Alan T Smith, Chartered Architect

64/65 HIGH STREET, WALLINGFORD OXFORDSHIRE

NGR SU 6062 8949

ARCHAEOLOGICAL WATCHING BRIEF REPORT

Planning Application No. P99/WO576/CA; P99/WO481

Oxford Archaeological Unit
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Summary

In May and June 2000 Oxford Archaeological Unit (OAU) undertook a watching brief during construction work at 64-65 High Street Wallingford, Oxon (NGR SU 6062 8949). The most significant find from the observation of the trenches was the presence of a large quantity of disarticulated human remains that were recovered from a probable charnel pit. The remains comprised a minimum of 45 individuals. The bones appeared to have suffered more than one stage of post-depositional damage, suggesting that they had been moved more than once.

It is possible that the charnel pit was filled with the remains of individuals originally interred and removed from the Benedictine Priory of the Holy Trinity. The possibility remains that they were part of the known Saxon cemetery in Wallingford, though no dating evidence was found associated with the remains. There was a suggestion of a mortar and stone floor at the base of one of the foundation trenches, possibly part of the priory, though not enough of it was exposed within the foundation trenches to be certain.

1 Introduction

1.1 It is proposed to demolish the single storey retail units at this site to construct a new food outlet with domestic accommodation above. The site is on the High Street at Wallingford at NGR SU 6062 8949, occupying a central position within the town (Fig. 1) An archaeological watching brief was attached to the development in accordance with the planning consent which was granted under PPG 16 and Local Plan Policy, as the development site lies within an area of archaeological potential.

1.2 In response to the County Archaeologists brief for the project, OAU prepared a Written Scheme of Investigation (OAU 2000), the details of which are summarised below.

1.3 This report presents the results from the watching brief including a report on the human skeletal assemblage.

2 Background

2.1 The site is located south of Bullcroft Park over the first gravel terrace of younger Thames River Gravels. The site lies at c. 49 m OD.

2.2 Wallingford dates at least to the Saxon period, as suggested by the cemetery there that predates the 9th-century defensive works. At Domesday the town comprised 491 houses. Bullcroft Park lies within the area of the Saxon burh, and was the site of the Benedictine Priory of the Holy Trinity, the foundations of which were found in the 19th century with associated inhumations. A watching brief undertaken by OAU in 1997 revealed a large flint foundation and tiles behind 55 High Street.

3 Aims

3.1 The aims of the watching brief were to identify any archaeological remains exposed on site during the course of the redevelopment and to record these to established OAU standards (OAU, 1992), in order to secure their preservation by record.

3.2 Provision was made for obtaining a Home Office Burial removal licence, owing to the known presence of inhumations in the vicinity.

4 Methodology

4.1 The watching brief was undertaken by means of separate inspection visits.

4.2 Within the constraints imposed by health and safety considerations the deposits exposed were cleaned, inspected and recorded in plan, section and by colour slide and monochrome print photography. Written records were also made on proforma sheets.

5 Results

5.1 The initial phases of groundwork comprised the demolition of the existing buildings and the removal of concrete slabs covering the site. Thereafter the excavation of the foundations was monitored (Fig. 2)

5.2 The foundation trenches of the new structure were excavated to an average depth of 1 m, and were 1 m wide.

5.3 The major find was located at the south-east part of the new foundation trench (Figs 2 and 3). At the base of the trench was a mixed layer of stone and chalk material (3) in a matrix of whitish-brown loam. This deposit was 0.05 m thick at the base of the trench through its full depth was not established by excavation. This layer was overlain by a 0.4 m thick layer of dark grey clay loam (2) including a quantity of disarticulated human bones (see finds report below). The layer appears to represent a deposit of charnel (4), presumably derived from the disturbance of graves elsewhere and their re-internment here.

5.4 This layer was sealed beneath a 0.6 m thick layer of grey clay loam (1) including red brick fragments, concrete pieces and flint nodules. Occasional pieces of bone were noted in this layer, which is interpreted as made ground of recent origin.

