

Mancetter - Hartshill Archaeological Excavations

1960 - 1984

Publication Proposal



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Summary of the current archive

Mancetter - Hartshill Archaeological Excavations 1960 - 1984 Publication Proposal

J Chadderton,
with contributions from P Booth and J Evans

1. General Introduction

1.1 The aims of the Mancetter - Hartshill Project

The overall aim of the current project is to archive and publish the results of the archaeological excavations undertaken by Kay Hartley at Mancetter and Hartshill, Warwickshire, between 1960 and 1977, and also the excavations undertaken at Cherry Tree Farm, Mancetter, by Martin Jones in 1983 and 1984.

It is proposed that the results will be published as part of the English Heritage archaeological reports series, covering all the above excavations.

1.2 The Mancetter - Hartshill excavations 1960-77

Between 1960 and 1977 Kay Hartley conducted numerous excavations on Romano-British 'industrial' sites between the Warwickshire villages of Mancetter and Hartshill. Most of her attention centred on the many Roman pottery kilns concentrated in the area, which resulted in the recovery of large assemblages of *mortaria* (mixing-bowls) and coarseware pottery. It is this body of material that provides the site with its greatest significance in both regional and national terms.

1.3 The Cherry Tree Farm excavations 1983-4

In 1983 and 1984 Martin Jones completed two rescue excavations on behalf of Warwickshire Museum at Cherry Tree Farm, Mancetter. These recovered further evidence of Romano-British pottery kilns, *mortaria*, and coarseware pottery, together with associated structures. The results of these excavations, while allowing for comparison with Kay Hartley's earlier work, are significant in their own right.

It is intended that the *mortaria* and coarseware pottery from both sites will form the core of the report, but these will be closely linked to a full account of the excavations, and all aspects of the sites will be discussed and integrated.

1.4 The Structure of the Proposal

This proposal attempts to describe briefly the history of the project, the potential significance of the data so far recovered, the current status of the project overall, and to detail and cost what further work is required to bring the project to a successful conclusion.

The proposal is arranged according to Appendix 5 (Updated project design specification) of English Heritage's *Management of Archaeological Projects* (1991) guide-lines, otherwise known as MAP 2, and the sections have been annotated accordingly with MAP 2 heading numbers for reference purposes.

Throughout this publication proposal the term Mancetter - Hartshill (M-H) is usually used to describe only the excavations conducted by Kay Hartley between 1960 and 1977: the 1983-4 excavations are normally referred to separately as Cherry Tree Farm (CTF). If "Mancetter - Hartshill" refers to both sets of excavations this will be indicated.

1.5 Summary of the Proposal

This proposal incorporates a two stage plan which should result in the archiving and final publication of the results of the above excavations. **Stage I** deals with the preparation and completion of a comprehensive site archive and sets out detailed costings for the completion of this work. **Stage II** puts forward a design for the final analysis and publication of the excavations with provisional costings based on specific assumptions made at this point in the project. The project will be reviewed on the completion of Stage I, and Stage II may be revised accordingly.

2. Background (MAP 2: A5.1)

No formal project design was produced at the outset of the Mancetter - Hartshill excavations in 1960, but once the discovery of the industrial complex was confirmed, Kay Hartley's (KH) academic objectives centred on the pottery kilns, and the study of the *mortaria* in particular. Since concluding her excavations, KH has undertaken a great deal of post-excavation work over the years, most of which has concentrated on the *mortaria* and the kiln structures. In particular, KH has devoted a great deal of time and effort to producing a comprehensive and definitive typology for the Mancetter - Hartshill *mortaria*. This work has been supplemented by post-excavation studies by other individuals, including studies of the coarseware pottery; and other specialist finds categories. The records and artefacts now form a partially organised site archive which KH has continued to develop with the intention of using this data to publish a definitive report on the kilns, their products, and the markets they served.

The excavations at Cherry Tree Farm were conducted by Warwickshire Museum in May - June 1983 and November 1983 - February 1984. These were undertaken in advance of pipeline laying which threatened the sites of known Roman pottery kilns, and the initial project design was to excavate and record all the archaeological evidence that would be destroyed by the modern development. These excavations were completed by Martin Jones, and a formal research design was submitted to English Heritage in 1985 for post-excavation analysis and further survey work which was intended to enhance the results of the excavations. This included an outline publication programme. The original objective was to create an archive to be incorporated into KH's Mancetter - Hartshill backlog project. The outline publication programme indicated that the Cherry Tree Farm data should be published as part of the same corpus as the rest the Mancetter - Hartshill project.

As part of the CTF post-excavation research design, a magnetometer survey was proposed to examine the area immediately to the south and west of the excavations to try and pin-point further kilns. It was hoped that this would yield important information regarding the full extent and layout of the kiln field.

2.1 Summary of the results of the project to date (MAP 2: A5.1.1 ii)

The excavations at Hartshill in the early 1960's concentrated on the individual kiln structures. More widespread, open-area excavation designed to examine any neighbouring, associated features, was not attempted until the 1970's at Broadclose, Mancetter. The excavations at Cherry Tree Farm examined only the areas directly affected by the pipeline laying and were therefore of fairly limited extent.

Detailed studies thus focused on the kilns themselves and any closely related deposits. The pottery assemblage, and the *mortaria* in particular, were considered to be of the greatest significance. Some features apparently associated with the making of the pottery and other industrial processes were also examined. All the deposits examined were apparently fully excavated, although many of the sites only covered a limited area.

The M-H excavations recovered the remains of at least 50 kilns of various types and levels of preservation. The excavations at Mancetter, Broadclose also revealed evidence of many associated structures including roads, wells, a corn drier, a glass furnace, and a variety of gullies and other features. The CTF excavations revealed the remains of seven kilns and a number of associated features, which showed traces of an organised layout within the northern and eastern sides of a possible enclosure.

The pottery formed by far the majority of the finds recovered from the sites, including *mortaria* and other coarseware pottery. Jane Timby (1992) has estimated that there are between 15,000 - 17,000 *mortaria* records in the archive, although an initial assessment of the records suggests that the actual figure may be as many as 22,000. As some of these records represent more than one sherd, the total *mortaria* sherd count for M-H may be as much as 25,000 to 30,000. The addition of the CTF *mortaria* (c 10,000 sherds), could increase this figure to 40,000. These figures are estimates as the *mortaria* has never been fully assessed, and the final figure may well be higher. The coarseware pottery (which has been fully assessed) represents a total of 69,153 sherds from all the Mancetter - Hartshill sites (M-H & CTF). All the pottery, bar a handful of examples, was the product of the Mancetter - Hartshill Kilns (M-H & CTF).

The current *mortarium* type series is composed of 11 broad types, but these contain at least 2,000 subdivisions and lesser variations. Added to this are 9 varieties of *mortaria* spout, with 24 recognised subdivisions; 30 different fired-clay fabrics; and the names of 65 individual potters immortalised on their *mortaria* using impressed name stamps, with many potters using a variety of different dies.

Other finds represented on the M-H sites include kiln furniture, coins, brooches, iron, lead, industrial waste, glass ware, querns, tile, wooden objects, carbonised grain, animal bone, worked bone, beetle remains, and plant macro samples. At CTF, a limited number of finds, other than pottery, were also recovered from the site, including Roman tile and a handful of copper alloy, iron, and flint artefacts.

A considerable amount of time and effort have been put into the post-excavation analysis since the excavations ceased. No formal post-excavation project design for Kay Hartley's M-H sites, as a single entity, ever appears to have been submitted. An outline publication proposal was prepared at a relatively early stage in the project, which forms at least a rudimentary project design. Various summary proposals have been presented over the years for different sections of the project, but these have tended to detail tasks and funding requirements in the short term only - on an approximately annual or biannual basis. The overall intention was to work steadily towards the publication of a final report which would include a detailed account of the excavations, and a comprehensive study of the pottery. KH's project is still some distance from achieving this objective.

A formal post-excavation project design, with an outline publication proposal, was submitted for the CTF sites and funding was granted for the preparation of a Level III archive. Most of this work has been completed, and the majority of this to an advanced publication standard. However, considerable difficulties were encountered during the analysis of the pottery assemblage by Rowan Ferguson and work was subsequently suspended on the whole CTF project, (see below). The final objective for the CTF material has always been to publish it alongside the M-H excavations.

The overall conclusions of the work so far undertaken can currently be summarised as follows:- The origins of the Roman settlement appear to be linked to the foundation of a legionary or vexillation fortress to the west of the River Anker on the site of the modern Warwickshire town of Mancetter in the Claudio-Neronian period (Webster 1978 and Baddeley 1991). This presumably attracted settlement (*vicus*) by the indigenous population, providing the military base with various services. There is little evidence for any pre-Roman ceramic tradition for the area, but the fortress probably attracted native potters from adjacent regions, such as the Upper Nene Valley (Swan 1984). The Romano-British settlement appears to have survived the departure of the Legion in the mid 1st century AD, but it is not until the late 1st/early 2nd century, when *mortarium* manufacturers migrated to the site from *Verulamium*, that the pottery industry expanded. The settlement soon became one of the major pottery producing centres in the Midland region. The coarse wares were produced to serve a relatively regional market, but the *mortaria* was traded and distributed across the whole province, particularly in the north. The site seems to have been a base for other industrial processes such as glass and tile making. The Romano-British occupation and large scale pottery manufacturing appears to have been continuous on the site until after the middle of the 4th century.

As stated above, a great deal of work still remains to be completed before the project can be published. No overall site archive has ever been created from the records and material recovered from the sites, (although various assemblages and bodies of evidence have been organised, to a degree, within themselves, and the majority of the CTF material is properly archived). This has caused considerable difficulties in coordinating the various aspects of the post-excavation work. Parts of the project are apparently complete (or at least close to completion), with some of the material prepared to publication standard at an early stage, but many other areas remain unfinished. Most of the individual kiln plans and sections, for example, are already drawn for publication, but much of the stratigraphical description of these structures currently exists only in summary form, if at all.

By far the greatest difficulties have been encountered in the study of the *mortaria*, where there have been considerable problems in processing and analysing such a large assemblage of material, and the data that this process has subsequently produced. Numerous delays have frequently beset the project as its personnel have wrestled with this material and data, and the post-excavation work for M-H has now been underway for some sixteen years. The long period of study has helped to increase the

difficulties, as over the years Kay Hartley has understandably re-assessed, and refined her methodology and conclusions, particularly with regard to the *mortarium* typology. Unfortunately, this has served to invalidate large amounts of earlier work; not just her own, but also the work of other individuals who had previously completed parts of the project. For example, the original intention for the CTF *mortaria* was to analyse it against the background of the developing research archive for KH's excavations. The changes to KH's typology forced an abandonment of the work on the CTF material at a regrettably advanced stage.

These delays and problems have resulted in English Heritage recently commissioning two assessments of the post-excavation project. These were completed by Claire Halpin (1990) and Jane Timby (1992), with the cooperation of KH, and they detail the outstanding work and areas of difficulty concerned with the project. They suggest some solutions that would hopefully complete the project. In the light of these assessments the project is now being finally reviewed with the intention of bringing it to a satisfactory conclusion and publishing the results. Warwickshire Museum has been commissioned to produce the following updated project design specification to plan and cost how this might be achieved.

2.2 Statement of potential (MAP 2: A5.2)

2.2.1 Material critical to the interpretation of the site (MAP 2: A5.2.1)

As the site is a recognised Romano-British industrial area it is crucial that the structures related to the industrial processes involved, and their material output, are closely studied in order to interpret the site correctly. This therefore focuses attention on the following -

- a The many pottery kilns, which are the principal structures represented on the site, will provide critically important information on the level of technology being practised. These manufacturing processes appear to have been continuous over almost three centuries, so in order to understand the site it will be necessary to examine the full range of kiln types, their development, and the ways in which they functioned.
- b The products of the kilns, particularly the *mortaria* and the regionally marketed coarseware pottery represent the site's primary function and the reason for its existence. It is critical that these pottery assemblages are studied in detail in order to interpret the site's purpose. It will be necessary to present the range of products being produced and how these developed over the long period of operations in the form of typological series and contemporary groups.
- c The manufacturers' stamps on the *mortaria* will provide data on the location and scale of operations of individual potters within the industrial complex. They will be critical in allowing a study of the range of *mortaria* products associated with a particular potter. It may be possible to examine any spatial relationship between known individuals and their contemporaries. The stamps are closely datable by their association with other known archaeological sites.
- d The juxtaposition of *mortaria* and other coarse pottery is particularly useful, since the relatively precise dating that can be achieved for the former enables the latter to be dated with more accuracy than usual. This is important for the understanding of the coarse pottery and for the dating of the site itself.
- e The study of the kilns and their products, supplemented with an assessment of the possible purpose and significance of the other excavated features, should enable a fuller understanding of all the industrial processes practised on the site.
- f The occurrence of the glass kiln, and its products, represents a rare opportunity to study this other commodity at its source of manufacture, and so the study of the glassware takes on its own significance as a matter of national importance. It also represents an opportunity to study another facet of the 'industrial' activities being conducted at Mancetter and Hartshill, and the nature of the glassware industry's relationship with the pottery industry.

g The inclusion of the CTF material with evidence from the other M-H sites is significant as it represents a recent body of work, from a site occupying a roughly central area in the known Roman industrial complex. This provides an obvious and useful opportunity for comparison with the results of the earlier excavations of Kay Hartley, and the material is important in its own right in providing information on this nationally important Romano-British industry.

