

A30 Temple to Carblake Road Improvements



Archaeological Watching Brief Report



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Prepared by: D. Watkeys
Position: Technician
Date: 01st December 2004

Checked by: A Bingham
Position: Senior Project Manager
Date: 21st December 2004

Approved by: Tim Allen
Position: Senior Project Manager
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Signed.....

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Oxford Archaeology

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Janus House

Osney Mead

Oxford OX2 0ES

t: (0044) 01865 263800

f: (0044) 01865 793496

e: info@oxfordarch.co.uk

w: www.oxfordarch.co.uk

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A30 Temple to Carblake Road Improvements

ARCHAEOLOGICAL WATCHING BRIEF ON GEOTECHNICAL TEST-PITS REPORT

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SUMMARY

In November 2004 Oxford Archaeology (OA) carried out an archaeological watching brief on geotechnical investigation along the line of the proposed A30 Road Improvements from Temple to Carblake, in North Cornwall (SX 137736 to SX 110709). The work was commissioned by Hyder Consulting on behalf of the Highways Agency. The watching brief did not reveal any archaeological deposits.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 In November 2004 Oxford Archaeology (OA) carried out an archaeological watching brief on geotechnical investigation along the line of the proposed A30 Road Improvements from Temple to Carblake, in North Cornwall (NGR: SX 137736 to SX 110709). The work was commissioned by Hyder Consulting on behalf of the Highways Agency.

1.1.2 This work was part of a programme of geotechnical investigation that comprised a mixture of window-sampling holes and test-pits, and was undertaken to obtain basic information on the geology and character of soils in order to inform general design considerations. The geotechnical investigation itself was carried out by Soil Mechanics. The proposed route corridor begins west of Higher Carblake at racecourse Farm, and runs generally north-eastwards to Temple. For much of its length the proposed route corridor follows the line of the existing A30 single carriageway.

1.1.3 In accordance with the brief provided by the English Heritage Inspector Ian Morrison, a Written Scheme of Investigations (OA 2004a) detailed how the archaeological watching brief would be undertaken during the geotechnical investigations to monitor and record any archaeological remains within the test-pits.

1.1.4 A total of 30 test-pits was proposed, plus 8 window-sampling holes; the locations of all of these are shown on Figures 2 and 3.

1.2 Geology and topography

1.2.1 The area of impact for the scheme consists of a granite intrusion, which is an exposed upper extension of the Variscan batholith that lies beneath South West England. This granite has decayed to produce valuable deposits of china clay, exploited from the 19th century to the present day. The granite mass and the metamorphic aureole that surrounds it is rich in mineral vein deposits such as tin and zinc; these too can be eroded to produce sedimentary 'placer' deposits in surrounding valleys and depressions. The western part of the proposed route extends off the exposed granite onto strongly metamorphosed sedimentary rocks, originally deposited in the Devonian and Carboniferous periods.

1.2.2 The landscape is undulating, with the existing A30 utilising a line of discrete ridges and hills. This situation provides a range of topographical settings (hilltops, ridges,

gentle to steep slopes and small valleys) in which archaeological sites of various date and function sit.

1.3 Archaeological and historical background

1.3.1 The archaeology of the proposed scheme is summarised in the Cultural Heritage Resource Assessment (OA 2004b) and the Historic Landscape Character Assessment (OA 2004c) produced for Hyder Consulting on behalf of the Highways Agency. This drew upon a Desktop Survey of all the main repositories of information, and will not be repeated here. In summary, the south-western half of the route is enclosed farmland that has developed from medieval farms or hamlets, the north-western part is open moorland, though significantly altered in part by industrial activity. Upstanding prehistoric sites are common on the moorland, but are rare within the enclosed farmland. The enclosed farmland was created by a process of gradual enclosure of the moorland from a number of documented medieval settlements.

1.3.2 Many of the test-pits lie relatively close to known or suspected archaeological sites. The relationships of the test-pit locations to Cultural Heritage sites are listed below (OA numbers are those used in the gazetteer of the Cultural Heritage Resource Assessment mentioned above):

- **TP 201** Adjacent to findspot of Neolithic arrowhead and other struck flints (OA 360).
- **TP 202** Within 100 m of a Scheduled Ancient Monument, the Council Barrow (OA 7).
- **TP 230** Very close to possible relict field system (OA 225) and within 60 m of platform (OA 457)
- **TP 205** Documentary evidence of possible defended prehistoric settlement (OA 338)
- **TP 209** On site of documented Cross Park, though this need not indicate a stone cross (OA 26). Also within 100 m of documented Round Park, possible site of prehistoric round (OA 27).
- **TPs 210 and 211** Site of medieval causeway (OA 32)
- **TP 215** Very close to 2 leats and possible structural platform (OA 229)
- **TP 216** Very close to earthwork depression (OA 77) and to leat (OA 230)
- **TPs 217 and 218** V close to parish boundary stone and low bank (OA 73 and 74)
- **TP 220** Close to farm buildings connected to quarrying (OA 205)
- **TP 221** May impact upon curving leat (OA 227)
- **TP 222** Site of industrial sluice (OA 358)
- **TP 223** Site of old lane (OA 322)
- **TP 224** Close to quarry and site of post-medieval building (OA 78)
- **TP 226** Probable eluvial tin streamworks adjacent (OA 51)
- **TP 227** Leats and other earthworks of China Clay Works (OA 241)
- **TP 228** Peat drying platforms close (OA 56)
- **TP 229** Medieval field system adjacent, track to moor (OA 55)

