Ebbsfleet Management Centre Eastern Quarry Swanscombe Kent

Archaeological Evaluation Report

Oxford Archaeology

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ARCHAEOLOGICAL EVALUATION REPORT

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SUMMARY

During June -July 2004, Oxford Archaeology (OA) carried out a field evaluation at Eastern Quarry, Swanscombe, Kent on behalf of Land Securities. The evaluation revealed Pleistocene colluvial deposits in places, but no Palaeolithic remains.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 In June–July 2004 Oxford Archaeology carried out a field evaluation at Eastern Quarry, Swanscombe, Kent on behalf of Land Securities in respect of a planning application for a management centre and access road, following a brief set by CgMs and a WSI agreed with Lis Dyson of Kent County Council (KCC). The development site is situated at TQ 609734 and comprises an east–west track 5 m wide by 500 m long (Fig.1).

1.2 Geology and topography

1.2.1 The site lies on deposits mapped as Thanet Sand overlying Cretaceous Chalk (BGS 1998). Recent investigations of adjacent locations have, however, indicated this is likely to be wrong and that Pleistocene deposits are likely to be present. Brickearths and clays containing Palaeolithic and palaeo-environmental remains have been revealed by quarrying and Channel Tunnel Rail Link (CTRL) construction works in the Ebbsfleet Valley, immediately to the east of the site. The ground surface slopes up from *c* 40 m OD at the eastern end of the track to *c* 60 m OD at the western end.

1.3 Archaeological and historical background

1.3.1 The archaeological background to the evaluation has been the subject of a previous desk-based study and field evaluation of nearby areas (CgMs 2002; Wenban-Smith 2002); the results are presented/ summarised below. The site itself represents the course of a late 19th century cement rail-line running between areas of quarrying to the west and cement works at the eastern end. These were located in an old clay pit at the eastern end of the track. Some Palaeolithic handaxes were recovered in the 1890s from Pleistocene deposits exposed in the clay pit (Wenban-Smith 2004). There are also several locations with archaeological remains adjacent to the development site. Test-pitting shortly to the north (TQ 609737) demonstrated the presence of Pleistocene fluvial deposits (from the Boyn Hill/Orsett Heath terrace formation) rich in Palaeolithic remains (Wenban-Smith 2002).

1.3.2 Construction works in relation to the CTRL have revealed a deep brickearth deposit immediately to the east of the site, on the east side of Southfleet Road. This is of uncertain origin, but is likely to be a Pleistocene deposit of colluvial/alluvial origin, possibly filling a dry valley that extends westward into the site under investigation here. It contains abundant Palaeolithic artefactual remains, possibly on undisturbed landsurfaces.

1.4 Evaluation aims

1.4.1 The primary objectives of the field evaluation were:

- To assess the nature and significance of the Pleistocene deposits and Palaeolithic remains present at the site
- To establish the distribution and depth across the site of Pleistocene deposits
- To assess the Palaeolithic archaeological significance of any deposits

1.4.2 More specifically, the work also aimed to:

- Determine the presence and potential of lithic artefact evidence and faunal remains in the sediments encountered
- Determine the presence and potential of palaeo-environmental micro-biological evidence in the sediments encountered
- Determine the presence of, or potential for, undisturbed primary context Palaeolithic occupation surfaces in the sediments encountered
- Establish the horizontal and vertical extent, sequence and sedimentological character of Pleistocene deposits across the site
- Interpret the depositional and post-depositional history of any artefactual or biological evidence found
- Establish correlations of any Pleistocene deposits found with reference to adjacent and regional sequences, and to national frameworks
- Assess in local, regional, national and international terms, the archaeological and geological significance of any Pleistocene deposits encountered, and their potential to fulfil current research objectives

2 EVALUATION METHODOLOGY

2.1 Scope of fieldwork

2.1.1 Nine test pits were dug (Fig.2, Test Pits 2–10). One proposed test pit (Test Pit 1 shown in CgMs) was not dug due to unsuitability of the intended location. Three of these (Test Pits 2–4) were clustered at the west end of the track, at the planned location of the management centre building. The remaining six text pits were located at regular intervals of *c* 50 m eastward along the track, up to the west edge of the previously quarried area. The westernmost test pit (Test Pit 10) was dug against the edge of the previously quarried area to examine the full sequence pre-quarrying.

2.1.2 Monitoring was also carried out of eight geo-technical test pits dug in the quarried area to the east of Test Pit 10 (see Fig.2). These were dug to a depth of *c* 3 m and revealed nothing but made ground and backfill. A deeper borehole scheduled for the area has not yet been carried out, so at present the depth of the made ground, and the nature of the underlying natural deposits are unknown.

2.2 Fieldwork methods and recording

2.2.1 Each test pit was dug by a mechanical excavator with a 1.8 m wide toothless bucket. Each test pit was one bucket-width wide, 3–4 m long and was dug to a maximum depth of 2.5 metres. Excavation ceased at a shallower depth if it was clear that Pleistocene deposits were not present, and that pre-Quaternary deposits had been reached.