2.2.2 Academic potential (MAP 2: A5.2.2)

The Mancetter - Hartshill pottery kilns (M-H and CTF), and related features, represent one of the largest known 'industrial' areas in Roman Britain. Although the pottery kilns are spread across an area over two miles in length, they can all be considered as representing a single industry. The products of the kilns as far apart as Mancetter and Hartshill display the same characteristics and date range, and the names on the *mortaria* manufacturer's stamps show that some of the potters operated kilns at both locations. The scale of the manufacturing operation appears to have been immense, and more importantly, it was continuous, from the beginning of the second century to the middle of the fourth.

This project therefore represents a prime opportunity to study an economically important industry, spanning the majority of the Romano-British period. The kilns produced a wide range of coarseware pottery while specialising in the manufacturing of the distinctive, heavy rimmed, Roman mixing-bowls called *mortaria*. It is the *mortaria* that are of the greatest significance: a commodity which was traded on a large scale across much of Roman Britain, particularly in the north of the province, and dominated the Midland markets. The large size of the assemblage will allow for a detailed study of this nationally important pottery at its source of manufacture, and the comprehensive range of *mortaria* types and forms represented will enable a full examination of the development of the kilns' products across three centuries.

The integration of the *mortaria* typology with an accurate contextual and chronological site framework will form a reference collection of great academic significance to Romano-British studies as a whole. It will facilitate the dating of many other archaeological sites where Mancetter - Hartshill pottery occurs, and will greatly aid further study of the complicated trade patterns of an important Romano-British pottery ware, between its place of manufacture, the distribution markets, and the consumer.

During the second century, many of the *mortaria* were stamped with the potter's name. This offers a rare opportunity to study the activities of particular potters, including their origins and movements prior to setting up at Mancetter - Hartshill, their preferred products and how they developed them as they adapted to changing markets, and their areas of trade. The names on the stamps may provide some indications as to the origins of the potters, and they also tell us something about the levels of literacy within Romano-British society.

The other coarseware pottery achieved only a regional market, but the Mancetter - Hartshill kilns produced this pottery in similar (if not greater) quantities to the *mortaria*, so it undoubtedly formed a significant part of the site's economy. The coarse pottery is of great importance to the study of the regional economy, and the close association of its type series with the *mortaria* may allow more accurate dating of other sites in the Midlands which contain this material.

There is great academic potential for studying the kilns themselves, reviewing the different forms of kiln used on the site, their construction, and the ceramic technology employed. It will be useful to examine how the ceramic technology developed during the long period of operation, and the relationship, spatial or otherwise, between the different types of pottery industry, and other industrial processes apparent on the site, such as glass making.

The importance of this complex, with a regard to future study, must be recognised. The significance of the *mortaria*, in terms of trade patterns and dating evidence, for those studying pottery assemblages on other sites in Roman Britain, cannot be emphasised enough. The importance of the coarseware pottery to the future study of the regional economy has already been touched upon, but there is also the possible significance of the other finds categories found at M-H and CTF in terms of the regional picture. Future study of the first century military activity at Mancetter or the later civilian settlement astride the nearby Watling Street (*Mandvessedom*) may reveal interesting relationships with the nearby industries.

2.2.3 Summary of potential

The potential of the project may be summarised as follows -

- A The publication of the Mancetter - Hartshill (M-H and CTF) *mortaria*, and their stamps, is of national importance, as it will form a definitive reference collection of great academic significance to Romano-British studies. It will provide an essential comparison, especially for the purposes of dating, for the many other finds of Mancetter - Hartshill *mortaria* on Roman sites throughout the Midlands and northern England.
- B The site represents a rare opportunity to study an important Romano-British commodity at its source of manufacture. The dissemination of data on the *mortaria* is essential for a wider study of the industry, its marketing, competition, distribution mechanisms, and chronology, to be undertaken.
- C The study of the *mortaria* makers' stamps will generate information about individual potters who can be identified by name. This may allow an examination of their origins, the development of their preferred products, the ceramic technology they utilised, and their spatial organisation, both within the industrial complex and in relation to each other.
- D An examination of the kiln sites will build a detailed picture of one of the largest known Romano-British 'industrial' areas, which manufactured its product on an immense scale for almost three centuries. The glass kiln and its products also form an important part of this study, as well as representing a body of material of national significance in its own right. This study will provide an excellent opportunity to look at the levels of Roman technology employed on the site, how such 'industrial' sites were organised, and how this technology and organisation developed during the long manufacturing period.
- E The other coarseware pottery manufactured at Mancetter - Hartshill, when closely associated with the precisely dated *mortaria*, represents a significant body of evidence for regional Romano-British studies in the Midlands.

3. Aims and objectives (MAP 2: A5.3)

3.1 Revised post-excavation research design (MAP 2: A5.3.1)

Jane Timby's post-excavation assessment of the project (1992) concluded that funding should continue for the project as a whole, but that this funding should be tailored to achieve specific goals rather than attempt the universal aims that Kay Hartley had been pursuing. An initial examination of the project conducted by Warwickshire Museum (March 1993) agreed with Jane Timby's overall recommendations, and identified the following aims and objectives for the project.

3.1.1 The general project aims

The principal aim of the project is to make available the evidence from the kiln sites as a research aid for any wider study of the industry in the future, and generally to disseminate information on material from the industrial complex to students of Romano-British pottery and other interested parties.

The dissemination of this information will ideally be achieved by the full publication of the evidence from all the sites, together with analysis, and interpretation which will satisfy the summary of potential as stated above, 2.2.3 A-E. The proposal sets out a plan as to how this objective may ultimately be fulfilled, but before 2.2.3 A-E can be fully addressed, the initial aim of the project will be the creation of a complete site archive. While representing an essential step towards eventual publication, the site archive will, in the meantime, form a vital aid for future study as an organised and accessible database of the basic primary records.

The proposal therefore identifies two levels of objectives -

Stage I - creation of the site archive.

Stage II - analysis and publication.

3.1.2 The research objectives for Stage I

- a The completion of a comprehensive, internally ordered, and consistent site archive for M-H and CTF to facilitate future study of the primary records by students of archaeology, and as an aid to the final publication of the excavations (Stage II). It will be based in one location and in conditions that will preserve the integrity of the primary records.
- b To assess and closely integrate the various individual sections of the site archive, firstly for the benefit of future study, and secondly to assist future analysis and publication.
- c As part of Stage I, but as a fundamental objective in its own right, the computerisation of the M-H *mortaria* records to form an electronic database. This will allow easy manipulation and analysis of this vast assemblage of artefacts which provides the sites with their greatest significance.
- d To assess and evaluate the M-H *mortarium* type series. The objective will be to identify how this vital aspect of the *mortaria*'s analysis may be edited and developed to render it more manageable for future study and eventual publication.
- e The final aim of Stage I will be to monitor and review the status of the completed site archive, and establish a finalised programme of work for the analysis and publication of the project in order to satisfy the project's potential as indicated above in the summary 2.2.3 A-E.

3.1.3 The data to be processed under Stage I

- a All the excavation records belonging to M-H will be collated, organised, examined, and archived to an integrated framework to fulfil objective a.

- b The status of the M-H excavation records, finds records, and existing reports will be finalised to ascertain their level of completeness and compatibility with other sections of the site archive to achieve objective b.
- c The status of the existing archive for CTF will be reviewed and assessed in terms of its compatibility with the M-H site archive in contribution to objectives a and b.
- d The M-H stratigraphic record will be studied and a basic site narrative and summary interpretation will be written to complement the site archive and the existing CTF site summary. This will facilitate future study by placing the various elements of the site archive in their context, and will be supported by specific information drawn from various artefact records with regard to the dating of structures and deposits. This will be undertaken in support of objective b.
- e The vast amount of data contained in the M-H *mortaria* records, including information on the typology, fabrics, stamps, spouts, and decoration, will all be transferred to a computer to form a database to achieve objective c.
- f The *mortarium* type series will be prepared to a uniform condition and then studied with the intention of formulating a plan by which it may be reduced in size to aid further study and publication. This will achieve objective d.
- g Objective e will be addressed once the other work on Stage I of the project has been completed. The results of Stage I will be reviewed and how far they satisfy the objectives outlined above (3.1.2 a-e). This data will be used to establish an agreed programme of further analysis under Stage II of the project.

3.1.4 The research objectives for Stage II

Stage II will address and attempt to satisfy the potential of the project as summarised in 2.2.3 A-E. However, it should be noted (see 3.1.2 e) that, to a large extent, the objectives of Stage II are dependent on the success of Stage I, and may therefore be subject to some revision if the results of Stage I show that any aspect of the project's potential cannot be fully achieved. With this in mind it is only possible to identify provisional objectives at this point in the project, but the following objectives may be stated with some confidence, based on current knowledge of the archive. These are -

- a To expanded the chronologically phased description and analysis of the archaeological structures and features recorded, in order to further improve future study of the M-H and CTF excavations. (See Summary of potential D, and an important part of A, B, C, & E).
- b To undertake a structural, spatial, and technological analysis of all the kiln types represented on the M-H and CTF industrial complex, including the glass kiln. (See Summary of potential D).
- c To complete a reference collection of national importance for the study of the Mancetter - Hartshill *mortaria* at its source of manufacture. This will included manufacturing techniques, clay types, volume of production, marketing, development and chronology groupings. (See Summary of potential A, B, & C).
- d The completion of a definitive typology for the *mortaria* as an essential aid to future study beyond the confines of Mancetter - Hartshill itself, namely the dating of other sites and the wider study of the industry's trade patterns. (See Summary of potential A & B).
- e To pursue a rare opportunity to conduct a detailed study of individually known potters, their origins, products, technological ability, and organisation. (See Summary of potential C).
- f To fulfil the potential of the other coarseware pottery from M-H and CTF as an aid for regional Romano-British studies in the Midlands. (See Summary of potential E).

g To undertake a detailed study of the glassware industry, and its relationship to the other industrial activities practiced on the site. (See Summary of potential D).

h To draw in any other useful data from other aspects of the project which may add to the chronological, technological, economic, sociological, and environmental evidence for the industrial complex. (Linked to all items in the Summary of potential).

i The completion of a full research archive for the project as an important step towards the dissemination of the evidence from the excavations to a wider audience. (Overall project potential)

3.1.5 The data to be analysed under Stage II

a The stratigraphic records will be used to add greater detail to the basic site narrative and the summary interpretation will be expanded accordingly, with refined phasing and progressively more data from the other elements of the project as their analysis develops. This will achieve objective a.

b The records linked directly to the pottery kilns (and the glass kiln), their products, *mortaria* stamps and other related artefacts, such as kiln furniture, will be analysed to build a detailed picture of the technology and organisation evident in the complex to address objective b.

c The coded data for the M-H and CTF *mortaria* will be combined and integrated. Elements of this combined data will then be drawn down and manipulated to provide the information that will form the basis of the nationally important reference collection specified by objective c.

d The M-H *mortaria* sherds and drawings associated with the revised typology will be organised into a definitive type series and stored/mounted accordingly. The CTF *mortaria* will be examined and any new data included (objective d).

e The *mortaria* stamps will be analysed and cross referenced to ranges of products, particular kilns and dating evidence. Any origins evident from their names will be considered (objective e).

f The existing records and analysis associated with the other coarseware pottery will be cross-referenced with other analytical reports, such as the closely datable *mortaria*, to establish a chronological framework for the pottery's development. The coarseware typology and context groups will be finalised within this framework, and this should result in a regionally important reference collection for the Midlands as stated in objective f.

g The existing glassware report will be linked to the structural evidence for the glass kiln itself. The results of this analysis will be compared with the evidence for the pottery industry in order to fulfil objective g.

h Those artefact and ecofact assemblages identified as significant to the interpretation of the industrial complex, such as the coins, glassware, samian, brooches, animal bone, and plant remains, will be analysed and the resulting data will be integrated into the other elements of the project (objective h).

i All the analytical reports and the typological data, as identified under a - h above, will be combined with the primary record held in the site archive to form a comprehensive research archive. This, together with any introductory or linking texts and illustrations, will form the basis for a final published report and thus fulfil objective i.

3.2 Publication and presentation (MAP 2: A5.3.2)

The overall aim of the project is to disseminate the maximum level of significant information concerning the Mancetter - Hartshill industrial complex to the widest possible audience, and the ideal

vehicle for achieving this will be formal publication. If the results of Stage I and Stage II prove to be satisfactory, a detailed publication proposal will be submitted for discussion.

An outline publication proposal was prepared at an early stage during the original post-excavation project, which included a suggested synopsis for the finished report.

There now follows an updated synopsis for the whole Mancetter - Hartshill volume based on this original, but revised in the light of the above recommendations. For the reasons already stated, this can only be a provisional outline until the work on the site archive (Stage I) and the analysis (Stage II) are finally completed. For this reason it is currently difficult to provide any accurate assessment of the quantity of text involved or the number of figures and tables required. However, the following synopsis can be presented with a degree of confidence.

The objective is to publish the excavations within the confines of a single volume, but the option of spreading publication across two volumes, if the quantity and quality of the material merits such an action, has not been discounted. A possible arrangement might be one volume covering the excavations and non-ceramic finds, and a second volume dealing with the *mortaria* and other pottery.

3.2.1 Volume synopsis

Contents

Acknowledgments

Summary

Volume introduction

- including the background to the project and a description of how the volume is organised and the evidence presented.
- the location of the excavations.
- Geology, topography, and soils.
- the archaeological background: brief resume of the area's place within the regional and national picture. (Pre-Roman; Conquest period; Roman settlement period).
- Figs: Maps and general location plans.

The excavations

Introduction

- the discovery of the industry and its known extent at the outset of excavations.
- the extent and organisation of the excavations.
- Figs: Location plans. Geophysical plots?