1.3.3 No intrusive investigations have been previously carried out in the area.

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The general project aims, as set out in the Written Scheme of Investigation were as follows:
- 2.1.2 Establish the general depth and complexity of the soil sequence, including the depth of topsoil and recent ploughsoils, overlying the solid geology along the route, with particular reference to evidence of disturbance such as ploughing and of truncation
- 2.1.3 Identify buried deposits, which may include waterlogged organic sediments and peat that may contain environmental evidence to inform the environmental landscape context for the archaeological sites in the area. Should suitable deposits for environmental assessment be identified, take appropriate samples.
- 2.1.4 To establish the presence or absence of archaeological remains within the specific locations chosen for Geotechnical test-pits. In addition, to establish the condition, nature, character, quality, date and depth below ground surface of any archaeological remains present.

2.2 Methodology

- 2.2.1 The Geotechnical Investigation was carried out by Soil Mechanics employing machine-dug test-pits (generally to a depth of 4 m), and a combination of hand-dug inspection pits to 1.20 m, cable percussive boring to bedrock and rotary boring up to 15 m below ground level.
- 2.2.2 An archaeologist from OA monitored the ground investigation works at all times during the excavation of the geotechnical test pits. The fieldwork was carried out under the direction of Senior Project Manager Annie Bingham and under the general direction of Tim Allen.
- 2.2.3 During the course of work Test pits 211, 230, 208 and soak-away Trench 201 were cancelled. Test pit 229 was moved approximately 4 m to the east due to the unexpected presence of services in the original location. Test pits 206 and 226 were dug as window samples and were therefore not monitored.
- 2.2.4 Test pits 217 and 218 were dug in two parts, the initial trench being excavated through the slope of the road cutting (running north-south) and a further trench being located at the base of the slope (running east-west).
- 2.2.5 All spoil excavated from the test pits was scanned, and a sample of each deposit hand-sorted, to look for archaeological material.
- 2.2.6 The dimensions of the completed test-pits were measured and sections were drawn at scales of 1:20. All test-pits were photographed using colour slide and black and white print film. A general photographic record of the work was made. Recording followed procedures detailed in the *OAU Fieldwork Manual* (ed D Wilkinson, 1992).
- 2.2.7 Excavation of geological deposits was not monitored by the OA archaeologist.

2.2.8 The excavation of the window samples was not monitored by an archaeologist in the field.

3 RESULTS

3.1 Description of deposits

3.1.1 The full description and thickness of all deposits is tabulated in Appendix 1.

3.1.2 Distinct changes in geology can be seen from the test pits. Natural geology to the south-west (Fig. 4: test-pits 201, 202, 203, 204, 205, 207, and 209) consisted of silt and shale. To the north-east (Fig. 5: test pits 213, 214, 216, 217, 218; Fig. 6: test pits 220, 221, 222, 223, 224, 225, 227, 228 and 229), the natural geology consisted of sand overlying the granite bedrock.

3.1.3 Test-pits 205, 207 and 209 were located at the southern end of the scheme and within established farmland. The recorded stratigraphic sequence included a thick (0.4 to 0.45 m) mid-red brown clayey silt topsoil suggesting extensive ploughing. This layer directly overlay the natural in test-pits 205 and 207 (Fig. 4, sections), but overlay a layer of yellow brown clayey silt in test-pit 209 (Fig. 4, section)

3.1.4 Test pits 201, 202, 203, 204, 217, 218, 220, 227 and 229 (Figs 4-6) were disturbed by modern activity, associated either with the construction of the A30 (201, 202, 203, 204, 217, 218, 227 and 229) or with farm-related landuse (220). A thin layer (0.15 to 0.30 m) of poor-quality topsoil was generally observed overlying the natural, though evidence of road construction (road chippings, bitumen etc) was discovered in test pits 204, 217, 227, and 229.

3.1.5 Test pits 213, 214, 216, 222, 225, 228 were located further into Bodmin Moor on less disturbed ground (Figs 5 and 6). A similar sequence of deposits was recorded in most test-pits in this area. A thin band of mid red-brown humic subsoil (c 0.1 m) overlay the natural sand. Only test-pits 221 and 223 showed no evidence of this layer of subsoil. A layer of dark brownish black humic topsoil (0.3 m) had accumulated above the subsoil (Fig. 6).