2.2.2 Each test pit was taken down in horizontal spits of 10–15 cm, respecting the interface between sedimentary units when unit changes were encountered. The work was carried out under supervision of the Palaeolithic/Pleistocene specialist (Francis Wenban-Smith), who recorded the sequence of sedimentary units and determined sampling requirements as excavation progressed and monitored the excavated spoil for the presence of Palaeolithic archaeological material, faunal remains or sediments of palaeo-environmental potential. All contexts were given unique numbers, and a representative section from each test pit was drawn at 1:20. When Pleistocene sediments suitable for on-site sieving were encountered, samples of 100 litres were numbered and set aside at regular intervals as excavation progressed and sieved on-site through a 1 cm mesh for recovery of lithic artefacts and biological evidence. When the sediment was not suitable for dry sieving, excavation proceeded in shallower spits of 5 cm, looking carefully for the presence of any archaeological evidence in the excavated spoil. No bulk samples were taken for off-site processing for biological palaeo-environmental evidence due to the absence of suitable sediments.

2.2.3 Test pits were entered at a depth of 1.2 m to record the upper stratigraphy. After excavation had progressed beyond this depth, recording took place without entering the trench. Each test pit was dug in turn, and backfilled level with the pre-existing ground surface as soon as possible following excavation and the completion of recording.

2.3 Finds

2.3.1 No finds were recovered.

2.4 Palaeo-environmental evidence

2.4.1 No Pleistocene palaeo-environmental evidence was found. Deposits with concentrations of Tertiary shell fragments were noted in Test Pits 7 and 8. In Test Pit 7 these were presumed to be contained within *in situ* Tertiary Palaeogene deposits. In Test Pit 8 these were presumed to have been derived and incorporated in Pleistocene colluvial deposits.

2.4.2 Again in Test Pit 7, a thin bed of slightly organic-rich silty sand was present, interbedded with clays and shell-rich silty sands. This was also interpreted as an *in situ* Tertiary sediment.

3 RESULTS: GENERAL

3.1 Soils and ground conditions

3.1.1 The site is mostly located (at the western end, west of Test Pit 7) on *in situ* Tertiary deposits (sands, laminated clay-silts/sands and pebble-beds) of no Palaeolithic significance. East of Test Pit 7, colluvial sediments underlie the ground-surface, increasing in depth eastward towards Test Pit 10, at the edge of the quarried area.

3.2 Distribution of archaeological deposits

3.2.1 No archaeological remains were found. Details of the sampling intensity of deposits in each test pit are given in Table 1.

Table 1. Sieve-sampling and finds recovery summary

Test pit	*Context*	*Sample*	*Vol. sieved (lit.)*	*Finds*
2	25	2.1	100	None
4	45	4.1	100	None
9	95	9.1	100	None
	97	9.2	100	None
		9.3	100	None
10	105	10.1	100	None

4 RESULTS: DESCRIPTIONS

4.1 Description of deposits

4.1.1 Four main groups of deposit were found (Table 2). Detailed descriptions of the sedimentary sequence in each test pit are given in Appendix 1.

Table 2. Stratigraphy

Group	*Summary*	*Description*	*Test pits*
IV	Topsoil, turf and modern made ground	Very well-compacted Chalk rubble Hard-core and recent metallic waste in silty/sandy matrix Clays/silts/sands with modern CBM and	2–10

		rotting wood/plant remains	
III	Colluvium — Holocene?	Mod. compacted clayey/silty sand with occasional sand and fine-gravel trails	10
II	Colluvium — Pleistocene	Well-compacted clayey/silty sand with occasional sand and fine-gravel trails, and occasional lenses dipping eastward 10–20cm thick of m–vc flint peb's and angular pieces Septarian nodule	8–10
I	Tertiary bedrock	Yellowish-brown sl. silty fine sand, slightly glauconitic in places Horizontally laminated sands/clays/silts, organic and shell-rich in places (crushed Tertiary shell fragments) Horizontal beds, very well-sorted, of gray rounded pebbles (m–c)	2–7

4.2 Finds

4.2.1 No finds were recovered.

4.3 Palaeo-environmental remains

4.3.1 No Pleistocene palaeo-environmental remains were found.

5 DISCUSSION AND INTERPRETATION

5.1 Reliability of field investigation

5.1.1 The field investigation was reasonably reliable. The test pit programme has been sufficient to demonstrate the absence of any obviously significant Pleistocene sediments or Palaeolithic remains. In particular, one can be confident that there will be minimal impact caused by the access road and management centre. The present track has up to 1m of modern made ground beneath the present surface in most places, and impact is not anticipated to exceed this depth. At the western end of the track, where the management centre will be built, modern made ground directly overlies undisputable Tertiary sediments of no Palaeolithic significance.

5.1.2 However, it is difficult to distinguish between Pleistocene and Tertiary sediments in the relatively small and shallow trenches that constituted the investigation. Furthermore, it is hard to build up an accurate picture of the overall geometry of sedimentary units from the intermittent trenching carried out. Finally, Palaeolithic remains may be concentrated in a particular location within a sedimentary body, and this may not have been picked out in a test pit. Therefore, there remains the possibility that Palaeolithic remains may be affected by any deep impacts (over 75 cm) east of Test pit 7.

