

ARCHAEOLOGICAL EVALUATION REPORT

SCCAS REPORT No. 2010/028

Pakefield Middle School and Pakefield Primary School, Lowestoft LWT 169 and 170

S. Cass
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HER Information

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Summary

An archaeological evaluation was carried out on land at Pakefield Middle School and Pakefield Primary School between the 25th and 29th January 2010. A total of 18 trenches was excavated, with one trench being abandoned due to access issues and the presence of underground services. A number of features of archaeological significance were located, mostly towards the eastern side of the current Middle School playing field, with a single large feature towards the western side of the playing field. Dateable features relating to both the Neolithic and Roman periods were identified, alongside several undated features. No archaeology was observed in the trenches at the Primary School, although there were several live services which prevented much of the trenching from reaching natural geological or archaeological layers.

1. Introduction

An archaeological evaluation was undertaken on land at Pakefield Middle and Primary Schools in January 2010 as part of the design phase of planned schools re-organisation in the area. Planning permission is to be sought for the demolition of the existing Middle School and the erection of a new High School on the site, extending south through the majority of the playing field in that direction. The opportunity was taken to carry out an evaluation on a related scheme of work to enlarge the facilities at the adjacent Primary School at the same time.

2. Geology and topography

The site lies on a generally flat area, with a rise from approximately 12m AOD at the northern edge of the school property to just over 15m AOD at the southernmost extent. Currently the site is in use as playing fields for the Middle School, with the area involved in the Primary School development centred around and between existing buildings and hard play areas. More generally, the site lies on the southern edge of the residential zone south of Lowestoft proper, with an industrial area to the southwest.

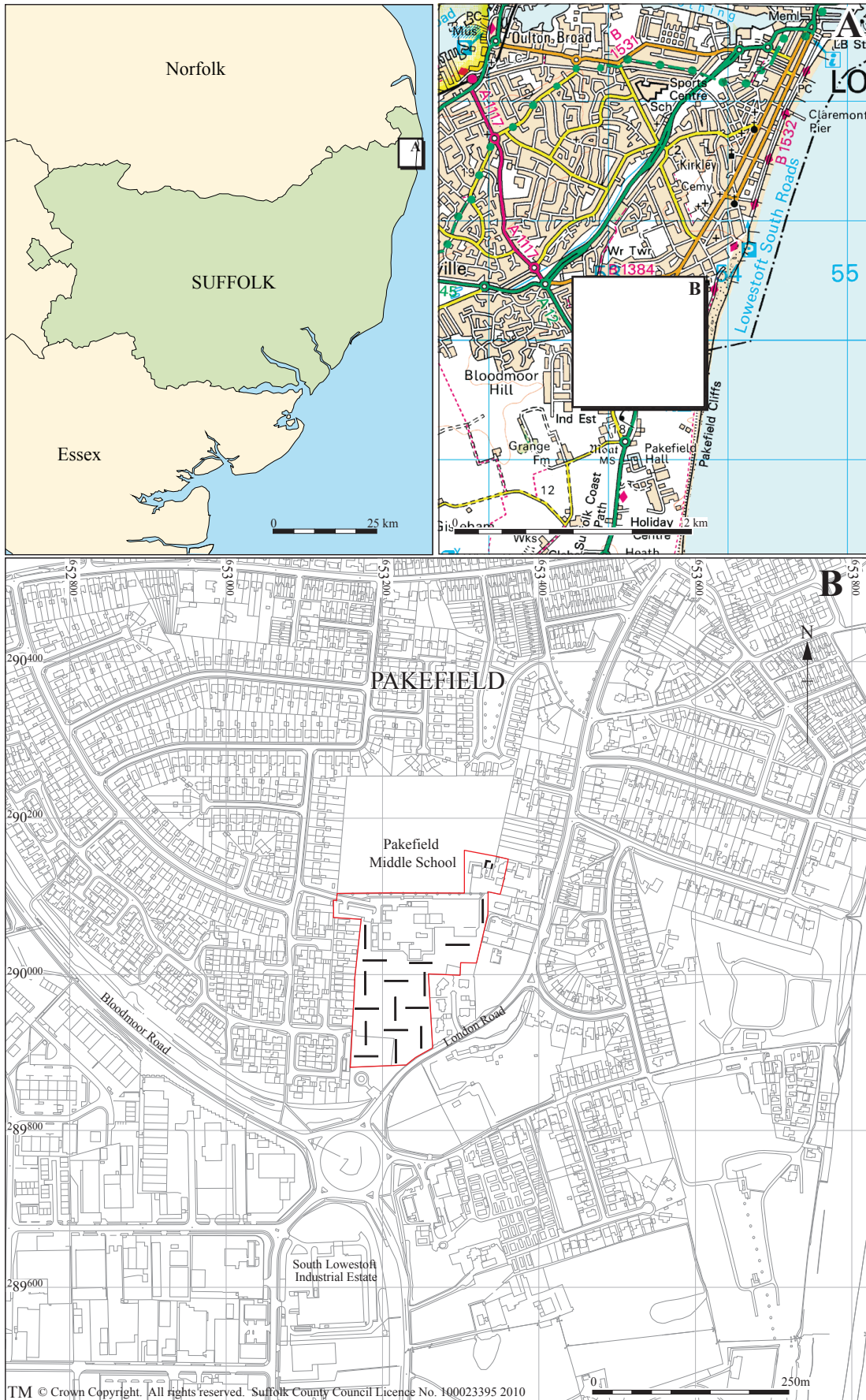


Figure 1. Site location, showing the development area (red) and evaluation trenches (black)

3. Archaeological and historical background

The archaeological potential of the site stems from both its location in a general area already known to have been utilised in the Iron Age, Roman and Anglo-Saxon periods (sites such as that at Bloodmoor Hill to the east - CAC 007, CAC 008, CAC 013 and CAC 016 between 600m and 1.5km distant from the present site) and the presence of a findspot of Neolithic flint flakes at the site of the present Primary School (LWT 025) known from an entry in the Basil Brown archives.

4. Methodology

Fifteen trenches were excavated by a 360 degree tracked mechanical excavator using a toothless 'ditching' bucket under constant archaeological supervision. Each trench was 1.8m wide and intended to be 30m long, though in practice it was necessary for some to be shortened. These trenches were laid out according to an approved location plan, intended to investigate the area of the playing field to the south of the current middle school and the grassed areas to the east and west of it. Three smaller trenches were to be excavated around a small outbuilding forming part of the adjacent Primary School using a smaller (<5 tonne) machine, although in the event only parts of 2 were able to be excavated due to safety and access considerations.

A record was made of the stratigraphy encountered in each trench, and where archaeological features were encountered they were hand-cleaned and a selection of them was excavated in order to characterise the site without causing undue disturbance. All features were planned and a full written, drawn and photographic (with a 6.2 megapixel digital SLR camera) record made of those which were excavated. The unexcavated features were all planned, though no further record has been made at this time.

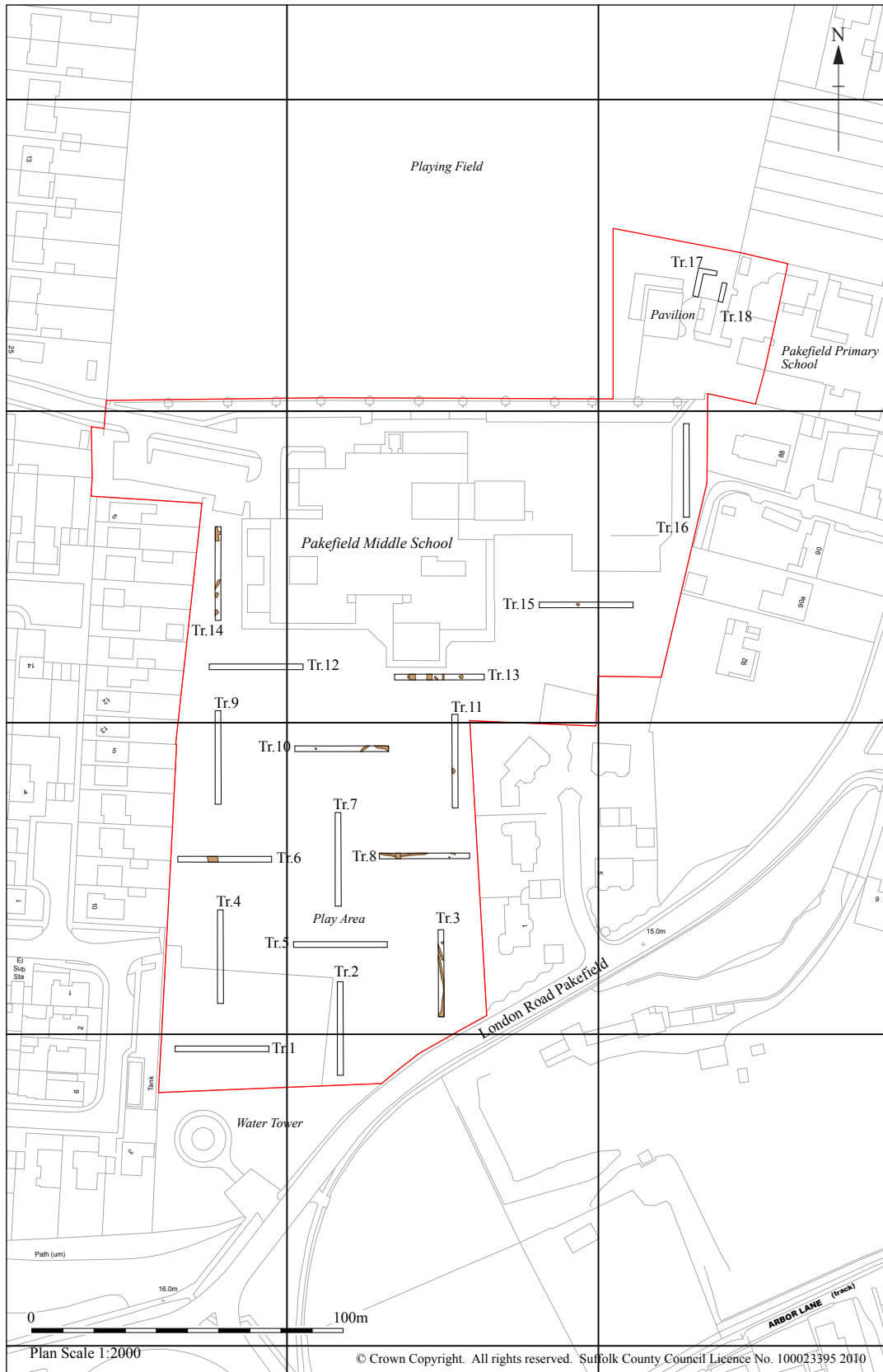


Figure 2. Trench plan

5. Results

5.1 Introduction

Trenches 1 – 13 were situated within the Middle School playing field to the south of the existing building, with Trench 14 just to the west of the current building and Trenches 15 and 16 to the east, around a small hard play area. Trench 17 was opened to the east of a small outbuilding to the Primary School, on the edge of another playing field, with Trench 18 within an area of shrubbery adjacent to the main access route to the primary school.

5.2 Trench 1

This trench was 30m long, 1.8m wide and 0.4m deep, orientated east-west. The stratigraphy encountered consisted of 0.3m of dark brown clayey silt/silty clay topsoil above 0.1m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). No finds or features of archaeological relevance were observed in this trench.

5.3 Trench 2

This trench was 30m long, 1.8m wide and up to 0.6m deep (at the southern end), orientated north-south. The stratigraphy encountered at the southern end consisted of 0.6m of dark brown clayey silt/silty clay topsoil above mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). At the northern end there was only 0.3m of topsoil above natural geology. No finds or features of archaeological relevance were observed in this trench.

5.4 Trench 3

This trench was 30m long, 1.8m wide and up to 0.5m deep, orientated north-south. The stratigraphy encountered consisted of between 0.3m and 0.4m of dark brown clayey silt/silty clay topsoil above mottled mid-grey/orangey brown clay with occasional flints and stones. A subsoil layer was noted in the southern 6m of this trench, 0.2m thick which consisted of a mid grey silty clay with occasional small stones. This trench contained a single pit and at least two linear features (no's 0004, 0006, 0013 and 0021 respectively). Pit 0004 was a truncated ovoid pit, measuring 0.75m E-W by 0.56m N-S and 0.1m deep with shallow sides to a concave/flat base. It was filled with a pale

grey/brown clay with occasional sub-angular stones and pottery recovered from this feature was dated to the Roman period.

Ditch 0006, orientated NNW-SSE, entered the trench at approximately 4m from the northern end of the trench and appeared to possibly terminate within the trench at approximately 10m from the northern end. It had shallow concave sloping sides and a flat base 0.76m wide and 0.14m deep and was overlain by redeposited natural on its south-west side. No dateable finds were recovered from this feature, although its orientation parallel to ditch 0013 could suggest a similar Roman date.

Ditch 0013 (and 0021) appears to have been a slightly curved linear feature, entering the trench at approximately 9.5m and continuing down the length of the trench to its southern end. Where both sides were fully exposed it was approximately 0.7m wide and 0.14m deep, with a shallow concave eastern side with a steeper western side and a narrow concave base. It was filled with a mid grey/brown clay with occasional sub-angular stones, very frequent charcoal flecks and lumps of fired clay (too friable to retain). The small section excavated as 0021 had a similar profile, but contained two fills. The upper fill was a stiff mid grey clay with occasional sub-angular stones and very frequent charcoal fragments and occasional fired clay lumps (too friable to retain) – similar to the fill of slot 0013 – while the lower fill was a stiff mottled grey/orange clay with occasional sub-angular stones. Pottery recovered from this feature dates to the Roman period. It is possible that at the southern end of this trench there is a further feature interacting with this ditch, where the orientation of the ditch seems to significantly alter, although without a larger visible area or further excavation little more can be said.