3.1.6 Test pit 224 had the deepest stratigraphic sequence, mostly due to its position at the base of a hill (Fig. 6, section). A thick band (1 m) of mid-brown grey silty sand overlay the natural sand. This deposit (112) may have been associated with quarrying in the area. It was overlain by a layer of mid-grey brown silty peat (111). The final deposit (110) was a fairly thick topsoil (0.30 m). The upper layers 110 and 111 may have resulted from hillwash material and contained several very large unworked granite blocks (0.50 m³+) possibly associated with the quarrying activity. Several more of these blocks formed an improvised wall to the east of the pit. A similar stratigraphic sequence of hillwash deposits (114, 115), although thinner, was recorded in test-pit 225 located higher up the slope (Fig. 6). The hillwash deposits directly overlay the natural sand in this trench. No finds were recovered from any of the deposits within test-pits 224 or 225. Although evidence of water accumulation was visible within the bottom of test-pit 224, there was no waterlogged deposit.

3.2 Finds

- 3.2.1 Only a single find was recovered in the course of the watching brief. This was an animal bone from a large mammal (most likely bovine and probably recently deposited) that came from the topsoil of test-pit 203. It was not retained.

3.3 Palaeo-environmental remains

- 3.3.1 In the absence of any suitable deposits, no palaeoenvironmental remains were collected.

4 DISCUSSION AND CONCLUSIONS

- 4.1.1 The preliminary geotechnical investigation did not reveal any archaeological deposits or palaeoenvironmental sequences.

- 4.1.2 Many of the test-pits contained a topsoil or ploughsoil that came straight down onto geological deposits. Others retained a thin subsoil below topsoil, but in no case did this show signs of earlier archaeological activity, or evidence of a buried land surface.

- 4.1.3 Deep stratigraphy was limited to test-pit 224 and produced neither finds nor suitable deposits for environmental sampling. Most pits to the south of the route were dug through disturbed ground, truncated either by ploughing or earlier work on the A30. Topsoil and subsoil in these disturbed areas did not provide any residual finds.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

Contexts	Type	Description	Depth (m)	Finds	Date
Test-pit 221					
100	Layer	Tenacious, Mid blackish brown silty clay	0.32		
105	Layer	Loose, light yellowish brown sand	0.6		
106	Layer	Bedrock			
Test-pit 223					
101	Layer	Tenacious, Mid Blackish brown silty clay	0.34		
107	Layer	Loose, light yellowish brown sand	0.2		
108	Layer	Bedrock			
Test-pit 227					
102	Layer	Firm, Mid blackish brown silty clay	0.3		
103	Layer	Compact, dark greyish black bitumen and stones	0.15		
104	Layer	Tenacious, mid blackish brown silty clay	0.05		
109	Layer	Natural sand			
Test-pit 224					
110	Layer	Soft, Dark blackish brown silty clay	0.3		
111	Layer	Firm, mid grey-brown humic silt	0.3		
112	Layer	Loose, mid brownish grey silty sand	1		
113	Layer	Natural Sand			
Test-Pit 225					
114	Layer	Soft, Dark blackish brown silty clay	0.27		
115	Layer	Soft, mid red-brown humic silt	0.1		
116	Layer	Natural Sand/Granite			
Soak-away Trench 204					
117	Layer	Soft, Dark Brownish Black humic silt	0.28		
118	Layer	Natural Sand	0.5		
119	Layer	Firm, Mid brown yellow Clay			
Test-Pit 220					
120	Layer	Soft, Dark Brownish Black humic clay	0.5		
121	Layer	Natural Sand			
Test-Pit 222					
122	Layer	Soft, Dark Brownish Black humic clay	0.35		
123	Layer	Loose, Mid Red-Brown humic silt	0.2		
124	Layer	Natural Sand			
Test-Pit 218(a)					
125	Layer	Soft, Dark Brownish Black humic silt	0.48		
126	Layer	Friable, Mid Brownish Orange sandy silt	0.1		
127	Layer	Natural Sand			
Test-Pit 218(b)					
128	Layer	Soft, Dark Brownish Black humic silt	0.2		
129	Layer	Loose, Mid Red-Brown sandy silt	0.08		
130	Layer	Natural Sand			
Test-Pit 217(a)					
131	Layer	Soft, Dark Brownish Black humic silt	0.05		
132	Layer	Friable, mid Yellow Brown sandy silt	0.25		
133	Layer	Natural Sand			
Test-Pit 217(b)					
134	Layer	Loose, Mid Brownish Grey Stone Chippings	0.17		
135	Layer	Loose, Mid Pink-Orange sand silt	0.06		
136	Layer	Firm, Light Pink-Orange sand	0.25		