Hartshill (1960-1)

- early discoveries, including 19th century quarry finds.
- description of the excavations by phase/area including stratigraphical data.
- description of the kilns excavated (cross-referenced to the general survey of the kilns: see below). Will include description of kiln furniture by kiln and a summary of the pottery associated with each kiln. Tabulation of the occurrences of *mortaria* types & fabrics, coarseware, and other pottery by stratigraphic unit. The material is cross-referenced to the relevant sections of the pottery reports and illustrations. Plus the forms occurring in each major group.
- description of other archaeological features excavated at Hartshill.

- summary conclusions.
- Tables: kiln products; cross-site phasing?
- Figs: site plans; kiln plans; sections; plates of features, excavations in progress etc.

Hartshill (1963), the *Iunius* and *Bruscus* kiln, Abell's Quarry

- description of the excavations of Kiln 34 by phase/area including stratigraphical data.
- description of the kiln excavated (cross-referenced to the general survey of the kilns: see below). Will include description of kiln furniture and a summary of the pottery associated with the kiln. Tabulation of the occurrences of *mortaria* types & fabrics, coarseware, and other pottery by stratigraphic unit. The material is cross-referenced to the relevant sections of the pottery reports and illustrations. Plus the forms occurring in each major group.
- summary conclusions.
- Tables: kiln products; cross-site phasing?
- Figs: site plans; kiln plans; sections; plates of features, excavations in progress etc.

Cherry Tree Farm (1983-4)

- description of the excavations by phase/area including stratigraphical data.
- description of the kilns excavated (cross-referenced to the general survey of the kilns: see below). Will include description of kiln furniture by kiln and a summary of the pottery associated with each kiln. Tabulation of the occurrences of *mortaria* types & fabrics, coarseware, and other pottery by stratigraphic unit. The material is cross-referenced to the relevant sections of the pottery reports and illustrations. Plus the forms occurring in each major group.
- description of other archaeological features excavated at Cherry Tree Farm.
- summary conclusions.
- Figs: site plans; kiln plans; sections; plates of features and excavations in progress?
- Tables: kiln products; cross-site phasing?
- The field walking and post-excavation magnetometer survey (strategy, finds distribution, magnetic anomalies. Figs: survey plans; results).

Mancetter, Broadclose (1964-77)

- description of the excavations by phase/area including stratigraphical data.
- description of the kilns excavated (cross-referenced to the general survey of the kilns: see below). Will include description of kiln furniture by kiln and a summary of the pottery associated with each kiln. Tabulation of the occurrences of *mortaria* types & fabrics, coarseware, and other pottery by stratigraphic unit. The material is cross-referenced to the relevant sections of the pottery reports and illustrations. Plus the forms occurring in each major group.
- description of the glass furnace.
- description of other archaeological features excavated at Mancetter.
- summary conclusions.
- Figs: site plans; kiln plans; sections; plates of features, excavations in progress etc.

- Tables: kiln products; cross-site phasing?

The pottery kilns

- a general survey of the kilns excavated at Mancetter - Hartshill, including a typology with date ranges of types.
- a comparative discussion of the origins and development of the kiln types, (spatial organisation of the site, brief discussion of parallels etc).
- the association of kiln types with specific products (eg *mortaria*).
- a description/discussion of the kiln furniture.
- discussion of the kilns.
- Figs: kiln typology; kiln furniture; comparative kiln plans (including parallels).
- Tables: kiln products; cross-site phasing?

Mancetter - Hartshill (1960-84): the kiln products

The *mortaria* (M-H & CTF)

- methodology, quantities, limitations etc.
- fabric descriptions: quantification of fabrics, cross-referenced to site, groups, grits, and vessel type.
- type series: rim and spout forms. Arranged by class in roughly chronological order with brief written descriptions and reference to the fabrics used. Discussion of each class of *mortaria* in the type series including the origins of the types & internal dating evidence, ie stamps occurring on types; trituration grits and types; decoration by form class and form types; spouts by form class and forms.
- vessel groups. The seriation of *mortaria* by context group and discussion of this and other dating evidence eg samian and coarse pottery. Some of the more important groups will still need to be illustrated.
- *mortaria* stamps - by potter in alphabetic order, dies represented per potter (preferably in roughly chronological order) and their general distribution.
- *Mortaria* stamps and *mortaria* forms: illustration of the typological ranges associated with particular stamp types.
- trituration grits.
- decoration.
- discussion of *mortaria* in relation to kiln types, coarse pottery and other industries at Mancetter; discussion of changes in *mortarium* manufacturing techniques and the practice of stamping.
- Figs: type series - rim & spout forms; potter's stamps; decoration; some *mortaria* groups.
- Tables: numerous analytical histograms and bar charts.

The other coarseware pottery (M-H & CTF)

- methodology, quantities, limitations etc.
- fabric descriptions: quantification of fabrics, cross-referenced to site and vessel type.
- type series. Arranged by fabric.
- vessel groups. The seriation of the kiln groups by fabric and form, and a chronological framework.
- an area by area discussion of the pottery?
- discussion of the coarse pottery tradition.
- Figs: type series; groups.

- Tables: numerous analytical histograms and bar charts.
- The glass industry (M-H) - glass ware catalogue by Jennifer Price & Hilary Cool.
- discussion of the glass industry and its relationship to the pottery industry.
- Figs: glass ware
- The tile (M-H & CTF) - fabrics: Peter Cheer.
- description.
- origins.
- Tables: quantification.
- The industrial waste (slag) (M-H) - brief report and listing: J G McDonnell.

Mancetter - Hartshill (1960-84): other finds

- The samian (M-H) - report and catalogue: Brenda M Dickinson.
- Figs: decorated samian; stamps
- The samian (CTF) - (to be decided)
- Amphora* stamp (M-H) - brief description.
- Fig: stamp
- The pottery objects (M-H) - catalogue: Janet Webster.
- Fig: ?
- The coins (M-H) - catalogue: Dr Elizabeth Pirie.
- The coins (CTF) - W Seaby
- The brooches (M-H) - catalogue with discussion: Donald Mackreth.
- Figs: ?
- Copper alloy (M-H) - catalogues of additional brooch fragments, bronze vessels, tools and personal equipment, and possible military objects: Janet Webster.
- Figs: ?
- Copper alloy (CTF) - (to be decided)
- The iron (M-H) - catalogue: W H Manning.
- The iron (CTF) - (to be decided)
- The lead (M-H) - catalogue: Janet Webster.

The stone objects (M-H)	-	a stone axe? (a note by the late Prof Shotton?).
	-	the querns.
	-	Figs: stone axe, querns?
The worked bone (M-H)	-	(to be decided)
The flint object (CTF)	-	one flint.
Charcoal (CTF)	-	(brief note).
The finds from the field walking and magnetometer survey (CTF)	-	selected finds.
	-	Fig: ?

Mancetter - Hartshill (1960-84): ecofacts

The animal bone (M-H)	-	report and groups - current report by Barbara Noddle
The animal bone (CTF)	-	(to be decided)
The beetle remains (M-H)	-	(to be decided)
The wooden objects from the well (M-H)	-	report and catalogue, S J Allen.
Dendrochronology analysis of the well timbers (M-H)	-	report, Jennifer Hillam.
The plant remains (M-H)	-	carbonised grain, Helena H Clark.
	-	fungal remains (Puffball), Allan Hall.
Leaf impressions (CTF)	-	(on fired clay).

Volume discussion and conclusions

- the chronological development of the pottery industry.
- the pre-industry local Roman pottery production.
- the establishment of the industry, including the spatial organisation of the kiln site and the evidence for the organisation of the industry.
- the development of the products, and a summary of their markets in the 2nd century.

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	-	Figs: stone axe, querns?
The worked bone (M-H)	-	(to be decided)
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Charcoal (CTF)	-	(brief note).
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Dendrochronology analysis of the well timbers (M-H)	-	report, Jennifer Hillam.
The plant remains (M-H)	-	carbonised grain, Helena H Clark.
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Leaf impressions (CTF)	-	(on fired clay).

Volume discussion and conclusions

- the chronological development of the pottery industry.
- the pre-industry local Roman pottery production.
- the establishment of the industry, including the spatial organisation of the kiln site and the evidence for the organisation of the industry.
- the development of the products, and a summary of their markets in the 2nd century.

- the development of the products, and a summary of their markets in the 3rd century.
- the end of the industry.
- detailed discussion of Mancetter - Hartshill coarse pottery from other sites in the region.
- a summary comparison of the industry's links with other pottery industries, both major (national) and minor (regional) producers, and other industries, including tile, glass, iron etc.
- Figs: interpretive phase plans, maps, reconstructions.
- summary and final conclusions.

Plates

Bibliography

Microfiche - Methodological and detailed analytical material.

3.3 Summary conclusion to the aims and objectives

The objectives of the revised project design fall into two stages. Stage I deals with the creation of a complete site archive and the assessment of the records with regard to future work. Stage II will undertake the detailed analysis of the data contained in the site archive with a view to the preparation of a full research archive and a published volume.

The completion of the site archive will allow a final, and accurate, assessment of the overall status of the project, particularly with regard to the crucial *mortaria* recording and type series, and the quality of the contextual site data. The primary objective of Stage I is to preserve the integrity of the primary field record and fulfil the basic requirement of making this body of evidence accessible to any individuals who may wish to study it.

When the work on Stage I is completed, the project will reach its most significant monitoring point, where the final programme of analysis towards possible publication will be decided. The majority of Stage II is dependent on the results of Stage I, but hopefully the amount of revision identified by monitoring will be minimal - thus satisfying the stated potential and objectives. If the completion of the site archive develops successfully (along the lines described above), the project will continue towards publication. However, it must be recognised that if any serious problems emerge during Stage I it may be necessary to revise the final objectives of the project, and produce a publication with a more limited scope than first envisaged.

Despite these reservations, the initial assessments of the existing project archive agree that the prospects for a successful conclusion to the project and the preparation of a published report are good.

4. Methods (MAP 2: A5.4)

4.1 Methods advocated for the completion of the site archive (Stage I)

The majority of the work undertaken under Stage I of the project will concentrate on Kay Hartley's excavations at Mancetter (Broadclose) and Hartshill. Only limited work will be needed on the Cherry Tree Farm material under Stage I as the majority of the artefacts and records from these excavations are already stored and organised in an integrated site archive. Some internal ordering and assessment of the CTF archive will be required, but only limited analysis of the CTF material will be undertaken before Stage II of the project.

It must be stressed that the completion of Stage I will consume a considerable amount of time and resources before the final review of the project for Stage II.

Although Stage I will concentrate on the completion of the site archive, as much of the material as possible will be prepared with Stage II in mind in order to save time and costs at a later date.

Section 3.1.3 a-g above identified the data to be processed under Stage I of the project. The methods adopted to complete this work will be as follows -

a The collation, organisation, examination, and archiving of the M-H excavation records.

All the M-H primary excavation records and associated artefacts will be gathered together in one location (Warwickshire Museum). This will include any original material still held by the excavation director, Kay Hartley (KH), in Leeds. The site archive will be examined for its condition and stability, and then organised along internally consistent lines, with an indexed inventory. This will conform with English Heritage's recommendations as outlined in MAP 2, Appendix 3.

The primary field record will be maintained in optimum conditions, ensuring the survival of the records and artefacts. It will be organised so as to contain the normally recognised divisions of - survey records; site notebooks and original context records; original photographic records; site plans and sections; the artefacts, including the *mortaria* and the coarseware pottery; the ecofacts; the original finds records; computer discs and any associated printouts; and correspondence. Where necessary, the records will be copied for security purposes, and to provide the excavation director (KH) with a working set of records to assist her future work as detailed below. This work will be completed by the archaeological editor with aid of an assistant.

b The assessment of the M-H excavation records, finds data, and existing reports.

All sections of the M-H record will be assessed by the archaeological editor for their completeness and their compatibility with other parts of the site archive as it develops.

The primary excavation evidence (notebooks and context cards) will be cross-referenced with the site plans and sections, and existing descriptive texts, to identify any gaps in the archaeological narrative. The data, if necessary, may be re-arranged for internal consistency.

The *mortaria* records will be examined by the archaeological editor and any necessary preparatory work completed. The records will then be examined in detail by the pottery specialist to ascertain how they have been formulated and their level of consistency prior to the computerisation and editing described below (e and f). Other classifications relevant to the *mortaria* records and type series, such as the fabric descriptions, potter's stamps, spout forms, decoration, and grits will also be studied.

The records for the other coarseware pottery have already been incorporated into a near complete report covering the pottery from both M-H and CTF, and this is also described in detail below (c).

Many of the remaining specialist finds reports for M-H are already completed. These include reports or catalogues for the coins, brooches, copper alloy, iron, lead, industrial waste (slag), samian, glassware, pottery objects, tile, wood, dendrochronology, carbonised grain, worked bone, animal bone, stone objects, a stone axe, and fungal remains (Puffball). Other reports are either unwritten or incomplete. These are the reports on querns, stone objects, plant remains from the well, and beetles.

The completed M-H reports will be examined by the archaeological editor for their suitability for incorporation into the site archive. A general review will assess the quality of the data, and will identify any difficulties with incomplete or missing reports and plan any future action accordingly. In consideration of the passage of time since many of the completed reports were written, it may be advisable to return them to their original authors for comment/advice, or if this is not possible, they

may be passed to other specialists in the respective fields. The majority of the report texts exist on computer, so any corrections or alterations will be incorporated without serious difficulty.

