New Warehouse Osney Mead Oxford

Archaeological Evaluation

Oxford Archaeology

7th June 2002

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Knowles and Son Ltd

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New Warehouse, Osney Mead, Oxford

ARCHAEOLOGICAL EVALUATION

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Summary

Oxford Archaeology (OA) carried out a field evaluation on land at Osney Mead Industrial Estate in April 2002. The work was undertaken prior to the determination of a planning application made by Knowles and Son Ltd to build a new warehouse on a plot of land backing onto the Bulstake stream. Three evaluation trenches were excavated. A series of alluvial layers overlying the natural gravel were recorded and evidence for palaeochannels was observed. A stone surface or platform of uncertain date was revealed in a trench in the south-west corner of the site. This may be part of a riverbank hardstanding surface or possibly a ford or causeway across an older course of the Bulstake stream.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 In April 2002 Oxford Archaeology (OA) undertook a field evaluation at Osney Mead Industrial Estate on behalf of Knowles and Son in respect of a planning application for the development of land in the eastern corner of the estate (Planning Application No. 02/046/FUL).

1.1.2 Oxford City Council requested that the site be archaeologically evaluated prior to redevelopment through the City's Archaeologist. The work was undertaken in line with a Written Scheme of Investigation prepared by OA and agreed with the City archaeologist.

1.2 Geology and topography

1.2.1 The development site is situated in the south-east part of Osney Mead Industrial Estate (Fig. 1), and is *c* 0.5 hectares in area. The site lies at *c* 56 m above OD, within the ancient parish of St. Thomas and is bounded to the south by Bulstake stream, which forms part of the River Isis.

1.2.2 The underlying geology is River Thames Alluvium overlying river terrace gravels, beneath which lies the Oxford Clay. At the time of evaluation the site was level and was partly used for storage and was partly waste ground.

1.3 Archaeological and historical background

1.3.1 The archaeological background to the evaluation has been the subject of a separate desk-based assessment (OAU February 2000). The development site is located to the west of the medieval town of Oxford, adjacent to one of the many tributaries of the river Thames/Isis. The site itself has produced no archaeological evidence. Limited archaeological finds of various periods have been found in the Osney Mead area and the site of the medieval abbey at Osney is situated to the north-west of the proposed development.

1.3.2 In March 2000 an evaluation was carried out by Oxford Archaeological Unit (OAU April 2000, now Oxford Archaeology) on land immediately to the north-east of the

development site. Three evaluation trenches were excavated. No archaeological features were present, although a series of alluvial flood plain deposits, a palaeochannel and possible gravel islands were observed.

2 EVALUATION AIMS

2.1.1 To determine the condition, nature, character, quality and date of any archaeological remains present in the site area.

2.1.2 To extend knowledge of the Osney Mead flood plain and any associated water channels on the site.

3 EVALUATION METHODOLOGY

3.1 Fieldwork methods and recording

3.1.1 The evaluation was undertaken in accordance with OA standard methodology and IFA 'Standard and Guidance for archaeological field evaluations' (Institute of Field Archaeology 1999). The proposal was to open up 35 linear metres of machine excavated trenches at least 1.6 m wide under the control of an experienced archaeologist. Initially two trenches were planned but as the evaluation proceeded this was altered to three (Fig. 2). Health and Safety considerations meant that Trenches 1 and 3 were widened to 3.2 m at the top to allow for stepped sides.

3.1.2 The three trenches were excavated using a JCB equipped with a toothless ditching bucket. Excavation proceeded by machine down to the level of the natural gravel. Features and deposits were inspected, and where necessary were manually cleaned and recorded in accordance with standard OA procedures (OAU 1992). Section drawings were made at a scale of 1:20, and overall plans of trenches were drawn at a scale of 1:100 or 1:50. All deposits, structures and features were assigned unique context numbers and records made on *pro forma* context sheets. Black and white and colour photographs were taken. All the trenches were excavated to below the water table and water pumps were used to remove surplus water from the trenches.