5.2 Overall interpretation

Summary of results

5.2.1 No significant Palaeolithic evidence was found. Pleistocene colluvium was present at the eastern end of the site, east of Test Pit 8, but no artefacts or palaeo-environmental remains were present in the parts of the deposit investigated.

5.2.2 The track was underlain along its route by 0.50 m to 1m of modern made ground, usually with at least the top 0.40 m consisting of very well-compacted Chalk rubble with flint pebbles. The thickness of made ground was seen to diminish more than 2m away from the edge of the track.

Significance

5.2.3 The parts of the site investigated are of no Palaeolithic significance. Significant remains may be present at lower levels than presently investigated at the eastern end of the site, to the east of Test Pit 8, and at the margins of the previously quarried area to the east of Test Pit 10.

6 IMPACT OF THE DEVELOPMENT

6.1.1 Development of the management centre will involve foundation footings of some sort in the vicinity of Test Pits 2–4. These will have no impact on deposits of any archaeological significance.

6.1.2 Improvement of the track is, on present information (Rob Bourn of CgMs, pers. comm. June 2004), unlikely to involve impact below 0.5 m, and thus will have no impact on deposits of any archaeological significance. There is a low potential for impacts below this depth to affect archaeological remains in Pleistocene and Holocene colluvial sediments west of Test Pit 7.

6.1.3 Made ground is present to a shallower depth either side of the track, so shallower impacts more than 2m away from the present track will potentially affect archaeological remains in Pleistocene and Holocene colluvial sediments west of test pit 7.

7 ARCHAEOLOGICAL POTENTIAL IN RELATION TO OUTLINE RESEARCH DESIGN

7.1 Periods represented

7.1.1 Colluvial sediments of possible Holocene date were present in Test Pit 10, around the margins of the previously quarried area. No archaeological evidence was present, other than a land drain of 19th or 20th century origin.

7.1.2 Colluvial sediments of Pleistocene date were present in Test Pits 8, 9 and 10. No archaeological remains were found in them.

7.2 Complexity of deposits

7.2.1 Tertiary sands and pebble-beds, with layers of horizontally bedded clays, silts and sands, with occasional organic and mollusc-rich beds were present from 0.5 to 1m beneath the present landsurface westwards from Test Pit 2 to Test Pit 7.

7.2.2 Pleistocene sands, silts and gravel bands of colluvial origin were present from 0.5 to 1.0m deep beneath the present track surface westwards from Test Pit 2 to Test Pit 10.

7.2.3 Clays/silts of probable Holocene colluvial origin were present between 0.5 and 2.0m from the present ground-surface around the edge of the previously quarried area in the vicinity of Test Pit 10.

7.3 Possible taphonomic issues

7.3.1 If any archaeological remains were to be recovered from the Pleistocene or Holocene sediments they would likely be disturbed from their original point of deposition, although would likely retain some integrity as an assemblage.

7.4 Summary of anticipated significance/ potential

7.4.1 There is very low potential (a) for any impact on deposits other than made ground, and (b) in the event of such impact, for any impact upon archaeological remains.

7.4.2 However, the range and variety of sediments away from the track remains unknown, particularly around the southern margin of the previously quarried area. This is an area of high Palaeolithic archaeological potential, judging from exposures in the adjacent CTRL development zone immediately to the east of Southfleet Road, where brickearth and clay deposits with abundant Palaeolithic remains are present.

7.5 Overall research issues

7.5.1 In general, fuller understanding of the sequence, correlation and stratigraphic relationships of deposits seen to-date only in isolated test pits would be desirable. Furthermore, in areas where Pleistocene deposits have been identified (to the west of Test Pit 8), significant remains may be present at deeper levels than investigated here. If there is any prospect of impact beneath 2.5 m from the present land-surface, then further evaluation would be required.

7.5.2 More thorough investigation of the sequence (a) around the periphery of the previously quarried area and (b) to the south of the track investigated in this project would also be desirable. Previous Palaeolithic investigations in the Swanscombe area and the Ebbsfleet Valley have demonstrated that significant Palaeolithic remains may be present in highly localised patches of Pleistocene deposits. Thus the absence of evidence along the route of the trackway under investigation here cannot be taken as an indicator of similar absence more than a short distance away from it.

8 REVIEW OF RESEARCH ISSUES FOR THIS STAGE

8.1 Stratigraphy and dating

8.1.1 There remains uncertainty over the date of the colluvial sediments identified in Test Pit 10, in particular whether Holocene sediments are present, and if so, where is the boundary between Holocene and Pleistocene sediments.

9 REVIEW AND UPDATING OF MITIGATION STRATEGY

9.1.1 Watching brief is advised for any impacts below the level of made ground along the route of the track to the east of Test Pit 7. Made ground is probably *c* 1 m thick along the route of the track, but diminishes to *c* 25 cm more than 2 m away from the edge of the track.

