

EXETER (DV)

EXBONEV
427/2000

A & H GADD Ltd

Bonhay Road, Exeter, Devon

ARCHAEOLOGICAL EVALUATION REPORT

NGR SX 9150 9237

Planning ref. No.: 98/1020/03

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SUMMARY

In December 2000, the Oxford Archaeological Unit (OAU) carried out a field evaluation at Bonhay Road, Exeter, Devon on behalf of A and H Gadd Ltd. The evaluation revealed a stone wall, a number of stakes and a timber beam lying at the level of the groundwater, three metres below current ground level (bgl). These were probably associated with the revetment of a mill stream dating to either the medieval or early post-medieval period. The wall and timbers were the only significant pre-19th century archaeological remains revealed. During the early 19th century the site was apparently cleared of all standing buildings and the ground level raised by 2 to 3 m. A large mill building was then constructed at the northern end of the site. This was demolished in the 1940s and the site used for warehousing up to the present day.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 In December 2001 OAU carried out a field evaluation at Bonhay Road, Exeter (Fig. 1) on behalf of A and H Gadd Ltd. The work was carried out in respect of a condition attached to planning permission for the construction of 44 houses on the site (Planning Application No. 98/1020/03). A brief was set by the Exeter City Archaeological Officer (CAO), Andrew Pye, who subsequently agreed a Written Scheme of Investigation (WSI) on the 7th of June 2000. The development site is bounded by Bonhay Road, Tudor Street and the Higher Leat, and is situated within the Exeter Area of Archaeological Importance. The site is 0.31 hectares in area.

1.2 Geology and topography

- 1.2.1 The site lies at 9.5m OD. The geology comprises alluvial deposits overlying shale and mudstones of Carboniferous Crackington Formation.
- 1.2.2 The site is flat, and was partially occupied, until recently, by warehouses.

1.3 Archaeological and historical background

- 1.3.1 The archaeological background to the evaluation has been the subject of a separate desk study (Exeter Archaeology, 1998), the results of which are summarised below. The site itself has produced no archaeological evidence prior to this evaluation.
- 1.3.2 The area lies within the statutory Exeter *Area of Archaeological Importance* (AAI), designated in 1984 under the 1979 Ancient Monuments and Archaeological Areas Act. The site was formerly occupied by Bonhay Mills, which were first established in the medieval period and were still present in the early 20th century. The Higher Leat, bordering the northern and eastern side of the site, is thought to date from the early medieval period, possibly before the Norman Conquest. The Lower Leat was probably a later medieval addition. The final vestiges of the mill structures were

demolished, and the Lower Leat and overflow channel to the west infilled, prior to the construction of modern warehousing in the 1970s.

- 1.3.3 The Lower Leat underlies the western edge of the present buildings whilst the northern extent of the development footprint lies directly over the site of the former Mills. Powhay House, which stood to the immediate south-east of the mill structures, is also likely to exist within the development footprint.

1.4 Acknowledgements

- 1.4.1 The authors would like to thank John Allan, Curator of Antiquities at the Royal Albert Memorial Museum, for visiting the site and advising on the pottery found.

2 AIMS

- 2.1.1 To establish the presence/absence of archaeological remains within the proposal area.
- 2.1.2 To determine the extent, condition, depth, nature, character, quality and date of any archaeological remains present.
- 2.1.3 To establish the ecofactual and environmental potential of archaeological deposits and features.
- 2.1.4 To inform the design of foundations for the new building, thereby achieving the aims of condition no. 16 of the planning permission: approval of the foundation design .
- 2.1.5 To make available the results of the investigation.

3 EVALUATION METHODOLOGY

3.1 Scope of fieldwork

- 3.1.1 The evaluation consisted of four trenches of varying shapes and sizes (Fig. 2); the original trench layout was altered significantly due to ground conditions and the need to determine the extent of deposits and structures revealed during initial machining. The concrete ground slabs were removed by a demolition crew prior to the archaeological evaluation. The overburden was removed under close archaeological supervision by a mechanical excavator fitted with a toothless bucket, in some cases to a depth of over three metres.

3.2 Fieldwork methods and recording

- 3.2.1 The trenches were cleaned by hand and the revealed features were sampled to determine their extent and nature, and to retrieve finds. No environmental samples were taken as no suitable deposits were encountered during the evaluation. All archaeological features were planned and, where excavated, their sections drawn at a scale of 1:20. All features were photographed using colour slide and black and white print film. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed D Wilkinson, 1992).

3.3 Finds

- 3.3.1 Finds were recovered by hand during the course of the excavation and generally bagged by context. Finds of special interest were given a unique small find number.

3.4 Presentation of results

- 3.4.1 The results of the evaluation are described below, trench by trench, with the deposits described from earliest to latest. Further detail can be found in Appendix 1: Archaeological Context Inventory

4 RESULTS: GENERAL

4.1 Soils and ground conditions

- 4.1.1 Excavations to the north (Exeter Archaeology 1998) suggest that the site is located on the break of slope between the floodplain and the second terrace of the River Exe, and is therefore likely to lie predominantly on the fluvial/alluvial sands and gravels relating to the braiding and flooding of the river.

5 RESULTS: DESCRIPTIONS

5.1 Description of deposits

Trench 1 (Fig. 3)

- 5.1.1 Trench 1 was 'L-shaped', measuring 12 m north-south and 11.5 m east-west, with an east-west spur, 6 m long, opposing (but offset from) the east-west arm. The trench was on average 2 m wide. An additional area was excavated immediately to the north, which measured 4 m by 3.5 m. The entire area of Trench 1 was covered with a substantial layer of concrete slab in addition to a further slab already removed by the demolition crew prior to the archaeological works. The trench was excavated to the water table which was reached at a depth of approximately 3 m below ground at 6.70 m OD. Natural geology was not reached.
- 5.1.2 An east-west aligned linear structure (128), constructed of large, unworked stones, was found at a depth of 3.1 m below ground level (bgl). The top of the structure was at a height of 6.62 m OD. The structure consisted of at least two very roughly constructed courses of wall, 0.9 m wide and seen to extend for 1.6 m east-west, before running beyond the limits of excavation. The blocks used were on average 0.2 x 0.15 x 0.1 m, and were bonded by an orange sandy clay.
- 5.1.3 Three vertical stakes (106, 129 and 130) were located immediately adjacent to the north face of structure 128, with another (107) immediately to the south, and a fifth (108) within, or driven into, the fabric of the wall itself. The stakes were on average 0.5 m long and 0.06 m in diameter. Two further stakes (104, 105) were located approximately 6 m to the north and were slightly more substantial (on average 0.15 m

in diameter), but did not appear to be associated with any other structures (see 5.2.2, below).