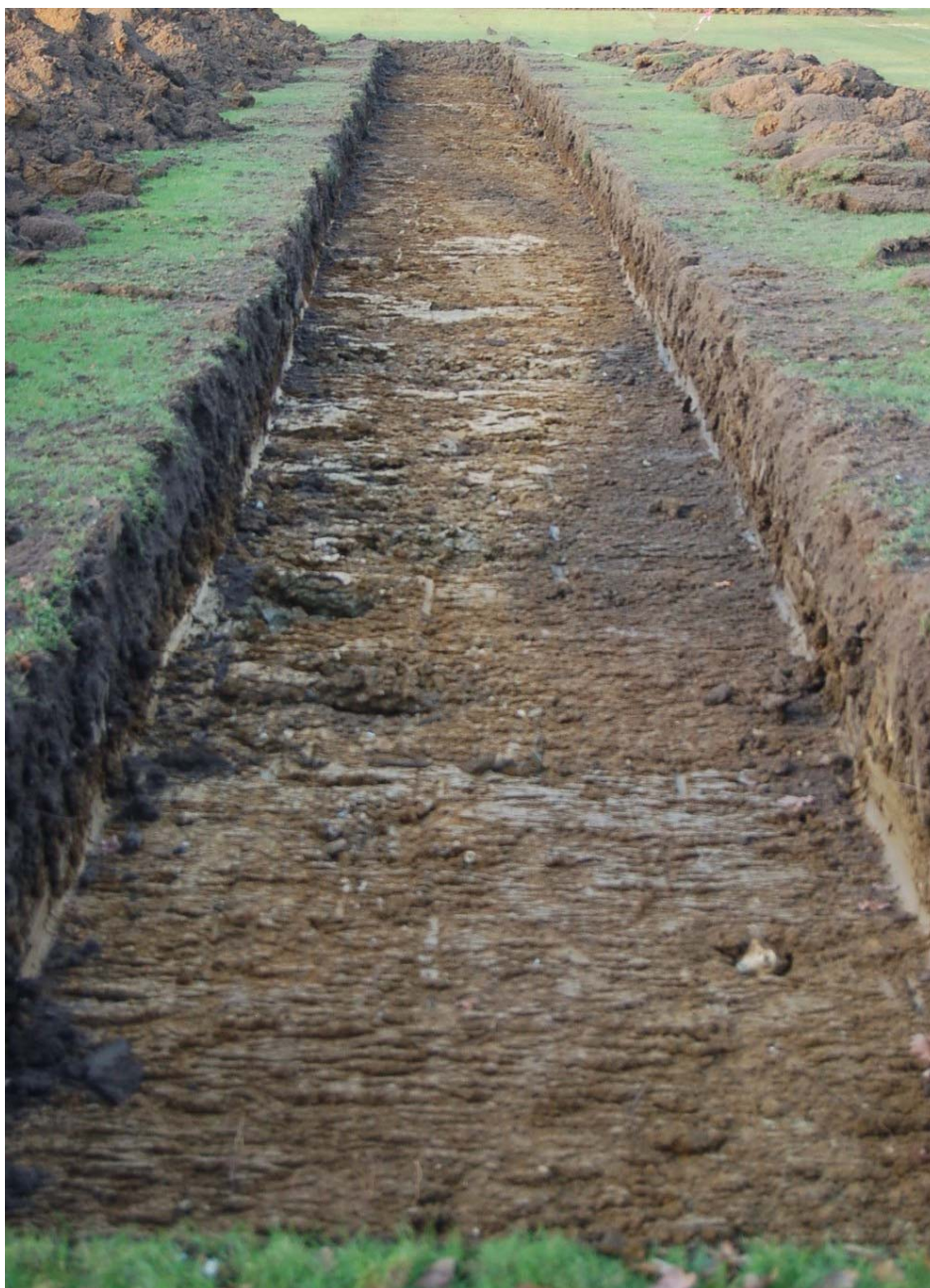


Plate 1. Trench 3, facing north.

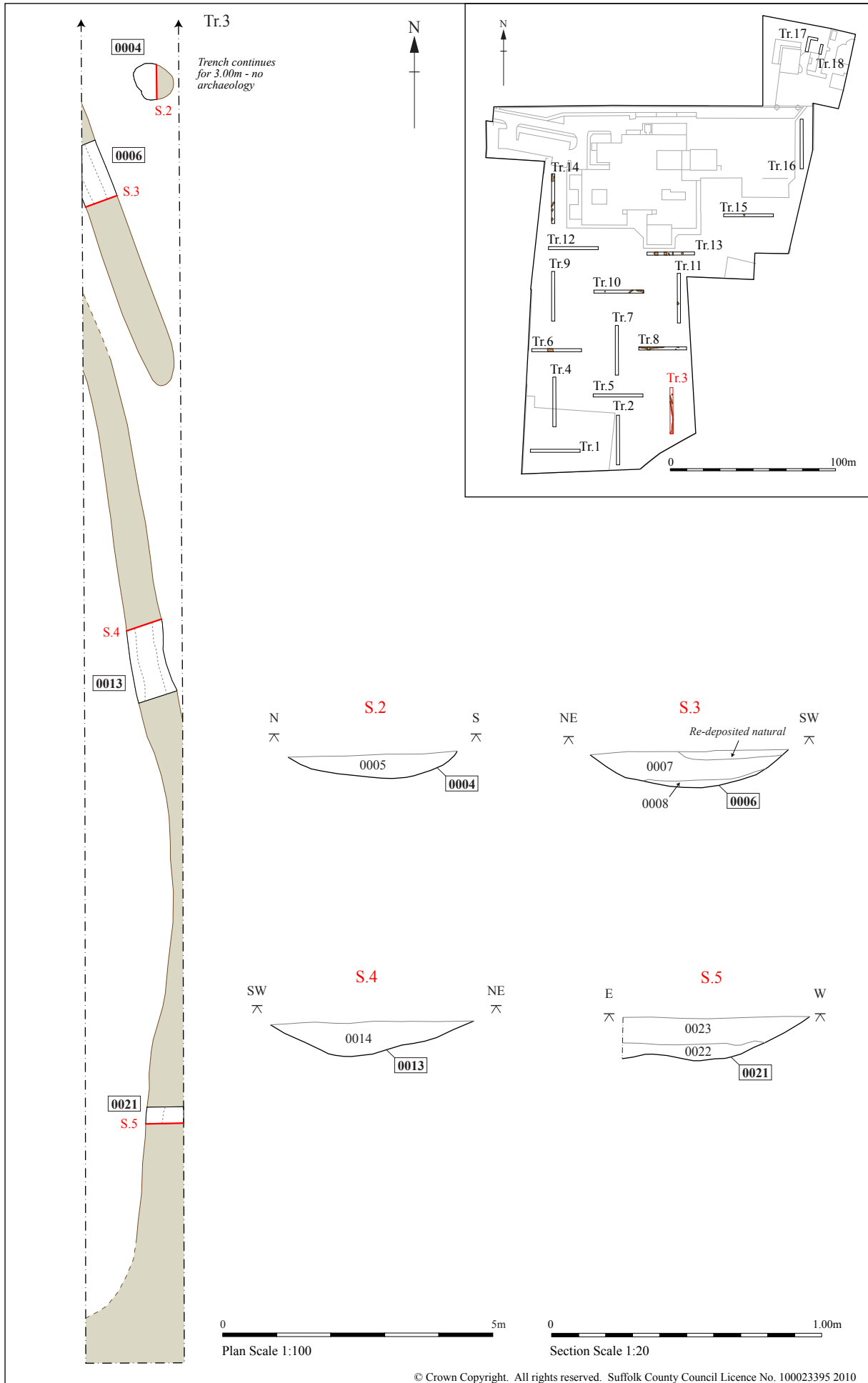


Figure 3. Trench 3, plan and sections

5.5 Trench 4

This trench was 30m long, 1.8m wide and 0.4m deep, orientated north-south. The stratigraphy encountered consisted of 0.35m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones. No finds or features of archaeological relevance were observed in this trench.

5.6 Trench 5

This trench was 30m long, 1.8m wide and 0.3m deep, orientated east-west. The stratigraphy encountered consisted of 0.25m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones. No finds or features of archaeological relevance were observed in this trench.

5.7 Trench 6

This trench was 30m long, 1.8m wide and 0.45m deep, orientated east-west. The stratigraphy encountered consisted of 0.35m of dark brown clayey silt/silty clay topsoil above 0.1m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer).

A single feature (0002) was identified in this trench. This could be a linear feature, or one which is square or rectangular, as only two sides were observed. It was approximately 3.25m wide and 1.5m+ deep with steep/near-vertical sides and was not bottomed. The single fill observed consisted of a mid grey/orange mottled stiff clay with occasional charcoal flecks. Three sherds of pottery recovered from the fill were dated to the Roman period. The size of this feature seems to be excessive for a field boundary or livestock watering hole, although its apparent linear nature argues against it being a well (or similar). Further excavation in this area should be able to shed more light on the nature of this feature.



Plate 2. Feature 0002, facing south-west (2m scale).

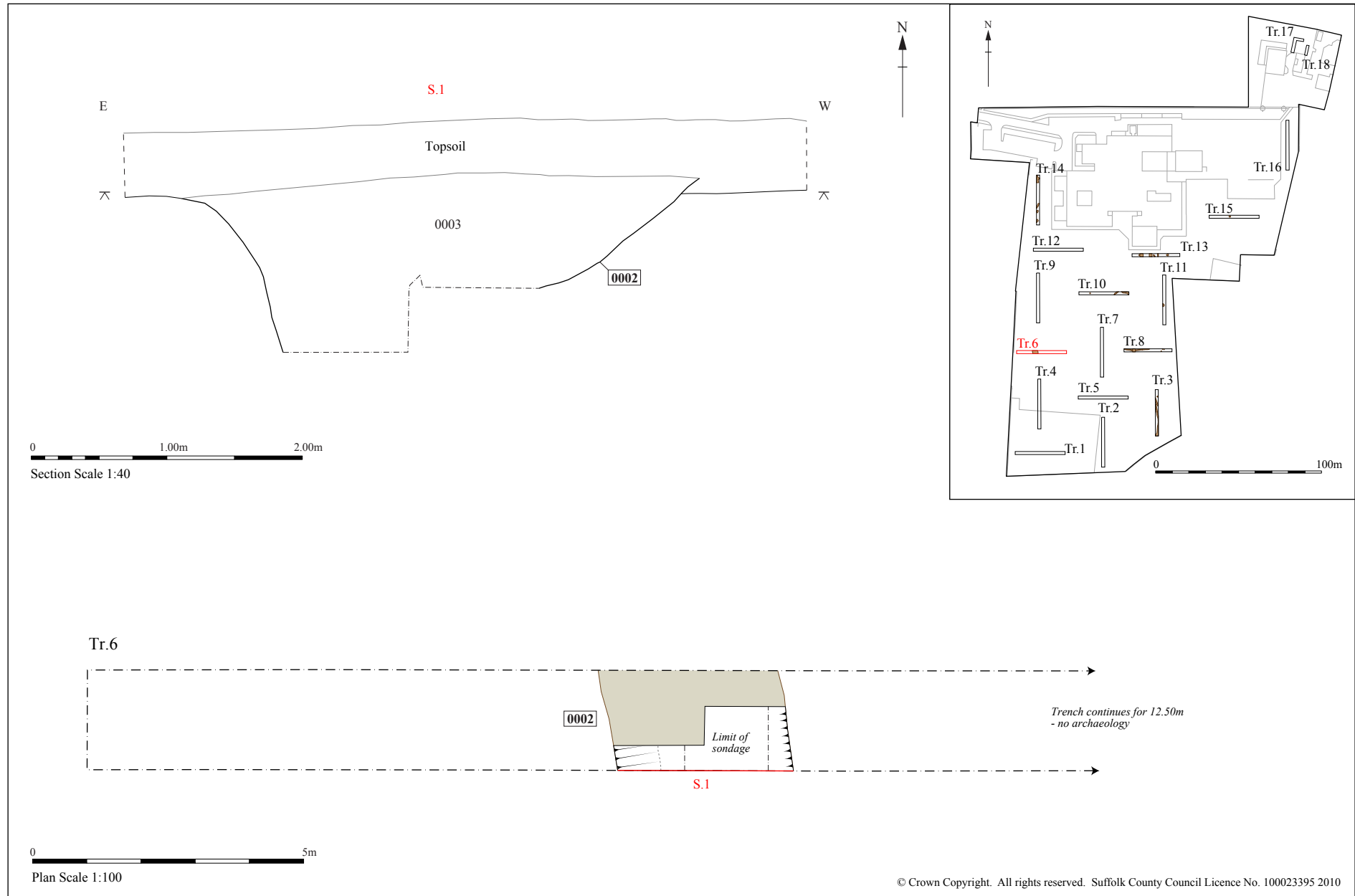


Figure 4. Trench 6, plan and section

5.8 Trench 7

This trench was 30m long, 1.8m wide and 0.5m deep, orientated north-south. The stratigraphy encountered consisted of 0.45m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). An area of bioturbation was noted approximately 10m from the southern end of the trench, likely to be a result of animal burrowing. No finds or features of archaeological relevance were observed in this trench.

5.9 Trench 8

This trench was 30m long, 1.8m wide and 0.4m deep, orientated east-west. The stratigraphy encountered consisted of 0.3m of dark brown clayey silt/silty clay topsoil above 0.1m of mottled mid-grey/orangey brown clay with occasional flints and stones. Several features were identified in this trench, comprising between one and three postholes/small pits, one dubious pit/tree bole and three linear features, one of which was very ephemeral.



Plate 3. Trench 8 facing east.

Posthole 0015 was 0.3m in diameter and 0.2m deep, with near-vertical sides and a flat base. It was filled with a dark grey/brown silty clay and pottery recovered from the feature was dated to the Roman period.

Gully/ditch 0009 was 0.5m wide and 0.25m deep, orientated approximately east-west but curving slightly to the north at both ends where it left the trench. It was filled with a mid grey/orangey brown mottled silty/sandy clay and no finds were recovered from the excavated portion. Although there is no direct dating evidence, this feature was visibly cut by ditch 0011.

A short length of gully was visible, arcing south-east from feature 0009, but on investigation it proved to be less than 0.01m in depth. Although it was not possible to ascertain any profile for this feature, its visible shape appeared to suggest that it was circular in shape although this is far from certain given its limited extent.

Ditch 0011 was orientated approximately north-south, cutting ditch 0009 towards the western end of the trench. It was 1.5m wide and up to 0.5m deep, with a with a shallow step on the eastern side then a medium/steep slope down to a sharp concave base; with a moderately steep western slope which became shallow out after c. 0.25m. It was filled with a mid grey/brown silty clay with very occasional charcoal flecks and pottery recovered was found to be of late Pre-Roman/Iron Age date.

