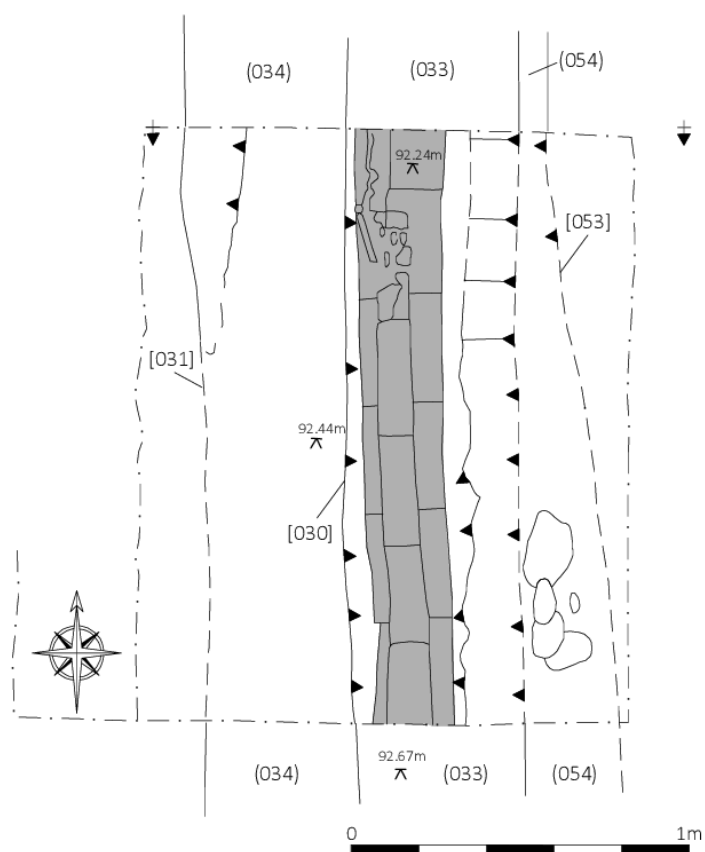
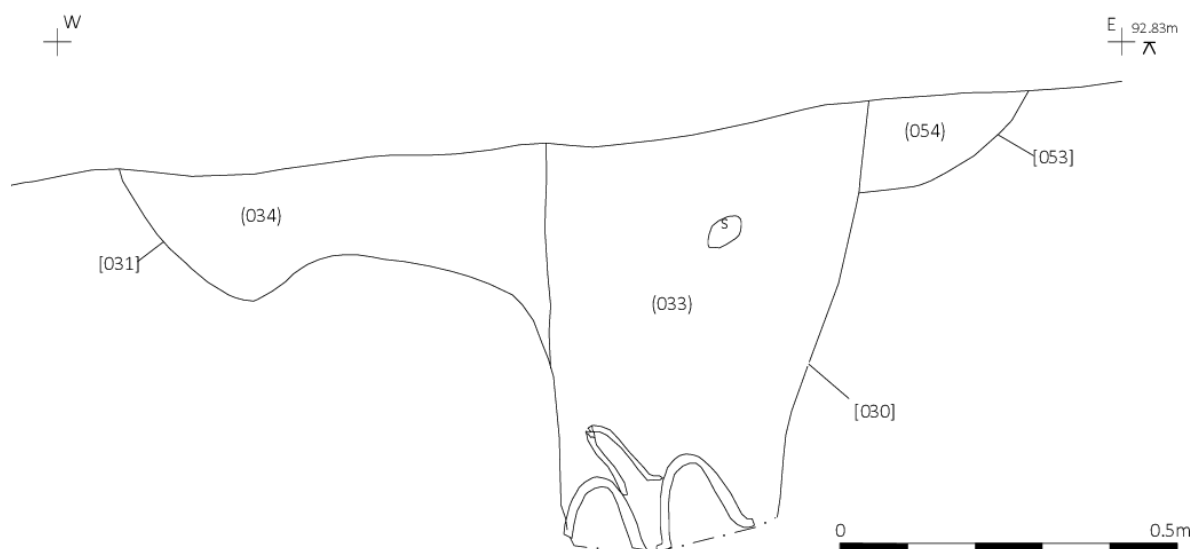


Figure 7: Slot 1 section (scale 1:10) and plan (scale 1:20)