- 5.1.4 All of the stakes were abutted by a layer of redeposited river gravel (103), which was not excavated due to the presence of the water table. Four further layers of dumped river gravels overlay layer 103 (109, 110, 111 and 112), to a thickness of 1.3 m. To the west of the trench, a large feature (113) cut deposits 110, 111 and 112. It was 3.5 m east-west and 0.8 m north-south, and was 0.7 m deep; it was filled by a silty-clay (114) which contained fragments of brick.
- 5.1.5 The uppermost gravel layer (112) was truncated by a construction cut [117] for the concrete foundations (122) of the 19th century brick mill building (101) and its associated brick tail race (102), which was 1 m wide and 0.9 m deep. The tail race (102) appears to be a channel through which water diverted to the wheel race flows back to the lower leat, which was itself seen at the westernmost extent of the trench, and which contained modern concrete ducts, presumably designed to drain water along its former course. To the east of the recent mill structures was another north to south orientated pipe trench (119), also of modern date and apparently bored under the 19th century wall 101. A late tarmac floor was also seen, abutting wall 101.
- 5.1.6 The remains of a cobbled surface (134), overlying a make-up layer (142) of sandy silt, were revealed in an extension excavated to the north of the main trench. Make-up 142 in turn overlay the uppermost layer (112) in the sequence of redeposited gravels also seen to the south, in the main body of the trench. The cobbled surface was observed at 0.60 m bgl. A small area of wall foundation (131) was constructed upon the cobbles. It was orientated from east to west and was 1 m long and 0.15 m wide. The wall was constructed of a single course of red sandstone blocks with a maximum size of 0.65 m x 0.35 m x 0.10 m. Two further blocks of sandstone (135) were located to west of wall 131 and appeared to be on a north-south alignment.
- 5.1.7 Abutting wall 131 but apparently later than it was a brick floor (132), 1.7 x 1.2 m in area and one course thick. It was edged with two courses of brick.

Trench 2 (Fig. 4)

- 5.1.8 Trench 2 was aligned east-west and was 11.5 m long and 5 m wide. It was stepped in order to ensure safe excavation to a depth of up to 3.2 m; a sandy deposit (216), which resembled the natural drift geology but may have been redeposited, was encountered at 3 m below current ground level.
- 5.1.9 At the base of the westernmost of the two sondages machined in Trench 2 were two timbers, one horizontal (211), and one vertical (212). Timber 211 was roughly worked and measured 2.5 m long, 0.09 wide and 0.07 m thick; Timber 212 was also roughly worked and formed a stake, seen upon recovery to be 0.73 m long, and 0.1 m across. 211 was aligned north-west to south-east; Timber 212 was 1 m to the west of its northern end. They were found 2.8 m below current ground level, and lay at the same level as the possible natural horizon represented by 216.

- 5.1.10 Overlying and abutting timbers 211 and 212 was a deposit of loose reddish-brown sand (209), which was 0.8 m thick. A single timber (215) was recovered from this deposit during machine excavation, which measured 0.7 m long and 0.12 m across. Although disturbed by the machine before recording, it appeared that 215 had occupied an upright position adjacent to 212 (see 5.2.2, below).
- 5.1.11 A further two layers of gravel (208, 207) overlay layer 209. Layer 207 was overlain by the remains of a possible wall foundation (213) comprising a single course of sub-rectangular stones of an average dimension of 0.6 x 0.18 x 0.15 m, laid end to end. This wall survived at 1.50 m bgl (7.97 OD).
- 5.1.12 A further layer of gravel (206), containing 19th/20th century pottery, abutted wall 213 and was in turn overlain by a compacted sandy gravel surface (210), measuring 2 m east-west at its southern extent, but only 1 m wide at its northern limit. The remains of a wall (205) which was orientated north-west to south-east, was seen at the easternmost limit of the trench overlying layer 206. The wall was at least 2 m long, 0.54 m wide and 0.40 m deep. It was constructed of three courses of sandstone blocks, the largest of which measured 0.52 m x 0.43 m x 0.25 m. Surface 210 was overlain by a mortar surface (214) which measured 0.6 x 0.45 m.
- 5.1.13 At the western end of the trench, layer 206 was overlain by a cobbled surface (203) measuring 3 x 4 m (and cut away at the north by structure 201), and containing pottery dating to the 19th/20th centuries.
- 5.1.14 A modern brick surface (202) overlay cobbled surface 203. It was constructed of frogged bricks, stamped 'Hancock and Son Exeter', and measured 3 x 2.2 m. A ceramic drain (204) was seen to truncate cobbled surface 203, and was itself overlain by a rubble layer (200), which was in turn cut by the insertion of a rectangular brick lined structure (201). Structure 201 measured 3.95 by 1.95 m, and was sealed by a tarmac surface, which formed the current ground level.

Trench 3 (Fig. 5)

- 5.1.15 Trench 3 was again aligned east-west and was 20 m long and up to 11 m wide. The trench was stepped due to the need for deep excavation. As with Trench 2, a possibly natural, sandy gravel deposit (309) was seen at the base of the trench, at 2.5 m below current ground level.
- 5.1.16 The gravel (309) was overlain by a layer of gravelly loam (308) which contained pottery of 19th/20th century date.
- 5.1.17 A north to south orientated stone wall foundation (307) was exposed at the western end of the trench, and was seen to be at least 6 m long. It was constructed upon the natural deposit 309 and appeared to be abutted by gravel loam deposit (308), which contained 19th/20th century pottery. The wall consisted of up to five courses of roughly squared or rectangular sandstone, and was 0.44 m wide and survived to a height of 0.7 m. The stones were unbonded. Deposit 308 was itself overlain by a

substantial dump of redeposited gravel and silt, containing a fairly high percentage of fragments of ceramic building material.

- 5.1.18 A brick and stone wall 306 was constructed directly onto foundation 307. It measured 1 m high and was 0.5 m wide, and contained an electricity cable within its coursing. A gravelly make-up layer (303) and a reddish-brown silty-clay (304) abutted wall 306. Layer 303 contained pottery of a 19th/20th century date. Layer 304 appeared to be the latest in-filling of the lower leat. A tarmac surface (302) overlay contexts 303 and 304, and also abutted wall 306. The tarmac was overlain by two sandy gravel make-up layers (301, 300). Two brick and concrete lined drains were also seen running north-south in Trench 3, one sealed by tarmac layer 302 and one abutted by layer 300.

Trench 4 (Fig. 6)

- 5.1.19 Trench 4 was aligned east to west and was 24.5 m long and 4.5 m wide, with a central slot which was 2 m wide and excavated to a depth of 3.7 m in a sondage at the eastern end of the trench. A deposit of sand and gravel (413), possibly natural, was encountered at 1.8 m below current ground level.
- 5.1.20 The lowest layer encountered comprised a possibly natural, silty river gravel (413) which was not bottomed due to the presence of the water table.
- 5.1.21 The natural river gravel 413 was truncated by a cut [414] orientated north to south and measuring a maximum of 0.90 m in depth where it could be seen in section. Only the base of this cut was revealed.
- 5.1.22 A wall foundation constructed of unbonded sandstone and brick (408) measuring approximately 4.50 m in length was seen at the western end of the trench. It was 0.60 m wide and 0.60 m high, and was orientated north to south; it was probably sitting within cut [414].
- 5.1.23 Three deposits of sandy silt (407, 406 and 402) abutted wall 408 and filled cut 414. Two further layers of sandy silt (405, 403) were revealed to the east of wall 408, which may have derived from, or been the same as, layer 413.
- 5.1.24 The uppermost fill (402) of cut 414 was truncated by a substantial north to south orientated linear cut [409] which was almost certainly the foundation trench for a large, ?upright, concrete slab (410). The concrete slab, which may have originally revetted the eastern edge of the Lower Leat, appeared to have been displaced, and was revealed immediately to the east of cut 409, on the same alignment but lying almost horizontally. An homogenous reddish brown silty clay (401) filled Cut 409 and overlaid the concrete footing (410).
- 5.1.25 A layer of made ground comprising redeposited river gravels (404) overlay the fill (401) of Cut 409.