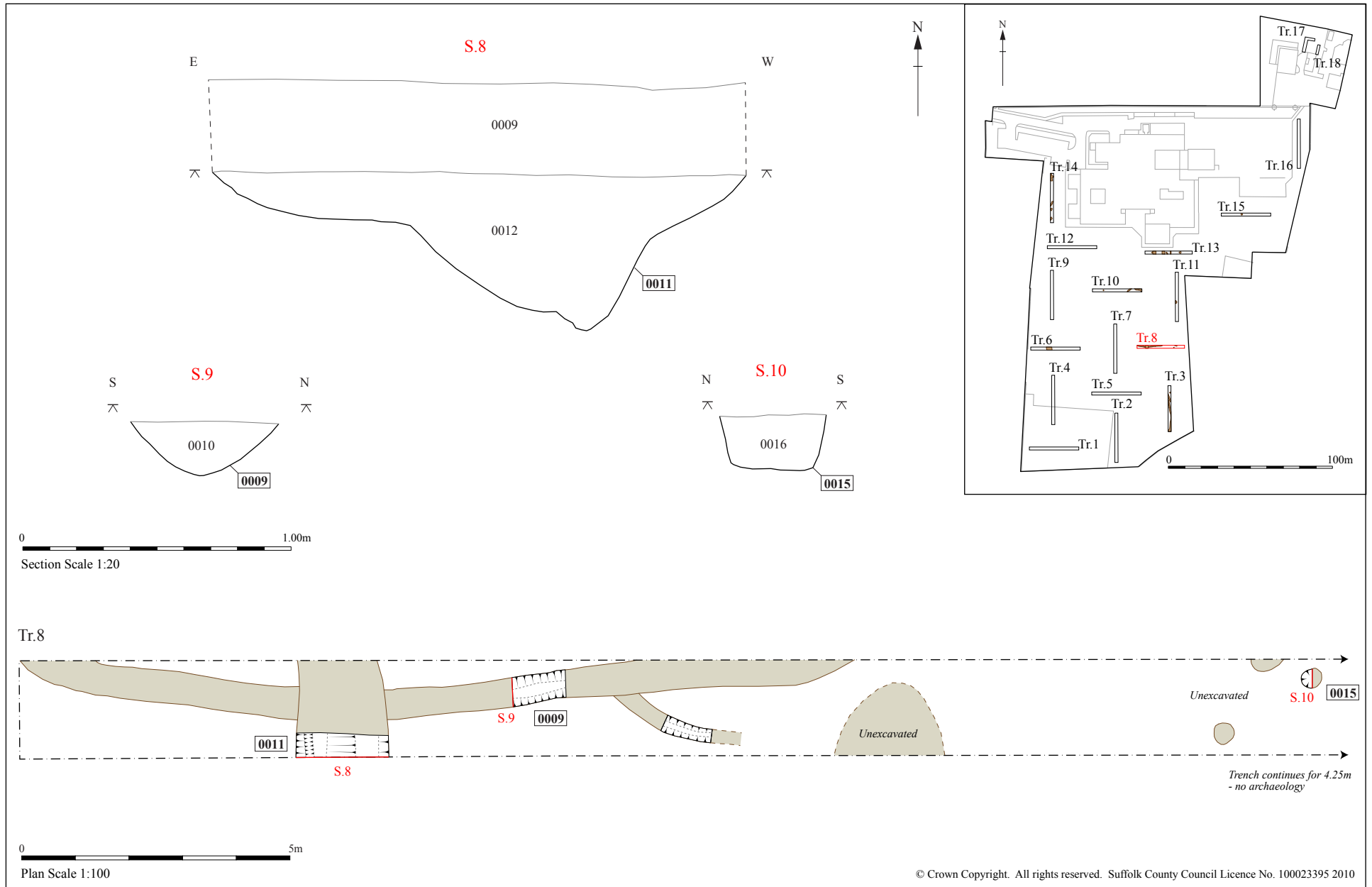


Figure 5. Trench 8, plan and sections

5.10 Trench 9

This trench was 30m long, 1.8m wide and 0.35m deep, orientated north-south. The stratigraphy encountered consisted of 0.3m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones. No finds or features of archaeological relevance were observed in this trench.



Plate 4. Trench 9 facing north.

5.11 Trench 10

This trench was 30m long, 1.8m wide and 0.35m deep, orientated east-west. The stratigraphy encountered consisted of 0.3m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones. This trench contained two ditches (one of which was not excavated) and a single possible pit.

Ditch 0017 was orientated approximately northeast-southwest across the trench and was a shallow (possibly truncated) ditch with shallow concave sides and a flat base 0.7m wide and 0.16m deep. It was filled with a pale grey brown and orange mottled clay with occasional sub-angular flints. No finds were recovered from this feature.

Pit 0019 had very shallow concave sides and a flat base and was 0.44m wide and 0.08m deep, filled with a pale grey/brown clay with occasional sub-angular stones. It is possible that this feature has been truncated, or that it is a natural/biological feature relating to the orchard on site (see Trench 14). No dateable finds were recovered from this feature.



Plate 5. Pit 0019, facing east (0.2m scale).

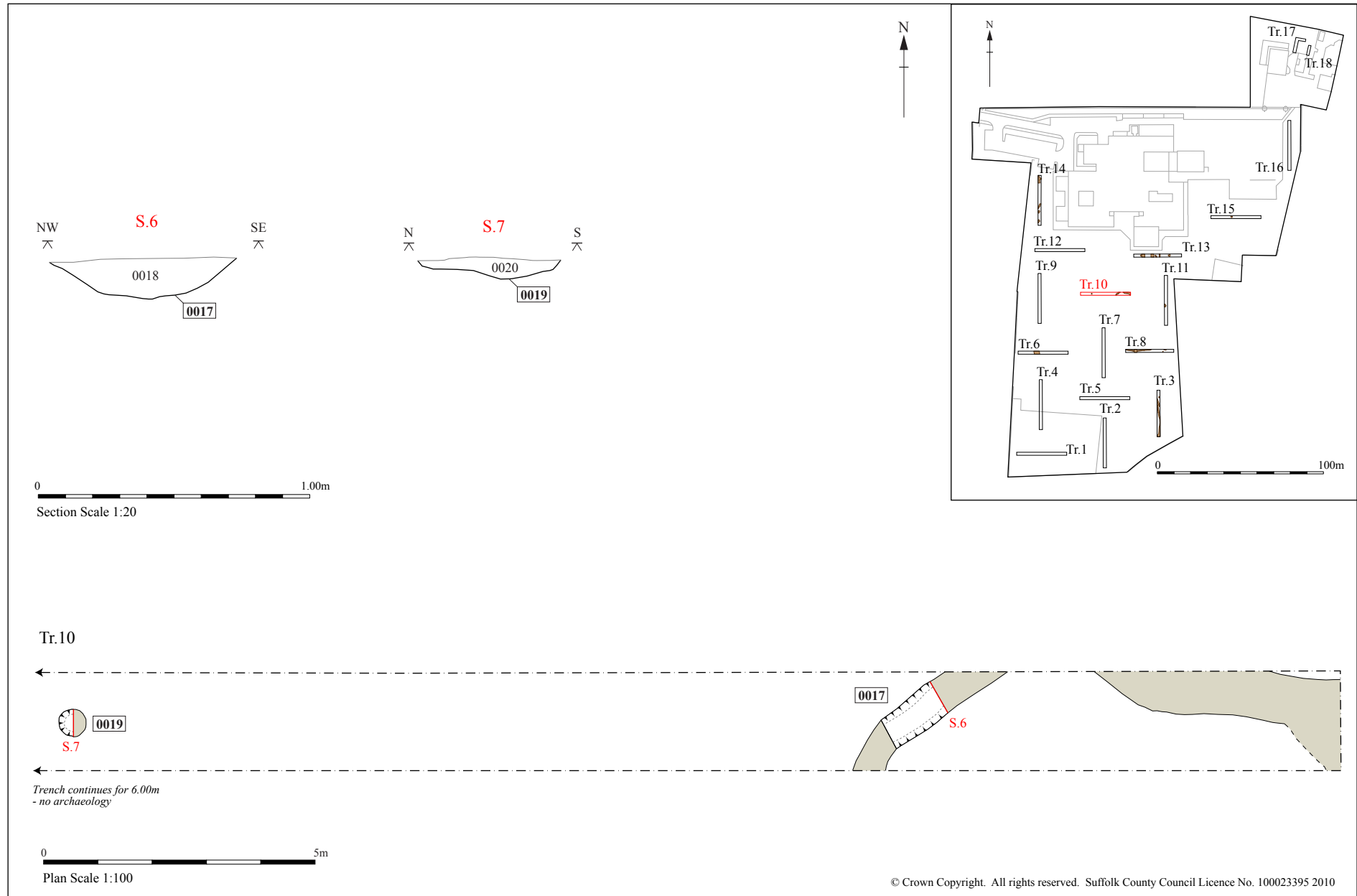


Figure 6. Trench 10, plan and sections

5.12 Trench 11

This trench was 30m long, 1.8m wide and 0.35m deep, orientated north-south. The stratigraphy encountered consisted of 0.3m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). A single pit was observed entering from the eastern side of the trench at c. 28m from the southern end. Pit 0024 was at least 0.85m in diameter and 0.2m deep, with steep, stepped sides and a shallow concave/flat base, and was filled with a clean grey/orange mottled clay with sub-angular stones. No dateable finds were located within this feature.



Plate 6. Pit 0024, facing west.

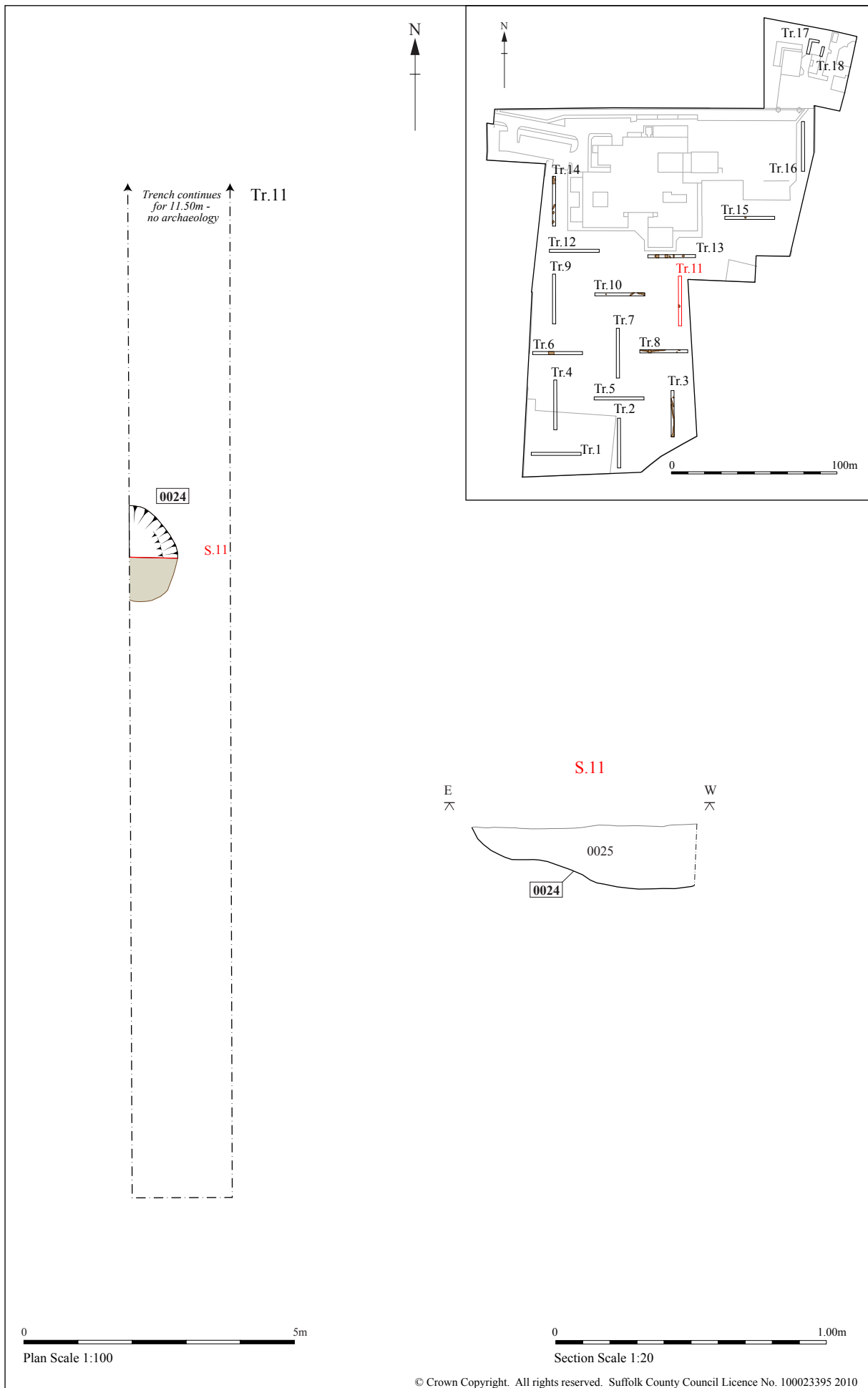


Figure 7. Trench 11, plan and section

5.13 Trench 12

This trench was 30m long, 1.8m wide and 0.3m deep, orientated approximately east-west. The stratigraphy encountered consisted of 0.25m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). No finds or features of archaeological relevance were observed in this trench.

5.14 Trench 13

This trench was 30m long, 1.8m wide and 0.35m deep, orientated east-west. The stratigraphy encountered consisted of 0.3m of dark brown clayey silt/silty clay topsoil above 0.05m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). Several linear features were observed in this trench, in addition to two pits.

Pit 0032 was a possible truncated pit with a very shallow and irregular plan and profile (shallow concave sides and an irregular concave base with an irregular elongated shape in plan) filled with a pale grey/orange mottled clay with dark grey patches. It is believed that this feature may be a possible tree bole or similar. No dateable finds were located within this feature.



Plate 7. Pit 0032, facing west (1m scale).

Ditch 0036, orientated approximately north-south and crossing Trench 13 at 13m from the eastern end, was 0.4m wide and 0.1m deep with shallow/medium sloping sides onto

a concave base. It was filled with a mid greyish brown silty clay and no dateable finds were recovered from this feature.

Either two or three linear features were noted just to the west of ditch 0036, though none were excavated, seemingly representing an additional north-south orientated ditch of similar dimensions to 0036 (or two smaller parallel and adjacent ditches) and a possible ditch terminus orientated northwest-southeast. No finds were visible on the surface of these features.

Ditch 0038 and pit 0042 were located towards the western end of Trench 13, with ditch 0038 visibly cutting pit 0042 in plan. Unfortunately this relationship was obscured in the section due to a large flint nodule at the junction between the features.

