Report 2837

nps archaeology

Archaeological Evaluation at Yarmouth Road, Norwich

ENF127227

Prepared for
Lovell Partnerships Limited
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September 2011

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BAU 2837

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Location:	Yarmouth Road, Norwich
District:	Broadland
Plannning Ref.:	Pre-application
Grid Ref.:	TG 2716 0861
HER No.:	ENF127227
OASIS Ref.:	110370
Client:	Lovell Partnerships Ltd.
Dates of Fieldwork:	19–22 August 2011

Summary

An archaeological evaluation was conducted for Lovell Partnerships Ltd. ahead of a new housing development on former allotments at Yarmouth Road, Norwich. The development site (0.4 hectares) was located on a south-facing slope looking over the River Yare in an area where significant prehistoric activity has been previously recorded on the other side of the valley. The land use as allotments meant it was likely that little damage to archaeological remains would have occurred.

Three trenches were excavated and apart from a single prehistoric worked flint - a possible borer - no archaeological remains were encountered. Interestingly this flint artefact, although not in situ *(and had signs of reworking), was recovered some 0.85m below the modern surface within what appear to be cryoturbated deposits tentatively suggesting prehistoric surfaces dating to before the last glacial advance (10,000-11,000 years ago) buried at some depth by later colluvium.*

1.0 INTRODUCTION

A programme of archaeological trenching was carried out in advance of the construction of a new housing development on the former allotments at Yarmouth Road, Norwich (Fig. 1).

This work was undertaken to fulfil a pre-planning application recommendation by the Norfolk Historic Environment Service (Ref. CNF43562). The work was commissioned and funded by Lovell Partnerships Ltd. and was conducted in accordance with a Project Design and Method Statement prepared by NPS Archaeology (Ref. NAU/BAU2837/NP).

The development site was approximately 0.4 hectares in area and three trenches measuring 30m, 35m and 40m were excavated. I

The programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010). The results will enable decisions to be made by the Local Planning Authority about the treatment of any archaeological remains found.

The site archive is currently held by NPS Archaeology and on completion of the project will be deposited with the Norfolk Museums and Archaeology Service (NMAS), following the relevant policies on archiving standards.