6 Finds: Human Bone *report by Anne-Sophie Witkin*

6.1 The human skeletal assemblage was subject to low-resolution recording involving a quantification of the skeletal elements present and the calculation of the minimum number of individuals. Sexing of the individuals was not undertaken, though age estimates were made and pathological lesions noted if present. The human remains represented at least 45 individuals of all ages. Pathological lesions included fractures and osteoarthritis. The remains were confirmed as charnel due to the under representation of small bones (hands and feet) in the assemblage.

6.2 The vast majority of skeletal elements were from adults (+18 years of age). A small proportion was juvenile remains and remains from at least two neonatal individuals were present. Remains from subadults aged between 2 and 15 were also noted but not quantified (see appendix 2 below).

6.3 The absence of associated dating evidence (pottery etc) means that the remains are likewise undated (see discussion below).

6.4 A quantity of animal bone was recovered with the human bones, suggesting that there was domestic occupation activity nearby at the time the human bones were re-interred.

7 Environmental results

7.1 No environmental soil samples were taken in the course of the project.

8 Discussion

8.1 The layer at the base of the foundation trench was not fully exposed, but may represent a surface perhaps associated with the grounds of the medieval priory. No significant impact was made into this deposit that was then overlain by a distinctive clay layer containing the remains of 45 disarticulated skeletons. The remains were undated, though they represent a significant number of individuals. It is probable that the remains were interred within a charnel pit, though no limits to the pit were defined or reported by the attending archaeologist. A definite context for the bones remains unclear, though it is possible that they were originally associated with either the known Saxon cemetery, or indeed the Benedictine Priory.

8.2 Away from the concentration of bones, the foundation trenches revealed a mixed loam and clay layer that contained no finds, sealed beneath made ground of recent origin.

8.3 Further archaeological work in this area of Wallingford should include provisions for the possibility of recovering human remains.

OAU, 2001

Appendix 1: Table of context information

Context	*Type*	*Depth*	*Width*	*Comments*
1	Layer	0.6 m	-	Layer of made ground, C19/20
2	Layer	0.4 m	-	Dark grey clay including human bones
3	Layer	0.05 m	-	Stone and chalk layer, ?surface? undated
4	Finds	-	-	Finds reference for quantity of human charnel recovered from foundation trench

Appendix 2: Human bone methodology and quantification tables

Introduction

The remains were recorded on a *pro forma* recording form, which divided the skeleton into skeletal element categories. These were further subdivided into left, right and unsided. Each element was also divided into different parts. For example long bones such as the femur was divided into proximal end, distal end and midshaft. This enabled the calculation of the minimum number of individuals as well as a quantification of the remains. Sex of the individuals was not recorded but it was noted that the remains were of both male and female individuals. No attempt was made to provide an age estimate from age yielding elements such as the auricular surface (Lovejoy et. al 1985) and the pubic symphyses (Suchey and Brooks 1990) of the pelvis and dental development (Moorees et al 1963) or attrition (Miles 1962). Due to the nature of the assemblage, age was only noted to provide an overview of the age ranges present. Pathological lesions were recorded and are presented using the standard categories for the subdivision of the pathological conditions. Standard terminology is used for the description of the lesions, which enables comparative analysis to be carried out if required.

Element representation

This section is concerned with establishing the nature of the context. Large disarticulated contexts of human bones are often seen as the result of burial ground clearances. These contexts are characterised by the large proportion of the larger easily recognisable bones such as crania and femora, and the under representation of small bones such as those in the hand and feet. Element representation for this assemblage was calculated using the crude totals for each type of skeletal element (Figure 1). These were further grouped into body areas. For comparative purposes, totals representing a whole skeleton was also calculated (Figure 2).