5.2 Finds

Pottery

- 5.2.1 A small assemblage of pottery was retrieved from Trenches 2, 3 and 4. All of the pottery was found to be post-medieval, with the majority being of 19th and 20th century date (see Appendix 2).

Timbers

- 5.2.2 Five stakes were retrieved, all of which were in a poor to fair state of preservation. All five stakes are of oak heartwood with no surviving sapwood. Stake 211 measured 1.2 m long x 0.13 m wide tapering to a 0.06 m wide point. Stakes 106, 107, 212 and 215 were all much shorter and measured between 0.70 m and 0.53 m in length. All except one (215) is pointed for use as a stake, but none have surviving toolmarks. They have all been roughly split and were probably hacked to a point at one end. The three shorter stakes (106, 107 and 215) have all been split from very twisted and knotty branch wood. This lack of careful selection or conversion suggests that they were unlikely to have been used in significant or load bearing structures. The timbers were briefly assessed by dendrochronologist Daniel Miles who considered the chances of retrieving an accurate date to be remote.

6 DISCUSSION AND INTERPRETATION

6.1 Reliability of field investigation

- 6.1.1 Two factors appear to slightly compromise the reliability of the evaluation. Firstly, only a very limited amount of dating evidence, in the form of pottery, was recovered. This may be partially explained by the depths to which machine excavation was required in order to reach the more significant archaeological deposits. Sufficient pottery was retrieved to allow for conclusions to be drawn about the thickness of the 19th/20th century deposits, and therefore the extent of truncation and/or dumping during that period.
- 6.1.2 Secondly, it was found that the first significant archaeological horizon was sealed by the 19th/20th century gravel make-up/dump layers and lay at a depth of up to 3 metres bgl. The wall (128) and associated timbers in Trench 1, and the timbers in Trench 2, constitute the main archaeological evidence for an earlier episode of activity on the site, and are probably associated with an earlier mill structure. These elements were revealed at the level of groundwater, which made excavation and recording very difficult, and did not allow for hand excavation and the retrieval of artefactual, ecofactual or environmental evidence apart from samples of the timbers themselves.

6.2 Overall summary and interpretation of results

- 6.2.1 Evidence for structures probably relating to a pre-19th century mill were recovered in Trenches 1 and 2, consisting of a small number of upright timber stakes which may have been associated with the remains of a stone wall foundation in Trench 1, and a horizontal timber beam and vertical stakes in Trench 2. All of the timbers were of oak. The timbers had all been subjected to water erosion and along with the wall were therefore probably part of the system of water management to be found surrounding a mill. Further evidence for possible mill buildings associated with these structures was not revealed during the evaluation.
- 6.2.2 Due to topographical restrictions (a steep slope to the east, and the previous line of the River Exe, prior to the construction of Bonhay Road in the early 19th century, to the west), the positions of both the upper and lower leats are unlikely to have undergone much change since they were originally dug or canalised. Previous mill buildings were almost certainly located within a relatively small area towards the junction of the leats at the northern end of the site, which was also the location of the most recent mill, constructed during the early 19th century.
- 6.2.3 The 1 m wide brick-built race of the latest mill, in which the wheel would have been positioned, ran approximately north to south beneath the central axis of the mill building (see Fig. 7). The structure was 1 m deep.
- 6.2.4 The timber stakes revealed immediately to the south of the 19th century mill in Trench 1 (104 and 105) appeared to be on approximately the same north-south alignment as the brick lined mill race, and therefore could be evidence for an earlier mill race. The largest timbers were sampled but they were found to be of an inadequate size for dendrochronological analysis.
- 6.2.5 It seems likely that the previous mill building may have been directly replaced by the 19th century mill. The stone wall foundations (213) in Trench 2, sealed by gravel deposits of 19th century date, may also be associated with an earlier mill building but due to their fragmentary nature their function and date could not be established.
- 6.2.6 The cobble surfaces and sandstone walls found in the northern sondage and in Trench 2 were located immediately beneath the foundations of the 19th century mill. They may be associated with an earlier mill building but again their fragmentary nature and the absence of any dating evidence from the underlying deposits makes their interpretation difficult.
- 6.2.7 It is possible that further structures, in the form of one or a series of timber foundation frames for earlier mill buildings, may still be present below the current ground water level at the northern end of the site, beyond the limits of the proposed buildings.

- 6.2.8 Historical records (Exeter Archaeology 1998) show that the site was continually occupied throughout the post-medieval period. Since no direct evidence for structures of the early to middle post-medieval period was revealed, it is probable that the majority of these buildings were demolished and then the ground surface raised with large quantities of imported river gravels. This probably occurred just prior to the construction of the most recent mill in the early 19th century when Bonhay Road was constructed. Both the upper and lower leats were re-cut and revetted during this phase of construction work. The stone wall in Trench 3 probably represents the foundation of this phase of the revetment of the lower leat. Pottery associated with this revetment foundation was of early 19th century date.
- 6.2.9 The latest mill building was demolished down to the level of its foundations in the 1940s. The floor of the wheel house and the underlying brick mill race have remained intact. The remains of the mill buildings were then capped with concrete and the whole site was subsequently developed, with the building of warehouses which remained standing until their recent demolition in advance of the proposed development.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

Trench	Ctxt No	Type	Width (m)	Thick. (m)	Comment	Find	Date
1							
	100	not used					
	101	structure	18.13	0.46	brick wall	none	19th
	102	structure	6.00	0.33	brick culvert	none	19th
	103	deposit		?	alluvium	none	
	104	timber			stake		
	105	timber			stake		
	106	timber			stake		
	107	timber			stake		
	108	timber			stake		
	109	deposit	1.10	0.82	alluvium	none	
	110	deposit	4.40	0.91	alluvium	none	
	111	deposit	8.70	1.14	alluvium	none	19th?
	112	deposit	4.18	0.36	alluvium	none	19th?
	113	cut	1.92	0.80	?		19th?
	114	deposit	1.92	0.80	fill of 113	none	19th?
	115	cut	1.67	0.83	Construction cut		19th?
	116	deposit	1.67	0.83	fill of 115	none	19th?
	117	cut	0.45	0.32	Construction cut	none	
	118	deposit	0.45	0.32	fill of 117	none	19th?
	119	cut	0.77	0.78	drain		19th?
	120	deposit	0.77	0.78	fill of 119	none	19th?
	121	deposit	-	0.40	concrete		19th?
	122	deposit	8.70	0.23	concrete		19th?
	123	deposit	8.70	0.02	tarmac		20th?
	124	cut	0.25	-	post-hole?		
	125	deposit	0.25		fill of 124	none	
	126	deposit	0.24		layer	none	
	127	deposit	0.30	0.08	layer	none	
	128	structure	1.60	0.40	brick wall		19th?
	129	timber			stake		
	130	timber			stake		
	131	structure	1.00	0.15	stone wall		18th?
	132	structure	1.70	0.30	brick wall		19th?
	133	deposit	5.00	0.22	layer		18th?
	134	structure	4.00	0.04	cobbles		18th?
	135	deposit			stones		18th?
	136	structure		0.20	concrete		20th?
	137	deposit		0.45	make-up	none	modern
	138	deposit	1.00	0.07	make-up	pot	20th?
	139	deposit		0.12	fill of 140	none	20th?
	140	cut	0.85	0.15	robber trench		20th?