Contexts	Type	Description	Depth (m)	Finds	Date
137	Layer	Natural bedrock			
Test-Pit 228					
138	Layer	Soft, dark Brownish Black humic silt	0.3		
139	Layer	Friable, light Orange-Brown clayey silt	0.7		
140	Layer	Natural Sand			
Test-Pit 213					
141	Layer	Soft, dark Brownish Black humic silt	0.3		
142	Layer	Friable, mid Red-Brown clayey silt	0.3		
143	Layer	Natural Sand			
Test-Pit 214					
144	Layer	Soft, dark Brown Black humic silt	0.25		
145	Layer	Friable, mid Red-Brown humic sand	0.2		
146	Layer	Natural Sand			
Test-Pit 209					
147	Layer	Loose, light Red-Brown silty loam	0.45		
148	Layer	Friable, mid Yellow-Brown clayey silt	0.6		
149	Layer	Friable, mid Yellowish Pink clayey silt (Natural)			
Test-Pit 216					
150	Layer	Loose, dark Brownish Black humic loam	0.2		
151	Layer	Natural Sand			
Test Pit 201					
152	Layer	Loose, dark Brownish Black humic loam	0.26		
153	Layer	Friable, mid Yellow-Brown sandy clay	0.1		
154	Layer	Natural Sand			
Test Pit 202					
155	Layer	Loose, dark Brownish Black humic silt	0.15		
156	Layer	Loose, mid Yellow-Brown silty sand	0.1		
157	Layer	Friable, mid Yellowish Pink clayey silt (Natural)			
Test Pit 207					
158	Layer	Loose, mid Red-Brown clayey silt	0.4		
159	layer	Friable, mid Blue-Grey clayey silt (Natural)			
Test Pit 205					
160	Layer	Loose, mid Red Brown clayey silt	0.4		
161	Layer	Friable, mid Yellowish Pink clayey silt (Natural)			
Test Pit 204					
162	Layer	Loose, dark Red-Brown clay silt	0.17		
163	Layer	Loose, dark Red-Brown clayey silt frequent road chippings and bitumen	0.23		
164	Layer	Friable, mid Brownish Grey clayey sand	0.4		
165	Layer	Friable, mid Yellowish Pink clayey silt (Natural)			
Test Pit 203					
166	Layer	Loose, light Grey Brown sandy silt	0.15	Animal Bone	Modern
167	Layer	Loose, Mid Red Brown sand silt	0.3		
168	Layer	Friable, mid Yellowish Pink clayey silt (Natural)			
Test Pit 229					
169	Layer	Loose, Dark Brown Black sand silt	0.3		
170	Layer	Loose, light Yellow-Brown silty sand	0.7		
171	Layer	Friable, light Brownish Yellow silty sand (Natural)			

APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

- OA 1992 Fieldwork Manual (ed. D Wilkinson, First edition 1992)
- OA 2004a A30 Temple to Higher Carblake: Written Scheme of Investigation, unpublished client report prepared for Hyder Consulting on behalf of the Highways Agency
- OA 2004b A30 Temple to Higher Carblake. Wider Landscape: Cultural Heritage Resource Assessment, unpublished client report prepared for Hyder Consulting on behalf of the Highways Agency
- OA 2004c A30 Temple to Higher Carblake. Wider Landscape: Historic Landscape Character Assessment, unpublished client report prepared for Hyder Consulting on behalf of the Highways Agency

APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: A30 Temple to Carblake Road Improvements

Site code: A30TTHC04

Grid reference: SX 137736 to SX 110709

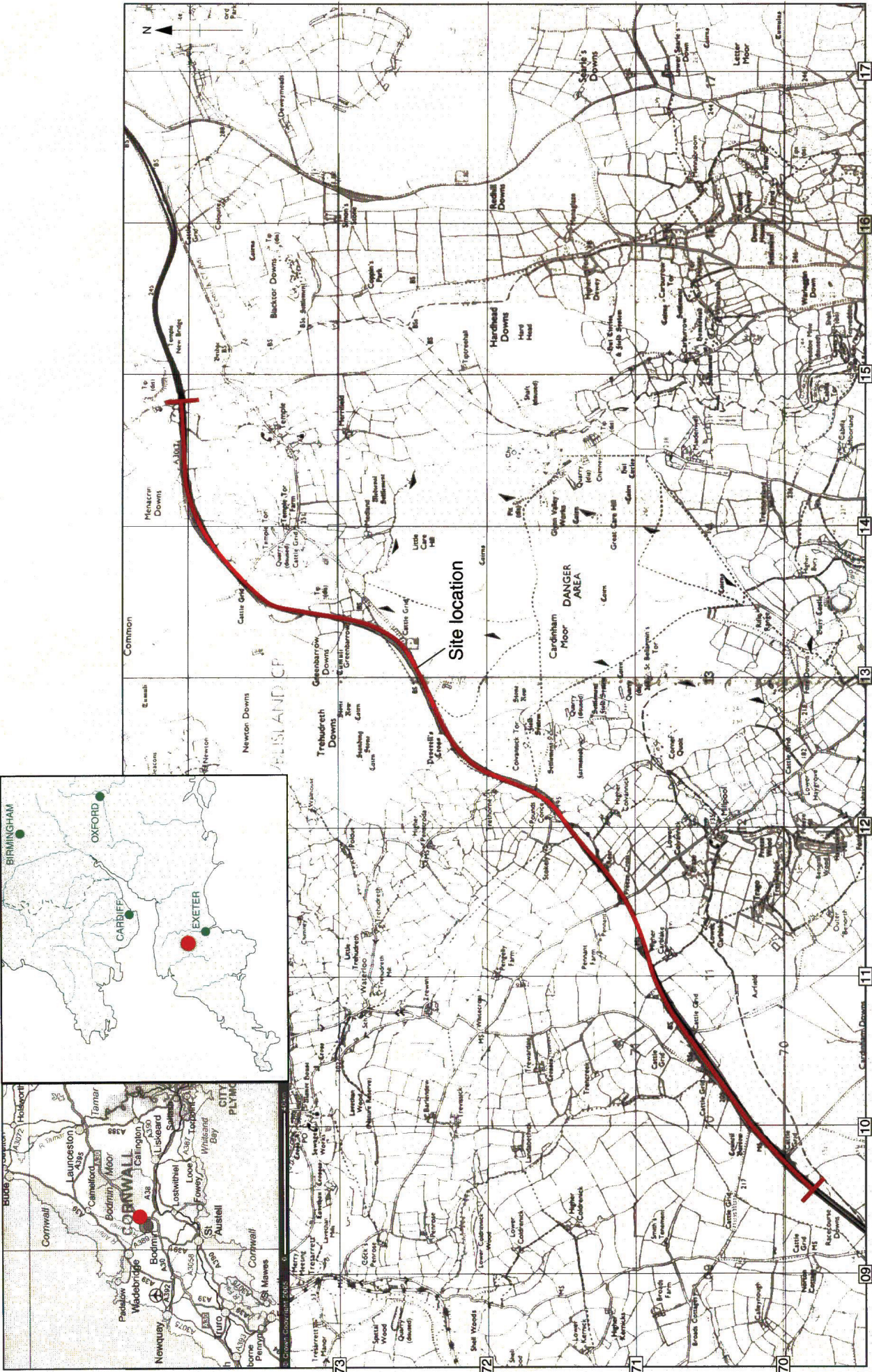
Watching Brief on 26 geotechnical test-pits

