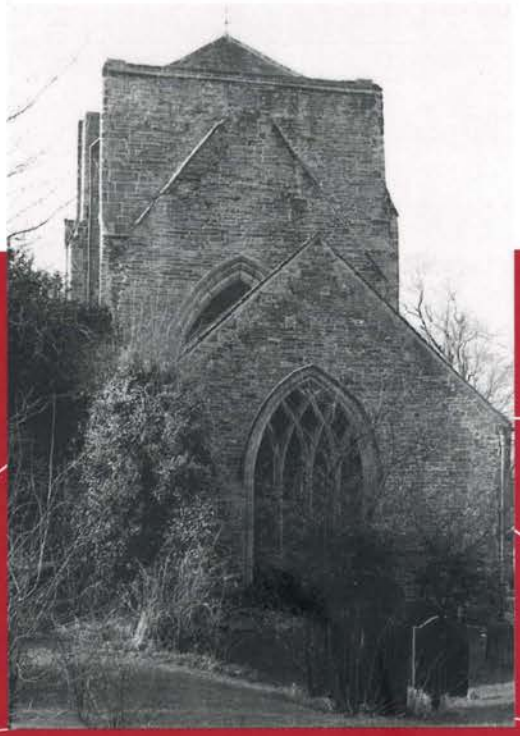
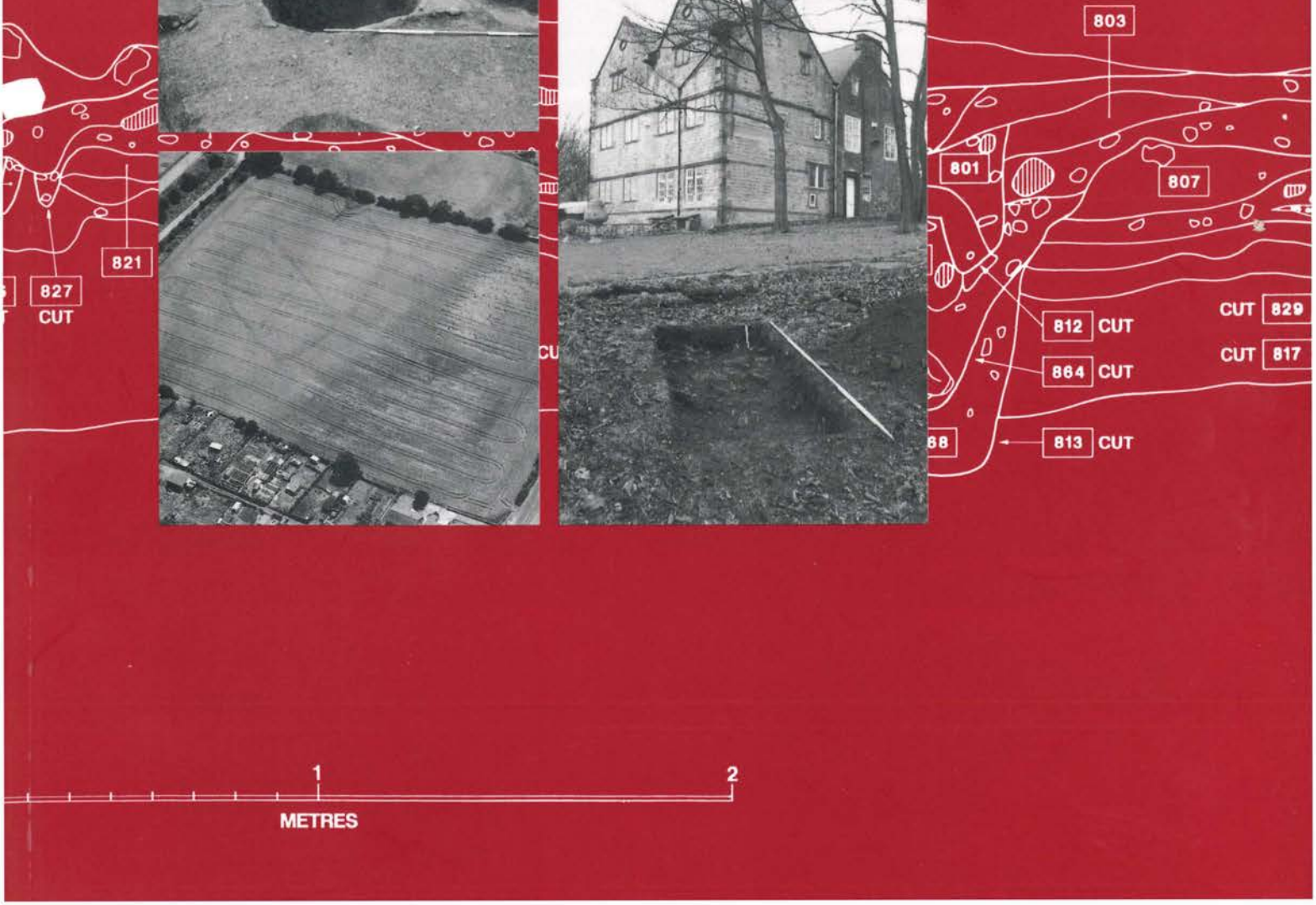
ARCHAEOLOGY IN SOUTH YORKSHIRE

1994-1995





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A REVIEW OF ARCHAEOLOGY IN SOUTH YORKSHIRE

1994 - 1995

COMPILED BY THE SOUTH YORKSHIRE ARCHAEOLOGY SERVICE

CONTENTS

FOREWORD

As chairman of the South Yorkshire Joint Archaeology Committee I am pleased to be able to introduce the sixth annual review of archaeology in South Yorkshire.

The year 1994 - 1995 has been a mixed one for the South Yorkshire Archaeology Service and for the South Yorkshire Archaeology Field and Research Unit. Uncertainty over staffing levels and accommodation, together with the growing volume of work and the uncertain economic climate has put a strain on service delivery.

In spite of these problems the range and quality of the work undertaken and reported on in this volume is greater than ever. For the first time survey work in the west of the county is included, a reminder that South Yorkshire spans a wide range of ecological zones which have contributed to the uniquely mixed archaeological record in the county. To the east our understanding of the archaeology of Doncaster continues to improve with the discovery of part of the Roman cemetery and further evidence for medieval industries.

In Sheffield the redevelopment of the city centre offers the opportunity to gain some insight into the early history of the city, prior to its emergence as one of the key centres of the industrial revolution.

It is to be hoped that next year's review will report the resolution of some of the problems and the continued increase in our knowledge and appreciation of the archaeology of the four districts which comprise South Yorkshire.

Councillor Reg Littleboy
Rotherham MBC

INTRODUCTION

In *Archaeology in South Yorkshire 1992 - 1993* we reported that, in order to more clearly define the separation between the curatorial and contractual functions, each part of the former South Yorkshire Archaeology Unit was to receive its own distinct title. This separation was further underlined when the South Yorkshire Archaeology Service, Sites and Monuments Record, (SYAS, SMR) and the South Yorkshire Archaeology Field and Research Unit (SYAFRU), were physically separated, each moving to separate locations.

The move came about when our base of twenty-one years, at Ellin Street in Sheffield, was sold and demolished to make room for a new car park. A building was constructed at Acres Hill Lane, Darnall to which the contractual functions, formerly housed at Ellin Street, were moved. This included the SYAFRU who now have alternative accommodation which, although not ideal, makes travel throughout the four regions more efficient and economical.

The Archaeology Service has been relocated to Sheffield City Museum. This was a logical option for the Service. By putting us in a position which is close to the centre of Sheffield it provides relatively easy access for users of the SMR. Close proximity to the University of Sheffield is an advantage as the extensive library facilities are close at hand. The SMR is also convenient for the growing numbers of students of Archaeology. Major bus and tram routes are close by, putting the SMR within relatively easy reach of all parts of the county.

The year 1994 - 1995 was not without its difficulties for the Archaeology Service. A rapid turnover of staff in the SMR, followed by a period of six months in which the Service was operated by only one Officer, resulted in the emphasis being placed on the processing of urgent development control matters while SMR enhancement and public access inevitably suffered. This serious situation was alleviated early in the new financial year when Jim McNeil was appointed as temporary SMR Assistant

Over the past year a number of spectacular archaeological discoveries have been reported in the popular press. This issue of *Archaeology in South Yorkshire* contains nothing comparable, but does reflect the normal day-to-day activities of the majority of archaeologists. One popular image of archaeology is of the fieldworker meticulously excavating a fragile artefact with a trowel and paintbrush. Although this image is one which can only rarely be observed on an archaeological excavation, as a metaphor it contains a good deal of truth in that it emphasises the way in which we attempt to build up a larger picture of past human societies from small details and fragments, whether these be fragile artefacts or the ephemeral traces of sequences of ditch cuts or bank collapse preserved in the soil. For every site which provides an impressive or newsworthy discovery, many others are excavated which yield small pieces of information, unimpressive when taken alone, but which contribute essential details to the broader picture. To obtain such details planning applications must be carefully considered by the staff of the South Yorkshire Archaeology Service (SYAS) and detailed advice offered to planners and developers. Archaeological contractors (amongst them the SYAFRU) must then put the recommendations of the Service into practice using techniques appropriate to the type of site and within a timescale and cost negotiated with the developer. The apparently limited results obtained from some of the watching briefs, evaluative excavations and geophysical surveys recorded in the pages of this edition of *Archaeology in*

South Yorkshire might cause the outside observer to question the need for such activity. We hope that some of the longer articles might provide answers. Evaluative excavations on an apparently unprepossessing site in Doncaster, for example, have led to the discovery of an important medieval kiln and, for the first time, part of the Roman cemetery.

Having excavated dozens of trenches across late prehistoric and early Roman field systems (as reported in earlier editions of *Archaeology in South Yorkshire*), we are at last able to begin to make suggestions about the type of society which laid out such extensive landscapes and the ways in which people perceived the landscape within which they lived and worked. Most importantly, we can use the results of such work to plan future excavations more carefully and direct our attentions towards specific problems and unanswered questions.

In a number of articles the authors have tried to reflect some of the recent changes in the way archaeologists approach their material and attempt to reconstruct the ways of life of people in the past. Instead of simply reporting the results of a piece of fieldwork the writers have tried to present the practice of archaeology as an interpretative process; an encounter with the partial and fragmentary remains of human activity in the past. These must be interpreted in the light not only of other information already existing about that period of history, but also in terms of the ways in which we, as the inhabitants of late 20th century Britain, think about human activity and the rationales which we place on human actions. It is clear from studies of indigenous societies in many parts of the world that people behave in accordance with many different sets of cultural rules, both explicitly stated and implicitly understood. In excavating an archaeological site we may be encountering the remains of a world in which common sense, everyday actions were governed by beliefs about the world radically different to those which we accept. The article on the prehistoric site at Auckley represents one response to this, the author having attempted a detailed reconstruction of the sequences of action which lay behind the digging and filling of the pit. In his consideration of the cropmark site at Edenthorpe the same author considers the cropmark landscape as 'existential space'; as a landscape as full of meaning and significance for its inhabitants as our own countryside is for us. Such approaches may not be 'provable' in a scientific sense, but they have the merit of populating the past with people whose actions and activities were governed by complex belief systems and perceptions of the world which possessed their own internal logic and sets of common sense values.

In terms of methodology this edition sees the first of an occasional series on the scientific techniques used by archaeologists. Geophysical surveying is now an essential part of the planning and evaluative process and plays a critical role in the archaeological process. On pages 14-18, Colin Merrony of Sheffield University decries the techniques in common use and the scientific principles upon which they are based. We hope in the future to include similar articles on other aspects of fieldwork and the analysis of archaeological materials.

As *Archaeology in South Yorkshire* exists to inform both the professional and non-professional about the archaeology of the county, we would welcome comments from readers on the form and content of the review. The address of the SYAS can be found on the inside front cover and correspondence should be addressed to the editors.

C.G. Cumberpatch, S.P. Whiteley, J. McNeil.

THE SITES AND MONUMENTS RECORD

In the last edition of *Archaeology in South Yorkshire*, the new Sites and Monuments Record computer software was discussed. Since then, the major changes at the SMR have again been technological. Most importantly, Black Diamond Software have produced an upgraded version of the software - SMR version 2.0. This has been installed on the South Yorkshire Archaeology Service computers and has been undergoing thorough testing.

This new version of the SMR has a new screen layout, so those familiar with version 1 will immediately see a difference. New input and amendment forms have been designed to reflect this (figure 1). However, the system is very simple to follow and easy to use. With a minimum of instruction from the SMR staff, most people have found it a very powerful and friendly system.

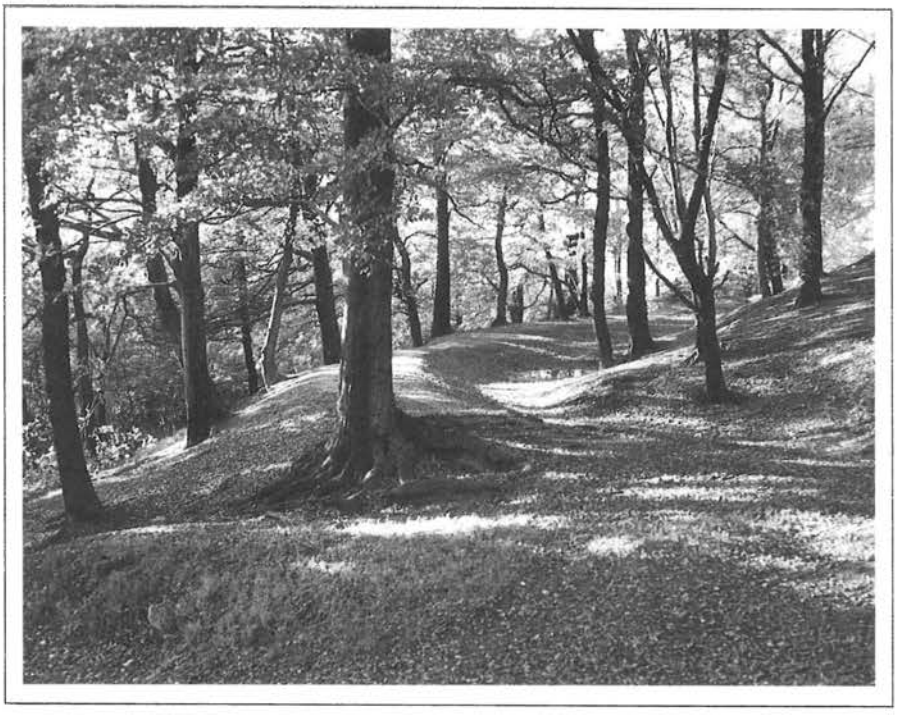
While the new software does everything that v.1 did, it has several new and powerful features. Perhaps the most useful of these are the improved methods of searching the database.

Information on a particular site is entered as a number of basic attributes common to all sites and monuments, such as parish, geology, site status etc. Extra information, such as site descriptions and history, photographs, site visits, bibliography is entered as free text into extra boxes called memo fields. Each of these attributes, called 'fields', can be searched for particular terms, as can the memo fields. It is this searching procedure that has been improved.

It is now possible to search the SMR in four different ways. "Query By Example" allows the user to type in a term under a particular heading, which the database uses - as an "example" - to conduct the "query" against the SMR.

More powerful than this is Advanced Multiple Search. This allows the user to select terms from within the database and to combine these with other terms for a more complex and specific search. For example, **parish = Auckley** and **type = cropmark** would find only cropmark sites within that parish. The beauty of this method of searching is that, since the terms are selected from the existing database, the user doesn't waste time searching for terms that haven't been used in the SMR.

A third search facility allows searching for particular words or phrases within the free text "memo" fields mentioned above. This can be particularly useful for finding particular aerial photographs or information



■ EARTHWORK IN WATH WOOD

which might not have been recorded as one of the basic record fields of the site.

Another search facility now available is locational, rather than text-based. SMR v.2 can conduct radial searches from a given grid reference. The results of such a search will be a list of all sites within a radius specified by the enquirer. Such a facility will be of particular value when considering the impact of development on sites and landscapes.

For much of the period 1994 - 1995, staffing of the SMR was reduced to one post, a state of affairs which inevitably limited the efficiency of the operation. In such circumstances day-to-day planning work had to be given priority with the effect that the scale of the response to other tasks had to be reduced. Over the period covered by this review for example, enhancement of the SMR - the preparation and input of information on new sites, and the editing and updating of those records already in the database - was often impossible. Thanks to the contributions of volunteers however, a certain amount of work continued and this now awaits input into the SMR database.

From March 1995 the vacant SMR post was filled and work has begun to regain the time lost. A first step towards tackling the SMR enhancement problem has been to develop a strategy for the year 1995 - 1996. This exercise has identified a number of areas in which the SMR requires

SOUTH YORKSHIRE ARCHAEOLOGY SERVICE

South Yorkshire Sites And Monuments Record Input Form

Key Information

PIN _____ Component _____ Site/Artefact S / A

Site Name _____

Locational Information

Parish _____ District _____

Grid Ref. 1 _____ Grid Squ. 1 _____ Map No. 1 _____

Grid Ref. 2 _____ Grid Squ. 2 _____ Map No. 2 _____

Descriptive Information

Type Specific _____ Material _____

Type General _____ Form _____

Period General _____ Period Specific _____ NAR ____ MPP ____

Status/Geology/Condition

Site Status _____ Geology _____

Area Status _____ Soils _____ Survival Conditions _____

HOD _____ Land Class _____ Excavated _____

Input Date _____ Amend Date _____ Compiler _____

Marked on Map _____ Record input by _____ on (Date) _____

Tick here if fields completed overleaf.

Notes ___ Arch History ___ Aerial Photos. ___ Planning Applications ___

Bibliography ___ Photos/Slides ___ Site Visits ___ Owner details ___

Notes

Arch. History

Aerial Photography

Planning Applications

Bibliography

Photos/Slides

Site Visits

Owner details

Work Tel. _____ Home Tel. _____ Post Code _____ Backup Info?_____

24/7/95 smrform1.dat

■ FIGURE 1. NEW SMR INPUT FORM

attention, and has established priorities for this work.

The first task is what might be termed a tidying-up process. In a database such as the South Yorkshire SMR, constructed over many years by a number of people, errors can creep in. Editing is a crucial task, to ensure consistency in the use of terms and to update records for sites which have been worked on or studied since the original record was made. The Advanced Multiple Search (mentioned above) is an ideal tool for this task. It will allow us to isolate and correct misspellings, incorrectly used or obsolete terms. It will make wholesale editing of the record quick and simple.

A number of new records have been prepared on paper input forms but either await some information to complete them or simply await entry onto the database. The completion of these is our second priority.

Once these task are completed, we can begin to work towards enhancement of the Record. There are a number of self-contained projects which are at or near completion, and these will be entered onto the SMR, as and when time allows. These are briefly described below, in no particular order of preference.

A substantial part of the SYAS' work is its input into the planning process in the county, as has been discussed in previous editions of *Archaeology in South Yorkshire.* Conservation and protection of the historic and archaeological heritage is achieved through our role in advising how best to deal with potential threats to archaeology, and this quite often results in some form of archaeological evaluation or assessment. Whether this takes the form of a watching brief, geophysical survey, field-walking, or excavation, a written report is normally the result and a copy is lodged with the SMR. A major task, which is seen as a priority, is to input the results of these evaluations into the SMR, so that archaeological judgements (and hence, archaeological advice) can be better informed in the future.

Barbara Jones has been working through the archaeological records in the library of Sheffield City Museum, completing SMR input forms for records not yet on the SMR. In particular, she has been using the Hunter Archaeological Index, a fine piece of scholarship compiled by the late Freddie Preston. This will be a major enhancement of the record for Sheffield District when it is completed and entered onto the SMR.

Tom Umpleby has been making a detailed study of the history of water power in the Dearne Valley, which he described in *Archaeology in South Yorkshire 1993 - 1994.* Tom's work is specifically for the SMR, in an area which has been recognised as particularly important. This is now being written up prior to input. Thanks to the work of local historical and archaeological groups and by Anne-Marie Moran, a great deal of information has been gathered on Conisborough Parks. This will help in the future interpretation and study of this important area.

There is a category of local monument not well known to most people: Peak Park Treasures (PPT). These are sites which have at some time in the past have been reported to the Peak National Park as being worthy of record and protection. Not all are of archaeological importance: indeed, many are of a very idiosyncratic nature, being simply reports of the location where a particular animal was spotted. However, many more are historically important sites such as milestones on old roads, now on moorland tracks. Staff of the Peak Park Archaeology Service have prepared SMR forms for all those within South Yorkshire. These records have now to be checked against existing records, new information added and, in some cases, new records created. This checking is necessary because some of the PPTs may already be recorded on the SMR. For

those which are new, processes of checking and assessment will be needed as not all PPTs will be of archaeological importance.

General enquiries

In the last review, it was noted that research-related topics constituted the major source of external enquiries to the SMR. In 1994 - 95, there appears to have been a shift in this balance.

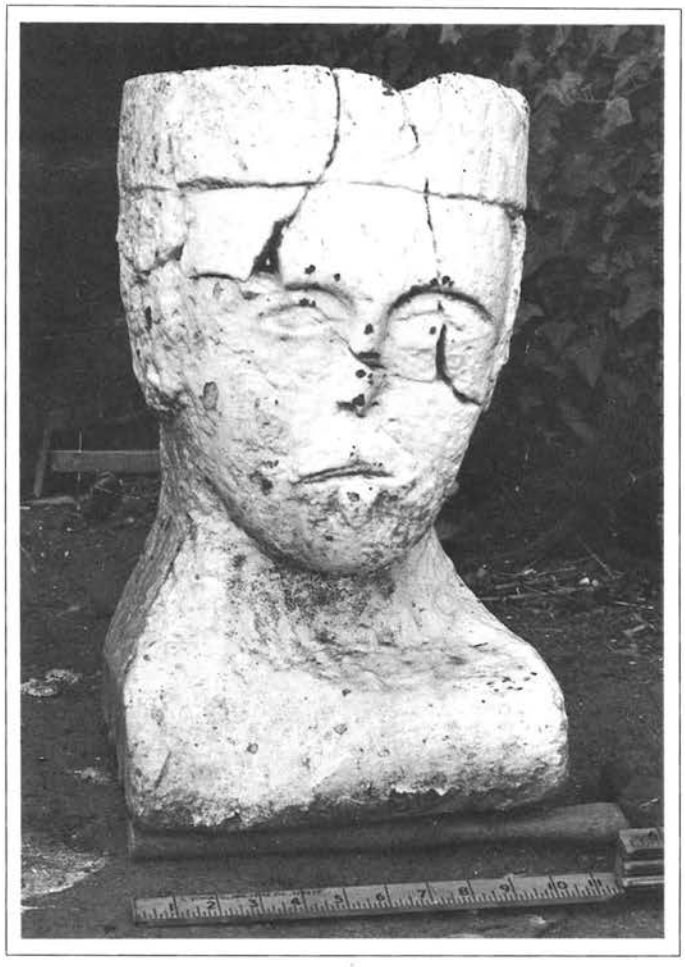
An analysis of the records kept of enquiries which required a visit to the SMR or produced information later forwarded, shows that they break down into the following categories:

• academic	34
• private research/local societies	13
• archaeological consultants	35
• public organisations	10
Total	92

There are certain observations which can be made on the basis of these figures. The first is the relative increase in consultancy enquiries. These are almost always in response to planning-related work. At a time when the general economic activity is low, and development pressure is not intense, this category of work now constitutes our largest number of enquiries. This is something that needs to be monitored, since an upturn in the economy, if reflected in an accompanying increase in development activity, could severely strain the already-stretched resources of the SYAS.

More positively, there are two heartening aspects to the above figures. One is the scope of academic-related enquiry. These range from students working on A-level projects to post-graduate students and professional archaeologists working on research projects. The maintenance of these numbers is almost certainly related to the increase, particularly in Universities, of courses covering landscape archaeology, including components such as aerial archaeology. There are now a substantial number of post-graduate courses in what is now broadly called Cultural Resource Management, and we anticipate this as a major potential source of enquiries in the future.

The second encouraging aspect is the increasing use being made of the SMR by locally-based historical or heritage societies. This has two benefits. Firstly the groups themselves can obtain rapid access to information relevant to their area. Secondly, they are able to feed back any new information which they may uncover directly to the SMR. This is a trend which we would very much like to encourage in the future.



■ CARVED STONE HEAD, BRADFIELD

The Monuments Protection Programme

The main item to report concerning the Monuments Protection Programme (MPP) in South Yorkshire is the completion, by the David Cranstone Consultancy, of the step three report on the coal industry. A description of the stages involved in the assessment of industrial monuments is given in *Archaeology in South Yorkshire 1993 - 1994.* The third stage of an evaluation of a site is that during which a report is produced which lists industrial structures and complexes which are considered to possess national significance. Twenty-five sites connected with coal extraction in South Yorkshire were identified as being of importance. These were all of 19th or 20th century origin.

During the year 1994 -1995 the SMR began to receive notifications of the scheduling (and in some cases de-scheduling) of standing crosses in the region. Decisions on these schedulings are based on our own, desk-based, assessments of the structures conducted in 1990 - 1991 and on field inspections by the MPP field officer, Angela Shackleton-Hill.

J. McNeil and S.P. Whiteley

■ SAXON CROSS SHAFT, BARNSLEY DISTRICT

ARCHAEOLOGY AND DEVELOPMENT CONTROL

The financial year 1994 - 1995 was marked by a clear decline in the number of large scale development proposals (particularly of a residential nature) submitted to the four planning authorities. This may have been due to the depressed state of the economy in general, and the housing market in particular, or to the fact that developers were awaiting the outcome of public enquiries into the content of the Unitary Development Plans for Doncaster and Sheffield.

In contrast, mineral extraction and waste disposal site applications were still received by the Sites and Monuments Record (SMR) on a regular basis. Given the potential for the destruction of the archaeological resource inherent in such developments, each proposal requires a substantial input of time by the curators of the SMR. In the preliminary stages of such an application the South Yorkshire SMR is usually approached for advice concerning the archaeological potential of the site under consideration. At this stage we will frequently

recommend that the developer commission a preliminary background assessment (known as an archaeological desktop survey) of the area, in order to collate all the archaeological and historical evidence available on the area. The SMR will normally provide a document, or brief, for the desktop study. This directs the archaeological consultant undertaking the work to the relevant sources of information (including early maps, archival records, aerial photographs, museum records, engineers reports and so on).

On the basis of the information supplied in the desktop survey any necessary evaluative fieldwork can be focused on areas identified as having archaeological potential. Ideally the desktop report and the results of any field evaluation should be submitted as part of the Environmental Statement. This statement, which considers the wider impact of the development, including matters such as noise, pollution, traffic flow and ecological impacts, as well as the archaeology, is required of developers proposing works which are deemed to have a potentially significant effect on the environment. On the basis of this report the SMR Officers should be able to make detailed recommendations to the planning officers and the developer on the ways in which the archaeological resource should be preserved or recorded. Frequently, however, Environmental Statements include only the desktop report element on the archaeology of the proposal site. In these situations it is sometimes necessary for the SMR to require that evaluative field work be undertaken to assess the nature of any surviving archaeological remains on the site prior to a planning decision on the application being made.

During the last financial year officers of the South Yorkshire SMR were involved in advising on mineral and/or waste disposal sites in the Barnsley, Doncaster and Rotherham districts. Most of these applications are still moving through the planning process.

Archaeological evaluations and conditions

A situation which continues to be a cause of concern to the SMR staff is a clear reluctance by the district planning authorities to support one of the major tenets of the government's Planning Policy Guidance note 16 (PPG 16; Archaeology and Planning 1990). This document sets out the procedures for the consideration of archaeological remains within the planning process and was issued in November 1990 by the Department of the Environment. One of the crucial requirements of the document is that, before a planning decision is made, developers commission evaluations of sites in situations where the SMR officers advise that there is a probability that the proposal will affect archaeological remains. Evaluative work is normally only recommended when ground conditions are suitable (i.e. when there is not already a building on the site) and there is sufficient evidence that archaeological remains exist, or are likely to exist, on the site. This evidence may be, for instance, an aerial photograph of the area showing a cropmark site or a number of records of archaeological artefacts within the environs of the application area. The reasons for requiring evaluation at the earliest possible stage is to allow decisions to be made on how best to limit the damage to any surviving remains identified by the evaluation. This may be achieved simply by changing the layout of the proposed development so that archaeologically sensitive areas are avoided, or by building structures on less damaging foundations. It is very rare for the presence of archaeological remains on a site to stop the development completely. An early knowledge of the nature of the archaeological remains on a site can also provide the developer with an idea of the timescale and costs involved in any further excavation, should this be necessary.

The keys to best practice are organisation and time. The developer must allow time for an adequate archaeological input to the application, once the necessity for this has been established. For this to work developers should be advised by the planning officers to consult the SMR when first researching a potential development site. There is no charge for this pre-planning service and the SMR officers are keen to encourage such practice.

The procedures outlined above are already laid out in PPG 16. The SMR will continue to advise district planning officers that pre-determination archaeological evaluation constitutes the best advice which they can give developers. In this way we would hope to promote the understanding and conservation of South Yorkshire's rich archaeological heritage.

Recent changes to the planning process

PPG 16 has been used as the basis upon which advice is given since 1990. In the light of our experience of the ways in which the document is interpreted by developers and planners, certain changes in the fine detail of our recommendations have been made. The wording of our recommended archaeological planning conditions, which are used when pre-determination evaluation is inappropriate, for example, has been redrafted. The briefs for archaeological work, which are produced by the SMR, are also more detailed, both for the benefit of the archaeological contractor undertaking the work and also for the client who commissions it.

A national reassessment of PPG16

Since PPG 16 was issued, two reviews of its operation have taken place. The first was in November 1991, the second at the end of 1994.

The latest review was undertaken by consultants commissioned by English Heritage. Representatives from a variety of relevant backgrounds were interviewed. They included County and District Archaeologists, archaeological consultants, developers, planning officers and inspectors, the Council for British Archaeology and academics. Qualitative and quantitative data were collected by means of interviews and questionnaires. All aspects of archaeology within the planning process were considered, from the pre-application research by developers through methods of monitoring applications to the funding of archaeological excavations. Curatorial archaeologists (County and District Archaeologists and SMR Officers) were asked to provide figures for the number of applications monitored in a specified year (1993) and the proportion of those applications which were of archaeological significance. The recommendations made on the basis of the archaeological significance of a development, their results and implications, were also assessed.

Because the report summarising the results of this research was released after the end of the financial year 1994 - 1995 it will be considered in detail in the next edition of *Archaeology in South Yorkshire.* At this point however we can say that it has been useful to look back at the effect that PPG 16 has had on the planning in the four districts of South Yorkshire. Its implementation has lead to the preservation or excavation of many archaeological sites in the region through processes of negotiation and mitigation. Furthermore, when preservation has been 'by record' only (a euphemism for excavation), the resulting information has significantly increased our knowledge of the region's past, as reports in this and previous editions of *Archaeology in South Yorkshire* demonstrate.

Unitary development plans

During the financial year 1994 - 1995 the Unitary Development Plans (UDP) of the four districts comprising South Yorkshire were either being prepared or had entered the stage of public consultation prior to the

compilation of the deposit drafts and local public enquiries.

Barnsley prepared a deposit draft version of its UDP in the summer of 1995; Doncaster completed a consultation period on the draft deposit version of their plan and prepared for the beginning of the local enquiry in the summer of 1995. Rotherham district were involved in preparing and amending policies and proposals to be included in the deposit draft version while Sheffield City Council were preparing for the beginning of the enquiry stage in March 1995. This involved liaison with objectors to the plan and the collection of information for the preparation of proofs of evidence.

The Monuments at Risk Survey

The Monuments at Risk Survey (known as MARS) is a national census of the condition and survival of archaeological sites in England. The project is run by the Department of Conservation Sciences at Bournemouth on behalf of English Heritage and in association with the Royal Commission on Historical Monuments for England (RCHME). MARS aims to quantify the country's archaeological resource in terms of a number of criteria including;

- the current knowledge of the extent and nature of the resource (including single monuments, historic landscapes and urban areas),

- the present condition and level of survival of archaeological sites and monuments,

- the scale and rate of the attrition of monuments since 1945 (through changes in agricultural practices, land use and development,

- the effectiveness of monument management regimes.

MARS is also designed to investigate the implications of the decay of monuments in terms of the archaeological information which may be in the process of being lost. The survey is being undertaken by means of a detailed assessment of a 5% sample of all known archaeological sites. This represents 1300 separate sample units (transects) scattered randomly throughout England. Aerial photographs of sites within the study areas will be checked and monuments will be visited in the field.

Case studies of specific monuments will also be undertaken to assess changes in their level of preservation and the implications for the survival of archaeology.

Early in 1994 the South Yorkshire SMR was approached by a representative of the MARS project regarding access to SMR information. Data on all the sites and monuments which fell into the transect areas was provided including locational information, monument type and period, protective designations (if any) and information on the condition of the site. A data recording form was also completed which provided the surveyors with a general profile of the SMR. Similar information was requested from every SMR (and other holders of archaeological information) in the country with a view to establishing the state of England's recorded archaeological resource. This information will also provide a baseline against which to judge the new information resulting from the field survey element of the MARS project, thus setting the sample areas in a national context.

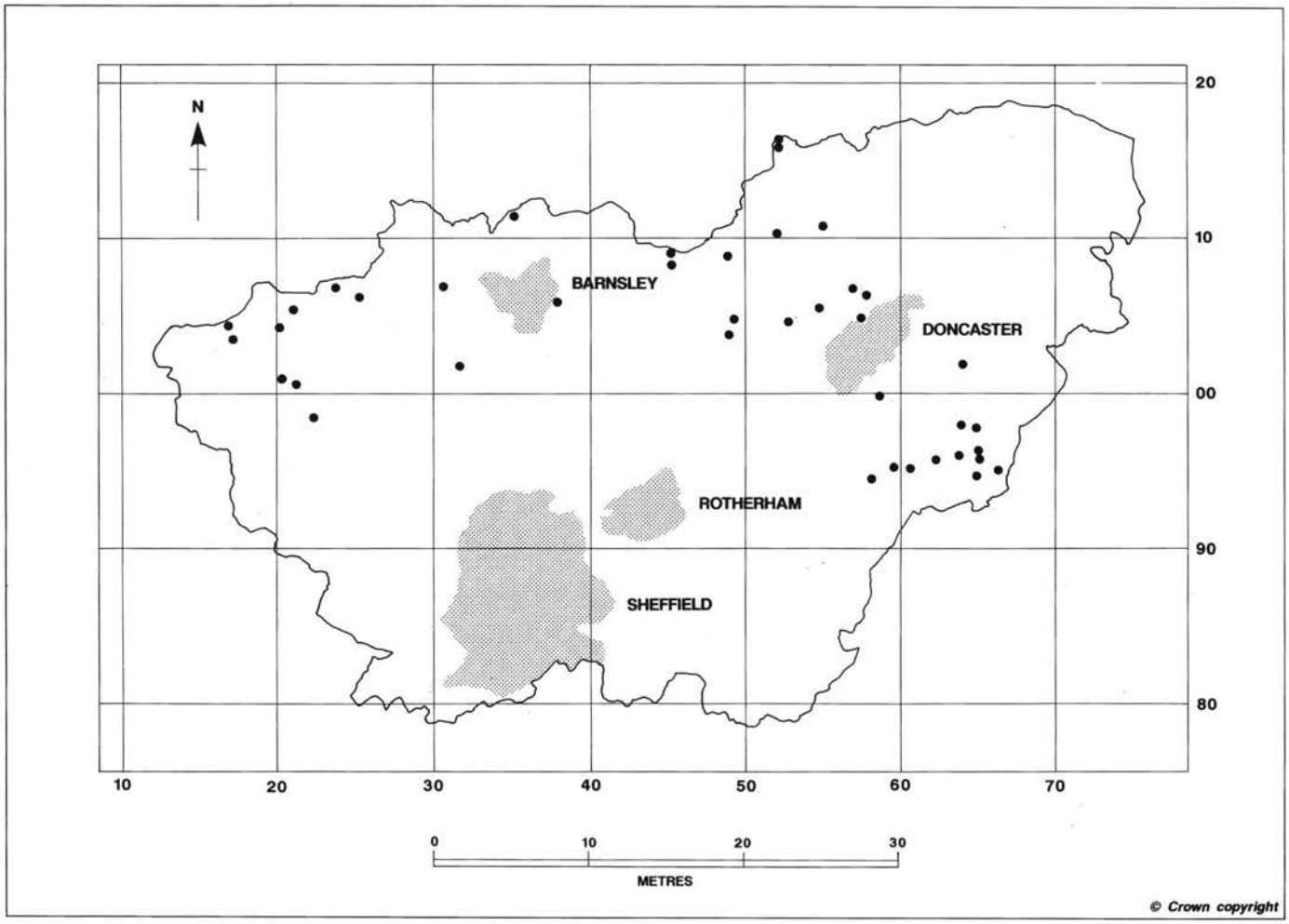
At the time of writing the South Yorkshire SMR is awaiting feedback on the results of the field survey programme. A report on this will be presented in *Archaeology in South Yorkshire 1995 - 1996.*

S.P. Whiteley

AERIAL PHOTOGRAPHY IN SOUTH YORKSHIRE 1994 - 1995

The progress of aerial photography in the county was last reported in *Archaeology in South Yorkshire 1991 - 92*. Up until that time, Derrick Riley had not only taken the bulk of the photographs but had assiduously reported the results in *Archaeology in South Yorkshire* and other local journals. Since his death in 1993, the amount of flying has been greatly reduced. It had been Derrick's wish that all the negatives from his collection of aerial photographs should be deposited at the Library of Aerial Photographs, National Monuments Record, held by the RCHME in Swindon. This has now been done, and copies of Derrick's photographs can be obtained from there.