	141	cut	0.05	0.05	Construct ion cut		18th?
	142	deposit		0.12	make-up	none	18th
	143	deposit		0.45	make-up	none	20th?
	144	deposit	1.12	0.10	make-up	none	19th?
	145	deposit	1.86	0.21	make-up	none	19th?
	146	deposit	2.69	0.48	make-up	none	19th?
	147	deposit	3.00	0.40	make-up	none	19th?
2							
	200	deposit		0.84	make-up	none	20th?
	201	structure	0.22	0.20	brick wall		20th?
	202	structure	3.00	0.10	brick floor		20th?
	203	structure	3.00	0.03	cobbles	pot	20th?
	204	structure			drain pipe		20th?
	205	structure	0.54	0.40	stone wall		
	206	deposit	2.50	0.50	make-up	none	20th?
	207	deposit	2.00	0.60	make-up	none	19th?
	208	deposit	2.50	0.50	make-up	none	19th?
	209	deposit		0.80	make-up	none	19th?
	210	deposit	3.00	0.10	surface	none	19th?
	211	timber			plank		
	212	timber			stake		
	213	structure	0.18	0.60	stone wall?		18th?
	214	deposit	0.45	0.03	surface	none	19th?
	215	timber			stake		
	216	deposit	?	?	layer	none	
3							
	300	deposit		0.45	tarmac		20th?
	301	deposit		0.50	make-up	none	20th?
	302	deposit		0.04	tarmac		20th?
	303	deposit			make-up		20th?
	304	deposit		1.50	make-up	pot	19th?
	305	deposit			make-up		20th?
	306	structure	5.80	1.40	stone wall		19th?
	307	structure	5.80	0.26	stone wall		19th?
	308	deposit		0.60	layer	pot	19th?
	309	deposit		0.40	layer	pot	19th?
	310	deposit		0.20	layer		19th?
4							
	400	not used					
	401	deposit	1.50	1.90	fill of 409		19th?
	402	deposit	0.68	1.68	fill of 414		19th?
	403	deposit	15.90	0.78	make-up		19th?
	404	deposit		0.40	make-up		19th?
	405	deposit	0.21	0.58	make-up		19th?
	406	deposit	0.38	0.23	fill of 414		20th?
	407	deposit	0.59	0.29	fill of 414		20th?
	408	structure	0.80		stone wall		19th?
	409	cut	4.50	2.00	construct ion cut		20th?
	410	structure			concrete		20th?

	411	deposit	7.10	0.20	make-up	20th?
	412	structure	1.40	0.96	brick wall	19th?
	413	deposit		>2.55	alluvium	
	414	cut		0.90	construction cut	19th?

APPENDIX 2 POTTERY ASSESSMENT AND SPOT DATING

Context	Date	Diagnostic pottery	Comments
203	19/20C	White 'china', refined earthenware	Also two sherds of red earthenware
206	19/20C	Coarse stoneware	Probably drainpipe
303	19/20C	White jam jar, transfer print	Large sherd of North Devon gravel-tempered; horizontal handle in North Devon post-medieval fineware; abraded piece of stoneware, possible Rhenish.
308	19/20C	White 'china'	Residual elements: North Devon gravel-tempered, including slipped type; red earthenware; English tin-glazed ware. Also one piece of tile.
402	19/20C	White 'china', transfer print	
403	19/20C	Mocha-type ware	
405	19/20C	White 'china'	Includes residual red earthenware.
407	18/19C	Post-medieval redware	A late type.
411	17/18C	North Devon post-medieval fine ware	Possibly residual.

APPENDIX 3 BIBLIOGRAPHY AND REFERENCES

- Exeter Archaeology 1998 *Archaeological Assessment of Development Site off Bonhay Road, Exeter* (unpublished client report no. 98.84).
- Wilkinson, D (ed) 1992 *Oxford Archaeological Unit Field Manual*, (First edition, August 1992)

APPENDIX 4 EXETER URBAN ARCHAEOLOGICAL DATABASE ENTRY

UAD-Event Data

Area(M2)	NGR Easting	NGR Northing	
	9150	9237	
NGR Qualifier	Event Type	Event Start	Event End
LO	EV	11/12/2000	22/12/200
Site Name	Fieldworker Name		
Bonhay Road, Exeter, Devon	Andrew Mayes		
Associated Organisation	Parish		
Oxford Archaeological Unit	St Davids		
Postal Address			
Bonhay Road, Exeter, Devon			

Event Description (Continued over if necessary)

1.1.1 The Oxford Archaeological Unit (OAU) carried out a field evaluation at Bonhay Road, Exeter, Devon on behalf of A and H Gadd Ltd. The evaluation consisted of four trenches of varying shapes and sizes (Fig. 2); the original trench layout was altered significantly, due to ground conditions and the need to determine the extent of deposits and structures revealed during initial machining. The overburden was removed under close archaeological supervision by a mechanical excavator fitted with a toothless bucket, in some cases to a depth of over three metres. The evaluation revealed a wall, a small number of stakes and a small timber beam approximately at the current level of the groundwater. These were probably associated with the revetment of a mill stream dating to either the medieval or early post medieval period. The wall and timbers were the only significant pre-19th century archaeological remains revealed. During the early 19th century the site was cleared of all its standing buildings and the ground level raised by 2 to 3 m. A large mill building was then constructed at the northern end of the site. This was demolished in the 1940s and the site used for warehousing up until the present day.

Sample Deposit Column

NGR Easting

NGR Northing

9150

9237

Surface Level (mAOD)

Intervention to (mAOD)

Water Level

9.5m

6.m

3.20 m BLG

Principal Deposit Top (mAOD)

Principal Deposit Base (mAOD)

6 m

N/A

Principal Deposit Description (continue over if necessary)

River gravels in which timber stakes of oak had been inserted probably torevet water control feature associated with mill predating early 19th century. Full depth of deposit not determined due to water intrusion.

Geology

Alluvial overlying mudstones and shales

Listed Building PRN

N/A

Listed Building Grade

N/A

Additional information

Evidence for structures probably relating to a pre-19th century mill were recovered in Trenches 1 and 2, consisting of a small number of upright timber stakes which may have been associated with the remains of a stone wall foundation in Trench 1, and a horizontal timber beam and vertical stakes in Trench 2. All of the timbers were of oak. The timbers had all been subjected to water erosion and along with the wall were therefore probably part of the system of water management to be found surrounding a mill. Further evidence for possible mill buildings associated with these structures was not revealed during the evaluation. Due to topographical restrictions (a steep slope to the east, and the previous line of the River Exe, prior to the construction of Bonhay Road in the early 19th century, to the west), the positions of both the upper and lower leats are unlikely to have undergone much change since they were originally dug or canalised. Previous mill buildings were almost certainly located within a relatively small area towards the junction of the leats at the northern end of the site, which was also the location of the most recent mill, constructed during the early 19th century.

