

CERAMIC BUILDING MATERIAL

MINIMUM STANDARDS FOR RECOVERY, CURATION, ANALYSIS AND PUBLICATION

1. INTRODUCTION

1.1 Background

1.1.1 Ceramic building material (CBM) is defined as clay material that has been deliberately fired for use as part of a structure. The main categories are brick, roof tile, floor tile, wall tile and hypocaust elements.

1.1.2 Archaeology became formally recognised in the planning process following the introduction of PPG16 (DoE 1990), and there has been a considerable increase in the amount of fieldwork that takes place as a result. Such archaeological work, mainly in the form of evaluations, is normally subject to competitive tendering. It is a commonplace for several contractors to work in the same region, resulting in a wide variability of excavation and recording procedures. Nevertheless, contracting archaeologists have a responsibility to ensure that archaeological information is properly recovered and recorded. Local authority planning archaeologists are responsible for adequate monitoring of those projects under their jurisdiction. However, the planning archaeologists have a tremendous workload and may have insufficient access to specialist knowledge to carry out this role.

1.1.3 In an attempt to ensure adequate study and curation of the archaeological resource, various standards have been issued by the professional body of the discipline, the Institute of Field Archaeologists. The latest standard deals with finds work (IFA 2001). Individuals and organisations could be in breach of the IFA Code of Conduct if they fail to adhere to these standards.

1.1.4 Another method that has been adopted in order to assist planning archaeologists with monitoring is the production of guidelines. The United Kingdom Institute for Conservation (UKIC) has produced several guidelines on the recovery and curation of excavated material. A review of medieval pottery studies in England recognised the existence of a range of curation and study procedures that required standardisation (Mellor 1994). Specialist pottery groups have produced guidelines regarding Roman and medieval pottery (SGRP 1994; MPRG 2001).

1.1.5 In order to maximise the resources available for archaeological research, MAP2 was published as a guide to the cost-effective management of projects (English Heritage 1991). MAP2 requires the research potential of all of the data recovered, including the finds, to be considered during assessment.

1.1.6 This document is presented by the Archaeological Ceramic Building Materials Group (ACBMG) which was established in 1999. The group covers Britain primarily, but also has links with Europe. One of its stated aims is to *influence policy and strategy with regard to ceramic building materials*.

1.2 The value of CBM

1.2.1 CBM is found on many archaeological sites. As it is relatively stable and forms a major component of many buildings, it often forms the greatest portion of the artefacts and bulk material found on archaeological sites. Although the forms are not as diverse as pottery, there are sufficient variations in the forms and fabrics of CBM to formulate typologies and to identify clay sources. All CBM, even unstratified material, is therefore potentially important in its own right.

1.2.2 Brick and tile of all periods can be extremely useful in providing information on:

a) *economy*: local, regional and international trade; manufacturing processes and technology; relationship with other British building traditions and techniques. An example is the introduction of brick into eastern England from the Low Countries in the 14th century.

b) *society*: building and site status; working practices. For instance, curved and flanged tile, a roofing system similar to the Roman imbrex and tegula, is increasingly being recognised as an indicator of the presence of high status buildings of Anglo-Norman date.

c) *fieldwork interpretation*: site dating; site formation processes (deposit status, contamination and residuality). For example, on evaluations in urban contexts where CBM is assessed, the brick and tile usually play a useful role in dating the stratified sequence of activity.

1.2.3 The importance of the brick and tile industries in England has been recognised in the English Heritage Monuments Protection Programme (Simco 1998, 46ff.). Roman and post-Roman CBM industries tend to manufacture products for a local or regional market, and there is considerable potential to refine the spatial and chronological distributions of the material.

1.3 The current use of CBM as a resource

1.3.1 The fact that CBM is bulky and can be found in quite large quantities can be seen to be as much a problem as an asset. It is often neglected as an archaeological resource because its retention in the archive is deemed to be too costly in a financially competitive environment. The recovery of brick and tile is variable as a result. Typically, the CBM is radically sampled on site, producing a biased sample. Even on larger or research excavations, decisions regarding the recovery and recording of CBM are often made without specialist advice. Sampling on a scale that would be totally unacceptable for virtually every other form of excavation data is still the norm. Discarded material is usually inadequately recorded. Often, the retained sample is not assessed (by a qualified specialist).

1.3.2 CBM form and fabric type series already exist in some regions, but they often result from the work of individual CBM specialists. Regions with more than one CBM specialist could have two or more type series that are not easily comparable. There is usually insufficient time in the average evaluation to record the forms and fabrics and weigh the individual fragments. The brick and tile is 'assessed' instead, resulting in an unquantified list of the presence of forms by context

1.3.3 Progress over the last decade in developing the potential of the material has been more limited than might have been expected. Even if brick and tile is adequately recovered and/or recorded, most of the information is not disseminated beyond the evaluation report. The analysis and publication of large CBM assemblages is extremely rare.