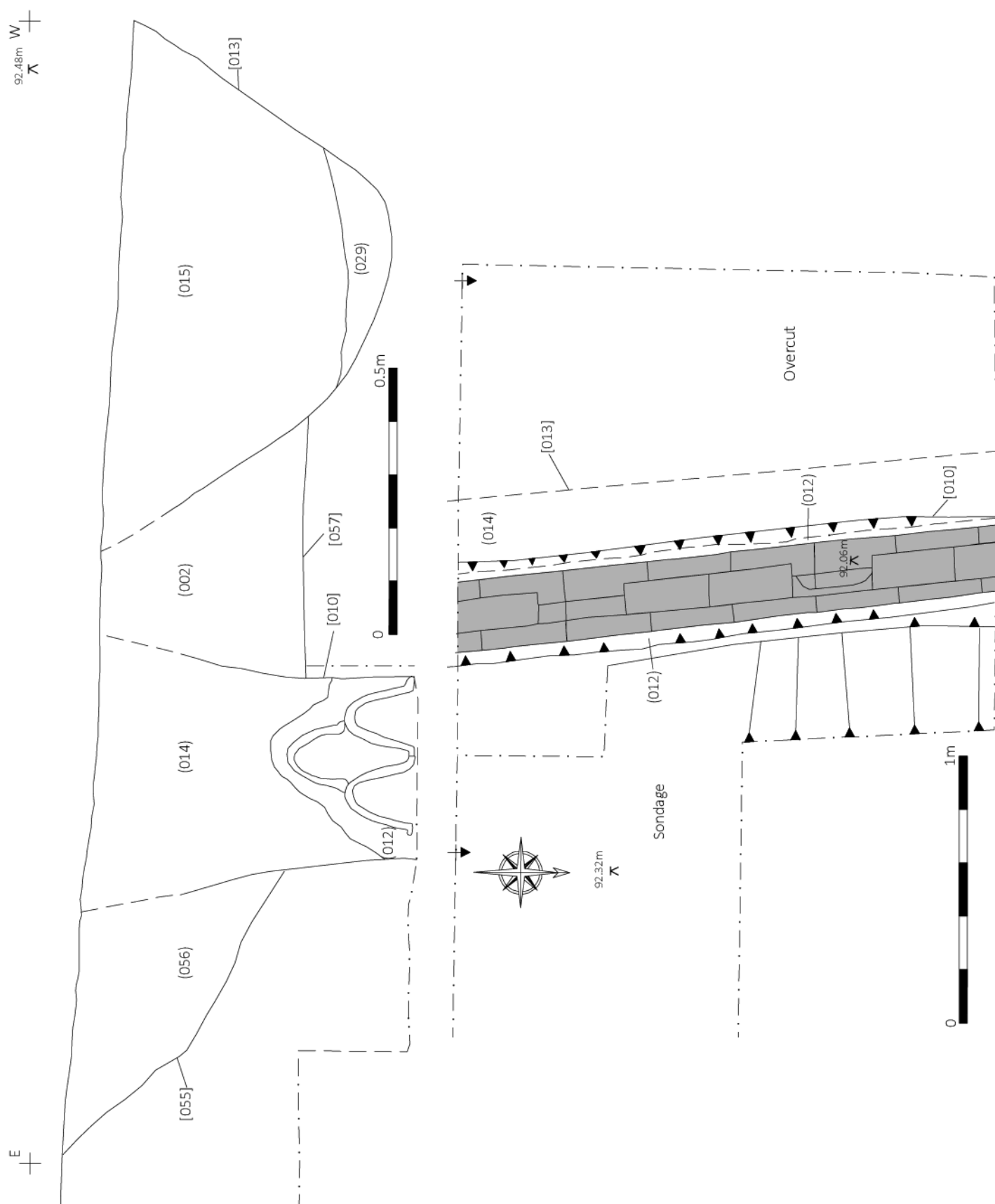
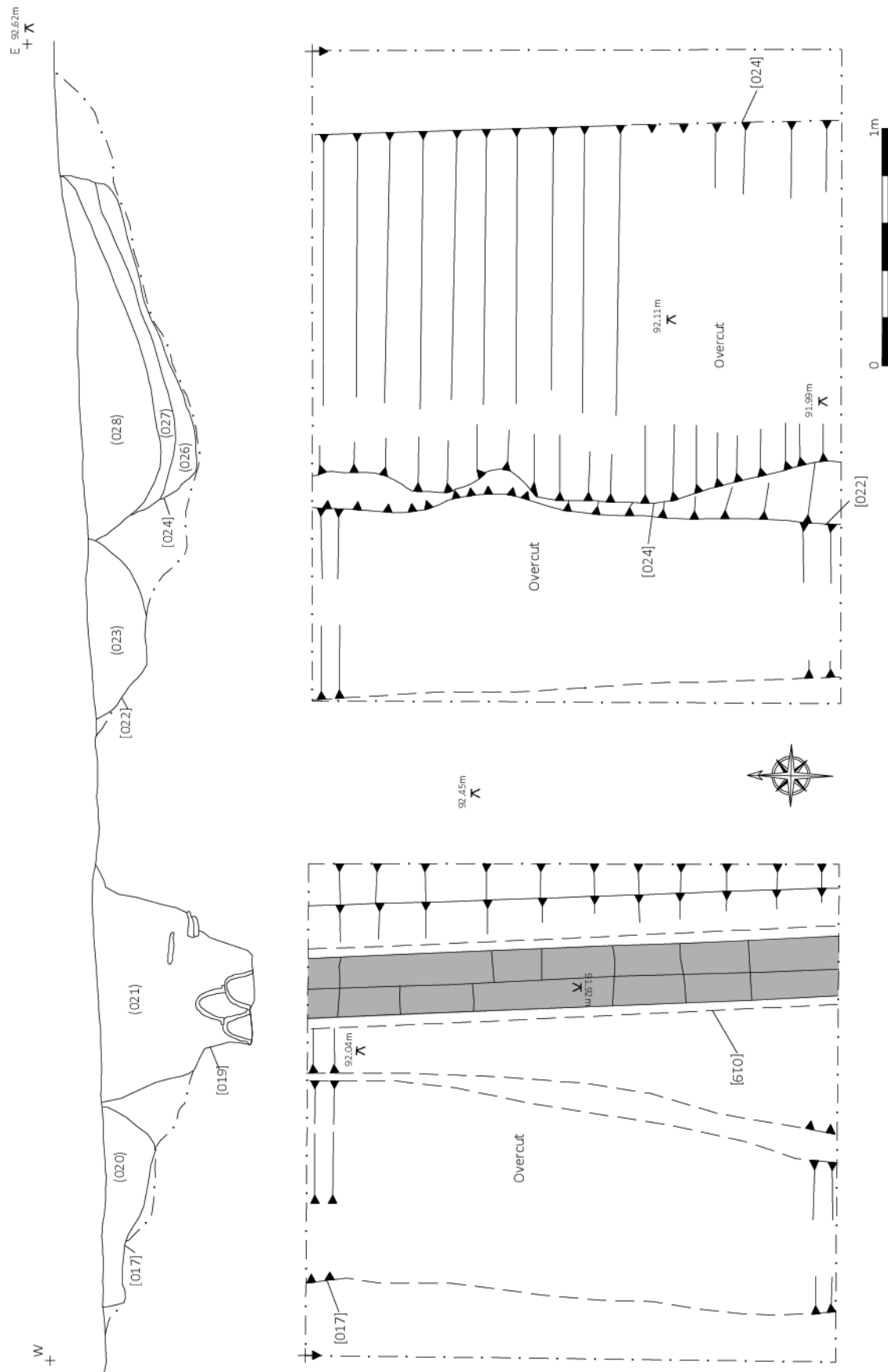