The 1 m wide brick-built race of the latest mill, in which the wheel would have been positioned, ran approximately north to south beneath the central axis of the mill building. The structure was 1 m deep.

The timber stakes revealed immediately to the south of the 19th century mill in Trench 1 (104 and 105) appeared to be on approximately the same north-south alignment as the brick lined mill race, and therefore could be evidence for an earlier mill race. The largest timbers were sampled but they were found to be of an inadequate size for dendrochronological analysis. It seems likely that the previous mill building may have been directly replaced by the 19th century mill. The stone wall foundations (213) in Trench 2, sealed by gravel deposits of 19th century date, may also be associated with an earlier mill building but due to their fragmentary nature their function and date could not be established.

The cobble surfaces and sandstone walls found in the northern sondage and in Trench 2 were located immediately beneath the foundations of the 19th century mill. They may be associated with an earlier mill building but again their fragmentary nature and the absence of any dating evidence from the underlying deposits makes their interpretation difficult. It is possible that further structures, in the form of one or a series of timber foundation frames for earlier mill buildings, may still be present below the current ground water level at the northern end of the site, beyond the limits of the proposed buildings.

Historical records (Exeter Archaeology 1998) show that the site was continually occupied throughout the post-medieval period. Since no direct evidence for structures of the early to middle post-medieval period was revealed, it is probable that the majority of these buildings were demolished and then the ground surface raised with large quantities of imported river gravels. This probably occurred just prior to the construction of the most recent mill in the early 19th century when Bonhay Road was constructed. Both the upper and lower leats were re-cut and revetted during this phase of construction work. The stone wall in Trench 3 probably represents the foundation of this phase of the revetment of the lower leat. Pottery associated with this revetment foundation was of early 19th century date.

The latest mill building was demolished down to the level of its foundations in the 1940s. The floor of the wheel house and the underlying brick mill race have remained intact. The remains of the mill buildings were then capped with concrete and the whole site was subsequently developed, with the building of warehouses which remained standing until their recent demolition in advance of the proposed development.