Date and duration of project: 10th to 26th November 2004

Area of site: The proposed route corridor runs a distance of approximately 4 km

Summary of results: No archaeological deposits or paleoenvironmental sequences were found.

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



Scale 1:25,000

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Figure 1: Site location

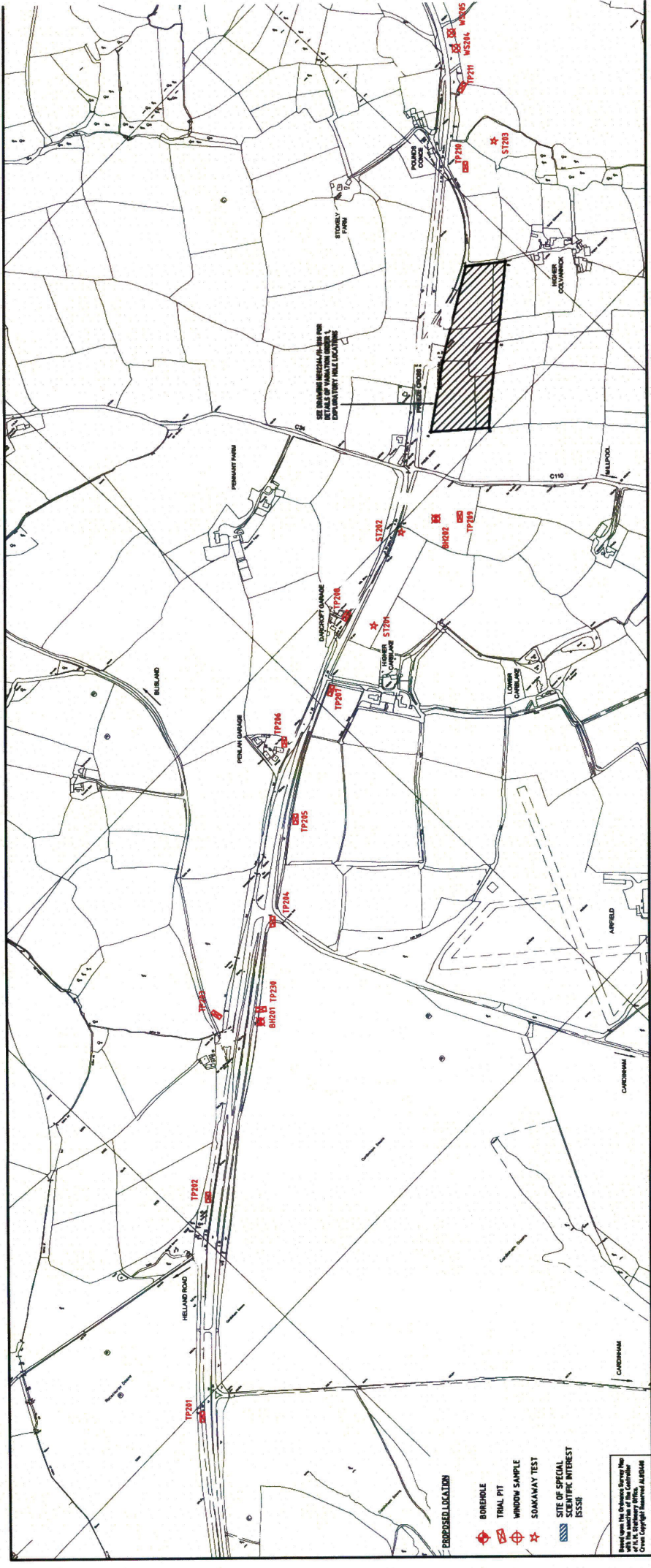


Figure 2 : Test pit location plan (west end)