3.2 Finds

3.2.1 Finds were recovered by hand during the course of the excavation and bagged by context.

3.3 Palaeo-environmental evidence

3.3.1 Incremental samples were taken through the alluvial deposits adjacent to a stone surface observed in Trench 1, to retrieve palaeo-environmental information.

4 RESULTS: GENERAL

4.1 Soils and ground conditions

4.1.1 The site is located on an area of recently made ground, lying upon various layers of alluvial clay on top of natural gravel. The site is subject to waterlogging due to its proximity to the Bulstake stream.

4.2 Distribution of archaeological deposits

4.2.1 Evidence of palaeochannels was noted in all three of the trenches. A stone surface, the only archaeological feature, was recorded in Trench 1.

5 RESULTS: DESCRIPTIONS

5.1 Trench 1

5.1.1 Trench 1 (Figs 3 and 4) measured 20 m x 3.2 m and was orientated north-south. At the north end of the trench an extension to the east was added which measured 8.5 m x 3.2 m. Natural sandy gravel (105) was revealed at a depth of 54.4 m OD at the south end of the trench. The level of the gravel rose steadily to a height of 54.6 m OD at the north end of the trench.

5.1.2 The natural was overlain by a stone surface (104) constructed of unworked pieces of Ragstone that varied in size from 0.1 m x 0.1 m x 0.05 m to 0.25 m x 0.2 m x 0.15 m and were set in a light grey silty matrix, which was probably the result of later inundation. The surface was well consolidated and survived well at the north end of the trench where it had a maximum thickness of 0.25 m. The surface was less substantial towards the middle of the trench and appeared to peter out completely towards the south end, giving an observed north-south length of 11 m. The northern and western extents of the feature were not established but the extension to the trench identified the east edge: this appeared to be aligned north-south. The surface has a maximum observed width of 4 m.

5.1.3 To the east of the stone surface the gravel was overlain by dark grey sandy silt of 0.1 m thickness (107). Sealing these deposits was a dark brown silty clay layer with a high humic content (103). This was 0.15 m thick over the stone surface and deepened to 0.3 m at the south end of the trench and 0.5 m to the east of the stones in the extension. This was overlain by two layers of brown/blue grey silty clay with a combined thickness of 0.6 m (layers 102 and 101). These deposits were overlain by a clean sandy gravel made ground deposit (100) that was 1.45 m deep.

5.2 Trench 2

5.2.1 Trench 2 (Fig. 5) measured 5 m x 1.8 m and was orientated roughly east-west. Natural sandy gravel (206) was revealed at a depth of 54.37 m OD. The natural gravel was overlain by a dark brown silty clay layer with a significant humic content that was 0.26 m in thickness (205). This was overlain by three layers of mid-light grey silty clay with a combined thickness 0.54 m (204, 203, 202).

5.2.2 These deposits were overlain by a clean sandy gravel made ground deposit (201) that was 1.5 m deep, which was in turn overlain by the concrete yard surface (200).

5.3 Trench 3

5.3.1 Trench 3 (Fig. 5) measured 11 m x 3.2 m and was orientated north-west/south-east. Natural sandy gravel (306) was revealed at a depth of 54.49 m OD.

5.3.2 The natural gravel was overlain by a brownish grey silty clay layer of up to 0.7 m thickness (307). This had a thin lens of humic material at its base and which petered out to the east, where it was overlain by a dark brown silty clay layer (305). This also had a significant humic content and was 0.5 m thick. This layer was overlain by four layers of mid-light grey silty clay with a total thickness of 0.78 m (layers 304, 303, 302 and 301).

5.3.3 These deposits were overlain by a clean sandy gravel made ground deposit (300), which was 1.2 m deep.

5.4 Finds

Animal Bone by Bethan Charles

5.4.1 A total of seven fragments of animal bone were recovered by hand from Trench 1. The bones were discovered within palaeochannel deposit 103 and were in excellent condition. All of the elements were identified as cattle bones and included four ribs, the right metatarsal and astragalus. It is possible that they belonged to the same individual. There was no evidence of butchery marks on any of the fragments.