Of course, Derrick flew over a much wider area than just South Yorkshire. His own personal collection of prints from these negatives reflected this. He intended that these should go to the appropriate local repository, usually the relevant County Sites and Monuments Record. In this, South Yorkshire has been in a particularly fortunate position. It had long been Derrick's practice to lodge his own prints for the county directly with the South Yorkshire SMR, once he had processed and studied them. This has ensured that the SMR has a virtually complete collection of Derrick's aerial photographs, a lasting testament to the outstanding contribution he made to the archaeological heritage of the county.



■ FIGURE 1. LOCATION OF AERIAL PHOTOGRAPHS TAKEN BY AERIAL PHOTOGRAPHY UNIT, RCHME IN 1994-5 (REDRAWN FROM INFORMATION AND PLOTS KINDLY PROVIDED BY APU, YORK)

Aerial photography 1994 - 1995

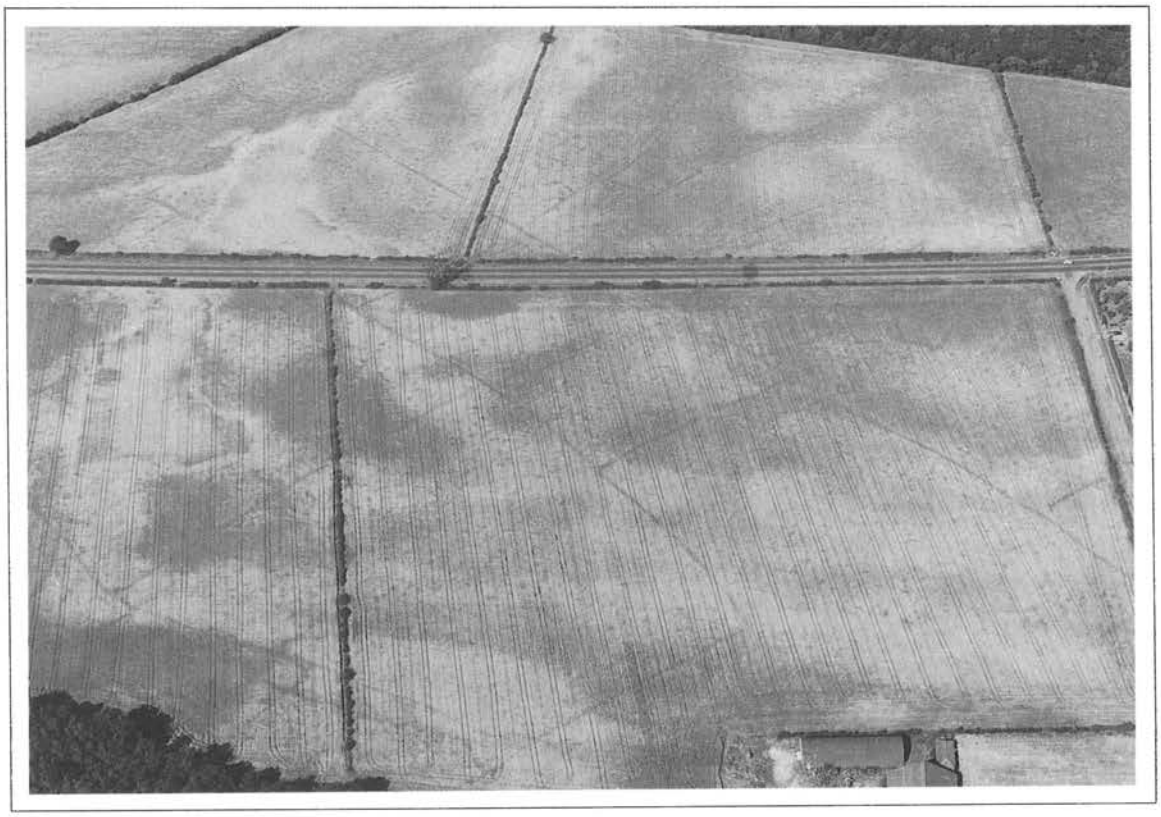
The main source of photographs is currently the Air Photography Unit of the RCHME, based in York. In 1994 - 95, five of their sorties included photography in South Yorkshire. The three flights in June and July of 1994 concentrated on cropmarks to the south and east of Doncaster (mostly on the Bunter sandstones), but photographs were also taken of the earthworks around Loversall. In January 1995, two further sorties concentrated on earthwork photography in the north of the county (see figure 1). Altogether, these flights resulted in forty targets being photographed in both 35mm. transparency and 70mm. panchromatic film format.

Aerial photography 1995 - 1996

Thanks to the weather, 1995 promises to be a classic year for aerial photography. Although the results have not yet been fully processed and catalogued, the early indications are extremely good. Aerial photographers are predicting the discovery of new sites once the photographs have been analysed and accessioned. It is hoped that these will compare favourably with the previous best year, 1976.

The RCHME Air Photography Unit were very busy in the county and photographed a number of sites previously unknown to them. The West Yorkshire Archaeology Service, although not scheduled to fly within the county, occasionally photograph sites on the South Yorkshire/West Yorkshire boundary. This has also resulted in the discovery of new sites, such as that in the Shafton area (see front cover). The extraordinarily long, dry summer seems to have produced just the right conditions for aerial photography, and the prospects are that next year's *Archaeology in South Yorkshire* will include reports on a good crop of new sites.

Jim McNeil



■ 'BRICKWORK PLAN' FIELD SYSTEM, DONCASTER DISTRICT

AN INTRODUCTION TO GEOPHYSICAL SURVEYING IN ARCHAEOLOGY

Methods of detecting archaeological features and deposits without destroying them by excavation have long been used in archaeology. As early as 1893 General Pitt-Rivers wrote that, during his work on Handley Down in Dorset, nothing could be found of past human habitation on the ground surface west of Wor Barrow. He goes onto describe how a pick was used to hammer on the surface of the ground and, by noting the deeper sound produced in places where the ground had been previously disturbed, the Angle Ditch was discovered (Clark 1990: 11). While this method, known as Bosing, still has its uses today, most archaeological geophysical survey is conducted using rather more technologically sophisticated equipment. In particular improvements in technology have allowed methods which utilise either resistance to the passage of electric current or the magnetic properties of materials to take up an essential role in modern archaeological fieldwork.

This growth in the use of archaeological geophysical methods is not only due to the development of more sophisticated technical equipment. It has also been dictated by changes to the type of information many archaeologists now need to recover. A great deal of archaeology today is driven by the planning process and requires the rapid evaluation of substantial areas of land (Gaffney and Gater 1993). Archaeological geophysics offers the possibility of investigating large areas quickly while providing information that is very specific. If archaeological deposits are detected then their location is known quite precisely and often (from the shapes of features) specific interpretations can be put forward. Geophysical surveying complements rather than replaces traditional archaeological skills, and is at its most effective when combined with other techniques. Its speed, cost and non-destructive nature has made it a powerful tool for archaeologists and given it a central role in the evaluation stage of field projects (David 1995; Gaffney *et al* 1991).

Three main methods are used on a routine basis in British field archaeology. These rely on past human actions altering either the magnetic properties of a deposit or its ability to pass an electric current. They come under the general headings of Resistivity, Magnetometry and Magnetic Susceptibility.

Resistivity survey

Perhaps the earliest of these methods to be used in archaeology was resistivity, which was first applied in 1946 (Atkinson 1953). The ability of the ground (and hence any archaeological deposits) to pass an electric current is almost entirely dependent on the distribution of moisture in it. An electric current applied to the ground is carried by soluble ions dissolved in the groundwater. Archaeological features and deposits can be detected if the level of moisture they contain is significantly different from that retained by the natural deposits (subsoil, etc.) that surround them (Clarke 1990). Fortunately for archaeology many of the actions of past human groups have had a great effect on the ability of the resulting deposits to hold moisture. Organic-rich deposits, such as ditch or pit fills, hold moisture very well, whereas compacted surfaces or constructions made from stone or brick hold moisture very poorly.

In order to investigate the ability of deposits to pass an electric current, one uses four metal probes pushed into the ground (see figure 1). Two of the probes are connected to an A.C. power source and an electric current passes between them. The other two probes, connected to a

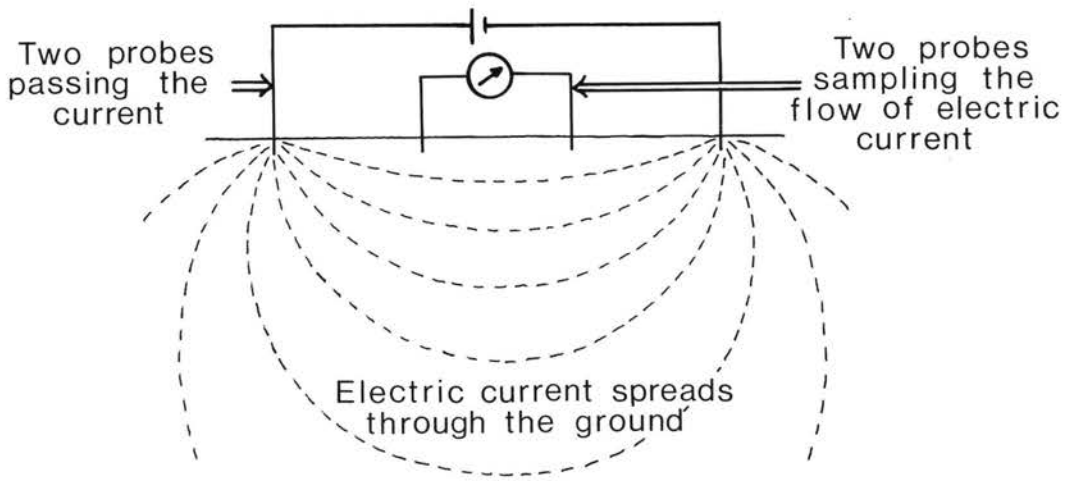
meter, are used to sample the circuit and determine the flow of the electric current. As one moves this array of four probes across the ground the meter displays changes in the flow of current. As the power source and the above ground part of the circuit remain constant then any change in the flow of the current is a result of changes in the properties of the deposits in the ground below the probes. If, for example, one moved the probe array across an archaeological feature that held more moisture than the subsoil around it (such as a ditch) then the meter would detect the electric current passing more easily. We refer to this as being a feature where the resistance to the passage of the electric current is lower, or in other words 'a low resistance feature'. A feature which holds less moisture than its surroundings allows the electric current to pass less easily and is consequently known as a 'high resistance feature'.

One must remember also, however, that these properties may also be altered by natural processes. An old stream channel, for example, will appear as a low resistance feature in the same way as a ditch. One must be aware of this possibility and try to take into account the geology and geomorphology of an area when interpreting the patterns that the survey produces.

Magnetic survey

The magnetic properties of a material depends on its molecular and crystal structure and the way in which the magnetic fields of the electrons it contains reinforce or oppose each other (Tite 1972). In the case of archaeological deposits it is the nature and content of its iron oxide particles that particularly determine the magnetic properties. Past human activities may permanently alter the magnetic properties of a material or deposit. Activities which alter the magnetic properties of deposits include the burning of deposits, the importation of magnetically different material (i.e. stone) into a site, the creation of organic-rich deposits and the altering of depths of topsoil.

The altered magnetic properties of a deposit fall into two groups. First is *Thermoremanence*, in which a material containing some iron oxide particles (for example, clay) is heated up to a level above the Curie point for the particles it contains



■ FIGURE 1. THE ELECTRIC CURRENT FLOWS THROUGH THE GROUND BETWEEN TWO OF THE METAL PROBES. THE OTHER TWO PROBES SAMPLE THIS FLOW OF CURRENT. AS THE ARRAY IS MOVED ACROSS THE GROUND, CHANGES IN THE NATURE OF THE DEPOSITS BELOW WILL CAUSE CHANGES IN THE READING OF THE METER SAMPLING THE FLOW OF THE ELECTRIC CURRENT

(generally 550 - 650°C.). Above the Curie point the particles are demagnetised. On cooling they demagnetise aligned, as far as possible, with the earth's magnetic field at that time. Prior to heating the iron oxide particles were randomly oriented and so their magnetic fields cancelled each other out. After heating the particles' magnetic fields are all aligned and so reinforce each other giving the deposit as a whole a strong permanent magnetisation aligned with the earth's magnetic field at the time of cooling.

Secondly, human activities may alter the *Magnetic Susceptibility* of a deposit. This is the ability of that material to become magnetised and for archaeologists, this is also principally related to the iron oxide particles contained within the deposit. The structure of the iron oxide determines its ability to be magnetised. For example, Maghaemite has a higher magnetic susceptibility than Haematite even though they both contain two iron atoms and three oxygen atoms per molecule (Fe_2O_3). This structure of the iron oxide particles is easily altered by human actions. The heating of a deposit can quickly alter the structure of the iron oxide particles even if temperatures are not high enough to induce thermoremanence (Clark 1990). In addition to this it appears that the magnetic susceptibility of a deposit can be increased during the breakdown of organic matter. This is a gradual process and may be related to bacteria in the soil which ingest iron oxide particles (along with organic matter) and redeposit the iron oxide in an altered, more magnetically susceptible form (Fassbinder et al 1990).

In addition to the alteration of a deposit's magnetic properties one must always remember that movement of material will affect the magnetic response from a site. Stone may be brought in that has quite different magnetic properties from the majority of the deposits in an area. Topsoil is often relatively rich in iron oxide particles when compared to subsoil. Changing the depth of topsoil by moving material around will also change the magnetic 'map' of an area.

In addition to the magnetic properties of the natural and archaeological deposits in the ground we must not forget that there exists a powerful magnetic field around us all the time; the Earth's magnetic field. This field is hugely more powerful than any that might be associated with an archaeological deposit. Unfortunately, this field gradually changes all the time.

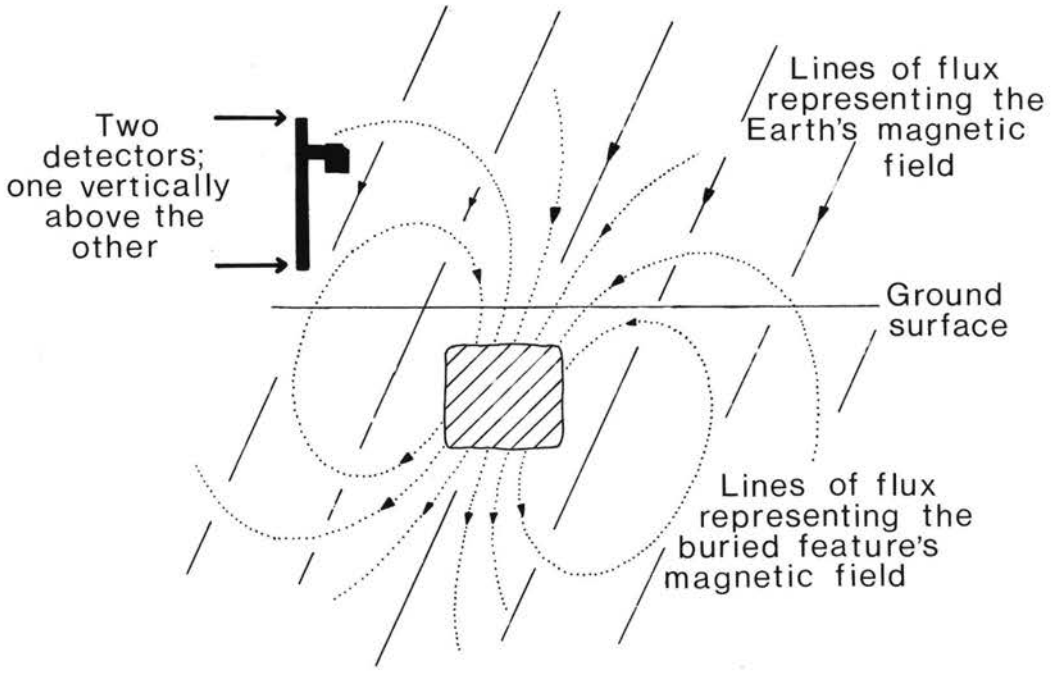
Magnetometers detect magnetic fields. We use two kinds of detectors in archaeology, most commonly flux-gate magnetometers and (much more rarely) proton magnetometers (now sometimes referred to as alkali-vapour magnetometers). The difference between the two is in the construction of the detectors (both types respond to the same phenomena as far as the detection of archaeological features is concerned and so the differences will not be described here. For further details consult Clark 1990: Ch. 3).

In order to conduct a magnetometer survey one must overcome the problem of the variation in the earth's magnetic field. In order to do this all magnetometer surveys use two detectors; one monitoring the earth's magnetic field and one detecting the earth's magnetic field plus any additional field (i.e. that related to an archaeological feature). The most common arrangement of these two detectors, when one is placed vertically above the other, is found in instruments are known as *Gradiometers*. As the readings from the two detectors are subtracted one from the other then, if there is no magnetic field present other than the Earth's, the instrument will produce a reading of zero. If there is an extra magnetic field present then this will produce a distortion in the Earth's magnetic field which is detected differently by the two detectors, the resulting value will not be zero (figure 2).

The determination of the magnetic susceptibility component of a deposit or feature is achieved by using an 'active' instrument. This is one which injects energy (in the form of a magnetic field it creates) into the deposits and measures the response of those deposits to that magnetic field. This is the method which is the basis for metal detectors, but is also used by much more sophisticated instruments that give a precise numerical value for the susceptibility of deposits.

The disadvantage of all active instruments (including metal detectors) is their extremely limited depth penetration. While it is common for resistivity and magnetometry to detect deposits as far down as 75 to 100 centimetres, 'active' instruments rarely reach beyond 20 centimetres and so are frequently only able to look at ploughsoil deposits. However, there are times when archaeological deposits have been completely 'ploughed-out' (i.e. all the features have been destroyed by ploughing). This will have destroyed most of the possibility of gathering information through resistivity (ploughsoil is a relatively consistent holder of moisture) or magnetometry (thermoremanence relies heavily on the directional component of a magnetic field surviving because a feature or deposit is still in the same position as when it last cooled down). However, magnetic susceptibility is not significantly dependant on the orientation of the iron oxide particles and so a deposit with enhanced magnetic susceptibility will still have enhanced magnetic susceptibility even if it has been churned up by ploughing.

A number of other can be found in text books (including Radar, Sonar and Thermal sensing). None of these techniques have yet been developed to the stage where they have a routinely



■ FIGURE 2. A MAGNETOMETER IS PASSED ACROSS THE GROUND SURFACE ABOVE A BURIED MAGNETIC ANOMALY. THE LOWER DETECTOR IS CLOSE TO THE GROUND SURFACE AND IS AFFECTED BY BOTH THE EARTH'S MAGNETIC FIELD AND THE MAGNETIC FIELD OF THE BURIED ARCHAEOLOGICAL DEPOSIT. THE UPPER DETECTOR, BEING FURTHER FROM THE BURIED ARCHAEOLOGICAL DEPOSIT DETECTS PRIMARILY THE EARTH'S MAGNETIC FIELD AND REMAINS RELATIVELY UNAFFECTED BY THE ARCHAEOLOGICAL FEATURE'S MAGNETIC FIELD.

useful role to play in archaeological fieldwork.

In each of the above techniques it is quite obvious that the 'background level' for the readings must be established. One cannot place an instrument in a position and know that one has detected an archaeological feature. One must determine the background level for readings and then define readings that are different to this. These readings are referred to as 'anomalous' and together they will make up areas of anomalous readings which are known as anomalies. These anomalies represent buried features and deposits (natural or archaeological).

Correctly used, resisitivity is a particularly effective technique for detecting walls, roads, buildings and floor and yard surfaces, as well as ditches. Magnetometry works well for detecting structures that have been subjected to high temperatures (such as kilns, furnaces and ovens), discrete very organic-rich deposits such as ditches and also stone features such as walls. Magnetic susceptibility will detect organic-rich deposits (including extensive deposits such as dumped domestic waste, even after the organic matter has been broken down) and will respond to features that have been heated, but perhaps not to the highest temperatures (hearths, locations of structures that have burned down, etc.).

Careful choice must be exercised when deciding which method or methods are to be used. Factors such as the underlying geology along with the hydrology and topography should all be considered along with an assessment of the type of archaeological features expected and their likely depth and preservation. Geophysical surveying in archaeology is normally only really effective when it is used as part of a suite of techniques (aerial photography, fieldwalking and survey, excavation, etc.) which together will give the best chance for the information required to be obtained within the time and other resource limitations of the project.

Colin Merrony

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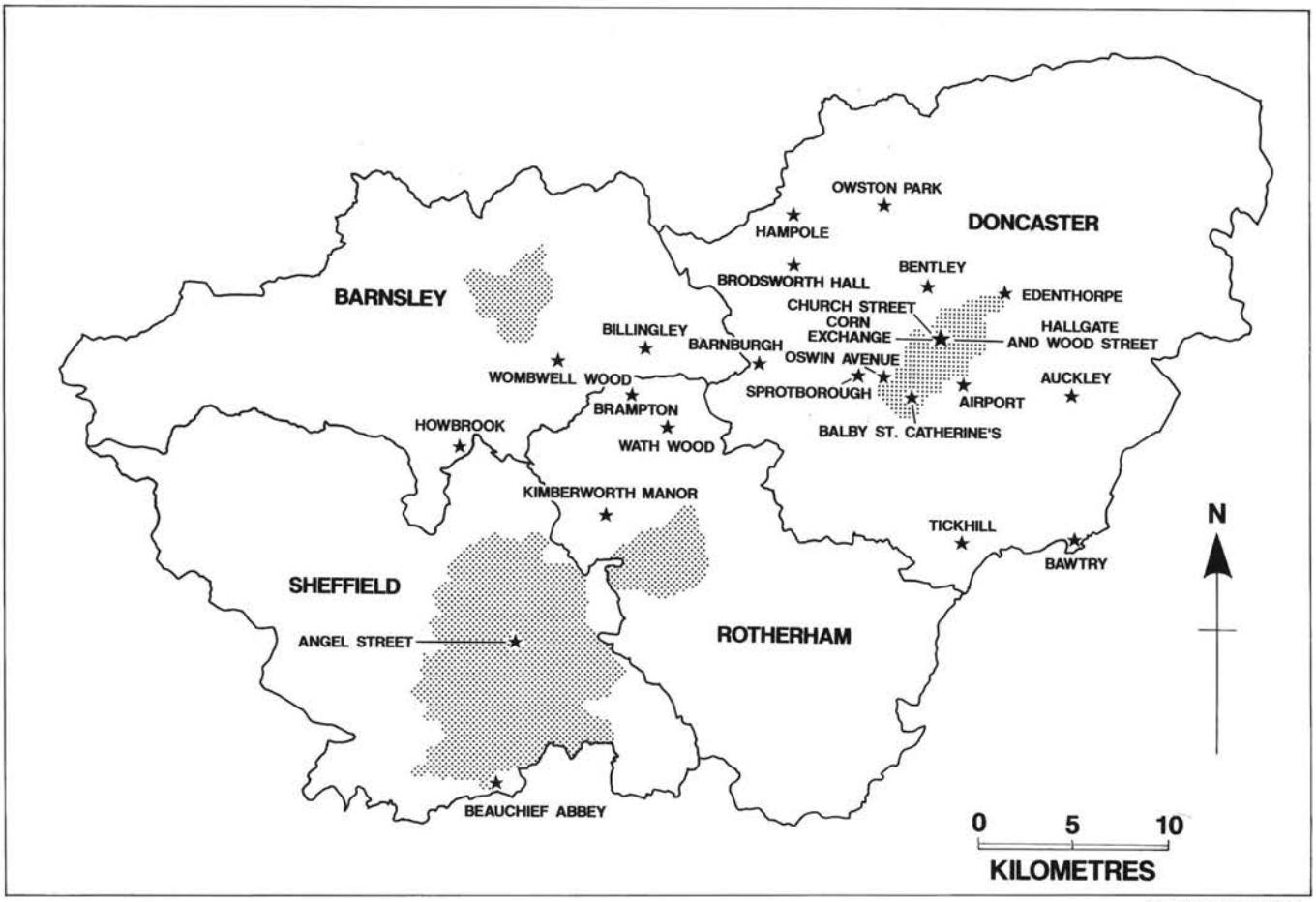

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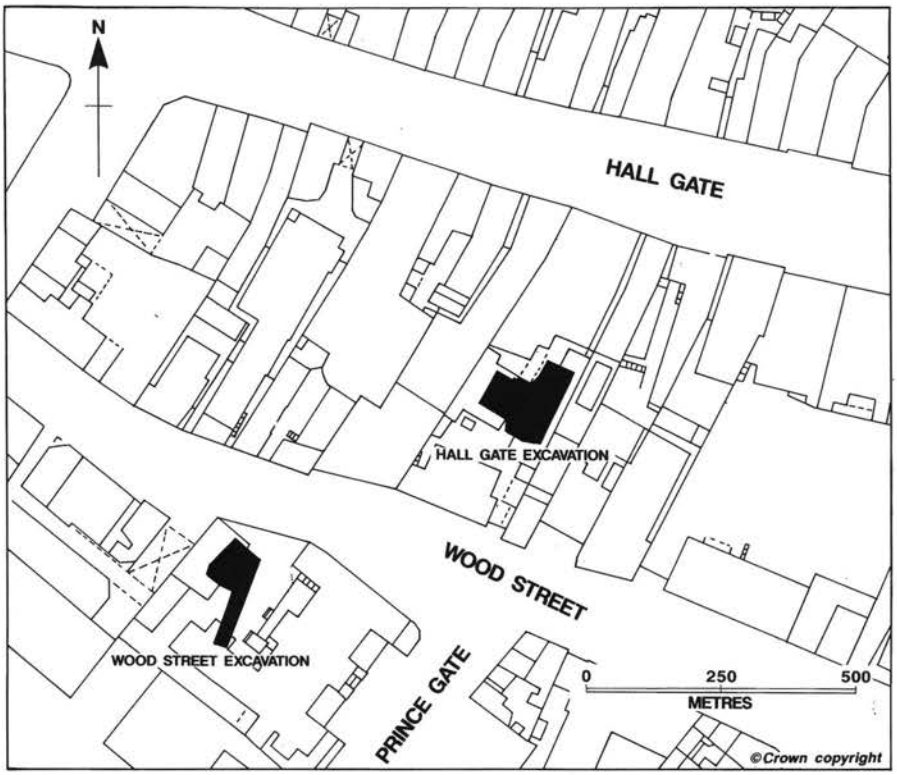
■ SOUTH YORKSHIRE: LOCATION OF SITES INCLUDED IN THE TEXT

RECENT EXCAVATIONS IN HALLGATE AND WOOD STREET, DONCASTER

During 1994 and 1995 separate proposals by The Tetley Pub Company Ltd. and the Monaghan Partnership to develop sites in Hallgate and Wood Street respectively, resulted in a series of excavations by the SYAFRU (figure 1).

Both sites occupied positions immediately outside the area of the Roman town and fort but close to the main road which linked them with Lincoln to the south and Castleford to the north. As the Great North Road, this maintained its importance into the medieval and post-medieval periods.

The medieval town ditch is known to have enclosed the area within a line now followed by Cleveland Street, Silver Street and Market Road, crossing Hallgate at Hallgate Bar (Buckland *et al* 1979) and lay approximately 100 metres from the sites. Both sites thus lay outside the Roman and Medieval towns, within the extra-mural suburbs. In both periods such zones were commonly the location for activities that were impossible, or were not permitted, within the town itself. Main roads leading out of Roman towns were often flanked by cemeteries set amongst cultivated land. In the medieval period the suburbs and extra-mural areas were often the



■ FIGURE 1. SITE LOCATION PLAN, HALLGATE AND WOOD STREET, DONCASTER

location of dangerous or unpleasant crafts and trades. Schofield and Vince have noted that 'Blacksmiths, potters, tanners and fullers were found here, either banned because of their smoke or noise, or taking advantage of the relatively open space (the bell founders could dig for brickearth, the dyers stretch their cloth on frames ....)' (Schofield and Vince 1994:53).

In the case of Doncaster the curiously central location of the town's tanning industry was already known, and is described by Steve Webster elswhere in this volume, but excavations in Hallgate during the 1970s had established that potters were working here in the late 12th and 13th centuries (Buckland *et al* 1979). Previous excavations had found little evidence of Roman suburban settlement, although its existence was suspected. Both sites were therefore in areas of considerable archaeological importance.

Excavations in Hallgate

The site in Hallgate became the subject of an archaeological study as a result of proposals by The Tetley Pub Company Ltd. to develop a plot fronting onto Hallgate and Wood Street as a public house. The area to the rear of the existing buildings was believed to have been relatively little disturbed by modern development, and so an archaeological field evaluation was carried out by the South Yorkshire Archaeology Field and Research Unit.

This involved the excavation of three small trial trenches, each approximately five metres in length, within the affected area. These confirmed that archaeological remains were present on the site, relatively close to the ground surface and largely unaffected by post-medieval or modern disturbance. These remains included Roman burials and ditches and a medieval pottery kiln.

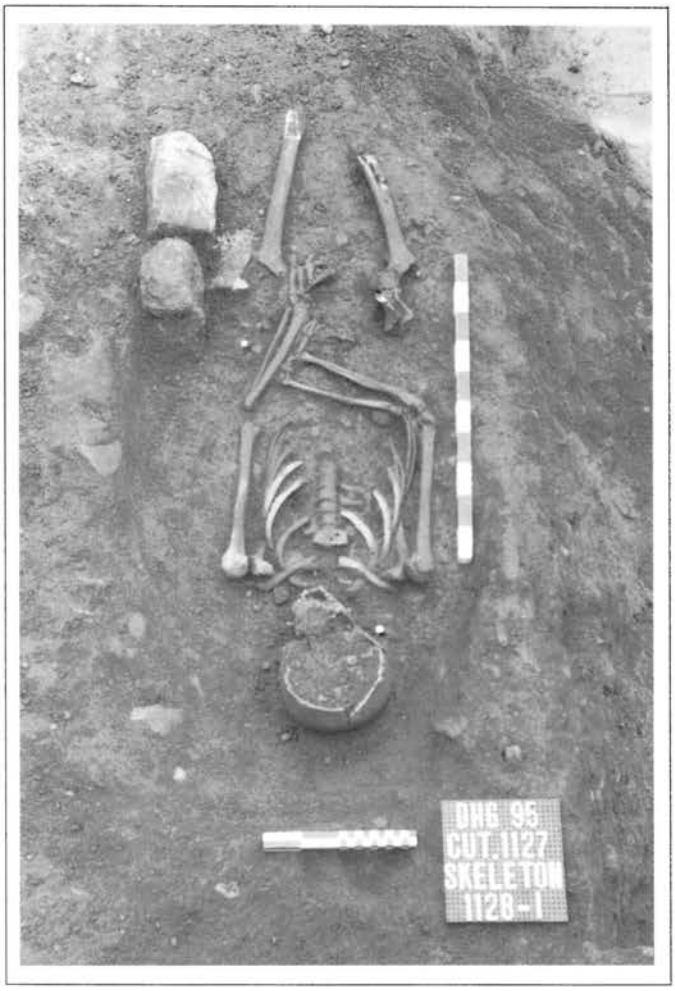
It was clear from the plans for the development of the site that the archaeology would not survive and arrangements were made for the full excavation of the affected area. This work was also carried out by the South Yorkshire Archaeology Field and Research Unit and was completed during January and February 1995. Work on the post-excavation analysis of the finds is continuing and it will be possible to discuss many aspects of the sites in greater detail in future.

The Roman cemetery

Before the excavations in Hallgate, the location of the town's Roman cemetery was unknown. The only human remains associated with the Roman occupation were scattered single and fragmentary bones from small scale and informal excavations. Hallgate thus offered the first opportunity to excavate archaeologically burials associated with the Roman town of *Danum.*

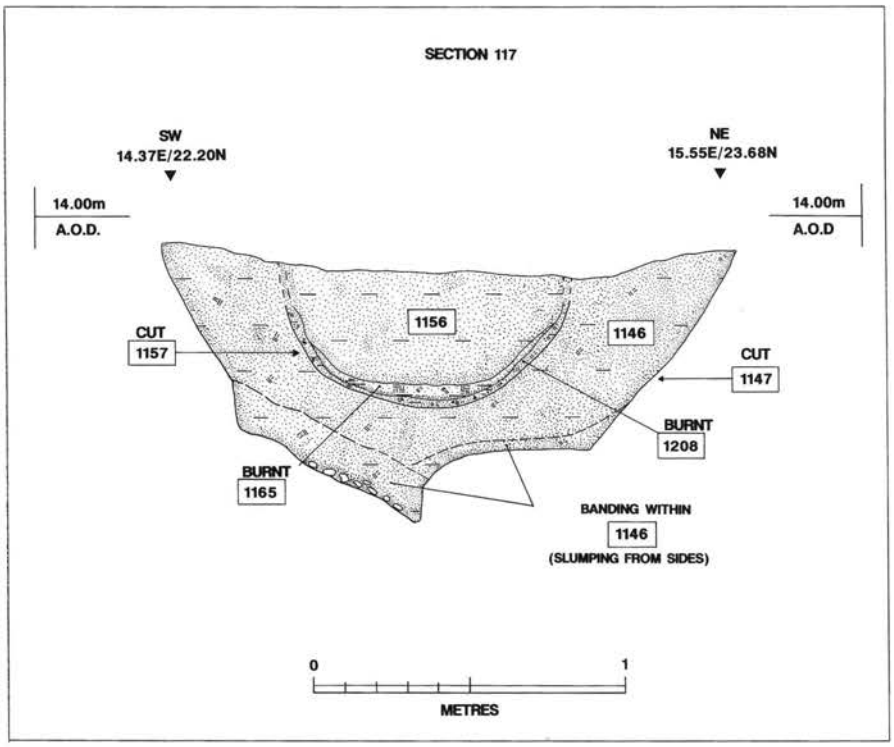
The cemetery consisted of a mix of inhumation and cremation burials, as well as a cremation pit. A total of nine inhumations, and five cremations were recovered, each damaged to some extent by later pits, ditches and the medieval kiln. The majority of the inhumations were found in the eastern section of the site and there were strong indications that the cemetery continued in this direction. A single inhumation (number 1128/1, shown in plate 1) was found in the western part of the site and this was slightly unusual in that the body had been placed in a pit dug at some earlier time and covered with a capping layer of stone.

Two of the inhumations were found with grave goods. Burial 1053/10 was found with several pot sherds, including pieces of amphora, and 1169/4 had a small jar with an upturned dish covering it, placed next to the left leg.