Ditch 0038, orientated north-south across the trench had moderately steep sloping sides to a shallow concave base, 1.8m wide by 0.4m deep and contained 3 distinct fills. The primary fill (0039) was a compacted pale brown clay fading to orange brown with occasional medium/large sub-angular flints. The secondary fill (0040) was a very dark brownish grey clay which was very greasy to touch and rich in charcoal flecking/small lumps with frequent medium/large sub-angular/angular flints – of which many appear heat-affected though not fire-cracked. Several flints appear deliberately selected for a specific purpose (thin and flat) and it is suggested that this fill includes possible sweepings from a stone-lined fire-pit or hearth of some kind. The tertiary deposit (0041) in this feature is a pale brown/orange mottled clay with occasional medium/large sub-angular flints and occasional charcoal flecks/fragments. Pottery recovered from the two upper fills of this ditch is likely to date to the Neolithic period.

Pit 0042 was a sub-circular pit with smooth sloping sides, although most of the base and the entire eastern half appear to have been totally truncated by ditch 0038, with an estimated diameter of approximately 0.8m and a surviving depth of 0.2m. It was filled with a mid brownish orange clay, heavily mottled with dark brownish grey charcoal flecked clay and occasional small sub-angular/rounded flints. This feature also contained Neolithic pottery.



Plate 8. Pit 0042 and ditch 0038, facing north (2m scale).

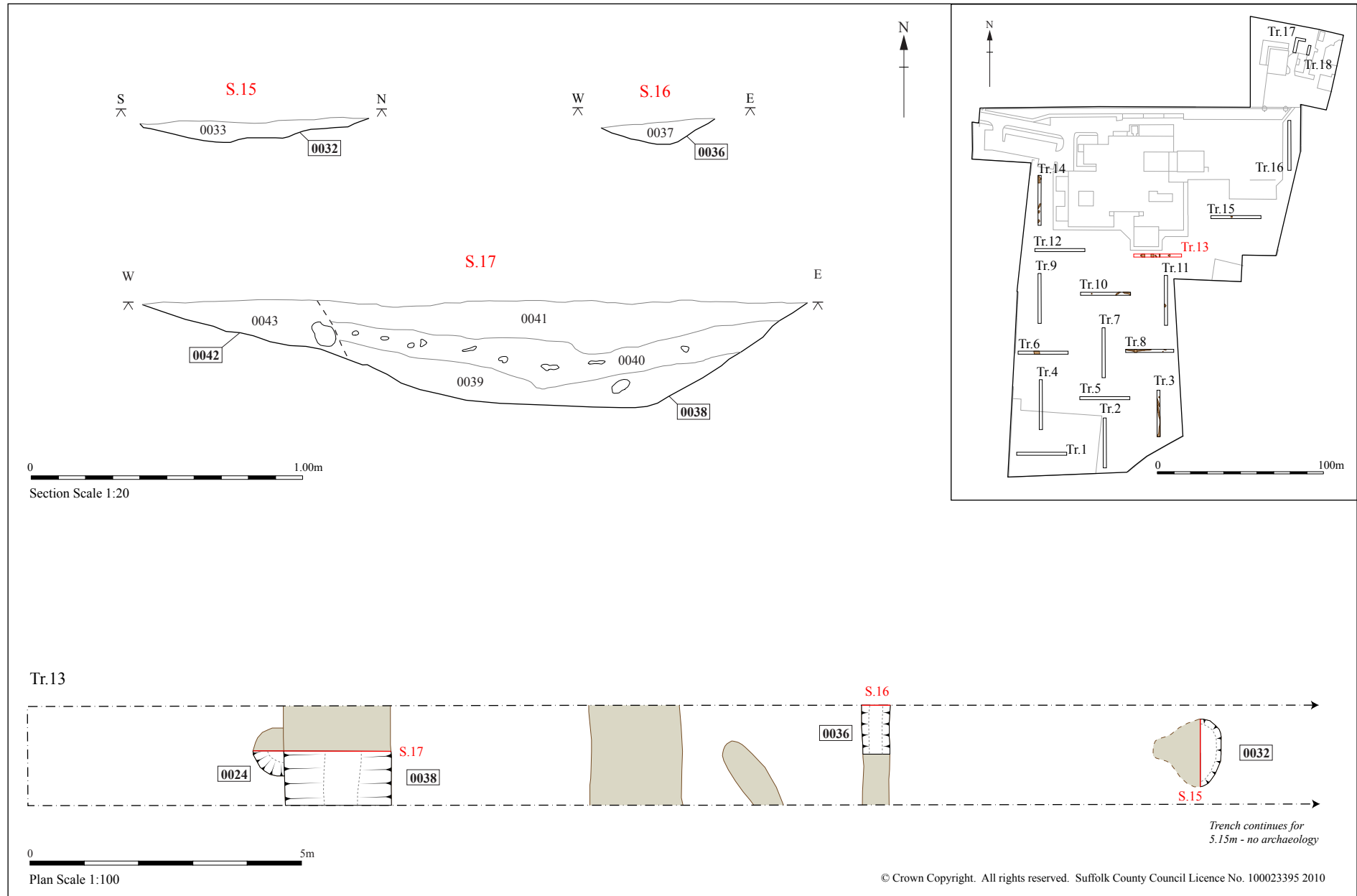


Figure 8. Trench 13, plan and sections

5.15 Trench 14

This trench was intended to be 30m long, although due to the presence of live services and large modern inclusions (steel reinforcing rods and unidentified cabling) crossing the middle of the trench, approximately 10m in the middle of the trench was not excavated. It was 1.8m wide and up to 0.8m deep, orientated north-south. The stratigraphy encountered at the northern end consisted of 0.4m of dark brown clayey silt/silty clay with modern building/demolition detritus inclusions, interpreted as a disturbed/redeposited topsoil layer likely related to the construction of the present middle school building. This lay above another layer of topsoil, 0.4m thick, with no visible modern inclusions and likely to be the original ground surface before the construction of the present school above 0.1m of mottled mid-grey/yellowy brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). The southern end of the trench had a topsoil layer c. 0.5m thick, with very frequent root disturbance lying above natural geology. Several irregular features were observed in this trench, comprising both linear ditch(?) features and ovoid pits. It is suspected that the pits/features here are related to the use of this land as an orchard which began some time between 1890 and 1920, due to their irregular nature and fills similar to the topsoil. The investigated features were recorded as 0026, 0034 and 0044.



Plate 9. Trench 14 (south), facing north.

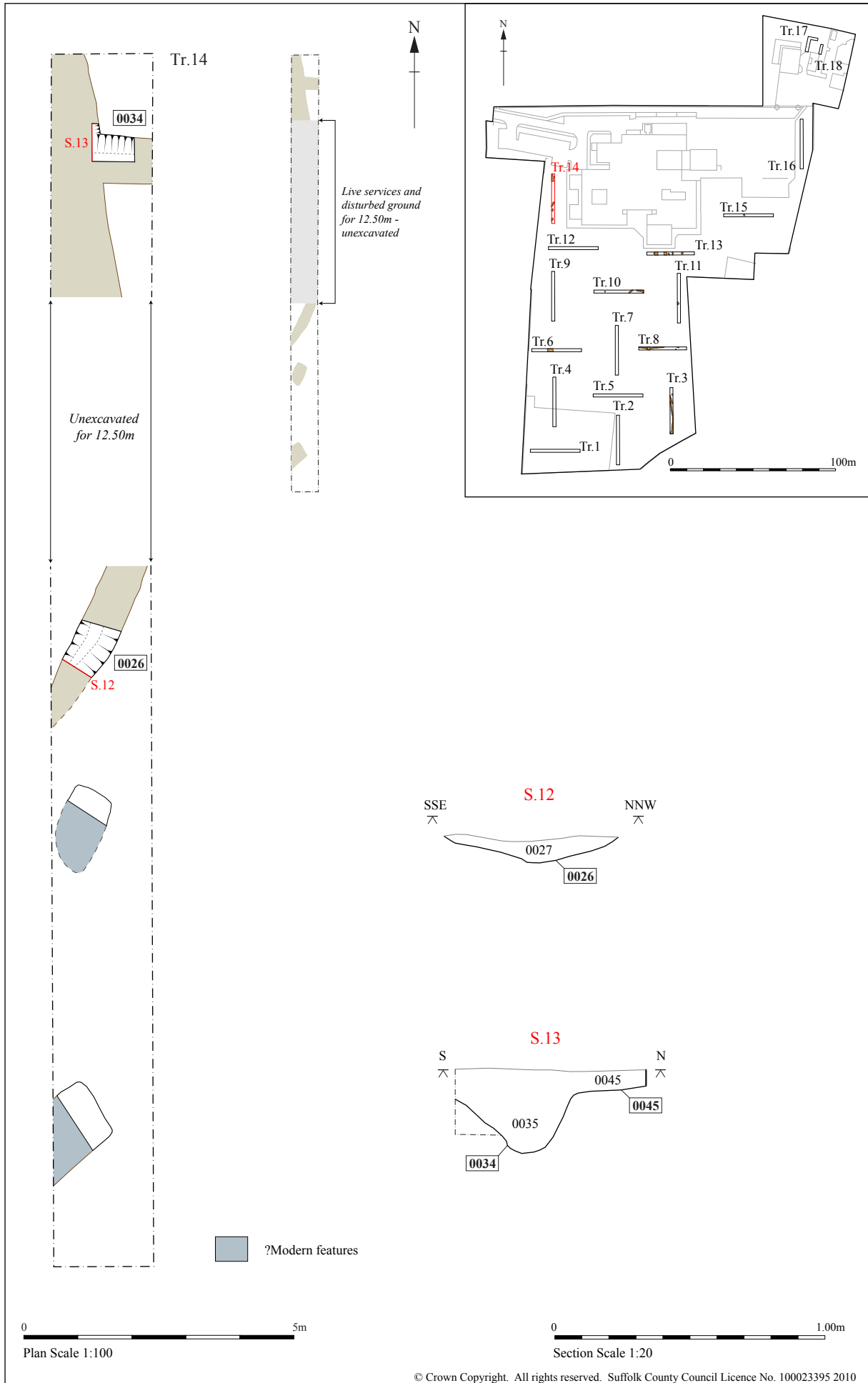


Figure 9. Trench 14, plan and sections

5.16 Trench 15

This trench was 30m long, 1.8m wide and 0.25m deep, orientated east-west. The stratigraphy encountered consisted of 0.25m of dark brown clayey silt/silty clay topsoil above mottled mid-grey/yellowish brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). A single pit was observed in the middle of the trench.

Pit 0029 was roughly circular in plan, with moderately steep concave sides and an irregular concave base, 0.7m wide and 0.17m deep. A stone lining (0031) lay against the cut and the secondary fill was a mid grey/brown clay with occasional sub-angular stones, frequent charcoal and fired clay flecks. Worked flints recovered from this feature have been identified as likely to belong to the Neolithic period.



Plate 10. Pit 0029, facing east (1m scale).

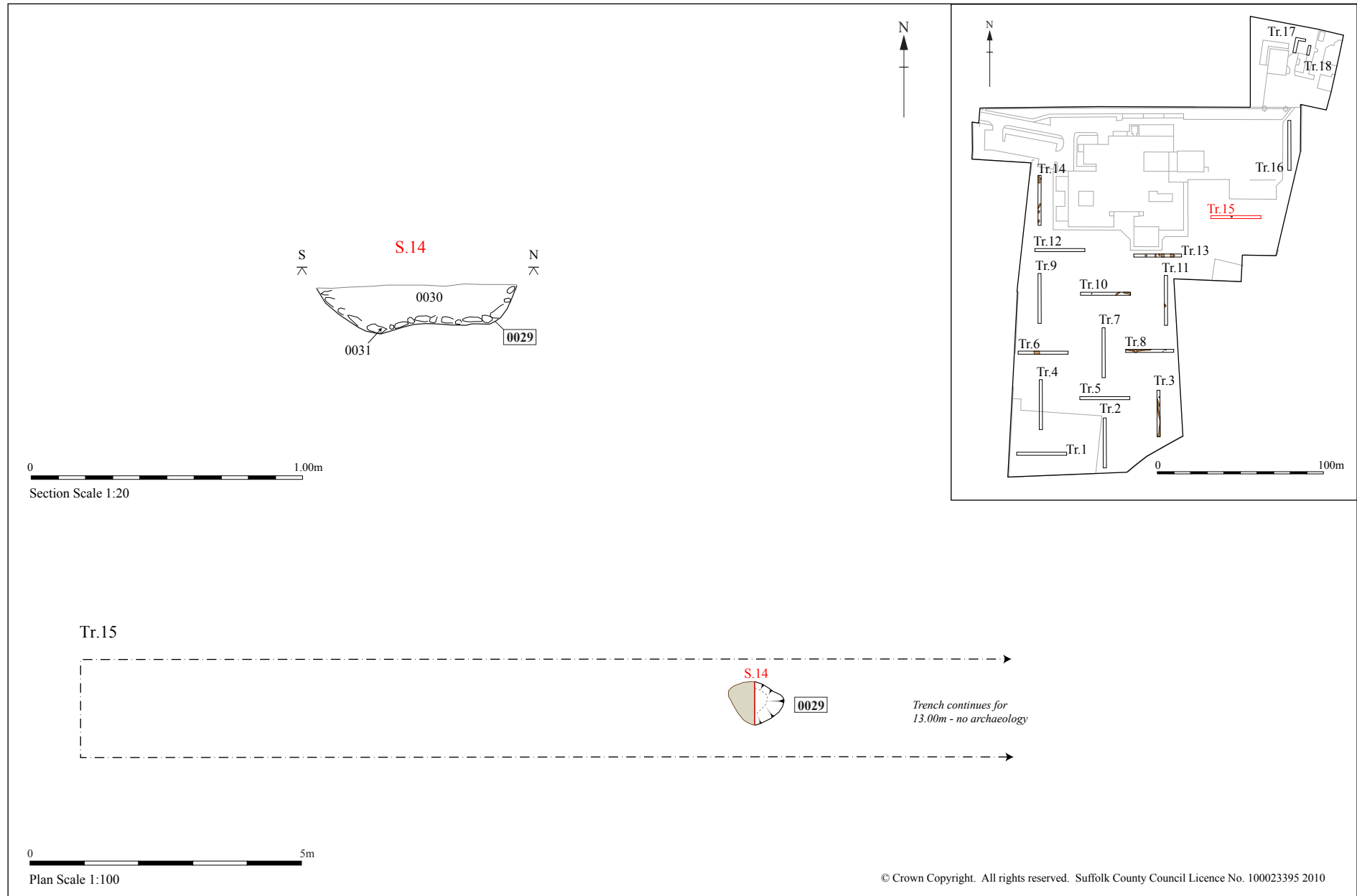


Figure 10. Trench 15, plan and section

5.17 Trench 16

This trench was 30m long, 1.8m wide and up to 1m deep, orientated north-south. The stratigraphy encountered consisted of 0.35m of mid/dark brown clayey silt topsoil with modern inclusions (CBM, broken concrete pipe, plastic, etc) above 0.25m of dark brown silty clay with very frequent charcoal fragments and flecks. This sealed a mid brown sandy clay deposit with occasional small/medium-sized sub-angular stones c. 0.3m thick. Under this subsoil layer was mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes (interpreted as a natural geological layer). No finds or features of archaeological relevance were observed in this trench. A number of modern truncations were observed, containing brick/CBM, concrete, plastic and glass fragments.