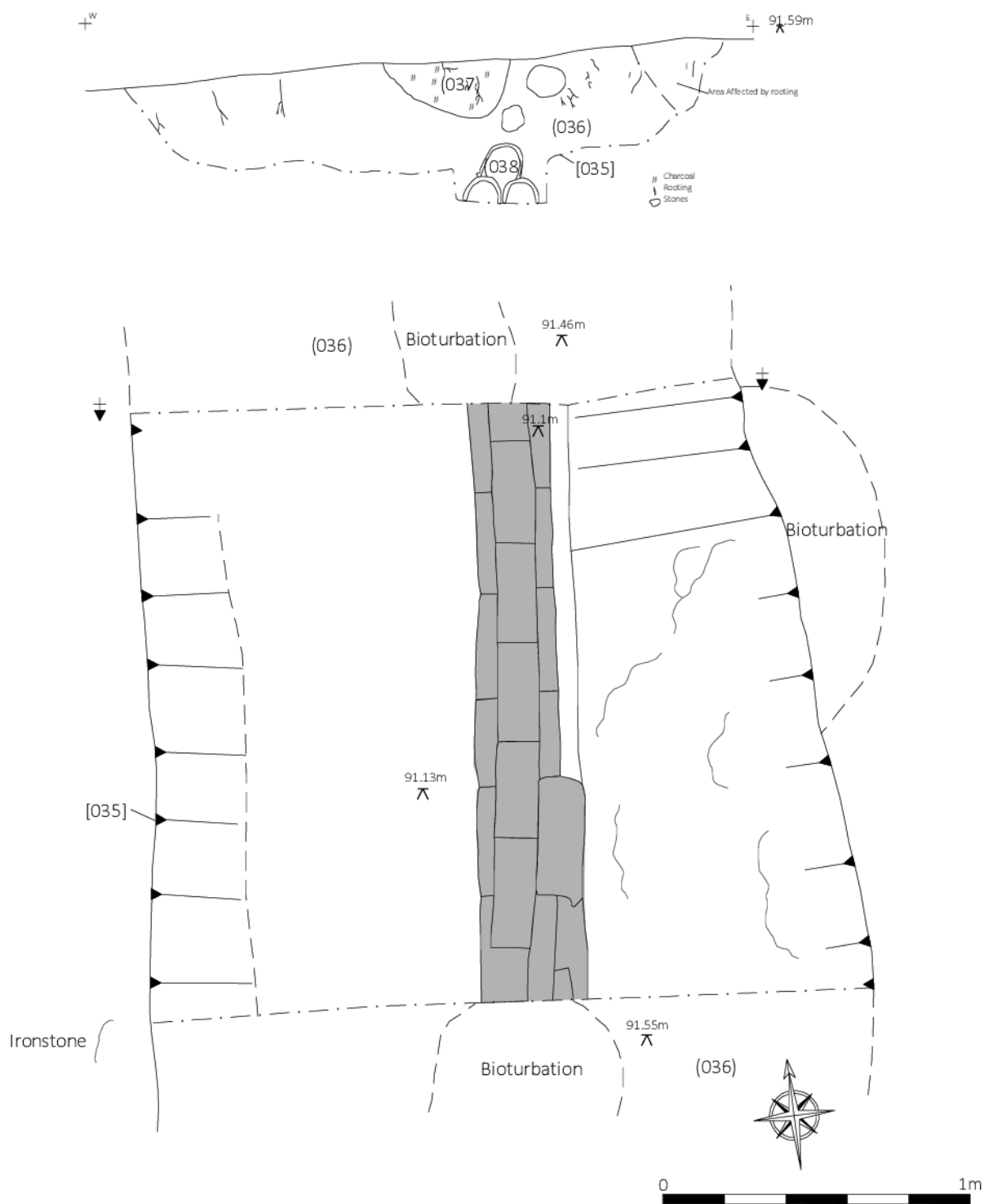