Specific data from some reports, particularly those dealing with datable material such as coins, brooches, and samian ware, will be extracted by the archaeological editor to supplement the basic site narrative/summary interpretation and the computerisation of the *mortaria* (see below - d, e, and f).

Some of the completed M-H reports may require special attention. The animal bone report is completed, but described as "unsatisfactory" by KH. She believes that the report is of importance, so it must be assumed that further work will be required. It is also felt that the samian report requires further consideration, particularly with regard to the integration of the samian EVEs data with the rest of the pottery.

The M-H stone report, including the querns, should be a short report according to KH, but as yet, has not been received. Money was apparently allocated to a specialist but no report is known. This situation will need to be assessed and confirmed.

Some elements of the M-H environmental report still need to be pursued, including the plant remains recovered from the well and some beetle remains.

c The review of the existing CTF archive

As stated above, the current CTF archive will only be subjected to limited assessment and analysis as part of Stage I of the project. The majority of the primary records and artefacts belonging to CTF are already contained within an organised site archive. This body of evidence and material will be checked and assessed to establish any incomplete sections by an appointed consultant familiar with the CTF excavations. The records and material may be re-ordered by an assistant to retain a level of consistency between the CTF and M-H archives.

Particular attention will be paid to the CTF *mortaria* records and the other coarseware pottery in terms of its level of completeness and its compatibility with the M-H site archive.

Rowan Ferguson has already done a great deal of work on the CTF *mortaria* including the computerisation of the records. It will be important to ensure that this data will be compatible with the information contained on the M-H *mortaria* records, and that it will be possible to combine both sets of data to form a definitive computer database. This assessment will be made by a *mortaria* pottery specialist. (Some of the existing drawn CTF vessels should be checked as a test analysis against the rationalised M-H type series, once the latter is prepared, to establish a correlation between the type series and the recording codes originally used by Rowan Ferguson for the CTF sherds - see below 4.1 g. The CTF records will eventually have to be re-coded on this basis under Stage II).

The majority of the work on the coarse pottery has already been undertaken by Paul Booth as part of the original CTF project. A type series has been formulated and a publication standard report written to an advanced stage, encompassing the material from all the Mancetter - Hartshill sites (M-H and CTF). This currently consists of a general text in which fabrics are described and discussed, and the forms are catalogued by fabric in line with paged up illustrations. There are as yet no illustrations of kiln or area groups. There are also many tables and bar charts for Hartshill, which it was intended to use as a basis for a seriation of the kiln groups by fabric and form, but these still require preparation to publication standard. Little further work will be undertaken on the coarseware pottery as part of Stage I, but the status of the coarseware data will be looked at with a view to its future integration with the *mortaria* record as part of Stage II, and any useful programme of analysis that may result from this. This review will be completed by a pottery specialist. Any problems that might hinder the integration and analysis of the coarseware, resulting in further work during Stage II, will be identified at this point.

The archaeological editor will assist the *mortaria* and coarseware pottery specialists with their initial assessments of the CTF pottery archives.

The reports dealing with the other specialist finds from CTF are incomplete, but these represent only a small assemblage of material.

d The preparation of the basic site narrative and summary interpretation for M-H and CTF.

Using the existing stratigraphic records from the M-H and CTF excavations the archaeological editor will prepare a basic site narrative and summary interpretation to provide the site archive with a basic framework and a firm foundation for future analysis (Stage II).

Some of the sections describing the stratigraphical evidence from the sites already exist as completed, or at least partially completed, draft texts. Some sections of the M-H text, for example, have already been written by Paul Booth, (who will act as the consultant for the existing CTF narrative and during the preparation of the M-H narrative). However, other parts of the site narrative are still to be written. These various accounts will be brought together, assessed and edited against the background of the primary record. Any gaps in the narrative will be identified and these sections will be written using the primary evidence contained in the site archive.

It should be comparatively easy to construct a site narrative for the Hartshill kilns as these structures were excavated as single entities, and the stratigraphy and resulting records are relatively simple. However, the Mancetter (Broadclose) sites may be more difficult to describe as they cover larger areas with numerous inter-connecting features. The majority of the CTF archive has already been brought up to this stage, and apart from some internal ordering and assessment, no work will be required on CTF until Stage II of the project.

The writing of the M-H site narrative will be done with the active involvement and assistance of the excavation director, Kay Hartley (KH). Her memory and intimate knowledge of the excavations will form an important supplement to the existing excavation records. Some difficulties are expected, but it is hoped that with KH's help, these will be overcome. The initial assessment suggests, for example, that the excavation records may not be of a consistent nature due to the changes in archaeological recording practice between the early 1960's and mid 1970's. This is reflected in the mixture of site notebooks and pro-forma context sheets used to record the excavations over this period. The archaeological editor will prepare texts based on the excavation records and close collaboration with KH. All texts will be presented to KH for checking, amendment, and approval.

The narrative should be complemented with illustrations prepared from the original drawings. The primary drawings exist in a variety of formats and mediums, and many of these may require copying in a format more suitable for archive storage. However, the drawing requirements for Stage I should not be excessive. Many, if not all, of the individual kiln plans appear to have been completed to publication standard, as have several general location and site plans. Some gaps in this coverage are apparent and undoubtedly the need for other plans will emerge as the basic site narrative is prepared. The aim will be to establish how many archive plans and sections will be required to complete the site archive, and the primary material will be gathered together to facilitate this process. Further plan and section requirements will depend on the final programme of analysis and publication adopted under Stage II.

The site narrative will then be used by the archaeological editor to write a summary interpretation of the sites as visualised at this point in the project, which will be supported by further illustrations if required. An intrinsic part of this process will be the phasing of the M-H and CTF sites to provide the excavations with a chronological framework. This will be linked to specific data from certain groups of finds to provide spot dates for the kilns and other features, which will form a basis for subsequent analysis of the pottery and other material under Stage II. However, it is recognised that the nature of the records may prohibit the creation of an accurate chronological framework. The opportunities for spot dating could be limited on some sites because the dating evidence available from *mortaria* stamps, samian, brooches, and coins will not be evenly distributed. It may only be possible to identify broad stratigraphic units within which artefacts can be grouped together. As with the narrative, KH will be closely consulted during the preparation of the summary interpretation.

The archaeological editor will examine the existing photographic archive and extract any relevant photographs to be cross-referenced with the stratigraphic narrative and summary interpretation as they are prepared.

e The computerisation of the M-H *mortaria* records

The principal and most important objective for Stage I will be the computerisation of all the *mortaria* records. The sheer size of the *mortaria* assemblage dictates that this is the only practical means of handling the vast amount of recorded data that has been produced. It is essential that the entire *mortarium* assemblage is computer coded at Stage I to allow for easy manipulation and detailed analysis of the data under Stage II. A rigorous system for the computerisation of the records will be established by the *mortaria* pottery specialist, based on the assessment of the existing paper archive and the consistency of the information it holds (see 4.1 b above).

Problems?

The database will contain typological and contextual information, cross-referenced with any relevant *mortarium* drawings, as well as data on the stamps, fabrics, petrology, decoration, and grits. Chronological data from other finds assemblages such as coins, samian, brooches, and coarse pottery will also be included.

It should be noted that considerable quantities of data concerning the *mortaria* have already been transferred to a computer as part of work previously undertaken on Mancetter - Hartshill. This data will facilitate the computerisation of the *mortaria* under Stage I and assist with the analysis proposed under Stage II, but it is unlikely to be fully compatible with any new scheme to be adopted. The majority of this data will therefore probably require further manipulation.

The computer coding will be done by the pottery specialist or an appointed assistant, probably using DBase III+, and manipulated there, to draw down data on form and stamp occurrence by context group, and the occurrence of other coded variables. The *mortaria* are currently coded by sherd numbers, weight, minimum numbers of vessels and rim estimates (RE) although only the minimum vessel counts and RE are particularly relevant given that the crucial information from the site is the form composition of the *mortarium* sequence and the occurrences of *mortaria* stamps. The principal means of quantification will be the Estimated Vessel Equivalents (EVEs). For this, measurements of rim percentages are required and it is important to ensure that these have been recorded consistently. An initial examination of the records suggests that this has been achieved, but other sections of the record (ideally compiled at different stages in the project) need to be checked for a similar level of consistency. If inconsistencies materialise, some adjustment will probably be required, but it is not thought that this will represent any serious problem. The use of the PIE SLICE program is anticipated to see if it can help isolate significant types and to seriate the context groups. The final policy chosen for the computer coding of the *mortaria* will be discussed in detail with English Heritage Central Archaeological Services (CAS).

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The data on the *mortaria* stamps will be incorporated into the computer data base by the pottery specialist, and later evaluated against the *mortarium* type series. This will be undertaken in close cooperation with KH, drawing on her unique understanding of the subject.

Some grouping of the 26 identified fabrics (Halpin 1990) into classes will certainly be necessary. It is suspected that only a few of the fabrics occur with any regularity. It will be essential to differentiate between Mancetter - Hartshill (M-H and CTF) and other fabrics, as it is thought that the current system may not make this point very clearly. It will be important to define which of the local fabrics result simply from variations in firing time, temperature, and atmosphere. At least some of these will not occur beyond the confines of the production site and will therefore be of minimal relevance to the wider study of Mancetter - Hartshill products. KH agrees that the fabrics will require some revision. KH also believes that a report on the petrology by David Williams is essential for the *mortaria* fabrics, especially on the trituration grits. This will have to be assessed.

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Once the computerisation of the of all the *mortaria* records is completed, a limited quantity of the data will be tested against the *mortaria* sherds in order to assess the integrity of the database and the prospects for further analysis under Stage II of the project. This will be conducted by the pottery specialist (*mortaria*).

An assistant will check the *mortaria* drawings against a drawing number list, drawn down from the database, to ensure that the form codes on the drawings match those held in the database.

As work progresses on the *mortarium* assemblage and its integration into the site archive, some reorganisation of the material itself may be needed. A re-boxing assistant will possibly be required for this task.

f The preparation, assessment, and editing of the *mortarium* type series

The *mortarium* type series will be examined in detail by one or more pottery specialists to ascertain how it has been formulated and the level of consistency. Other classifications relevant to the type series, such as the fabric descriptions, potter's stamps, spout forms, decoration, and grits will also be studied. The validity of the *mortarium* type series is of crucial importance to the project as a whole. The current type series is a comprehensive and highly detailed typology of the *mortaria*. However, its great size probably represents a considerable burden in terms of the practicalities of publication and, in its current form, the type series may be somewhat unmanageable. Careful consideration will also have to be given to the modifications KH has made to the type series during its development. It will

be necessary to establish what effect, if any, these amendments may have had on any earlier typological work. The viability of the *mortarium* type series must therefore be established at an early opportunity in the project, and if required, a programme of rationalisation formulated. However, it will be fundamental to ensure that any amendments made to the type series will respect the existing broad infrastructure of KH's *corpus* and that the integrity of her original work is not compromised.

The *mortarium* type series will be examined by the pottery specialist with a view to editing it to effect a possible reduction in size. It should be noted that some preparatory work will be required before this assessment can take place; including the photocopying of the 2000 plus type series rim drawings to a uniform scale of reduction for essential comparative analysis, and the generation of stratigraphic data and dating evidence relevant to any kiln/waster groups. This preparatory work on the type series (and other aspects of the *mortaria* records) will be performed by a the archaeological editor or an assistant. Exactly how the editing of the type series may be achieved will probably not be apparent until the computerisation of the *mortaria* records is at an advanced stage. The emphasis will be on checking the consistency of the type series and the structure of the typology. Jane Timby's assessment (1992) noted that the type series is "not...a rigorous system", and KH is known to have made radical changes to it over the years. KH describes the current type series as a "recording type series", stating that the codes are mainly for reference purposes - the letter code does describe the basic type of rim form, but the number is of no significance as far as the sequence goes - it is simply a means of locating the appropriate reference card. The size of the type series is explained to some extent by KH's acceptance that there is a lot of repetition of forms on the reference cards. This was done to remind KH "that a potter made a particular form", and as many pots as possible were put on the cards when Rowan Ferguson was working on the pottery "so that she could relate to the type series more easily". It may therefore simply be a matter of establishing a rigid coding system and editing out the repetitious forms in order to make the *mortarium* type series more manageable. The removal from the type series of any non-Mancetter products and the segregation of Mancetter imitations originating from other industries will also be considered. It has been pointed out (Paul Booth pers comm), that the theory and potential nature of the typology need to be carefully considered before detailed work is begun. The editing of the type series will be undertaken by the pottery specialist, and will be a three part process with, firstly, a test edit; followed by a second edit, revising the test draft; and then a third edit, which will finalise the type series. There will be a period of consultation and discussion between the first and second edits and following the final edit to assess the work done in each case, and to agree any amendments or reorganisations for the next draft. This consultation will involve the pottery specialist (*mortaria*), pottery consultants, and the excavation director (KH).

It is of the greatest importance that any amendments made to the type series respect the integrity and structure of KH's work. Understandably, KH has made it clear that she does not want to be associated with a type series that "someone else has compiled", and any system that is finally adopted should have her general approval. While some revision is almost inevitable, whatever editing is finally done to the type series, it will essentially still retain KH's original work.

Yvonne Boutwood's recommendations for publishing the type series are apparently acceptable to KH and supported by Jane Timby (1992). These present a useful starting point for the work. KH says that she does not necessarily agree with all of Yvonne Boutwood's comments, but she accepts that Yvonne Boutwood's observations are normally sound and that she is in fact more familiar with some aspects of the *mortaria* than KH is. Yvonne Boutwood will be consulted at the beginning of the editing process. Other aspects of the typology such as spout forms, grits, and decoration may also be subject to revision.