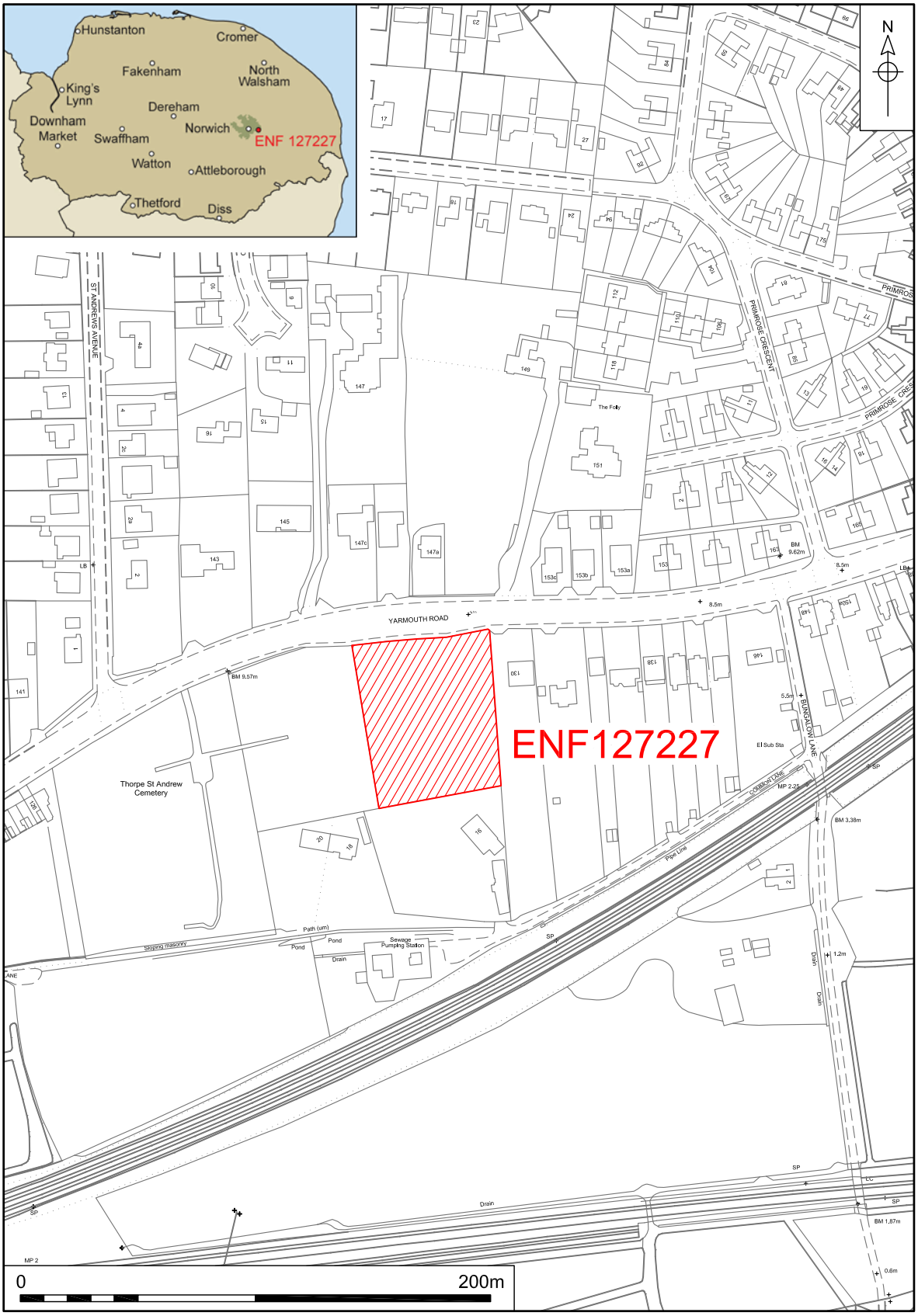

Figure 1. Site location. Scale 1:2500

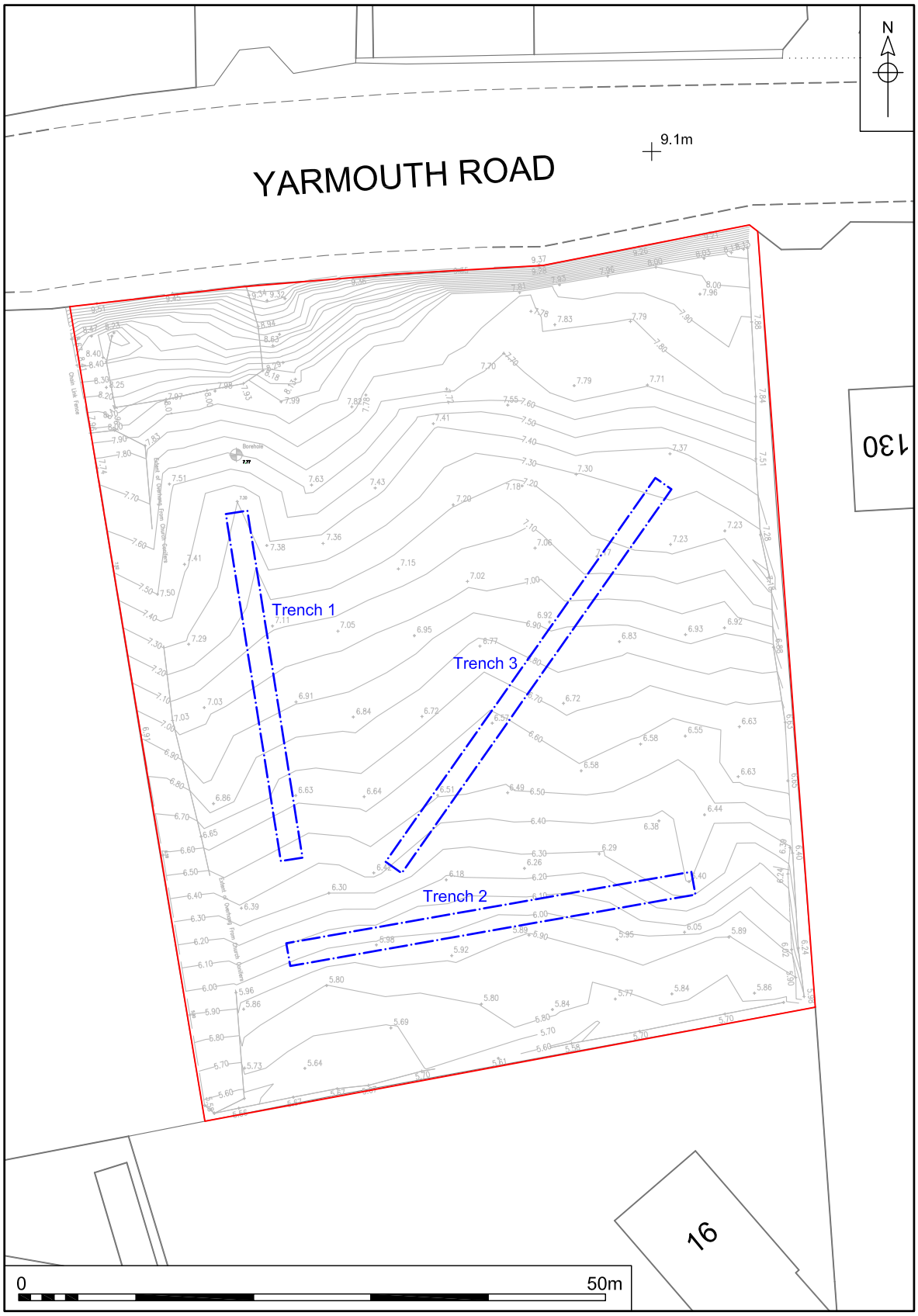

Figure 2. Trench location. Scale 1:500

Levels taken from drawing YRS001 supplied by Lovell Partnerships Ltd

2.0 GEOLOGY AND TOPOGRAPHY

The proposed development site sits on a south-facing slope overlooking the floodplain of the River Yare, which is a position often favoured for settlement and funerary activity, particularly in the prehistoric period. The location suggests archaeological potential and the fact that the site has been used for allotments may have preserved any such remains.

The site is a rectangular parcel of land approximately 55 m wide by 65 m long located in the eastern suburbs of Norwich. The land slopes gently down to the south towards the River Yare some 550m away Fig. 2. The north end of the site lies at 9.5mOD and steeply drops away then more gently slopes to 5.6mOD to the south. The land is currently disused allotments and is overgrown with grass, small shrubs and brambles. The northern boundary is a wooden fence and overgrown hedge bordering Yarmouth Road. A trimmed hedge forms the southern boundary with the gardens of a bungalow. A tall hedge of mature conifers separates the site from a 19th-20th century cemetery/graveyard, some 50m to the west. A hedge of various trees and shrubs lies between the site and the neighbouring house to the east.

The development site is featureless apart from the sporadic remains of composting bins, water butts and trellising for climbing crops. The northern part of the site is very overgrown with brambles making access difficult and it is littered with various plastic sheets, old carpet and old gardening implements. No potentially asbestos-containing materials, agrochemicals, fuel or ash were observed.

The site lies above sand and gravels of river terrace deposits. The northern part is underlain by the till, sands and gravels of the Pleistocene glacial deposits of the Happisburgh and Lowestoft Formations (British Geological Survey 1991). The underlying bedrock is chalk (British Geological Survey 1985).