Measurements:
Metatarsal
GL = 234mm SD = 32mm DD =31mm Bd = 61mm
Astragalus
GLI = 69mm GLm = 63.4mm Bd = 37mm

5.5 Palaeo-environmental remains by Mark Robinson

5.5.1 Trench 1, alongside the Bulstake stream, exposed 1 m of channel alluvial sediments overlying a limestone surface on the former margin of the channel. A sequence of nine samples was taken through the alluvial deposits (Fig. 4). For evaluation purposes, 200g of three of the samples was washed over onto a 0.25mm mesh to recover biological remains.

5.5.2 Waterlogged macroscopic plant remains, insect remains and mollusc shells are all present in Sample 9 from Context 107, the lowest deposit. The molluscs are aquatic species including *Bithynia tentaculata* which requires flowing water and *Gyraulus acronicus* which is endemic to the Thames. There are many seeds of emergent aquatics including *Schoenoplectus lacustris* (bulrush), *Glyceria* sp. (reedgrass), *Oenanthe aquatica* gp. (water dropwort) and *Alisma* sp. (water plantain). The insects include species of *Donacia* and *Plateumaris* which feed on reedswamp vegetation. There are few seeds of terrestrial vegetation but *Achillea* sp. (yarrow) and *Taraxacum* sp. (dandelion) are present. There is also a pod fragment, possibly of *Vicia cracca* (tufted vetch) and an example of the grass-feeding beetle *Crepidodera ferruginea*.

5.5.3 Similar mollusc shells and seeds of emergent aquatic vegetation are present in Sample 7 from Context 103, the deposit above Context 107. However, they are joined by a seed of *Rumex hydrolapathum* (great water dock), a characteristic marginal plant along the upper Thames. The beetles include *Prasocuris phellandrii*, which feeds on aquatic Umbelliferae, such as *Oenanthe aquatica* and *Donacia semicuprea*, which feeds on *Glyceria aquatica*. This sample has a higher proportion of seeds of terrestrial plants. They are mostly from grassland plants, including *Ranunculus* cf. *repens* (creeping buttercup) and *Prunella vulgaris* (self-heal). There are also seeds of the hay-meadow plants *Rhinanthus* sp. (yellow rattle) and *Leucanthemum vulgare* (ox-eye daisy). The terrestrial insects include the weevil *Sitona* sp., which feeds on vetches and clover.

5.5.4 Waterlogged plant and insect remains are absent from Sample 3 from Context 102, alluvial clay above Context 103. However, mollusc shells are present, including the aquatic species *Valvata cristata* and *Planorbis planorbis*. There is also a strong element of marsh or damp grassland species, including *Carychium* sp., *Vallonia pulchella* and *Succinea* or *Oxyloma* sp.

5.5.5 The biological remains from Osney Mead are characteristic of Thames palaeochannel and floodplain habitats of Roman to post-medieval date. In particular, there is a hay meadow element to the seeds from Sample 7 and the terrestrial snails from Sample 3. There is no evidence from the region for hay meadow prior to the Roman period and there seems to have been an expansion of the area of hay meadow on the floodplain during the late Saxon period. In the absence of any other dating evidence or useful archaeological association, no further work is recommended on the sample sequence. However, the results show that the lower part of the alluvial sequence has the potential to contain well-preserved waterlogged macroscopic plant remains (and presumably pollen), insects and molluscs, while mollusc shells are preserved in the upper, non-waterlogged part of the sequence. Suitable provision for sampling should be made if any further excavation takes place.

6 DISCUSSION AND INTERPRETATION

6.1 Reliability of field investigation

6.1.1 The evaluation was carried out in controlled conditions and the results are considered to be reliable.

6.2 Overall interpretation

6.2.1 All three of the trenches revealed a broadly similar sequence of deposits. Water logged palaeochannel deposits were overlain by a series of alluvial layers. These had been truncated by the removal of topsoil in the 1950s and imported gravel had been used to make up the ground prior to the construction of the present day industrial units.