In figure 1, crania, arm and legs are proportionally the largest categories. In comparison to the whole person, these body areas are over represented. This is an expected pattern for charnel deposits where the largest and most readily recognisable bones are most often recovered during exhumation and subsequent redeposited in charnel pits. The small proportion of hand feet, vertebra and ribs again support the charnel deposit interpretation because these are the most easily missed and fragile bones in the body when exhuming skeletal remains.

Figure 1
Charnel Remains

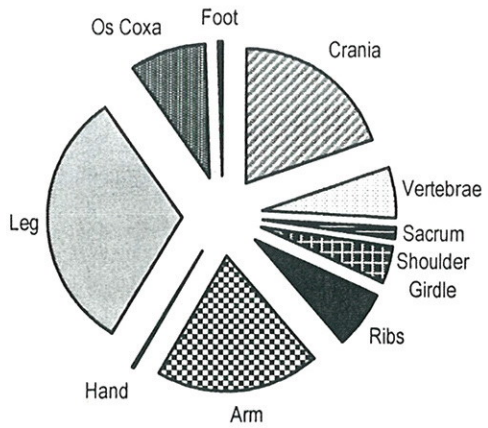
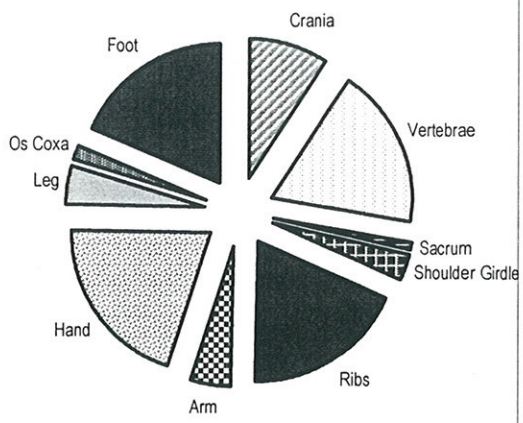


Figure 2
Whole Person



Quantification

A count of all fragments present yielded a grand total of 2741 fragments. Of these 565 (20.6%) fragments were too small to be identifiable. There was a high incidence of post-mortem breaks. The majority of these were old indicating the damage had been done when the

bones were removed from the original place of interment. Some bones had also spade marks present. Table 1 lists all the elements present.

Table 1: Present Skeletal Elements

Skeletal Element	Left Side	Right Side	Unsided
Parietal	15	8	65
Occipital			54
Temporal	24	33	
Frontal	20	10	20
Zygomatic	1	1	2
Occipital Condyles	7		
Vault Fragments			333
Maxilla	7	7	4
Mandible	13	11	9
Mandibular Ramus	6	4	
1st Cervical Vertebra			2
2nd Cervical Vertebra			1
3rd-7th Cervical Vertebra			3
Thoracic Vertebrae			33
Lumbar Vertebrae			22
Sacrum			14
Scapula		1	
Blade of Scapula	7	2	10
Acromion	5	4	
Coracoid	1	1	
Clavicle	2	7	
Sternal end of Clavicle	1	2	
Lateral end of Clavicle	1	3	1
1st Rib	2	2	
2nd Rib		2	
3rd-10th Rib	25	34	127
11th Rib	1		
12th Rib		1	
Manubrium			3
Sternum			2
Humerus		2	
Midshaft of Humerus	22	17	17
Proximal Humerus	12	7	4
Distal Humerus	33	40	4
Midshaft Radius	1	1	5
Proximal Radius	7	6	
Distal Radius	10	11	
Ulna		2	
Midshaft Ulna	1	1	1
Proximal Ulna	23	14	1
Distal Ulna	9	6	1
1st Metacarpal	1	2	
Metacarpal			1
Hand Phalanges			6
Iliac Blade	16	18	46