APPENDICES

APPENDIX 1 TEST PIT LOGS AND SAMPLING SUMMARY

Test pit 2

IV. TOP-SOIL/TURF/MADE GROUND

21 Topsoil

22 a) Compacted chalk silt with VF–F angular flint pebbles

b) Pocket of yellowish-brown F–M sand with chalky patches

23 Layer of bricks and clinker

24 Moderately sorted M–C sand, clay-silty in places, grayish-brown

I. TERTIARY BEDROCK

25 Very well sorted C-VC gray flint pebbles, w-rounded, moderate-soft and loose, in F–M yellowish-brown sand matrix, slightly clay-silty in places

26 Yellowish-brown / brownish-yellow F–M sand, sub-horizontal flint with orange Fe-staining

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
205	2.1	100	-	-

Test pit 3

IV. TOP-SOIL/TURF/MADE GROUND

31 Soft yellowish-brown sand, with brown clay silty patches, occasional chalk pieces and frequent rooted and humic-rich areas

I. TERTIARY BEDROCK

32 Moderately soft pale yellow / brownish-yellow F–M sand. Sub-vertical faults picked out with orange/red staining

33 Gray laminated clay / silt / fine sand sub-horizontal laminated bands 0.5–1cm thin of gray clay / grayish –brown silt / fine sand

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
-	-	-	-	-

Test pit 4

IV. TOP-SOIL/TURF/MADE GROUND

41 Turf / topsoil – very thin yellowish sand, thickens to the West to 20cm

42 Compacted chalk rubble, very firm white chalk silt with VF-M chalk pebbles and flint pebbles – MMG

43 V firm slightly sandy clay silt grayish brown with dark patches towards the base covered by charcoal rich area with burnt twigs 0.5–2cm across. There are also occasional un-burnt twigs in deposit and pieces CBM 1–3cm maximum diameter. MMG.

I. TERTIARY BEDROCK

44 Moderately soft F–M sand with line of coarse flint pebbles, gray very well rounded, 5–10cm above base. Upper part (above pebbles) mottled brownish-yellow; lower part (below pebbles) brownish-yellow

45 Very well sorted M-VC flint pebbles in yellowish-brown F–M sand matrix; moderately firm, possibly slightly increasingly coarse towards base

46 Pale brownish-yellow F–M sand, occasional reddish-yellow patches – moderately soft

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
45	4.1	100	-	-

Test pit 5

IV. TOP-SOIL/TURF/MADE GROUND

51 Moderately compacted sand, yellowish-brown with chalk pebbles – track surface

52 Moderately compacted sand, yellowish-brown with chalk pebbles and flint pebbles VF–M, occasional VC– SM cobbles. MMG.

53 Organic rich moderately compacted to firm, very dark gray clay silt, smells very peaty, contains occasional ceramic building material of recent origin (19^{th} – 20^{th} c.)

I. TERTIARY BEDROCK

54 a) Moderately compacted fine sandy clay silt, mottled yellowish-brown / strong brown

b) Strong brown slightly sandy clay silt, F, some grayish mottling

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
-	-	-	-	-

Test pit 6

IV. TOP-SOIL/TURF/MADE GROUND

61 Turf / topsoil

62 Chalk rubble layer, very compacted with interspersed dark grayish-brown silty sand

63 Dark grayish-brown, moderately-compacted silty sand with moderately-common flint pebbles

64 Soft, dark grayish-brown F–M sand with M–C rounded flint pebbles

I. TERTIARY BEDROCK

65 Moderately-soft grayish-brown F–M sand with very pale brownish-yellow patches containing M–C–VC rounded flint pebbles plus concreted iron-stained sub-vertical zones (infilling vertical faults)

66 Moderately compacted grayish-brown / blueish-gray laminated clay silt / fine sand

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
-	-	-	-	-

Test pit 7

IV. TOP-SOIL/TURF/MADE GROUND

70 Turf / topsoil

71 Soft and loose slightly silty sand, dark grayish brown, with common VF–F chalk pebbles, slightly humic with rootlets and other small pieces. CBM

72 Yellowish-brown F sand with VF-Mchalk and flint pebbles moderately compacted. MMG

73 a) F–VC chalk pieces with occasional F-C angular flint pebbles in yellowish-brown sandy matrix
b) Clay-silty sand with VF–M chalk pebbles and CBM
c) Yellowish-brown clay silt with occasional VF–M chalk pebbles, CBM and charcoal / ashfelt pieces
d) As above but with no charcoal / ashfelt
e) Yellowish-brown clay-silt with frequent VF chalk pebbles and occasional CBM

I. TERTIARY BEDROCK

74 a) Very firm dark yellowish/ grayish-brown (slightly brecciated?) VF-F slightly sandy (VF–F) clay / silt / fine sand laminae. Pale leaching infilling cracks, plus developed in small frequent patches 0.5–1.0 cm diameter

b) Darker grayish-brown (slightly brecciated) clay – same as above but a bit darker, possibly more leaching as salts within cracks in sediment

75 Strong brown/reddish yellow at top 2–5cm; bottom part very pale brown, rich in compacted Tertiary shells

76 Dark grayish-brown sl. sandy clay-silt, thin blueish-gray band at top

77 Very pale brown clay-silty fine sand rich in compacted Tertiary shells

78 Friable, dark gray cl-silty F–M sand, organic-rich in places, mod. compacted

79 Yellowish-brown mod. compacted F–M sand with occ. F–M flint pebbles

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
-	-	-	-	-

Test pit 8

IV. TOP-SOIL/TURF/MADE GROUND

81 Soft sand with grass growing

82 Well-compacted chalk silt/pebbles and flint pebbles with occ. CGM, v. pale brown

83 Dark gray clayey/silty sand with flint peb's and occ. pieces CBM

84 Mod. to well-compacted very clay-silty sand with occ. VF–VC flint peb's, and occ. small cob's and modern CBM; gen. yellowish-brown with darker. greyer staining in places