All the *mortaria* drawings relevant to the type series are completed and many of these have been inked. These will be acceptable in their current state for the purposes of the initial assessment and analysis, and they will be used to form the basis of a working *mortarium* type series for Stage I of the project. However, some additional drawing may be required. All the relevant drawings will have to be finally checked by the *mortaria* pottery specialist against the record sheets/database to ensure that the correct type series numbers have been applied to the correct drawings. (According to KH some of the drawings will have incorrect type series numbers, and only the numbers on the record sheets should be trusted).

It is generally agreed, from the superficial examination of the *mortarium* record, that significant data can be presented on the major aspects of the whole Mancetter - Hartshill industry (M-H and CTF). Although problems may well be encountered, these should not be insurmountable.

g The monitoring and review of Stage I of the project

Once Stage I, the completion of the site archive and the initial project assessment, is complete, the project as a whole will be monitored and reviewed to ascertain the prospects for a successful conclusion to Stage II.

Part of this process may involve limited test analysis of some of the databases and type series to supply the necessary data to assist with the monitoring and review process. This will include, for example, the checking of the drawn CTF *mortaria* vessels against the rationalised M-H type series to establish a correlation between the type series and the original CTF *mortaria* recording codes (See 4.1 c above).

The archaeological editor will produce a progress report outlining the state of the project, including statements from the pottery specialists and information from other project consultants, which will discuss how far the Stage I objectives have been achieved. It will also examine the project's chances of fulfilling the provisional objectives outlined for Stage II, and include a revised draft proposal for the completion of Stage II based on the provisional proposal outlined in this document (See 3.1.4-5 3.2 4.2-3 & 5.1-3).

The report will be circulated to project members, consultants, and English Heritage, and then a major monitoring meeting will be held to confirm the programme of further analysis for Stage II. It is expected that the draft proposal will follow the objectives for Stage II outlined above, but it must be re-iterated that the aims of Stage II may have to be re-evaluated in the light of any unforeseen problems emerging during Stage I.

The archaeological editor will then submit an agreed revised proposal for the completion of Stage II of the project.

The archaeological editor will incorporate any additional material or data generated by the Stage I tasks into the site archive.

English Heritage Central Archaeological Services (CAS) will monitor the short term holding conditions for the site archive and the project overall.

4.2 Methods advocated for the analysis of the data, the creation of the research archive (Stage II)
Stage II will cover the detailed analysis and manipulation of the data from all the Mancetter - Hartshill excavations (M-H and CTF), the deposition of a full research archive, and ultimately the final publication of the results. As stated above, the plan of work that is finally implemented under Stage II of the project will be dependent on the results of Stage I. At this point, prior to commencing Stage I, it is only possible to look forward to, and present, a provisional design for the final analysis and publication of the report. However, it is possible to outline a reasonably confident plan based on specific assumptions that can be made about the contents of the current archive. Section 3.1.5 a-i above identified the data to be processed under Stage II. The methods adopted to complete this work will be as follows -

a The expansion of the basic site narrative and the summary interpretation into a full analytical report on the stratigraphic history of the excavations

The editor will confirm the proposed publication format and synopsis for the report with English Heritage, including details of the required house style for the text and illustrations. All the following tasks will be completed within this framework and with the final published volume in mind. The basis for the publication material will be formed by the analytical reports and illustrations held in the research archive. These may be published in their entirety, or as edited versions, depending on the relative importance of the evidence under discussion. This will hopefully result in a final report structure similar to that outlined in the synopsis above (3.2.1).

The basic site narrative will be expanded into a full, chronologically ordered description of all the M-H and CTF excavations and their stratigraphy by the archaeological editor. The intention will be to form a full analytical report on the sites' stratigraphy for deposition in a research archive. This may include text prepared by other individuals associated with the project, such as Kay Hartley or Paul Booth. The report will be closely related back to the excavation records, and supported by illustrations (plans and sections) and photographs as required. The final site narrative will be cross-referenced with the pottery reports so that it will be possible to associate certain groups of *mortaria* and other coarseware pottery with particular kilns, or other features.

The summary interpretation of the excavations will also be expanded into a full structural history of the excavations and this will be further refined as the analysis of all the various aspects of the project begins to produce further data. This will be supported by illustrations where necessary.

To facilitate other aspects of Stage II of the project, principally the study of the kiln development (see below - b) and typological changes to the kiln products (see below - d & f), it will be fundamental to try and establish an accurate chronological framework for the archaeological deposits excavated. This will require a detailed examination of all datable material and its archaeological provenance, including coins, brooches, *mortaria* stamps, and samian ware pottery, and this will be linked into the detailed site narrative and interpretation.

The resulting analytical reports will form the basis for the final publication texts.

b The structural, spatial, and technological analysis of the kiln types

The full analytical report on the stratigraphic history and interpretation will include a detailed study of the evidence for the kiln structures and kiln furniture, and all the different varieties that occur on the site. This will result in a comparative survey, establishing a kiln typology, if possible, within a chronological and spatial framework, and an examination of the levels of technology represented by these structures. Where possible, the kiln typology will be linked to particular *mortaria* potters or distinct ranges of products.

To understand fully all the industrial processes practised on the site, the study of the kilns (and their products) should be supplemented with an assessment of the other excavated features, their possible purpose, and significance.

c The integration of the M-H and CTF *mortaria* computer records, and the manipulation and analysis of this data

Any outstanding work on the CTF *mortaria* identified under Stage I (see above - 4.1 c & g), principally the computerisation of any CTF *mortaria* records that might be outstanding, will be finished at this

point. The test analysis conducted at the end of Stage I (4.1 g above) will have established a correlation between the rationalised type series and Rowan Ferguson's original recording codes for the CTF *mortaria* sherds. The remaining CTF records will then be re-coded on this basis. (It is likely that there will be some vessels which it is not possible to re-code in this way. These will be isolated and a decision made as to how they might best be dealt with). This data will then be incorporated into the M-H *mortaria* database.

The combined computerised data for the M-H and CTF *mortaria* will be manipulated in the DBase programme and possibly using other software which the pottery specialist finds appropriate. The objective will be the seriation of the *mortaria* by context group, cross-referenced to the type series, all the available dating evidence, the site narrative (kilns types), and eventually the coarseware pottery and other industries (see below - f-h). Special attention will be focused on the *mortaria* associated with a particular makers' stamp and the dating of these groups. Most of the vessel group data will probably be presented in tabular form, cross-referenced with the finalised type series. This method will be adopted in order to keep the number of illustrations at a manageable level in terms of any future publication. However, some of the more important *mortaria* groups will still need to be illustrated as significant details may be lost if the data is presented only in tabular form. This may represent a considerable number of additional drawings to be completed by an archaeological illustrator.

The resulting analysis will be absorbed into the archive and a detailed analytical report for all aspects of the *mortaria* prepared for inclusion in the research archive, and as a basis for final publication. The completed analytical report for the *mortaria* will include fabric descriptions, a full type series, a discussion of each class of *mortarium* (cross-referenced with the fabrics, form types, dating evidence, potter's stamps, spouts, decoration and grits), and the seriation of the material by context group. The changes in *mortaria* manufacturing, typology, stamping practice etc will be described and discussed.

It is worth repeating, that any publication resulting from this project is only intended as a study of the ware at its source of manufacture, thereby forming a fundamental aid to the future study of Mancetter - Hartshill *mortaria*. It is not the aim of this project to embark on a nationwide survey of the ware, wherever it may occur in Roman Britain, and while some reference to the material known on other sites is unavoidable, and indeed, beneficial - in terms of comparative dating or at least a summary of the ware's trade patterns, - any future survey will constitute a separate piece of research. Such a survey would, of course, be highly desirable, but it is felt that an undertaking of this sort would be too ambitious to be contained within the parameters of this project.

d The completion of the definitive *mortarium* type series

One of the principal aims of Stage II will be the preparation of as complete a typological sequence as possible, arranged by class, in roughly chronological order, embracing all the Mancetter - Hartshill kilns (M-H & CTF). This will be based on the assessment and editing of the M-H type series undertaken as part of Stage I and the final version will be prepared by the pottery specialist in close conjunction with Kay Hartley. The CTF *mortaria* will be incorporated into the M-H database and any new forms identified will be incorporated into the revised type series.

The type series will be closely linked to a detailed quantification of the material, and analysis of typological and stamp occurrence by context group (see above c & below e).

The final type series will be fully illustrated to a publication standard and an illustrator will be employed to complete any drawings that may be required. Many of the drawn *mortaria* relevant to the current type series appear finished (ie inked), but it is debatable whether this is always to the required publication standard and many still only exist in pencil. A considerable amount of additional drawing and redrawing may be needed.

e The *mortaria* stamps and the individual potters

A full catalogue of the potters' stamps recorded at Mancetter - Hartshill (M-H & CTF) will be completed, including all the varieties of die employed by each individual. This may be supported by a number of illustrations.

The pottery specialist will then draw down information from the computer database held in the site archive to identify the *mortaria* associated with the stamps of a particular potter; their date range, and

their spatial occurrence across the site will be examined. An analytical report will be prepared discussing any significant patterns that may emerge from this analysis, such as possible operational relationships between contemporary potters. The typological ranges associated with each stamp type will be identified and this may require additional illustration to show the potter's stamps and the general form types associated with them. This data will be cross-referenced with other aspects of Stage II as they develop, including any associated coarseware pottery, and the detailed structural and stratigraphic analysis. The study of the *mortaria* stamps may also include some evidence from other Romano-British sites, perhaps linked to particular kiln types, in order to examine the influence of migrant potters. It may also be possible to draw certain conclusions about the origins of the potters from this epigraphic evidence.

Kay Hartley will be more closely involved in the preparation of this part of the project than any other on account of her unrivalled knowledge and understanding of the topic.

f The integration of the coarseware pottery into the research archive

As already stated, a great deal of work on the coarseware pottery for both M-H and CTF has already been completed to an advanced stage. The Stage I review (see above - 4.1 c) will have identified any problems that might hinder the integration of the coarseware records into the research archive, and these will be addressed at this point by a pottery specialist.

The outstanding work on the M-H and CTF coarseware pottery will be completed, including the preparation of a detailed analytical report discussing the seriation of the kiln groups by fabric and form, checking the coarseware type series, and the fabric descriptions. An illustrator will be required to complete the existing tables and bar charts which will form the basis of the text. The coarseware type series is already completed and the drawings are paged up. The groups will be cross-referenced with the *mortaria* database and type series, and briefly described, area by area, across the sites. The intention will be to place the coarseware pottery within the same chronological framework as the stratigraphy and the *mortaria*.

Any further illustrations required to supplement the analytical report will be completed. These will probably include the depiction of important coarse pottery groups and their associated *mortaria*. These drawings will be prepared with a view to final publication. Many coarseware pottery drawings have already been finished to a high standard, but these are not yet paged up because they were originally to be mounted with the *mortaria* groups - an exercise abandoned when KH's revisions invalidated the earlier work based on the original *mortarium* typology. All these drawings will require mounting once an agreed system has been finalised.

g The analysis of the glassware, glass kiln, and their significance to the interpretation of the site

A glassware report already exists, but the bulk of this forms only a catalogue of the material, and no attempt has been made to relate the glassware to the glass kiln itself. The material will be re-examined and incorporated into a full report analysing the kiln structure and the level of technology represented. This report will include the analysis of any apparent relationship between glass and pottery production on the site.

To achieve this, the current report will ideally be returned to the authors, together with a written structural analysis of the glass kiln prepared by the archaeological editor. The glass specialists will then be commissioned to expand their original work with any discussion or conclusions they may wish to make. Any relationships between the glass and pottery industries that are identified by the glass/pottery specialists, or the archaeological editor, will be assimilated into the discussion and conclusions.

An illustrator will be commissioned to prepare any drawings that may be required to accompany the report.

h The analysis of other assemblages of material significant to the interpretation of the site

To complete the analysis/interpretation of the site, the industrial structures and their products should be closely related to the other artefact assemblages which should provide important evidence concerning the site's inhabitants, their activities, and the environment within which they lived. Some of these artefact groups will provide important dating evidence for the site.

Finds specialists will be commissioned to complete the unfinished M-H finds reports identified under the Stage I review (see above - 4.1 b). Some finished reports may be revised in the light of any amendments suggested by their original authors, or even, in some cases, completely re-commissioned. A report on the small assemblage of artefacts from CTF will be written and the relevant specialists consulted if appropriate. However, various notes and/or brief reports already exist for most of these few finds, so consultation should be minimal. One exception may be the report on the fired clay, which may include a discussion of the kiln furniture.

Once all the finds reports and catalogues are complete for both M-H and CTF, the data they contain will be incorporated into the analysis of the site stratigraphy and the principal finds assemblages represented by the *mortaria* and coarseware pottery.

The condition/completeness of the illustrations for all the finds reports should be assessed at this point and any apparent omissions rectified by an illustrator. The drawings will be prepared to a high standard and mounted with a view to publication.

i The research archive and publication

The site archive constructed for Stage I of the project will be upgraded to a full research archive, including the texts, illustrations, printouts, analysis, and other additional data created by Stage II. This will be organised to an approved format and will represent an accessible reference collection for the benefit of future study. The research archive will be held under the control and care of Warwickshire Museum, and will be organised and stored in accordance with the English Heritage guidelines described in MAP 2 Appendix 6.

The research archive will form the basis for any publication. The analytical and interpretive texts and illustrations held in the research archive will have been prepared in the light of an agreed publication format and synopsis (see above 4.2 a), so as to facilitate the publication process. If required, it will be possible to publish sections of the research archive in their entirety, with little or no amendment. Alternatively, other sections of the research archive may be edited for publication, depending on the relative importance of the evidence they contain.

