Excavation and Recording Techniques used at the Cemetery of St. Nicholas Shambles (1975-78)

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IN MARCH 1978 the Museum of London's Department of Urban Archaeology completed its excavation of the medieval church of St Nicholas Shambles and part of the northern cemetery[1] which contained over 300 skeletons. Throughout the excavation, and now during the post excavation work, it has become apparent that the presence of human remains on archaeological sites is bound to create time consuming obstacles when encountered for the first time. Seldom in the past has it been possible to learn from the experiences of others since generally only the final interpretation of a site is produced for publication. In an attempt to remedy the situation, this paper is offered to those unfamiliar with burial sites, as a description of some of the practices adopted on the St. Nicholas Shambles site, in the hope of helping to reduce the initial period of trial and error which could otherwise be spent developing productive recording and excavation techniques.

Excavation

The cemetery was the first to be excavated on a large scale in the City of London and is therefore of great importance to the study of Medieval London as well as in providing comparative material for other urban and rural populations. For these reasons, and since — unlike other sites in the City — the pressure of time from developers was minimal, it was decided at the outset that a thorough excavation should be carried out.

The actual excavation proved difficult and valuable time was lost while trying to solve the overriding problem of defining grave cuts. The graveyard survived to a depth of about one metre and consisted of extremely homogenous soil in which only the most distinct layers could be defined. Thus, graves dug and almost immediately backfilled with the same material provided in most instances no trace of their existence. Because of this, various methods of excavation were applied experimentally and their virtues assessed. Eventually, the following procedure was found to be the most successful:—

> Once a skeleton is located and partially uncovered to reveal its extent, the surrounding 0.5m of soil is cleaned and then moistened. If as is often the case no cut is discernible when viewed from above, a section deliberately overcutting the possible sides of the grave is put across one end of, and perpendicular to, the long axis of the skeleton. This is done in order to locate the cut in section which is then plotted on plan as the section is taken back in 0.1-0.2m stages to the other end of the skeleton whilst leaving the bones *in situ*.

Recording

At the beginning, a separate notebook was used in which information of each skeleton was entered i.e. number, orientation, grid reference, photographic notes, levels, associated finds, and general observations. In conjunction with this, an outline drawing of a skeleton was coloured in by the excavator to represent bones present. It became apparent though that this was unsatisfactory since it left the recording open to widely varying descriptions, and at times the addition of fundamental information was neglected. A printed sheet (Fig. 2) was devised in order to make the recording easier and, more importantly, to achieve standardization. This was designed to include those details considered to be essential for subsequent analysis, while also incorporating a cross-reference system with the already existing site context sheets, and finally to reduce the amount of writing and individual interpretation.

Because very little is known about historical burial customs, the recording of seemingly insignificant variations may prove useful in gaining more insight into such practices. Such particulars noted on the site included rotation of the skull, alignment of the body in degrees, nails present, stones randomly lying either near or directly on skeletons, and pebbles or pot sherds between the teeth. Disparities in the positions of the skeletons also occurred as,

1. Supervised by G. A. Thompson.

for example, in the position of the hands lying on or under the pelvis, crossed over the chest and — as was apparently the norm for this cemetery — down at the sides. Only after many skeletons are unearthed will the "normal" mode of burial for the group become evident, and so early awareness and careful notation of positions and peculiarities will result in more useful data for final evaluation.

Photography

To serve as the visual record it was decided to ensure a photographic representation of each skeleton *in situ* which later could be traced onto a 1:20 overall plan of the churchyard. Throughout the three years on site justification for spending the extra time needed for photographic cleaning was assessed. It was felt though that detailed photographs ultimately provide two different site records: plans showing site relationships, and photographs which prove to be extremely useful aids to post excavation work of specialists and can also be used as subsequent publication material.