85 Well-compacted, massive structureless sandy clay-silt; yellowish-brown with mod. common F–C rounded flint peb's

86 Yellowish-brown silty fine sand with occ. chalk peb's

II. PLEISTOCENE COLLUVIUM

87 Strong brown sl. sandy clay-silt; massive, structureless, with small brownish-yellow pockets towards base filled with crushed fragments Tertiary shell

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
-	-	-	-	-

Test pit 9

IV. TOP-SOIL/TURF/MADE GROUND

91 Turf/topsoil

92 Very compacted chalk silt/pebbles with flint pebbles

93 Mod. compacted, sl. friable clay-silt/fine sand with roots. occ. recent CBM and steel cables; old tramway/cement railway sleepers at N corner of trench; darker gray (asphalt clinker?) towards base

II. PLEISTOCENE COLLUVIUM

94 Very firm well-compacted brown clay, massive and structureless

95 F–VC flint gravel (with small cob's) in stiff sand/clay matrix; yellowish-brown; clasts mixture of M–VC rounded T^{o} flint pebbles and angular pieces of Septarian nodule 5–15cm max. dim. Dipping east

96 Very firm well-compacted brown clay, massive and structureless

97 M–VC flint gravel (with small cob's) in mod. loose F–M sand matrix with mod. common F–M sub-ang. to mod. rounded Chalk peb's and freq. frag's Tertiary shell; clasts mixture of rounded M–VC T^{o} flint pebbles and angular pieces of Septarian nodule 5–15cm max. dim. Dipping east

98 F–M sand, mod. compacted, brownish/reddish-yellow, glauconitic in small patches

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
95	9.1	100	-	-
97	9.2	100	-	-
	9.3	100	-	-

Test pit 10

IV. TOP-SOIL/TURF/MADE GROUND

101 Brownish-yellow F–M sand with mod. freq. VF–M dark gray flint peb's, occ. VC

102 Mod. loose and friable clayey/silty F–M sand with occ. small frag's red CBM and occ. VF–M T^{o} peb's; slightly humic in places

III. HOLOCENE (?) COLLUVIUM

103 a) VF–F brownish/reddish yellow sand with occ. VF–M mod. rounded chalk peb's

b) Very firm/well-compacted massive and structureless brown clay, brecciated in places, with very occ. VF–M sub-angular to angular flint peb's

c) VF–F brownish/reddish yellow sand

II. PLEISTOCENE COLLUVIUM

104 Very firm/well-compacted brown clay (brecciated) with bands of gray sandy clay 5–10cm thick and occ. M–C rounded flint peb's; top 10cm grayer, and much more sandy gravelly (clasts VF–M, sub-ang to mod. rounded)

105 a) Very firm and w-compacted massive brown clay with intermittent band of flint nodules 10–15cm max. dim., dipping slightly east

b) Intermittent band 5–10cm thick of M–VC flint gravel, some small cob's, in med. sand; clasts gen. rounded, some sub-angular; gen. colour yellowish-red/brownish-yellow

c) Very firm and w-compacted massive brown clay

Archaeological sampling and finds

Context	*Samples*	*Vol. (lit.)*	*Lithic artefacts*	*Biological evidence*
105 b)	10.1	100	-	-

APPENDIX 2 REFERENCES

CgMs	2002	*Archaeological Desk-based Assessment: Eastern Quarry, Swanscombe, Kent.* Unpublished report submitted to KCC.
CgMs	2004	*Ebbsfleet Management Centre , Eastern Quarry, Swanscombe, Kent.* Specification for an Archaeological Evaluation
BGS	1998	*Dartford: England and Wales Sheet 271, Solid and Drift geology, 1:50,000*. British Geological Survey, Keyworth, Nottingham
Wenban-Smith, .F (for CGMS)	2002	*Eastern Quarry, Swanscombe: Preliminary Palaeolithic/Pleistocene Field Evaluation Report.* Unpublished report submitted to KCC
Wenban-Smith, F.F	2004	*The Stopes Palaeolithic Project: Final Report*. Unpublished report prepared for English Heritage

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APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: Ebbsfleet Management Centre, Eastern Quarry, Swanscombe, Kent

Site code: SWEMC 04

Grid reference: TQ 609734

Type of evaluation: Palaeolithic test pits, n=9

Date and duration of project: Two days in June 2004, Four days in July 2004

Area of site: Track 500 m long by 5 m wide

Summary of results: Most of track covered by 1m thickness of made ground. Tertiary sediments underlying made ground at western end of track. Colluvial sediments of Pleistocene and probable Holocene origin underlying made ground at eastern end of track

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with an appropriate museum in due course.