6.2.2 The Palaeochannel in Trench 3 appeared to be orientated roughly north-east south-west and the deposits in the base of Trench 2 were probably part of the same feature. It is also possible that this is a continuation of the channel recorded in the evaluation on the adjacent land to the northeast (OAU April 2000).

6.2.3 The Trench 1 deposits, unlike those in the other two trenches, which are typical of flood plain inundation, appear to relate more directly to the present day Bulstake Stream. The report on the palaeoenvironmental remains indicates that the deposits in Trench 1 relate to a channel and the southward slope of the natural gravel and nature of the waterlogged deposit indicates that the Bulstake Stream had been wider or followed a slightly more northerly course. The migration of the channel towards the south is probable given the bend in the river at this point.

6.2.4 The stone surface was well compacted and appears to have been constructed on the margins of the pre-existing channel. Due to the limitations of evaluation trench investigations, the constantly changing nature of a flood plain environment and the possible erosion of the stone surface to the south it is not possible to create a full picture of the ancient environment and the idea that this is a ford across the river or a previous channel cannot be discounted.

6.2.5 Although there is no evidence that the stone surface extends any great distance to the north, in the absence of a northern limit to the feature it is not possible to fully discount the theory that this is the end of a causeway extending from the north to the river, across what would be a seasonally wet area.

6.2.6 However, the most feasible explanation, backed by the environmental evidence and in the absence of any other features associated with the surface, is that this is a bank-side hard standing intended to provide access to the river.

6.2.7 The surface is undated but the environmental evidence appears to exclude a prehistoric date. The general appearance of the structure and the presence of Oseney Abbey to the north means we can suggest that the feature is most likely to be

medieval in date and that it could have been associated with the activities of the Abbey.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

Trench	*Ctxt No*	*Type*	*Width (m)*	*Thick. (m)*	*Comment*	*Finds*	*No. / wt*	*Date*
1								
	100	Layer		1.45	Made ground			
	101	Layer		0.10	Alluvial Deposit			
	102	Layer		0.50	Alluvial Deposit			
	103	Layer		0.40	Alluvial Deposit	Animal Bone	6	
	104	Structure			Stone Platform			
	105	Layer			Natural Gravel			
	106	Not used						
	107	Layer		0.10	Alluvial Deposit			
2								
	200	Layer		0.10	Recent Concrete			
	201	Layer		1.50	Made Ground			
	202	Layer		0.12	Alluvial Deposit			
	203	Layer		0.30	Alluvial Deposit			
	204	Layer		0.12	Alluvial Deposit			
	205	Layer		0.26	Alluvial Deposit			
	206	Layer			Natural Gravel			
3								
	300	Layer		1.20	Made Ground			
	301	Layer		0.04	Alluvial Deposit			
	302	Layer		0.14	Alluvial Deposit			
	303	Layer		0.50	Alluvial Deposit			
	304	Layer		0.10	Alluvial Deposit			
	305	Layer		0.50	Alluvial Deposit			
	306	Layer			Natural Gravel			
	307	Layer		0.70	Alluvial Deposit			

APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

OAU, April 2000 *Land at Osney Mead Industrial Estate, Oxford.* Oxford Archaeological Unit. Unpublished client report

OAU, February 2000 *The Really Good Card Company Osney Mead, Oxford.* Desk-top assessment. Oxford Archaeological Unit. Unpublished client report

APPENDIX 3 SUMMARY OF SITE DETAILS

Site name: Osney Mead, New Warehouse

Site code: OXOMW 02

Grid reference: SP 5040 0555

Type of evaluation: 3 Trenches

Date of project: April 2002

Summary of results: Evidence of flood plain and palaeochannel deposits. A stone surface, possibly a bank-side hard standing to a slightly more northerly course of the Bulstake Stream or a causeway across a former line of the stream – undated but possibly relates to activities of Oseney Abbey.

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.