Ischium	9	14	
Pubis	5	4	1
Acetabulum	4	3	15
Femur	1	3	
Midshaft Femur	41	38	124
Proximal Femur	45	45	1
Distal Femur	38	28	28
Tibia	1	1	
Midshaft Tibia	24	23	66
Proximal Tibia	27	31	4
Distal Tibia	20	13	5
Fibula	2		
Midshaft Fibula			65
Proximal Fibula	3	3	1
Distal Fibula	5	14	
Talus	1		
Calcaneus	2	3	
1st Metatarsal		2	
2nd Metatarsal		1	
3rd Metatarsal	2		
5th Metatarsal		1	
Unidentifiable Fragments			565
Animal bones			79

Minimum number of individuals

An MNI (minimum number of individuals) estimate is based on the highest number of an individual element present in a sample (Ringrose 1993). For example, an individual only ever has one right humerus. Therefore a count of all the right humerii in a sample would tell the minimum possible number of individuals that were represented by that count. In this assemblage, complete long bones were rare. To establish an MNI when dealing with highly fragmented bones, a count of for example distal right humerii plus the total number of the complete right humerii would estimate the number of individuals in a sample. The highest number of individuals was achieved when adding the number of complete right femora with the number of proximal femora (see Table 2). The MNI was 48 individuals.

Table 2: Minimum number of individuals

Skeletal Element	Left Side	Right Side	Unsided	MNI
Frontal bone	20		20	40
Distal Humerus		40		
Humerus		2		42
Femur		3		
Proximal Femur		45		48

Pathology: Non-specific infection

Periostitis represents a reaction of the periosteum to an infectious or traumatic insult by the formation of new (woven) bone, which in time can become remodelled into lamellar bone and incorporated into the underlying cortex (Ortner and Putschar 1981:129).

One fibula was observed to have changes to the bone surface consistent with periostitis. The lesion consisted of striated lamellar bone indicating that the lesion was healed.

One left temporal bone was identified to have mastoiditis. This is manifested by a middle-ear infection which abscess has burst through the mastoid. The infection was drained externally through a sinus. This type of infection has been found to be more common in the older people and the lower classes of society in antiquity (Roberts and Manchester 1995:133).

Joint Disease
Mechanical stress due to activities such as bending and lifting and the normal ageing process cause degenerative changes to the spine. The reaction to this stress is the growth of new bone at the margins of the vertebral bodies and modern studies has shown that by the fifth decade of life, most individuals have the condition. In extreme cases, these osteophytes grow together and fix the spinal segments preventing movements (Roberts and Manchester 1995: 106-107). Two thoracic and one lumbar vertebral body were noted to have moderate osteophyte formations. Osteoarthritis is a non-inflammatory condition that affects synovial joints. It is diagnosed by, porosity and eburnation on the joint surface and new bone formation on or at the margins of a joint. A joint surface becomes eburnated, or polished, when the cartilage has worn through and the bone ends comes in direct contact with each other (Waldron 2001:86). The aetiology is multifactoral and genetic predisposition, obesity, increasing age and environmental factors may all contribute to its development. The left acetabulum of an adult male hipbone and the head of left humerus (adult) had new bone formation and eburnation consistent with osteoarthritis.

Trauma
Two tibiae, both from adult individuals and the right leg had fractures. Both fractures were healed and the remodelling of the fracture site was extensive indicating that the injury was long standing. There was no infection present and the bones were in proper alignment but somewhat shortened due to an overlap of the segments.

Metabolic disease
Cribra orbitalia was observed on the orbital roofs of two juvenile frontal bones. These lesions are caused by iron deficiency anaemia. The porotic lesions results from increased activity of the bone marrow as the body attempt to combat the deficiency by raising red blood cell production (Mays 1998:142). Dietary deficiencies or disease such as parasitic infections of the gut may cause the lack of iron in the blood.

Infectious disease
One left distal femur of an adult individual had lesions which may be consistent with tuberculosis. The normal morphology of the joint surface was destroyed and lytic lesions as well as new bone formation was present. The shaft was thickened due to proliferation of new bone and the surface was characterised by disorganised plaque formations and striated lamellar bone. The knee is the joint most commonly affected area outside the spine. However, bone lesions from tuberculosis in joints are indistinguishable from many other diseases including end-stage septic arthritis and pyogenic osteomyelitis (Ortner and Putschar 1981:170). The diagnosis is therefore tentative.