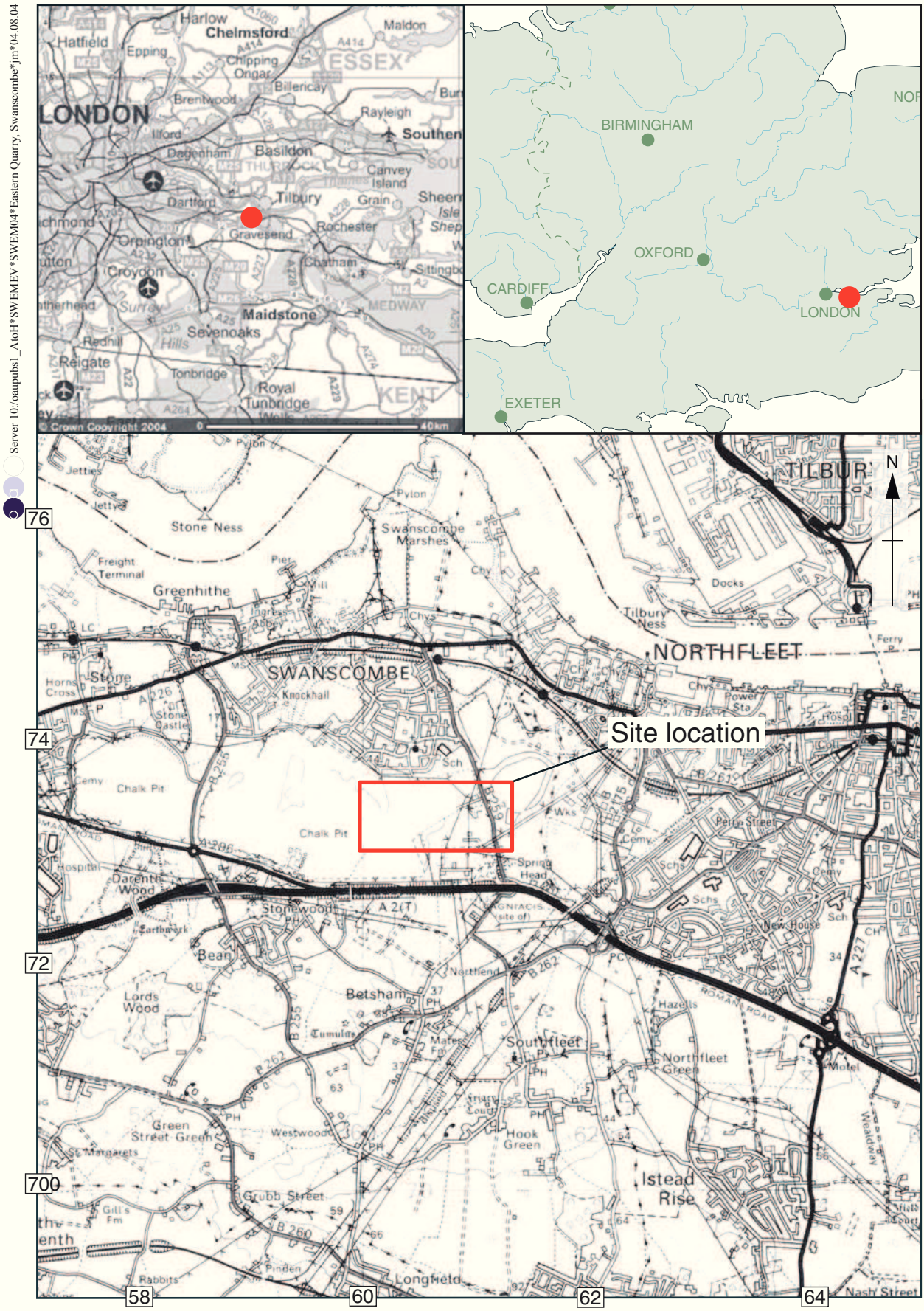

Figure 1: Location map

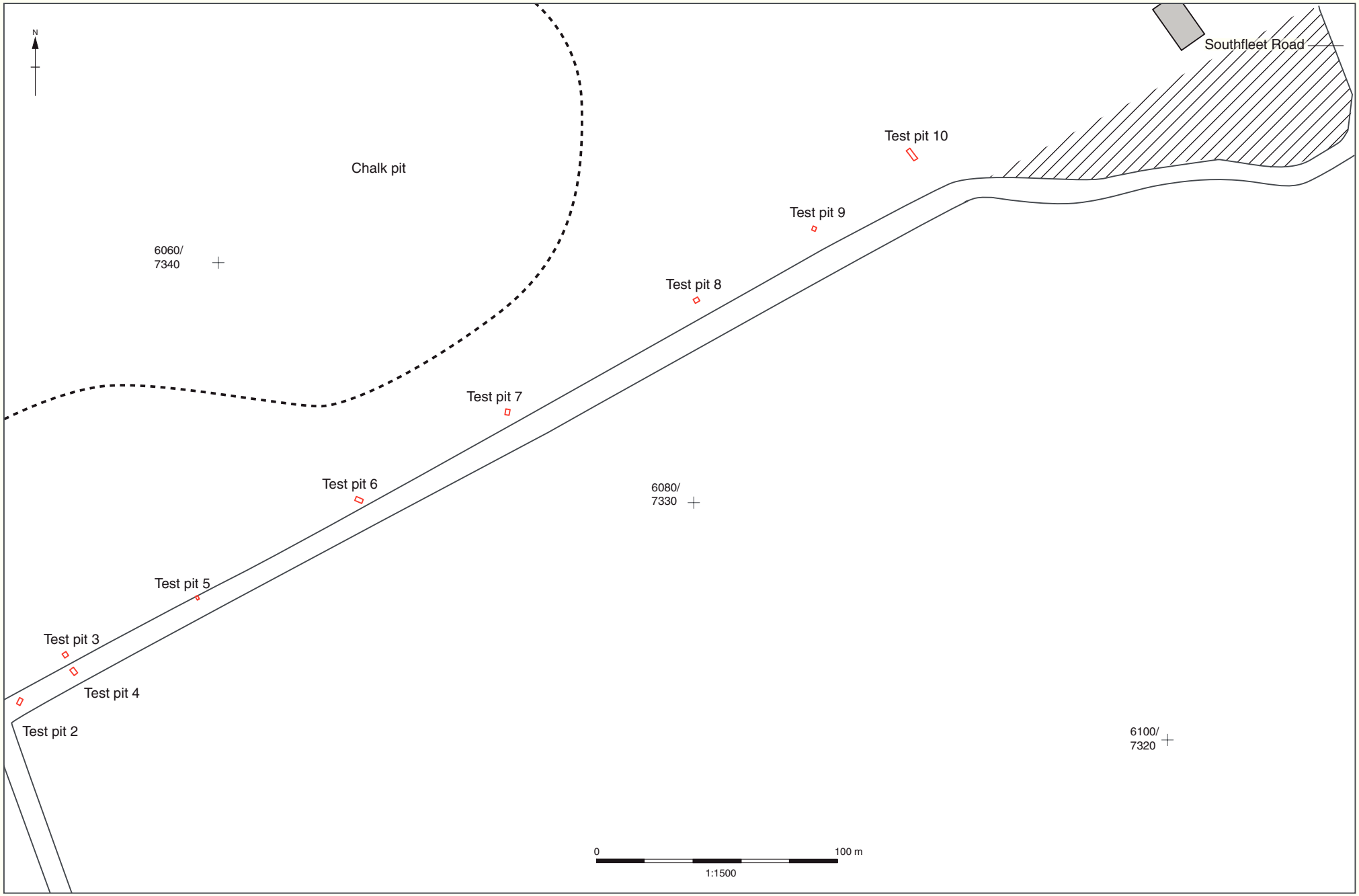