■ PLATE 1. THE SINGLE INHUMATION (NUMBER 1128/1)

■ PLATE 2. THE LARGER CREMATION URN, AS EXCAVATED



■ FIGURE 2. SECTION THROUGH CREMATION PIT, CUT 1157 AND EARLIER DITCH, CUT 1147

The cremations were found both with and without cremation urns. Of the urned cremations, two were recovered inside their complete and unbroken urns. Both vessels were apparently of the normal domestic type, one a small rusticated vessel, the other a larger, more roughly made, vessel (plate 2). A third cremation was found in close association with a flagon.

The cremation pit (feature 1157, figure 2) was cut into an earlier ditch. It was identified on the basis of clear evidence for intense burning and the presence of a number of intact, but heavily burnt and extremely friable, human bones scattered across the bottom of the pit. It also contained a single complete pot of a similar type to the cremation urns, although with slip painted decoration around the rim. Whether it was discarded accidentally in the pit or was a deliberate deposit associated with the cremation rite was not clear.

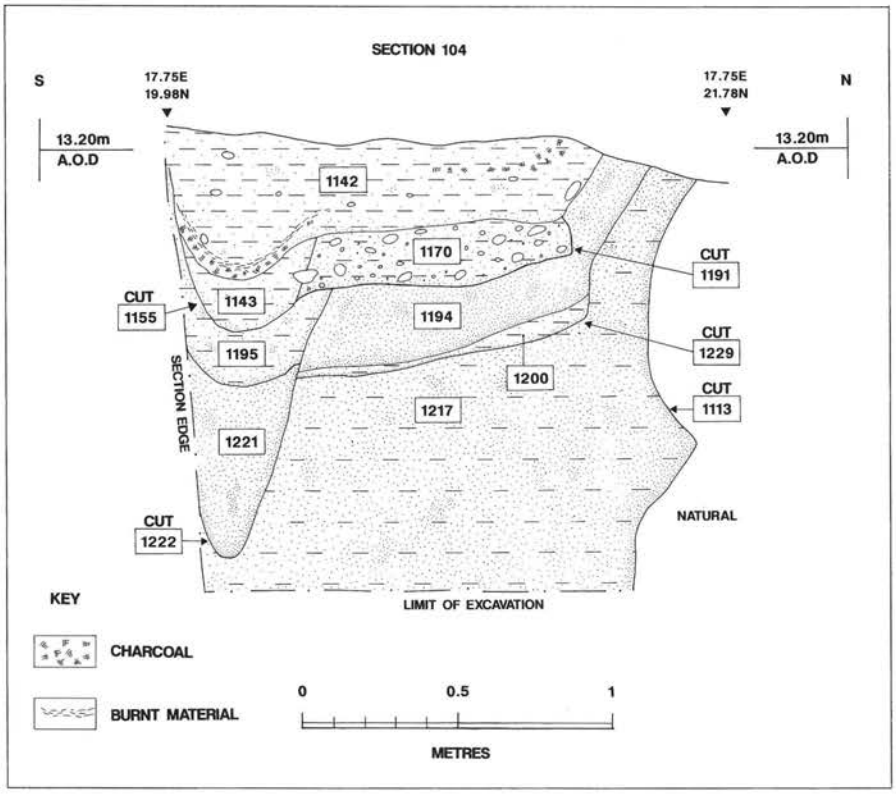
Linear Features

A number of other Roman features were found which were not directly related to the cemetery. The earliest of these was a ditch running across the site on an approximately northwest to southeast (site grid) alignment. This had been heavily truncated throughout its length and little of it remained to be recorded. A later ditch, running north to south and cutting this feature was found at the eastern edge of the site. On closer examination it was found to consist of two ditches which diverged towards the southern end. Running parallel to them, and along the western edge, was a slot with associated post-holes. This was presumably the line of a fence or palisade which lined the western side of the ditch. It appeared to post-date the majority of the burials and probably indicates a change in the use of the area.

A second palisade feature was located within the south-west corner of the site. Only a small fragment of this feature was found within the excavated area and it had been heavily damaged by later use.

Non-linear Features

A number of non-linear features were found representing the Romano-British period on the site. A circular steep-sided feature (1207) was found within the central part of the site. This was not fully excavated as the depth exceeded the maximum depth of excavation initially agreed with the developer. It is assumed, given its depth and nature, that it was a well. The feature measured approximately 2.3 metres in diameter and was excavated to a maximum depth of 2 metres. A sizeable assemblage of Romano-British pottery was recovered from the



■ FIGURE 3. SECTION THROUGH CUT 1113

fill. Once analysis is complete it is expected that this material will provide an accurate date for its backfilling. A later re-cut pit (1034) was found to respect the edge of the well. This reached a depth of 1.3 metres.

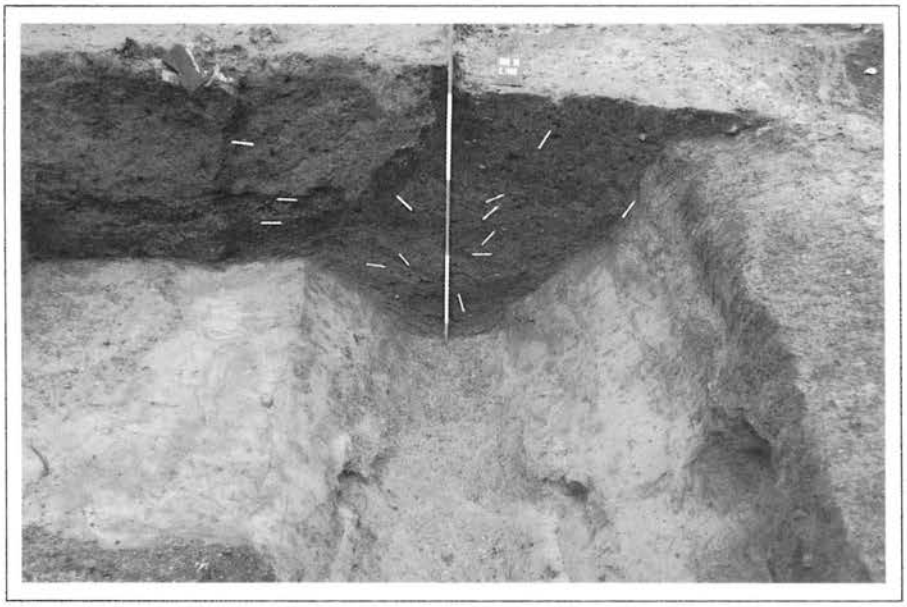
A very unusual non-linear feature was found within the central southern part of the site, unfortunately also truncated by the southern edge of the excavated area. The initial cut of the feature (1113) was very steep-sided and deep, and so the full depth was not excavated for the reasons given above. The upper fills of this feature had been cut by later activity (figure 3). This included a hardened sand or cobbled surface, cut by a post hole located on the southern edge of the excavated area. Although the feature continued into the unexcavated area, it can be seen as a circular steep-sided pit, with a flat base with a hardened surface and a central post. Its function remains unclear, although it is hoped that post-excavation work may cast some light on this. This feature was later reused as the location for an inhumation (1128/1), the only burial not located in the eastern part of the site. Other pits and post-holes dated to the Romano-British period were also excavated within the site.

Early Medieval Period

A single ditch (cut 1080, plate 3), which crossed the centre of the site on a north-south axis may be dated to the early medieval period. The dating is dependant on pottery found within the ditch. Some of the pottery was clearly Romano-British in date but this may be residual, derived from a Romano-British feature truncated by the ditch. A number of pottery sherds were recovered which, though seriously abraded, are believed to be early medieval in date.

The Medieval Period

During the medieval period Hallgate appears to have been the location of at least part of the town's pottery industry. To operate successfully a pottery requires an ample supply of fuel (during the medieval period wood or charcoal were most commonly used), water and clay. Equally important is an efficient transport system and a market of sufficient size to maintain a demand for pots. It is probable that fuel was brought to the site from some distance away, the potters having to compete with other local artisans and the inhabitants of the town. Water was presumably available from wells as the site is some distance from the river. Clay was available locally; analysis of the pottery from the earlier excavations has shown that it was derived from beds of 'Older Glacial Sand and Gravel' on which the site lies (Buckland *et al* 1979). The decisive factor was probably the local market for



■ PLATE 3. CUT 1080

■ PLATE 4. KILN 1110

pottery, represented by Doncaster itself and its market which served not only the townspeople but also the communities in the countryside. Doncaster's position on the navigable Don and the Great North Road also gave it a position of greater than regional importance. Hallgate pottery has been found in many major medieval towns including York, Hull, Beverley and Lincoln. Pottery from the area has also been found during excavations at Trondheim in Norway (Reed 1994:Fig. 2).

The kiln (feature 1110, plate 4) was loosely associated with a number of pits and post holes which seem to indicate the presence of workshops and other buildings. The kiln itself consisted of a central pit with two opposing flues which would have provided the draft necessary to raise the temperature within the firing chamber. There is some evidence that the kiln continued to be used after one of the flues had been blocked up, although the precise details remain to be studied. This type of kiln has been classified by John Musty (1974) as a type 2A, found throughout England during the 13th century. It is probable that the Hallgate kiln represents an early example of the type.

A considerable amount of pottery was recovered from the kiln and some of the vessels had clearly failed during the firing.

Preliminary results suggest that the activity on the site dated to the later 11th or early 12th centuries and was thus earlier than that described by Buckland and his collaborators (1979).

The pottery, mainly jugs, jars and pancheons, all seems to have been made by coiling, smoothing and turning techniques. Glazing of the vessels, notably the jugs, is exclusively of the splashed type in which powdered glaze was applied to the surface of leather-hard pots. This was replaced by safer and more convenient suspension glazes during the later 12th century. A number of distinct types of clay and temper have been identified and some of these suggest that, while the potters may have changed their methods over time, they continued to exploit the same clay sources and to mix their clays in similar ways. A considerable amount of further analysis is required before the details of the pottery assemblage are understood, but it is clear that its discovery has implications for our understanding of the pottery industry in the post-Conquest period.

Excavations at Wood Street, Doncaster

The site at Wood Street lies close to the Hallgate site (figure 1). A plan to demolish the former offices of the Doncaster MBC Education department and to redevelop the site led to a two stage excavation by the SYAFRU.

The size of the area available for investigation was greatly curtailed by surrounding areas of modern disturbance. The ground plan of the demolished building and three engineers test pits excavated around its perimeter showed that the cellars of the building had reached the underlying sand and gravel deposits over most of the site. A main drain and the presence of two underground electricity cables further defined the area in which excavation could take place. Ultimately the excavated area measured only nine metres by six metres and this restricted the extent of possible interpretation.

The archaeological features consisted of two parallel ditches and two smaller gullies orientated on an east - west axis and curving slightly. The curvature suggests that they may have formed part of an enclosure, centred to the north of the site. A small pit and a post hole were located immediately to the north of the northernmost ditch. Pottery from the ditch fills was of local Romano-British greyware type and has been provisionally dated to the 2nd century AD.

Together with the evidence form the larger excavation in Hallgate, it is clear that there was a considerable amount of activity outside what was previously thought to be the limit of the Roman civil settlement. The ditches may represent part of the southern boundary of the cemetery, although without further evidence it is difficult to distinguish such a boundary from that of a domestic or agricultural enclosure. Should further opportunities arise for work in the area the situation may become clearer.

S. Atkinson and C.G. Cumberpatch

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SURVEY AND EXCAVATION ON THE SITE OF THE FORMER DONCASTER AIRPORT

The site of the former Doncaster Airport is currently being redeveloped as part of the Doncaster Leisure and Business Park. This scheme, intended to make use of a largely derelict area of the urban fringe, will inevitably have a profound effect on surviving archaeological features. A superficial survey of the known history of the area showed that much of it had probably been rendered archaeologically sterile by previous ground disturbance, but that small areas survived where archaeological remains might be expected to survive. The potential importance of these areas was enhanced by the proximity of Loversall Carr, where later prehistoric field systems have been located by aerial photography. In addition Short Lane has been identified as a possible Roman road leading into Doncaster. A programme of survey and excavation was designed to evaluate the presence and condition of surviving archaeology and to collect samples for paleo-environmental analysis should areas of peat be discovered.

The work consisted of three elements; a geophysical survey to locate surviving sub-surface features, a series of trial trenches to examine archaeological features and a machine dug sample pit to obtain paleo-environmental material.

The survey, carried out by Geophysical Surveys of Bradford, proved inconclusive with only a limited number of features of potential archaeological interest being identified.

Two trenches were excavated, initially by machine and subsequently by hand. The first of these, placed so as to investigate a geophysical anomaly, located a single archaeological feature unrelated to the geophysical plot. This appeared to be a trackway, probably of post-medieval date.

A second trench, placed to the southeast of the first, revealed a linear feature, most probably a ditch. The primary ditch fill consisted of dark humic material, the result of the growth and decay of vegetation while the ditch was in use. A secondary fill, of dark sandy material containing some ash, lay above it and was in turn overlain by the upper fill which cut through the subsoil horizon below the modern topsoil. This implied that it was of relatively recent date, probably post-dating the early medieval period. Its stratigraphical characteristics distinguished it from the cropmark sites which are believed to be late prehistoric in date.

The programme of environmental sampling, undertaken by N.J. Whitehouse of Sheffield University, consisted of thirteen samples taken from a test pit excavated by machine in the southern section of the site, an area identified as having the potential to contain peat deposits. Analysis of the samples showed that they were characterised by poor preservation of both plant pollen and insect remains. It seems probable that the area had been subject to fluctuating water levels consequent upon 18th century and later drainage schemes. Such a regime would have allowed oxygen to penetrate the previously anaerobic deposits and decay processes to begin.

The investigation of the site of the former Doncaster airfield proved disappointing in that archaeological features were both sparse and undatable and the environmental evidence was of poor quality. Both these facts point to the extensive disturbance of the area in recent times.

The work was commissioned by the Economic Development Unit of Doncaster Metropolitan Borough Council.

Compiled by C.G. Cumberpatch from reports by S. Atkinson and N.J. Whitehouse.

AN EVALUATIVE EXCAVATION AT THE CORN EXCHANGE, DONCASTER

The famous Corn Exchange in the Market Place, Doncaster, was badly damaged by fire in early 1994. Refurbishment work has been continuing during 1994-5, and involves the construction of a new floor level within the building. ARCUS, the contractual arm of the Department of Archaeology and Prehistory at the University of Sheffield, were commissioned by Design Services, Doncaster Metropolitan Borough Council, to carry out an archaeological evaluation of the proposed new market stall area. Nineteenth century sources record that the Corn Exchange was constructed near the site of the former parish church of St. Mary Magdelene, but no previous archaeological investigation had taken place within the building.

Historical background

The church of St. Mary Magdelene

The triangular Market Place appears to have been deliberately planned to fit inside the south eastern corner of the medieval town defences. Documentary sources suggest a late twelfth century date for the Market Place (Buckland *et al* 1989), but it is likely that St. Mary's church had been in existence long before then. The church has no clear topographic relationship to the Market Place, which implies that by the time the Market Place was laid out the church and its graveyard were already long established. The present excavation found burials under the market hall itself, some distance away from the site of the church.

The seventeenth century antiquarian Abraham de la Prymehat records the frequent unearthing of Anglo-Saxon gravestones within the Market Place, and later authorities mention 'cist' burials (rare in the middle ages, but more common in the Roman and Anglo-Saxon periods). The nineteenth century antiquarian William Sheardown described surviving late-Saxon architecture in the remains of the chancel. (Sheardown 1870). A possible reference by Bede to the construction of the second Anglo-Saxon church in Yorkshire at *Campodunum*, is often thought to refer to Doncaster (Jackson 1853) The evidence seems to point to an early-established church, one which appears to have had an extensive graveyard by the end of the twelfth century.

Drawings made at the time of the demolition of the church show that it was probably remodelled in Early English style during the thirteenth century (Jackson 1853, plates 1-4). Such expensive work indicates that St. Mary's was still a parish church of some status. However, by the mid-fourteenth century it had declined. The appropriation of the rectorial tithes of Doncaster in 1303 transferred the main parish activities to St. George's church. The graveyard is likely to have fallen into disuse at this time and St. Mary's was relegated to the status of a chantry chapel. After the Dissolution of the Chantries in 1548 the entire property (including the graveyard) became Crown property. It was sold in 1556 for use as the Borough meeting house. In the seventeenth century it became the Town Hall, with the chancel being used as a grammar school (Walton 1980).

The market hall and Corn Exchange

In the 1840s it was decided to demolish the building to create a market hall, and in 1846 site clearance began. Substantial remains of the early church were discovered, and destroyed, in spite of much local opposition (Jackson 1853). The market hall was further developed in the 1860s, and in September 1870 work began on the new Corn Exchange. These developments, which included the construction

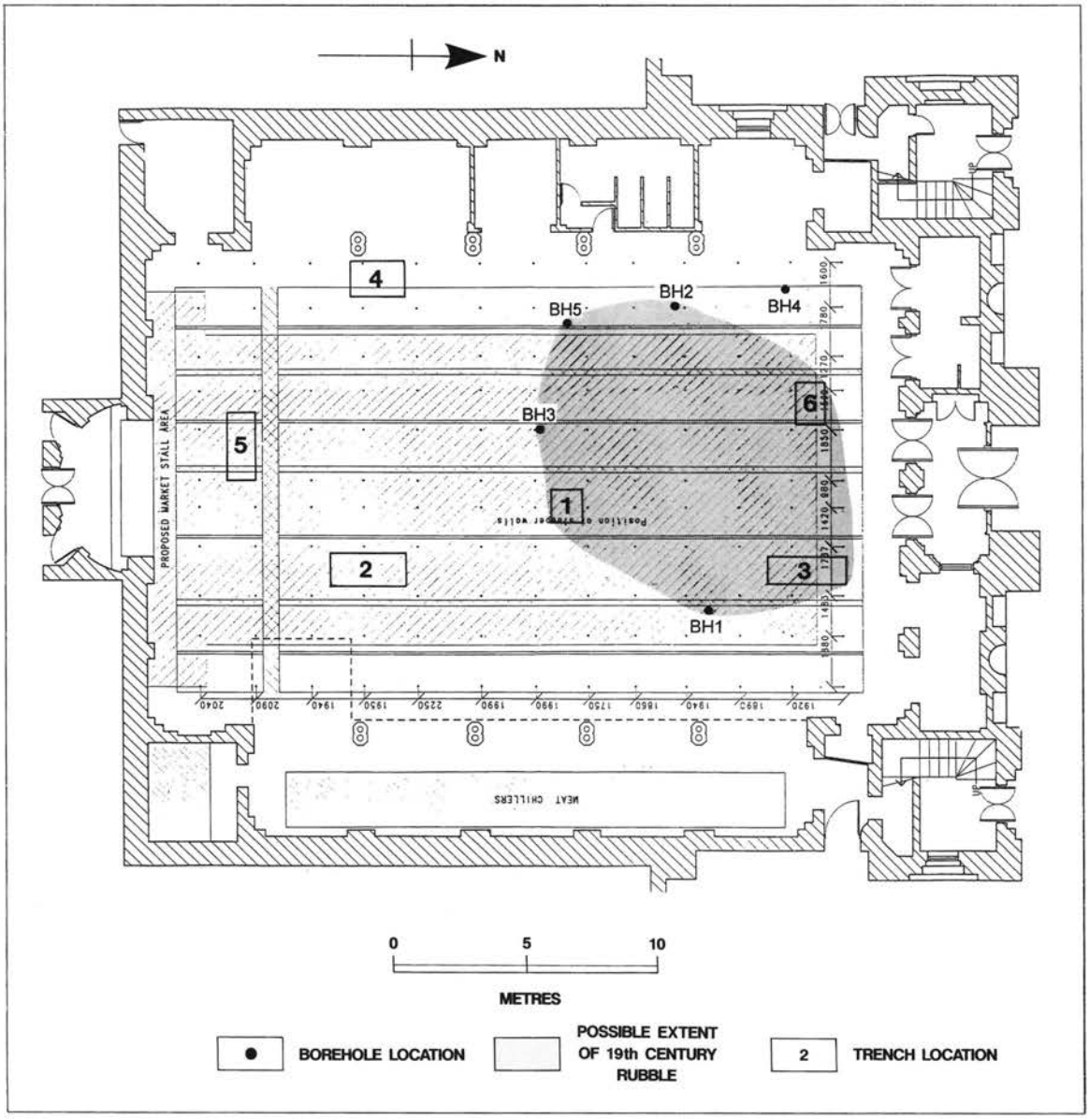
of vaults and cellars, unearthed a large number of burials (Sheardown 1870, Walton 1980)

Evaluation results

Five trial trenches were opened in the floor of the Corn Exchange, and an examination was made of one of the column bases. The siting of these trenches was severely restricted by the brick support walls for the original floor, which effectively divided the floor area into seven thin strips (figure 1). The work was further hampered by the densely packed scaffolding which had been erected to provide access to the roof during the refurbishment. Due to the restricted space, all trenches were excavated by hand, down to an agreed maximum depth of 1.00 metres.

Trench 1

This was located in the centre of the building. Due to the restricted space an area of 1.20m x 1.20m was all that could be excavated. The trench was taken to a depth of 1.00m and auger-sampled for a further 0.60m. No archaeological features were found, but an homogenous rubble layer (002) contained domestic refuse, including a strap handle fragment dated to the late-fifteenth/early sixteenth century. Other finds were of post-medieval date, including pot, glass, clay pipe and animal bone.



■ FIGURE 1. TRENCH LOCATION PLAN, CORN EXCHANGE, DONCASTER

Trench 2

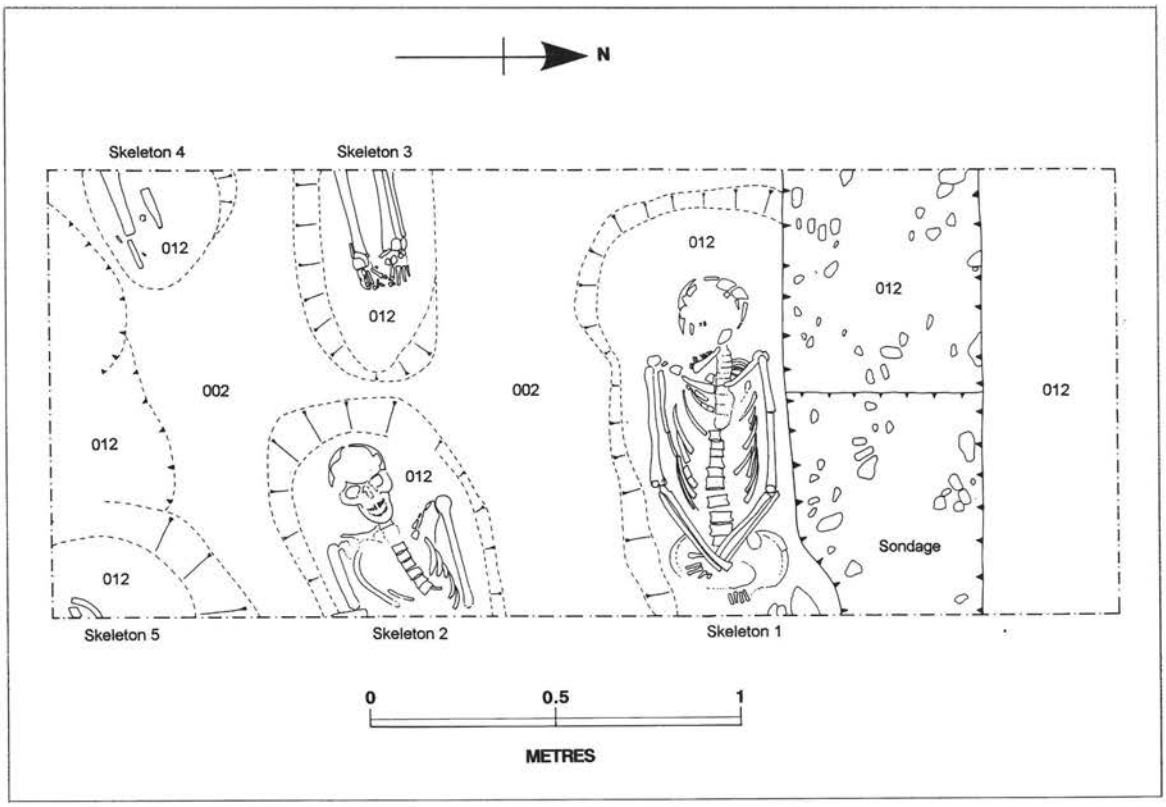
This trench was located on the eastern side of the hall, and was oriented N-S. An area 3.50m x 1.20m was excavated down to the natural, which was encountered at a depth of 0.25-0.35m below the present ground surface. A sondage was excavated to 0.70m at the northern end of the trench.

Trench 2 contained five human graves, all oriented E-W. The graves were cut into the natural (012), and filled with a brown silty clay. Two of the grave fills contained sherds of Roman grey ware (layers 003 (Skeleton 1) and 005 (Skeleton 3)). Fragments of glass and nineteenth century ceramics were recovered from layer 006, the grave fill for Skeleton 4. Due to the narrow width of the trench, none of the skeletons were completely exposed (figure 2).

Skeleton 1 was the most fully exposed. The body was buried with the head to the west, and with the hands crossed over the pelvis. Analysis of the teeth and bones suggested an older adult, probably male, with an estimated stature of c.1.75m. The other skeletons were much less accessible. Only the skull and upper torso of skeleton 2 was excavated, while Skeleton 5 was represented only by skull fragments in section. Analysis of Skeleton 2 suggested an older adult female. Skeletons 3 and 4 were largely buried to the west of the trench, only the feet being exposed by excavation.

Trench 3

This trench was located in the north-west part of the market hall. Oriented N-S, the area excavated was 1.00m x 2.75m, to a depth of 0.40m-1.00m. A sharp, near-vertical cut (009) defined the edge of a subterranean feature cut into the natural. The fill of this cut (003) contained finds of post-medieval date. At the northern end of the trench a deposit (004) consisted of black ashy burnt soil, with inclusions of burnt stone, bone and fragments of coal. Both medieval and post-medieval finds were recovered from this layer, including sherds of Cistercian ware and Firsby ware, datable to the fifteenth or sixteenth century. Post-medieval finds included a possett cup dated to the sixteenth century.



■ FIGURE 2. PLAN OF TRENCH 2 SHOWING SKELETONS

Trench 4

Trench 4 was situated on the western side of the building, and investigated the foundations of one of the four pillars on this side of the Corn Exchange. An area 2.00m x 1.30m was excavated to a depth of 1.00m. No archaeological features were discovered in this trench.

Trench 5

This trench was located at the southern end of the building, and was 2.50m x 1.00m. The natural was encountered at a depth of 0.50m. Running through this trench, and cutting through several layers, was a linear feature (003). This consisted of a single layer of various stone, brick and mortar components. To the east of this feature, in the fill (004), two fragments of bone were recovered: a human tooth, and a fragment of skull, probably also human.

Trench 6

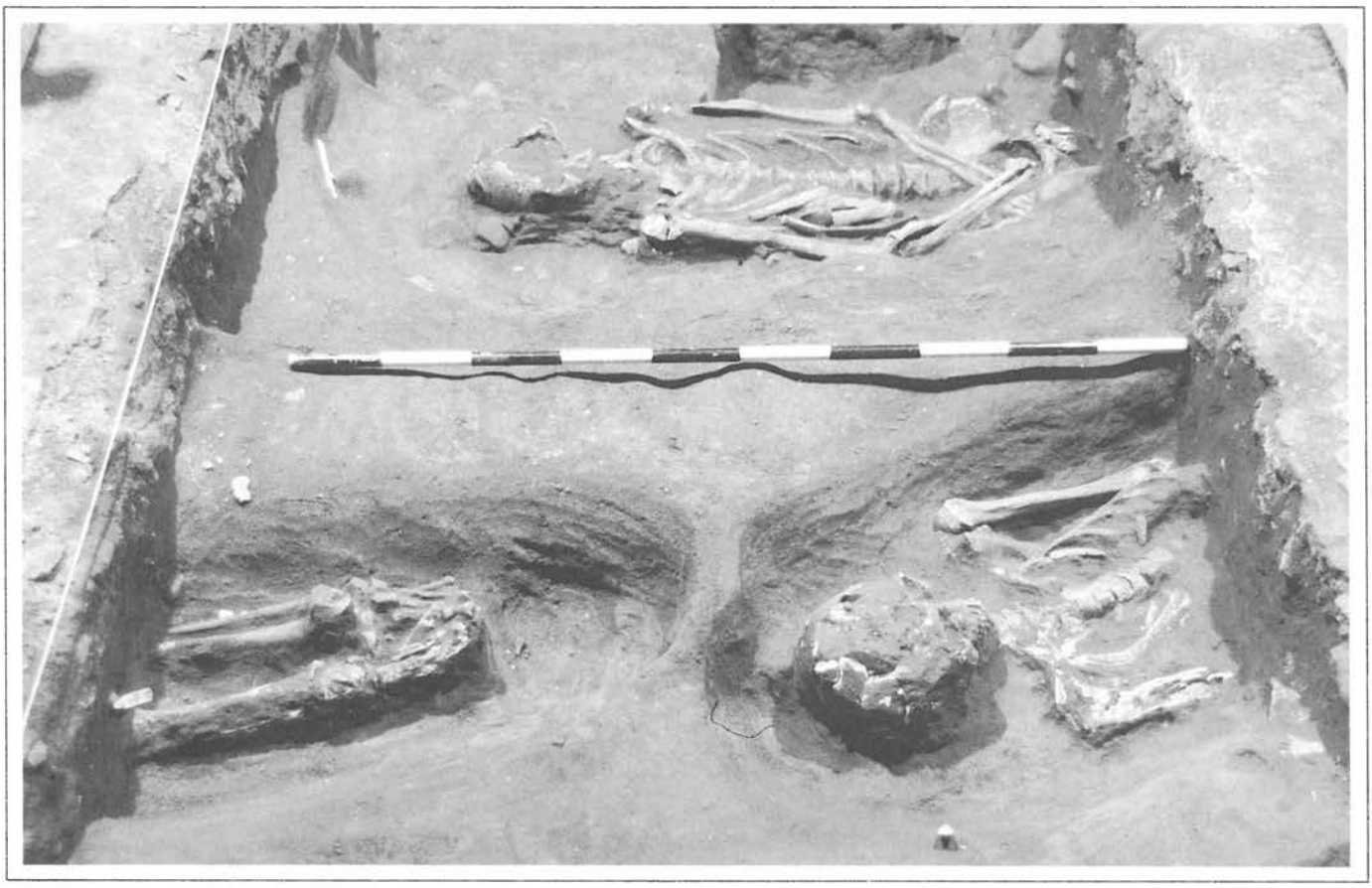
Trench 6 was situated on the western side of the present building, oriented E-W. An area 2.00 x 1.00m was excavated, to a depth of 0.80m. No archaeological features were discovered in this trench.

Interpretation and discussion

The burials uncovered in Trench 2 were all placed in graves oriented W-E, and were deposited without grave goods. This, together with the crossed arms over the pelvis of Skeleton 1, suggests Christian burial. It is therefore likely that these burials derive from the graveyard of St. Mary Magdelene. However, the date of these inhumations is uncertain.

The linear feature in Trench 5 can be interpreted as the footings for a wall, which was later completely removed. The flimsy nature of these foundations implies that the wall was non-loadbearing, and possibly marked a boundary division.

It could be argued that this was the boundary of the graveyard, as



■ THE BURIALS UNCOVERED IN TRENCH 2

no human bone was found to the west of it.

The deep vertical cut in Trench 3 represents a subterranean feature cut into the natural. This was later filled with rubble. The results of a borehole survey carried out in January 1995 support the view that a quantity of brick rubble was deposited on the northern part of the site in the later nineteenth century. To the south, where the ground naturally rises, the burials are very close to the surface. Clearly, this naturally sloping site was levelled before construction work began in 1870.

On the basis of this limited excavation, it may be suggested that the graveyard of St. Mary Magdelene extends under the south-eastern corner of the Corn Exchange, perhaps in the area bounded by Trenches 2 and 5. Human remains were not found in any of the other trenches, and it is clear that substantial modification of the site occurred in the post-medieval period.

Mr. P. Belford, Dr. T. Cooper, Mr. J. Symonds and Dr. J. Webster

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A WATCHING BRIEF AT 49 MARKET PLACE, DONCASTER

In February 1995 ARCUS (Archaeological Research and Consultancy at the University of Sheffield) was commissioned to carry out a watching brief at 49 Market Place, Doncaster, in response to demolition and excavation work to be carried out by Fairfax Securities Ltd.

A structure to the rear of 49 Market Place was to be demolished, although a concrete raft, which formed the base of this structure, was to be left intact. Two chutes were also to be excavated, to contain support pillars for the new building. However, this part of the building design was modified, and the new design involved re-inforcing the present cellar roof, causing no deposits to be disturbed.

Nothing of archaeological significance was encountered during the site works. Investigation of the deposits under a cellar flagstone revealed a cut filled with limestone rubble and stone blocks, none of which showed any signs of being worked. Cultural material dating from the 19th and 20th centuries was found associated with this feature. Investigation of a test-pit adjacent to the cellar wall showed that the cellar foundation appeared to be dug into natural deposits. Nothing of archaeological significance was adversely affected by the developments.

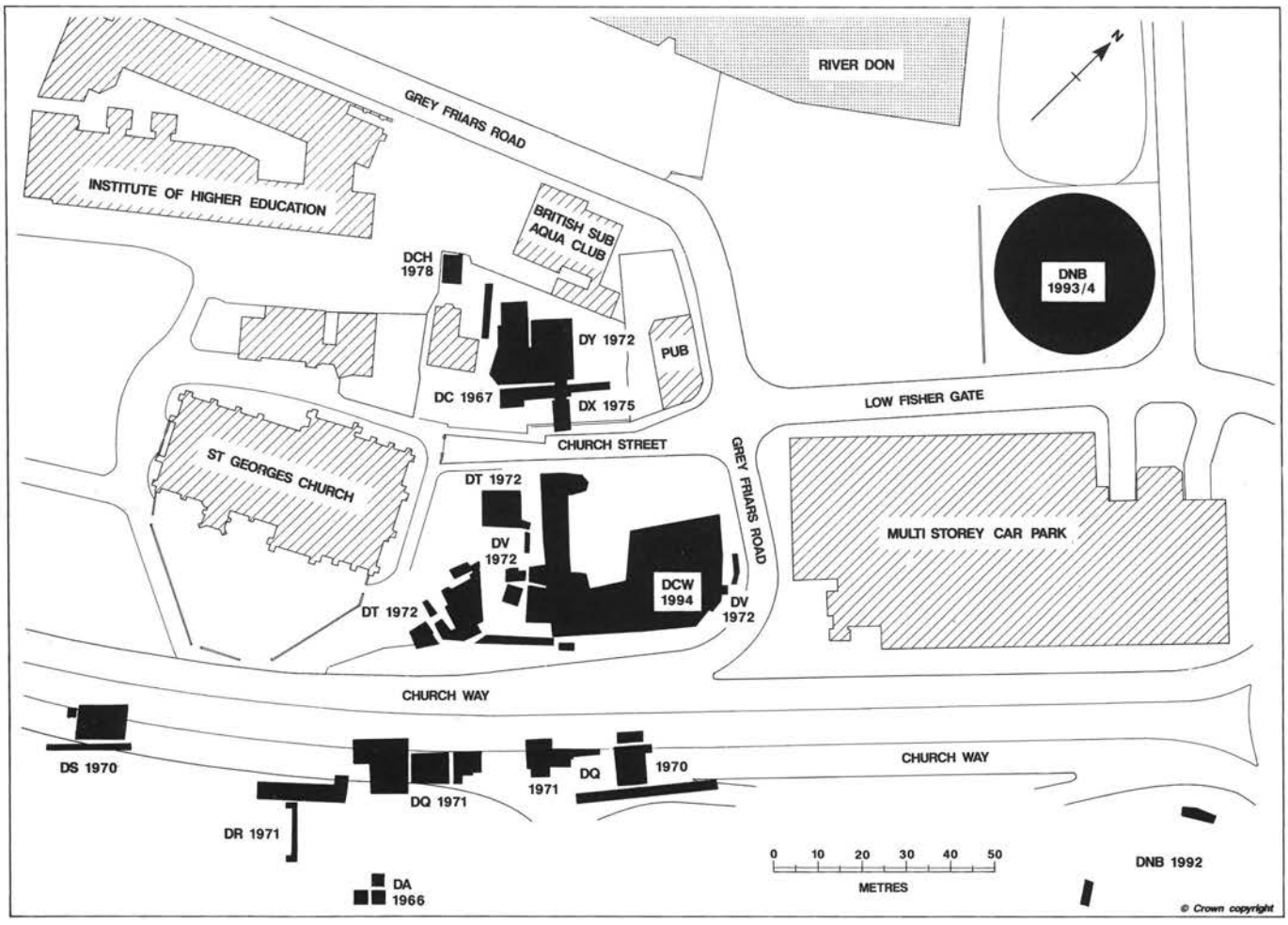
Edited by Ms. A. Badcock from a report by Mr. R. Ross

EXCAVATIONS ON THE SITE OF ASKEWS PRINT SHOP, CHURCH STREET, DONCASTER

Between June and August 1994 the SYAFRU conducted a major excavation in Church Street, Doncaster. The work was conducted in advance of the North Bridge relief road scheme, and was funded by the Borough Engineers Department of Doncaster Metropolitan Borough Council.