Some additional texts, as well as maps, plans, and other illustrations, may be required to introduce and link the published sections of the research archive, and these will be prepared as appropriate. They will include items such as the acknowledgments, introductions, summaries, archaeological background, and any additional synthesis interpretation, plans or reconstructions. The texts will be written by a combination of the excavation director (KH), pottery specialists and other project consultants, and these will be collated and edited by the archaeological editor. In some cases draft texts already exist which might form part of a finished volume. A draft text describing the archaeological background, for example, has been written by Paul Booth, and it is envisaged that he will complete this.

The illustrator complete the mounting of all the publication figures. Any amendments to the figures will be identified during the final editing process, and these will also be undertaken by an illustrator.

Where reports and catalogues from the research archive have been edited for the printed page, the full versions will be reproduced in microfiche if the data they contain is considered significant to other parties such as other specialists. Quantities of detailed methodological and analytical information may also be held on microfiche rather than in print. The microfiche texts will be prepared by the archaeological editor.

5. Resources and programming (MAP 2: A5.5)

5.1 Staffing and equipment (MAP 2: A5.5.1)

(Provisional staff names in brackets)

i Staffing

Stage I of the project will require the following personnel -

Project manager	(Helen Maclagan/Nicholas Palmer)
Project co-ordinator/archaeological editor	(John Chadderton)
Excavation director and <i>mortaria</i> consultant	(Kay Hartley)
Roman pottery specialist (- <i>mortaria</i>)	(Jerry Evans)
Roman pottery specialist (- coarseware)	(Paul Booth)
Roman pottery consultant	(Paul Booth/Yvonne Boutwood)
Cherry Tree Farm consultant	(Martin Jones/Paul Booth)
Mancetter - Hartshill consultant	(Paul Booth)
Illustrator	
Assistant	

Stage II of the project will provisionally require the following personnel -

Project manager
Project co-ordinator/archaeological editor
Excavation director and *mortaria* consultant
Roman pottery specialist (- *mortaria*)
Roman pottery specialist (- coarseware)
Roman pottery consultant
Cherry Tree Farm consultant
Mancetter - Hartshill consultant
Finds specialist - coins
Finds specialist - samian
Finds specialist - brooches
Finds specialist - copper alloy
Finds specialist - glassware (& glass kiln)
Finds specialist - industrial waste
Finds specialist - iron
Finds specialist - lead
Finds specialist - ceramic objects & kiln furniture
Finds specialist - tile
Finds specialist - stone
Finds specialist - wood
Finds specialist - worked bone
Finds specialist - animal bone
Finds specialist - floral remains
Finds specialist - beetle remains
Illustrator
Assistant

The areas of expertise and responsibility outlined above serve only as a general guide. In practice the areas of expertise and responsibility of the many of the project staff will overlap due to their previous involvement in different aspects of the Mancetter - Hartshill (M-H & CTF) project in the past.

ii Tasks

The project tasks identified in the methods section above (4.1 a-g: 4.2 a-i: & 4.3) are summarised below, and related to the relevant staff member where appropriate.

Stage I

	<i>Task</i>	<i>Staff member</i>
a	M-H <ul style="list-style-type: none">- primary archive collation & inventory- primary archive collation & packing- primary archive organisation and storage- security copying	<ul style="list-style-type: none">- archaeological editor- excavation director- archaeological editor- assistant
b	M-H <ul style="list-style-type: none">- archive assessment & cross-referencing- material re-organisation/re-boxing- preparatory work: <i>mortaria</i> records- <i>mortaria</i> assessment- assessment of specialist finds reports- extraction of chronological information	<ul style="list-style-type: none">- archaeological editor- assistant- archaeological editor- pottery specialist- archaeological editor- archaeological editor
c	CTF <ul style="list-style-type: none">- archive assessment- material re-organisation/re-boxing- <i>mortaria</i> computerisation assessment- coarseware pottery assessment- co-ordination/general assistance	<ul style="list-style-type: none">- Cherry Tree Farm consultant- assistant- pottery specialist- pottery specialist- archaeological editor
d	M-H & CTF <ul style="list-style-type: none">- write basic site narrative- write summary interpretation: spot dating- Consultation and additional editing- General consultation- General consultation- illustrations	<ul style="list-style-type: none">- archaeological editor- archaeological editor- excavation director- CTF consultant- M-H consultant- illustrator
e	M-H <ul style="list-style-type: none">- establish system for computerisation- input <i>mortaria</i> data onto computer- test analysis of <i>mortaria</i> database- <i>mortaria</i> re-boxing- <i>mortaria</i> drawing check- <i>mortaria</i> consultation	<ul style="list-style-type: none">- pottery specialist- assistant/pottery specialist- pottery specialist- assistant- assistant- excavation director/<i>mortaria</i> consultant
f	M-H <ul style="list-style-type: none">- preparatory work: <i>mortarium</i> type series- preparatory work: <i>mortarium</i> type series- preparatory work: <i>mortarium</i> type series- preparatory consultation: type series- first edit: <i>mortarium</i> type series- consultation and discussion of first draft- consultation and discussion of first draft- consultation and discussion of first draft- consultation and discussion of first draft- second edit: <i>mortarium</i> type series- consultation and discussion of second draft	<ul style="list-style-type: none">- archaeological editor- pottery specialist- assistant- pottery consultant- pottery specialist- pottery specialist- pottery consultant- archaeological editor- excavation director/<i>mortaria</i> consultant- pottery specialist- pottery specialist

<i>Task</i>	<i>Staff member</i>
(f) M-H Continued)	
- consultation and discussion of second draft	- pottery consultant
- consultation and discussion of second draft	- archaeological editor
- consultation and discussion of second draft	- excavation director/ <i>mortaria</i> consultant
- final edit & consultation	- pottery specialist
- final edit & consultation	- pottery consultant
- final edit & consultation	- archaeological editor
- final edit & consultation	- excavation director/ <i>mortaria</i> consultant
- collation of <i>mortarium</i> type series drawings	- pottery specialist
- additional drawings: <i>mortarium</i> type series	- illustrator
g M-H & CTF	
- limited test analysis: <i>mortaria</i>	- pottery specialist
- concluding submissions from specialists	- pottery specialist (<i>mortaria</i>)
- concluding submissions from specialists	- pottery specialist (coarseware)
- write progress report	- archaeological editor
- dissemination and discussion	- all principal parties
- Monitoring/confirmation meeting	- all principal parties
- complete revised proposal for Stage II	- archaeological editor
- archiving	- archaeological editor

In addition to the above tasks, which are listed on the timetable below (5.2), some of the staff and consultants will be involved at various points of Stage I in meetings and/or discussions etc. These are not itemised on the timetable, but blocks of additional time have been allocated to the appropriate members of staff in the budget lists (5.3). A block of time has also been allocated to a project manager, who will manage the project throughout.

Stage II

	<i>Task</i>	<i>Staff member</i>
a	M-H & CTF	
	- confirm proposed publication format	- archaeological editor
	- collate & despatch finds reports/material	- archaeological editor
	- write analytical report: site narrative	- archaeological editor
	- write interpretation & refine chronology	- archaeological editor
	- site narrative: consultation & editing	- excavation director
	- site narrative: consultation	- Mancetter-Hartshill consultant
	- site narrative: consultation	- Cherry Tree Farm Consultant
	- illustrations	- illustrator
	- cross-referencing to rest of archive	- archaeological editor
b	M-H & CTF	
	- write survey of kiln types	- archaeological editor
	- kiln survey: consultation & editing	- excavation director
	- kiln survey: consultation	- Mancetter-Hartshill consultant
	- kiln survey: consultation	- Cherry Tree Farm Consultant
	- describe/interpret other features relevant to the industry	- archaeological editor
c	M-H & CTF	
	- complete computerisation of CTF <i>mortaria</i> records	- assistant/pottery specialist
	- integrate M-H and CTF <i>mortaria</i> databases	- pottery specialist
	- analysis and seriation of the <i>mortaria</i>	- pottery specialist
	- <i>Mortaria</i> : consultation	- excavation director/ <i>mortaria</i> consultant
	- <i>Mortaria</i> : consultation	- pottery consultant
	- editorial assistance	- archaeological editor
	- illustrate <i>mortaria</i> groups	- illustrator
d	M-H & CTF	
	- incorporate new CTF <i>mortaria</i> forms into the M-H type series	- pottery specialist
	- prepare full <i>mortaria</i> type series	- pottery specialist
	- <i>Mortaria</i> type series: consultation	- excavation director/ <i>mortaria</i> consultant
	- <i>Mortaria</i> type series: consultation	- pottery consultant
	- cross-reference type series with stamps & groups	- pottery specialist
	- editorial assistance	- archaeological editor
	- illustrations for <i>mortaria</i> type series	- illustrator
e	M-H & CTF	
	- complete catalogue of <i>mortaria</i> stamps	- excavation director
	- complete catalogue of <i>mortaria</i> stamps	- pottery specialist
	- illustrations: <i>mortaria</i> stamps & dies	- illustrator
	- identify <i>mortaria</i> stamp groups from database	- pottery specialist
	- write analytical stamp report	- excavation director/ <i>mortaria</i> consultant
	- stamp report: consultation & editing	- pottery specialist
	- write full analytical <i>mortaria</i> report	- pottery specialist
	- final <i>mortaria</i> report consultation & editing	- excavation director
	- final <i>mortaria</i> report consultation	- pottery consultant

<i>Task</i>	<i>Staff member</i>
f M-H & CTF	
- complete work on coarseware pottery	- pottery specialist
- cross-reference coarseware with <i>mortaria</i> groups	- pottery specialist (CWare)
- assist with cross-referencing of coarseware with <i>mort</i> groups	- pottery specialist (<i>mort</i>)
- write analytical coarseware pottery report	- pottery specialist
- complete illustrations: coarseware report	- illustrator
g M-H	
- prepare structural analysis of glass kiln	- archaeological editor
- revise & expand glassware report	- finds specialist (glassware)
- final editing	- archaeological editor
- illustrate glassware	- illustrator
h M-H & CTF	
- revise/complete coin report	- finds specialist (coins)
- revise/complete samian report	- finds specialist (samian)
- revise/complete brooch report	- finds specialist (brooches)
- revise/complete copper alloy report	- finds specialist (copper alloy)
- revise/complete iron report	- finds specialist (iron)
- revise/complete lead report	- finds specialist (lead)
- revise/complete industrial waste report	- finds specialist (industrial waste)
- revise/complete ceramic object report	- finds specialist (ceramic objects)
- revise/complete kiln furniture report	- finds specialist (kiln furniture)
- revise/complete tile report	- finds specialist (tile)
- revise/complete stone report	- finds specialist (stone)
- revise/complete wood report	- finds specialist (wood)
- revise/complete worked bone report	- finds specialist (worked bone)
- revise/complete animal bone report	- finds specialist (animal bone)
- revise/complete floral remains reports	- finds specialist (floral)
- revise/complete beetle report	- finds specialist (beetles)
- incorporate finds data: site interpretation	- archaeological editor
- complete illustrations for finds	- illustrator
i M-H & CTF	
- deposit research archive	- archaeological editor
- write concluding summary report	- pottery specialist (<i>mort</i>)
- write concluding summary report	- pottery specialist (CWare)
- write progress report	- archaeological editor
- dissemination and discussion	- all principal parties
- establish & confirm final volume synopsis	- archaeological editor
- collate/edit analytical reports	- archaeological editor
- write additional texts	- excavation director
- write additional texts	- pottery specialist (<i>Mort</i>)
- write additional texts	- pottery specialist (CWare)
- write additional texts	- Mancetter-Hartshill consultant
- write additional texts	- Cherry Tree Farm consultant
- additional figures & drawing mounting	- illustrator
- copy editing - first draft	- archaeological editor
- discussion & amendment	- excavation director
- discussion & amendment	- pottery specialist (<i>Mort</i>)
- discussion & amendment	- pottery specialist (CWare)
- discussion & amendment	- Mancetter-Hartshill consultant

<i>Task</i>	<i>Staff member</i>
(i) M-H & CTF Continued)	
- discussion & amendment	- Cherry Tree Farm consultant
- amend illustrations	- illustrator
- copy editing - final draft	- archaeological editor

In addition to the above tasks, which are listed on the timetable below (5.2), some of the staff and consultants will be involved at various points of Stage II in meetings and/or discussions etc. These are not itemised on the timetable, but blocks of additional time have been allocated to the appropriate members of staff in the budget lists (5.3). A block of time has also been allocated to a project manager, who will manage the project throughout.