Figure 8: Slot 2 section (scale 1:10) and plan (scale 1:20)



Figure 9: Slot 3 sections (scale 1:25)





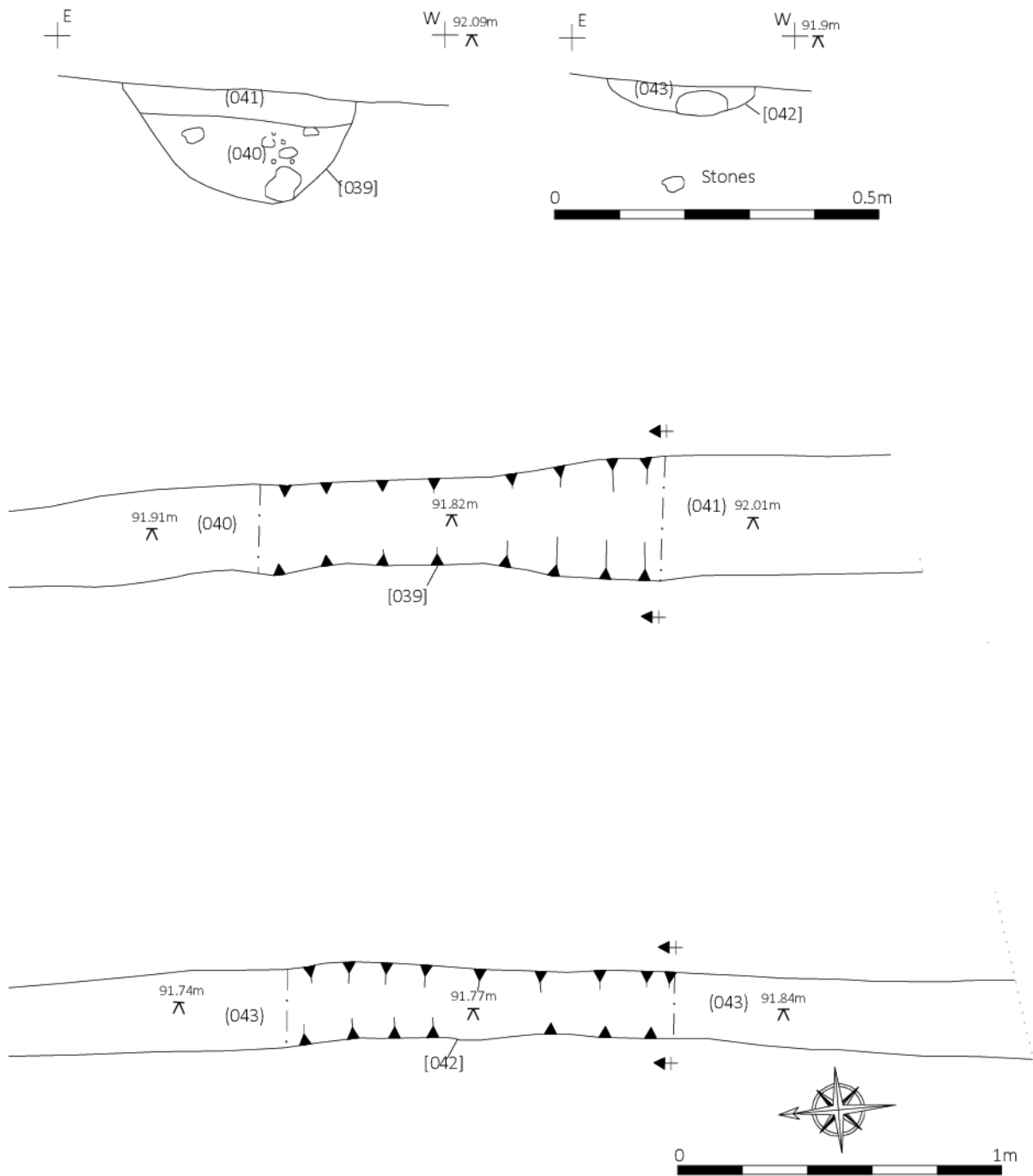
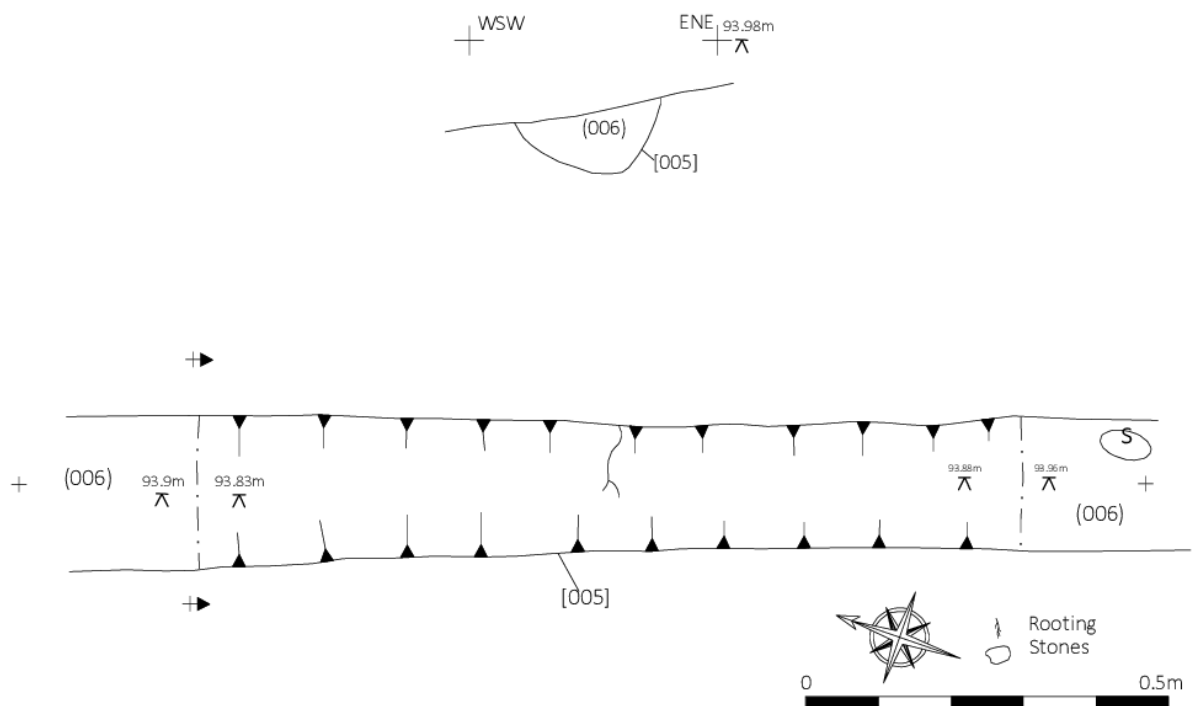