5.18 Trench 17

This trench was 9m long, 1.8m wide and 0.8m deep, with an L-shape orientated north-south then west from the northern end. The stratigraphy encountered consisted 0.2m of mottled mid-yellow/brown sandy silt topsoil interpreted as a made-ground deposit above a mid/dark grey/brown layer of clayey silty sand c. 0.35m thick, believed to be the natural topsoil deposit. Below this was a subsoil deposit c. 0.2m thick of a mid yellowish brown silty sand with occasional/moderate small/medium stones sealing natural dirty brownish yellow mottled sand with moderate stone inclusions (interpreted as a natural geological layer). No finds or features of archaeological relevance were observed in this trench. This trench was not fully excavated due to the presence of both water and electricity services running along the north-south segment of trench and crossing at the corner of the trench. No archaeological finds or deposits were observed in this trench.

5.19 Trench 18

This trench was 4m long, 1.8m wide and 0.9m deep, orientated north-south. The stratigraphy encountered consisted of 0.4m of dark brown clayey silt/silty clay topsoil above 0.5m of mottled mid-grey/orangey brown clay with occasional flints and stones of various sizes. This lay above natural yellow/orange sands. This trench was shortened due to access issues and the presence of buried electricity cabling within the trench. No finds or features of archaeological relevance were observed in this trench.

5.20 Trench 19

This trench was due to be 7m long and orientated east-west. Unfortunately due to an obstructing fence around the primary school building, and the presence of multiple underground electricity cables within this area, it was not possible to excavate in the intended position and there was no practical alternative location.

6. Finds and environmental evidence

Andy Fawcett

6.1 Introduction

Finds were collected from 11 contexts, as shown in the table below.

CTX	Pottery		Flint		Burnt Flint		Fired clay		Miscellaneous	Spotdate
	No.	Wt/g	No.	Wt/g	No.	Wt/g	No.	Wt/g		
0003	3	14								Roman
0005	1	11								Roman
0007					5	13				
0012	1	1					2	1	4 fragments of coal 3g 5 fragments of shell 4g	LIA to LPRIA
0014	1	1					60	5		Roman
0016	1	2			7	12				Roman
0028	2	14								Roman
0030			1	8	24	236				Neolithic/early Bronze Age
0040	2	1	4	243	47	244				Neolithic
0041	9	54	1	3						Neolithic
0043	5	12			19	47				Neolithic
Total	25	110	6	254	102	552	62	6		

Table 1. Finds quantities

6.2 Pottery

A total of 25 sherds of pottery with a weight of 110g was recovered from the archaeological work at the two Pakefield schools. A detailed breakdown of the pottery can be observed in Appendix 4. These are spread across 9 contexts (see Table 1.), however nearly half of the assemblage has been noted in ditch fill 0041 and pit fill 0043 (16 frags @ 67g).

Both of these fills contain Neolithic flint-tempered pottery (NEFT) although the best examples occur in ditch fill 0041. One expanded rim is present within this assemblage and the style is thought to be more typical of the Neolithic period (Edward Martin pers.com). While flint-tempered fabrics extend into the late Bronze/early Iron Age, on balance the remaining instances of this fabric are also likely to be of a Neolithic date. All of the NEFT has been noted within Trench 13.

The remaining sherds (9 frags @ 43g) are all Roman and occur in Trenches 3, 6 and 8 with an unstratified example noted in Trench 14. Just two unsourced fabrics have been noted, BSW (black surfaced/Romanising greyware) and GX (a general sandy greyware). All of the Roman pottery displays some level of abrasion and has a poor average sherd weight of just over 4.5g. The only diagnostic piece is noted in ditch fill 0003 and this belongs to a lid-seated jar which is not closely datable. Although most surfaces of the pottery are in a poor state of preservation, the presence of BSW may indicate that some of the sherds could be placed in the first half of the Roman period, up to the 2nd century.

6.3 Worked flint

(identified by Colin Pendleton)

In total 6 pieces of worked flint have been identified (254g), and these have been recovered from pit fill 0030 and ditch fills 0040 and 0041.

The two ditch fills belong to the same feature, with the primary fill containing 4 of the flint fragments (243g). The first of these is a mottled pale brown flint that appears to be either a failed or unfinished butt end of a Neolithic axe. The colour is significant and possibly indicates that it was mined at a different geographical location, as opposed to having been collected locally off the surface (Pendleton pers.com). The second piece is exactly the same colour and is a very large thin flake. It has been retouched along one edge and has a serrated distal end as well as having a small retouched notch and a prepared striking platform. This is again dated to the Neolithic period. The third is a dark brown unpatinated snapped large flake which displays pronounced ripples. The final piece in this group is another flake that may be slightly patinated and was possibly used as a scraper. It exhibits incipient cones of percussion on the platform. Both of these flints are dated to the late-prehistoric period. The second ditch fill 0041 contained just a single small flint (3g) which is snapped and unpatinated. It also displays a sub-triangular sub-section and is dated to the later prehistoric era. Both of these ditch fills also contained Neolithic flint-tempered pottery (NEFT).

The example in pit fill 0030 is an unpatinated oval thin flake which has a small natural striking platform with bulbs of percussion on both sides. It is likely that it was soft hammer struck and is probably dated from the Neolithic to early Bronze Age.

6.4 Burnt flint

As Table 1 demonstrates the burnt flint is spread across a number of contexts amounting to 102 fragments with a weight of 552g. A large collection occurs in pit fill 0030, which also contained a piece of worked flint dated from the Neolithic to early Bronze Age period. The biggest group (47 frags @ 244g) is noted in ditch fill 0040. The assemblage and is mainly red and white to grey in colour. Although little else can be said about this material it does occur alongside Neolithic pottery.

6.5 Fired clay

Fired clay was recovered from two contexts. Two abraded fragments from ditch fill 0012 both have fine sandy fabrics, one containing clay pellets (fscp) and the other common mica (fsm). Ditch fill 0014 contained some 60 fired clay fragments (4g), however these are extremely small and very abraded. Most of these have a medium sandy fabric (ms).

6.6 Shell

Only one context contained shell, ditch fill 0012 and all of the pieces (5 @ 4g) belong to the garden snail *helix aspersa*.

6.7 Coal

The four small fragments of coal (3g) were all noted in ditch fill 0012.

6.8 Charred plant macrofossils and other remains

Val Fryer

Introduction and method statement

The evaluation recorded a limited number of features of possible prehistoric to Roman date. Samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated area and nine were submitted for assessment.

The samples were bulk floated by SCCAS and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Table 1. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern contaminants, including fibrous roots, seeds, grass and fungal sclerotia, were present throughout.

Results

With the exception of Sample 4, from ditch fill 0013 of possible later prehistoric to Roman date, plant macrofossils were scarce, with most occurring as single specimens within an assemblage. Preservation was poor to moderate, with a high density of the grains being severely puffed and distorted, possibly as a result of combustion at very high temperatures.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recorded along with a possible rye (*Secale cereale*) grain and a single large pulse (*Fabaceae*) of probable pea/bean type. Weed seeds occurred very infrequently. However, those recorded were all of common segetal taxa including brome (*Bromus* sp.), black bindweed (*Fallopia convolvulus*), wild radish (*Raphanus raphanistrum*) and vetch/vetchling (*Vicia/Lathyrus* sp.). A single possible hazel (*Corylus avellana*) nutshell fragment was noted within the assemblage from sample 6 taken from post-hole fill 0015. Charcoal/charred wood fragments were present throughout, although rarely at a very high density.

With the exception of small coal fragments, which were present throughout but almost certainly intrusive within the contexts, other remains were scarce. The pieces of black porous and tarry material were probable residues of the combustion of organic remains (including cereal grains) at very high temperatures. The assemblage from Sample 4 contained a high density of small pieces of burnt or fired clay although, at the time of writing, the source of this material was unknown.

Conclusions and recommendations for further work

Although very small, the assemblage from Sample 4 possibly includes a low density of cereal processing waste, much of which was probably derived from an advanced stage of cleaning where the larger contaminants were removed by hand prior to the storage/consumption of the grain. The remaining assemblages are extremely sparse and are probably largely derived from scattered refuse, much of which was accidentally incorporated within the feature fills.

As none of the assemblages contain a sufficient density of material for quantification (i.e. 100+ specimens), no further analysis is recommended. In addition, as most of the

assemblages appear to contain some intrusive materials (i.e. coal fragments and, in some instances, shells of the burrowing snail *Cecilioides acicula*), none of the plant remains are considered suitable for either AMS or C14 determinations, as their contemporaneity to the contexts from which the samples were taken cannot be adequately proved.

6.9 Discussion of the material evidence

This small collection of finds from the two Pakefield schools, is made up of two separately dated groups, Neolithic and Roman. The Neolithic activity is concentrated mainly in Trench 13 with a smaller group located in Trench 15. Flints dating to this period have previously been recorded at the Primary School site in Pakefield (LWT 025). Indeed the immediate area surrounding the current site, has numerous references to the Neolithic period, for example GSE 006 and LWT 023 both list the presence of polished flint axes. Certainly, this group contributes more valuable data to our understanding of Neolithic settlement in the Pakefield area. Although the Roman evidence is minimal, it also represents some form of activity in the immediate area.

7. Discussion

The features identified by this evaluation appear to form at least two distinct phases of activity in the area. Dateable Roman features seem to be located towards the middle and southern end of the playing field, with Neolithic features appearing near the top of the field and on the land to the east of the present Middle School building, closer toward the previously known Neolithic findspot of LWT 025. The undated features located could belong to either of these phases although it is believed that a number of them, particularly those in Trench 14, are likely to be of more modern origin and relate to the usage of the site as an orchard in the early 1900's (Fig 11).

While it is not possible to be certain about the precise nature of the features encountered during this evaluation, there is the suggestion that some of the identified features may form an enclosure, possible circular, in the area around Trenches 8, 10 and 11, with numerous north-south orientated ditches could represent multiple redefinition of an important boundary.

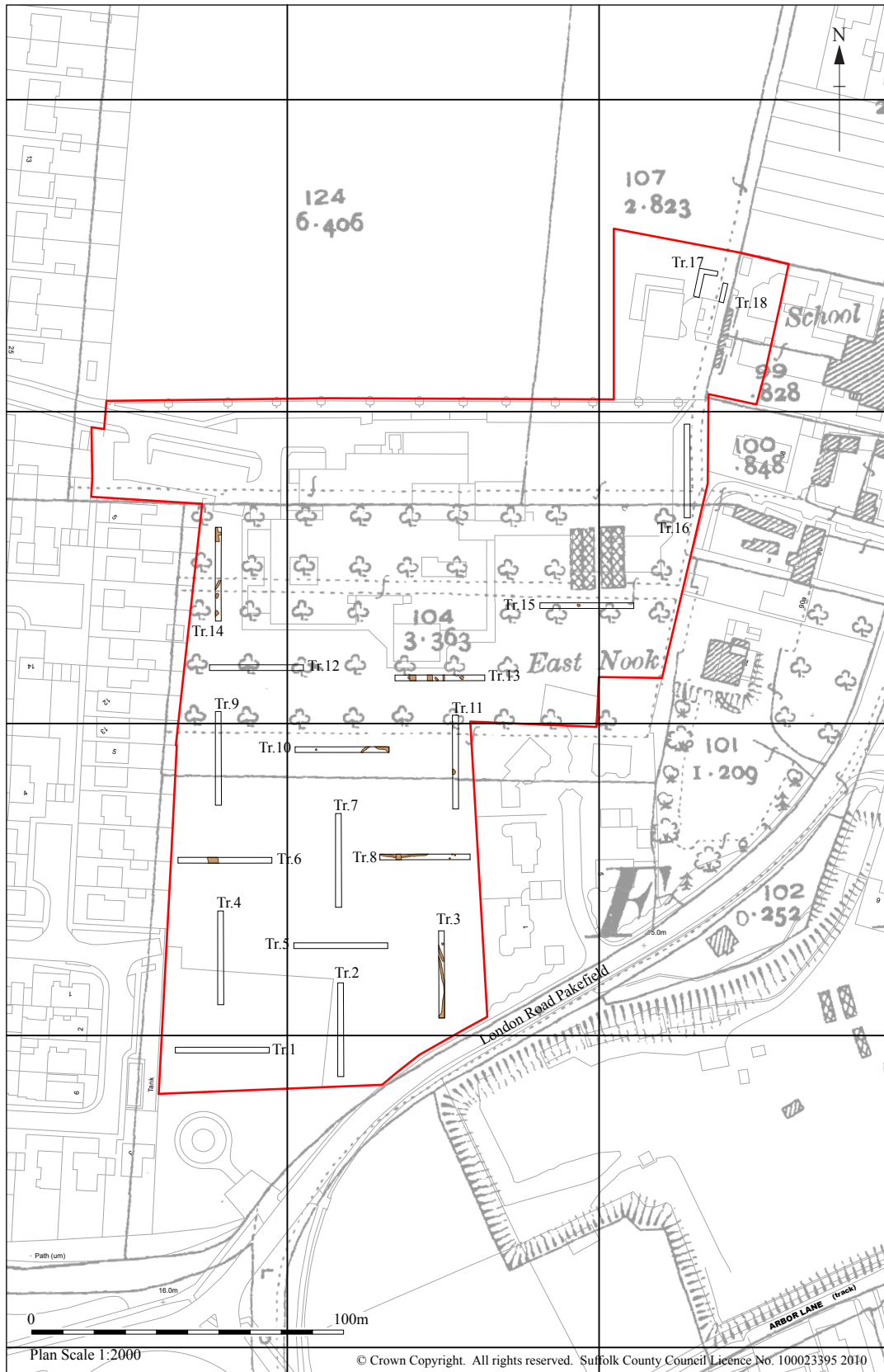


Figure 11. Trench plan, overlain on the 3rd Edition Ordnance Survey of 1927

The presence of intact features of Neolithic date suggests that there may well be surviving features of similar date amongst the mid to late 20th century development of the area, in gardens and undeveloped land nearby (such as the garden of no. 92 London Road, immediately adjacent to the east of the school site) and the open land to the south of the school site (between London Road and Arbor Lane) may also have a continuation of the Roman site revealed towards the east and south of the school playing field.