iii Materials

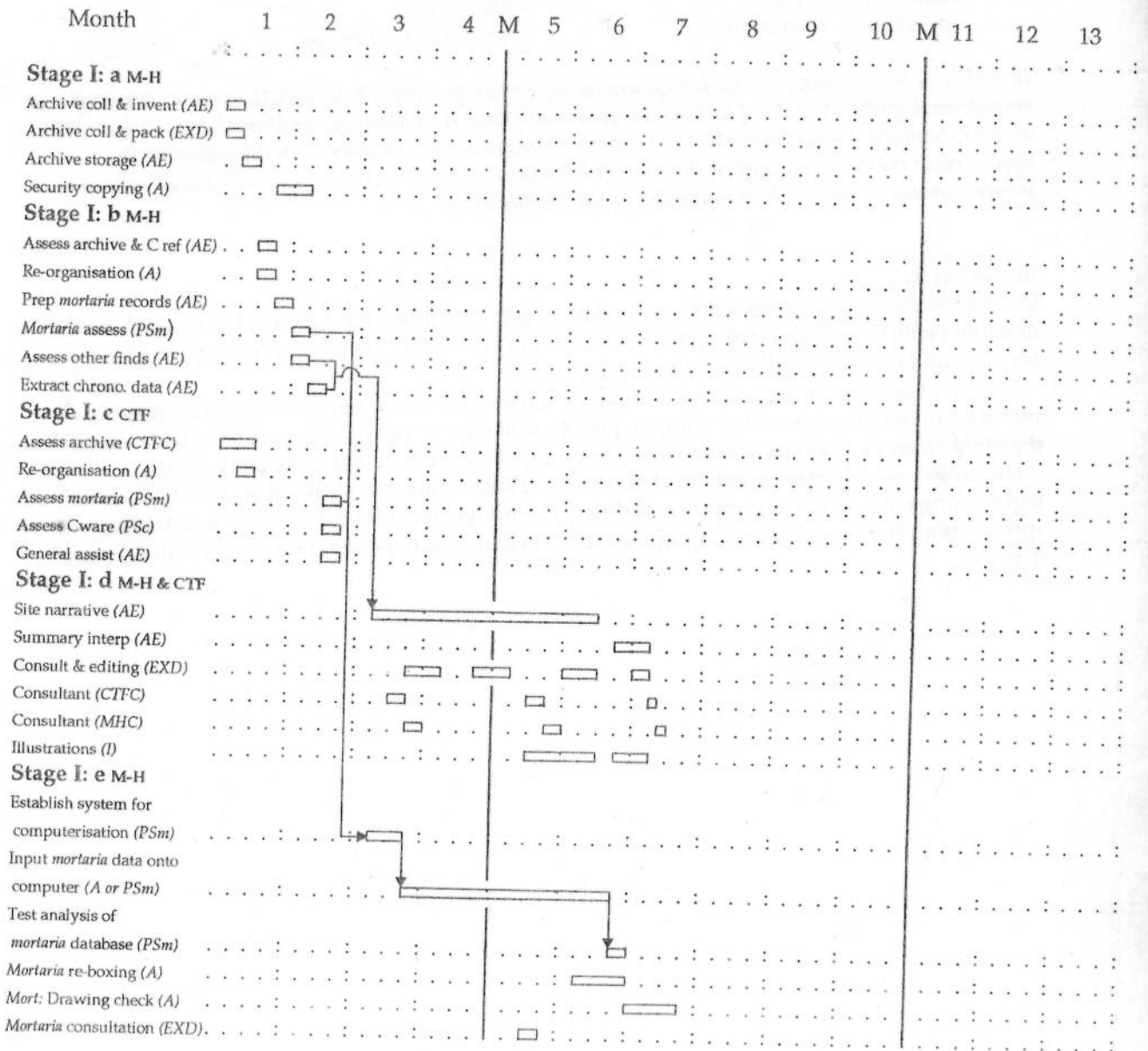
During the course of the project the normal archaeological office services will be required, including drawing facilities and materials, photocopying, filing materials, stationary, photographic reduction services, and communication and travel costs.

The intention to store the research archive at Warwickshire Museum, and the large quantity of records and artefacts associated with the project, will require significant resources. The material costs therefore cover archive storage facilities, including filing cabinets and a planning chest.

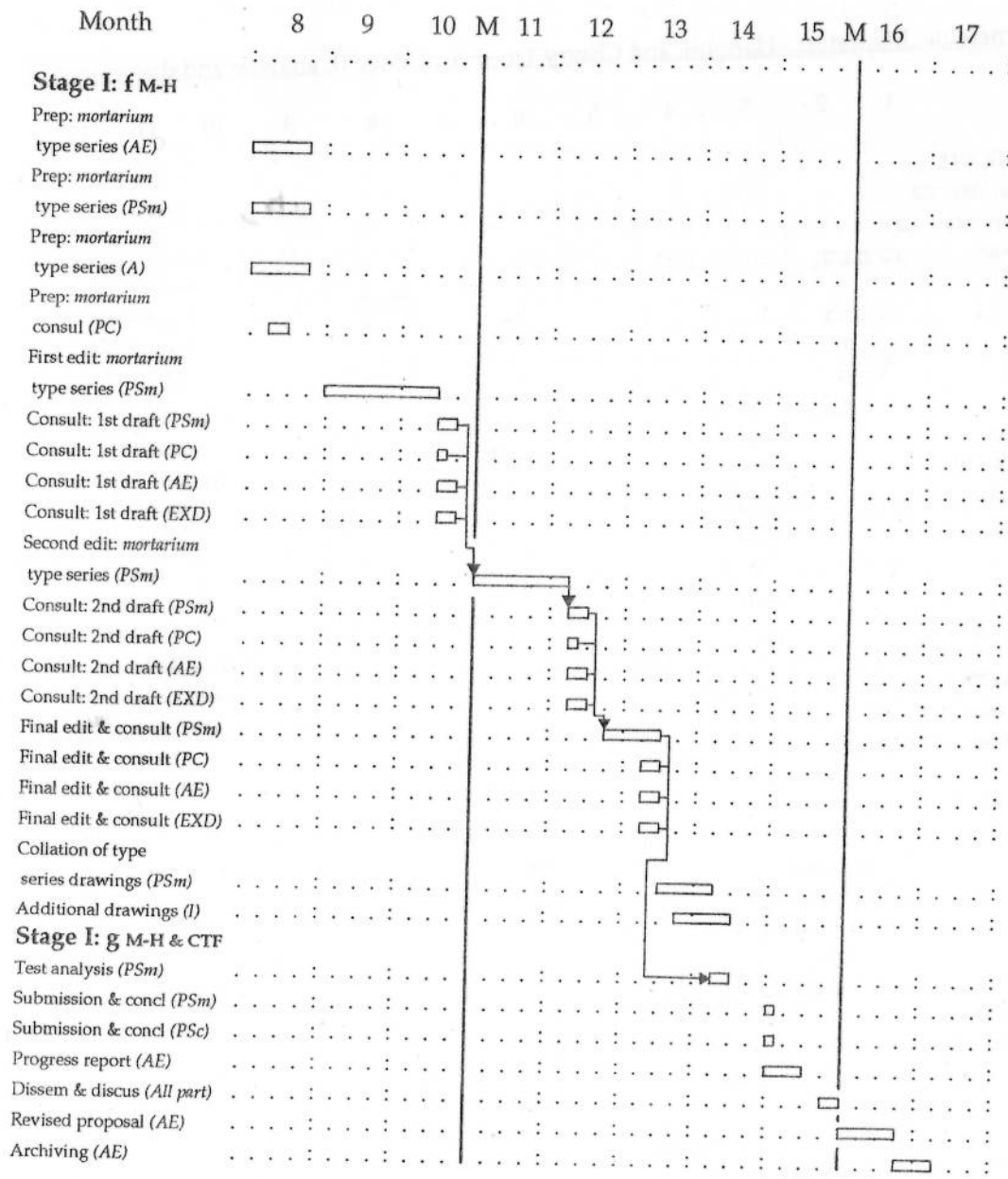
The project incorporates a high level of computer based data management and analysis, which will require long term access to computer facilities. The budget includes the costs for a computer with the specification, software and backing-up facilities needed to manipulate the necessary quantities of data.

5.2 Timetable (MAP 2: A5.5.2)

Timetable: Mancetter - Hartshill and Cherry Tree Farm: Stage I, site archive



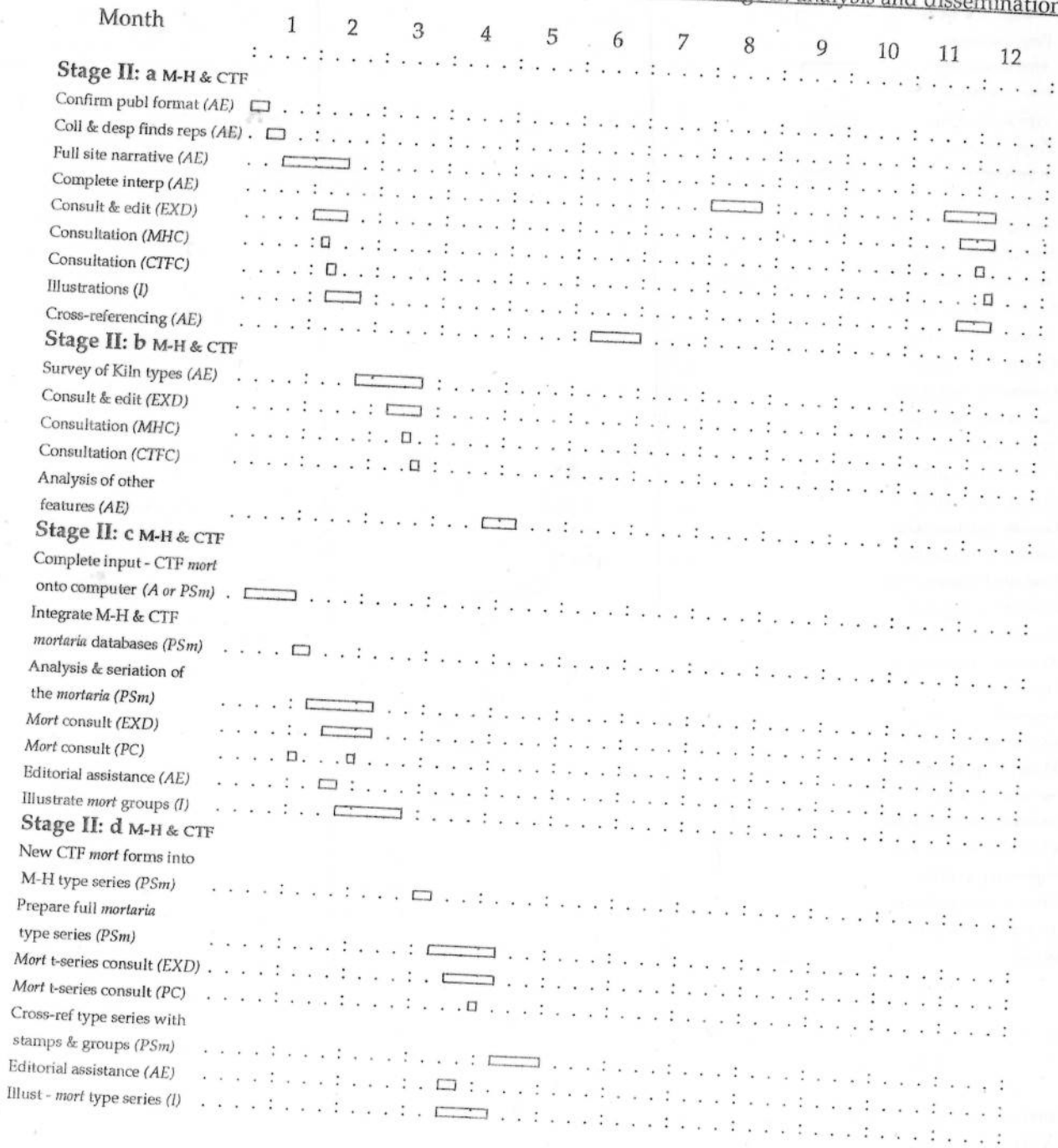
M = Monitoring point
 → = Key interdependencies



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- Staffing abbreviations**
- EXD = Excavation Director / *mortaria* consultant
 - AE = Archaeological Editor
 - PSm = Pottery Specialist (*mortaria*)
 - PSc = Pottery Specialist (coarseware)
 - CTFC = Cherry Tree Farm Consultant
 - MHC = Mancetter-Hartshill Consultant
 - PC = Pottery Consultant
 - A = Assistant
 - I = Illustrator
 - All part = All principal parties

Schematic timetable: Mancetter - Hartshill and Cherry Tree Farm: Stage II, analysis and dissemination



5.3 Budget (MAP 2: A5.5.3)

Stage I of the project will require the following funding -

Task	Weeks	Cost
Project co-ordinator/archaeological editor		
a M-H - primary archive collation/archive inventory	1	
- primary archive organisation and storage	1	
b M-H - archive assessment	1	
- preparatory work: <i>mortaria</i> records	1	
- assessment of finds reports	1	
- extraction of chronological information	1	
c CTF - general assistance: <i>mortaria</i> & coarseware pottery assessment	1	
d M-H & CTF - write basic site narrative	13	
- write summary interpretation: spot dating	2	
f M-H - preparatory work: <i>mortarium</i> type series	3	
- consultation and assistance: first draft (<i>mortaria</i>)	1	500
- consultation and assistance: second draft (<i>mortaria</i>)	1	
- final edit & consultation (<i>mortaria</i>)	1	
g M-H & CTF - write progress report	2	
- dissemination and discussion	1	
- revise publication proposal: Stage II	3	
- archiving	2	
(Not on the timetable) - additional consultation/meetings	<u>1</u>	
	37	18,870
Excavation director and <i>mortaria</i> specialist (Kay Hartley)		
a M-H - archive collation and packing	1	
d M-H & CTF - site narrative/summary interpretation: consultation & additional editing	7	
e M-H - <i>mortaria</i> consultation	1	
f M-H - <i>mortaria</i> type series: 1st edit consultation	1	600
- <i>mortaria</i> type series: 2nd edit consultation	1	
- final edit & consultation	1	
g M-H & CTF - dissemination and discussion	1	
(Not on the timetable) - additional consultation/meetings	<u>1</u>	
	14	8,400
Roman pottery specialist (- <i>mortaria</i>)		
b M-H - assessment of <i>mortaria</i> records	1	
c CTF - <i>mortaria</i> computerisation assessment	1	
e M-H - establish system for computerisation (<i>mortaria</i>)	2	
- input <i>mortaria</i> data onto computer	12	
- test analysis of <i>mortaria</i> database	1	
f M-H - preparatory work: <i>mortarium</i> type series	3	
- first edit: <i>mortarium</i> type series	6	500
- consultation and discussion of first draft	1	
- second edit: <i>mortarium</i> type series	5	
- consultation and discussion of second draft	1	
- final edit & consultation	3	
- collation of <i>mortarium</i> type series drawings	3	
g M-H & CTF - test analysis of various aspects of the site archive	1	
- write & submit summary statement on <i>mortaria</i> for progress report	0.4	
- dissemination and discussion	1	
(Not on the timetable) - additional consultation/meetings	<u>1</u>	
	42.4	22,896