Five boreholes have been drilled across the site by Delta-Simmons Ltd. These show the presence of relative deep topsoil up to 0.36m deep. Beneath the topsoil the soils generally comprised brown and orange slightly gravelly sands which were principally river terrace deposits to a maximum depth of 3m. The exception to this terrace sequence was borehole WS101, in the north-west corner of the site, where glacial till was encountered at 1.39m below the surface.

The underlying chalk was not penetrated in the 3m-long Delta-Simmons boreholes nor was groundwater encountered.

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The Norfolk Historic Environment Record (NHER) was checked for sites of archaeological and historical interest in the area surrounding the site. It appears that little work has been done in the immediate vicinity of the site. The closest known sites are Second World War features: primarily a series of anti-tank defences situated 400m to the east (NHERs 20338, 32536-7, 51893, 51968-9), but also air-raid shelters (NHER 52015), an emergency water tank (NHER 52103) and a pillbox (NHER 32534).

There are a number of prehistoric sites and finds from the general area, including a Bronze Age barrow cemetery (NHER 9619) 500-1400m to the north-east, from which Neolithic, Roman, medieval and post-medieval finds have also been recovered. A Late Bronze Age quern and potsherds (NHER 9625) have been recorded 750m to the north-north-east, and prehistoric struck flints have been noted to both the north (NHERs 9614, 9691, 12077) and south, with a particularly large number from the banks of the River Yare (NHERs 9644, 15279, 40912, 52922 on the north bank; NHERs 13221, 13418, 15279-80, 16144, 25714 on the south bank).

There are Roman finds and sites from and in this area, including a 1st- or 2nd-century pottery kiln 500m to the north-east (NHER 9629) and a 3rd-century coin (NHER 9638) from a site 200m to the north-east. The remains of a Roman mortarium have been recorded from beside the river (NHER 9641), and Roman pottery (NHERs 25714, 41356), Roman coins (NHERs 13417, 25391), and a Roman mosaic floor (NHER 9676) have been recorded on the south banks of the river.