> In preparation for photography, each skeleton is cleaned to a high standard using trowels, spoons, dental tools and paint brushes. Each bone is completely uncovered, and the level of earth directly around and in between is taken down to the floor of the grave, or, if the cut is undefined, to expose the depth of each bone. Before the photographs are taken, the bones are sponged to remove excess earth and to help clarify the distinction between them and the surrounding soil. Included in each photograph is a scale, the skeleton number, and two white tags (*c.* 2 x 2cm.) nailed in the ground at the two extremities of the skeleton. The photographs are taken from a height of about two or three metres directly over the centre of the skeleton and horizontal to its plane. When possible a tripod is used but sometimes a hand held camera has to suffice. Prior to lifting, the grid references of the tags as well as the distance between them is recorded and marked on plan. Later, the photograph is enlarged to the plan scale, the coordinated points and the tags in the photograph are overlain, and the skeleton is traced off.

Lifting

Following the recording and photography, each skeleton is carefully lifted bone by bone, dried, and

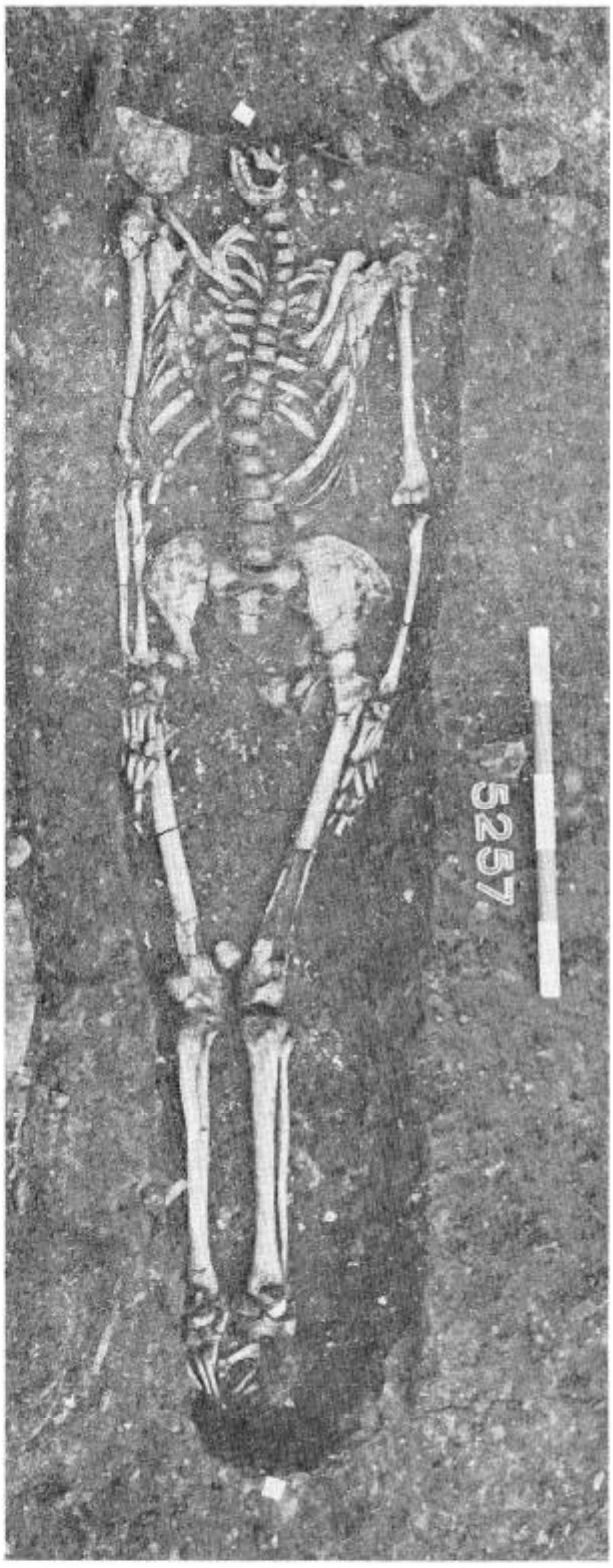
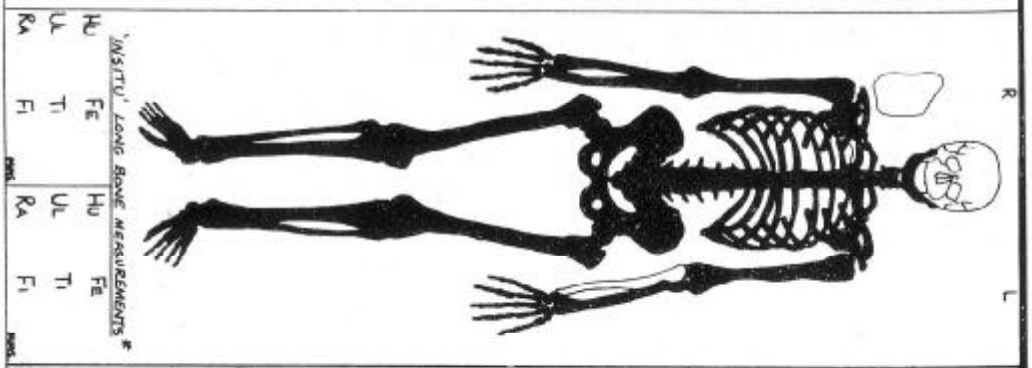