Roman pottery specialist (- coarseware)		
c CTF	- coarseware pottery assessment	1
g M-H & CTF	- write & submit summary statement on coarseware for progress report	0.4
	- dissemination and discussion	1
(Not on the timetable)	- additional consultation/meetings	<u>0.2</u>
		2.6
		2,496
Roman pottery consultant		
f M-H	- preparatory consultation: <i>mortarium</i> type series	1
	- consultation and discussion of first draft (<i>mortaria</i>)	0.6
	- consultation and discussion of second draft (<i>mortaria</i>)	0.6
	- final edit & consultation (<i>mortaria</i>)	1
(Not on the timetable)	- additional consultation/meetings	<u>1</u>
		4.2
		4,032
Cherry Tree Farm consultant		
c CTF	- archive assessment	2
d M-H & CTF	- site narrative: general consultation	2.4
(Not on the timetable)	- additional consultation/meetings	<u>0.2</u>
		4.6
		4,416
Mancetter - Hartshill consultant		
d M-H & CTF	- site narrative: general consultation	2.6
(Not on the timetable)	- additional consultation/meetings	<u>0.4</u>
		3
		2,880
Illustrator		
d M-H & CTF	- illustrations	6
f M-H	- additional drawings: <i>mortarium</i> type	<u>3</u>
		9
		2,970
Assistant		
a M-H	- security copying	2
b M-H	- material re-organisation/re-boxing	1
c CTF	- material re-organisation/re-boxing	1
e M-H	- <i>mortaria</i> re-boxing	3
	- <i>mortaria</i> drawing check	3
f M-H	- preparatory work: <i>mortarium</i> type series	<u>3</u>
		13
		4,290
Project manager		
Stage I: a-g	- project management	<u>3.6</u>
		3.6
		2,268
Staff total		
		73,518
Materials (8.5%)		
Sub total		<u>6,249</u>
		79,768
Travel		
Sub total		<u>1,200</u>
		80,968
Overheads (15%)		
		12,145
TOTAL		
		<u>93,112</u>

Stage II of the project will require the following *provisional* funding -

Task	Weeks	Cost
Project co-ordinator/archaeological editor		
a M-H & CTF	- confirm format for proposed publication	1
	- collate and despatch finds reports to specialists	1
	- write analytical report: site narrative	4
	- write interpretation & refine chronology	6
	- cross-referencing to rest of archive	3
b M-H & CTF	- write survey of kiln types	4
	- describe/interpret other features relevant to the industry	2
c M-H & CTF	- <i>mortaria</i> analysis: editorial assistance	1
d M-H & CTF	- <i>mortaria</i> type series: editorial assistance	1
e M-H & CTF	- <i>mortaria</i> stamp report & final <i>mortaria</i> report: editorial assistance	3
f M-H & CTF	- coarseware pottery report: editorial assistance	1
g M-H	- prepare structural analysis of glass kiln	1
	- final editing	1
h M-H & CTF	- incorporate finds data: site interpretation	2
i M-H & CTF	- deposit research archive	2
	- write progress report	1
	- dissemination & discussion	1
	- establish & confirm final volume synopsis	2
	- edit all analytical reports	4
	- copy edit: first draft	3
	- copy edit: final draft	3
(not on the timetable)	- additional consultation/meetings	1
		48
		24,480
Excavation director and <i>mortaria</i> specialist (Kay Hartley)		
a M-H & CTF	- full site narrative & interpretation: consultation & editing	4
b M-H & CTF	- kiln survey: consultation & editing	2
c M-H & CTF	- <i>mortaria</i> analysis: consultation	3
d M-H & CTF	- <i>mortaria</i> type series: consultation	3
e M-H & CTF	- complete catalogue of <i>mortaria</i> stamps	3
	- write analytical stamp report	6
	- final <i>mortaria</i> report: consultation	4
i M-H & CTF	- dissemination & discussion	1
	- write additional texts	3
	- discuss & amend report 1st draft	1
(not on the timetable)	- additional consultation/meetings	1
		31
		18,600
Roman pottery specialist (- <i>mortaria</i>)		
c M-H & CTF	- complete computerisation of CTF <i>mortaria</i> records	3
	- integrate M-H and CTF <i>mortaria</i> databases	1
	- analysis and seriation of the <i>mortaria</i>	4
d M-H & CTF	- incorporate new CTF <i>mortaria</i> forms into M-H type series	1
	- prepare full <i>mortaria</i> type series	4
	- cross-reference type series with stamps & groups	3
e M-H & CTF	- assist completion of <i>mortaria</i> stamp catalogue	1
	- identify <i>mortaria</i> stamp groups from database	2
	- stamp report: consultation & editing	3
	- write full analytical <i>mortaria</i> report	6
f M-H & CTF	- assist with cross-ref of coarseware with <i>mortaria</i> groups	1
i M-H & CTF	- write & submit summary of the <i>mortaria</i> for progress report	0.2
	- dissemination & discussion	1
	- write additional texts	1
	- discuss & amend report first draft	0.6

(not on the timetable) - additional consultation/meetings	1	
	32.8	17,712
Roman pottery specialist (- coarseware)		
f M-H & CTF - complete work on coarseware pottery	4	
- cross-reference coarseware with <i>mortaria</i> groups	3	
- write analytical coarseware pottery report	3	
i M-H & CTF - write & submit summary of the coarseware for progress	0.2	
- write additional texts	1	
- discuss & amend report first draft	0.6	
(not on the timetable) - additional consultation/meetings	1	
	12.8	12,288
Roman pottery consultant		
c M-H & CTF - <i>mortaria</i> analysis consultation	0.6	
d M-H & CTF - final <i>mortarium</i> type series consultation	0.4	
e M-H & CTF - <i>mortaria</i> stamp report consultation	0.4	
	1.4	1,344
Cherry Tree Farm consultant		
a M-H & CTF - final site narrative & interpretation consultation	0.6	
b M-H & CTF - kiln survey: consultation	0.2	
i M-H & CTF - write additional texts	0.6	
- discuss & amend report first draft	0.4	
	1.8	1,728
Mancetter - Hartshill consultant		
a M-H & CTF - final site narrative & interpretation consultation	0.6	
b M-H & CTF - kiln survey: consultation	0.2	
i M-H & CTF - write additional texts	0.6	
- discuss & amend report first draft	0.4	
	1.8	1,728
Finds specialist - glassware		
g M-H - revise & expand glassware report	2	
Finds specialist - coins		
h M-H & CTF - revise/complete coin report	0.2	
Finds specialist - samian		
h M-H & CTF - revise/complete samian report	2	
Finds specialist - brooches		
h M-H - revise/complete brooch report	0.4	
Finds specialist - copper alloy		
h M-H & CTF - revise/complete copper alloy report	0.2	
Finds specialist - iron		
h M-H & CTF - revise/complete iron report	0.4	
Finds specialist - lead		
h M-H - revise/complete lead report	0.2	
Finds specialist - industrial waste (including charcoal)		
h M-H & CTF - revise/complete industrial waste report	1	
Finds specialist - ceramic objects		
h M-H - revise/complete ceramic objects	0.2	

Finds specialist - kiln furniture		
h M-H & CTF	- revise/complete kiln furniture	2
Finds specialist - tile		
h M-H & CTF	- revise/complete tile report	0.4
Finds specialist - stone (including flint)		
h M-H & CTF	- revise/complete stone report	1
Finds specialist - wood		
h M-H	- revise/complete wood report	1
Finds specialist - worked bone		
h M-H	- revise/complete worked bone report	1
Finds specialist - animal bone		
h M-H & CTF	- revise/complete animal bone report	3
Finds specialist - floral remains		
h M-H & CTF	- revise/complete floral remains reports	1
Finds specialist - beetle remains		
h M-H	- revise/complete beetle report	1
		17
		8,925
Illustrator		
a M-H & CTF	- final site narrative & interpretation: illustrations	4
c M-H & CTF	- illustrate <i>mortaria</i> groups	4
d M-H & CTF	- illustrations for final <i>mortarium</i> type series	3
e M-H & CTF	- illustrations: <i>mortaria</i> stamps & dies	3
f M-H & CTF	- complete illustrations: coarseware report	3
g M-H	- illustrate glassware	1
h M-H & CTF	- complete illustrations for finds	1
i M-H & CTF	- additional publication figures and final mounting	6
	- amendments to final publications	2
		27
		8,910
Project manager		
Stage II: a-i	- project management	4.8
		4.8
		3,024
Staff total		
		98,739
Materials (8.5%)		
		8,393
Sub total		
		107,132
Travel		
		1,000
Sub total		
		108,132
Overheads (15%)		
		16,220
TOTAL		
		124,352

Bibliography

- Andrews, G *et al*, 1991, *Management of Archaeological Projects*, English Heritage Guide
- Halpin, C 1990, *Mancetter-Hartshill/Broadclose/Cherry Tree Farm: Post-Excavation Progress Report*, English Heritage internal report
- Swan, V 1984, *The Pottery Kilns of Roman Britain*, RCHM Supplementary Series: 5
- Timby, J 1992, *Mancetter-Hartshill Post-Excavation Assessment*, English Heritage internal report

Appendix

A summary of the current archive

Stratigraphic records

Mancetter (Broadclose)

Site notebooks	=	5
Post-ex notes: kilns, context list etc	=	c 80 pages
Descriptive texts & notes	=	c 50 pages

Hartshill

Site notebooks	=	?
Descriptive texts & notes	=	c 32 pages

Cherry Tree Farm

Context sheets	=	c 70
Site note book	=	1
Site notes/post excavation notes	=	30 pages
Site level books	=	2

Plans and sections

Mancetter - Hartshill (general)

General site location plans	=	10 sheets	(A1 to AO in size)
Assorted site plans and sections	=	60 drawings	(A4 to A1 in size)
Drawing/context index list	=	1 file	

Mancetter (Broadclose)

Site plans and sections (first draft)	=	12 sheets	(A1 to AO in size)
Copies of the above site plans and sections	=	20 sheets	(A1 to AO in size)
Site plans and sections (?publi standard)	=	37 sheets	(A1 to AO in size)
Plans: magnetometer survey	=	3 sheets	(A1)

Hartshill

Kiln plans and sections (?publi standard)	=	30 sheets	(A3 to A2 in size)
Copies of kiln plans with corrections	=	28 sheets	(A1 to AO in size)

Cherry Tree Farm

Site plans and sections	=	44 sheets	(A1 to AO in size)
Site plans and sections (?publi standard)	=	15 sheets	(A1 to AO in size)
Individual feature sections	=	21 sheets	(A4 to A3 in size)

Photographs

Mancetter (Broadclose)

Colour & B/W site photographs (prints)	=	250-300
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Hartshill

B/W site photographs (prints)	=	c 150
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Cherry Tree Farm

B/W slides	=	c 180
Colour slides	=	217

Pottery quantities

Mortaria

<i>Mortaria</i> record sheets (Mancetter-Hartshill)	=	1,950 sheets	
<i>Mortaria</i> (M-H)	=	377 boxes -	(c 22,000+ sherds)
<i>Mortaria</i> (CTF)	=	131 boxes & 46 half boxes -	(c 10,000+ sherds)
Number of potters identified from <i>mortarium</i> stamps	=	65	
Number of identified <i>mortaria</i> fabrics	=	30	
Number of <i>mortaria</i> spout types	=	9	(24 subdivisions)
The current <i>mortarium</i> type series			
- number of broad types	=	11	
- number of subdivision examples	=	2,000+	

Coarseware pottery

Hartshill (60-1)	6,811 sherds
Hartshill (63)	384 sherds
Cherry Tree Farm	9,477 sherds
Mancetter, Broadclose	<u>51,511</u> sherds
Total for all sites	69,153 sherds

Other pottery occurs in only small amounts

Pottery drawings

M-H <i>mortarium</i> rim profiles	=	2,000+	
<i>Mortarium</i> rim decoration	=	2 sheets	(A1 in size)
M-H <i>mortarium</i> stamp drawings	=	226	
M-H <i>mortarium</i> spout drawings	=	35-40	
Coarseware fabric/type series	=	c 40 sheets	(AO in size)
Coarseware pottery groups	=	c 30 sheets	(AO in size)
CTF <i>mortaria</i> drawings	=	31 sheets	(AO in size)
CTF stamped <i>mortaria</i> drawings	=	9 sheets	(AO in size)
CTF, various original inked <i>mortaria</i>	=	18 sheets	(AO in size)

Finds reports - current status

Report completed?	Yes/No
The glass industry (M-H)	= Y
The tile (M-H & CTF)	= Y
The industrial waste (M-H)	= Y
The samian (M-H)	= Y
The samian (CTF)	= N
<i>Amphora</i> stamp (M-H)	= Y
The pottery objects (M-H)	= Y
The coin report (M-H)	= Y
The coin report (CTF)	= N