Evidence of Late Saxon occupation (NHER 9646) has been identified at Thorpe St. Andrew, with a 12th-century (medieval) church occupying the same site. Other Saxon and medieval finds have been recorded (along with post-medieval finds) alongside the river (NHERs 9641, 9644, 20730, 25937, 29667).

The oldest notable buildings in the vicinity date from the 18th to 19th centuries, with an early psychiatric hospital (St. Andrew's (NHER 9693)) to the east.

To the south lie the railway lines of the East Norfolk Railway (Cromer line) (NHER 13586), constructed in the late 19th century (opened 1874) and the Yarmouth line (opened in 1844).

4.0 METHODOLOGY

The objective of this evaluation was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

The Brief required that 5% of the development site be sampled. Initially a total of four trenches were proposed, but a reduction in the number of trenches from four to three (with slightly extended lengths) was agreed with Norfolk Historic Environment Service.

Machine excavation was carried out with a wheeled JCB-type excavator using a toothless ditching bucket under constant archaeological supervision.

Spoil, exposed surfaces and features were scanned with a metal-detector but no archaeological or historic artefacts were recovered.

No environmental samples were taken.

All deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. Monochrome and digital photographs were taken of trenches and deposits.

The temporary benchmark used during the course of this work was transferred from an Ordnance Survey spot height with a value of 9.1m OD, located in the road outside the site.

Site conditions were good, with the work taking place in very hot and dry weather.

5.0 RESULTS

Three trenches (Trenches 1-3) were excavated at the former allotments site at Yarmouth Road, Norwich and the results summarised below.

5.1 Trench 1

Trench 1 measured 30m long by 1.8m wide and was orientated north–south along the axis of the slope (Fig. 2). Its depth varied between 0.85m-1.2m.

Plate 1. Trench 1, looking to south along length of trench

In the northern part of the trench the lowest deposits were pale yellow, firm and crumbly chalky clay - this is likely to be 'head' a soliflucted cold climate deposit which is at least Late Devensian in date (10KaBP - roughly 10,000 years ago) but could be older (Fig. 3 and Plates 1 and 2). These deposits were recorded at a depth of about 5.8m OD in the northern third of the trench, and formed a patchy deposit with overlying brown orange sandy clay [1]. The lowest deposit