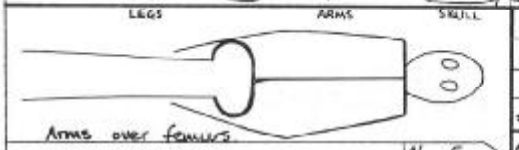
Fig. 1: record photograph of skeleton number 5257, showing grave and later disturbance of skull. The recording sheet for this burial appears in Fig. 2.

(Photo: J. Bailey)

PERIOD	TYPE OF BURIAL	SITE CODE	SKELETON NO.
Medieval	Inhumation	GPO 75	5257



BONE CONDITION: POOR (FAIR) GOOD; SHADOW (CRUSHED) (BROKEN) WHOLE — ARTICULATED: (YES) NO



Arms over femurs

ALIGNMENT: N S E (W)

GRID REFS: E 110.351/218.695 W 108.640/219.035

INITIAL AGE: INFANT CHILD ADOLESCENT (ADULT) SENILE

INITIAL SEX: (MALE) FEMALE UNKNOWN

GRAVE TYPE: (PIT) CIST, SARCOPHAGUS, ETC.

stone between right shoulder + Mandible

	CONTEXT No.	PLAN No.
GRAVE FILLS	7050 / 7051	—
COFFIN TYPE: (NAILS), WOOD, LEAD.		—
GRAVE CUT: (PRESENT), NOT PRESENT	7049	P195

LEVELS Mandible - 14.160m Sacrum - 14.070m Ankles - 14.025m

INITIAL PATHOLOGY: Arthritic lipping on vertebral column

REMARKS: sides of grave are lined with crushed, light sandy mortar with small bits of chalk. 7051, main grave fill. 7050 overlies 7051; (Left ulna missing)

STRATIGRAPHICALLY UNDER: 1031 — STRATIGRAPHICALLY OVER: 5236

PHYSICAL RELATIONSHIPS: in context 1125: cranium robbed out by stanchion foundation bench.

PLANS: P195 SECTIONS: S183

PHOTOGRAPHS: DATE 21.10.76 TAKEN BY J. Bailey (B/W) / (COLOUR)

DIRECTION: LOOKING - North REF. NOS. 1518-76

SAMPLE TAKEN FROM	Sacrum							
CONTEXT NO. / S.F. NO.	7050 / 364							
ASSOCIATED FIND	nail							
POSITION REL. TO BODY	proximal end of left humerus							
CONTEXT NO. / S.F. NO.	7050							

TREATMENT: pelvis, shoulders and knees - 50% PVA solution prior to lifting

PHASING

CHECKED BY: NMM — SIGNATURE: VM. — DATE: 22.10.76.