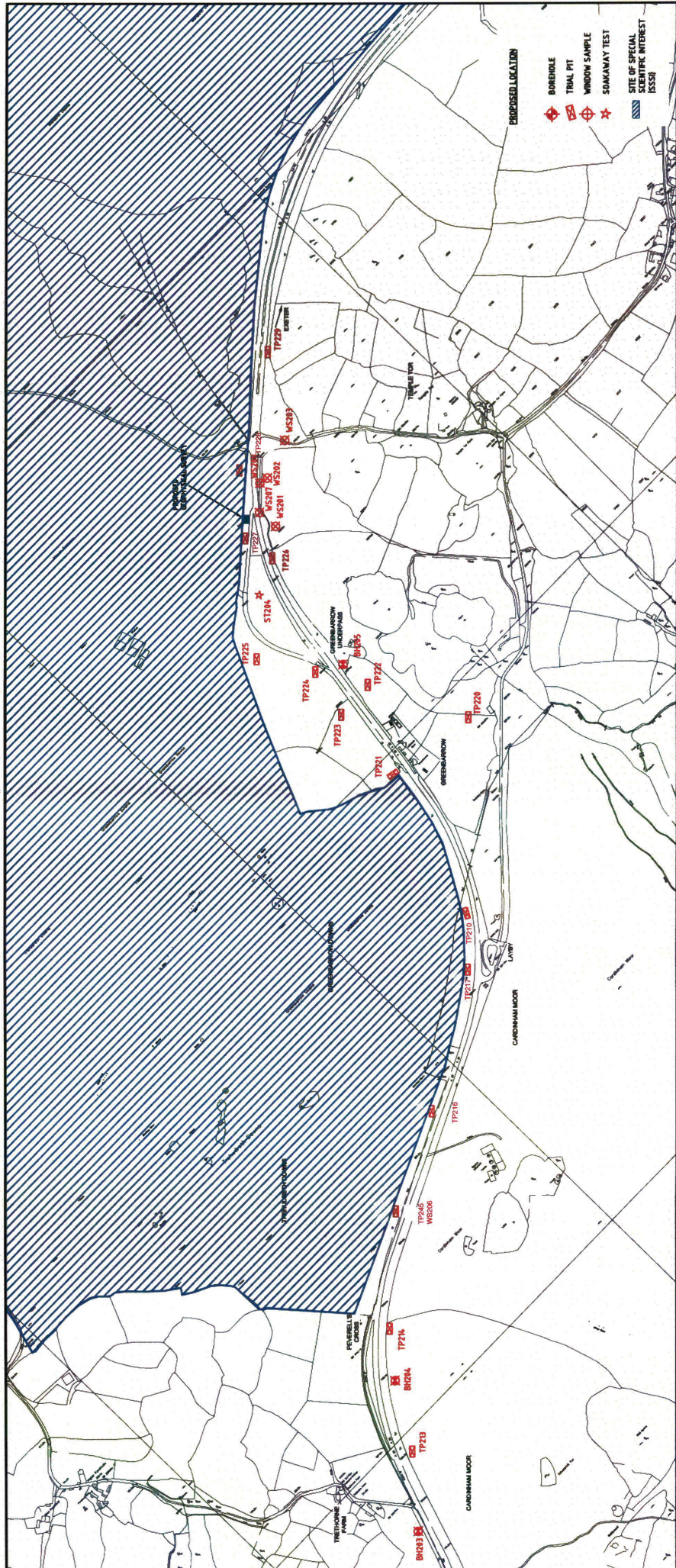


Figure 3 : Test pit location plan (east end)