The site was located to the east of St. Georges church, on an area of land formerly occupied by Askews Print Shop (figure 1). Numerous small trenches, excavated in the area during the 1970s, had demonstrated the existence of Roman, Saxon and Norman defences as well as Medieval activity (Buckland and Magilton 1986, Buckland, Magilton and Hayfield 1989). The information gained from these trenches showed that the area had the potential to reveal important information concerning the development of the town and because of this a full excavation was carried out.

The excavations took place within an L shaped area that largely avoided the heavily disturbed Church Street frontage. They revealed a complex sequence of deposits ranging in date from the 1st to the 20th century. The following account is a summary of the preliminary results and is based largely on 'on-site' observations. Some of the interpretations may well change when the finds have been analysed and fuller details about the site are available.



■ FIGURE 1. SITE LOCATION PLAN AND LOCATIONS OF PREVIOUS EXCAVATIONS, CHURCH STREET, DONCASTER

■ THE SITE VIEWED FROM THE TOP OF ST GEORGES CHURCH TOWER

The upper deposits, 1.2 to 2.4 metres deep, comprising the majority of the post medieval features, were removed by machine. The remaining archaeology can be divided into several broad phases of activity which will be described in their chronological sequence.

The earliest activity on the site is represented by a scatter of flint artifacts. These finds were not associated with any excavated features and indicate little more than that the Don valley was the scene of a range of activities during the prehistoric period.

The first dated features can be assigned to the period of the construction of the early Roman fort in the 1st century AD, an episode that effectively initiated the development of a settlement in the area now occupied by Doncaster.

These early Roman deposits were extremely fragmentary, particularly across the main, eastern, arm of the site. This was initially seen to be at odds with the fact that the early defences were thought to run to the east of the excavated area, along the line of Grey Friars Road (figure 2). As will become clear however, this apparent absence of evidence is likely to be the product of later disturbance. Where they did survive the deposits demonstrated the existence of structures, wells and ditches, with an indication that the end of the phase may have been marked by the burning of the buildings.

The next phase of activity was marked by the construction of a smaller fort within the area of the 1st century fortifications (Figure 2). The edge of this later fort was represented by an intermittent line of pitched limestone foundations, interpreted as the robbed remains of a stone wall. To the west of this wall line were a sequence of deposits that indicated the presence of an earth rampart and associated post holes. Some 14 metres to the east there was a 0.75 metre deep ditch. All of these later Roman features had been heavily disturbed by medieval activity and it would seem that the ditch, assuming that it was a defensive obstacle, must have been truncated. The evidence suggested a wall width of approximately 2.7 metres with the wall walk being supported on an earth and timber construction behind it.

The Roman deposits appear to broadly support the sequence of events suggested after the 1970s excavations, although firm conclusions will have to await the detailed publication of the results from the earlier excavations. The finds from the 1994 excavations have not yet been fully analysed, but preliminary results suggest a date in the last quarter of the 1st century for the construction of the first features (the earliest coin was of 72 AD) and a late 2nd or 3rd century date for the construction of the stone fort.

The period from 400 AD to 1200 AD was dominated by successive re-fortifications of the Roman defences, culminating in the

■ FIGURE 2. INTERIM PHASE PLANS

construction of a motte and bailey castle in the 11th century. The two features currently ascribed to the Saxon period are both large defensive ditches, surviving to a depth of up to 3.5 metres (Figure 2). The current theory suggests that the eastern ditch was the first to be dug, and that it represents a reinforcement of the Roman fort. According to this interpretation the later ditch is therefore the western one, which was dug directly alongside the remains of the Roman wall, with the up-cast from these excavations being deposited as a gravel bank, behind, and partially over, the earlier wall.

The infill of these two ditches was radically different. The eastern ditch had silted up over a long period of time, with little sign of activity in the area during the process. The western ditch had apparently been filled in fairly quickly with material derived from the gravel bank thrown up during its construction. The final fills of the later ditch contained a quantity of stone and mortar fragments which suggested that a surviving hollow was deliberately infilled during the robbing of the Roman wall. Given the proximity of the Norman bailey ditch to the wall (located some 2 metres to the west), it is tempting to see this robbing and infilling as a product of the 11th century phase of activity.

The dating of these putatively Saxon features is currently open to question, as most of the finds recovered from their fills seem to be Roman in date. The only Saxon find thus far identified is a 9th century dress ornament depicting a valkyrie figure. The location of this find, in the final fill of the early ditch, need not contradict a Roman date for the feature as a whole as it could easily be intrusive. Conversely, assuming that the features are Saxon, the existence of Roman material within them is not surprising given that they were cut through the area of the Roman fort. The resolution of these problems will be a priority during the post-excavation analysis of the finds.

The final phase of defensive activity on the site was represented by two features associated with the construction of the Norman motte and bailey castle in the latter part of the 11th century (figure 2). The most obvious of these is the easternmost edge of a ditch which previous excavations had identified as being that surrounding the inner bailey (Buckland and Magilton 1986). To the east of this there was circumstantial evidence, and a certain amount of positive information from the main east - west section, which combined to suggest that a large area had been truncated by up to 1.5 metres. This had removed the eastern side of the platform currently occupied by St. George's church. This may be seen as activity designed to provide material for the construction of the castle motte, and explains the absence of all but the deepest Roman deposits in this area.

The construction of the castle marked the end of the area's 1000 year association with the Roman defences. The slighting of the castle in about 1200 AD terminated the area's association with all forms of defensive structure and saw the start of its involvement in the commercial and industrial life of the town.

The next phase of activity, spanning the period 1200 AD to 1500 AD, produced by far the largest body of evidence in terms of both excavated features and material remains (figure 2). The majority of these appear to have been connected with the tanning industry (figures 4). Research into this important, but poorly understood, aspect of medieval life is to be the main thrust of the post excavation analysis.

Three plots of land, presumably laid out after the slighting of the castle, were identified (Figure 3). The central plot was the only area where there was evidence for the buildings that lay along the street frontage. This consisted of a low stone wall running north to south which

formed one side of the 13th century structure. The position of the back wall was also visible but only in the form of a robber trench. To the rear of this was a much thinner wall which represented the addition of an extension in the 15th century.

The size of the early structure, (the wall was 1.4 metres wide with a solid pitched stone foundation) suggests that it may have been part of a building with a stone built ground floor and a timber first floor. In contrast the wall forming the extension was very flimsy, only 0.6 metres wide, and may have been used as support for a timber superstructure.

The interior of the building had been extensively damaged by the excavation of modern cellars.

■ FIGURE 3. CHURCH STREET, DONCASTER, PLAN OF MEDIEVAL FEATURES

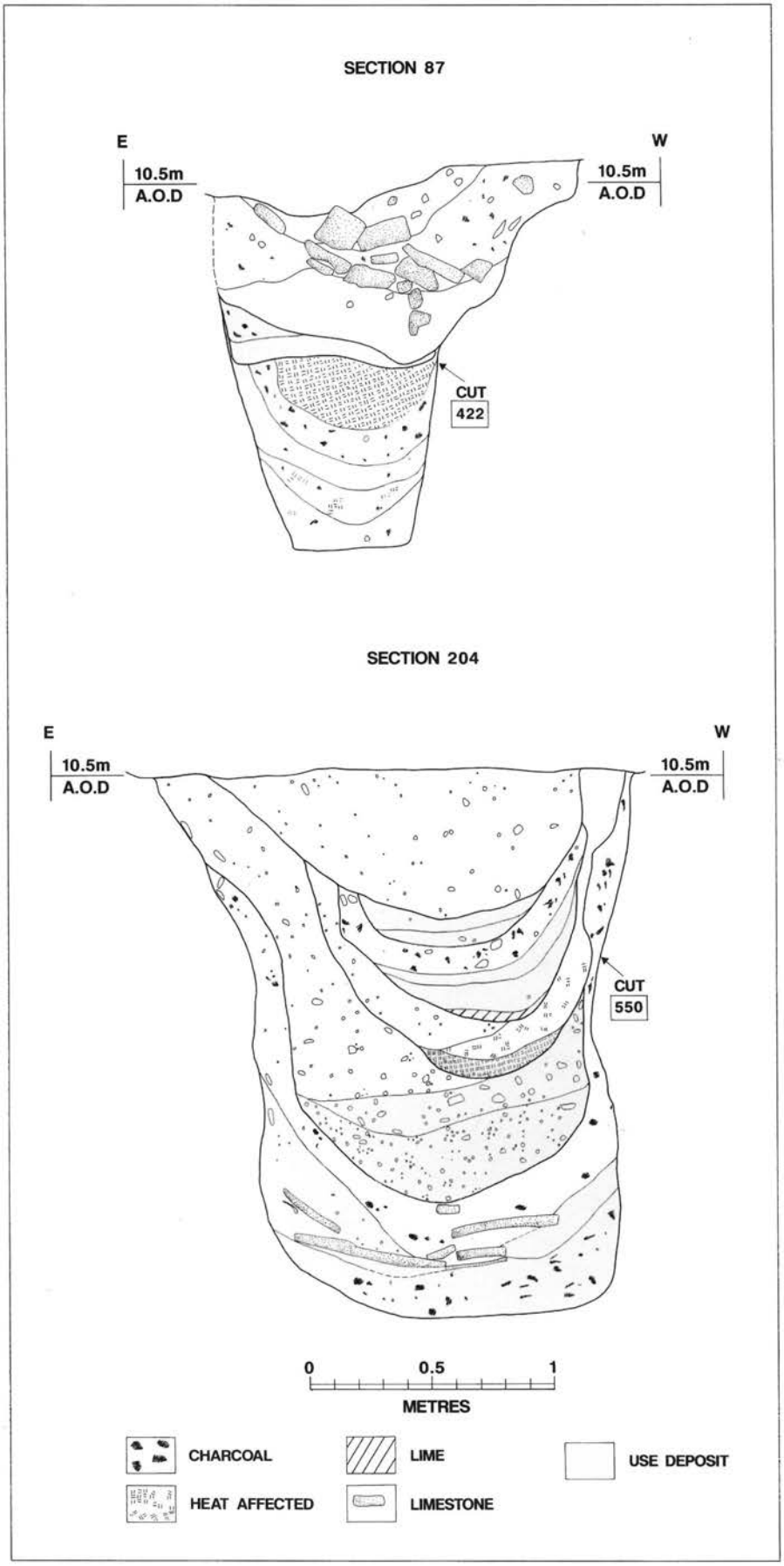
There were however the fragmentary remains of a hearth associated with copper working. To the rear of the property there was little evidence for any activity other than an unlined corn drying oven and a stone lined well.

The western plot was the least well understood as only a limited amount of space was available for excavation. The most striking feature was a 2 metre deep stone lined tank with opposed sockets in the eastern and western walls. This was originally interpreted as a garderobe associated with the building in the central plot, but later reconsideration suggested that it was associated with the features to the west. The fact that it contained lime might indicate that it played some role in the tanning process. There were also two large pits, 2 metres square and 3.5 metres deep, both believed to have had a tanning function, and a stone lined well. All of these features were in use during the 13th and 14th centuries and can be linked with similar features excavated on sites DV 1972 and DT 1972 (Figure 1, see also Buckland *et al.* 1989).

The eastern half of the site was dominated by a mass of tanning pits and associated features that were contained within what was apparently a double plot. The pits varied greatly in size and depth, with the largest being 2.2 metres deep and the smallest only 0.4 metres deep. They were characterised by concreted green and orange staining on their internal faces, and many showed evidence for various forms of timber lining. All the pits had been recut and reused several times. The fills of these pits fell into three categories: grey - brown soil that had apparently accumulated gradually in wet conditions; patches of soil that had been burnt *in situ*; and mixed deposits that appeared to have been dumped into the pits. These categories may be interpreted as: material that accumulated during the use of the pits for tanning; the result of

■ 13TH CENTURY MALTING OVEN

■ THE WEST WALL OF THE MEDIEVAL BUILDING



■ FIGURE 4. SECTIONS ACROSS TANNING PITS 422 AND 550

fires lit as part of a cleaning process (perhaps an attempt to remove unpleasant smells); and deliberate backfilling after disuse.

In addition to the pits there were two wells, an oven associated with malting barley and four clusters of post holes that may indicate the prescence of flimsy timber structures. The features could all be dated to within the period 1200 AD to 1500 AD.

Any reconstruction of the activities carried out on the site must remain tentative until the soil samples have been analysed. As suggested above however, the initial findings suggest that the site was used for part of the tanning process. The first stages in the production of leather involve the scraping of the hides which are then covered in lime and then thoroughly washed. The rarity of lime deposits on the site suggests that this part of the process largely took place elsewhere, possibly in the vicinity of trench DCH 1978 (Figure 1, see also Buckland *et al* 1989) which contained a lime kiln and was close to the medieval waterfront.

The next stages in the tanning process involve soaking the cleaned hides in a tannin solution produced using oak bark and water. This process took months and involved various strengths of solution. This was sometimes preceded by a short immersion in

solutions of a brewed liqueur, or in a liquid produced using dog faeces and water. There are strong indications that all of these soaking processes took place on the site.

The tanning aspects of the site are unusual for two reasons. The splitting up of the tanning process has not previously been seen in the archaeological record, and the number of pits indicates a departure from what is normally seen as a small scale operation. This may be a reflection of the fact the site was located on open land, the area having been cleared during the construction of the castle and not occupied until its destruction. The location of such a noxious industry, on land close to the market place and immediately adjacent to the town's main church is surprising to modern eyes, and may serve to remind us of some of the more unpleasant aspects of medieval life.

The end of large scale tanning on the site came during the late 15th century. The only features that could be dated to the 16th and 17th centuries were three tanning pits and two small cess pits, suggesting that small scale processing continued, perhaps associated with the central plot, which remained in use. During the 18th century the eastern plot held a small complex of pits believed to be associated with vellum production and a large retting pit associated with bone working. The final break with areas medieval past occurred during the 1970s when the building in the central plot, which had survived since the 13th century, was finally demolished as a prelude to the construction of Askews print shop.

Stephen Webster

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AN EVALUATION OF LAND OFF OSWIN AVENUE, BALBY, DONCASTER

As a result of an application by Tarmac Homes (Yorkshire) Ltd to develop a site off Oswin Avenue and Greenfield Lane in Balby, Doncaster, the South Yorkshire Archaeology Field and Research Unit carried out an evaluative survey and excavation on the site in May and June 1994. The work was prompted by the belief that the site lay on the course of the Roman road leading into Doncaster from the west.

The first stage of the work involved a geophysical survey which covered the whole of the area believed to be archaeologically sensitive. The work, carried out by Mr. C. Merrony of Sheffield University, showed that, although there were no readily identifiable archaeological features, an area in the north-western part of the site showed a higher resistance to the electrical current than normal. In response to these results five trenches were cut using a mechanical excavator, the intention being to locate the sources of the anomalies. With the exception of some small shallow features, associated with the recent use of the area for allotments, no features of human ori- gin were located. The source of the geophysical anomalies appeared to be the presence of patches of subsoil with a greater than normal density of river gravel.

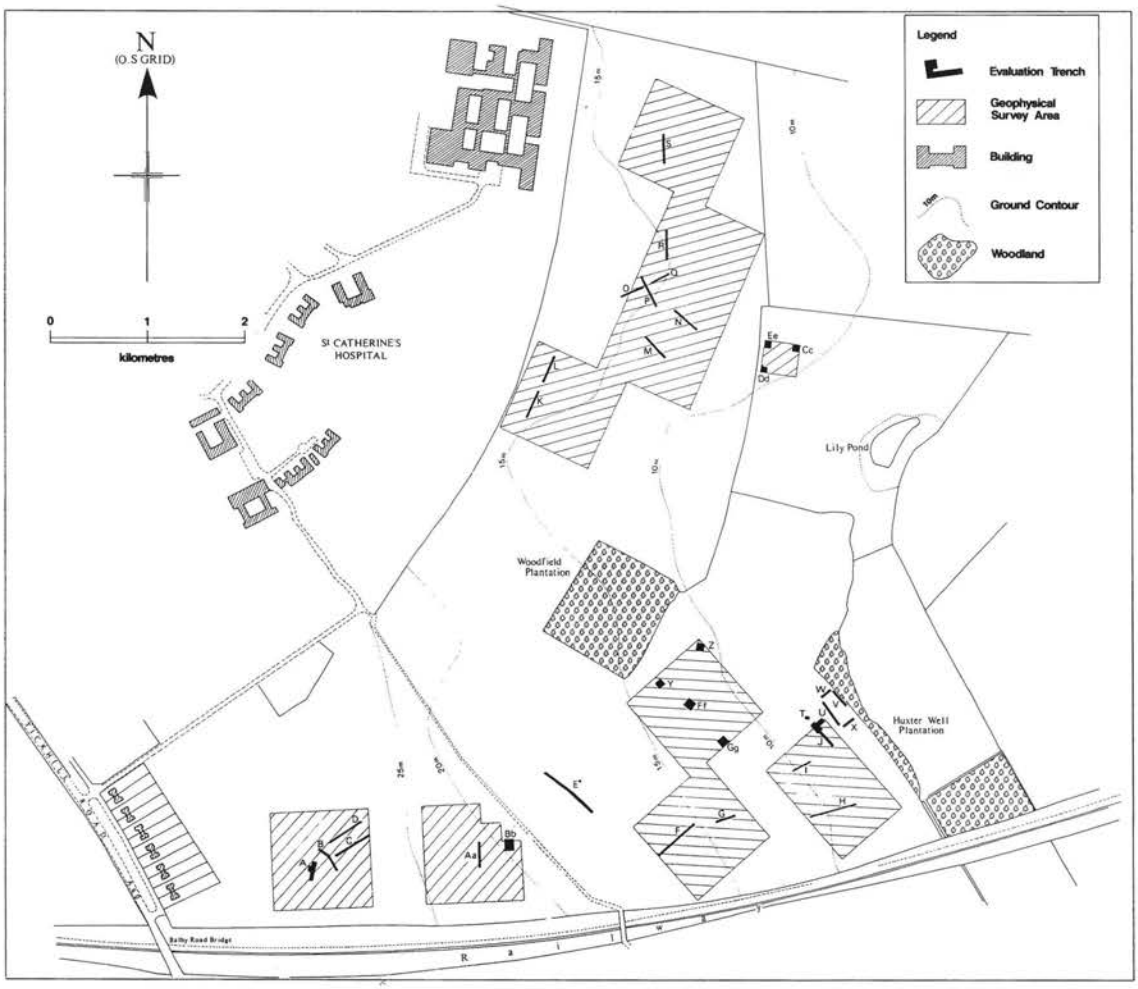
It was concluded that the Roman road did not run through the area of investigation and the actual route remains in doubt.

Edited by C.G. Cumberpatch from a report by S. Atkinson

AN ARCHAEOLOGICAL EVALUATION ON LAND ADJACENT TO ST CATHERINE'S HOSPITAL, BALBY, DONCASTER

A proposal to develop a block of land adjacent to St Catherines Hospital, Balby was passed to the SYAS early in 1994. In view of the known presence of cropmarks to the south of the area and a number of recorded finds of prehistoric flintwork, Romano-British pottery a hoard of Roman coins and medieval coins within it or close by, a brief was issued for a archaeological evaluation. This followed the standard pattern for such work; a geophysical survey followed by trial trenching.

The geophysical survey was undertaken by Geophysical Surveys of Bradford. Using a fluxgate gradiometer a 30% sample of the area was surveyed and a number of magnetic anomalies detected. These anomalies were investigated using thirty-three machine cut trenches and 3 metre square test pits across the area bounded by Tickhill Road, St Catherines Hospital, a disused railway line and Huxter Well Plantation (figure 1). This comprehensive programme showed that the bulk of the anomalies identified during the geophysical survey were either of natural origin or were the result of recent field boundaries. The survival of archaeological features must be seen in the context of the underlying geology. The site lay at the boundary between a limestone ridge to the west and the carr land of the Bunter sandstone to the east, a division reflected in the topography of the site. The land sloped downwards from west to east, falling from over 25m above sea level



■ FIGURE 1. LOCATION OF EVALUATION TRENCHES, ST CATHERINES HOSPITAL

immediately east of Tickhill road to below 10m above sea level at Huxter Well Plantation. This had inevitably resulted in the movement of soil down the slope over time; a movement probably accelerated by ploughing. It was therefore unlikely that archaeological features would have survived at the top of the slope unless they had been cut into the rock. No such features were located.

An examination of the soil profiles at the base of the slope clearly showed the accumulation of soil resulting from mass movement over many years. Romano-British pottery (local greywares) in two features, (a ditch and a pit) stratigraphically associated with plough furrows, suggested that the agricultural use of the area has a long history. The excavation of further trenches to establish a context for the two features proved inconclusive and it was concluded that the ditch and the pit were solely associated with agricultural practices. Three small, irregular features which contained medieval pottery were likewise assumed to relate to medieval agriculture. No other features of archaeological significance were noted.

This work was commissioned by Doncaster MBC Economic Development Unit.

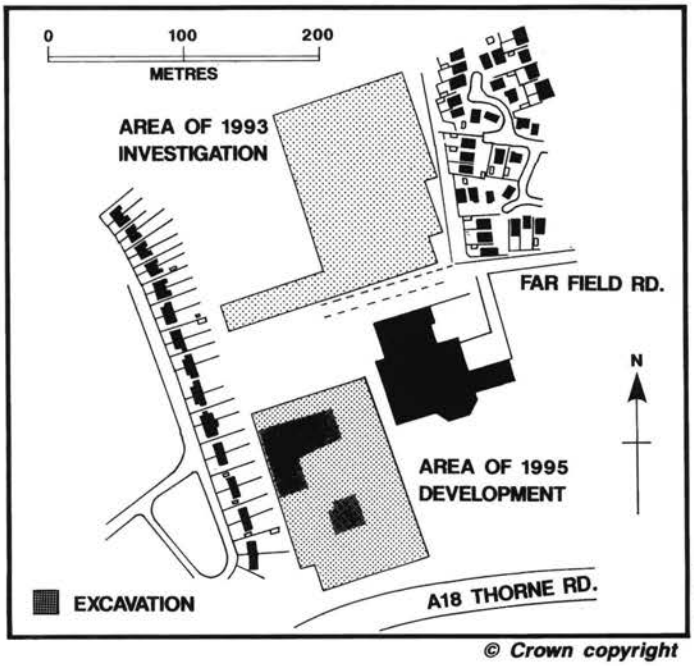
Compiled by C.G. Cumberpatch from a report by S. Atkinson.

FURTHER WORK ON THE IRON AGE AND ROMANO-BRITISH LANDSCAPE AT EDENTHORPE

In response to a proposal by Haslam Homes to build a number of houses on a site between Far Field Road and the main A18 Thorne Road near Edenthorpe, the SYAS proposed a two stage investigation of the cropmarks known to exist on the site. Following a geophysical survey (carried out by Geophysical Surveys of Bradford) the developer commissioned the SYAFRU to undertake an excavation on the site.

Cropmark sites are the result of the differential growth of cereal crops in response to patterns of greater or lesser soil depth and water availability. Although they may appear because of variations in the natural geology, they are commonly the result of human activities including the digging of ditches and the construction of banks and walls. The cropmark landscape of South Yorkshire has been documented by Derrick Riley (1980) and investigated by the SYAFRU and other contractors. Although a number of basic facts about the cropmark sites are well known, but we are still far from having a full understanding of the significance of the landscape.

It is clear from earlier excavations that, although parts of the field systems remained in use into the Roman period, their origins lie in the later Iron Age. In South Yorkshire this period is characterised by an absence of most of the material which archaeologists have traditionally



■ FIGURE 1. LOCATION PLAN, EDENTHORPE

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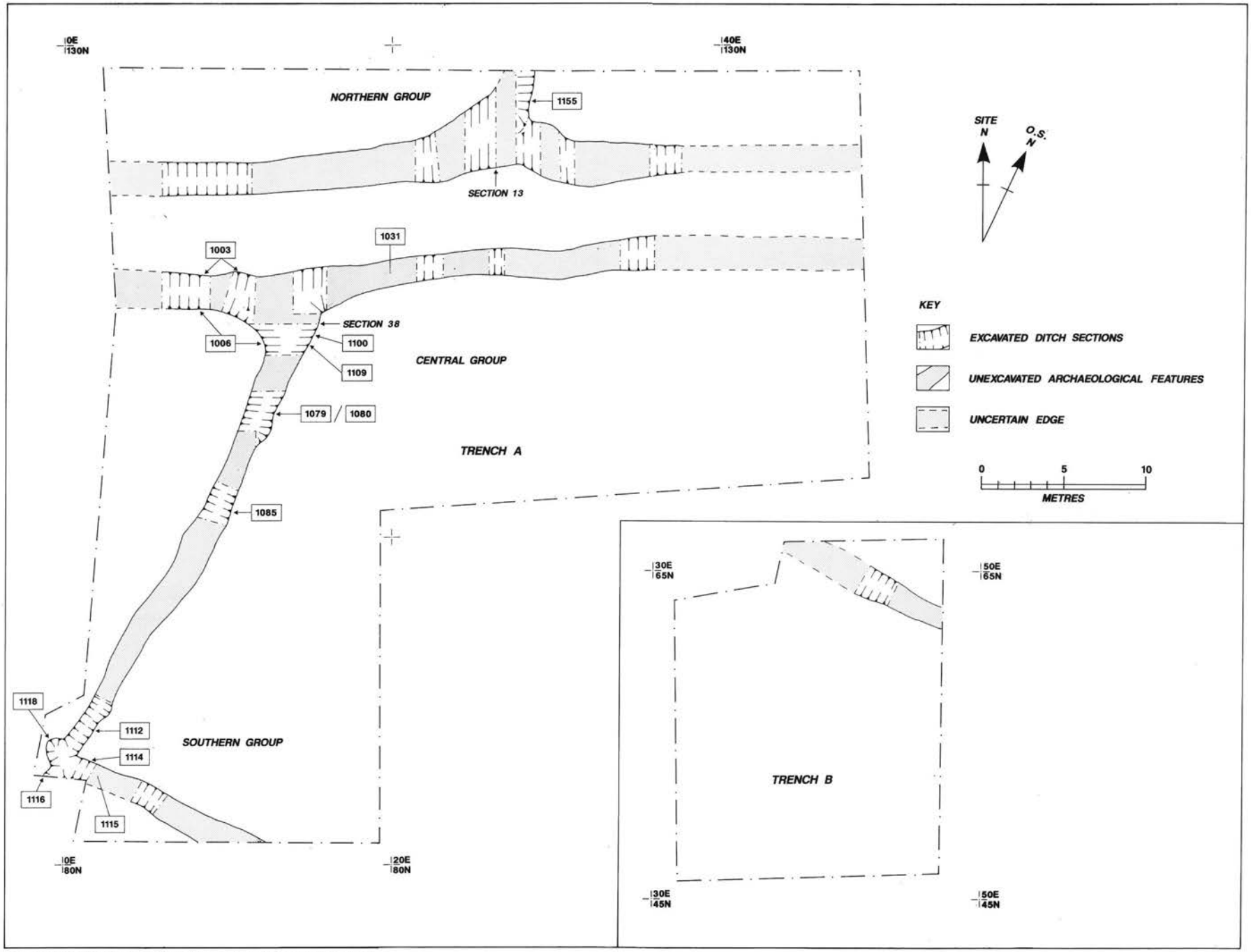


■ FIGURE 2. FEATURES REVEALED BY EXCAVATION, EDENTHORPE

relied upon for their interpretations. Thus Iron Age pottery has been found on only a handful of sites (Sutton Common and Pickburn Leys) while metalwork is even rarer (Cumberpatch and Robbins in prep.) and burials are unknown. In these circumstances we have to rely on the evidence of the cropmarks; the traces of field boundaries, enclosure ditches and trackways. A previous excavation carried out at Far Field Road (Atkinson 1994) had shown that there were a number of aspects of the cropmarks which required detailed investigation. These included the varying size of the ditches and the complexity of their history, as represented by the traces of recutting and periods of silting. For this reason an area of some 3000 square metres was stripped by machine and cleaned by hand. The features revealed are shown in figure 2.

The northern group

The group of features which formed the northern element of the apparent double ditched feature appeared to be composed of at least four phases of activity, with the earliest phases obscured to some considerable extent by the later. The general picture appears to have been one of a series of ditches running approximately west-south-west to east-north-east, interrupted by a gap or a series of gaps. It was far from clear whether there was ever an unbroken ditch line on this orientation; rather the line appears to have been made up of a series of short, punctuated ditch sections. These ditches were recut on a number of occasions, this recutting obliterating and confusing the stratigraphical record, but apparently maintaining the interrupted barrier. During one of the final phases of activity, the established line was replaced by a continuous ditch which turned at and angle of about 80 degrees from the previous line to run northeastwards.

The central group

To the south of the first group of cropmarks lay a second group, apparently forming the southern part of the double ditched feature.

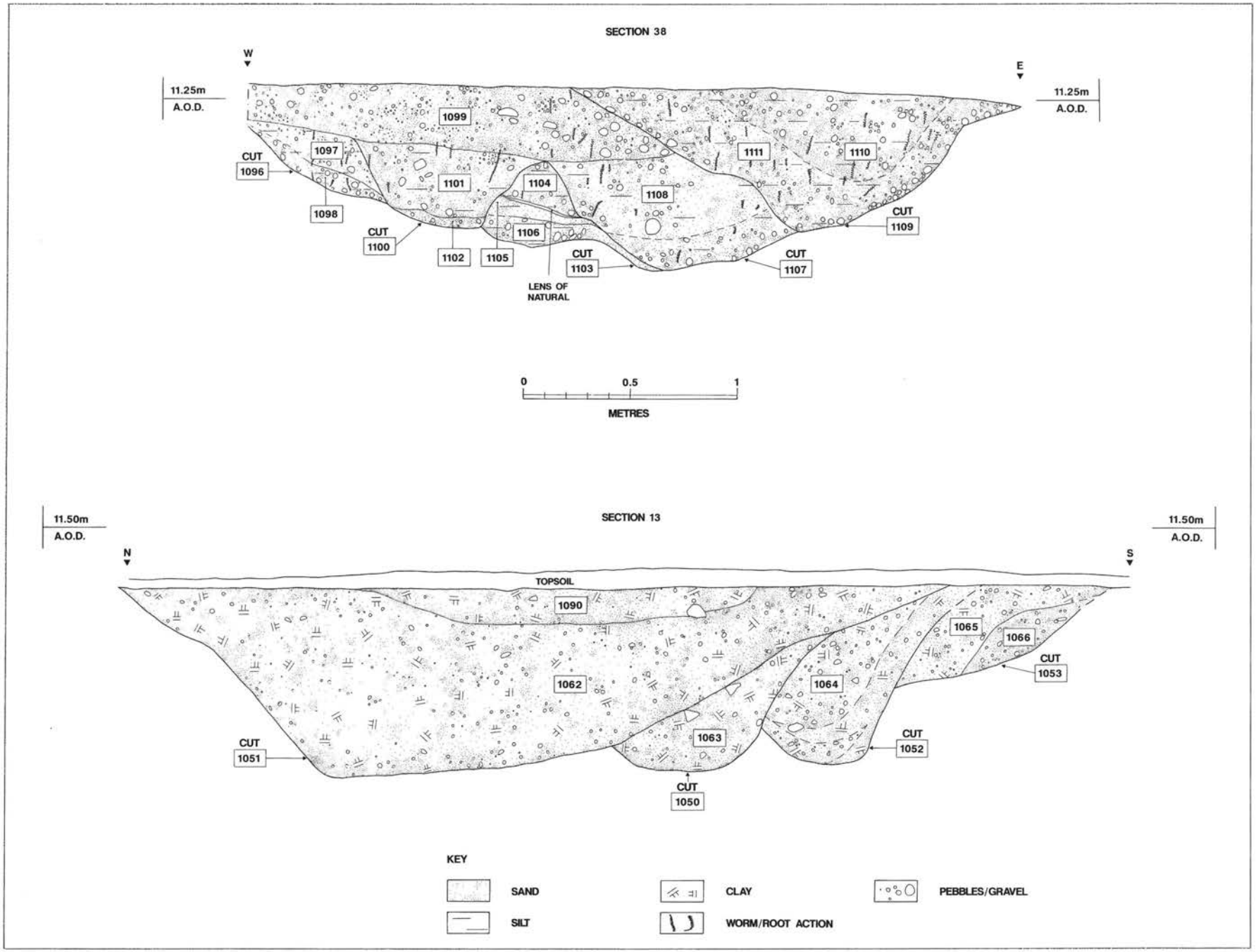
The earliest phase, ditch 1003, appeared to be an unbroken ditch running west-south-west to east-north-east across the site, forming the line visible on the aerial photographs. In subsequent phases this line was abandoned in favour of two sharp 'dog-leg' turns. The first (comprising several phases) ran in from the west-south-west and turned sharply to run south (cut 1006). This line was maintained for some considerable time, being recut on a number of occasions. In the final phase of activity the dogleg was reversed, with the ditch line running in from the east-north east and turning south-south-west, to end as part of the southern group described below. The uppermost fill of this ditch (deposit 1031) contained a quantity of Roman pottery concentrated within an area of about one square metre.

The southern group

The southern group of ditches was represented on the aerial photograph as a cropmark running approximately east to west across the site on a line converging with the apparent 'double ditched' feature.

The earliest phase was represented by a badly truncated terminal, 1118, apparently part of a feature running eastwards. This was subsequently recut by a ditch which approached on the same line (1114) before turning sharply southwards (1116). The primary fill of this ditch contained several sherds of heavily abraded Roman pottery, all from the same vessel. These had been deposited at the exact point where the ditch turned the corner.

In the final phase of activity consisted of the cutting of ditch 1112/1085/1079/1080 which linked the southern group with the central group. This ditch terminated in the same place as the earlier right-angle turn and the butt end of 1118.



■ FIGURE 3. SECTIONS 38 AND 13, EDENTHORPE

The pottery

One hundred and twenty-four sherds of pottery were recovered from two contexts (1031 and 1115). They were examined by M.J. Darling (1995).

The majority of the pottery (88 sherds) was recovered from context 1031 and consisted of flanged bowls and a grooved rim bowl in reduced sandy fabrics. The flanged bowls were not closely datable but fell into a chronological zone within the later second and early third centuries AD. A single sherd with a combed wavy line decoration may have been later in date.

The vessel from context 1115, a carinated bowl, was a more complex case. The form was originally derived from late Iron Age bowls but production continued into the Roman period with a series of changes in shape which transformed a bowl into a wide-mouthed jar or beaker. The example from Edenthorpe probably dates to the later 1st century or (more probably) the early 2nd century AD.

Discussion

In general there was a close match between the results of the geophysical survey and the line of the excavated ditches, although it is interesting to note that in most cases the geophysical plots coincided with the later ditch recuts rather than with the earliest phases. Many of the questions raised by the excavations are being examined in greater detail as part of an informal attempt to conduct research within the framework of rescue and evaluative archaeology (Cumberpatch and Robbins in prep., Webster in prep.). In this discussion we hope to explore some of the issues surrounding the Edenthorpe site specifically.