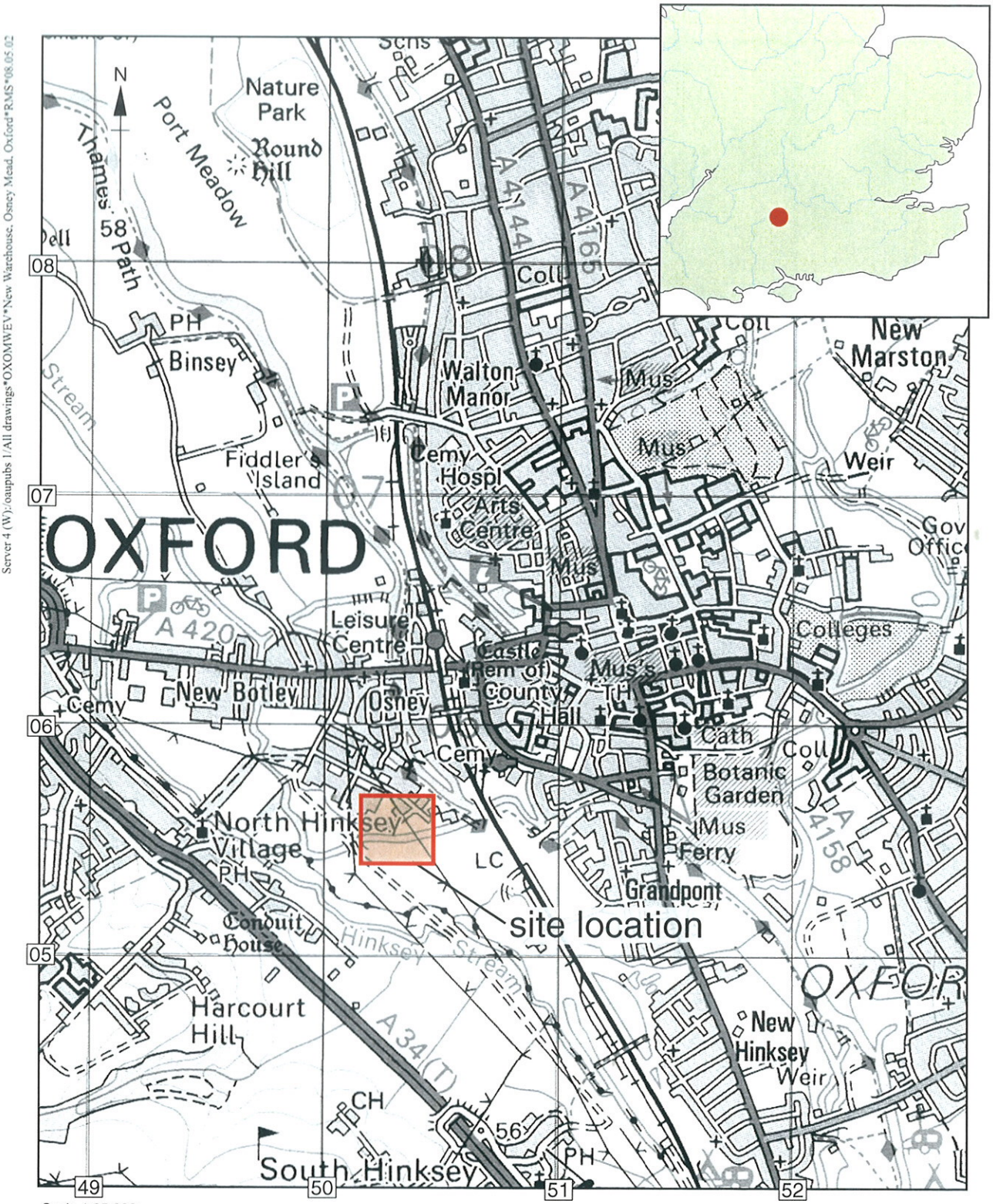