Fig. 2

then bagged, labelled and stored for washing. A great time saving convenience for the post excavation workers is for the excavator to string the complete vertebrae in order, and to bag separately the left and right sides of the body as well as each of the hands and feet.

Discussion

Conditions and problems will undoubtedly vary from site to site and therefore it would be unwise to offer specific guidelines for others to follow, but it is hoped that the observations relating to the St. Nicholas Shambles site made here may prove helpful to others.

For useful information and references on sampling, pathological changes and racial variations in bone and teeth, ageing and sexing criteria, and other details relevent to the study of human skeletons, *Digging Up Bones* by D. R. Brothwell (1965) proved to be of great assistance.

Copies of the skeleton recording sheets are available from:

Department of Urban Archaeology,
71 Basinghall Street,
London, E.C.2.

Letters

SAFETY ON SITE

MAY I ADD two comments to your valuable article on site safety in the current issue? I would like to see all trenches fenced off at all times, but especially so when the public are admitted. The fence should be high enough to deter adults, but also have a second horizontal to prevent toddlers walking *underneath*. (The Construction Regulations 1966 specifically require fencing on building sites.) A fence also has a psychological effect — it requires a conscious effort of will to cross, whereas natural curiosity will lead people to the very edge of an unfenced trench, which can all too easily crumble.

Secondly, I want to sound a warning note where trenches are excavated close to standing structures. The archaeologist is naturally enough concerned with evidence in the ground, and may not apreciate that excavation close to foundations *could* affect their stability. Special care must be observed when working in front of a wall which is retaining soil at a higher level behind, as indiscriminate digging could produce a slippage by the disturbance of an equilibrium condition.

There is an obvious danger to the excavators from such activities. Less obvious, but no less significant from a purely financial viewpoint, is the risk that damages could be sought by a building owner if his property was affected. Working close to an adjoining property could affect this too! I know of no case yet where archaeological work has led to such actions, but it seems there is an increasing tendency to excavate *before* demolition. None of us want to be concerned in establishing such a legal precedent! So if planning excavations inside or near standing structures, it might be wise to seek technical advice first.

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THE FIELDS BENEATH

IN HIS REVIEW of Gillian Tindall's *The Fields Beneath*, Kevin Flude seems to have allowed his enthusiasm for the documentary history of his area to blind him to the book's archaeological shortcomings. Several points seem to show a lack of archaeological research, especially where the author ventures into outside territory: for example we are told that St Paul's Cathedral stands on the site of a Roman temple, and that Wandsworth takes its name from the River Wandle. The author's derivation of the name "Kentish Town" from "Kent-ditch," which we are assured means bottom of a ditch," is also rather suspect. As archaeologists we should not allow old chestnuts like these a new lease of life without comment, whatever our opinions of the non-archaeological parts of the book.

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SAFETY ON SITE

WITH REFERENCE TO your article *Safety on Archaeological Sites*, Vol 3, No 6, I would like to make a few suggestions. First and foremost, no mention is made of the wearing of goggles. On some excavations the need to remove concrete foundations and walls requires the use of heavy duty tools like concrete breakers, kango guns and compressor drills. Protective goggles are an essential part of safety equpment both for the operator and for anyone within a twenty yard radius of the work being carred out. Being in the building trade myself, I have on occasion seen pieces of concrete and brick fly out from drill tips and chisels like shrapnel! Also the manual use of hammer and chisel requires protection for the eyes.

Secondly, any electric cables to these tools must be protected from any traffic over them like wheelbarrows, etc.

Thirdly, if you have to stand near the edge of a trench, stand on a scaffold board or something similar to spread your weight.

The wearing of safety helmets is sound advice, but try to wear them at all times — you never know when one of your fellow workers may turn around with a board on his shoulder and try to bash your brains out!

Generally the rules and regulations of the building industry should apply to archaeological sites. HMSO publish several booklets on safety precautions on building sites which should prove useful to site directors.

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