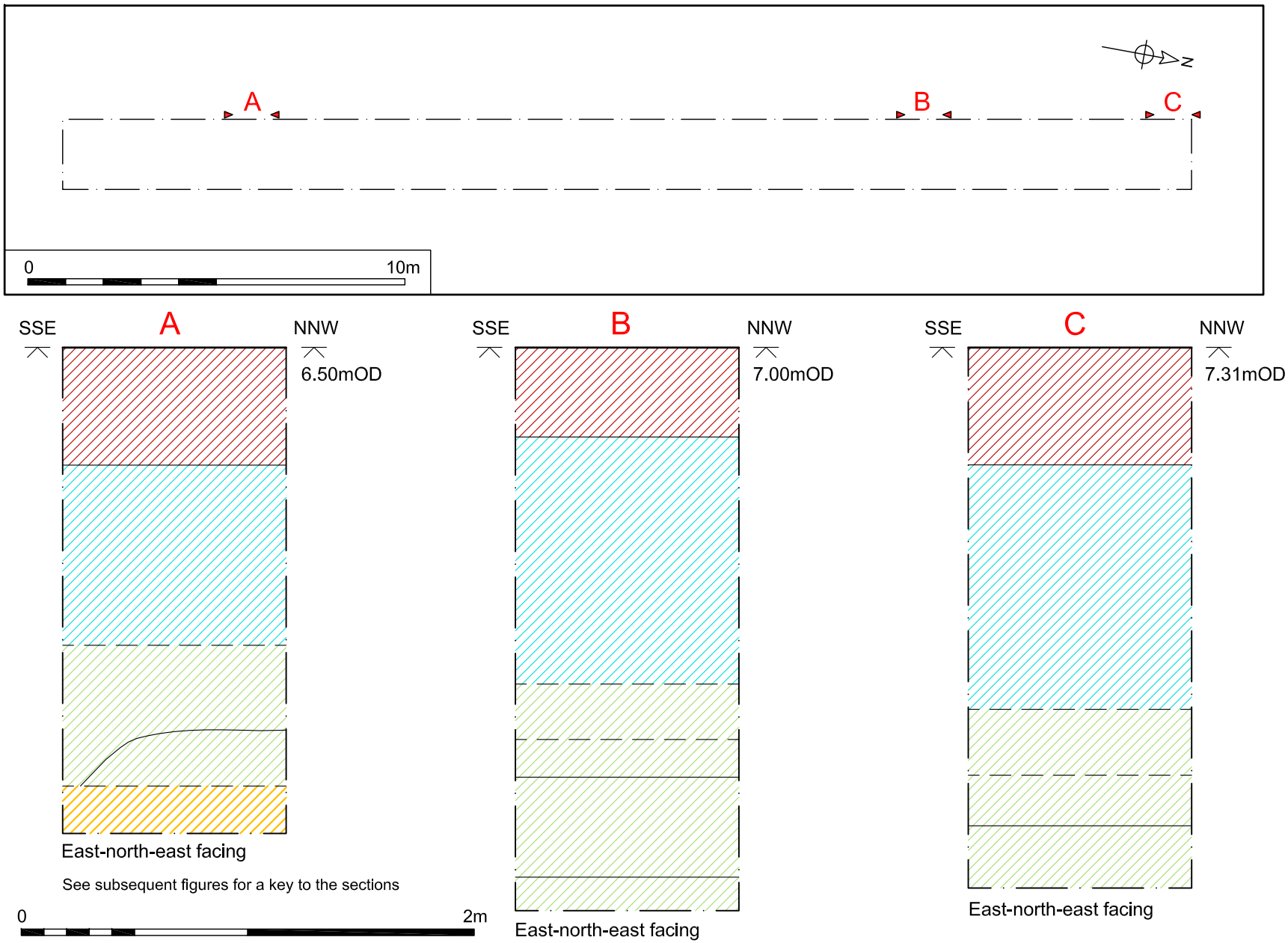

Figure 3. Trench 1, plan and sections. Scale 1:150 and 1:25

encountered in the southern two thirds of the trench was a yellow and orange sand. This sand lies below the chalky head and is either an earlier river terrace or a deposit of glacial sands.

Brown sandy clay [1] was 0.10-0.20m thick and lay above both the chalky clay and the orange sands. It was found at a depth of 0.85m below the modern surface. Interestingly, within this deposit was recovered the only artefact encountered in the excavation - a prehistoric worked flint. Deposit [1] was a firm and slightly sticky sandy clay which appears to lie both above and in hollows within the underlying chalky head deposits. It is likely this sandy clay is also a cold climate deposit and may represent an early soil which has undergone alteration due to freeze thaw cryoturbation in periglacial conditions.

This suggests the flint may be at least pre Loch Lomond advance (11KaBP, approximately 11,000 years ago) in date (i.e. Late Glacial Stadial). It is unfortunate that only a single flint was encountered since there is not enough evidence to suggest any Late Upper Palaeolithic activity. The flint itself is not assigned to any particular prehistoric period and it is always possible that it is intrusive in these lower deposits through an unobserved channel or wider-scale sediment disturbance.

Plate 2. Trench 1, east-facing section, 7m from north end of trench.

Plate 2 shows the sequence of top soil, a virtually stone free colluvium and an orange brown soliflucted silty sand which appears to fall into probable periglacial features developed in underlying soliflucted chalky clay.

Above sandy clay [1] was a thin layer (0.10-0.30m) of a light yellow brown silt subsoil which contained some small pebbles. It is probable this deposit is hillwash and seals the earlier sandy clay containing the prehistoric flint.

This pale deposit gradually gives way to mid to light orangey brown sandy silt with very occasional small stones which was friable and soft. This deposit is colluvium and has accumulated as a consequence of both wind blow and migration of sediments down slope. It is 0.4m deep at the southern end of the trench and 0.55m deep at the north end of the trench.

A sharp contact was noted between the colluvial deposits and the overlying topsoil. The topsoil (0.26m deep) developed in the fine sand ands and silts of the colluvium and is a dark brown, fine sand with silt and rare small pebbles. The sharp lower contact is caused by digging for allotments and the dark colour by the amount of humic material added to the soils by the allotment holders.

5.2 Trench 2

Trench 2 was 35m long and lay east-west across the slope at the bottom of the site (Fig. 2). The trench was machined to a depth of 0.6m below the ground surface for all of its length then at each end two test holes were excavated to a depth of 1.25m at the west end and 1.4m deep at the east end.

Plate 3. Trench 2, looking to the east along length of trench

No archaeological features or finds were identified or recovered from this trench.

The sequence of sediments was similar to those found in Trench 1.

The oldest deposits were dark orange stone-free sand (0.20m deep) (Fig. 4 and Plate 3) followed by 0.3m of soft yellow sand with moderate gravel. These are likely to be either glacial sands and gravels or part of an early river terrace.