Figure 12: Gullies [039] and [042] Section (scale 1:10) and plan (1:20)





5 Conclusions

The principal feature on the site was Ditch Group [060] which was a late medieval or early post-medieval shallow boundary or drainage ditch which had subsequently been re-cut to deepen it, and later still consolidated with the addition of a land drain that appeared to be present throughout its length. It is unclear why this drain was not recorded during the evaluation despite the cut of the earlier ditch being noted (Headland Archaeology 2017a).

The topography of the site as a whole effectively forms a gradual funnel, focussed at a point approximately three quarters of the length along the ditch from the southern end, thereby forming a natural location for a drainage ditch.

The topography may also have led to the formation of a colluvial deposition both within the ditch and immediately adjacent to it, perhaps taking on the form of a subsoil. It is possible that a combination of this colluvium and a degree of under-machining during the evaluation, led to the conclusion that there was a bank and ditch enclosure. No traces of a bank were observed during the current project, either during the site stripping or the excavation itself.

All the features uncovered were aligned approximately north-south and heading towards the small stream beyond the northern boundary of the site. This could suggest that the ditches and gullies were probably contemporary and all related to water management on the site.



6 Acknowledgements

KDK Archaeology is grateful to Ian Foll for commissioning this report on behalf of Arnold White Estates. Thanks are also due to Sam Mellonie for providing historic environment records and other relevant documents and to Hannah Firth of Central Bedfordshire Council for monitoring the project.

We would also like to thank Ian Foll, Richard Endley and Pete Wood of Fox (Owmby) Limited for their hospitality and assistance on site as well as Jamie and Sam who assisted with the site stripping.

The fieldwork was carried out by Laura Dodd MSc, Barney King, Cameron Kaye BA, Christopher Martin-Taylor BA, Derek Watson PhD and Jeffery Lansdown. The report was written by Laura Dodd MSc, and edited by Karin Kaye MA MCIfA.



7 Archive

7.1 The project archive will comprise:

1. Brief
2. Written Scheme of Investigation
3. Initial report
4. Monitoring sheets
5. Site drawings
6. Client's site plans
7. List of photographs
8. B/W prints & negatives
9. Specialist reports
10. CDROM with copies of all digital files.

7.2 The archive will be deposited with Luton Culture (Accession entry number: 1314).



8 References

Standards & Specifications

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Appendix 1: Excavation Summary Tables

Context Register

Context	Type	Dimensions (m) (Width, Length, Depth)			Description
001	Layer	-	-	Varies	Topsoil Covers entire site. Varies in size between 0.15-0.28m. Contained Iron, CBM and modern pottery.
002	Fill	Varies	Varies	Varies	Ditch fill from Cuts [013], [017], [031], [035], & [049]
003	Layer	-	-	-	Natural geology present across the site. This comprised a mixed brown and orange loose sand which contained a moderate number of ironstone pieces and occasional rounded stones
004	Layer	-	-	-	Secondary natural. Large lenses of ironstone. Visible in patches throughout the trench but more concentrated to the north west.
005	Cut	0.23	1.15	0.09	Cut of linear feature. Narrow gully with no observable termini. True length undetermined. Drone photo shows the feature continuing into the northern baulk, however, this cannot be seen at ground level.
006	Fill	0.23	1.15	0.09	Only fill of gully [005]. The fill had been affected heavily by rooting which has caused the natural geology to become contaminated with flecks of charcoal. CBM was present in large fragments and in flecks. Heavily degraded ironstone also present.
007-009	-	-	-	-	Voided contexts
010	Cut	0.46	2.00	>0.60	Trench cut for land drain [011]. Filled by (012). Runs the length of the excavated area and is orientated N-S.
011	Masonry	0.14	0.31	0.14	North-south aligned land drain constructed of hand-made ceramic clay pipes that were horse-shoe shaped and measured 0.31m long by 0.14m wide and 0.14m high. The pipes were stacked in a pyramid formation with one on top and two below which rested on flat rectangular ceramic tile spacers.
012	Fill	0.36	>2.04	0.3	Lower (primary) fill of [010] and packing/sealant for 011 land drain.
013	Cut	0.76	>2	0.36	Cut of possible gully. Filled by (015) and (029). Only partially exposed in trench, and only seen in sections.
014	Fill	0.46	>2	>0.60	Upper fill of cut [010]. Similar to the fills within the other slots of Ditch 1. Contained post-medieval material.
015	Fill	0.61	>0.32	0.18	Upper fill of Ditch [013]. Contained a number of CBM pieces, the latest of which was modern.
016	-	-	-	-	Context voided
017	Cut	0.84	>2	0.23	Ditch to the west of Land Drain [118]. Part of Ditch 2.
018	Masonry	0.14	0.31	0.14	Land drain in slot 4. See [011] for details.
019	Cut	1.47	>2	0.67	Fill of ditch containing land drain 018. Identical to (020) but includes more ironstone pieces. Post medieval finds recovered from fill.
020	Fill	0.84	>2m	0.23	Fill of gully to the west of [118]. Contained modern CBM.
021	Fill	1.47	>2m	0.67	Fill of ditch containing land drain 018. Identical to (020) but includes more ironstone pieces. Post medieval finds recovered from fill.
022	Cut	0.76	>2	0.25	Cut of ditch which runs parallel to other gullies. Possibly cuts (028) to the east but this relationship is unclear.
023	Fill	0.76	>2	0.25	Fill of Ditch [022] to the west of ditch [024]. The relationship of the ditches is unclear.