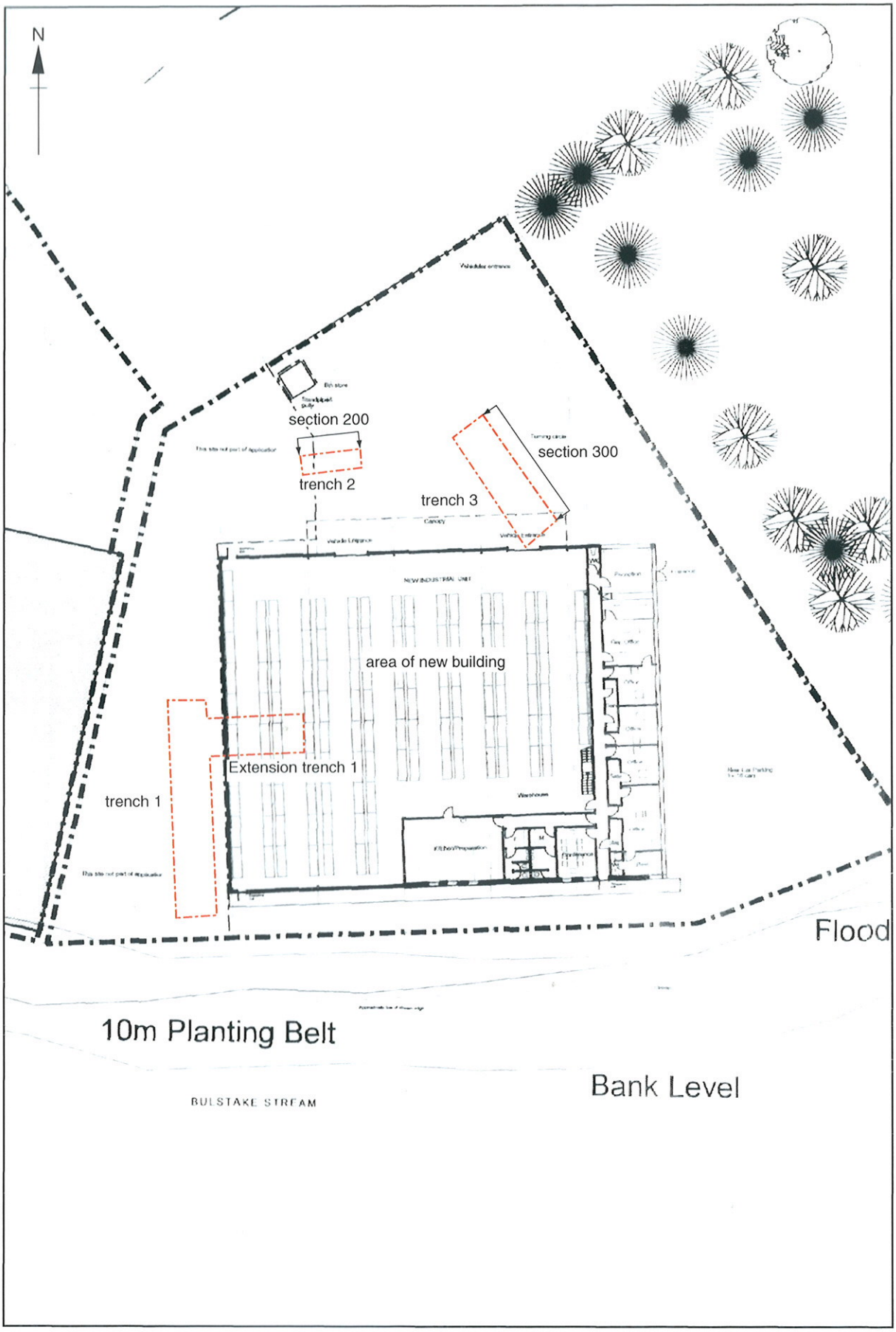