Overlying these sand and gravel deposits was 0.4m of bright dark orange silty sand with moderate to frequent flint gravel. This deposit was relatively hard and compacted. It is likely to be a lateral equivalent of the cold climate solifluction deposits recorded in Trench 1 (deposit [1] is part of this sequence). The indurated (hardened) nature of these deposits possibly suggesting a cold climate soil but further work would be required (soil micromorphology) to prove this.

Sealing these hard sandy silts was a relatively thin (0.2m thick) deposit of colluvium. A fine grained mid to light yellow brown sandy silt with occasional small stones, which was friable and soft.

Developed into the upper surface of the colluvium with a sharp lower contact was 0.3m deep top soil. A fine grained dark brown sandy silt with rare occurrences of small pebbles.

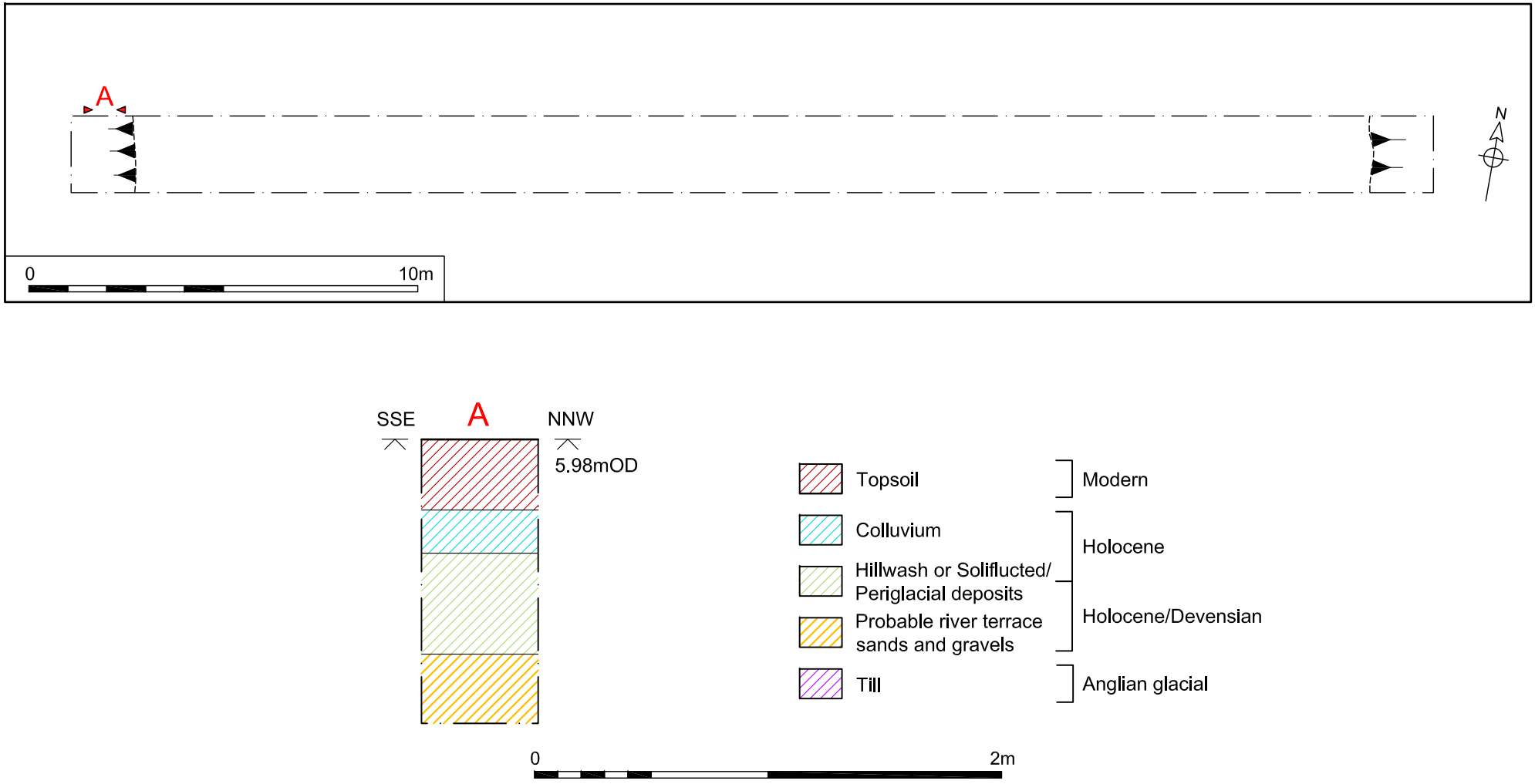

Figure 4. Trench 2, plan and sections. Scale 1:150 and 1:25

5.3 Trench 3

Trench 3 was 40m in length by 1.8m wide and was positioned at an angle across the site and aligned north-east to south-west (Fig. 2). It was machined to a depth between 0.7m and 1m across the trench (Fig. 5) and two deeper test pits (to examine the sequence) were excavated at each end of the trench.