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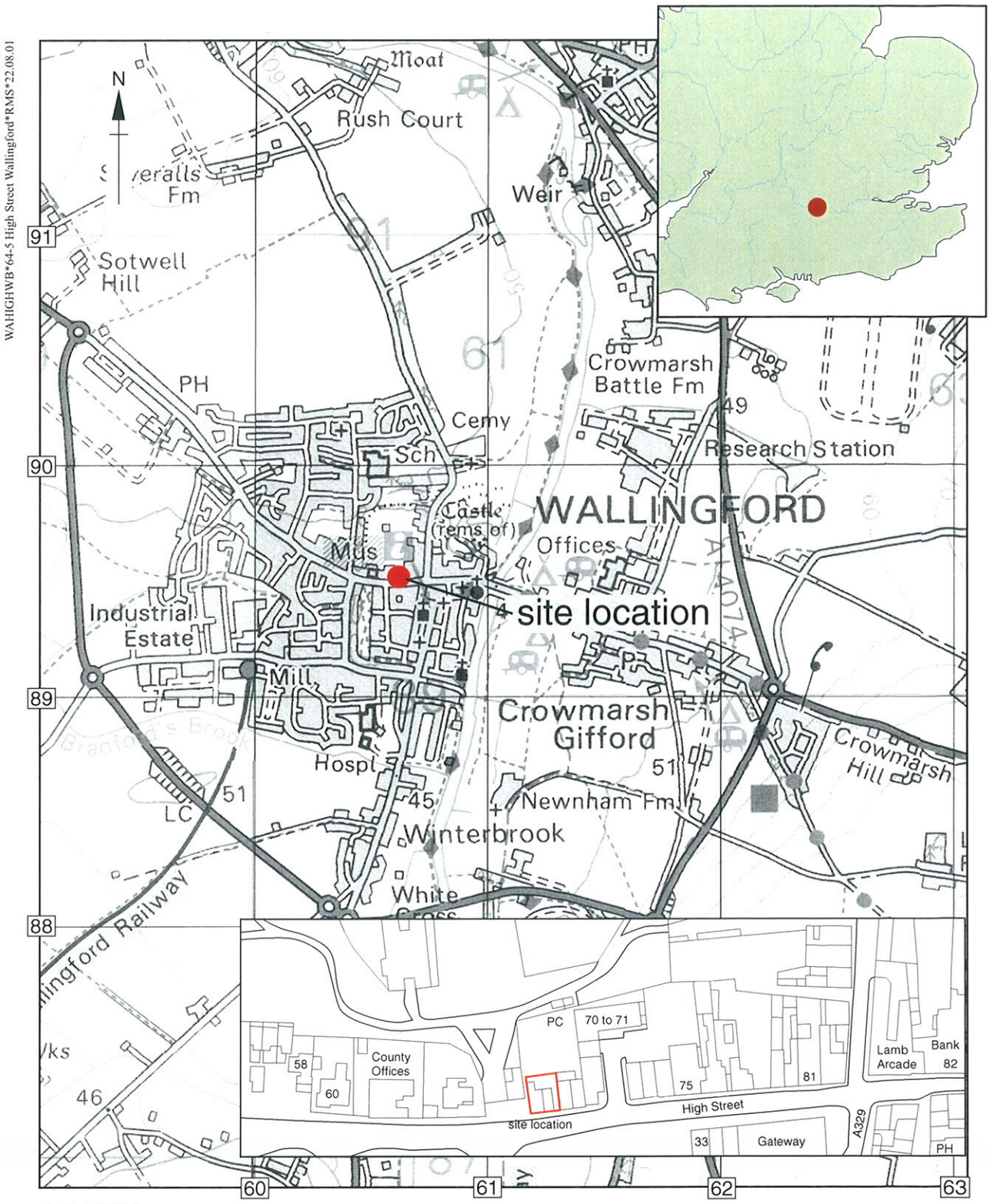

Scale 1:25,000

Figure 1: Site location.