1.4 Aims of these guidelines

- a) to assist planning and other archaeologists devising specifications for archaeological projects, so that adequate treatment of CBM and involvement of CBM specialists is ensured*
- b) to assist museum curators in the management of their archives and CBM collections*
- c) to offer guidance on good working practice to CBM specialists and those in the archaeological profession who come across CBM in their work*

2. GUIDELINES

2.1 Project design

2.1.1 Wherever the recovery of CBM assemblages (or related material such as daub or mortar) from a fieldwork project is likely, the advice of a CBM specialist should be sought. If such a specialist is required to form part of a project team, he/she should be identified at the outset. The CBM specialist should be involved in the project design (and its up-dating), the project costing and strategic decision-making.

2.1.2 Contracting archaeologists should be aware of the resource implications regarding the deposition of CBM with receiving museums. The registered receiving museum should be consulted by the contracting archaeologist regarding the deposition of the material and its documentation as part of the site archive (see IFA 2001, 3.3 and 3.6).

2.1.3 The ownership, curation and accessibility of the CBM archive should be considered in the project design. The costing of, and provision for, each of these aspects should be accounted for in the project budget (IFA 2001, 3.10.1).

2.2 Type series

2.2.1 Regional CBM (form and fabric) type series should be established and curated, preferably by the local collecting museum or similar curator, and their use encouraged by the planning archaeologist. This would result in standardised identifications, the basis of future synthetic work. The necessity of consulting a recognised CBM type series should be built into briefs and specifications, and should apply to all contractors working in each region. In the absence of a regional type series curated by the collecting museum, the local CBM specialist(s) should be consulted (see IFA 2001, 3.7.2).

2.2.2 The type series should comprise examples of each fabric and form, supported by written descriptions; and thin-sections of each fabric, the location of which should be incorporated into the UK Database of Thin-Sections. Fabrics should be identified using a magnifying hand lens or microscope as appropriate.

2.3 Fieldwork

2.3.1 Recovery

All CBM found during fieldwork must be retained for examination by a CBM specialist. Unstratified material should be examined by the CBM specialist in order to identify items of intrinsic interest.

2.3.2 Discard

It should be possible to discard some CBM from each assemblage provided it is adequately recorded by a CBM specialist (see Recording, below). The retained sample must be representative of the form and fabric types.

Unstratified material generally need not be retained (but see 2.3.1). CBM in excavated structures, such as brick walls, should be sampled. Any sampling and discard procedures must be agreed with the CBM specialist. Discard strategies should be described in the site report (see IFA 2001, 3.4.1-3).

2.4 Processing

2.4.1 All retained brick and tile should be processed as soon as possible. It should be adequately washed, bagged (normally by context) and boxed, using suitable archive-quality material. Marking of individual fragments is generally unnecessary, provided the unmarked material is never left without an archive-quality label showing its exact provenance. Suitable care and conservation of the CBM should be undertaken (IFA 2001, 3.4.4).

2.5 Assessment

2.5.1 Assessment of brick and tile by a CBM specialist, in order to determine the quality of the data, is necessary for evaluations as part of the planning process (PPG16) and before undertaking analysis and publication (MAP2). In the case of evaluations, the minimum information recorded should be the forms by context, comments regarding diagnostic items, fabrics and the character of the context assemblage, and context spot dates. Such information does not constitute a full record of the material. It is often worthwhile and cost-effective for the CBM to be fully recorded at this stage, prior to analysis, subject to the agreement of the CBM specialist and the planning archaeologist (IFA 2001, 3.5.1).

2.5.2 The CBM specialist should have access to suitable stratigraphic information and supporting locational and dating evidence, in order to ascertain the context of the assemblage and to ascertain the degree of residuality/contamination (IFA 2001, 3.5.2).

2.6 Recording

2.6.1 Where full recording is necessary (prior to discarding, or during the creation of a research archive - see above), recording should be undertaken using a proforma (see Appendix 1 for an example of a recording proforma). The CBA guide to recording floor tile (Stopford 1990) and the museums documentation standard (SPECTRUM) should also be consulted as appropriate. Normally, a proforma will be completed for each context. All fragments of CBM should be fully recorded (IFA 2001, 3.7.2). The following details should be included for each item:

a) quantification

Quantification of each item will normally be by weight in grammes. Along with the recording of each fragment separately, this constitutes the minimum information needed to ascertain the condition of the assemblage (sherd count and weight). Additional methods of quantification may be necessary depending on the project research objectives.

b) fabric

Should refer to the regional fabric series. In the absence of a regional fabric series, or where fabrics new to the fabric series are identified, samples of the fabrics, along with supporting descriptions, should be included in the archive. Examples of fabrics new to the regional fabric series should be added to that series. See Orton et al (1993, 132-40) for guidance on fabric descriptions.

c) form

Consistent and standardised terminology should be used where possible (tegula cutaway types for example). If local terms are used, they should be included in the regional type series. See for example Ryan (1996, 91f.) for terms regarding bricks.

d) Supporting information

Includes form characteristics (such as peg holes), manufacturing details (such as signatures, pressure marks and glazing), condition (such as signs of abrasion) and signs of use (such as sooting) and re-use (such as mortar applied to broken edges). Measurement in millimetres of certain features (including any complete dimensions, tegula flange heights and peg hole sizes) is necessary.