The Edenthorpe site was characterised by the evidence for the recutting of the ditches, all excavated areas exhibiting signs of such activity. This recutting was particularly pronounced at the ditch junctions, as sections 13 and 38 testify (figure 3). Even so, it is possible that not all the recuts present were identified. A number of slight breaks in slope, visible and recorded in plan, were invisible in section. Furthermore the recuts which were detected were perhaps only those which had not exactly matched the earlier feature. Where the later ditches had exactly matched or had overcut these earlier features such preceding activity would be rendered archaeologically invisible.

Most of the recutting appeared to have taken place after the earlier features had almost totally silted up. In section 38 for example it appeared that the silting up of cuts 1100 and 1107 was followed by the deposition of a further layer (1099) over both of them. Only then was ditch 1109 created by an episode of recutting. This pattern of behaviour was also noted during the earlier excavations at Edenthorpe (Atkinson 1993, 1994).

It has been argued by other workers that this recutting reflects the careful maintenance of the ditch systems (Atkinson 1993, 1994, Merrony 1993, Samuels and May 1980). Whilst this may be true of some ditches and for some sites (diversity amongst the field systems being one of their pronounced features, Cumberpatch and Robbins in prep.), it is clear that at Edenthorpe the situation is more complicated. From a purely functional point of view, if the brickwork pattern ditch systems were designed for drainage or to restrict the movement of livestock, then the irregular and episodic nature of the recutting would appear to contravene what is considered to be good modern agricultural practice. Most of those involved with the field systems now agree that drainage was not in fact one of the primary reasons behind the construction and maintenance of these field systems. Their distribution is largely confined to the Sherwood Sandstone belt which extends from north Nottinghamshire, through South

Yorkshire and into West Yorkshire (Riley 1980). This geological zone is characterised by subsoils of sand and gravel (Carroll, Hartnup and Jarvis 1979). It is unlikely that drainage has ever been a serious problem across this area. In addition it is hazardous to assume that past agricultural practices ever obeyed the same rationale as those in our late capitalist culture. Ancient agriculture took place in societies which had very different belief systems to those of today and there is abundant ethnographic evidence to suggest that agricultural and other practices would have respected complex rules derived from beliefs about the world, the cosmos and society's place within them.

An example of this could be the double ditched features often associated with the brickwork pattern field systems, one example of which was excavated at Edenthorpe. These long parallel ditches have been interpreted as lanes or droveways (Riley 1980:24) and, on some sites, evidence has been found for rutting between the ditches which may be indicative of disturbance by animals or wheeled transport (Chadwick 1992, Merrony 1993). Others have found evidence from the direction of slumping of ditch deposits that there may have been banks between some of these parallel cuts (Samuels and May 1980) and that these linear features were boundaries rather than trackways. There are however problems with both these interpretations. At Edenthorpe it is likely that the continuous double ditched feature existed only during the first phase of the site. In the later phases a confusing arrangement of butt ends and turns replaced the parallel, if punctuated, linear ditches. It has also been suggested that the ditches of these lanes are much larger than would have been necessary simply to keep animals from straying (Merrony 1993:51). Many of the ditches at Edenthorpe were also surprisingly large, some being at least two metres wide and over one metre deep. As truncation by ploughing may have removed up to half a metre of soil over some parts of the site, they would have originally been even larger, implying that a considerable amount of labour was invested in their construction.

It is becoming increasingly clear is that the landscapes observed from the air are much less uniform than has previously been thought. In the Rossington area the ditches excavated to date appear to have been mainly of a single phase with a minimum of recutting (Atkinson forthcoming). Elsewhere, at Edenthorpe and at Armthorpe for example (Atkinson 1993, 1994, Webster in prep.), there appears to be not only a greater chronological depth to the landscape but also greater complexity. The precise significance of this variability requires investigation through the further excavation of cropmark sites and also more work on the relationship between the cropmark sites and the natural and cultural landscape.

Our major error may have been to try to see these landscapes as representing field systems designed to increase the efficiency of farming. It is far from clear that this was the reason for their construction. While they were certainly involved with the process of land division in the broadest sense, the complexity and character of those excavated at Edenthorpe may suggest that this was not dominated by efficiency in land management as we might understand it.

We should perhaps be moving towards viewing these landscapes more as what has been referred to as 'existential space' (Tilley 1994). This existential space is, in physical terms, the space occupied by a community; villages, farms, farmland, common land and so on. Over and above this tangible reality it also holds a variety of shared symbolic, sacred and mythical meanings for the members of the community. Such meanings are not fixed but will change over time as new generations

reinterpret received wisdom and experience the landscape in new ways. Tilley has described existential space, perhaps rather obscurely, as space which 'is in a constant process of production and reproduction through the movements and activities of members of a group. It is a mobile rather than a passive space for experience. It is experienced and created through life activity ... Places in existential space are foci for the production of meaning, intention and purpose of societal significance' (Tilley 1994:16- 17).

At Edenthorpe the recutting of some stretches of ditch whilst others were left silted up would have had the effect of emphasising different areas of land at different periods of time. The changing sequences of ditch terminals would have created shifting patterns of gaps or entrances. These, and the changing of the ditch alignments on a larger scale, may have controlled who had rights of access to the fields and lanes. It has been demonstrated that in many small scale farming societies (both in the past as well as today) the control of space, and particularly of areas of agricultural land, can be an important means of controlling certain groups within society. As Tilley has remarked: 'Boundaries are of major significance in structuring existential space both in and between places and regions. Boundaries are to do with creating distinctions and marking out social oppositions, mapping social and cultural differences and Otherness. The presence of boundaries ... may be of major significance in delineating territories, the choice of locales and the networking of paths through a landscape' (Tilley 1994:17).

The episodic recutting of the ditches at Edenthorpe may have been a reaffirmation of ownership at the individual or group level. These digging activities might have reiterated and enhanced social bonds or commitments between people, or groups of people, within the society. It is even possible that the actual physical act of ditch renewal was equal to, or more important than, any subsequent functional role that the ditches might have performed.

Figure 4 shows the extent of the cropmarks around Edenthorpe. It can be seen that the parallel ditch lines excavated on the site itself extend further to the east as well as curving away to the northwest. Immediately to the northeast of Edenthorpe the feature running off one of these parallel ditches on an approximate north to south alignment must be cut 1155. This same feature was also encountered during the 1993 excavation to the north of Far Field Road (Atkinson 1993, 1994). The east-south-east to west-north-west cropmark just below these features is the southernmost ditch excavated, although the north to south aligned feature joining this lay outside the area of excavation.

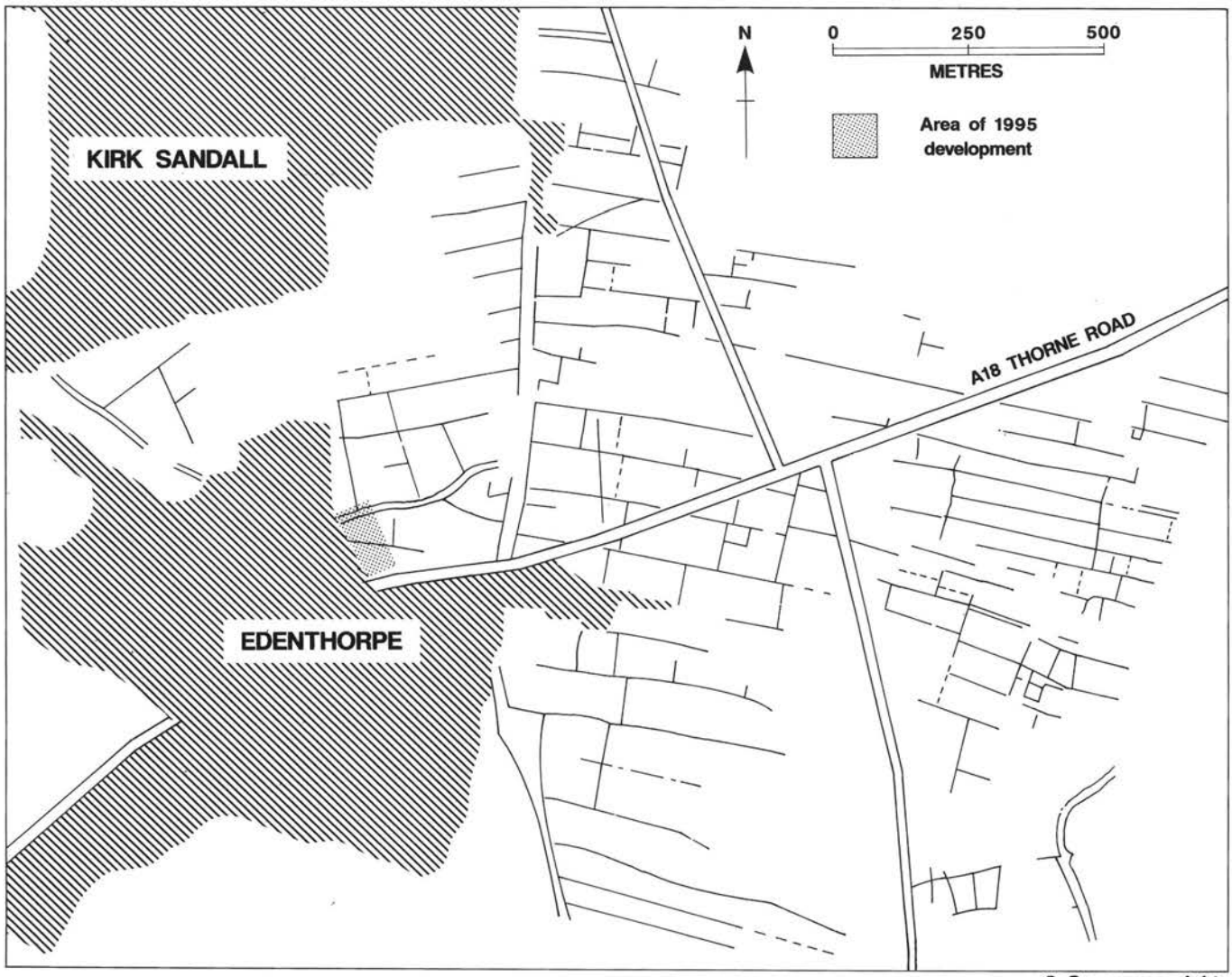
The same figure shows a pronounced double ditch feature running north to south, to the east of the area of excavation. This appears to mark a change in the orientation of the field systems. To the east of the feature the general trend is roughly west-north-west to east-south-east. This orientation appears to be continued to the south of the excavated double ditch feature, as represented by the southern group of features described above. To the north of this the horizontal axis of the fields lies on a roughly east-north-east to west-south-west line. It is not clear what this change in alignment represents. It may reflect a reorganisation of the landscape, with the fields to the south and east being later in date than the earlier 'core' to the north. This seemed to be reflected on site, with the ditch containing the earlier 2nd century pottery (context 1115) being later than the earliest phase of the double ditch feature. These earlier ditches did not completely go out of use however, for the later 2nd or early 3rd century pottery was recovered from the final fill of a recut of the southernmost ditch.

Such a change in the landscape may itself reflect more profound social economic or political changes. Traditional interpretations of such changes have seen them as a consequence of increased demand which entailed a need for greater productivity and hence a 'filling in' of the landscape. However, as landscape archaeologists working on later periods have shown, changes in the landscape cannot be isolated from their contemporary social and political contexts (Taigel and Williamson 1993).

Riley has postulated that 'field boundary ditches end at the side ditches of the same lanes which they meet, and the lanes are therefore probably earlier than, or of the same date as, the fields'. (1980:24).

Certainly it would appear that the initial phase of activity at Edenthorpe was the digging of two parallel ditches. Thereafter the situation became much more complex, and it would seem that the landscape around Edenthorpe was remodelled over what could be a substantial period of time.

Rather than being frightened of this complexity, archaeologists should recognise and embrace it for the challenge that it represents. Recent innovative developments in approaches to the study of archaeological landscapes should point the way forward for future research designs. On a more prosaic level, it is now clear that the excavation of open areas is a much more useful methodological tool than trial trenching (Cumberpatch 1993). Detailed recording of deposits can greatly improve the taphonomic



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■ FIGURE 4. THE CROPMARKS IN THE EDENTHORPE AREA (AFTER RILEY, 1980, 90)

information available from sites. In particular attention must be paid to context interfaces, lensing and tip lines within the deposits. By treating deposits as dynamic and mutable rather than as static entities the 'inference potential' (Adams 1991) of the sites excavated can be greatly improved. Soil chemical analysis and micromorphological sampling may be useful procedures to be adopted in the future. The anthropologist Clifford Geertz has suggested that to understand human societies we should aim for 'thick descriptions' (1993:4-30), which take into account the complexity, contradiction and multiplicity of meanings which exist within even the simplest community. With regard to the excavation and interpretation of the brickwork pattern field systems, it would seem that the thicker we can make the description, the better.

Compiled by A.M. Chadwick and C.G. Cumberpatch from reports by A.M. Chadwick and M. Darling.

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AN ARCHAEOLOGICAL SURVEY ON THE COURSE OF THE DEARNE TOWNS LINK ROAD

In November 1994 Barnsley MBC commissioned the West Yorkshire Archaeology Service to undertake a survey of part of the course of the Dearne towns link road near to, and within, Wombwell Wood. The wood is known to contain earthworks of Romano-British date, two of which are Scheduled Ancient Monuments, and the area around has produced flint artefacts and sherds of pottery. A number of cropmark sites have been identified by aerial photography. The survey was intended to assess the possibility that archaeological features existed on the line of the road itself.

Two techniques were employed, magnetic susceptibility and gradiometry. Magnetic susceptibility measures the magnetic properties of the ferrous minerals within the soil. The magnetic properties of such minerals can be enhanced by natural causes, but also by human agency, notably through heating. Regular measurement across a survey area is designed to establish the normal background level of magnetism and locate any particularly high readings which might be indicative of the presence of features such as hearths, kilns, furnaces or ovens. Magnetic susceptibility readings were taken at 20 metre intervals along the road corridor. Once the results had been processed specific areas were surveyed more intensively using a gradiometer.

The magnetic susceptibility survey highlighted several areas of enhanced magnetism. It appeared that the majority of these related to patterns of recent land use. The areas which gave medium to high susceptibility readings were under arable crops, while those under pasture gave lower readings. The enhancement of the readings in the arable fields probably resulted from a combination of stubble and straw burning and the application of fertilisers and, possibly, manuring.

The areas covered by the gradiometer survey were small and highly selective which made their interpretation difficult, but it was clear that a number of linear anomalies crossed the site. These were not orientated with respect to any existing field boundaries or other features and may represent the traces of an earlier field system. Excavation would be required to assess this suggestion.

The thick undergrowth and the interference caused by the tree roots precluded any form of magnetic surveying within Wombwell Wood itself and the only kind of survey possible was visual. The threatened area was examined in detail, and seventeen features of possible archaeological significance were identified. The majority of these were rectangular although some circular depressions and pits as well as a number of gullies were also identified. It seems likely that these were the results of small scale coal mining, exploiting outcrops close to the ground surface. Their date is unknown, but they probably post-date the 18th century. Two larger features, a circular hollow and a square feature, were deemed to be of unidentified date and purpose.

The survey achieved its purpose in highlighting features of possible archaeological interest. Further work is planned for 1995.

Compiled by C.G. Cumberpatch from a report by A Francis and A. Webb

AN ARCHAEOLOGICAL EVALUATION AT FITZWILLIAM LANE, BILLINGLEY, BARNSLEY

In February 1994 four members of the West Yorkshire Archaeology Service carried out an evaluative excavation on the site of a proposed open cast coal mine on land to the north of Fitzwilliam Lane, Billingley. The work was commissioned by MED Contracting Ltd and followed a geophysical survey of the area.

This revealed evidence for ridge and furrow, a possible ring ditch, a number of parallel linear features and other isolated features believed to be hearths or pits. Seven trenches were excavated, initially by machine and were later cleaned by hand. A series of features were identified but the numbers of finds from each was so low that none could be regarded as securely dated (only one feature, a shallow gully, produced more than one sherd of pottery). Relative dating was possible using the stratigraphic relationships between the various features.

The earliest features on the site were two parallel ditches and a third ditch, probably slightly later in date, at right angles to them. No dating evidence was recovered, but the position of the ditches with respect to the medieval ridge and furrow suggested that they defined a field system of earlier than medieval date.

The ridge and furrow appeared to be of typical medieval type. Three sherds of medieval pottery appeared to have reached the fields amongst manure. Other traces of ridge and furrow had been located to the east of the site during an earlier survey (Boucher 1992), and it seems likely that the whole area was farmed during the medieval period.

The latest features on the site were a series of coal pits and associated shallow gullies. Apart from post-dating the medieval field system, no dating evidence for the coal extraction was recovered, and such informal and haphazard mining could date to virtually any period, up to and including the 20th century. No features were found in the vicinity of the supposed ring ditch and it may be that the feature survived only as a trace in the plough soil or that it was a natural feature related to the clay subsoil.

It was concluded that all the features on the site were related either to medieval and earlier agriculture or to the informal mining of coal.

Edited by C.G. Cumberpatch from reports by A. Boucher and J. Wright.

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SURVEY AND EXCAVATION AT HAZEL LANE QUARRY, HAMPOLE, DONCASTER

The cropmark landscape revealed through aerial photography is widely recognised as one of South Yorkshire's most valuable archaeological resources. Proposals for development which threaten the existence of cropmark features consequently require rigorous investigation. In 1993 a proposal to extend the Hazel Lane quarry near Hampole led to the compilation of a desktop assessment which identified an enclosure, one of several in the area, lying within the threatened area. Although no artefacts were associated with the site, the enclosure closely resembled those known from other parts of the county and was assumed to be of late prehistoric or early Roman date. In view of this, a two stage geophysical (gradiometer) survey was undertaken by GeoQuest Associates.

The survey confirmed the existence and location of the enclosure and revealed a number of internal divisions and a possible roundhouse located within it. In addition a number of linear features were located which were identified as possible field boundaries. In view of the potential importance of these features to our understanding of the late prehistoric landscape of South Yorkshire, a programme of test trenching was planned to determine the depth, dates and state of preservation of the archaeological features.

Twelve trenches were excavated using a mechanical excavator equipped with a toothless ditching bucket. The trenches were cleaned by hand and recorded in accordance with standard archaeological practice. Seven of the trenches were positioned to test the results of the geophysical survey while others were located to provide a control sample. With the exception of Trench L none of the trenches yielded any archaeological material. It appeared that the geophysical anomalies were caused by geological features, primarily undulations and fissures in the underlying limestone which lay close to the surface.

Trench L was positioned over the enclosure ditch and, following cleaning, the ditch was clearly visible running northwest to southeast, at right angles to the trench. The rock cut ditch was 2.5 metres wide and 1.1 metres deep from the base of the ploughsoil and was V-shaped with a break of slope on the southwestern side. Whether this was a feature related to the recutting of the ditch or a result of the natural weathering of the limestone was unclear. The eastern side of the ditch was cut by a small rock cut gulley (of undetermined function) with four postholes in the bottom.

In common with the majority of cropmark features excavated in South Yorkshire, the Hazel Lane enclosure produced very few finds. Two fragments of animal bone, three small pieces of burnt limestone and a ball of clay were recovered from the ditch. No objects were found in the gulley or the post holes. This scarcity of artefacts is typical of later prehistoric sites in South Yorkshire and has been discussed in earlier editions of *Archaeology in South Yorkshire.*

The results of the survey and excavation at Hazel Lane, while failing to locate land divisions associated with the enclosure, confirmed that this feature was one of considerable importance. As few enclosures of this type have been excavated in the county further work on the site is in prospect and will be reported in future editions of *Archaeology in South Yorkshire.*

This survey was carried out on behalf of CSL Surveys Ltd.

Compiled by C.G. Cumberpatch from reports by GeoQuest Associates.

AN ARCHAEOLOGICAL EVALUATION AT GAINSBOROUGH ROAD, BAWTRY

The town of Bawtry occupies an important position in the history of South Yorkshire and north Nottinghamshire. Lying close to the highest navigable point of the River Idle, the town was an important inland port throughout the medieval and early post-medieval periods. Archival research has shown that exports of lead and millstones from Derbyshire and metal goods from the workshops of Sheffield and adjacent towns passed through the port (Collis, in press). The only excavations to be carried out in the town prior to this evaluation were undertaken in Church Street by the SYAFRU in 1990 - 1991. During the course of research connected with the publication of this site (Cumberpatch, Dunkley, Latham and Thorpe, in press), it became clear that an excavation of the wharf area would be of great importance not only to our understanding of the history of Bawtry itself, but also of the region as a whole. Consequently, when the field to the west of the railway viaduct and adjacent to Gainsborough Road (figure 1) became subject to a planning proposal, a recommendation was made by the SYAS that the archaeological potential of the area should be evaluated prior to any building work.

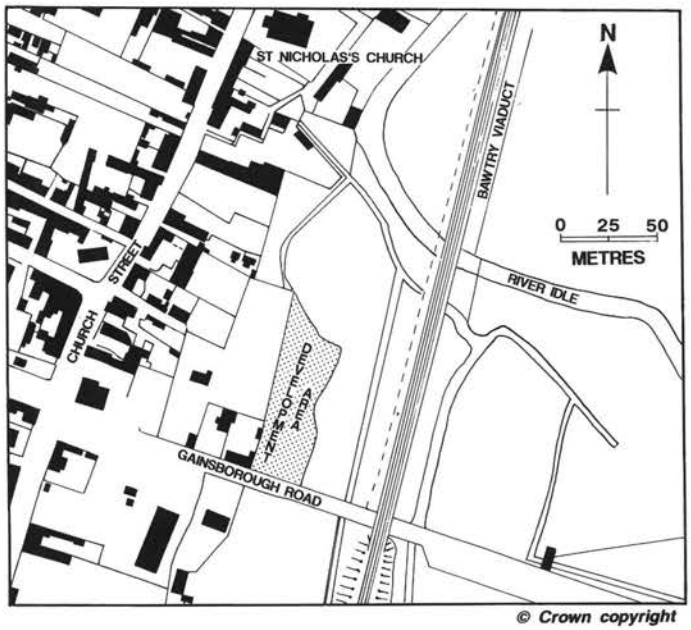
Six trenches were excavated using a mechanical excavator equipped with a ditching bucket. It immediately became clear that the ground was heavily waterlogged and the trenches filled with water so rapidly that it was scarcely possible even to record the stratigraphical sequence in section. Examination of the character of the soil suggested that it represented clay and silt deposited by the river, and closely resembled clay deposits excavated at the Low Fishergate site in Doncaster (described in *Archaeology in South Yorkshire 1993 - 1994*). Fragments of clay pipe were recovered from Trench D and a sherd of abraded medieval pottery was found in a hollow in trench C, but all of the finds appeared to have been derived from elsewhere.

The absence of evidence for any activity in the area suggests that the wharves lay further to the north. The thick riverine deposits and waterlogging implies that the area was too wet for settlement and that the use of the area was limited to summer grazing for cattle. Even with the advantages offered by modern drainage methods, the area remains difficult to develop, requiring the addition of over 1.5 metres depth of material prior to building work commencing.

The work was commissioned by Mr. M. Gough

Edited by C.G. Cumberpatch from a report by A.M. Chadwick.

Collis, K. in press *The Documentary Evidence.* In: C.G. Cumberpatch, J.A.



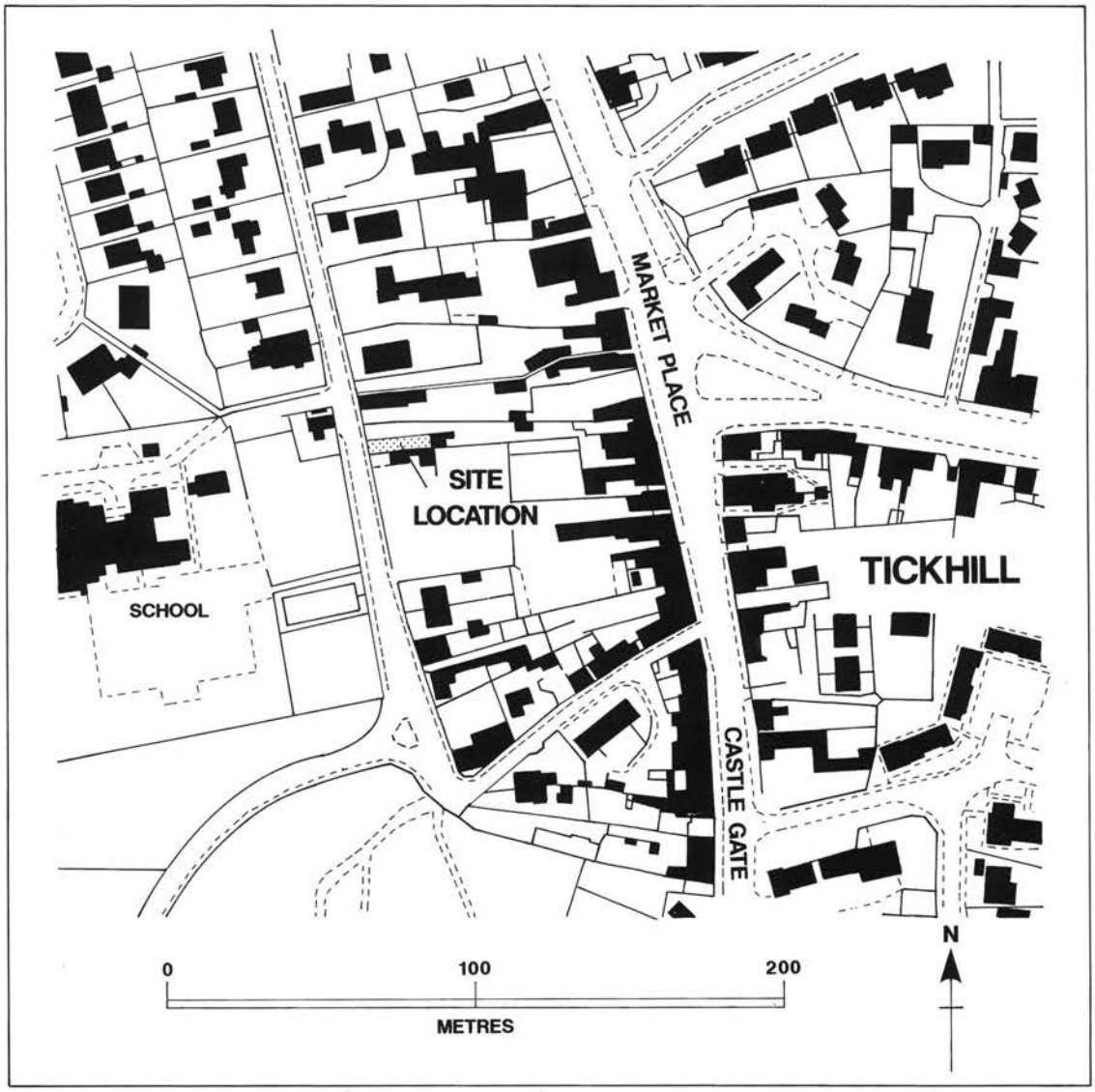
■ FIGURE 1. LOCATION PLAN, GAINSBOROUGH ROAD, BAWTRY

Dunkley, I.D. Latham and R. Thorpe. *Excavations at 16 - 20 Church Street, Bawtry.* SYAFRU County Archaeology Monograph No. 3

Cumberpatch, C.G., Dunkley, J.A., Latham, I.D. and Thorpe, R. In press *Excavations at 16 - 20 Church Street, Bawtry.* SYAFRU County Archaeology Monograph No. 3.

AN ARCHAEOLOGICAL EVALUATION AT 14 MARKET PLACE, TICKHILL

The town of Tickhill, unlike many other small towns in South Yorkshire, retains a substantial part of its medieval core. In addition to the castle, the town also has a number of timber framed buildings of medieval origin and a street plan that is basically medieval in form (Whiteley 1993). A number of small scale excavations have taken place within the town. In 1975 J.R. Magilton excavated a medieval pit complex and burgage plot divisions which produced medieval pottery and also identified a substantial earlier ditch which may have been associated with the early defences of the town. In 1992 the SYAFRU excavated a site to



■ FIGURE 1. LOCATION PLAN, MARKET PLACE, TICKHILL

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the rear of the Red Lion Public House and discovered further evidence of medieval occupation (Atkinson 1993). Early in 1995 the West Yorkshire Archaeology Service were employed by Mrs S. Cowan to carry out an evaluation of land behind 14 Market Place, a site within the historic core of the town and the subject of a planning application.

Three trial trenches were opened using a mechanical excavator and the archaeological features investigated by hand. Two broad groups of features were identified. The earliest dated to between the later 11th and 14th centuries and the later to the 17th century or later. The medieval features consisted of a pit and a ditch, the latter orientated on the same axis as the burgage plots in the area. This might suggest that it formed a boundary ditch between the burgage plots and open fields.

The later features included a pit containing lumps of limestone, apparently the result of the demolition of a wall, an event which, on the basis of the associated pottery, probably took place in the 17th century. This was overlain by a deposit of a mid brown clay silt containing abraded pottery which was interpreted as a cultivated soil. This had been partially truncated and overlain by a 19th century barn. On the basis of the excavated evidence it would seem that the area remained open from the medieval period until the 19th century. It was initially divided into burgage plots, but, during the 17th century, was opened out and cultivated, possibly as a kitchen garden. It is interesting to note that a similar pattern of activity may also be seen in other towns in the area, notably Bawtry (Cumberpatch, Dunkley, Latham and Thorpe, in press).

Edited by C.G. Cumberpatch from a report by A. Boucher and R. Barkle.

Atkinson, S. T. 1993 An evaluation to the rear of The Red Lion, Tickhill. *Archaeology in South Yorkshire 1992 - 1993.* SYAS. Sheffield

Cumberpatch, C.G., Dunkley, J.A., Latham, I.D. and Thorpe, R. in press *Excavations at 16 - 20 Church Street, Bawtry, South Yorkshire.* County Archaeology Monograph No. 3.

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AN EVALUATIVE EXCAVATION AT ARKSEY LANE, BENTLEY

The scheduled ancient monument known as Moat Hills lies close to Arksey Lane in Bentley. It consists of two 'islands' surrounded by a large and well preserved moat and is one example of a type of monument widespread in Yorkshire and elsewhere (Le Patourel 1973). Although the site has never been investigated by excavation, analogies with similar sites suggest that it dates to between the early 13th and later 14th century. As moats are generally understood to be the site of manors or monastic granges, it is likely that in many cases other ancillary buildings existed outside the ditch itself.

A proposal by Doncaster MBC to build a day care centre on land adjacent to the moated site was consequently deemed to have a potential impact on the archaeology and an evaluative investigation was commissioned by the Directorate of Planning and Design Services and carried out by the SYAFRU.

The excavation consisted of three trenches, dug by machine

under archaeological supervision (figure 1). A number of features were located, largely restricted to the south-western corner of the development area. The stratigraphical positions of the features suggested the existence of three phases of land use. The earliest phase was represented by a ditch which appeared to lie on an alignment respecting that of the moated site. No artefacts were found in the fill of the ditch and a secure dating was thus impossible. No other trace of medieval occupation was found suggesting that, if there was activity associated with the moated site in the area, it lay elsewhere, outside the development area.

The second phase of activity on the site consisted of a stone wall and a stone surface. The wall appeared to belong to a building, the bulk of which lay to the southwest of the threatened area, while the surface was probably part of a yard. Once again dating evidence was absent. The stratigraphic sequence showed that the wall was later than the underlying ditch and was probably dismantled for its stone sometime in the 19th century. The style of construction and the character of the deposition of the overlying material suggested to the excavator that a broad 17th century date for the building was likely.

The final phase of activity on the site was a trench cut after demolition (probably during the 19th century) to remove stone from the wall footings, most probably for reuse close by.

Edited by C.G. Cumberpatch from a report by S. Atkinson.

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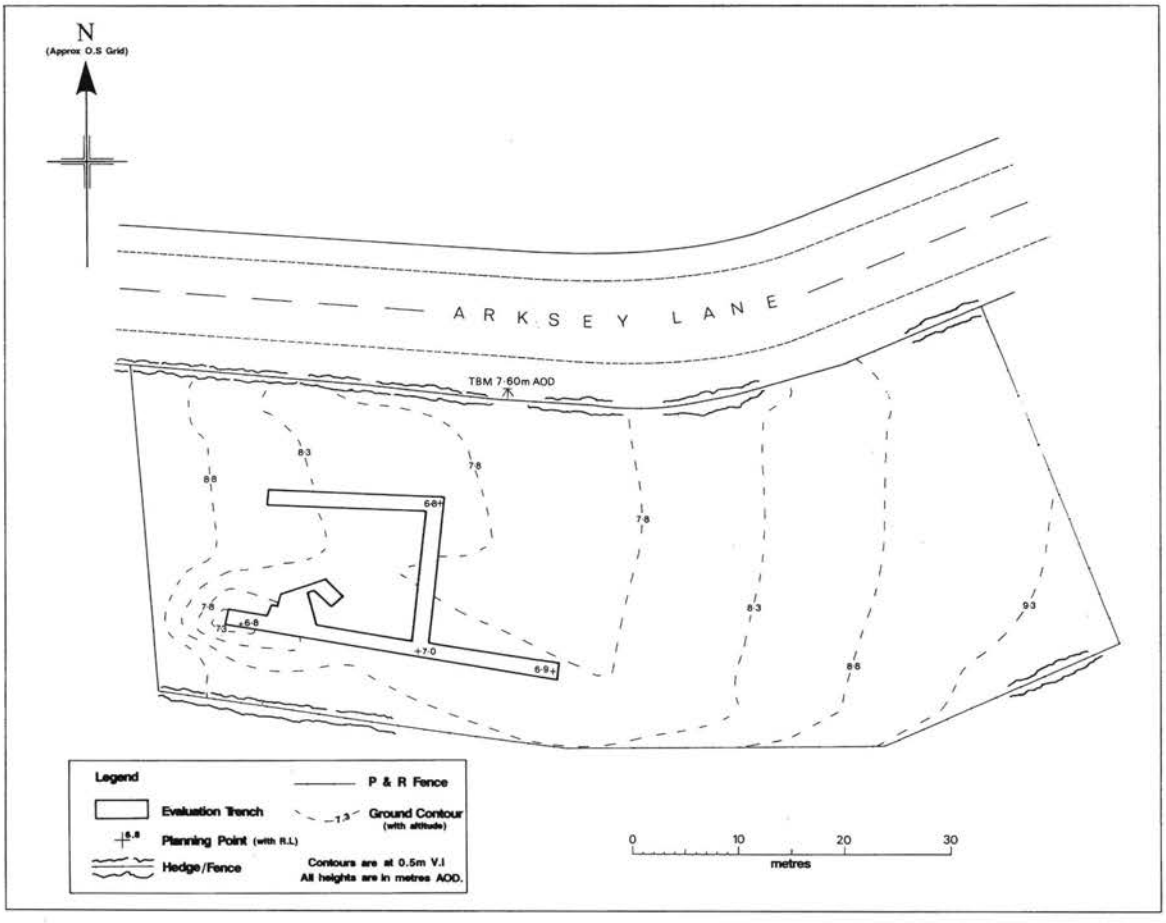

■ LOCATION OF EVALUATION TRENCHES, ARKSEY LANE, BENTLEY, DONCASTER

AN ARCHAEOLOGICAL EVALUATION OF LAND OFF FOX LANE, BARNBURGH, DONCASTER

The village of Barnburgh is known to have originated in the early medieval period; the suffix *burh* being derived from the Saxon word for a defended settlement. Investigative excavations have shown that the existing Barnburgh Hall has a medieval predecessor (Sydes and Holbrey 1991) and may lie on the site of an even earlier settlement. Any disturbance of the ground within the village is likely to have implications for the archaeology and consequently will require investigation. The proposal to build a bungalow on ground adjacent to Fox Lane and on part of the rectory lawn was thus subject to a constraint whereby an archaeological evaluation was required before planning permission could be granted.

The SYAFRU carried out a two stage evaluation programme with a geophysical survey preceding limited trial trenching. The results of the geophysical survey were entirely consistent with the visible topographical features and the terracing of the rectory lawn. The evidence from the test pits confirmed this and no archaeological features were located

The work was commissioned by Shepherd, Fowler and Robinson Ltd.