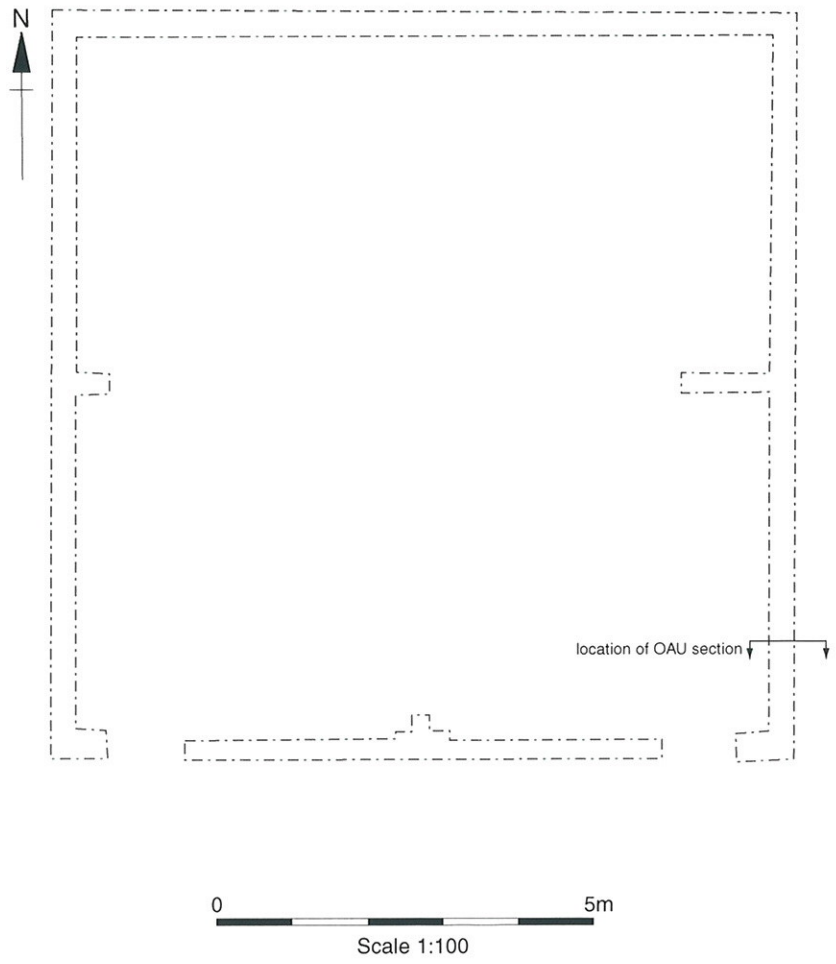

Fig 2 : Site Plan

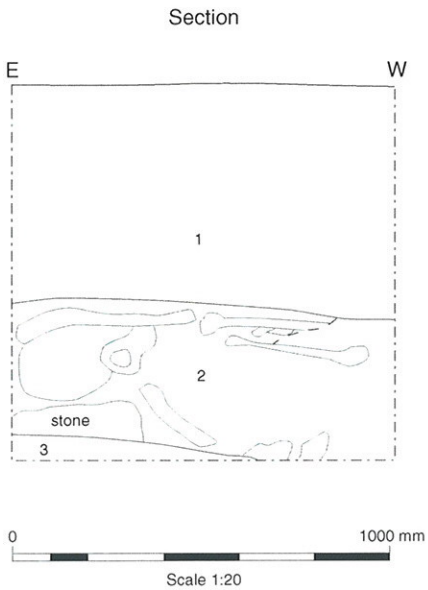

Figure 3 : Section.

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