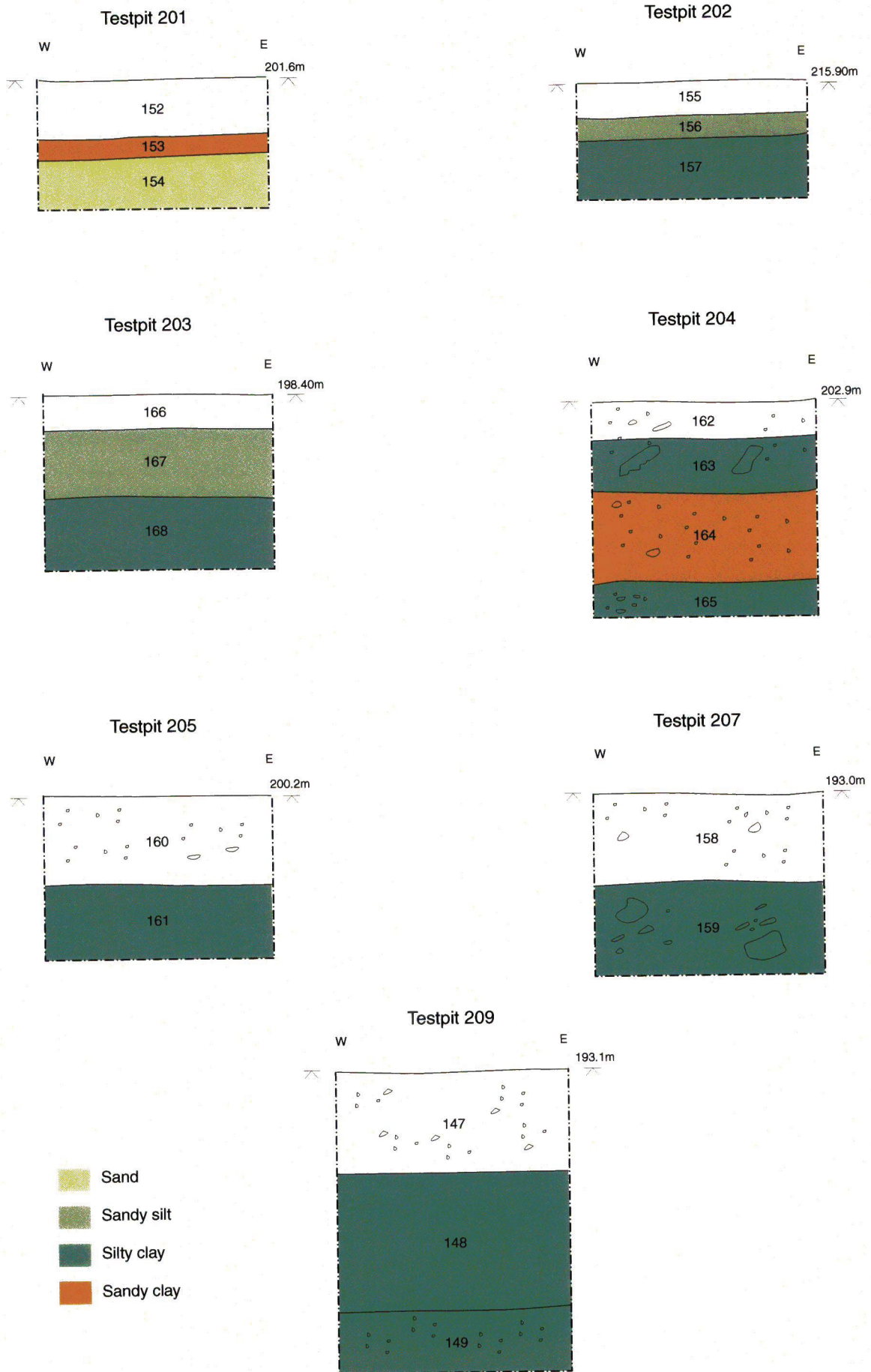


Figure 4 : Sections 201-209

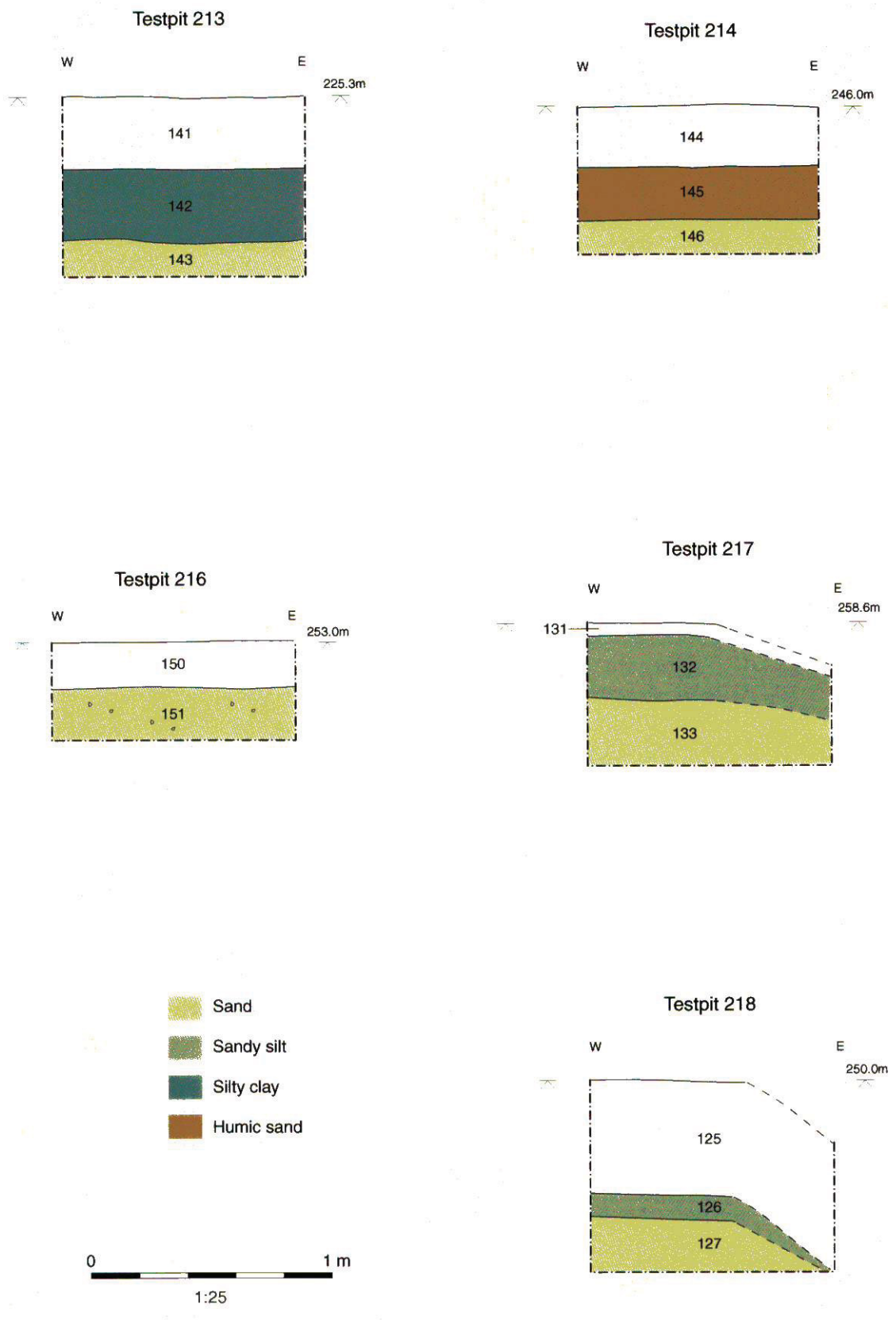