Figure 2: Test pit location plan

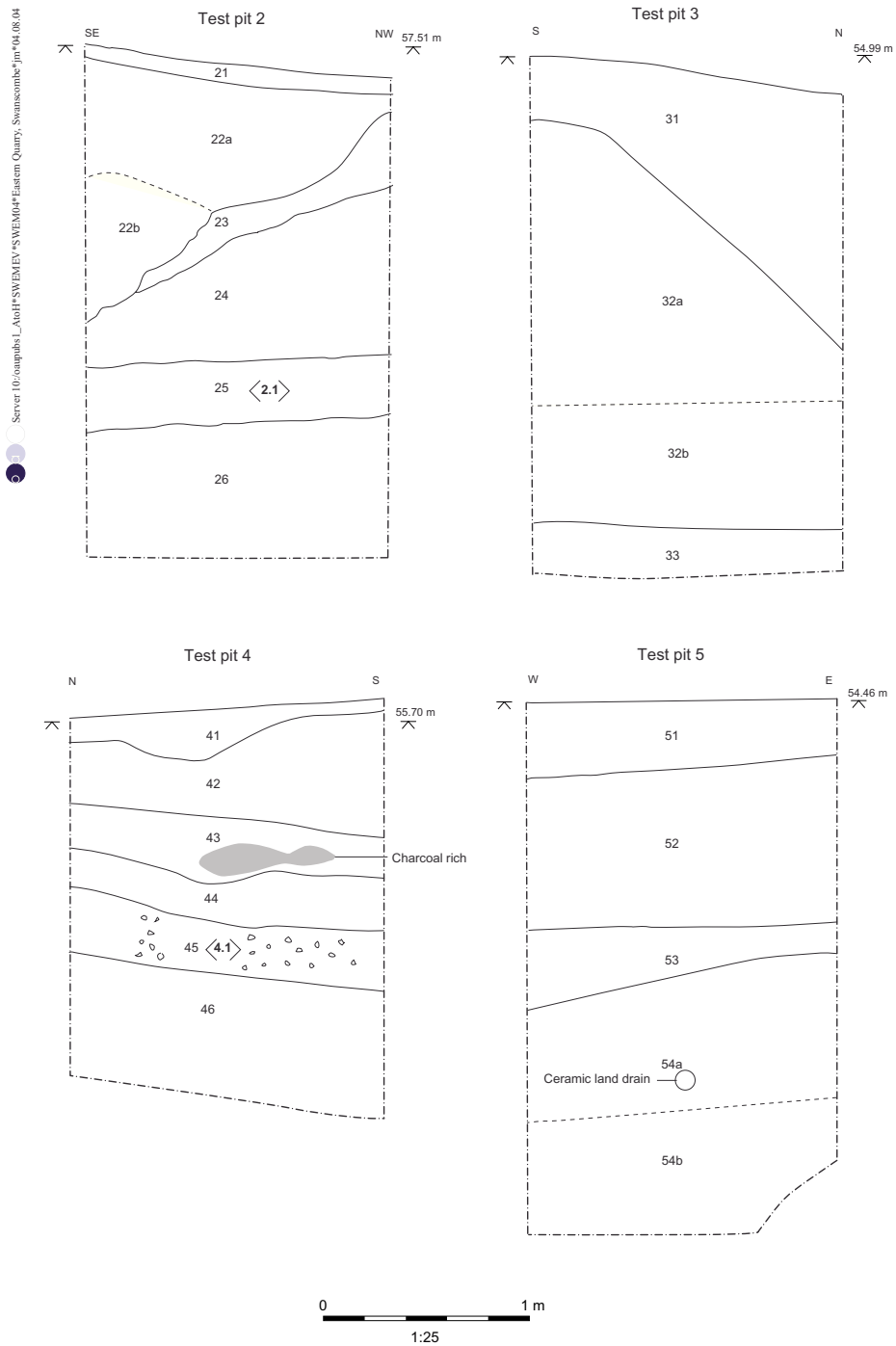