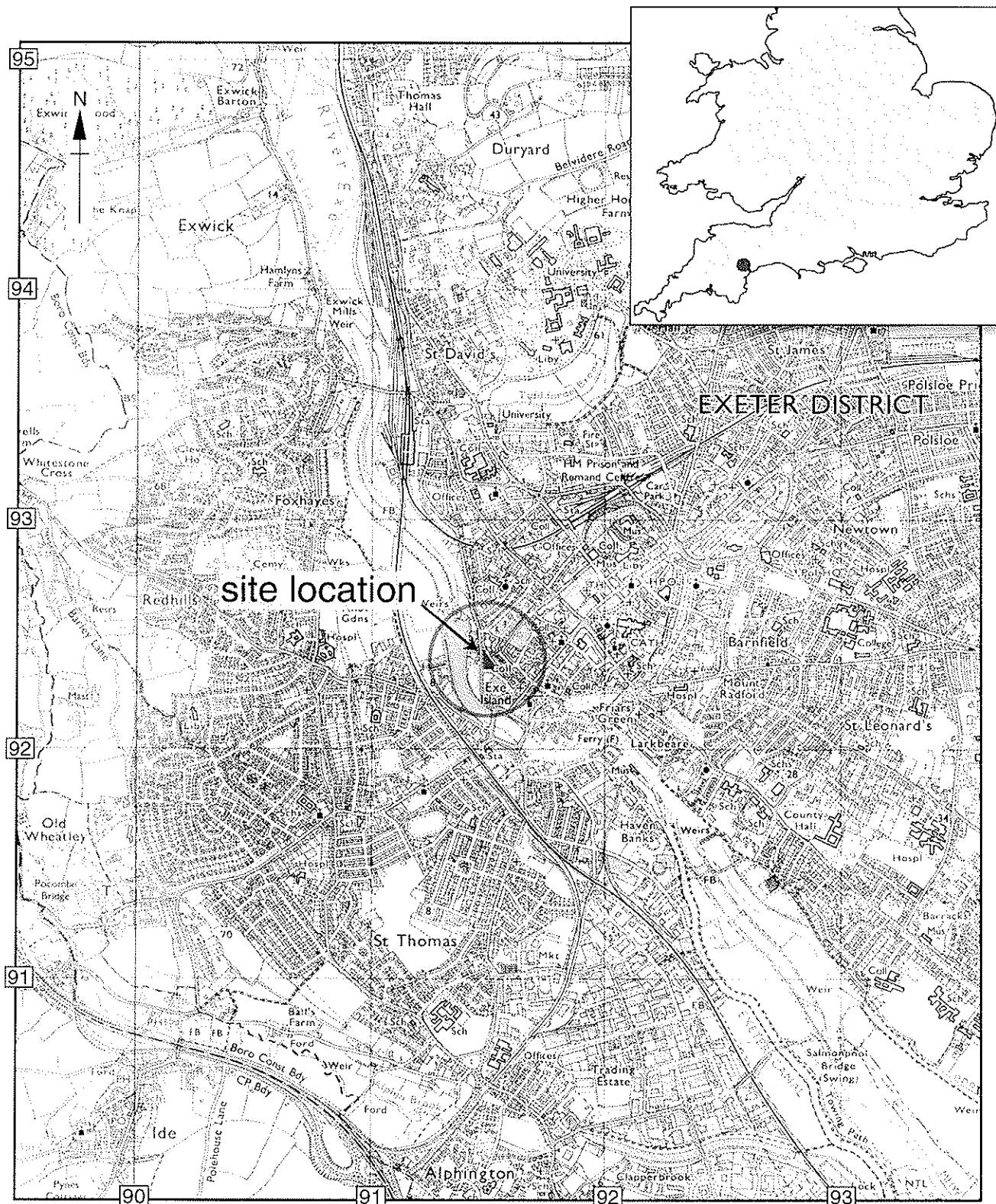


Figure 1: Site location

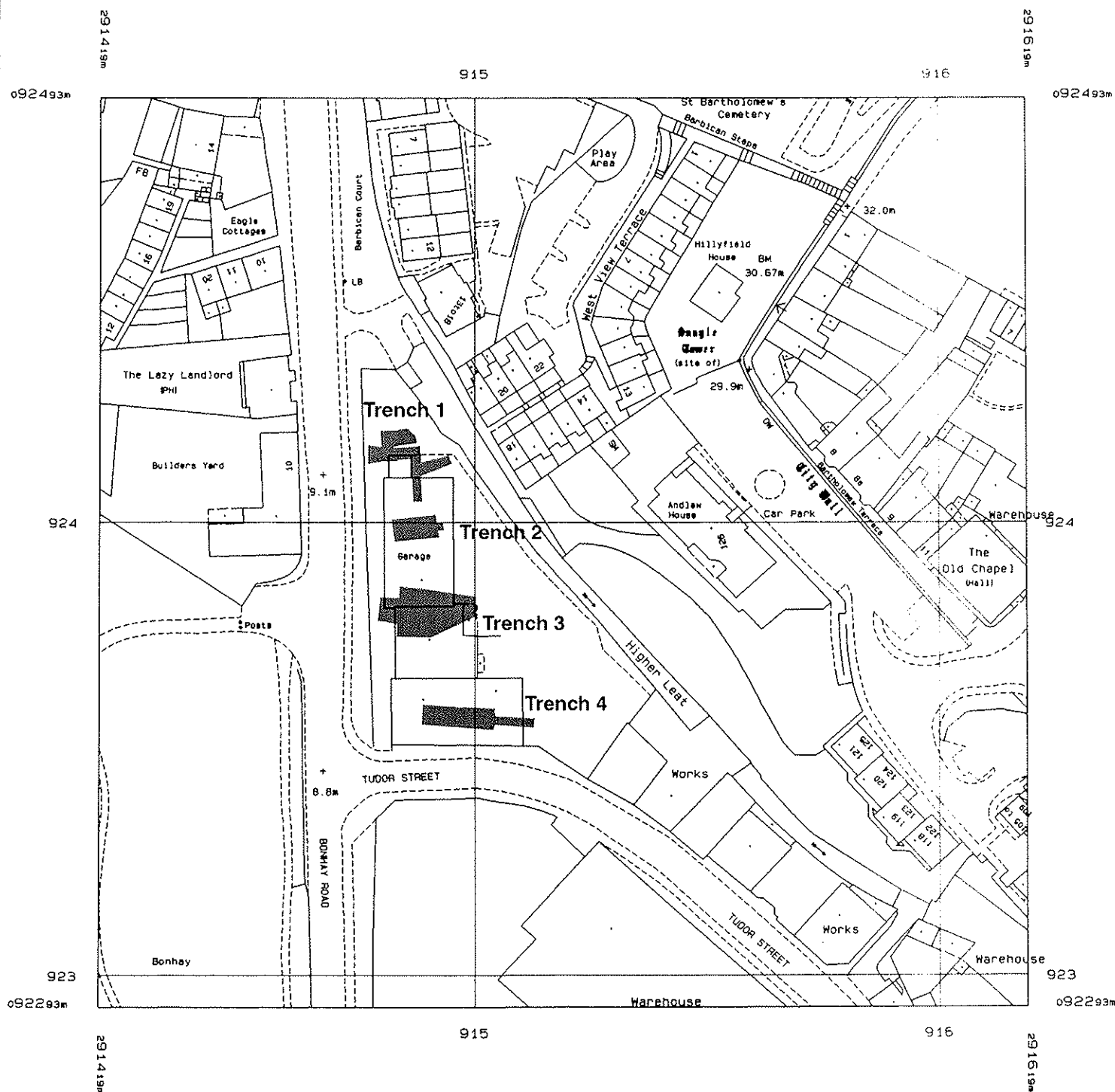


Figure 2: Trench location plan

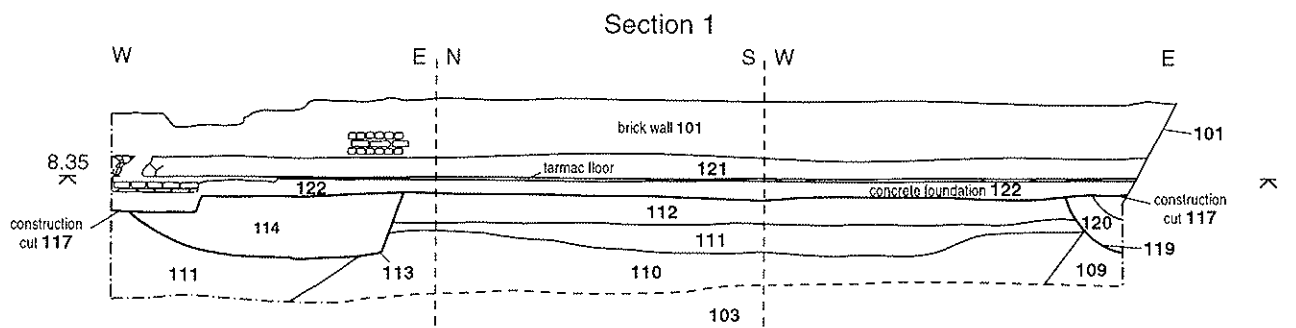
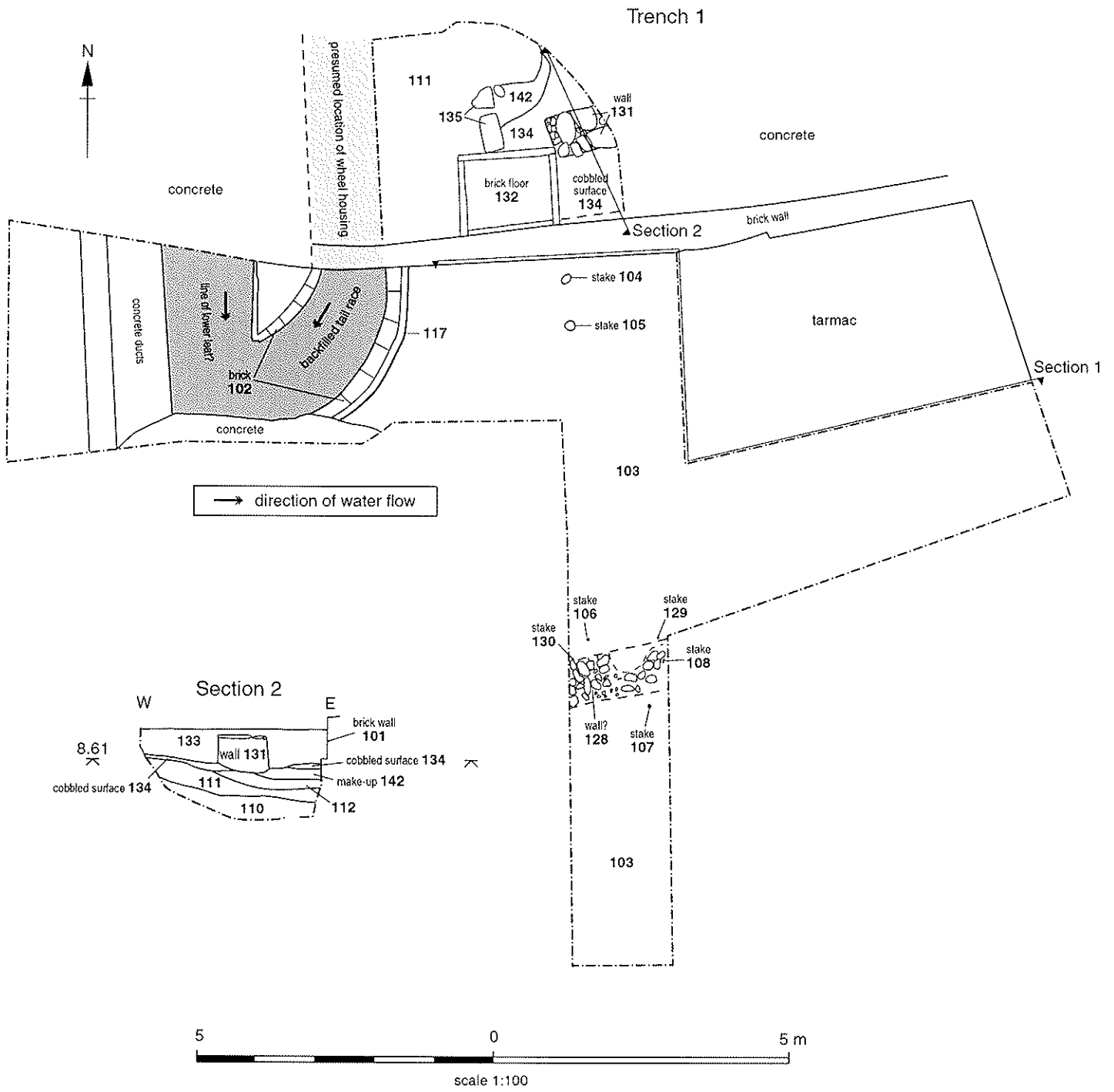
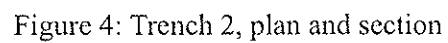