Figure 5 : Sections 210-219

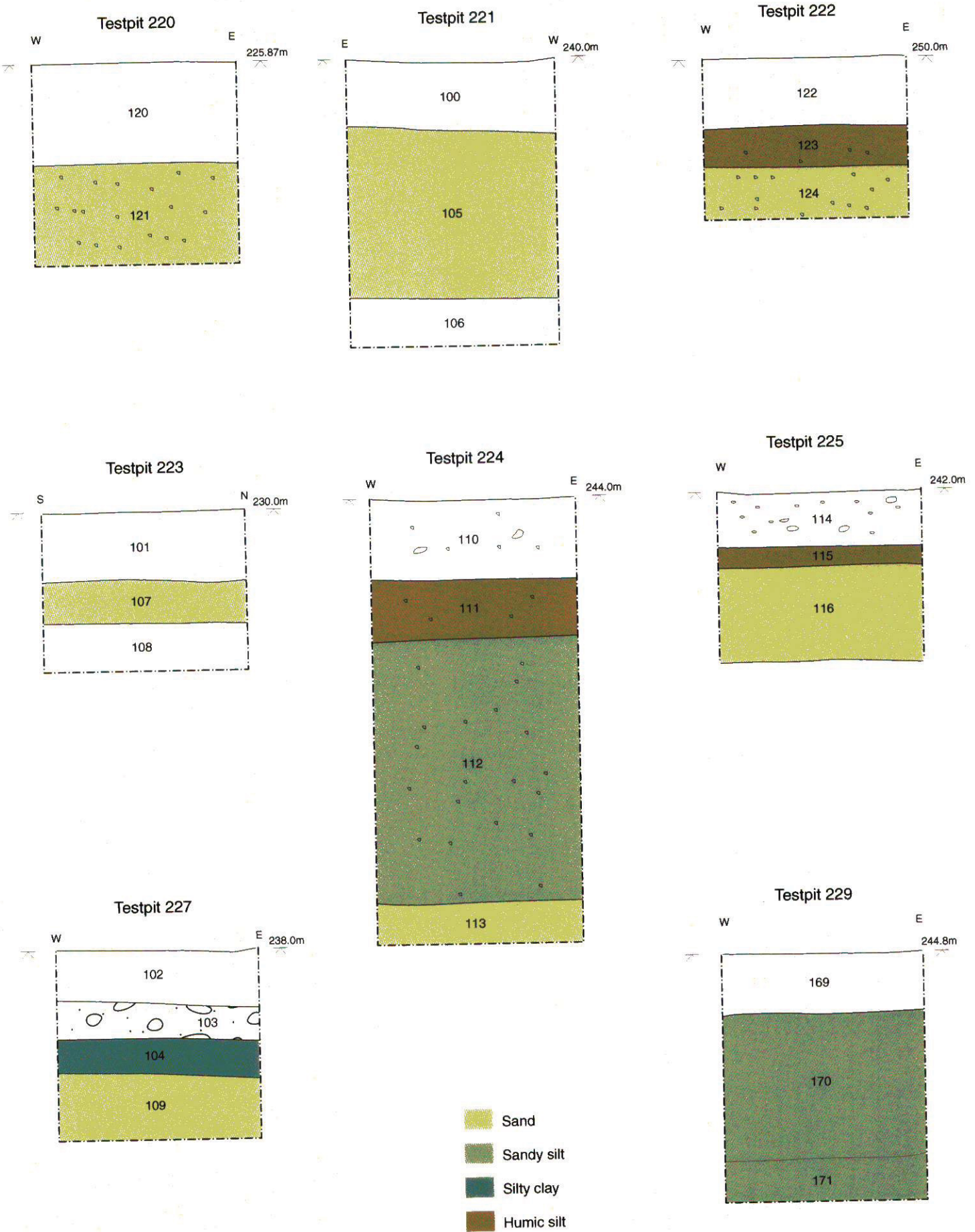


Figure 6 : Sections 220-229