Plate 4. Trench 3, looking to the north-east along length of trench

The oldest deposit observed was in the north-east end of the trench - a stiff dark orange clay with large clasts (fragments from larger piece) of chalk. This is a glacial till and is Anglian in date (British Geological Society 1991). The till was not recorded to the south-west.

Lying above the till was a sequence of 0.13m thick dark orangey yellow sandy clay with rare pebbles. Followed by 0.22m of a firm brown-orange sandy clay with occasional pebbles. These two deposits are probably soliflucted 'head' deposits and are a cold climate deposit possibly of Devensian date and in part equivalent to deposit [1] which contained the worked flint in Trench 1.

Sealing these sediments is a maximum depth of 0.6m of colluvium with the lower 0.22m being paler and possibly much earlier in date. The colluvium is much deeper at the north east end of the trench (0.6m) compared with 0.3m at the

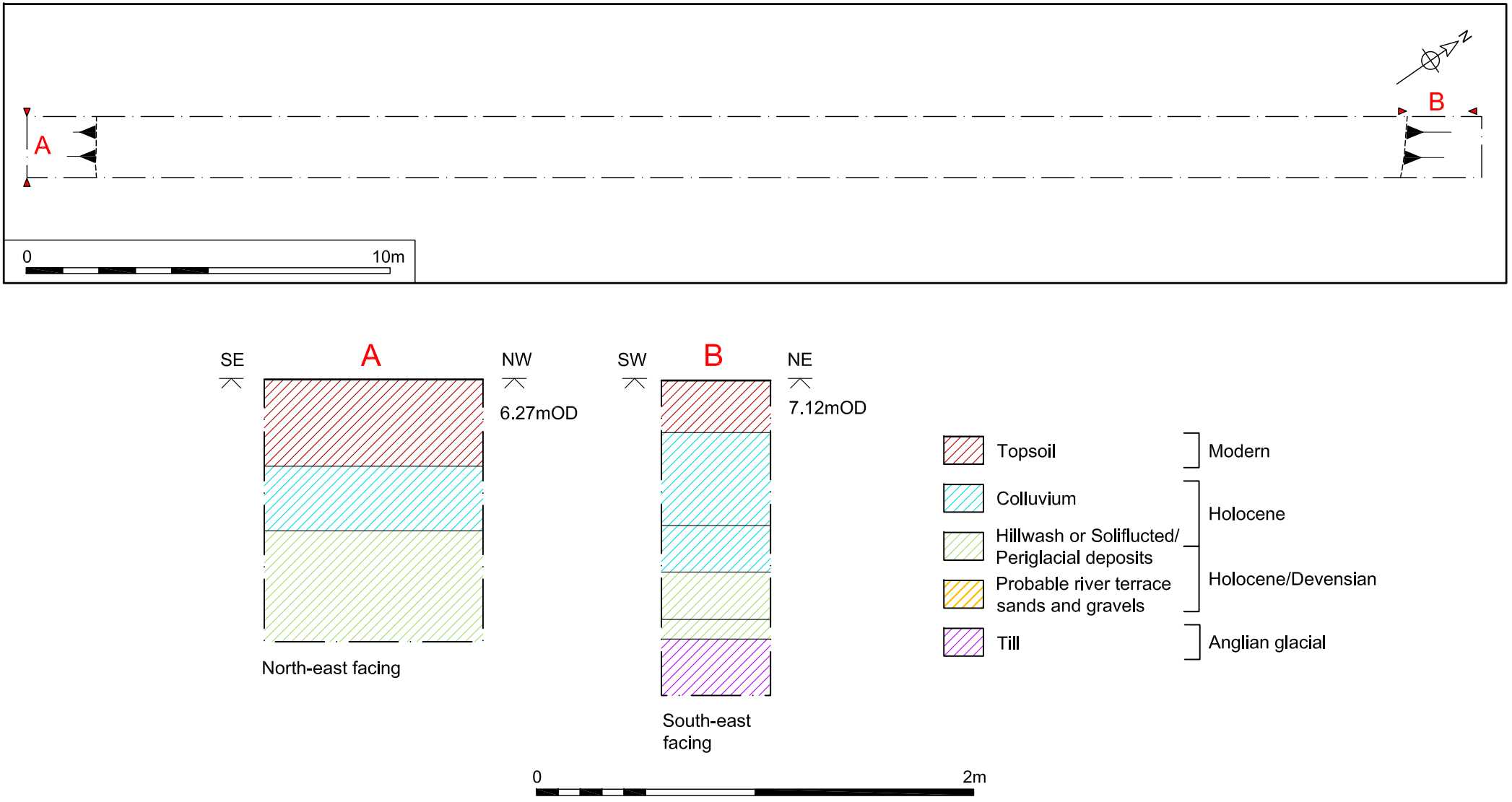

Figure 5. Trench 3, plan and sections. Scale 1:150 and 1:25

south-west end of the trench. The colluvium is a siltier deposit than recorded in other trenches and is light brown and stone free.

A dark brown fine-grained almost stone free topsoil has developed in the upper part of the colluvium to a depth of 0.24m

6.0 FINDS

by Lucy Talbot and David Adams

6.1 Flint

A single dark grey, mottled, worked flint, weighing 13g, was recovered from deposit [1] a natural deposit of sandy clay in Trench 1 (Appendix 2a).

The artefact has a small area of cortex remaining and is in rolled condition, indicating it has been moved around in antiquity. Identified as a prehistoric core preparation flake, it is re-touched along two edges one of which is a hinge fracture, to form a crude point, suggesting its use as a tool, possible a borer.

7.0 CONCLUSIONS

No archaeological features were recorded in any of the three evaluation trenches but a single flint found at 0.85m below the modern surface and the sequence of 'natural' deposits recorded across the site is of some interest and significance.

The sequence of deposits spans the last 400,000 years. The oldest deposit was a glacial till (observed at the north-eastern end of Trench 2) of Anglian age which was laid down directly by a massive ice sheet which covered the area more than 400,000 years ago.

Above the Anglian deposits lie sands and gravels which are either glacial outwash sands and gravels of an undifferentiated glaciation - Anglian or younger or more likely part of an undifferentiated Quaternary river terrace (River Terrace 1 RTD1 (British Geological Society 1991). The Quaternary map of the area indicates the site lies on this terrace therefore this is a most likely nature of the sands and gravels.