Compiled by C.G. Cumberpatch from an original report by S. Atkinson

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AN ARCHAEOLOGICAL EVALUATION AT KIMBERWORTH MANOR, ROTHERHAM

A proposal by Rotherham Metropolitan Borough Council to landscape the grounds of Kimberworth Manor, a Scheduled Ancient Monument, required an evaluative survey of the archaeological potential of the threatened area.

The evaluation began with a resistivity survey carried out by Mr C. Merrony of Sheffield University. Following this, the staff of the SYAFRU and students from the Department of Archaeology, Sheffield University excavated a series of test pits designed to assess the anomalies detected during the survey. Four test pits were opened but no features of archaeological significance were found. The geophysical anomalies identified by the resistivity survey appear to have been caused by natural bedrock features.

Summarised by C.G. Cumberpatch from a report by S. Atkinson

EXCAVATIONS AT BRODSWORTH HALL, DONCASTER

Brodsworth Hall was presented to the nation by its owner, Mrs P. Williams, in April 1990, and is now managed by English Heritage.

The present hall dates from 1860 and contains important mid-Victorian decorative schemes including trompe l'oeil work, decorative wallpapers and paint schemes (English Heritage 1992). To date renovation work has concentrated on the fabric and the interior of the building, but a number of changes were required to grounds to improve access for visitors.

As it was known that an earlier hall had existed on the site, two small excavations were carried out prior to disturbance of the ground. Both were commissioned by English Heritage and were carried out by the West Yorkshire Archaeology Service.

The first excavation, designed to aid in a decision on the final presentation of the grounds, involved an investigation of six paths with the aim of determining their age, the number of phases of use represented and their methods of construction. Two of the paths, running through the formal gardens laid out in the 1860s, were of broadly similar construction and, together with a third path south of the church appeared to have been laid out at the time of the building of the new hall. The remaining three paths had been constructed in different ways and appeared unlikely to be contemporary. The enclosure map of 1815 shows paths in the same general area as those located, but no positive evidence was located to indicate that they were identical.

The second excavation was on the site of a new car park, in a field adjacent to the main approach to the Hall. Four trenches were laid out using the results of a geophysical survey (carried out by Geophysical Surveys of Bradford) to determine their position. In spite of the presence of a number of features of possible archaeological origin on the geophysical plots, only one linear slot was of archaeological significance, the rest being natural features resulting from the weathering of the limestone. The linear feature contained two sherds of post-medieval pottery in the lower fills and was judged to be of relatively recent origin.

Compiled from reports by J Wright and C. Morris by C.G. Cumberpatch

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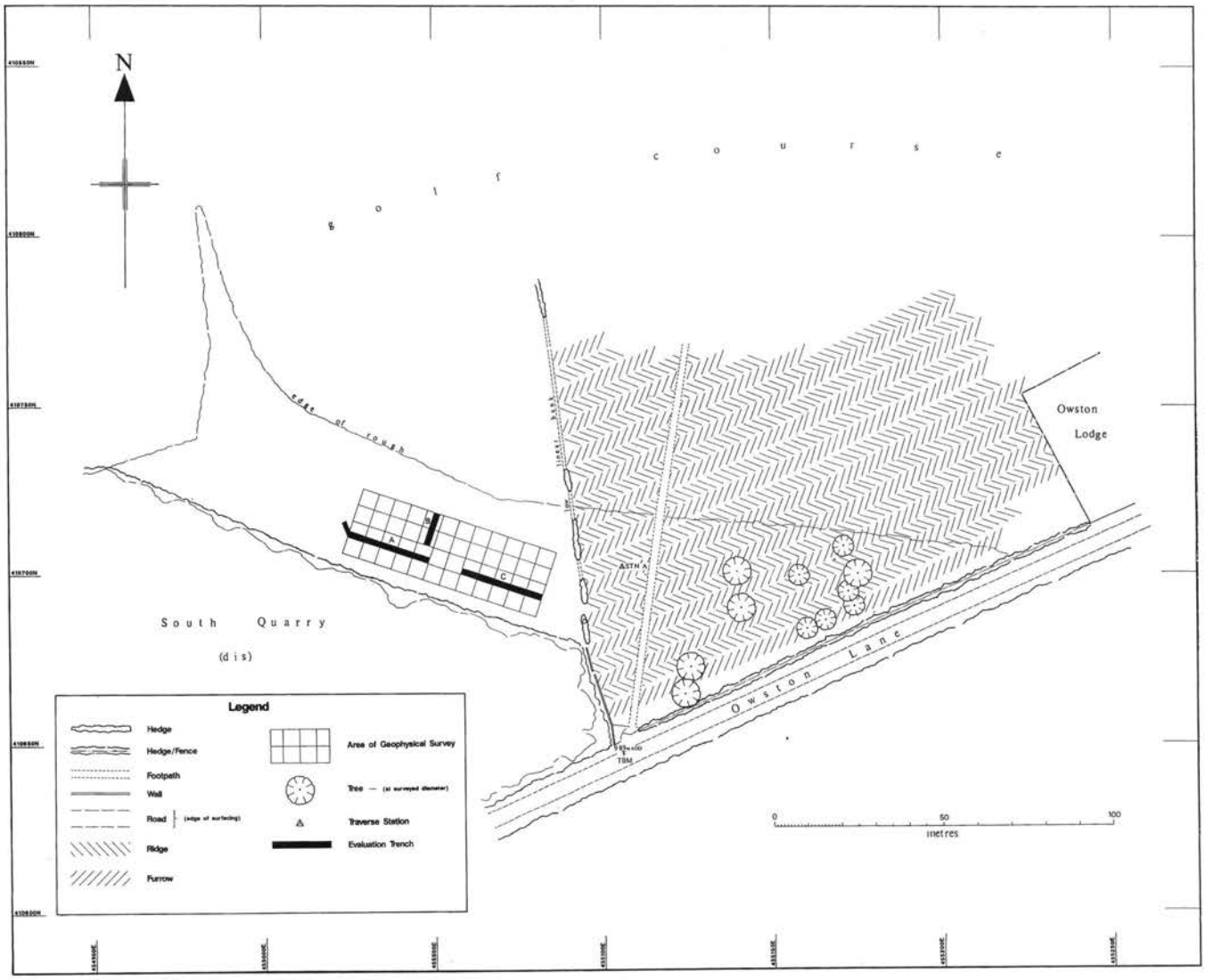
A THREE STAGE EVALUATION OF LAND WITHIN OWSTON PARK, DONCASTER

Archaeological and archival sources indicate that Owston Park has a long and complex history. The village was a large and thriving one in the 14th century, and the presence of Norman features in the church might indicate an origin in the Anglo-Saxon period. Today the park includes the remains of the medieval settlement and a more recent estate village. A part of the park is used as a golf course and plans to develop this facility with a shop, office, storeroom, flat, car park and access road led to the developer's agent, Mr. J.M. Hunt, commissioning an archaeological evaluation by the SYAFRU. Following an inspection of the site, it was clear that a multi-stage project would be required to record the visible archaeology and to evaluate the possibility of surviving sub-surface features.

The topographic survey

From a brief inspection of the site it was clear that an area of ridge and furrow, the remains of medieval agriculture, existed in the area to be crossed by the proposed access road. The ridge and furrow surveyed occupied an area bounded by Owston Lane, Owston Lodge and the edge of the golf course. The features continued across part of the golf



■ FIGURE 1. LOCATION PLAN SHOWING THE PROGRAMME OF SURVEY, OWSTON PARK, DONCASTER

course, but a survey of this area went beyond the brief agreed with the commissioning agent. To the west a low bank appeared to mark the edge of medieval cultivation. From purely topographic information it was impossible to determine whether this was a medieval feature or whether it marked the eastern edge of later activities which had obliterated the ridge and furrow.

The geophysical survey

A geophysical survey, using a Geoscan RM4 resistivity meter, was carried out over the whole of the area to be occupied by the proposed building and the car park. A series of high resistance linear features were visible running southwest to northeast and these corresponded exactly to the pattern of the ridge and furrow visible further east. They appeared to indicate that the area of cultivation originally covered this area, but that the traces surviving elsewhere had here been removed by subsequent ploughing. A second feature also ran across the site on a similar alignment to the ridge and furrow, but was characterised by a low resistance signature. This appeared to be too wide to be an archaeological feature and was interpreted as a natural fissure in the underlying limestone.

Trial trenching

A programme of trial trenching was planned to investigate and verify the results of the geophysical survey. Three trenches were excavated by machine and subsequently cleaned by hand and recorded. Trench A was placed so as to cut the putative ridge and furrow seen in the geophysical plots. Trench B was placed to investigate the low resistance feature and C to cover the eastern end of the site.

The ridge and furrow was clearly identified in trenches A and C and sherds of pottery dating to between the later 12th and later 14th centuries were recovered. Trench B proved more enigmatic. No trace of the low resistance feature was discovered although a shallow plough furrow was noted.

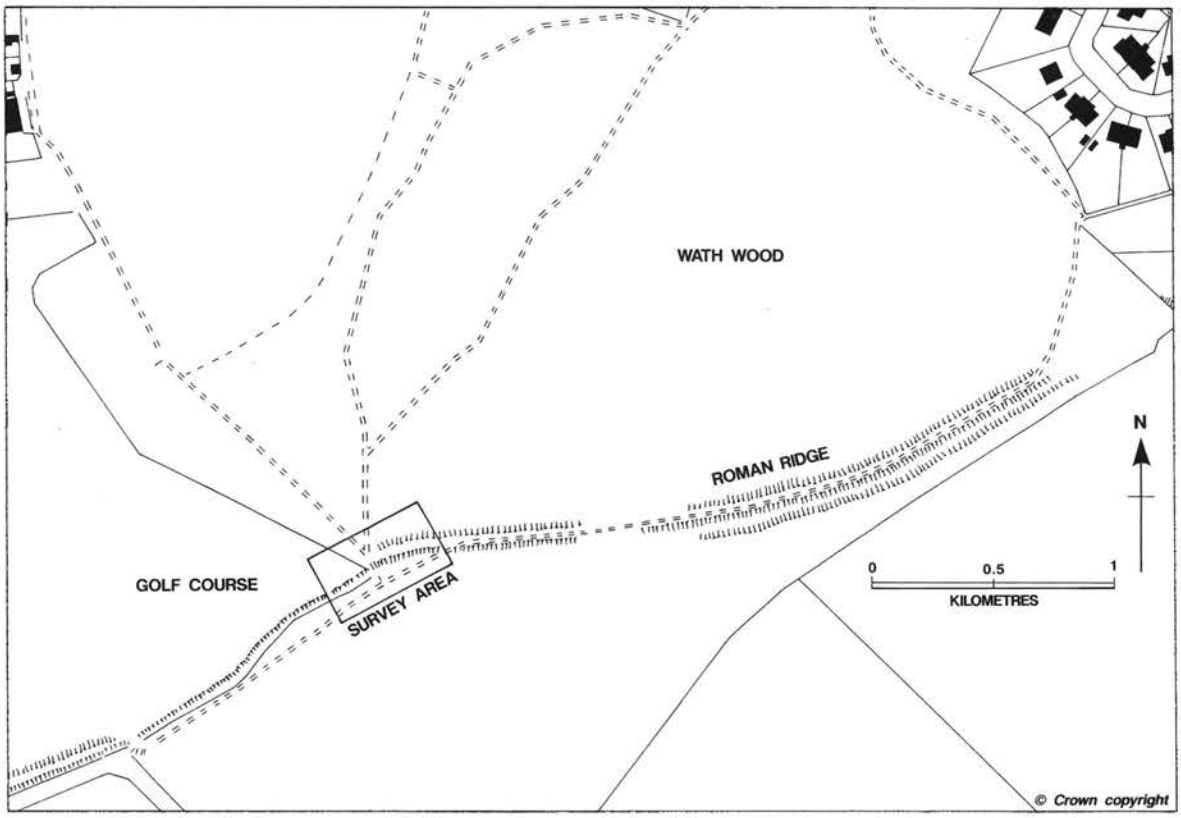
The programme of survey and excavation demonstrated clearly that the area had been cultivated during the later medieval period (figure 1) and that little other activity had taken place on the site until the construction of the golf course.

Edited by C.G. Cumberpatch from an original report by S. Atkinson

A TOPOGRAPHIC SURVEY OF THE ROMAN RIDGE AT WATH WOOD, ROTHERHAM

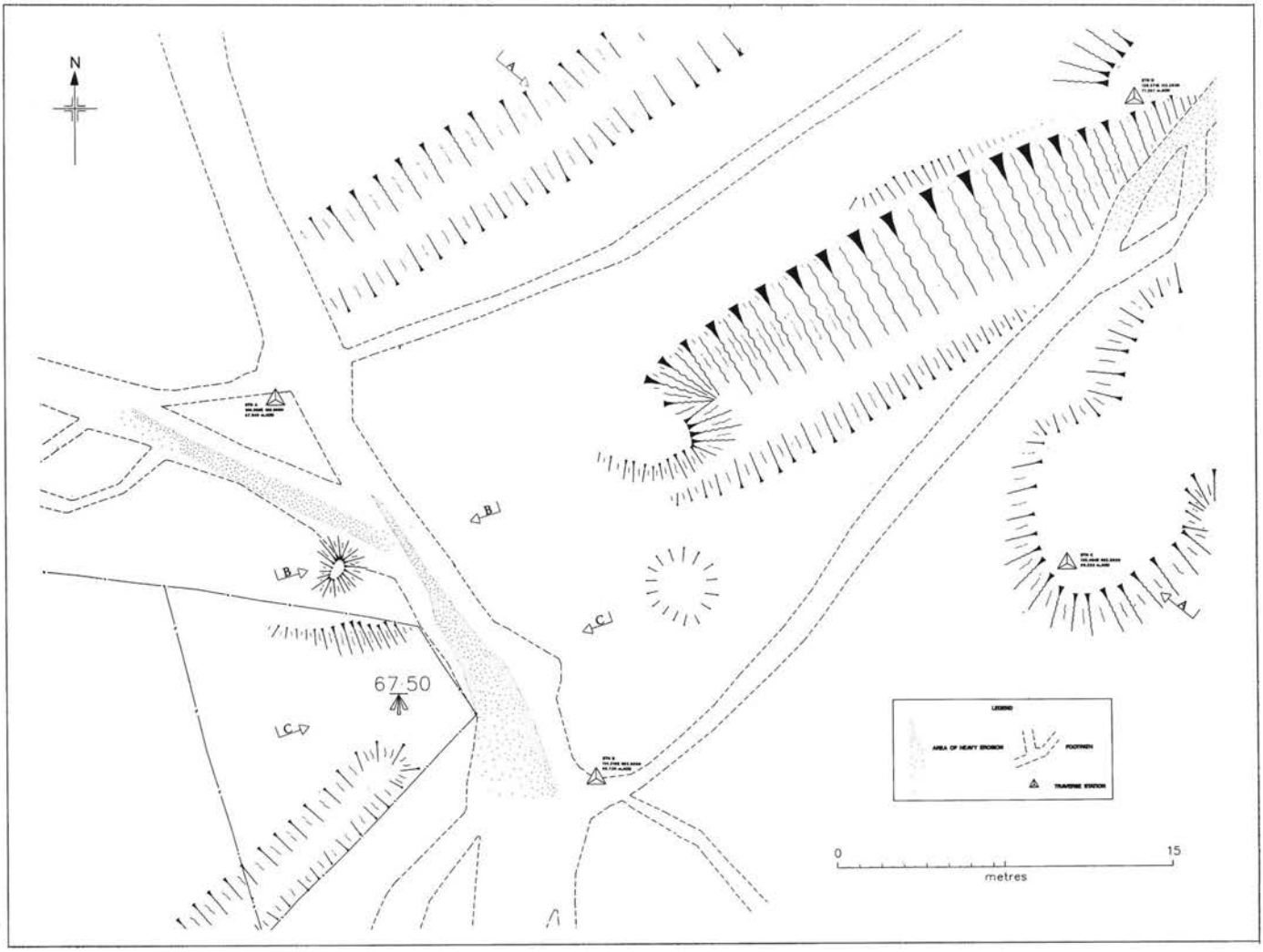
The Roman Ridge linear earthwork is one of South Yorkshire's most enigmatic archaeological monuments. Running northeastwards from Sheffield to Rotherham, its bank and ditch structure survives intact in many places, but in spite of a number of excavations and surveys over many years the date and purpose of the monument remains unknown. Recent work by the SYAFRU located two pre-existing ditches beneath the surviving earthwork (Atkinson 1994), implying that the monument had a more complex history than had hitherto been assumed.

For most of its length the Roman Ridge runs through urban and suburban areas where it is subject to erosion and attrition by cyclists, walkers and others using it for recreational purposes. Continual management is necessary if the monument is to be preserved in its present form. One such management scheme, proposed by Rotherham MBC, involved the resurfacing of footpaths and a programme of



■ FIGURE 1. LOCATION PLAN, THE ROMAN RIDGE IN RELATION TO WATH WOOD, ROTHERHAM

■ FIGURE 2. (BELOW) WATH WOOD, PLAN SHOWING THE ROMAN RIDGE, ASSOCIATED EARTHWORKS AND THE AREAS OF EROSION



woodland management in the vicinity of Wath Wood (figure 1). As this would clearly have an impact on the archaeology of the Ridge, a topographical survey was commissioned to clarify the nature and extent of the monument and any associated features. The survey was undertaken by I.D. Latham on behalf of the SYAFRU.

The survey established that the main body of the monument consisted of an earthern bank flanked by a ditch on its southern side (shown in figure 2). A second ditch was identified to the north west of the bank, although the precise relationship of this feature to the main bank and ditch could not be established. A series of mounds were identified lying to the southeast of the monument, the northwestern faces of which formed the outer edge of the ditch. These continued to the northeast, outside the survey area, where they could be seen to be closely associated with the Ridge. The precise nature of these features was impossible to determine. Like the ditches located by Atkinson, they hint at a complex history for the Roman Ridge.

The survey also showed that the monument has suffered extensive damage in an area where modern footpaths cross it, to the east of the golf course, and also that it appears to peter out in one area, for reasons that could not be determined from the topographical survey. Using the results of the survey, Rotherham MBC were able to establish methods of footpath resurfacing and tree felling which minimised damage to the monument.

Edited by C.G. Cumberpatch from a report by I.D. Latham

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AN AUGER SURVEY AT THURCROFT, ROTHERHAM

In October 1994 ARCUS was commissioned by Mr Alan Cox to undertake an Archaeological Field Evaluation of land at Common Road/Long Road near Brampton-en-le-Morthen. The evaluation was designed to assess the impact from the construction of a fishery and nature reserve. The area under consideration was wet meadow, with the potential for containing sealed and preserved archaeological and palaeoenvironmental remains. Information gathered from the SMR showed that the surrounding area contained several extant features thought to be medieval in date. These included a timber- framed agricultural building, a trackway and Todwick Grange, indicating extensive activity in the area during this period.

A scheme of sampling by auger coring was implemented, to identify any occupational deposits present, and to establish if any deposits were waterlogged. In total, twelve auger cores were sunk, in two transects across the application area.

No occupation evidence was encountered, and the sub-soil strata was consistent with natural formation processes. The sub-soil strata was not found to be waterlogged, despite standing water being present on the surface at the time of the investigation. The evidence obtained showed that no deposits of archaeological or palaeoenvironmental significance would be affected by the development.

Edited by Ms. A. Badcock from a report by Dr. P. Sidebottom

THE MYSTERIOUS CASE OF THE LOST LAD

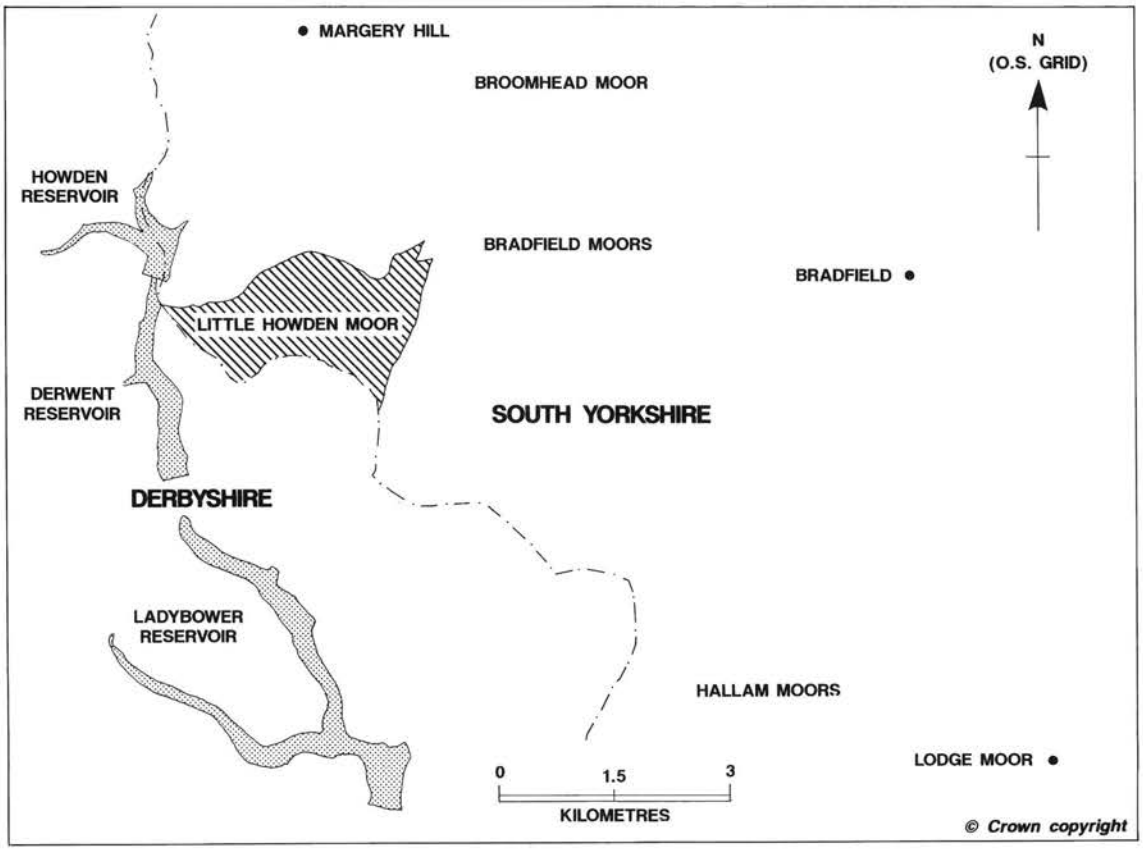
Little Howden Moor is an area of open moorland owned by the National Trust which lies in the western part of the parish of Bradfield and within the Peak National Park. The moor was surveyed by the Peak National Park Archaeology Service in September 1994 and 1995 as part of the wider Upper Derwent Archaeological Survey. As well as Little Howden Moor the survey area includes Lost Lad Hillend and Howden Dean which are bounded by Abbey Brook to the north, Low Tor to the east, and the Derbyshire - South Yorkshire county boundary to the south and west (figure 1).

Most of the moorland, comprising approximately 3 square kilometers, forms a plateau dissected by numerous cloughs and lies between 390 and 540 metres above Ordnance datum. The ground drops sharply to below 300 metres along the course of Abbey Brook. The underlying geology is millstone grit. Today the area is covered in blanket peat upon which grows a mix of heather, purple moor and matt grasses, and bilberry.

Archaeological evidence on the moors, surviving as built features and artefact scatters, can be dated to the Mesolithic, Neolithic, Bronze Age and Post-Medieval periods. Some of the Post-Medieval features may have originated in the Medieval period. Using this evidence we are able to interpret some of the uses of this upland landscape during these periods.

Prehistoric occupation (Fig. 2)

The earliest evidence for human activity within the survey area dates back approximately 10,000 years. Scatters of chert and flint were collected from areas of peat erosion across Little Howden Moor in the 1930s and 1940s by A.H. Henderson. The scatters contained a mixture of Mesolithic, Neolithic and Bronze Age material. Finds included numerous microliths, scrapers, knives, waste flakes, arrowheads

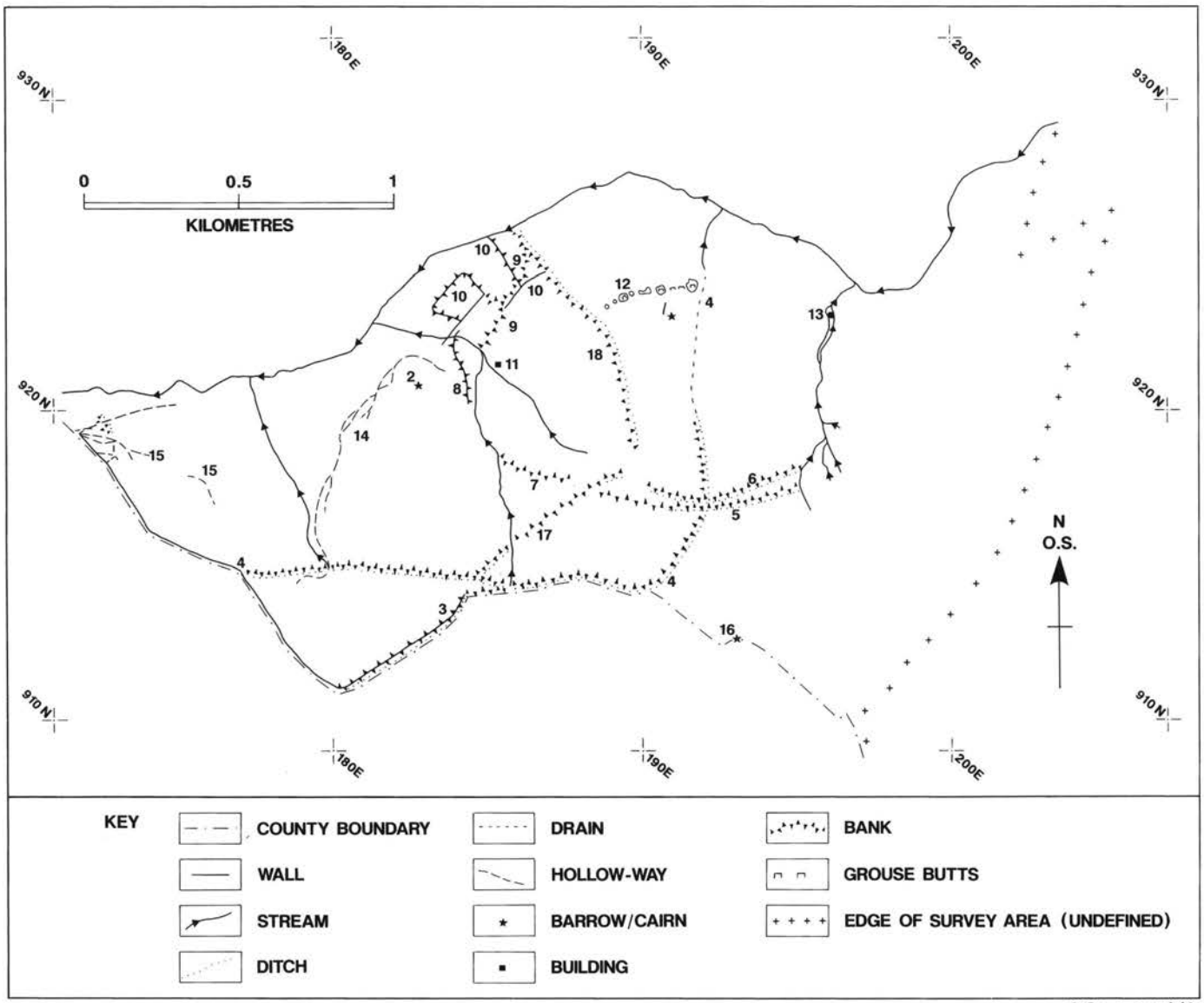


■ FIGURE 1. LOCATION MAP, PEAK PARK, LITTLE HOWDEN MOOR SURVEY (SOURCE: PEAK NATIONAL PARK ARCHAEOLOGY SERVICE)

and an axe. A Bronze Age shale bead was also found. The dates and relationships between the waste flakes and the implements are unknown. It is possible that the later Neolithic and Bronze Age artefacts were deposited as a result of hunting and may be mixed with the waste products of Mesolithic microlith and other implement production and use (John Barnatt pers. comm.). The finds were deposited at Sheffield City Museum and require detailed analysis to resolve their relationships. The lithics show that people were travelling across and using the moorland landscape for a range of activities including hunting, food preparation, implement production, and possibly the gathering of vegetable foods, between about 10,000 and 3,500 years ago.

Neither chert nor flint is indigenous to the millstone grit of the area. Chert is found across the limestone plateau to the south, while the nearest sources of flint are in East Yorkshire, the Cheshire Plain, the Trent Valley and Lincolnshire. Local contact with, or use of the moor by, people from these locations is indicated by the finds of lithics on the moors.

The waste flakes show that some of the implements were produced on the moorland itself. This production probably took place at temporary hunting or food gathering camps rather than at



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■ FIGURE 2. DETAIL OF ARCHAEOLOGICAL FEATURES DESCRIBED IN THE TEXT (SOURCE: PEAK NATIONAL PARK ARCHAEOLOGY SERVICE)

more permanent settlements. It has been suggested that permanent settlement and farming began during the earlier Bronze Age on the eastern moors (Barnatt 1986, 1987). This would be earlier than other areas of Britain such as Wessex and East Yorkshire where permanently settled farming has been interpreted as developing during the middle and late Bronze Age, partly through the construction of long-distance boundaries (Barrett 1993).

There is no evidence for early prehistoric settlement on the moor, which is much higher than settlement and farming could have been sustained, or has yet been identified in the Peak District (John Barnatt, pers. comm.). It is more likely that settlement was located on the lower plateaus and gently sloping valley sides. It is at such locations that extensive Bronze Age and Iron Age settlements, field systems and cairn fields have been identified on the Eastern Moors (Barnatt 1986; 1987; 1994; Barnatt, Bevan and Edmonds 1995). The valley bottoms contain clay and shale soils which were probably too heavy for cultivation until the introduction of heavier ploughs during later prehistory. It is currently thought that the valleys were heavily wooded and probably used for gathering and hunting, although further archaeological investigation of these areas is required in order to identify the existence and nature of any settlement.

Two probable burial barrows, probably dating to the later Neolithic - earlier Bronze Age, were discovered by the current survey (Figure 2: features 1, 2). The smaller of the two barrows measures 5 metres by 4 metres and 0.3 metres high. The second measures 11 metres by 9.5 metres and is 1 metre high. No record of archaeological excavation in either barrow exists, although both bear traces of unrecorded excavations. They are similar in form to, although the first is much smaller than, the majority of later Neolithic - earlier Bronze Age barrows in the Peak District (Barnatt 1989),. It is likely that many smaller barrows have been destroyed by later cultivation within inbye land and intakes (John Barnatt, pers. comm.). Three further barrows, including Pike Low, lie further south in the area of enclosed moorland on Howden Moors within Derbyshire (Bevan 1994). To the north lies a large barrow, close to the summit of Margery Hill (Reeves 1995).

The barrows mark the locations of the buried dead within the landscape. Their prominence is heightened by the barrow's positioning on the end of ridge crests with land dropping away to the Derwent Valley, and gently rising in other directions. The deliberate and careful selection of these topographically prominent locations makes the burial places, and, from certain viewpoints, the actual barrows, highly visible from surrounding areas. The locations of the barrows also give extensive views across the landscape. Those who occupied, or travelled across, the valleys and moors to the north and west would have been made aware of the presence of the dead. This may have helped to remind the living community associated with the barrows of their ancestral connections with the geographical location.

The Upper Derwent survey has also identified later Neolithic and earlier Bronze Age barrows on the western side of the Derwent valley, extending the distribution of barrows into the area for the first time. In other areas of the Peak District barrows are closely associated with agricultural land, such as the field systems and clearance cairns of the Eastern Moors. Where the barrows are situated in large areas which were unsuitable for cultivation during the Bronze Age (as in the Upper Derwent), the social relationship between the living and the burial places of the dead is likely to be somewhat different to that in the intensively settled and farmed areas. Possible ties between the dead and agricultural fertility, evidenced in the relationship

between barrows and farmland on the Eastern Moors for example, will be less significant, or even unrelated to, barrows in the Upper Derwent.

Historic occupation

In the early to mid 17th century the moors were referred to as commons over which the commoners had rights to pasture sheep and cattle and to cut peat (Ward 1927). These rights probably began during the Medieval period. Commoners of the parish of Bradfield would have enjoyed the right to use the moor for such purposes. Hollow-ways leading on to the open moorland from the Derwent valley also suggest that commoners of Derwent parish also had rights on these moors. This would appear to be an example of the practice of inter-commoning, the sharing of a common by more than one parish, which is a repeated feature of medieval and post-medieval use of moorlands in the uplands throughout Britain.

A number of defined routeways, most of which lie outside the survey area, are preserved as braided hollow-ways which lead on to the moors from the sites of Derwent village, Bamford House and Abbey Farm (feature 15). These have been eroded through repetitive use of these particular routeways as 'rights of way' sanctioned by tradition and the local community. One hollow-way (feature 14) leads from Bamford House to a set of enclosures south of Abbey Brook (feature 10). None of the tracks cross over the moor but they lead to it and often fade away on the moor after they have left the enclosed land. It is clear that the delineation of specific 'rights of way' was more important through the intensively farmed enclosed land than on open moorland.

Across the eastern part of the moors are ten ditch and bank linear earthwork features. Some are overlain by dry-stone walls. They may all pre-date the 19th century enclosure of the moor to the south and west (Bevan 1994; 1995). A 19th century enclosure wall overlies a bank and ditch which is the latest in a sequence of at least four earthworks (features 3, 4, 5, 6). Feature 3 approaches the longest of the earthworks (feature 4), implying that 4 is the earliest of the two. Feature 4 then cuts earthworks 5 and 6. These latter two features may be associated and contemporary with some of the other earthworks to the north-west (see features 7, 8, 17, 18).

The linear earthworks appear to have been used as both boundaries and land drains. Two of the features start as distinct banks and ditches upslope then become drains by being cut wider without a defined bank as they run downslope (features 3, 4). The latter of these two runs along the crest of a ridge (where it is a bank and ditch) before dropping down the side of the valley of Abbey Brook (where it is a drain). A ridge crest is a totally ineffective location to build a drain, and it is probable that this section was built exclusively as a boundary. Three of the other earthworks are located to connect watercourses by running across the ridges between the streams (features 5, 6, 9). Each of these cross-ridge boundaries is near to, and parallels, a break in slope. While partly contributing limited drainage, they may also be interpreted as boundaries. These moorland boundaries are not related to the enclosure of the moor, the taking of land into private ownership, but probably demarcate the limits of different peoples rights of use. As well as having specific functions, such earthworks are also socially important as they physically mark the boundaries of particular types of, and rights to, land use. Organisation of such a moor, which probably developed and changed over time, can become more fixed and less open to alteration by the presence of such boundaries.

On maps of 1767, 1811 and 1840 the east to west orientated section of feature 4 is shown as

forming part of the county boundary between Derbyshire and Yorkshire (Burdett 1767; Anon 1811, Smith 1986; Ordnance Survey 1840). However, on maps of 1826, 1830 and 1880 the county boundary is depicted as deviating from this earthwork to follow a more southerly course (feature 3) (Anon. 1826; Fairbank 1830; Ordnance Survey 1880). In 1826 this was called the 'County Ditch'. To the west it is overlain by an intake wall built by the Act of Enclosure for Derwent parish in the early 19th century (Fairbank 1830). It appears as if the line of the county boundary changed location to follow the more southerly route in the early 19th century, causing confusion among the earliest Ordnance Surveyors of the area. How much earlier than the late 18th century the county boundary followed the northern line is unknown. The county boundary across the moors is only demarcated by an earthwork where it does not follow obvious topographical features such as watercourses, watersheds and Derwent Edge. This would have given physical substance and emphasis to the line of the boundary.