8. Conclusions and recommendations for further work

The sites revealed during this evaluation appear to be an area of Roman activity relating to land sub-division and either agriculture or livestock management, and scattered Neolithic activity, with a single linear feature possibly representing an enclosure of some form. Further work is recommended, in particular to explore the nature of the large Roman feature identified in Trench 6 and the spread of features in the eastern half of the playing field and the area of apparent Neolithic activity immediately south of the present building potentially stretching up as far as the location of Trench 16.

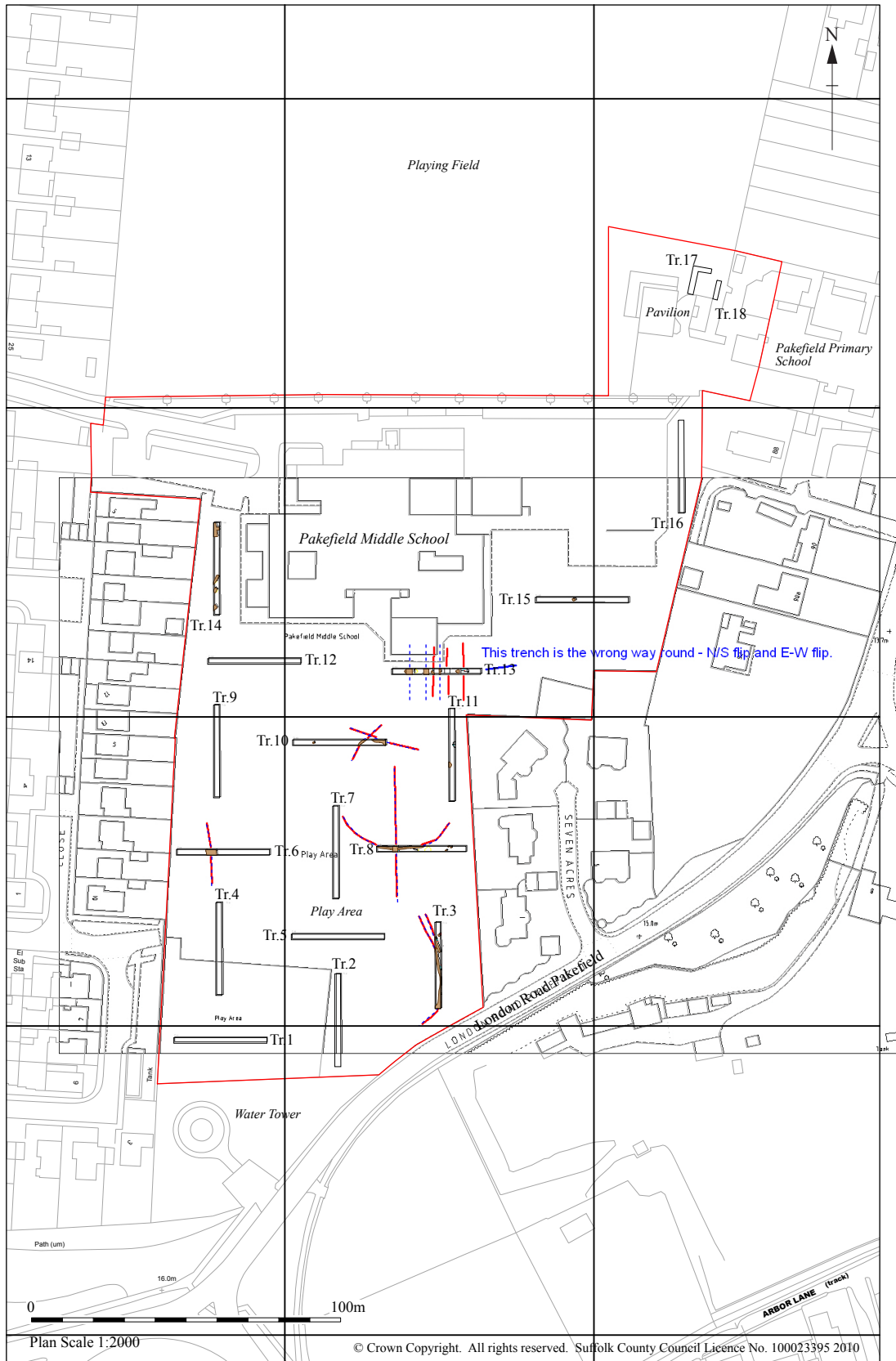


Figure 12. Trench plan, showing possible feature extrapolations

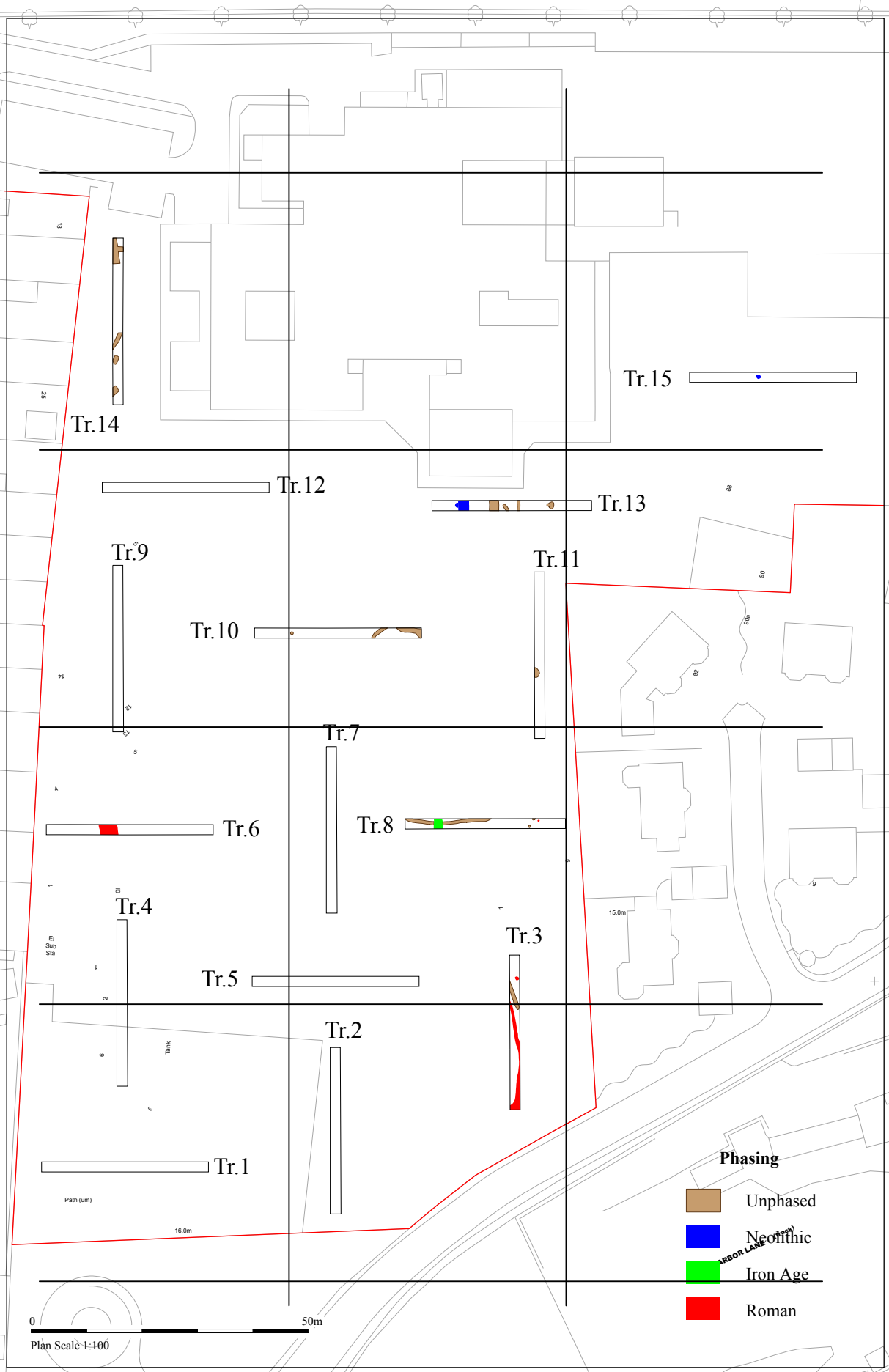


Figure 13. Phasing

9. Archive deposition

Paper and photographic archive: SCCAS Ipswich T:\ENV\ARC\PARISH\Lowestoft

Finds and environmental archive: SCCAS Bury St Edmunds. Store Location: H / 80 / 5

10. List of contributors and acknowledgements

The evaluation was carried out by a number of archaeological staff, (Simon Cass, Anna West, Duncan Allan, Jonathan van Jennians) all from Suffolk County Council Archaeological Service, Field Team.

The project was managed by Rhodri Gardner, who also provided advice during the production of the report.

The post-excavation was managed by Richenda Goffin. Finds processing and the production of site plans and sections were carried out by Jonathan Van Jennians and Crane Begg respectively, and the specialist finds report by Andy Fawcett. Other specialist identification and advice was provided by Colin Pemberton and Val Fryer. The report was checked by Richenda Goffin.

11. Bibliography

Stace, C., 1997 *New Flora of the British Isles*. Second edition. Cambridge University Press

Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

**Appendix 1. Brief and Specification
for Pakefield Middle School****Brief and Specification for Archaeological Evaluation****PAKEFIELD MIDDLE SCHOOL, KILBOURN ROAD, LOWESTOFT**

The commissioning body should be aware that it may have Health & Safety responsibilities.

1. The nature of the development and archaeological requirements

- 1.1 A planning enquiry has been made for the construction of a new high school on the site of Pakefield Middle School, Kilbourn Road, Lowestoft NR33 7DS (TM 532 900).
- 1.2 The Planning Authority (Suffolk County Council) will be advised by Suffolk County Council Archaeology Service that this proposal lies in an area of high archaeological importance. In order to establish the archaeological implications of this application, the applicant should be required, prior to consideration of the application, to provide an archaeological impact assessment of the proposed site as suggested in DoE Planning Policy Guidance 16 (November 1990), para 21.
- 1.3 The area of the proposed development measures c. 2.75 ha. in size, located on the site of Pakefield Middle School. The proposal comprises development (new school blocks, parking, access and landscaping) on the current playing field to the south of the existing school buildings, and subsequent demolition of existing buildings and redevelopment for MUGA pitch and further parking. The soils are deep sands and loam derived from the underlying glaciofluvial drift and chalky till at c. 12-18.00m AOD.
- 1.4 The school lies in an area of high archaeological importance, recorded in the County Historic Environment Record. Neolithic finds are recorded from the site of this school (HER: LWT 025), which are indicative of further occupation remains. However, this area has not been the subject of systematic investigation.

The site has good potential for the discovery of important hitherto unknown archaeological sites and features in view of its large size and proximity to known archaeological remains. Aspects of the proposed development would cause significant ground disturbance that has potential to damage any archaeological deposit that exists.

- 1.5 The following archaeological evaluation work is required:
 - A linear trenched evaluation is required of the development area. At this stage, the evaluation will be undertaken on areas currently under grass (playing fields), measuring c. 1.70ha. in extent. Areas under concrete and current buildings will need to be evaluated at a subsequent stage (assuming permission is forthcoming for demolition), but these areas are currently unavailable for investigation.
- 1.6 **The results of this evaluation will enable the archaeological resource, both in quality and extent, to be accurately quantified. Decisions on the suitability of the area for development, and also the need for, and scope of, any further work (geophysical survey and full excavation) should there be any archaeological finds of significance,**

will be based upon the results of the evaluation and will be the subject of an additional specification.

- 1.7 All arrangements for the field evaluation of the site, the timing of the work, access to the site, the definition of the precise area of landholding and area for proposed development are to be defined and negotiated with the commissioning body.
- 1.8 Detailed standards, information and advice to supplement this brief are to be found in *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14, 2003.
- 1.9 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to the Conservation Team of the Archaeological Service of Suffolk County Council (Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 352443) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the WSI as satisfactory. The WSI will provide the basis for measurable standards and will be used to satisfy the requirements of the planning condition.
- 1.10 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination. The developer should be aware that investigative sampling to test for contamination is likely to have an impact on any archaeological deposit which exists; proposals for sampling should be discussed with the Conservation Team of the Archaeological Service of SCC (SCCAS/CT) before execution.
- 1.11 The responsibility for identifying any constraints on field-work, e.g. Scheduled Monument status, Listed Building status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites &c., ecological considerations rests with the commissioning body and its archaeological contractor. The existence and content of the archaeological brief does not over-ride such constraints or imply that the target area is freely available.
- 1.12 Any changes to the specifications that the project archaeologist may wish to make after approval by this office should be communicated directly to SCCAS/CT and the client for approval.

2. Brief for the Archaeological Evaluation

- 2.1 Establish whether any archaeological deposit exists in the area, with particular regard to any which are of sufficient importance to merit preservation *in situ*.
- 2.2 Identify the date, approximate form and purpose of any archaeological deposit within the application area, together with its likely extent, localised depth and quality of preservation.
- 2.3 Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
- 2.4 Establish the potential for the survival of environmental evidence.
- 2.5 Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.

- 2.6 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), all stages will follow a process of assessment and justification before proceeding to the next phase of the project. Field evaluation is to be followed by the preparation of a full archive, and an assessment of potential. Any further excavation required as mitigation is to be followed by the preparation of a full archive, and an assessment of potential, analysis and final report preparation may follow. Each stage will be the subject of a further brief and updated project design; this document covers only the evaluation stage.
- 2.7 The developer or his archaeologist will give SCCAS/CT (address as above) five working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored.
- 2.8 If the approved evaluation design is not carried through in its entirety (particularly in the instance of trenching being incomplete) the evaluation report may be rejected. Alternatively the presence of an archaeological deposit may be presumed, and untested areas included on this basis when defining the final mitigation strategy.
- 2.9 An outline specification, which defines certain minimum criteria, is set out below.