Figure 3: Trench 1, plan and section



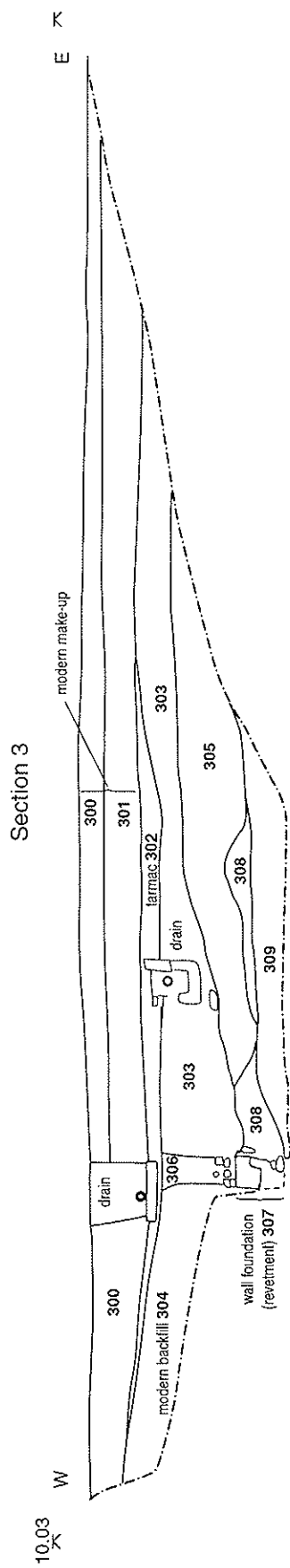
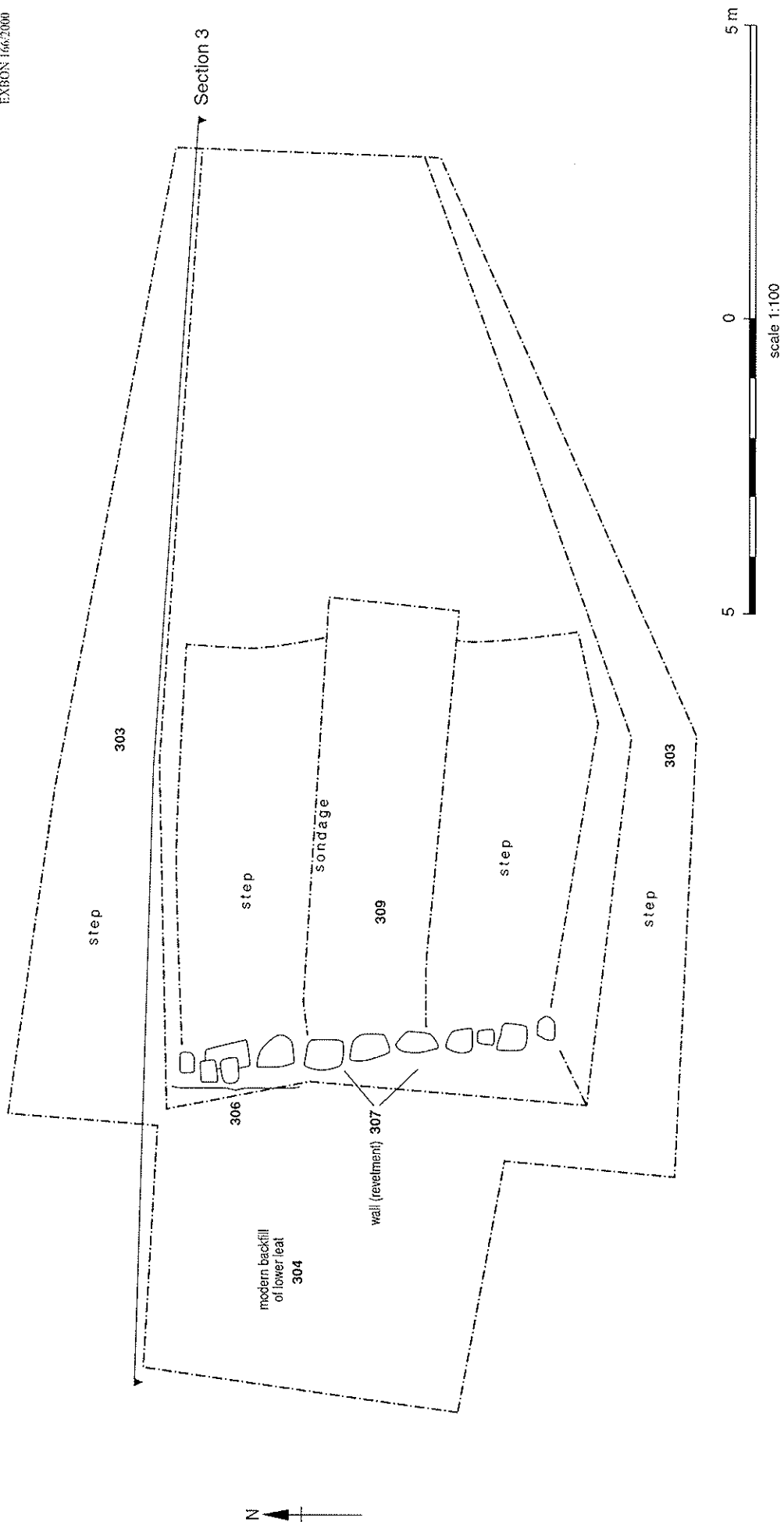
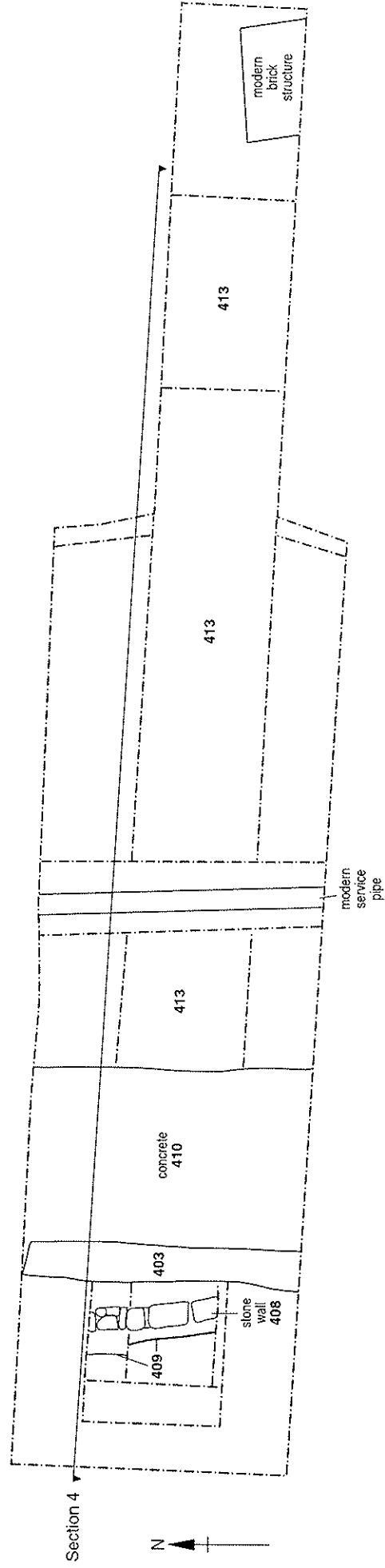