Overlying the probable river terrace deposits, a chalky clay is likely to be a cold climate soliflucted periglacial deposit called head. Subsequent brown orange sequences of sandy clays were deposited. In places these deposits lie within deformations and hollows (see Trench 1) and are likely to have been altered and moved in periglacial conditions. The hollows in the chalky head with infill of brown sandy clay suggest perhaps patterned ground having developed on this hillside. It is within these sandy clays that the worked flint was found (from deposit [1] in Trench 1). The flint is rolled and has been moved possibly downslope, it could be reworked from the earlier river terrace gravels but may be later in date. There is no specific prehistoric date attributed to this single flint but it is most probable it predates a period of extreme cold when periglacial conditions allowed the development of cryoturbated and soliflucted deposits, some of which were earlier warmer climate soils. The last time such conditions prevailed was 10-11kaBp (10,000-11,000 years ago) during the Loch Lomond re-advance. Therefore, the flint and associated sediments must predate this period.

Sealing these periglacial deposits was a variable depth of colluvium (0.16-0.70m thick). This colluvium was mainly composed of very fine sand and probably had a large aeolian (wind-borne) component. It appears to have banked up slightly against the steeper slope at the top of the site and is obviously deeper to the north of the site (uphill) than it is to the south. Wind blowing up the slope and moving the fine sand and silt of this deposit uphill would account for the uphill deepening of the deposit. Such development of colluvium may have initiated as woodlands were cleared in the Neolithic period and peaking during the Bronze Age and Roman periods as light soils cleared of vegetation became mobilised.

Recommendations for future work based upon this report will be made by the Norfolk Historic Environment Service.

Acknowledgements

Thanks are expressed to Lovell Partnerships Ltd who commissioned and funded the work.

Field work was carried out by Suzie Westall and Rob Brown.

The find was washed, recorded by Lucy Talbot. David Adams identified the flint. The borehole data was provided by Delta-Simmons Environmental Consultants, Ltd.

The report was edited by Jayne Bown and illustrated and produced by David Dobson.

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Appendix 1: Context Summary

Context	Category	Cut Type	Fill Of	Description	Period
1	Deposit	-	-	Naturally deposited sandy clay	-

Appendix 2a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
1	Flint – Struck	1	13g	Prehistoric	Possible tool

Appendix 2b: Finds Oasis Summary

Period	Material	Total
Prehistoric	Flint – Struck	1