Context	Type	Dimensions (m) (Width, Length, Depth)			Description
024	Cut	0.84	>2	0.33	Cut of ditch. Orientated north south with steep sides and a sloped base. Contained three fills (026), (027) and (028)
025	-	-	-	-	Context voided
026	Fill	1.35	>2	0.10	Primary fill of ditch [024]. Contained large ironstone pieces which can be found in the natural below. Appears to be natural silting of the ditch.
027	Fill	0.84	>2	0.07	Secondary fill of ditch [024]. Contained some rooting and large ironstone pieces. Appeared to be natural silting of ditch.
028	Fill	0.84	>2	0.33	Tertiary fill of ditch [024]. Contained post med material. Some rooting and large ironstone pieces. Cut by ditch [022].
029	Fill	0.76	>2	0.06	Lower fill of Ditch[013]. Appears to be natural silting.
030	Cut	0.45	>1.77	~0.56	Cut for land drain [032]. Possibly a narrower re-cut, as appears to be cut into fill (034) which lies in cut [031].
031	Cut	~1.23	>2	~0.19	Indistinct cut extending N-S across land drain (032). Possible earlier ditch, however, could also be caused by natural processes as the sides and base are unconvincing in plan and section.
032	Masonry	0.14	0.31	0.14	Land drain in slot 1. See [011] for details
033	Fill	0.45	>1.77	~0.56	Only fill of [030]. Contained post medieval material including modern CBM and an iron object.
034	Fill	~1.23	>2	~0.19	Fill of Ditch [031]. Cut by [030]. The fill is fairly homogenous in regards to the natural sand although appears 'dirtier' making the extent difficult to determine. Contained small flecks of CBM.
035	Cut	2.36	>2	0.47	Cut of large ditch which runs N-S through the whole site. 49.48m of the ditch is visible within the area of excavation. Contains hand-made post-medieval land drain.
036	Fill	2.36	>2	0.47	Primary fill of ditch [035]. Contained occasional ironstone pieces. Animal bone and post-med pottery and possible late medieval CBM pieces were also observed. Land drain within fill.
037	Fill	2.36	>2	0.18	Secondary fill of ditch [035]. Contained flecks of CBM.
038	Masonry	0.14	0.31	0.14	Land drain in slot 5. See [011] for details
039	Cut	0.39	>1.24	0.17	Cut of a narrow stony gully which runs N-S in the northern part of the site. The gully is at least 6 metres long and runs parallel to a second stony gully [042].
040	Fill	0.39	>1.24	0.12	Primary gravelly fill of gully [039] contained degraded animal tooth.
041	Fill	0.39	-	0.05	Possible sub soil on top of 040. Not visible to north of slot. No inclusions and very shallow. Full extent is unknown.
042	Cut	0.22	>1.20	0.05	Cut of a narrow stony gully which runs N-S in the northern part of the site. The gully is at least 6 metres long and runs parallel to a second stony gully [039].
043	Fill	0.22	>1.20	0.05	Gravelly fill of gully [042]. Identical to (040).
044	Cut	1.08	>2	0.36	Ditch cut. Quite wide and deep. Runs parallel to land drain [049]. Extent is unknown as the fill was homogenous with the surrounding natural.
045	Fill	1.08	>2	0.23	Fill of ditch [044]. Homogeneous. Relatively deep and wide, no imbrication evident in section, but frequent <0.04 rounded (some angular) pebbles at base in revealed planform channel. Contained some possible Romano-British CBM
046	Deposit	-	-	-	Poorly cemented ironstone deposit, iron oxide rich/stained. Not fully revealed in plan or section. Natural formation which can be seen in bands across the site. Same as (004).
047	Fill	0.84	>1.96	unknown	Unexcavated section of Land Drain. Evident in plan. Not visible in section as below excavated depth.
048	-	-	-	-	Voided context