Figure 1: Site location.



Scale 1:500

Figure 2: Location of Trenches

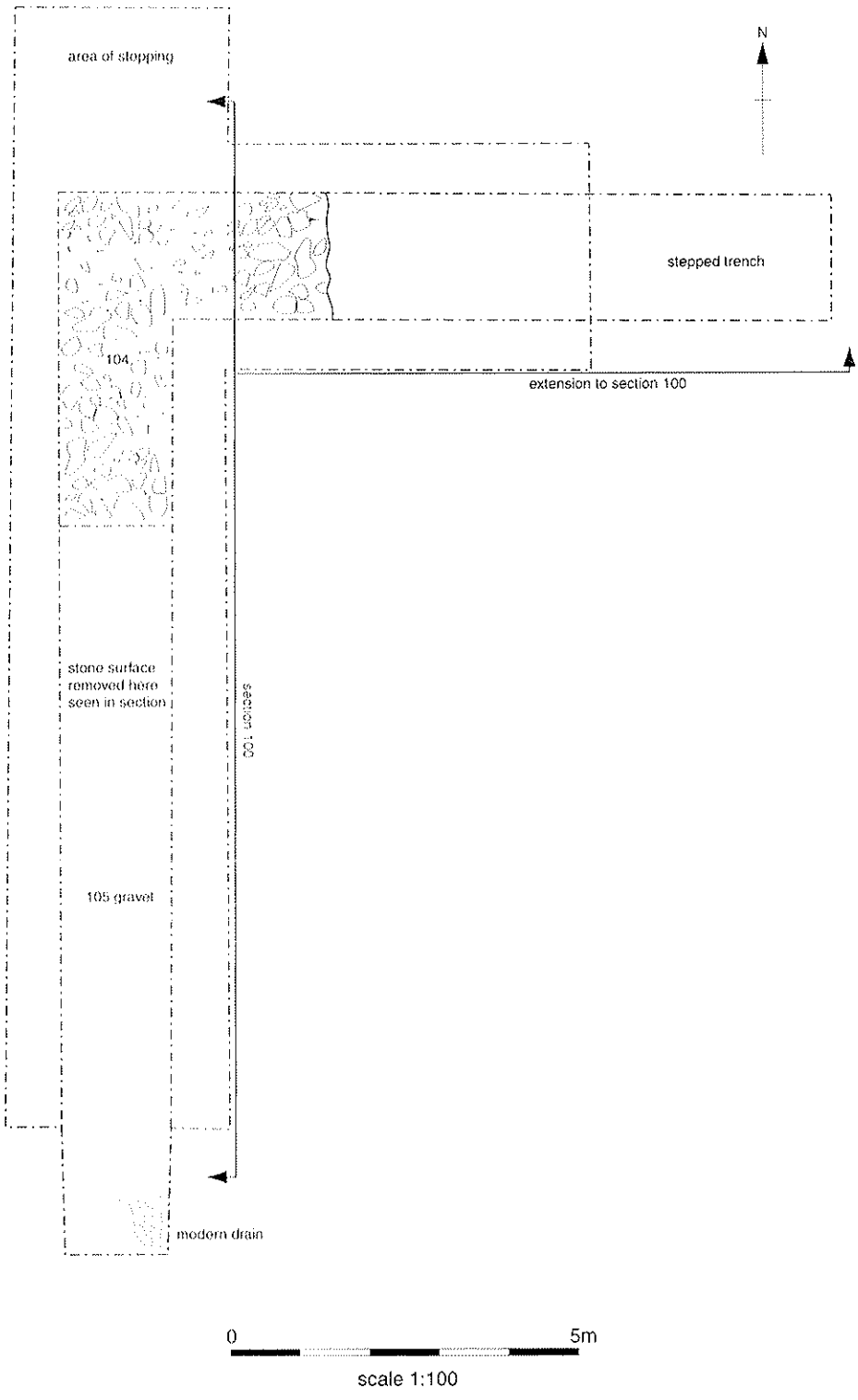


Figure 3: Trench 1, Plan

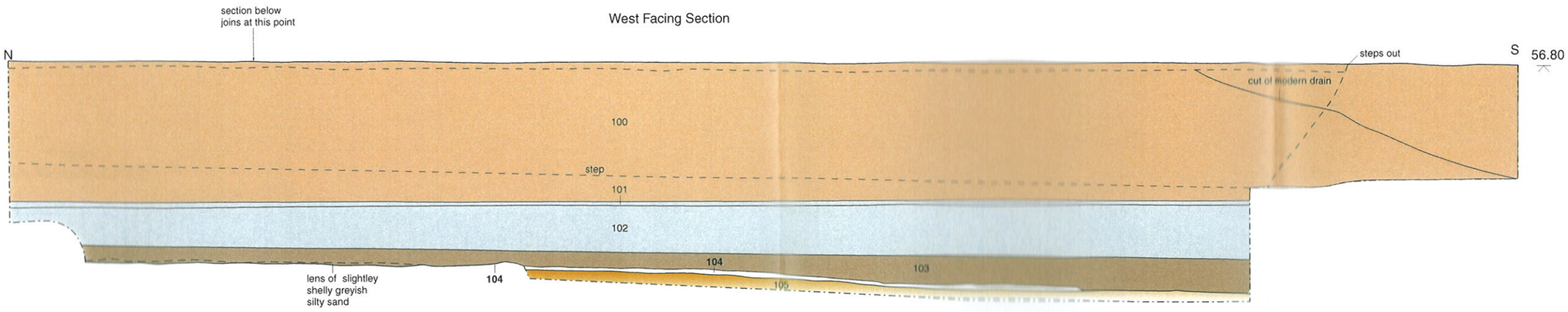
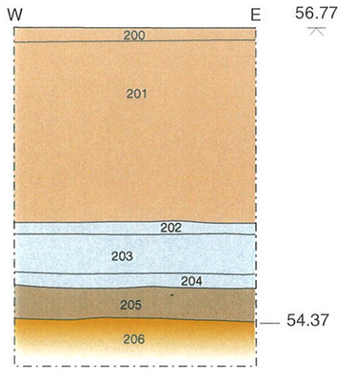
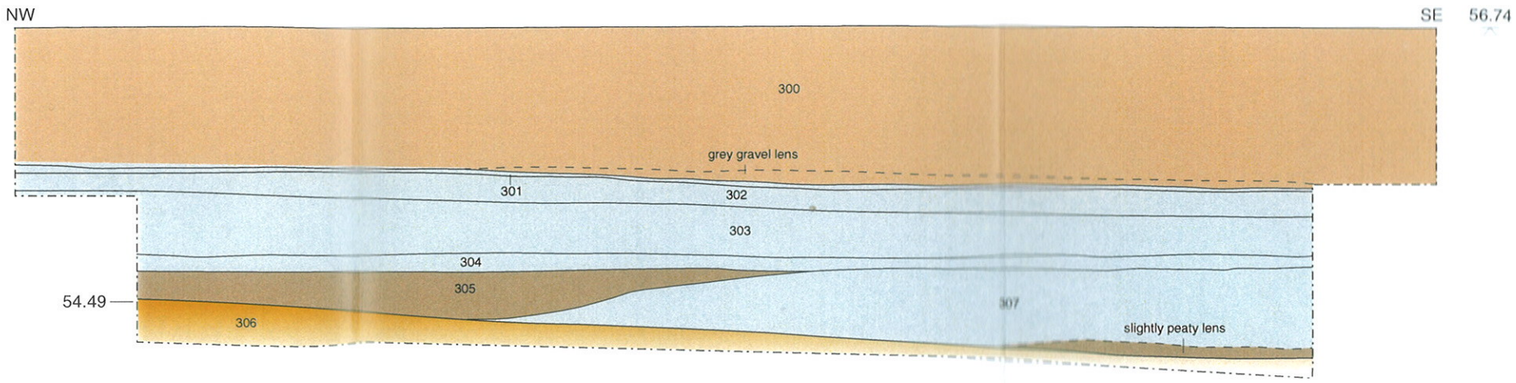


Figure 4: Trench 1, Sections

Trench 2
South Facing Section 200



Trench 3
South West Facing Section 300



made-ground
humic
alluvium
natural gravel

0 2m
scale 1:50

Figure 5: Trenches 2 and 3, Sections

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