3. Specification: Trenched Evaluation

- 3.1 Trial trenches are to be excavated to cover 5% by area of the site available for investigation (the playing fields), which is c. 850.00m². These shall be positioned to sample all parts of the site. Linear trenches are thought to be the most appropriate sampling method. Trenches are to be a minimum of 1.80m wide unless special circumstances can be demonstrated; this will result in a minimum of 472.00m of trenching at 1.80m in width.
- 3.2 If excavation is mechanised a toothless 'ditching bucket' at least 1.80m wide must be used. A scale plan showing the proposed locations of the trial trenches should be included in the WSI and the detailed trench design must be approved by SCCAS/CT before field work begins.
- 3.3 The topsoil may be mechanically removed using an appropriate machine with a back-acting arm and fitted with a toothless bucket, down to the interface layer between topsoil and subsoil or other visible archaeological surface. All machine excavation is to be under the direct control and supervision of an archaeologist. The topsoil should be examined for archaeological material.
- 3.4 The top of the first archaeological deposit may be cleared by machine, but must then be cleaned off by hand. There is a presumption that excavation of all archaeological deposits will be done by hand unless it can be shown there will not be a loss of evidence by using a machine. The decision as to the proper method of excavation will be made by the senior project archaeologist with regard to the nature of the deposit.
- 3.5 In all evaluation excavation there is a presumption of the need to cause the minimum disturbance to the site consistent with adequate evaluation; that significant archaeological features, e.g. solid or bonded structural remains, building slots or post-holes, should be preserved intact even if fills are sampled. For guidance:
- For linear features, 1.00m wide slots (min.) should be excavated across their width;
- For discrete features, such as pits, 50% of their fills should be sampled (in some instances 100% may be requested).
- 3.6 There must be sufficient excavation to give clear evidence for the period, depth and nature of any archaeological deposit. The depth and nature of colluvial or other masking deposits must be established across the site.

- 3.7 Archaeological contexts should, where possible, be sampled for palaeoenvironmental remains. Best practice should allow for sampling of interpretable and datable archaeological deposits and provision should be made for this. The contractor shall show what provision has been made for environmental assessment of the site and must provide details of the sampling strategies for retrieving artefacts, biological remains (for palaeoenvironmental and palaeoeconomic investigations), and samples of sediments and/or soils (for micromorphological and other pedological/sedimentological analyses. Advice on the appropriateness of the proposed strategies will be sought from Rachel Ballantyne, English Heritage Regional Adviser for Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy, P.L. and Wiltshire, P.E.J., 1994, *A guide to sampling archaeological deposits for environmental analysis*) is available for viewing from SCCAS.
- 3.8 Any natural subsoil surface revealed should be hand cleaned and examined for archaeological deposits and artefacts. Sample excavation of any archaeological features revealed may be necessary in order to gauge their date and character.
- 3.9 Metal detector searches must take place at all stages of the excavation by an experienced metal detector user.
- 3.10 All finds will be collected and processed (unless variations in this principle are agreed SCCAS/CT during the course of the evaluation).
- 3.11 Human remains must be left *in situ* except in those cases where damage or desecration are to be expected, or in the event that analysis of the remains is shown to be a requirement of satisfactory evaluation of the site. However, the excavator should be aware of, and comply with, the provisions of Section 25 of the Burial Act 1857.
- 3.12 Plans of any archaeological features on the site are to be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. All levels should relate to Ordnance Datum. Any variations from this must be agreed with SCCAS/CT.
- 3.13 A photographic record of the work is to be made, consisting of both monochrome photographs and colour transparencies and/or high resolution digital images.
- 3.14 Topsoil, subsoil and archaeological deposit to be kept separate during excavation to allow sequential backfilling of excavations.
- 3.15 Trenches should not be backfilled without the approval of SCCAS/CT.

4. General Management

- 4.1 A timetable for all stages of the project must be agreed before the first stage of work commences, including monitoring by SCCAS/CT. The archaeological contractor will give not less than five days written notice of the commencement of the work so that arrangements for monitoring the project can be made.
- 4.2 The composition of the archaeology contractor staff must be detailed and agreed by this office, including any subcontractors/specialists. For the site director and other staff likely to have a major responsibility for the post-excavation processing of this evaluation there must also be a statement of their responsibilities or a CV for post-excavation work on other archaeological sites and publication record. Ceramic specialists, in particular, must have relevant experience from this region, including knowledge of local ceramic sequences.
- 4.3 It is the archaeological contractor's responsibility to ensure that adequate resources are available to fulfill the Brief.

- 4.4 A detailed risk assessment must be provided for this particular site.
- 4.5 No initial survey to detect public utility or other services has taken place. The responsibility for this rests with the archaeological contractor.
- 4.6 The Institute of Field Archaeologists' *Standard and Guidance for archaeological field evaluation* (revised 2001) should be used for additional guidance in the execution of the project and in drawing up the report.

5. Report Requirements

- 5.1 An archive of all records and finds must be prepared consistent with the principles of English Heritage's *Management of Archaeological Projects*, 1991 (particularly Appendix 3.1 and Appendix 4.1).
- 5.2 The report should reflect the aims of the WSI.
- 5.3 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 5.4 An opinion as to the necessity for further evaluation and its scope may be given. No further site work should be embarked upon until the primary fieldwork results are assessed and the need for further work is established.
- 5.5 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 5.6 The Report must include a discussion and an assessment of the archaeological evidence, including an assessment of palaeoenvironmental remains recovered from palaeosols and cut features. Its conclusions must include a clear statement of the archaeological potential of the site, and the significance of that potential in the context of the Regional Research Framework (*East Anglian Archaeology*, Occasional Papers 3 & 8, 1997 and 2000).
- 5.7 The results of the surveys should be related to the relevant known archaeological information held in the County Historic Environment Record (HER).
- 5.8 A copy of the Specification should be included as an appendix to the report.
- 5.9 The project manager must consult the County HER Officer (Dr Colin Pendleton) to obtain an HER number for the work. This number will be unique for each project or site and must be clearly marked on any documentation relating to the work.
- 5.10 Finds must be appropriately conserved and stored in accordance with *UK Institute of Conservators Guidelines*.
- 5.11 The project manager should consult the SCC Archive Guidelines 2008 and also the County HER Officer regarding the requirements for the deposition of the archive (conservation, ordering, organisation, labelling, marking and storage) of excavated material and the archive.
- 5.12 The WSI should state proposals for the deposition of the digital archive relating to this project with the Archaeology Data Service (ADS), and allowance should be made for costs incurred to ensure the proper deposition (<http://ads.ahds.ac.uk/project/policy.html>).
- 5.13 Every effort must be made to get the agreement of the landowner/developer to the deposition of the finds with the County HER or a museum in Suffolk which satisfies Museum and

Galleries Commission requirements, as an indissoluble part of the full site archive. If this is not achievable for all or parts of the finds archive then provision must be made for additional recording (e.g. photography, illustration, analysis) as appropriate. If the County HER is the repository for finds there will be a charge made for storage, and it is presumed that this will also be true for storage of the archive in a museum.

- 5.14 The site archive is to be deposited with the County HER within three months of the completion of fieldwork. It will then become publicly accessible.
- 5.15 Where positive conclusions are drawn from a project (whether it be evaluation or excavation) a summary report, in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the *Proceedings of the Suffolk Institute for Archaeology*, must be prepared. It should be included in the project report, or submitted to SCCAS/CT, by the end of the calendar year in which the evaluation work takes place, whichever is the sooner.
- 5.16 County HER sheets must be completed, as per the County HER manual, for all sites where archaeological finds and/or features are located.
- 5.17 An unbound copy of the evaluation report, clearly marked DRAFT, must be presented to SCCAS/CT for approval within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.

Following acceptance, two copies of the report should be submitted to SCCAS/CT together with a digital .pdf version.

- 5.18 Where appropriate, a digital vector trench plan should be included with the report, which must be compatible with MapInfo GIS software, for integration in the County HER. AutoCAD files should be also exported and saved into a format that can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files.
- 5.19 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.
- 5.20 All parts of the OASIS online form must be completed for submission to the County HER. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).

Specification by: Dr Jess Tipper

Suffolk County Council
Archaeological Service Conservation Team
Environment and Transport Service Delivery
9-10 The Churchyard, Shire Hall
Bury St Edmunds
Suffolk IP33 2AR
Tel: 01284 352197
Email: jess.tipper@suffolk.gov.uk

Date: 11 August 2009

Reference: / PakefieldMiddleSchool-Lowestoft2009

This brief and specification remains valid for six months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.

If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.

Appendix 2. Brief and Specification for Pakefield Primary School

Environment and Transport Service Delivery
9-10 The Churchyard, Shire Hall
Bury St Edmunds
Suffolk
IP33 2AR

Brief and Specification for Archaeological Evaluation

PAKEFIELD PRIMARY SCHOOL, LONDON ROAD, PAKEFIELD, LOWESTOFT

The commissioning body should be aware that it may have Health & Safety responsibilities.

1. The nature of the development and archaeological requirements

- 1.1 Planning permission is to be sought by Suffolk County Council for the erection of a new building (existing pavilion to be demolished), new hard play extension and new soft play extension at Pakefield Primary School, London Road, Pakefield, Lowestoft NR32 1PL (TM 533 901). Please contact the developer for an accurate location plan.
- 1.2 The Planning Authority will be advised that any consent should be conditional upon an agreed programme of work taking place before development begins (PPG 16, paragraph 30 condition).
- 1.3 The area of the proposed development is located on the west side of Pakefield Primary School. The soils are deep sands and loam derived from the underlying glaciofluvial drift and chalky till at c. 12-13.00m AOD.
- 1.4 The school lies in an area of high archaeological importance, recorded in the County Historic Environment Record. Neolithic finds are recorded from the site of this school (HER: LWT 025), which are indicative of further occupation remains. There is high potential for archaeological remains to be defined at this location. Any groundworks causing significant ground disturbance have the potential to damage any archaeological deposit that exists.
- 1.5 In order to inform the archaeological mitigation strategy, the following work will be required:
 - A linear trenched evaluation is required of the development area.
- 1.6 **The results of this evaluation will enable the archaeological resource, both in quality and extent, to be accurately quantified. Decisions on the need for and scope of any mitigation measures, should there be any archaeological finds of significance, will be based upon the results of the evaluation and will be the subject of an additional specification.**
- 1.7 All arrangements for the field evaluation of the site, the timing of the work, access to the site, the definition of the precise area of landholding and area for proposed development are to be defined and negotiated with the commissioning body.
- 1.8 Detailed standards, information and advice to supplement this brief are to be found in *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14, 2003.
- 1.9 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement.

This must be submitted by the developers, or their agent, to the Conservation Team of the Archaeological Service of Suffolk County Council (9 – 10 The Churchyard, Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 352443) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the WSI as satisfactory. The WSI will provide the basis for measurable standards and will be used to satisfy the requirements of the planning condition.

- 1.10 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination. The developer should be aware that investigative sampling to test for contamination is likely to have an impact on any archaeological deposit which exists; proposals for sampling should be discussed with the Conservation Team of the Archaeological Service of SCC (SCCAS/CT) before execution.
- 1.11 The responsibility for identifying any constraints on field-work, e.g. Scheduled Monument status, Listed Building status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites &c., ecological considerations rests with the commissioning body and its archaeological contractor. The existence and content of the archaeological brief does not over-ride such constraints or imply that the target area is freely available.
- 1.12 Any changes to the specifications that the project archaeologist may wish to make after approval by this office should be communicated directly to SCCAS/CT and the client for approval.

2. Brief for the Archaeological Evaluation

- 2.1 Establish whether any archaeological deposit exists in the area, with particular regard to any which are of sufficient importance to merit preservation *in situ*.
- 2.2 Identify the date, approximate form and purpose of any archaeological deposit within the application area, together with its likely extent, localised depth and quality of preservation.
- 2.3 Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
- 2.4 Establish the potential for the survival of environmental evidence.
- 2.5 Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.
- 2.6 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), all stages will follow a process of assessment and justification before proceeding to the next phase of the project. Field evaluation is to be followed by the preparation of a full archive, and an assessment of potential. Any further excavation required as mitigation is to be followed by the preparation of a full archive, and an assessment of potential, analysis and final report preparation may follow. Each stage will be the subject of a further brief and updated project design; this document covers only the evaluation stage.
- 2.7 The developer or his archaeologist will give SCCAS/CT (address as above) five working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored.
- 2.8 If the approved evaluation design is not carried through in its entirety (particularly in the instance of trenching being incomplete) the evaluation report may be rejected. Alternatively

the presence of an archaeological deposit may be presumed, and untested areas included on this basis when defining the final mitigation strategy.

2.9 An outline specification, which defines certain minimum criteria, is set out below.

3. Specification: Trenched Evaluation

3.1 Trial trenches are to be excavated to cover the area of the proposed development. These shall be positioned to sample all parts of the site. Linear trenches are thought to be the most appropriate sampling method. Trenches are to be a minimum of 1.80m wide unless special circumstances can be demonstrated; this will result in a minimum of 40.00m of trenching at 1.80m in width.

3.2 If excavation is mechanised a toothless 'ditching bucket' at least 1.50m wide must be used. A scale plan showing the proposed locations of the trial trenches should be included in the WSI and the detailed trench design must be approved by SCCAS/CT before field work begins.

3.3 The topsoil may be mechanically removed using an appropriate machine with a back-acting arm and fitted with a toothless bucket, down to the interface layer between topsoil and subsoil or other visible archaeological surface. All machine excavation is to be under the direct control and supervision of an archaeologist. The topsoil should be examined for archaeological material.

3.4 The top of the first archaeological deposit may be cleared by machine, but must then be cleaned off by hand. There is a presumption that excavation of all archaeological deposits will be done by hand unless it can be shown there will not be a loss of evidence by using a machine. The decision as to the proper method of excavation will be made by the senior project archaeologist with regard to the nature of the deposit.

3.5 In all evaluation excavation there is a presumption of the need to cause the minimum disturbance to the site consistent with adequate evaluation; that significant archaeological features, e.g. solid or bonded structural remains, building slots or post-holes, should be preserved intact even if fills are sampled. For guidance:

For linear features, 1.00m wide slots (min.) should be excavated across their width;

For discrete features, such as pits, 50% of their fills should be sampled (in some instances 100% may be requested).

3.6 There must be sufficient excavation to give clear evidence for the period, depth and nature of any archaeological deposit. The depth and nature of colluvial or other masking deposits must be established across the site.

3.7 Archaeological contexts should, where possible, be sampled for palaeo-environmental remains. Best practice should allow for sampling of interpretable and datable archaeological deposits and provision should be made for this. The contractor shall show what provision has been made for environmental assessment of the site and must provide details of the sampling strategies for retrieving artefacts, biological remains (for palaeo-environmental and palaeo-economic investigations), and samples of sediments and/or soils (for micromorphological and other pedological/sedimentological analyses. Advice on the appropriateness of the proposed strategies will be sought from Rachel Ballantyne, English Heritage Regional Adviser for Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy, P.L. and Wiltshire, P.E.J., 1994, *A guide to sampling archaeological deposits for environmental analysis*) is available for viewing from SCCAS.