A cairn is located on the line of the county boundary to the east of the earthwork (feature 16). Erected on a knoll, reputedly in the 17th century, this is a memorial to a shepherd boy from Derwent named Abraham who died in a snowstorm. The boy supposedly sheltered from the blizzard in the lee of a large rock and, when he knew that he was doomed, scratched the words 'lost lad' on the rock. His remains were discovered next to his epitaph the following spring and a cairn was built on the knoll which became known as Lost Lad (Daniel 1935). The cairn and Lost Lad place name appear on a map of 1767 (Burdett 1767). Today the cairn acts as a marker along the county boundary and a tourist path. It is still added to by walkers.

On the north-facing valley side of Abbey Brook is a group of banks, ditches and walls which form a system of enclosures (feature 10). The arrangement of the enclosures suggest that a cross-ridge boundary (feature 9) was the earliest of the group, though the physical relationships between them are not conclusive. The group does not appear on the 19th century Bradfield Enclosure Act and is not related to the wider enclosure pattern of the area. Situated in a secluded clough, the group appears to be a private or even illegal enclosure. It may be related to a nearby building (feature 11) and was probably used for livestock management on the moor.

During the 19th century the use of moorland for grouse shooting developed. A group of dry-stone grouse butts were built on the plateau south of Abbey Brook (feature 12). Butts are thought to have been introduced when the beating of grouse over prepared shooting positions began in the mid 19th century (Byford 1981). The remains of a probable shooting cabin survive to the east of the butts (feature 13). During the late 19th century grouse shooting became seen by many landowners of moorland in the region as a more important and profitable use of moors than livestock pasturing. As a consequence, the number of sheep pastured on the moors fell significantly and the economic viability of a number of farms was threatened (Ward 1931).

Survey rationale and methodology

The archaeological investigation of Little Howden Moors forms part of the Upper Derwent Archaeological Survey. This project is being undertaken by the Peak National Park Archaeology Service on behalf of the Upper Derwent Officer Working Group. The survey is being conducted over four years to increase our knowledge of the archaeology of the area so that the cultural landscape can be better understood and managed by the landowners in relation to the current use of the area for agriculture, water supply, forestry and tourism. The original survey reports, from which this paper has been adapted, were therefore primarily written for landowners and tenants in the Upper Derwent.

The survey involved a systematic search of the moors to the Archaeology Services Phase 1 standard. Every part of the moorland was inspected from at least one vantage point and care was taken to avoid blind areas by taking in further vantage points. Every potential feature was inspected more closely to plot its extent, form and interpretation.

On a moorland where only O.S. 1:10,000 maps are available, these are enlarged to 1:2,500 and the features sketch plotted. The enlargement produces inherent errors in the accuracy of the. maps and further inaccuracies are introduced through the lack reference points in the open landscape. To an extent this is compensated for by reference to vertical aerial photographs.

The Peak National Park Archaeology Service is a service unit of the Peak Park Joint Planning Board. Its main responsibilities include assessing the archaeological impact of planning applications and other development, carrying out survey and other field work to enhance knowledge of the archaeological record, and securing appropriate management of archaeological sites within the Park.

Bill Bevan

Survey archive

Documents

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Acknowledgments

Thanks are due to the National Trust for giving permission to survey the land. Derbyshire Record Office and Sheffield Archives gave access to 19th century maps. Paul Ardron conducted an initial survey of the area. Miles Johnson and Robin Keech volunteered their time to aid with the survey. John Barnatt offered suggestions and interpretations on prehistoric occupation of the Peak District, while he and Ken Smith provided more general advice.

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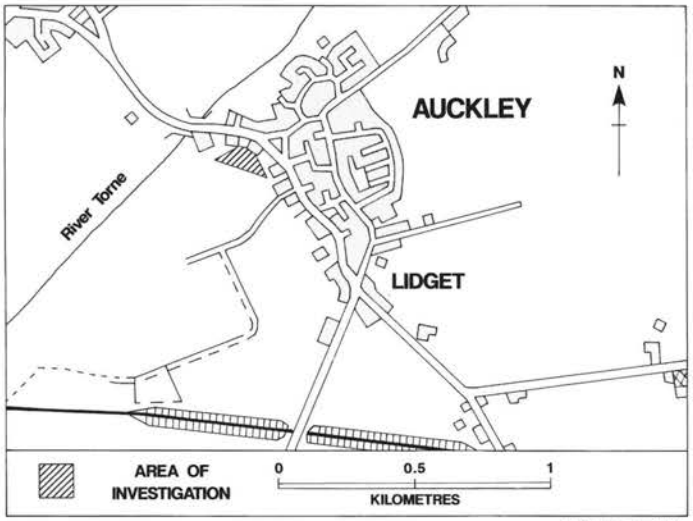
A CASE OF TOO MUCH MEANING? A CONTEXTUAL ANALYSIS OF THE FORM AND CONTENT OF A BRONZE AGE PIT IN AUCKLEY, DONCASTER

An application to build houses on 1.25 hectares of land adjacent to Main Street, Auckley to the east of Doncaster (figure 1), was granted on condition that an archaeological evaluation be carried out to investigate the possible survival of traces of a series of medieval fishponds. Following a geophysical survey of the area the SYAFRU was commissioned by the Mr. J. Hunt, the agent, to carry out an archaeological evaluation of the area. A series of trial trenches were excavated across the site. Whilst these failed to locate any significant medieval deposits, a large pit produced a quantity of prehistoric pottery and some worked flints (Atkinson and Chadwick 1994). Initial examination of the finds suggested that they were of late Neolithic or early Bronze Age date. As finds of this period are rare in South Yorkshire a third stage of investigation was

■ FIGURE 1. LOCATION PLAN, AUCKLEY, DONCASTER



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initiated with an area of approximately 2700 square metres being stripped by machine and cleaned by hand.

Results

Despite the excavation of this much larger area no further prehistoric features were identified and the anomalies detected by the geophysical survey were shown to result from natural processes, probably fluvio-glacial in origin. The pottery recovered from the pit however represents the largest corpus of prehistoric pottery discovered in the South Yorkshire for many years.

When fully excavated the pit proved to be subrectangular in plan and orientated so that its long axis was on an north-west/south-east alignment. It measured 2.9 metres long and 2.1 metres wide with a maximum depth of 0.78 metres. Its sides were smooth and steep, dropping sharply to a flat base which shelved gently downwards towards the east (figure 2). It was cut through natural sand and gravel deposits which were friable along the top edge but increasingly more compact towards the bottom. It also displayed a noticeable break in slope around its eastern edge. The pit contained three distinct deposits, although artefacts were found in only one of these, fill 402/1005. Each deposit within the pit was excavated in a series of 20 centimetre spits. A total of 269 sherds of pottery were recovered representing a maximum of sixteen different vessels belonging mainly to the Beaker tradition. Five of the vessels were decorated with toothed-comb impressions, four with incisions and three were rusticated in style with finger nail or other impressions (Gibson 1995). The remaining three vessels were probably Food Vessels or possibly hybrid Beaker / Food Vessel forms. All these vessels were highly fragmentary and only one was represented to any significant degree. The vessels appear to date to between 2000 and 1750 BC, calibrated (Gibson 1995).

Thirteen worked flints were also found in the pit, including three thumbnail scrapers and a petit tranchet derivative style arrowhead (Myers 1995). These were mostly in a brown translucent flint which probably originated in the till deposits of eastern Yorkshire. A core from deposit 402/1005 was of late Mesolithic date whereas a late Neolithic or early Bronze Age date was suggested for the rest of the material. This accorded well with the pottery evidence. Some of the tools displayed signs of heavy usage. With one exception all the flints were from the lower part of the deposit. The single exception (a core rejuvenation flake) was the only one to exhibit signs of heat modification. Nearly twenty heat-shattered pebbles were also recovered from the upper spits.

Discussion

The fact that the pit appeared to be an isolated feature was surprising. It may be that this reflected the original situation, but it is also possible that other, shallower features had been destroyed by subsequent activity in the area, specifically modern ploughing.

A functionalist view of the past would label this feature as an isolated pit for rubbish disposal. However I felt that it displayed a

number of attributes worthy of closer investigation. Christopher Tilley has recently pointed out that:

No meaning is determined or indelibly privileged by something inherent in the archaeological record itself (Tilley 1993:7)

Following from this I shall consider the pit discovered at Auckley from a contextual point of view. I hope to show that a closer examination of the archaeological record allows us to consider an alternative interpretation to the functionalist one of 'rubbish pit'. This alternative is one possible reading amongst a number of others and is not presented as an objective truth. It is intended as an example of the 'fine grained analysis' proposed by John Barrett (1994:71) and demonstrated by K. Taylor (1994)

To begin with, the pit's rectangular plan and flat base were extremely regular and might suggest that the cutting of the feature was a well planned and deliberate act that was carried out with a predetermined goal in mind. It is as if the person or persons responsible for the digging already had a clear mental template of the desired end result of their activities before they had started to dig. The marked east-west orientation of the pit is also significant, aligning the pit as it does with the rising and the setting of the sun.

The break of slope that exists halfway down the eastern edge of the pit may also be important; it is unlikely to be the result of recutting as no interface was detected within the pit deposits themselves.

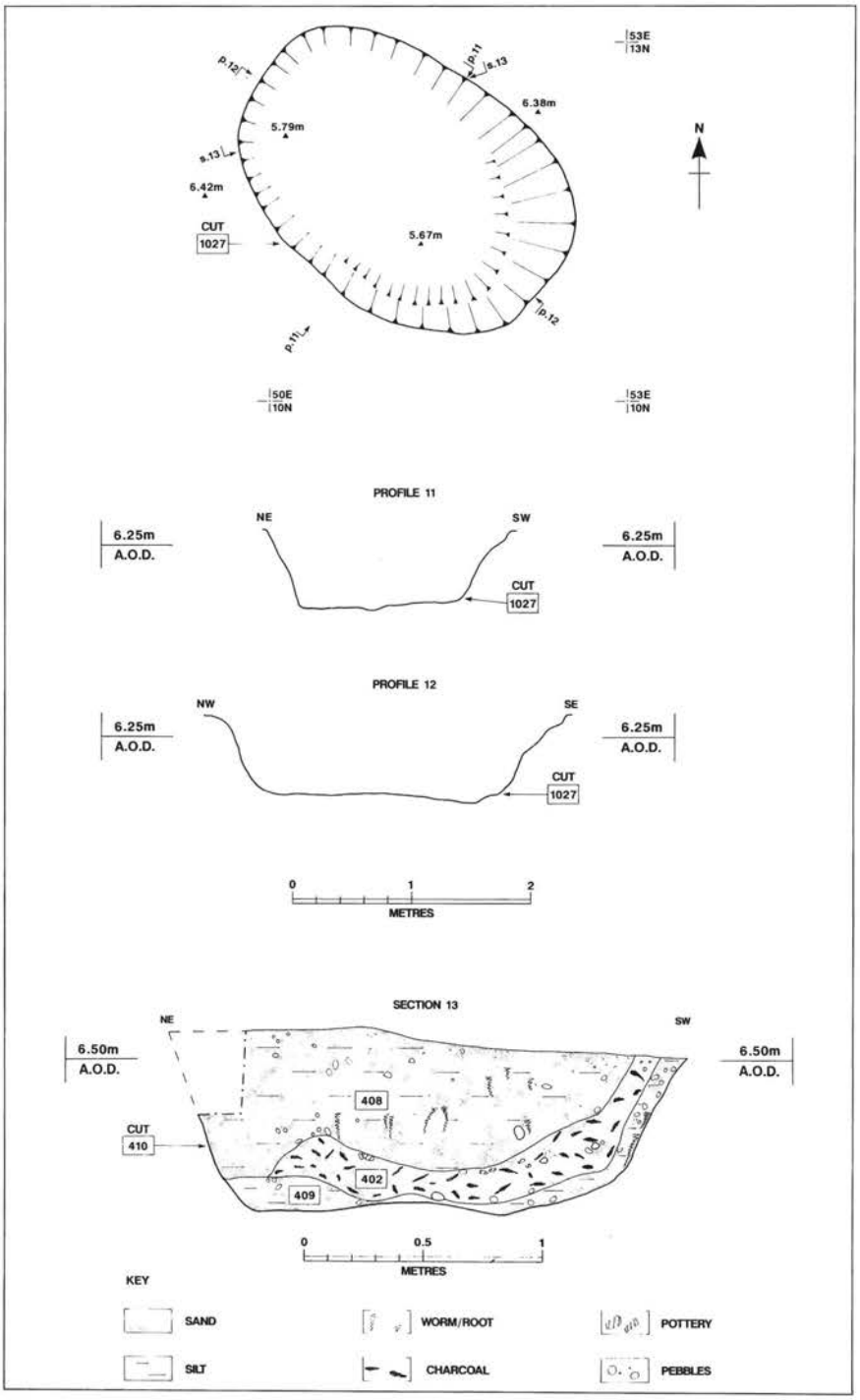
Deposit 409, the lowest deposit, was a very fine, friable, light orange-brown silty sand and was almost certainly derived from the natural deposits through which the pit was cut. Gravity alone would account for the formation of this layer and the implication of its existence is that the pit had been left open for a period of time (in excess of several days) after it was dug in order for this to accumulate as the edges of the pit slowly crumbled. Any feature open for longer would soon accumulate leaf litter and other organic debris together with self-set plants. Although the leaching processes in sandy and gravelly soils are not conducive to organic preservation, other sites on similar soils (such as the cropmark sites described in other editions of *Archaeology in South Yorkshire*) normally show darker, humic, deposits marking periods when the features were open and when plant communities were able to establish themselves. As 409 showed no evidence of this darkening it would seem that it formed fairly rapidly, probably over a period no longer than several weeks.

Deposit 402/1005 was a fine dark grey-black silty sand which also contained scattered charcoal flecks. In cut features such as pits and ditches, the natural accumulation of slumped deposits and waterborne silt tends to result in a concave surface, visible archaeologically as a concave interface profile. Although the surface of the western section of 402/1005 showed this pattern, to the east the deposit had a pronounced convex profile, more indicative of a deliberately dumped deposit. It seems likely that 402/1005 was deliberately deposited by a person or persons facing west along the long axis of the pit. The uneven distribution of the material suggests that relatively few people (perhaps three or less) were involved in the filling operation. More people, working together, would probably have arranged themselves around the edges of the pit and this would have resulted in a more even spread of material across the pit.

Such activity might also have a bearing on the break of slope around the eastern edges of the cut. The natural sand and gravel deposits of the area are very friable and it is common for the edges of a pit or feature to collapse or slump as individuals climb in and out of them. Such slumping often involves the shearing off of regular blocks of material and their redeposition at the base of the cut. It is possible that the break of slope on the eastern side of the pit was the result of slumping caused by

individuals climbing in and out of the pit. It was towards the eastern end of the pit that deposit 409 was thickest, and it may have been partially derived from such slumping.

Within deposit 402/1005 itself there was a marked lack of the expected vertical sorting amongst the inclusions. The relatively heavy heat shattered pebbles were found in the upper three spits whereas the much lighter flints were largely confined to the lower spits. The largest potsherds were also found in the lower spits, although in general the pottery appeared to be distributed throughout the deposit. Nonetheless, if the layer had formed as a result of natural processes then the heavier, more rounded pebbles would have been expected to end up at the bottom with the lighter material sorted through the deposit. This evidence suggested that there were some peculiarities associated with the deposition of the finds which did not accord with an entirely natural filling of the feature.



■ FIGURE 2. PLAN AND SECTION DRAWINGS SHOWING PIT 1027 AND CUT 410

Layer 408 (the upper fill), a mid orange-brown sand was similar to 409 and was probably also derived from natural deposits. Indeed it was only the presence of the dark layer 402/1005 which alerted the excavators to the presence of the pit in the first place, so similar was 408 to the natural. Although it was the largest in terms of volume, 408 contained no finds and exhibited no sorting or internal differentiation such as lensing. Its colour suggests that it contained little or no organic material and that it probably formed very quickly. This deposit could therefore be the product of a very rapid and deliberate backfilling episode, probably using the material thrown up from the digging of the pit.

The origin of the finds and the dark 402/1005 material is problematic. None of the

potsherds and only one of the flints had been exposed to heat which would preclude them coming from the rake-out of a hearth. Some of the pottery was severely abraded and one sherd even displayed striations that were probably caused by rodent gnawing (Gibson 1995). It has been suggested that the finds may originate from a domestic rubbish deposit such as a midden (Cumberpatch and Edmonds 1994, Gibson 1995). The fire cracked pebbles might have been associated with a burnt mound, where such items are often found in large numbers. The same origin however is unlikely for the unburnt sherds. No trace of a midden or mound was found during the excavation, but the evidence from other parts of the site indicated that the original ground surface had been removed by modern ploughing.

It proved difficult to establish whether the artefacts had been incorporated into 402/1005 prior to its deposition. The fact that there was an unusual vertical distribution of finds might imply that, in the case of the flints and heat shattered pebbles at least, they only came into contact with the dark deposit during or after they entered the pit.

The heat modified flint may have been deposited along with fire-cracked pebbles, having been heated elsewhere or, alternatively, the flint may have been modified whilst in the pit, having come into contact with the pebbles while they were still hot. The unheated flints were probably deposited first, followed by the dark soil containing the pottery. The heat shattered pebbles were the last objects to have been dumped into the pit.

The activity connected with the pit can be summarised as follows. A very regular and neatly dug pit was cut into the natural subsoil, with attention paid to its orientation so that the long axis lay on an east-west alignment. The pit was probably not open for more than a few days or weeks before flints, heat shattered pebbles and broken pottery were thrown into it, the pottery at least being mixed up in a dark soil containing charcoal. There may have been some structure to this activity. As it was not open for long it would seem that either the pit was dug to receive the material or that it was available fortuitously. This deliberate dumping was carried out by at least one and probably not more than three people facing west along the long axis of the pit. The upper part of the pit was then quickly and completely backfilled.

It may be productive at this point to draw a distinction between 'rubbish' and 'discard'. The Concise Oxford English Dictionary (1990) defines rubbish as 'waste material; debris, refuse, litter ... worthless material or articles'. Disposing of rubbish is therefore removing from the social sphere material that is of no further social or economic value. To discard however is to 'remove or put aside'. Such acts may be imbued with more than a simple desire to dispose of unwanted material. Indeed, under certain conditions it can be construed as being positively beneficial or as having important magical or ritual meaning. This has frequently been demonstrated both archaeologically and from the ethnographic observation of other societies. Discarded material should not necessarily be considered as being without value or worth.

If this was simply a rubbish pit, why should so much trouble have been taken over its shape? Why were the finds within it not more mixed? Why was the pit backfilled so quickly when most of it was still empty? Is this apparent patterning the result of deliberate actions or the chance result of the filling process?

When I began this excavation I, together with my co-workers, expected to find medieval deposits or perhaps ditches of Iron Age or Roman-British date. Instead we found a few sherds of medieval pottery, numerous fluvio-glacial features and a pit containing prehistoric artefacts. This discovery changed our approach to the excavation. The archaeological record of the

Neolithic and Bronze Ages is dominated by the evidence for ritual practices, some of which involve the careful and structured deposition of items of material culture (Barrett 1994). This immediately influenced our methods of excavation, as our subdivision of the pit deposits into spits testifies. Had we been dealing with a pit of medieval or Roman date we would have been satisfied with an excavation based on the sequential removal of the individual stratigraphic units.

When I began the post-excavation analysis of the site I was hoping to find evidence for highly structured deposition. The curious distribution of the finds suggested that there was some evidence for such patterning and my preliminary report on the site reflected this. Following the detailed analysis of the finds by specialists however I questioned my line of reasoning. The pottery evidence showed that the vessels within the pit were highly fragmentary and worn and must therefore have been old and weathered before they were deposited in the pit. Many of the flints were heavily worn, and the Mesolithic core had presumably been derived from much older deposits. It is thus quite likely that these items at least had been derived from some other context, perhaps a midden. Further questions now arise. Is this burying of midden material a characteristic of late Neolithic and early Bronze Age sites in northern England? Is such activity common away from domestic sites? Further research is clearly needed to answer such questions.

In searching for meaning I have carried out a similar enquiry to that undertaken by Ian Hodder (1992:213-240), although on a much smaller scale. Hodder has described the process of interpreting an archaeological site as entering a 'hermeneutic spiral'. This is a metaphorical description of the processes of interpretative thought, whereby one moves from pre-supposition through an encounter with the archaeological data to a new position of understanding, prior to an encounter with new data. In following this path I have sought for meanings which might account for some of the features which I feel cannot be explained by a glib recourse to simple notions of rubbish disposal. Nonetheless I would admit that other readings of this particular archaeological text might result in alternative explanations. Perhaps my investigation demonstrates Tilley's observation that: 'while events did occur in a real past we constitute those events as relevant facts by their active selection and ordering in discourse. Writing displaces the real past' (1993:24)

I leave the reader to engage with their own dialogue with the past.

A.M. Chadwick

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A PALEOENVIRONMENTAL ANALYSIS OF SAMPLES FROM LINDHOLME BANK ROAD, HATFIELD MOORS

Following a preliminary assessment of the archaeological and palaeological potential of deposits from Lindholme Bank Road, Hatfield Moors (reported in *Archaeology in South Yorkshire 1993 - 1994)*, a sequence of paleoentomological samples were taken by ARCUS in September 1994, from a trench excavated for the installation of a gas pipeline. This was constructed to link an existing gas production site on Lindholme Bank Road to a site on the edge of the disused Lindholme Airfield.

Although the sequence was not associated with any archaeological sites, it forms part of the palaeoenvironmentally sensitive area of Hatfield Moors. The samples offered a unique opportunity to examine the peat archive relating to medieval and post-medieval deposits, which, elsewhere have been lost during recent peat milling and hand cutting activities. The deposits adjacent to Lindholme Bank Road have been protected by tarmac.

The importance of peat deposits in the understanding of mire genesis and development has, until recently, been little acknowledged. In addition such deposits provide 'proxy data' for past climatic fluctuations, valuable indicators of local hydrological conditions and evidence for direct human impacts upon a bog. Such information is valuable to archaeologists, ecologists and conservation bodies interested in mire regeneration and an integrated approach to the management of areas such as Hatfield Moors.

Four samples were examined for their entomofauna, which proved, not surprisingly, to be characteristic of lowland raised mires; certain species indicated the importance of heathland habitats, probably influenced by the sandy substrate which underlies Hatfield Moors. The importance of heathland fluctuated in some samples with others showing the importance of wetland biotopes. These fluctuations may have been in response to climatic signals or changes in the hydrology of the bog, although fauna associated with open water appears to have remained constant over the period represented by the samples. The insect fauna gave no indication of any anthropogenic activity within the area. Many of the samples contained charcoal fragments, probably the result of fire on the surface of the bog. It is unclear whether this was the result of human activity; fires can start naturally on such bogs; as witnessed on Thorne Moors during the summer of 1995. On the other hand the deliberate burning of heathlands is well attested historically. The role of fire within the natural ecosystem of a raised bog is poorly understood; such events would certainly have had an impact upon a bogs' perched water table.

The most exciting species recovered from the samples was that of a probable *Bembidion humerale* Strum., a ground beetle characteristic of lowland bogs, whose habitat today is restricted to Thorne and Hatfield Moors. Its occurrence as a fossil within the peat deposits underlines the continuity represented by this valuable site.

Thanks are due to Kelt UK Ltd., who funded the project and to Doncaster MBC. The analysis formed part of an ongoing research project on Thorne and Hatfield Moors at Sheffield University, undertaken with the permission of Levingtons Horticulture, Tilcon Ltd and English Nature.

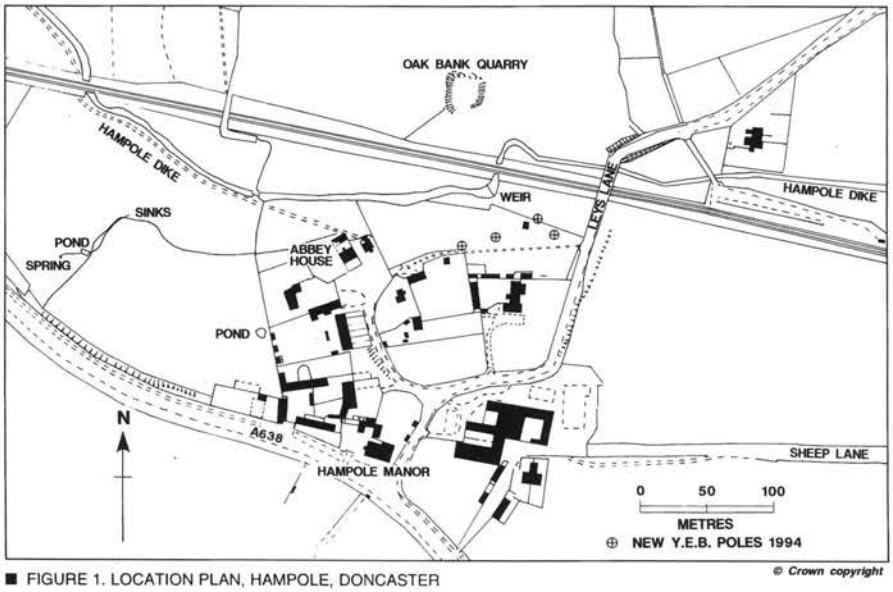
N.J. Whitehouse

RECENT ARCHAEOLOGICAL WORK IN HAMPOLE, DONCASTER

The village of Hampole is today largely composed of buildings of 17th century and later date. It is well known however that the village was somewhat larger during the medieval period and included St Mary's Priory, founded in 1156 by nuns of the Benedictine order and later transferred to the Cistercian order. Although no traces of the nunnery now exist above ground, excavations in the 1930s by C.E. Whiting (better known for his work at Sutton Common, South Yorkshire's most important prehistoric site), revealed extensive sub-surface remains. Unfortunately Whiting's publication of his work failed to make clear the precise location of the site. In consequence the whole of the village is considered to be of archaeological importance. During 1994 the SYAFRU carried out two small pieces of fieldwork in the village (figure 1).

Investigations at Abbey House

An application to extend the present Abbey House into a disused garden area prompted the Sites and Monuments Record Officer to request an evaluation of the area to be disturbed. Closer inspection revealed that half of the area had been disturbed by the removal of a large tree stump and only two small test pits were required to evaluate the remainder. These were excavated by hand and contained disturbed deposits associated with the present Abbey House. Both pits produced mixed assemblages of artefacts which dated to between the 13th and 20th centuries.



■ FIGURE 1. LOCATION PLAN, HAMPOLE, DONCASTER

These groups suggested that while the ground adjacent to the house had been disturbed in the recent past, earlier deposits had existed dating to the medieval period.

Hampole Priory

Although the precise site of the Priory is unknown, the Ordnance Survey map of the village includes a reference to it. When the Yorkshire Electricity decided to reroute an overhead powerline to the north of the village the erection of four new poles became necessary on the site as identified by the Ordnance Survey. The excavation of the pole settings was overseen by members of the SYAFRU. The holes were excavated to a depth exceeding two metres, well below the maximum depth of the topsoil (40 centimetres). The holes produced a considerable amount of natural limestone but there were also indications that archaeological remains existed in the vicinity. A number of pieces of mortar were found associated with the limestone in the most northerly of the holes and two fragments of 14th century pottery were recovered from the hole immediately to the west. No specific structures were noticed, but, as with the evidence from Abbey House, it is clear that medieval occupation existed on or close to the site.

Compiled by C.G. Cumberpatch from reports by S. Atkinson

DESKTOP SURVEYS IN SOUTH YORKSHIRE 1994 - 1995

An assessment of the area of the proposed opencast mine at Howbrook, Sheffield

A proposal by Cobex Ltd to establish an opencast coal mine at Howbrook near Tankersley was deemed to pose a threat to the historic landscape of an area known to contain a number of archaeological features. A desktop survey of the area was commissioned by Cobex from the West Yorkshire Archaeology Service.

Although lying within an area of considerable archaeological importance, close to Wharncliffe Chase (see *Archaeology in South Yorkshire 1993 - 1994*) and the medieval parks of Tankersley and Wortley, the area directly affected by the proposal contained only a limited number of features considered to require further archaeological investigation. These were an area of cropmarks which may relate to medieval or earlier land divisions, a group of earthworks provisionally identified as early industrial features, possibly charcoal hearths or coke ovens and a dry stone wall and two stone posts. The latter feature is unusual in that it lies amongst hedges and fences and may be the remains of an earlier system of enclosure. Two farm buildings at Hollin Berry Farm were also given a cursory inspection. Whilst the external features of the barn and farmhouse date to the 18th century, it would appear from the character of the walls and the steep pitch of the farmhouse roof that the building may be earlier than this in date. Unfortunately it was not possible to examine the construction of the roof as this would have given a more precise date for the structure.

Edited by C.G. Cumberpatch from a report by A. Boucher

Angel Street, Sheffield

As part of the long term scheme to revitalise Sheffield city centre, Provincial House (Sheffield) Ltd. proposed the redevelopment of an area of land bounded by High Street, Market Place, Angel Street, Bank Street and Harts Head. As the area lies within the historic core of the city and close to the site of the castle (described in *Archaeology in South Yorkshire 1993 - 1994*) a desktop survey of the archaeological potential of the area was required as part of the planning application.

The assessment considered the documentary evidence (including 18th and 19th century maps) for the survival of historic buildings within the development area and its immediate surroundings as well as the limited evidence for the extent of ground disturbance consequent on the redevelopment of the area after bomb damage during World War II. An archaeological evaluation carried out in 1990 established that cellaring beneath 27/29 High Street had reached bedrock, thus destroying any archaeological layers. This cellaring appeared to be limited to a zone extending twelve metres back from the street frontage, the buildings beyond this having smaller cellars or no cellars at all. It was therefore possible that archaeological deposits, albeit affected by bomb damage, may have survived in this area. In addition the ABC cinema (now demolished) was constructed around a reinforced concrete frame, which may have permitted the survival of some archaeological strata. The principal implication of the study was that very little is known of the survival of archaeological remains within the core of the city of Sheffield. A programme of trial trenching and watching briefs was therefore proposed for the site.

Edited by C.G. Cumberpatch from a report by S.Atkinson.

A desktop study at New Stubbin Stockyard, Rotherham

In July 1994 ARCUS (Archaeological Research and Consultancy at the University of Sheffield) was commissioned by Coal Contractors Ltd to undertake a desk-top study and walkover survey of land at New

Stubbin, Rotherham, as part of a planning application for open cast coal extraction.

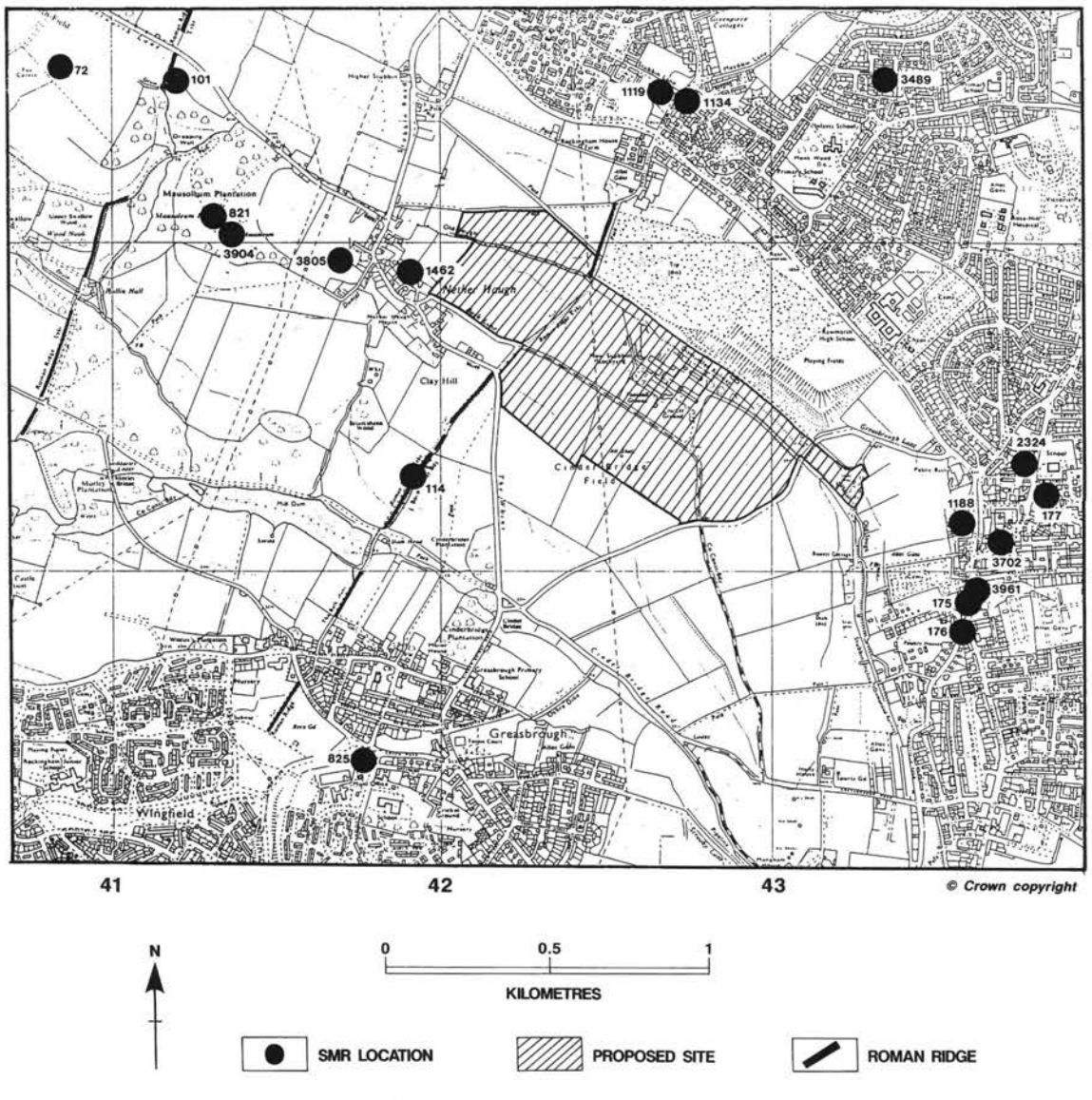
Historical Summary

The site straddles the boundary of the medieval townships of Greasbrough and Rawmarsh. Documentary sources for the Middle Ages indicate local pottery and coal mining industries, although they show that the land in the area was primarily given over to agricultural use. During the eighteenth century, coal mining became organised on a large scale here, and the application area contains the site of the former New Stubbin Colliery. This colliery was sunk between 1913 and 1915 and was worked until 1978.

Archaeological Summary

Known archaeology within the application area: Only one archaeological feature is known to exist in the application area. This is part of the Roman Ridge, a discontinuous linear earthwork. The ridge runs from Sheffield, along the north side of the Don Valley and splits into two branches just south of Kimberworth. The northern branch ends near Mexborough and the southern branch ends near Kilnhurst.

The general characteristics of the Ridge comprise a simple ditch and bank. Various excavations on the feature have failed to establish a certain date, although it is conventionally dated to either the Iron Age or early medieval period. Within the application area only slight traces of the earthwork survive, although its line may be clearly traced. It comprises a slight bank planted with well-established hawthorn, and serves as a field boundary. Eighteen separate



■ FIGURE 1. PLAN SHOWING SMR LOCATIONS AND AREA OF PROPOSED SITE AT NEW STUBBINS

sections of the Ridge have Scheduled Ancient Monument (SAM) status, and although the portion inside the application area does not have this status, it lies a few hundred metres to the north of a scheduled section (SAM 155e).

Known archaeology within the site environs: The SMR records a number of features of archaeological interest in the environs of the application area. These include Iron Age/Roman cropmarks and spot finds, medieval buildings and pottery kiln sites, and post-medieval kilns and buildings of note.

Archaeological Potential
Although a proportion of the site had been previously worked for coal, other areas remain undisturbed, particularly the fields to the north-west of the Roman Ridge. The potential for features of archaeological significance to be present in the application area has led to a programme of further archaeological investigations. At the time of writing, these are ongoing.