2.7 Analysis

2.7.1 Analysis of brick and tile should be undertaken by a CBM specialist. The precise form of the analysis will depend on its suitability to address the project aims and objectives (IFA 2001, 3.7.1).

2.7.2 In certain circumstances, it may prove necessary to undertake one or more forms of scientific analysis at this stage, as determined by the MAP2 assessment, usually in order to confirm fabric identifications or to identify clay sources. The main types of scientific analysis are as follows:

a) Thin-sectioning

The mineral components of CBM can be identified by viewing thin slices of brick and tile under a petrological microscope.

b) Inductively-coupled plasma spectrometry analysis (ICPS)

The measurement of atomic components of a vapourised ceramic sample.

c) Neutron activation analysis

Through neutron bombardment, the radioactive isotopes in a specimen are measured in order to identify trace elements. Not recommended.

d) X-ray fluorescence.

This has the advantage of being a non-destructive process, but it can only detect certain elements. Perhaps best for the analysis of glazes.

For a thorough exploration of these methods see Barclay (2001).

2.7.3 It may be possible for the CBM specialist to discard some of the material at this stage, subject to the agreement of the planning archaeologist and/or the collecting museum, provided the discarded CBM has been adequately recorded (see Recording, above).

2.7.4 A research archive should be created whether or not the material is deemed suitable for publication (IFA 2001, 3.7.4).

2.8 Computerisation

2.8.1 The use of proformas and standard terms lends itself to computerisation of the records. Ideally, computerised records should be held in an active database; disks stored with the paper archive will become unusable due to their obsolescence (see Richards and Robinson 2001). Even if records are computerised, the paper records should still be included in the archive.

2.9 Dissemination

2.9.1 It is essential that the results of the study of brick and tile from archaeological sites should be adequately disseminated in order to develop the material as a resource; to encourage a broader appreciation of the value of archaeological investigation; and to enable broader synthetic studies. Sufficient attention should be paid to the intrinsic value of each assemblage, not just to the best-preserved and more unusual items or the contribution of the material to the interpretation of the site.

2.9.2 The form of dissemination should be determined by a MAP2 assessment. In the case of published reports, this may range from short notes to a full text with illustrations, perhaps incorporating the recorded data in its entirety (see Recording, above).

2.10 The archive

2.10.1 The creation of the archive, and its transfer to the collecting museum, should accord with the guidelines of the Society of Museum Archaeologists (1993). The archive should comprise the retained CBM, all documentation relating to the recording and analysis of the entire assemblage, and a copy of the final report. See SPECTRUM for guidance on museum documentation requirements.

2.10.2 The location of the archive, the existence of any unpublished information and the museum accession code should be stated in the publication report.

2.10.3 The archive should be stored in accordance with the requirements of the registered receiving museum. Examples of new fabrics and forms, along with its documentation, should also be deposited with the Regional Type Series (see IFA 2001, 3.10).

3. BIBLIOGRAPHY

Barclay, K. 2001. *Scientific analysis of archaeological ceramics: a handbook of resources* (Oxbow Books)

DoE, 1990. *Planning Policy Guidance Note 16: Archaeology and Planning* (=PPG16)

English Heritage, 1991. *Management of Archaeological Projects* (=MAP2)

IFA = Institute of Field Archaeologists, 2001. *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials*

Mellor, M., 1994. *Medieval Ceramic Studies in England: A Review for English Heritage* (English Heritage)

MPRG = Medieval Pottery Research Group, 2001. *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics*(Medieval Pottery Research Group)

Orton, C., Tyers, P. and Vince, A., 1993. *Pottery in archaeology* (Cambridge University Press)

Richards, J. and Robinson, D. (eds.), 2001. *Digital Archives from Excavation and Fieldwork: Guide to Good Practice* (Oxbow, 2nd edition)

Ryan, P., 1996. *Brick in Essex from the Roman Conquest to the Reformation*

Simco, A., 1998. *The clay industries* (English Heritage, Monuments Protection Programme, Step 1 Report)

Society of Museum Archaeologists, 1993. *Selection, Retention and Dispersal of Archaeological Collections: Guidelines for use in England, Wales and Northern Ireland*

SPECTRUM = UK museums documentation standard (Museums Documentation Association, 2nd edition)

Stopford, J., 1990. *Recording medieval floor tiles* (Council for British Archaeology)

SGRP = Study Group for Roman Pottery, 1994. *Guidelines for the Archiving of Roman Pottery* (Study Group for Roman Pottery, Guidelines Advisory Document 1)

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