Context	Type	Dimensions (m) (Width, Length, Depth)			Description
049	Cut	0.52	>1.96	Unknown	Cut for land drain. Unexcavated. Evident in plan. Cuts ironstone
050 -051	-	-	-	-	Voided context
051	Fill	0.15	3.3	0.09	Fill of gully [050].
052	Layer	>5	>2	>0.27	Probable subsoil, truncated by site clearance. Only notable difference to (002) is it is not greyish in hue. Contained post-medieval CBM and pottery
053	Cut	>0.23	>2	>0.14	Probably same ditch cut as [031]
054	Fill	>0.23	>2	>0.14	Fill of [053]. Probably same ditch fill as (002)
055	Cut	>0.46	>2	>0.4	Probably same ditch cut as [013]
056	Fill	>0.46	>2	>0.4	Fill of [053]. Probably same ditch fill as (002)
057	Cut	>0.49	>2	>0.39	Ditch cut filled by (002). Probably the same as [055]
058	Cut	>0.38	>2	>0.36	Ditch cut. Probably the same as [017]
059	Fill	>0.38	>2	>0.36	Fill of Ditch [058]. Probably the same as [020]
060	Group				Slots [013], [017] & [031]

Plan Register

Sheet No	Drawing No	Scale	Details
1	2	1:10	Plan of [005]
1	4	1:10	Plan of [007] Bioturbation
2	7	1:10	Land drain [011]
4	15	1:20	Plan of [035], [039] and [042]
5	17	1:20	[019], [022], [024], [044] and [049]
6	18	1:20	[013] and [010]
6	19	1:20	[030], [031] and [032]

Section Register

Sheet No	Drawing No	Scale	Contexts
1	1	1:10	SSE facing section of [005]
1	3	1:10	NW facing section of [007]
1	5	1:10	N facing section of [010], [011] and [013]
1	6	1:10	S facing section of [010], [011] and [013]
3	8	1:10	S facing section [018], [017] [022] and [024]
3	9	1:10	N facing section [018], [017] [022] and [024]
2	10	1:10	S facing section of [032]
3	11	1:10	S facing section of [038] and [035]
3	12	1:10	N facing section [039]
3	13	1:10	N facing section [042]
3	14	1:10	S facing section of [044], [049], [050]
2	16	1:10	S facing section of [032], [030], [031]



Appendix 2: Finds Concordances

Context	Pottery		Bone		CBM		Iron Objects		Shell		Other	
	No.	Wt (g)	No.	Wt (g)	No.	Wt (g)	No.	Wt(g)	No.	Wt(g)	Type	No/Wt(g)
002	2	5	1	16	13	692	49	1729	4	20	Metal Button	2/12
											Chalk	1/161
											Clay-pipe	4/11
015					30	550					Clay-pipe	1/2
020					2	33						
033					1	302	1	67				
036	2	9			18	53	1	340			Clay-pipe	1/2
040			1	1								
045					5	44						
052					15	199						
Total	4	14	2	17	84	1873	2	407	4	20		9/188



Appendix 3: Photograph List

Shot	B&W	DSLR	View	Subject
1	23/115	4368	NE	Trench overall
2	-	4369	NE	Trench overall
3	22/115	4370	SW	Trench overall
4	-	4371	SSW	Trench overall
5	21/115	4372	ENE	Gully [005]
6	20/115	4374	NNW	South southeast facing section of [005]
7	19/115	4375	SE	Posthole/Bioturbation [007]
8	18/115	4376	SE	[007] Northwest facing section
9	-	4379	E	Land drain [011]
10	15/115	4380	N	[017], [018] and [019]. South facing section
11	14/115	4381	N	[022] and [024] South facing section
12	13/115	4382	S	[022] and [024] North facing section
13	12/115	4383	S	[017], [018] and [019] North facing section
14	11/115	4384	N	[017], [018], [019], [022] and [024]. South facing section
15	10/115	4385	N	Overview [010], [011] and [013]
16	9/115	4386	S	Overview [010], [011] and [013]
17	8/115	4387	E	Land drain [011]
18	-	4388	N	[030] [031] and [032] South facing section
19	7/115	4389	N	[030] [031] and [032] South facing section
20	6/115	4390	E	[035] and [038] overall
21	5/115	4392	N	[035] and [038] South facing section
22	4/115	4395	SSE	[039] and [043]
23	3/115	4396	W	[039] overall
24	2/115	4397	s	[039] North facing section
25	1/115	4398	W	[043] overall
26	35/134	4399	S	[043] North facing section
27	-	4400	N	Land drain [049] gully [050]
28	34/134	4401	N	Land drain [049] gully [050]. S facing section
29	33/134	4402	N	Gully [045] South facing section
30	32/134	4003	N	Land drain [049] gully [050]. South facing section
31	-	4365	WNW	Stratigraphy 2 lower trench.
32	-	4366	WNW	Stratigraphy 2 lower trench
33	-	4367	ESE	Stratigraphy 1 upper trench



Appendix 4: Pottery and CBM Report

Paul Blinkhorn

The pottery assemblage comprised 3 sherds with a total weight of 28g. It is all post-medieval, and was recorded using the conventions of the Bedfordshire County Archaeology Service type-series (eg Baker and Hassall 1977), as follows:

P01: Glazed Red Earthenware, 16th – 18th century. 2 sherds, 19g.