- 3.8 Any natural subsoil surface revealed should be hand cleaned and examined for archaeological deposits and artefacts. Sample excavation of any archaeological features revealed may be necessary in order to gauge their date and character.
- 3.9 Metal detector searches must take place at all stages of the excavation by an experienced metal detector user.
- 3.10 All finds will be collected and processed (unless variations in this principle are agreed SCCAS/CT during the course of the evaluation).
- 3.11 Human remains must be left *in situ* except in those cases where damage or desecration are to be expected, or in the event that analysis of the remains is shown to be a requirement of satisfactory evaluation of the site. However, the excavator should be aware of, and comply with, the provisions of Section 25 of the Burial Act 1857.
- 3.12 Plans of any archaeological features on the site are to be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. All levels should relate to Ordnance Datum. Any variations from this must be agreed with SCCAS/CT.
- 3.13 A photographic record of the work is to be made, consisting of both monochrome photographs and colour transparencies and/or high resolution digital images.
- 3.14 Topsoil, subsoil and archaeological deposit to be kept separate during excavation to allow sequential backfilling of excavations.
- 3.15 Trenches should not be backfilled without the approval of SCCAS/CT.

4. General Management

- 4.1 A timetable for all stages of the project must be agreed before the first stage of work commences, including monitoring by SCCAS/CT. The archaeological contractor will give not less than five days written notice of the commencement of the work so that arrangements for monitoring the project can be made.
- 4.2 The composition of the archaeology contractor staff must be detailed and agreed by this office, including any subcontractors/specialists. For the site director and other staff likely to have a major responsibility for the post-excavation processing of this evaluation there must also be a statement of their responsibilities or a CV for post-excavation work on other archaeological sites and publication record. Ceramic specialists, in particular, must have relevant experience from this region, including knowledge of local ceramic sequences.
- 4.3 It is the archaeological contractor's responsibility to ensure that adequate resources are available to fulfill the Brief.
- 4.4 A detailed risk assessment must be provided for this particular site.
- 4.5 No initial survey to detect public utility or other services has taken place. The responsibility for this rests with the archaeological contractor.
- 4.6 The Institute of Field Archaeologists' *Standard and Guidance for archaeological field evaluation* (revised 2001) should be used for additional guidance in the execution of the project and in drawing up the report.

5. Report Requirements

- 5.1 An archive of all records and finds must be prepared consistent with the principles of English Heritage's *Management of Archaeological Projects*, 1991 (particularly Appendix 3.1 and Appendix 4.1).
- 5.2 The report should reflect the aims of the WSI.
- 5.3 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 5.4 An opinion as to the necessity for further evaluation and its scope may be given. No further site work should be embarked upon until the primary fieldwork results are assessed and the need for further work is established.
- 5.5 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 5.6 The Report must include a discussion and an assessment of the archaeological evidence, including an assessment of palaeoenvironmental remains recovered from palaeosols and cut features. Its conclusions must include a clear statement of the archaeological potential of the site, and the significance of that potential in the context of the Regional Research Framework (*East Anglian Archaeology*, Occasional Papers 3 & 8, 1997 and 2000).
- 5.7 The results of the surveys should be related to the relevant known archaeological information held in the County Historic Environment Record (HER).
- 5.8 A copy of the Specification should be included as an appendix to the report.
- 5.9 The project manager must consult the County HER Officer (Dr Colin Pendleton) to obtain an HER number for the work. This number will be unique for each project or site and must be clearly marked on any documentation relating to the work.
- 5.10 Finds must be appropriately conserved and stored in accordance with *UK Institute of Conservators Guidelines*.
- 5.11 The project manager should consult the SCC Archive Guidelines 2008 and also the County HER Officer regarding the requirements for the deposition of the archive (conservation, ordering, organisation, labelling, marking and storage) of excavated material and the archive.
- 5.12 The WSI should state proposals for the deposition of the digital archive relating to this project with the Archaeology Data Service (ADS), and allowance should be made for costs incurred to ensure the proper deposition (<http://ads.ahds.ac.uk/project/policy.html>).
- 5.13 Every effort must be made to get the agreement of the landowner/developer to the deposition of the finds with the County HER or a museum in Suffolk which satisfies Museum and Galleries Commission requirements, as an indissoluble part of the full site archive. If this is not achievable for all or parts of the finds archive then provision must be made for additional recording (e.g. photography, illustration, analysis) as appropriate. If the County HER is the repository for finds there will be a charge made for storage, and it is presumed that this will also be true for storage of the archive in a museum.
- 5.14 The site archive is to be deposited with the County HER within three months of the completion of fieldwork. It will then become publicly accessible.
- 5.15 Where positive conclusions are drawn from a project (whether it be evaluation or excavation) a summary report, in the established format, suitable for inclusion in the annual 'Archaeology

in Suffolk' section of the *Proceedings of the Suffolk Institute for Archaeology*, must be prepared. It should be included in the project report, or submitted to SCCAS/CT, by the end of the calendar year in which the evaluation work takes place, whichever is the sooner.

- 5.16 County HER sheets must be completed, as per the County HER manual, for all sites where archaeological finds and/or features are located.
- 5.17 An unbound copy of the evaluation report, clearly marked DRAFT, must be presented to SCCAS/CT for approval within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.

Following acceptance, two copies of the report should be submitted to SCCAS/CT together with a digital .pdf version.

- 5.18 Where appropriate, a digital vector trench plan should be included with the report, which must be compatible with MapInfo GIS software, for integration in the County HER. AutoCAD files should be also exported and saved into a format that can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files.
- 5.19 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.
- 5.20 All parts of the OASIS online form must be completed for submission to the County HER. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).

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Date: 11 August 2009

Reference: / PakefieldPrimarySchool-Lowestoft2009

This brief and specification remains valid for six months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.

If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.

Appendix 3. Context Database

CONTEXT FEATURE IDENTIFIER DESCRIPTION

CONTEXT	FEATURE	IDENTIFIER	DESCRIPTION
0001		Topsoil	Dark brown clayey silt topsoil
0002	0002	Ditch	Large probable ditch, very steep/near vertical sides, base not reached. C. 3.25m wide and 1.5m+ deep.
0003	0002	Ditch Fill	Mid grey/orange mottled stiff clay with occasional charcoal flecks. Fill of ditch 0002
0004	0004	Pit	Truncated ovoid pit, 0.75m x 0.56m x 0.1m deep. Shallow sides to a concave/flat base.
0005	0004	Pit Fill	Fill of truncated pit 0004. Pale grey/brown clay with occasional subangular stones.
0006	0006	Ditch	Ditch, running NNW-SSE across Tr 3. Shallow concave sloping sides and a flat base 0.76m wide and 0.14m deep. Overlain by redeposited natural to the SW.
0007	0006	Ditch Fill	Upper fill of ditch 0006. Mid grey/brown clay with very frequent charcoal flecks.
0008	0006	Ditch Fill	Lower fill of ditch 0006. Mottled grey/orange clay with very frequent charcoal flecks and occasional subangular stones.
0009	0009	Ditch	Ditch/gully in TR 8, orientated approximately E-W, but curving northwards at both ends c. 0.5m wide and 0.25m deep with medium concave sloping sides and a concave base.
0010	0009	Ditch Fill	Mid grey/orangey brown mottled silty/sandy clay.
0011	0011	Ditch	Ditch, orientated N-S, crossing TR 8. c. 1.5m wide and 0.5m deep, with a shallow step on the eastern side, then a medium/steep slope down to a sharp concave base, with a moderately steep western slope which shallows out after c. 0.25m.
0012	0011	Ditch Fill	Mid grey/brown silty clay with very occasional charcoal flecks
0013	0013	Ditch	Ditch, running NNW-SSE in Tr 3. Shallow concave eastern side with steeper western side, with a narrow concave base. 0.7m wide and 0.14m deep.
0014	0013	Ditch Fill	Fill of ditch 0013. Mid grey/brown clay with occasional subangular stones, very frequent charcoal flecks and lumps of fired clay (too friable to retain).
0015	0015	Posthole	Posthole in TR 8. 0.3m diameter and 0.2m deep. Steep/near vertical sides and a flat base.
0016	0015	Posthole Fill	Fill of posthole 0015. Dark grey/brown silty clay.
0017	0017	Ditch	Ditch, running approx. NE-SW across TR 10. Shallow (truncated?) ditch with shallow concave sides and a flat base. 0.7m wide and 0.16m deep.
0018	0017	Ditch Fill	Fill of ditch 0017. Pale grey brown and orange mottled clay with occasional subangular flints.
0019	0019	Possible Pit	Possible truncated pit (or natural feature?) - very shallow concave sides and a flat base. 0.44m wide and 0.08m deep.
0020	0019	Pit Fill	Fill of possible pit 0019. Pale grey/brown clay with occasional subangular stones.
0021	0021	Ditch	Ditch, orientated NNE-SSW across TR 3. Ditch is same feature as 0013. Western side is shallow concave down to a shallow concave/flat base but the eastern side is outside the trench. 0.72m wide and 0.18m deep (not full width as feature extends outside trench).
0022	0021	Ditch Fill	Lower fill of Ditch 0021. Stiff mottled grey/orange clay with occasional sub-angular stones.
0023	0021	Ditch Fill	Upper fill of Ditch 0021. Stiff mid grey clay with occasional sub-angular stones and very frequent charcoal fragments and occasional fired clay lumps (too friable to retain)

CONTEXT FEATURE IDENTIFIER DESCRIPTION

0024	0024	Possible Pit	Possible pit, very irregular sides, from moderately sloped to shallow, with a flat base. Roughly ovoid in plan, only half of the feature is visible inside the trench. 0.85m wide and 0.2m deep.
0025	0024	Pit Fill	Fill of possible pit 0024. Very clean grey/orange mottled clay with sub-angular stones.
0026	0026	Ditch	Ditch orientated NNE-SSW across north end of TR 14. Shallow concave sides and concave/flat base. 0.8m wide and 0.1m deep.
0027	0026	Ditch Fill	Fill of ditch 0026. Mid grey brown clay with occasional sub-angular stones.
0028	0028	Unstrat finds from	Unstrat finds from Tr 14 (2 sherds of abr Rom greyware?)
0029	0029	Pit	Pit, roughly circular in plan, with moderately steep concave sides and an irregular concave base. A stone lining (0031) lies against the cut. 0.7m wide and 0.17m deep.
0030	0029	Pit Fill	Fill of pit 0029. Mid grey/brown clay with occasional sub-angular stones, frequent charcoal and fired clay flecks.
0031	0029	Pit Fill	Stone lining of pit 0029. Irregular sized sub-angular stones against the cut of the pit.
0032	0032	Possible Truncate	Cut of possible truncated pit in TR 13. Very shallow and irregular feature with shallow concave sides and an irregular concave base, amorphous in plan. Possible treebole/natural feature.
0033	0032	Pit Fill	Fill of possible pit 0032. Pale grey/orange mottled clay with dark grey patches.
0034	0034	Ditch	Ditch noted in TR 14 (north end). c. 1m wide and 0.3m deep with steep sloping side and a sharp concave base.
0035	0034	Ditch Fill	Dark grey/brown silty clay. No finds.
0036	0036	Ditch	Ditch in TR 13, orientated N-S. c. 0.4m wide and 0.1m deep with shallow/medium sloping sides to a concave base.
0037	0036	Ditch Fill	Fill of ditch 0036. Mid greyish brown silty clay.
0038	0038	Ditch	Linear ditch feature orientated N-S across TR 13. 45 degree sloping sides to a shallow concave base. 1.8m wide by 0.4m deep.
0039	0038	Ditch Fill	Primary fill of ditch 0038. Compacted pale brown clay fading to orange brown, occasional medium/large sub-angular flints.
0040	0038	Ditch Fill	Very dark brownish grey clay. Very greasy to touch and rich in charcoal flecking/small lumps. Frequent medium/large sub-angular/angular flints - many appear heat-affected though not fire-cracked. Several flints appear deliberately selected for a specific purpose (thin and flat). Possible sweepings from a stone-lined fire-pit or hearth?
0041	0038	Ditch Fill	Pale brown/orange mottled clay with occasional medium/large sub-angular flints, occasional charcoal flecks and fragments. Pottery recovered from top 0.05m on western side of feature. (Flint temp. preh pot - Looks NEO)
0042	0042	Pit	Pit cut by ditch 0038. Sub-circular pit with smooth sloping sides - base appears to have been totally truncated by ditch 0038 (relationship not clear in section due to large flint nodule but very clear on surface prior to excavation). Maximum depth 0.2m
0043	0042	Pit Fill	Mid brownish orange clay - heavily mottled with dark brownish grey charcoal flecked clay, occasional small sub-angular/rounded flints.
0044	0044	Possible Ditch	Feature noted in TR 14 (north end). Only excavated at intersection with 0034. feature extends outside trench to west and is at least 0.1m deep.
0045	0044	Ditch Fill	Fill of feature 0044. Dark grey/brown silty clay. No finds.

Appendix 4. Pottery spotdates

<i>Context No</i>	<i>Ceramic Period</i>	<i>Fabric</i>	<i>Form</i>	<i>Sherd No</i>	<i>Weight (g)</i>	<i>State</i>	<i>Comments</i>	<i>Fabric date range</i>	<i>Context date</i>
0003	Roman	GX	Jar (lid se	1	8	abr	Similar to Colchester GX 730 - long lived	3rd to 4th C	
0003	?Roman	?BSW	Body	1	3	sli	Surface worn, sparse calcite	?Early Roman	
0003	Iron Age	IAQT	Jar	1	4	sli	Medium ill sorted quartz	Iron Age to LPRIA	
0005	Roman	BSW	Body	1	11	sli	Same as 0003, ill sorted quartz	?Early Roman	
0012	Iron Age	IAGT	Body	1	1	abr	Clay pellets in coarse quartz, could be transitional	IA to LPRIA	
0014	Roman	GX	Body	1	4	abr	Coarse quartz with abundant ill sorted black iron ore	Roman	
0016 <6>	Roman	GX	Body	1	2	abr	Coarse ill sorted quartz, a worn BSW	Roman	
0028	LIA/Roman	GROG/BS	Body	2	14	sli	See Cath - Sherds join, silty sparse clay pellets	?Early Roman+	
0040 <8>	Neolithic	NEFT	Body	2	1	sli	Very fragmented	?Neolithic	
0041	Neolithic	NEFT	Plain Bo	9	54	sli	Expanded rim, coarse flint	?Neolithic	
0043	Neolithic	NEFT	Body	1	7	sli	Ill sorted flint	?Neolithic	
0043 <9>	Neolithic	NEFT	Rounded	4	5	abr	Most are ill sorted flint	?Neolithic	