Figure 5: Trench 3, plan and section

Trench 4



Section 4

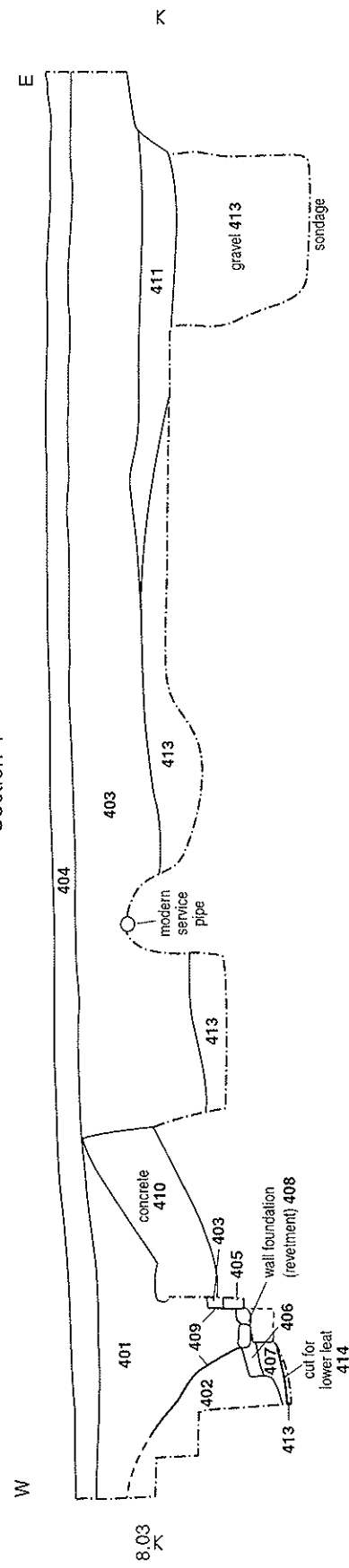
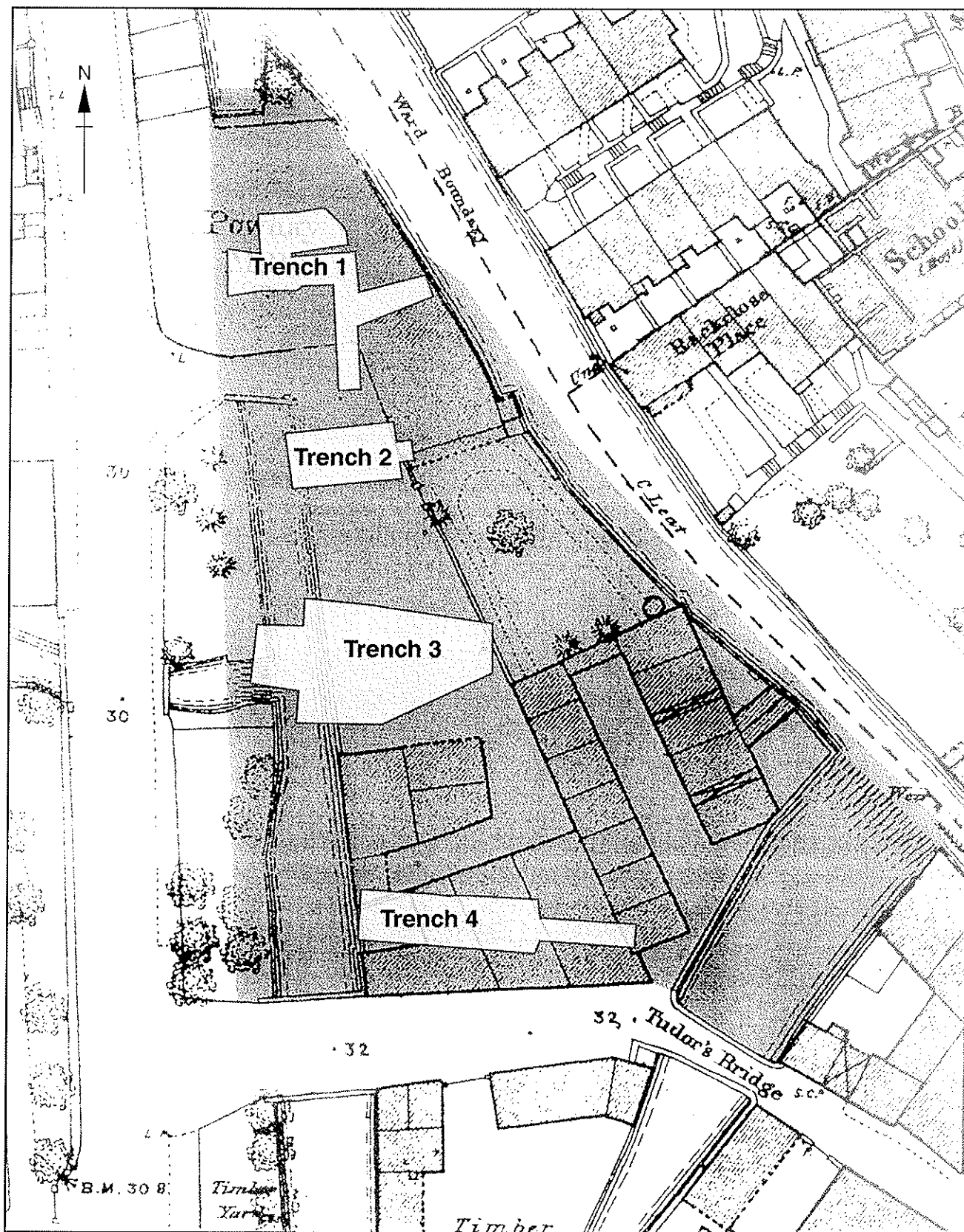


Figure 6: Trench 4, plan and section



Scale 1:500

Figure 7: Trench locations relative to 1876 OS map



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