P03: Black-glazed Earthenware, late 16th – 19th century. 1 sherd, 9g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 1. Each date should be regarded as a *terminus post quem*. Both the fabric types are well-known in the region. The sherd of P03 is from an externally glazed jar, while those of P01 are both from internally glazed bowls. This is typical of both traditions. All the sherds are abraded to some degree.

Table 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

	P01		P03		
Cntxt	No	Wt	No	Wt	Date
36			1	9	L16thC
52	2	19			16thC
Total	2	19	1	9	

CBM

A variety of brick, tile and daub was noted. The occurrence is shown in Table 2. Each date should be regarded as a *terminus post quem*.

Context 15 produced a broad spread of material. The piece of brick does not survive to its full thickness, but appears to be hand-made and post-medieval. The seven small fragments of tile consisted of one rather abraded, small piece (15g) in a soft reddish fabric with mica and clay pellets which is probably Romano-British, another (12g) with a calcareous fabric which is 10mm thick and of medieval date, four (76g) in a hard, red, sandy fabric which is of late medieval or early post-medieval date, and a final fragment (12g) which is of fairly recent date.

The fragment of floor tile from context 52 is medieval. It has a orange-red sandy fabric, survives to 110mm in width and is 24mm thick. The upper surface is extremely worn, and no glaze survives other than traces of a green, copper-rich type which survives in some of the pitting at the edge. This suggests that it is probably of 15th – 16th century date. The same context produced a fragment of 16th – 17th century pottery, and a small piece of 120mm thick, hard, sandy, red roof-tile which is probably of a similar date. A single fragment (20g) of tile in the late medieval sandy fabric also occurred in context 20, along with a small piece of a modern example (12g)

The two small fragments of tile from context 36 are also in the late medieval sandy fabric. They are 11mm thick and 14mm thick respectively. The single small fragment of tile from context 45 is somewhat abraded, and does not survive to its full thickness, but is relatively soft fired and most likely to be Romano-British.

All the daub was in a sandy fabric, and generally burnt to a reddish colour. None of it exhibited any surfaces or withy impressions.



Table 2: CBM occurrence by number and weight (in g) of fragments per context by type

	Floor Tile		Roof Tile		Burnt Daub		Brick		
Cntxt	No	Wt	No	Wt	No	Wt	No	Wt	Date
15			7	127	1	35	1	81	MOD
20			2	32					MOD
33							1	302	MOD
36			2	56	31	218			LMED?
45			1	9	4	35			RB?
52	1	135	1	22	11	41			16thC
Total	1	135	13	246	47	329	2	383	

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Appendix 5: OASIS and Site Data

PROJECT DETAILS			
Project Name & Address	Chamberlains Barn Quarry, Leighton Buzzard, Bedfordshire	Project Site Code	319/LBC
OASIS reference	Kdkarcha1-293277	Event/Accession no	1314
OS reference	SP 93018 26760	Study area size	2758 sq m
Project Type	Strip Map and Record	Height (mAOD)	90-100
Short Description	<p><i>In September 2017 KDK Archaeology Ltd undertook a Strip, Map and Sample Excavation at Chamberlains Barn Quarry, Leighton Buzzard, Bedfordshire following several phases of archaeological evaluation on the site, which has been granted planning consent for mixed use development (CB/11/01937/OUT). A geophysical survey undertaken within the development area had suggested a number of anomalies of potential archaeological interest (Stratascan 2008). In response to these findings an Archaeological Evaluation was conducted in 2016 which uncovered a suspected medieval triple ditched enclosure (Headland Archaeology 2017a). The Strip, Map and Sample Excavation undertaken by KDK Archaeology revealed a wide but not particularly deep, probably late medieval or early post-medieval ditch, that had subsequently been re-cut and later still consolidated with a post-medieval land drain. A series of ditches and gullies were also present, though other potential features identified in the geophysics survey proved to be variations in the natural geology.</i></p>		
Previous work	Evaluation (Albion and Headland) Geophysics	Site status	None
Planning proposal	Construction of an adventure playground	Current land use	Disused quarry, arable, pasture and scrub/woodland
Local Planning Authority	Central Bedfordshire Council	Planning application ref.	CB/11/01937/OUT CB/11/01937/FUL
Monument type	Land drain. Ditches and Gullies	Monument period	Post- medieval
Significant finds	None	Future work	Unknown
PROJECT CREATORS			
Organisation	KDK Archaeology Ltd		
Project Brief originator	Hannah Firth, CBC	Project Design originator	KDK Archaeology Ltd
Project Manager	David Kaye BA ACIfA	Director/Supervisor	Laura Dodd MSc
Sponsor/funding body	Arnold White Estates		
PROJECT DATE			
Start date	04.09.17	End date	27.09.17
PROJECT ARCHIVES			
	Location	Content (eg. pottery, animal bone, files/sheets)	
Physical	Luton Culture 1314	Pottery, animal bone, CBM, Iron objects	
Paper		WSI, Report, site records, B&W photographs and negatives	
Digital		CD containing all digital files	
BIBLIOGRAPHY (Journal/monograph, published or forthcoming, or unpublished client report)			
Title	Archaeological Strip, Map and Sample Report: Chamberlains Barn Quarry, Leighton Buzzard, Bedfordshire		
Serial title & volume	319/LBC/2		
Author(s)	Laura Dodd MSc		
Page nos	36	Date	02.11.17