Figure 3: Test pits 1-5

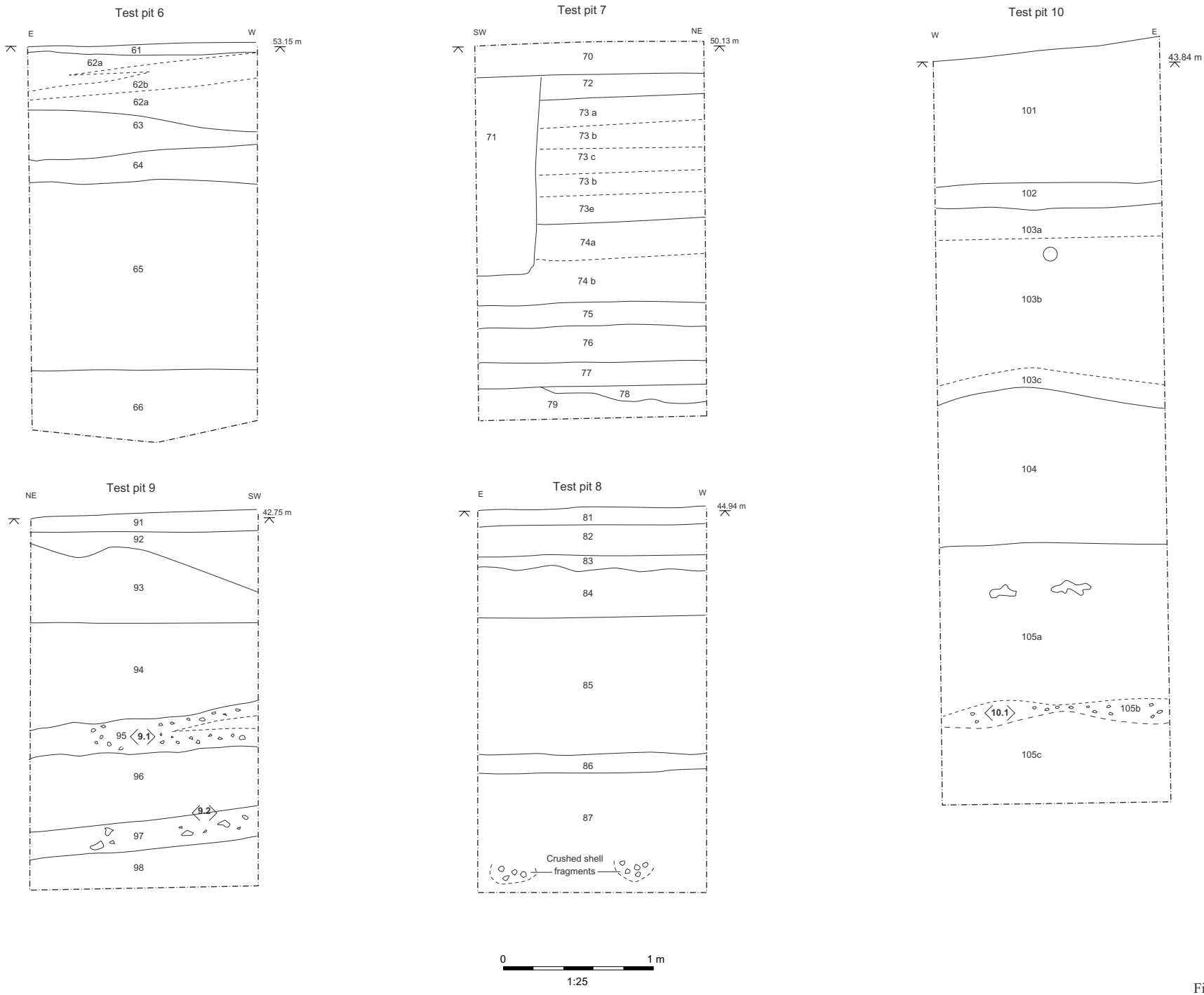

Figure 4: Test pits 6-9