Summarised by Ms. A. Badcock from a report by Mr. J. Symonds, Dr. T. Cooper, Dr. J. Webster and Dr. P. Sidebottom

A desk-top study at Straight Mile, Brampton-en-le-Morthen
In November 1994 ARCUS was commissioned by VHE Construction plc to undertake a desk-top study of land near Brampton-en-le-Morthen. The study was commissioned in advance of a planning application by VHE Construction plc. to develop an advanced Design and Build landfill facility on 87 hectares of agricultural land, of which 50 hectares will be disturbed. The area is one of rolling pasture land, with the underlying geology comprising Upper Coal Measures.

Historic & Cartographic Sources
The proposed site is situated at the east of the parish of Aston-cum-Aughton, and to the immediate north of the settlement of Hardwick. Aston-cum-Aughton lies within the ancient settlement area of Morthern (Hey 1979:25). This unit of Viking administration was already obsolete by the time of the Norman Conquest. Aston-cum-Aughton formed part of an arable belt which by the time of the Norman Conquest was the most prosperous and most densely settled of any part of the West Riding.

Hardwick
The place-name Hardwick derives from Old English *Heordewic* (literally, 'wic for the flock'), and denotes a sheep farm. Hardwick is first mentioned in a charter, thought to be of the late twelfth century. In a Lay subsidy of 1334, Hardwick does not appear as a discrete settlement, and is likely to have been little more than a sheep station on the outskirts of Aston parish.

Possible monastic connections
One of the buildings at Hardwick is named Grange Farm. The present farmhouse is a post-medieval structure, but it faces a two-storied, timber-framed cottage of probable medieval date.

The presence of a 'Grange' place-name at Hardwick (Hardwick Grange Farm) may suggest that the settlement was established by the Cistercians. Cistercian houses commonly established distant centres of agrarian management. The most important Cistercian Abbey in South Yorkshire is Roche Abbey, and its charters show that granges were established, including one at Todwick, c.2km from Hardwick. It is possible that Hardwick was in the ownership of Roche Abbey, subsumed within Todwick.

Archaeological Summary
Known archaeology within the site environs: Examination of the SMR and aerial photographs show that three sites or features are present in the environs of the application area, in addition to Hardwick Hall and its associated buildings. These include a cropmark ring enclosure and fieldsystem (Iron Age/Roman), the 'Monk's Path' (possibly medieval) and a dovecote (post-medieval).

Known Archaeology within the application area: Two features of archaeological interest can be identified within the application

area. The first is an area of ridge-and-furrow around Hardwick Hall, denoting medieval agricultural activity. The second is the Aston-cum-Aughton/Brampton parish boundary, represented by a low bank following a stream which bisects the application area. Near the eastern edge of the application area this boundary meets the Aston-cum-Aughton/ Todwick parish boundary, and the convergence of the three parishes at this point is marked by a boundary stone.

Archaeological Potential
The application area has the potential to contain features of archaeological interest dating from the prehistoric period to the present day. The Iron Age/ Roman cropmark site could well be part of a more extensive agricultural landscape, which may extend into the application area. Historical and archaeological sources also suggest that the adjacent settlement of Hardwick was the focus of an early-established medieval settlement. The Monk's Path, on the southern boundary of the application area, may date to the medieval period, although it is possible that it is a more recent feature.

The parish boundaries may also be of considerable antiquity. Present day parish boundaries can often be seen to reflect those defined in the Saxon or later periods and in some instances these boundaries have been shown to pre-date Roman roads (Aston 1985).

Edited by Ms. A. Badcock from a report by Dr. T. Cooper, Mr. J. Symonds and Dr. J. Webster.

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L O C A L R E S E A R C H

RECENT WORK BY THE DONCASTER GROUP OF THE YORKSHIRE ARCHAEOLOGICAL SOCIETY

Following the geophysical survey of a cropmark site near Sprotborough (reported in last year's edition of *Archaeology in South Yorkshire)* the Doncaster group of the Yorkshire Archaeological Society expanded the scope of their work in the area. With the assistance of Steve Webster of the SYAFRU a project design was drawn up to provide a framework for the planning of future work. The aims are:

- To generate enough data to enable the production of a model for the development of the landscape from the Mesolithic to the present day
- To place the results of the survey within a regional context
- To promote non-destructive archaeological research and the aims of the Doncaster Group of the Yorkshire Archaeological Society
- To introduce members of the society to archaeological survey and documentary research techniques
- To publish the results of the survey

The project began with a search of documentary sources through the archives held by the SYAS, Doncaster Archives and the Doncaster Local History Unit. Members of the society attended a course 'Sources for Local History' to gain experience in the use of archival and documentary material. Photographs from an aerial survey, carried out by the project group, was used to plan a campaign of field walking and a training session organised for members interested in this aspect of the survey. During the summer four fields were walked and plans for future work were drawn up.

Albert Cruse, Gordon Morris, Andrew Steers, Steve Webster

TWO WAY TRAFFIC: THE IMPORTANCE OF BEAUCHIEF ABBEY AS A CASE STUDY FOR THE PREMONSTRATENSIAN ORDER IN ENGLAND

The Premonstratensian Order (to which Beauchief Abbey belonged) was founded in 1120 by Saint Norbert at Premontré in Northern France (Bond 1993). The Premonstratensians were considered a branch of the Canons Regular of the Augustinian Order. The Canons were respected for their piety and constant 'mortification of the flesh' (particularly by means of a very frugal diet and the wearing of 'verminous clothing'). Significantly, while Premonstratensians were expected to observe the Daily Offices, they were also required to serve in the parishes (Colvin 1951). In fact, the Premonstratensian community was one that included a variety of members of different status, including large numbers of lay brethren (Bond 1993).

If one attempts to look archaeologically at the impact of the Premonstratensian Order on the English Medieval landscape, a number of difficulties become apparent. It is immediately obvious that although there were more than fifty successful Premonstratensian communities in Britain (out of a total of over seventy foundations) there is an almost complete lack of archaeological study of this order. With only very occasional exceptions (Merrony 1994) any form of detailed field investigation is particularly sparse. This lack is compounded by the fact that what historical and archaeological work has been done has tended to concentrate on the genesis and life of the monastic community as related to spiritual or liturgical aspects. The very areas that archaeology can illustrate most effectively - the detail of the temporal organisation of the establishment, its life as a commercial enterprise and its relationship with and impact upon existing lay communities and their landscape - has until very recently been the virtually ignored (Halsall 1989). The order is often dismissed as an imitation, both in architecture and lifestyle, of the better known Cistercians. The role and impact of Orders such as the Premonstratensians (and others), which were based on small communities working with and within an existing lay population, must (archaeologically) be hugely different from that of the large communities of Orders like the Cistercians, where so much more of the life of the community was undertaken directly by the monks themselves. This reluctance to look at smaller religious communities within the wider cultural and physical environment is inexcusable, as a significant portion of the medieval English landscape was influenced by such relationships. It is not adequate to take the landscape of a large monastery (be it Cistercian, Benedictine or whatever) and present it as representing the norm for medieval England.

An analysis of the location of Premonstratensian houses in England shows that they clearly tended to be established in areas where other Orders did not have a strong presence. This may represent either a deliberate policy of avoiding competition with the houses of other, economically aggressive, Orders or may be an unavoidable product of potential donors already having been taken up by other foundations. The majority of Premonstratensian houses in England were established in the second half of the 12th and the first decade of the 13th centuries. The majority of gifts for foundations are often explained as acts of penance for some misdeed. In fact, closer inspection suggests that the foundations are based on a much more subtle process involving family and political ties. For example, the relations of Rannulf de Glanville were responsible for founding or substantially endowing at least six Premonstratensian houses.

The political and economic relationships of the Premonstratensian Order is clearly represented in the founders of houses. The status of the founding patrons of Premonstratensian houses was generally lower than that of the Benedictines and Cistercians. This may be due to a lack of availability of patrons of high status to a relatively late arriving Order, as these high status individuals were already linked to established Orders. This process is a significant factor in the relatively small scale of Premonstratensian houses and is important in determining the impact of those foundations on the communities and landscape into which they arrived. This modesty of resources available to a small house has ensured that these establishments had a smaller documentary legacy to pass down to modern scholars. Consequently these are exactly the establishments where archaeology has the greatest role to play in illuminating their life, economic base, social structures and relationships.

It is possible to describe the general form of a Monastic community. The main estate was normally based on a block of land given in the founders grant. The community worked hard at increasing these lands in order to facilitate more efficient management and economic stability. Outlying estates were often used for specialised activities, such as mineral working, stock rearing or timber production. The monastic estate had to provide for both the daily needs of the religious population and lay communities which depended upon it as well as for the long term economic stability of the house.

It is suggested that the Orders with smaller houses relied on economic bases that were more diverse than many of the larger houses. These smaller houses may have combined industrial and agricultural activities within a complex of interactions between themselves, lay brethren, tenants, patrons and landlords. This complex set of relationships and diverse areas of activities, contained within a single establishment (or estate), must have had a characteristic impact on the landscape and left particular forms of evidence in the archaeological record.

Within Sheffield we are fortunate to be presented with one of these smaller houses. The Premonstratensian Abbey of Beauchief was established officially in 1183, following the grant of a founding estate of nearly 800 acres from Robert Fitzranulf, Lord of Alfreton and Norton, some years earlier (1172-3). Fitzranulph also gave the Abbey four churches along with the tithes of his rents and the mill of Aston on the river Sheaf (Pegge 1801). The founding community was of five canons, Prior and Abbot from Welbeck in Lincolnshire. While the community soon grew to about twelve, it was never large (the highest number recorded being twenty-one in the mid-15th century). Even without later acquisitions it is immediately apparent that this is a tiny number of people to work an estate of this size and consequently there must have been large numbers of people living and working on the estate. As will be discussed below, this must have become increasingly the case as the Abbey acquired further assets.

The Abbey acquired further grants of land and other assets, particularly during the thirteenth century. Its greatest benefactor at this time was Sir Thomas de Chaworth (related to Fitzranulf by marriage) who gave a total of nineteen grants. These grants not only extended the Abbey's lands to the south and west, but also brought rights to minerals and other materials. One of Sir Thomas's grants, in the early 1300s, gave full liberty of getting coals, drawing them and carrying them away, both for their own use and their tenants. Beauchief Abbey also owned mills (Merrony 1994, Mott 1969) and the rights to ironstone, sandstone, siltstone, high quality clay and, perhaps, an involvement with some of the Sheffield region's other great assets: millstones made from the Gritstones of the Dark Peak and

lead; as well as with the very important salt trade from Cheshire. We also know from other Premonstratensian Abbey documents that this establishment may have had an involvement with tanning, fulling and related activities, as well as a very diverse agricultural base.

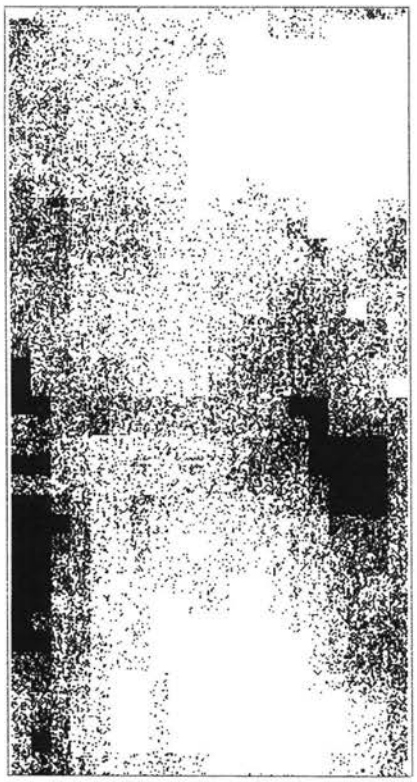
As has been discussed before (Merrony 1994) this wide range of activities were clearly not being undertaken by a total of no more than twenty-one individuals. Many more people were involved in the activities of the estate, either as lay brethren, tied workers or tenants. The large size of the church at the Abbey gives some indication of the number of people involved (Elgar 1926, Smith 1993).

As with other Premonstratensian Abbeys, the precise range and scale of activities undertaken, along with questions of where all these sites were and where all the people lived, has been largely unexplored at Beauchief. In fact, we cannot even satisfactorily demonstrate the position and size of the Abbey Precinct, let alone provide details for most of the activities within the estate. While documentary research will provide a background to these questions it is only archaeological fieldwork that will provide substantial detail.

As Beauchief can be argued to have much that is typical of a Premonstratensian Abbey (size, apparent diversity of economy) detailed work here may allow us to understand more fully the functioning of such an estate, its relationships with non-monastic communities nearby, the diversity of its economy and the resultant impact on the landscape. This will be a step along the way to illuminating this important aspect of the medieval economy and to placing the smaller monastic houses in their deserved role as influences on the medieval (and ultimately modern-day) landscape of England.

That Beauchief appears typical of the smaller communities is demonstrable in a number of ways. For example, when the known estates of Beauchief are plotted to determine their height above sea level it is clear that much of the estate lies above 175 metres above sea level. Very little of the land lay below 75 metres above sea level. The significance of this distribution is made clear when one compares this distribution with that of the holdings of the benefactors of the abbey. It could be that the preponderance of highland in the Beauchief estate is a product of the benefactors of the Abbey actually giving away their poorer land in return for spiritual salvation. In fact, this appears not to be the case. The majority of the benefactors of Beauchief were relatively local landowners and if one plots the location of their lands then one finds a distribution very similar to the distribution of the Beauchief estate. It appears that the benefactors gave Beauchief Abbey land that was representative of their own estates, rather than merely offloading the least valuable land. This characteristic of the Beauchief estate depends on the fact that the benefactors of the estate were local landowners. Documentary records tell us that this was frequently the case with the smaller houses, Premonstratensian or otherwise.

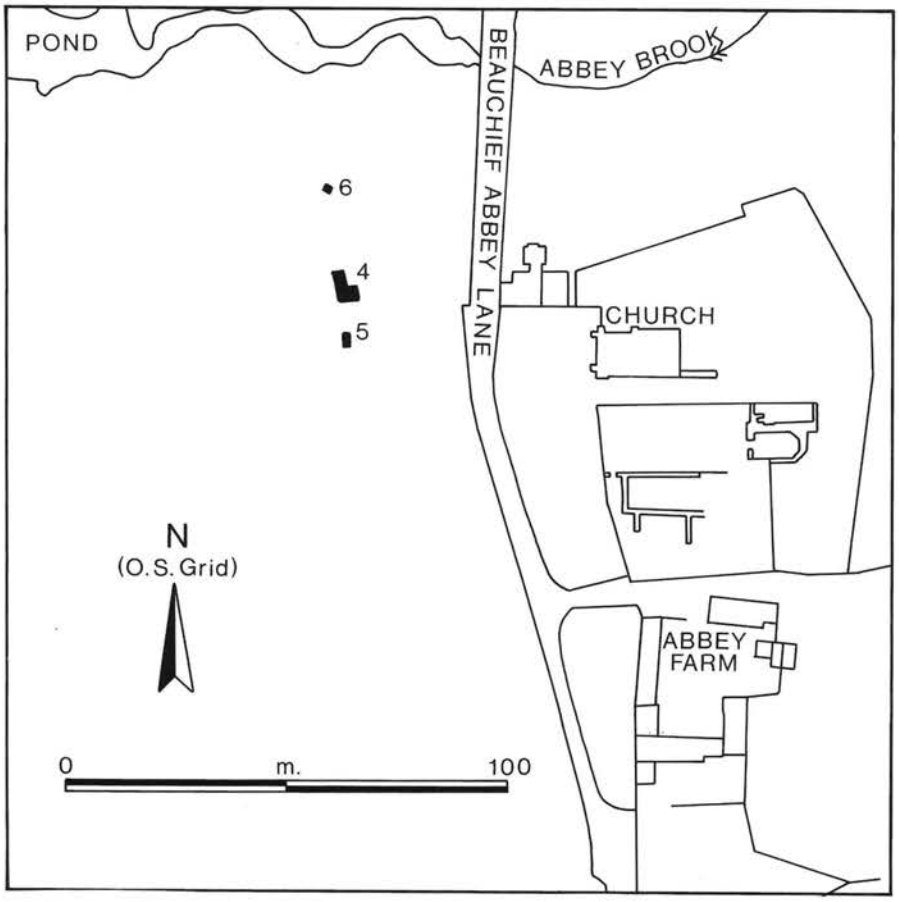
At the heart of a monastic estate lay the church and surrounding buildings within an enclosed area known as the Abbey precinct. This precinct included the monastic buildings, with the living quarters for the monks themselves, guest quarters, stabling and so on, along with the home farm and an area of intensively managed park, which may have included vegetable and herb gardens, orchards and some fields. At Beauchief we can see many (but by no means all) of the claustral buildings. However, we appear to have no direct evidence of where the majority of the precinct was located. In fact, as a wealth of archaeological features survive at Beauchief, both at and below ground level, it is obvious that a considerable body of evidence must exist to allow us to investigate this inner core of the estate. As has been discussed before (Merrony 1994) the conventional position for the precinct is open to some debate



■ FIGURE 1. DOT DENSITY PLOT OF AREA 1

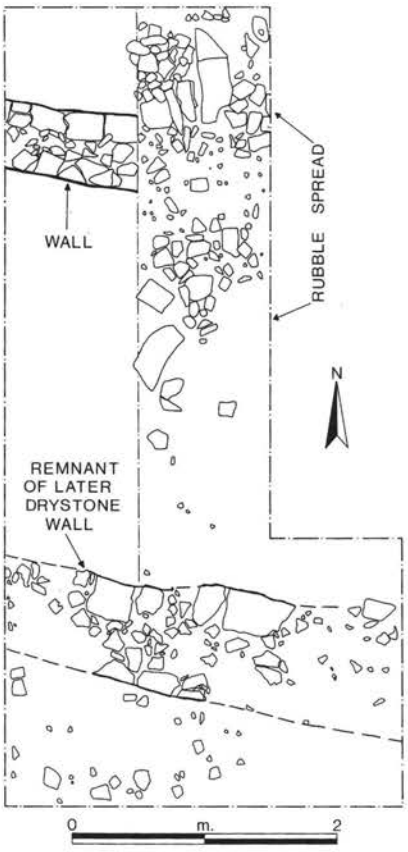
and work has continued towards better defining the extent of buildings and the possible limits of the precinct. The definition of the precinct area will help us to understand the layout of the main body of the estate as a whole.

In November 1994 a further area was covered by a resistivity survey. This was the area to the north-east of the church, approximately between the area surveyed behind the Chapter House (Merrony 1994) and the lower pond. The results of this survey are shown in Figure 1. When one combines these results with that of the previous year's surveys it is clear that there is a strong suggestion of a building extending out towards the lower pond. It is also apparent that a high resistance feature is running approximately north-south across the survey area, through, or perhaps under, the possible building. It was suggested at the time of survey that this feature may be the culvert which brought water down from the vicinity of the top pond through the site and flushed the reredorter (monastic latrine block). It was also suggested that the building extending into this area may well be the reredorter. This position is very close to the location for this building suggested by Smith (1993). Subsequently a culvert-like stone structure has been observed in the stream bank just below the lower pond dam. This seems rather too fortuitous a discovery to be true, but the large size of the construction does seem to suggest that it is related to the Abbey and not a drain or similar feature from a later building. This survey has located a key area for future excavation, as the location of the culvert and the reredorter would allow us to largely complete the arrangement of buildings at the 'rear' of the main complex.



■ FIGURE 2. LOCATION OF TRENCHES, BEAUCHIEF ABBEY

In addition to this, an exploratory investigation took place to the west of the church entrance, on the Abbey Green, a terrace of land that may have lain within the precinct area (Merrony 1994). Figure 2 shows the

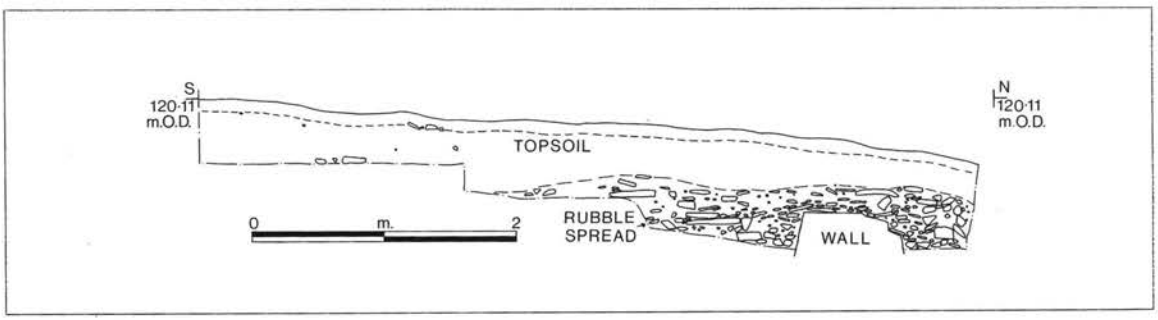


■ FIGURE 3. TRENCH 4 PLAN, FEATURES MENTIONED IN THE TEXT

position of three trenches that were excavated in August 1995. One of the trenches was located at the base of the slope at the edge of the terrace, on the flat ground at the level of the Abbey Brook. This trench revealed two drains, one a ceramic pipe and one stone-lined. It seems unlikely that either of these features are earlier than eighteenth century, although no direct dating evidence was recovered.

The most southerly of the trenches was excavated across a break in slope on the terrace area. This trench revealed no buried archaeological deposits and, at present, we must assume that the features visible on the surface at this point are of recent origin, perhaps the result of the surface stripping of deposits for an unknown purpose. It is hoped that further work will be conducted on these features, including geophysical survey and excavation.

The largest trench was situated close to the northern margin of the terrace. Removal of the turf and topsoil revealed the remnant of a drystone wall running approximately east-west. This survived only as a single course, the rest having been robbed out at some time (Figure 3). This wall was underlain by a topsoil-like deposit that contained 18th and 19th century A.D. artefactual material. Underlying this layer was a rubble spread containing stone roofing shingles, pieces of worked building stone (similar to that used in the church), an iron hammer and pottery that dated to between the 13th and 15th centuries A.D. This evidence strongly suggested that the rubble spread was deposited either late in the Abbey's life or, perhaps, at about the time of the Dissolution in the early 16th century. The exact date at the moment is unimportant, since the significance of this deposit lies in knowing that it has a medieval origin and that it seals a wall. Underlying this rubble spread was a very good quality stone wall with both of its faces well finished (Figures 3 and 4). The wall was truncated (the top was missing) and it ran east-west (towards the church). This wall appeared to be part of a medieval structure. We did not find the base of the wall, nor any relationship to a floor or yard structure, but it was so well finished that it would seem unlikely that this 'wall' was actually a foundation. The wall could be part of a building or perhaps part of a courtyard enclosure wall. Either way its presence strongly improves the case for extending the Abbey buildings and main courtyard across the Beauchief Abbey Lane and including this area within the Abbey precinct. The results of these and other excavations will be discussed in greater detail in next years volume of *Archaeology in South Yorkshire.*



■ FIGURE 4. EAST FACING SECTION, TRENCH 4

The work described above and last year (Merrony 1994) merely illustrates the potential for archaeological examination at Beauchief. There are many other aspects of the Abbey's estate that could be investigated, which when understood more fully could be used to illustrate more fully the lives of other smaller religious houses.

We have established from documentary sources that the economies of the smaller houses may be quite diverse. Beauchief Abbey offers us an opportunity to investigate not only the agricultural component of the landscape but also the industrial. This would seem a particularly appropriate aspect of this study as Beauchief Abbey lies within one of England's great industrial cities and must have played a role in its early development.

The industrial activity of the Abbey is likely to have taken advantage of resources all over the Abbey's holdings. As has been discussed elsewhere (Merrony 1994), the very entrance to the Abbey precinct may have been linked to an industrial process (milling). The construction of the causeway which dammed the Great Pool and carried a track over the Abbey Brook into the main abbey buildings has been linked with Sir William de Gringlei (Addy 1878). The purpose of the Great Pool may or may not have been linked to a mill or some other establishment, but the term used in the documentary evidence is 'causey'. This is a Norman-French word normally used to describe the metalled portion of a packhorse route built over boggy ground. Stock trails do not generally require metalling even over boggy ground. This may explain the existence of both the causeway and the apparent medieval holloway (trackway), some 60 metres to its west. The holloway should perhaps be seen as a stock road taking animals by the side of the Abbey precinct across a ford over the stream, while the metalled causeway brought more 'prestigious' traffic into the gate-house and the main courtyard in front of the Abbey buildings.

Regardless of whether or not the Great Pool drove a mill, we do know that Beauchief owned a number of mills, particularly along the Sheaf (Mott 1969). Some of these may have been leased, others may have been operated directly by the Abbey. There are hints in the documents as to what these mills were used for, but the full diversity of use is not clear. Although some may have been corn mills, other uses were clearly significant. Documents tell us that Abbey mills were being used for fulling buff (chamois) leather, and the Abbey cartulary records a 'mill and adjacent tannery' (Pegge 1801), although the position of this is unknown. By the time of the Dissolution two of the six mills recorded as being owned by the Abbey were operating the hammers and bellows of iron bloomeries. Documents also refer to leases of blocks of land within the Abbey bounds, excluding 'the smythees'. Other documents refer to the taking of ironstone, coal, other stone and minerals on land in Norton and Alfreton. Still further mentions are made of several tanneries, at least one of which is mentioned as being 'within the bounds of the Abbey'. This may mean that it was within or close to the precinct. As Steve Webster has outlined elsewhere in this volume, tanning was a malodorous business, and it might seem unlikely that this process was being undertaken very close to the main Abbey buildings. There are however other examples of possible tanneries within Abbey precincts, notably at Bolton Priory in Wharfedale. While the current study of the documentary evidence may reveal some further details with respect to these activities it is unlikely to ever give us the full complexity of the situation, nor will it give us firm locations for many of the activities. While the documents have given us a framework to base our work on, the detail awaits archaeological fieldwork.

In addition to the details of the industrial landscape, archaeological fieldwork may help us to understand more of the agricultural component of the

Abbey's estates. Beauchief Park contains a wealth of medieval earthwork features (including ridge and furrow and holloways) that remain largely unrecorded. The establishment of the pattern of this component of the landscape may well help us to understand the overall arrangement of the whole Abbey estate. Very little work has been done on the Abbey's farms or granges. On other monastic sites (for example Meaux in Humberside) detailed studies of the granges are revealing much new information on the economy, organisation and relationships of the community.

One should not overlook the value to the Abbey of other resources (including fish, woodland and charcoal burning) nor the significant position of the Abbey in relation to routeways. Beauchief Abbey commands one part of the valley of the river Sheaf and sits astride one of the main southerly routes out of the Sheffield area. This involvement with routeways along the Sheaf valley may have encouraged the Abbey to involve itself with long distance as well as local trade. This may have included the valuable trade in salt which was brought from Cheshire over the Pennines on a number pack horse routes going towards the markets of Sheffield, Rotherham and beyond.

While the documentary evidence gives us a broad picture of the diversity of activities and holdings of Beauchief Abbey, the 'fleshing out of these bones' is dependent on a long programme of archaeological fieldwork, integrated with close analysis of the documents. As recent fieldwork has demonstrated there is a surprising wealth of archaeological information to be recovered from the Abbey's holdings, both in Beauchief and from its granges. A detailed study of this Abbey, if the suggested potential of the archaeological remains is fulfilled, could give us a much more complete understanding of the social and economic relationships of the monastic and related lay communities, of the life of those communities and of the landscape which their actions helped to create. While we must look to information from other Premonstratensian Abbeys to help us understand the findings at Beauchief, the fieldwork carried out here may provide a wealth of information which will allow us to demonstrate the significance of smaller religious communities in the landscape of medieval England. For this work to succeed and realise its full potential there must indeed be a two-way traffic; information in from the broad background of the Order as a whole and, as our understanding of Beauchief improves, a feeding back of ideas and information from our local perspective into an understanding of the broader landscape of medieval England.

Acknowledgements

Thanks are due to Mr. D. Howgate and the other staff of the City of Sheffield Recreation Department for permission to undertake fieldwork and for much help during this period. The excavation work was undertaken by J. Dilcock, R. ONeill, R. Collins, A. Schofield, T. Staines, J. Brady and I. Baker, who all showed considerable good humour in spite of the difficult summer weather and the directors sense of humour. Local residents Neil Anderson and Peter Fielding provided much encouragement and information, including pointing out the presence of the culvert in the stream side below the lower pond. The geophysical work was undertaken by A. Katzoudi, M. Kolleti and A. Konstantinidou in November weather conditions that did not exactly match the climate of Greece that they were more used to working in. They also shouldered the difficulties of working at Beauchief with great patience and good humour.

R. Harte and C.J.N. Merrony

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THE SOUTH YORKSHIRE PLACENAME PROJECT

Place names are often a good guide to previous activity at a particular place. The many 'Bole Hills' for example, found in South Yorkshire are evidence of late Medieval iron working, the name deriving from Middle English. Earlier names can illustrate land ownership with many names dating to the Domesday Survey of 1086. The standard source of information are the county volumes of the English Place Name Society (EPNS), but these were originally published in the early 1960s and are now impossible to obtain. As the SYAS does not possess copies of these volumes, a quick and convenient reference source was required. This need has recently been fulfilled by a piece of work carried out by Patricia Wheeler as part of her Certificate of Archaeology course at Sheffield University. Using the West Riding and Derbyshire EPNS volumes she produced a guide to the names of every major settlement in South Yorkshire. The final report lists the modern place names in alphabetical order with the following information; first known date and source of the name, its meaning and derivation and the 1:10 000 OS map reference for the site.

Jim McNeil

CASTLE DIKE, LANGSETT: A RECORD AND RE-EVALUATION

The small enclosure known as Castle Dike lies on the top of Gilbert Hill on ground sloping gently down towards the north. The site is approximately 315 metres above sea level and, from its position on Brown Edge, a steep, south- facing scarp, overlooks the valley of the Little Don and the modern village of Langsett. It has been described as an Iron Age hillfort (Bramwell 1973) and is recorded as consisting of a bank and inner ditch enclosing approximately 0.4 hectares (1 acre). The site appears on the 1:2500 Ordnance Survey map represented as an extant ditch on the south side and then a dotted 'line of' feature around the rest of its circumference. When examined on the ground the reason for this is obvious. The majority of the site lies in a field that has clearly been ploughed, and here the

enclosure is only visible as a very faint dip along the line of the ditch. The southern margin of the enclosure lies on the other side of a drystone wall, close to Brown Edge, in an area of rough pasture. Here the ditch is a clearly visible feature.

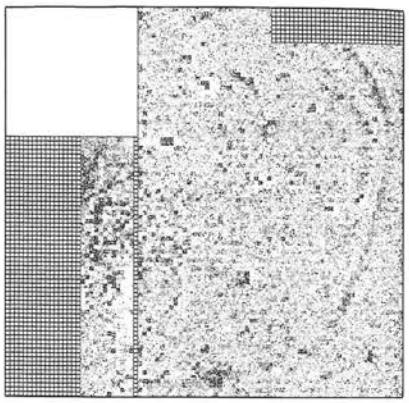
This survey was undertaken as part of a student project in the Department of Archaeology and Prehistory of the University of Sheffield. The intention was to provide a record of a site that was suffering plough damage, to check the Ordnance Survey's record and to see if any other features were visible in, or close to, the enclosure itself. The survey showed that the surviving features are not fully represented on the Ordnance Survey plan and the geophysical survey demonstrated that the site may be more complex than it appears on first inspection.

The topographic survey was conducted using a Zeiss RecElta 5 E.D.M. The survey was located with reference to the field boundaries that surround the site and a reference height was obtained from a cut Ordnance Survey benchmark on Gilbert Hill Lane. The major feature of the site (the enclosing bank and ditch) was readily visible as a shallow ditch on its southern margin in the area of rough pasture. There is a faint bank visible inside this ditch, and it was apparent during the survey that there may also have been a faint bank visible on the outside. At first this was assumed to be the remains of a counterscarp bank (a product of ditch maintenance during the occupation of the site) rather than a functioning part of the enclosure structure. When the results of the geophysical survey were obtained, however, this interpretation was challenged.

North of the drystone wall the enclosure is visible only as an extremely faint dip along the assumed line of the ditch. The field is improved pasture and is ploughed on a regular basis. As a consequence of this, it seems unlikely that the earthwork will remain visible on the surface for much longer. Archaeological deposits below ground in the interior of the enclosure are likely to be badly disturbed as the soil depth will be limited on this hilltop, which overlies Coal Measure Sandstones. The line of the ditch on both sides of the drystone wall was surveyed and is shown in Fig. 1. This generally confirmed the shape shown by the Ordnance Survey, but made the circuit more complete. Two hollows were also noted. One, approximately 3 metres across, was located near the enclosing ditch in the southern part of the enclosure. It was not possible to establish whether this hollow was a feature associated with the enclosure ditch or was a later disturbance. A larger sunken area (approximately 10 metres across) was visible to the north-west of the smaller feature. This hollow underlay the drystone wall and was visible on both sides. While it was not possible to arrive at a convincing interpretation of this feature or relate it to the enclosure ditch, it was clear that it predated the drystone wall.

In an attempt to overcome the limitation of the lack of visible features, a geophysical survey was conducted over the enclosure. A magnetometer survey (using a Geoscan FM36 flux-gate gradiometer) was conducted over the whole of the area while a resistivity survey (using a Geoscan RM4 earth resistance meter) was completed across a transect running approximately east - west across the enclosure north of the drystone wall. The resistivity survey proved unsuccessful, perhaps as a result of the very high levels of soil moisture that were present at the time of the survey. However, the magnetometer survey provided some very interesting results. A dot density plot of these results is shown in Figure 1.

The most obvious feature of the magnetometer plot is the line of the enclosure ditch itself. In fact, it would be more accurate to say 'themselves', as the enclosure appears to be defined by a double bank and ditch. When



■ FIGURE 1. CASTLE DIKE, MAGNETOMETER SURVEY

this result is combined with the observation of the faint outer bank, south of the drystone wall, the two conclusions may be drawn. Firstly, the enclosure consists of a double bank and ditch and not a single. Secondly, the area south of the drystone wall, while apparently much better preserved, is also very badly eroded. It is possible that we are seeing two banks and ditches that were not actually in use at the same time. If a second bank and ditch was a recutting or rebuilding of the enclosing defences then it would be less surprising that the surface features show only a single ditch. However, the realignment of the entire ditch and bank enclosing the site during a rebuild would seem unlikely. It is perhaps more likely that the second bank was used to fill one of the ditches at some time during the site's occupation. This would account for the lack of surface visibility of the second bank and ditch. Excavation is required to resolve this argument.

■ CASTLE DIKE ENCLOSURE, LANGSETT

A number of smaller anomalies were visible in the magnetometer survey. Anomalies H, J, L, M, N, P Q and R exhibit the characteristics consistent with stray finds of metal near the surface. These are most likely to be modern in origin and related to the agricultural use of the area. Anomaly K has a crescent shape and the appearance of being the last remnant of a circular feature perhaps 8 metres in diameter. If it was a circular feature then it could perhaps be the remains of a structure. Hut platforms on similar sites elsewhere range between 4.5 and 9.0 metres in diameter (Forde-Johnson 1976). The linear anomaly S is consistent with a modern feature such as an agricultural land drain.

The results from this survey have defined a small defended enclosure (or hillfort) with perhaps two enclosing banks and ditches and some internal features. The entrance to the enclosure was not located. The survey also established that the enclosure has suffered, and continues to suffer, from a very high level of erosion, particularly from ploughing, but also from the grazing of animals near the scarp edge. If any significant part

of this site is to remain visible at ground level in the future, then clear changes in land use will have to be instigated. If it is accepted that the site has been severely damaged, and that this damage is likely to continue, then small scale excavation work should be considered with the aim of defining the nature of the site and the likely preservation of buried deposits.

C.J.N. Merrony, K. Scherewode, M. Stone and N. Berry

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Thanks are due to the farmer, Mr. Howe, for allowing access to the site. Also to Roger Philips, Steve Barker, Alice Pyper and Richard Holbrey for helping with the geophysical survey in conditions that made us realise why living in a small enclosure on the top of a exposed hill on the edge of the Pennines is not a common choice today.

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THE SIXTH SOUTH YORKSHIRE ARCHAEOLOGY DAY

The sixth annual South Yorkshire Archaeology Day took place on the 26th November 1994. As in previous years it was organised in conjunction with the Department of Continuing Education of the University of Sheffield.

Much of the day was taken up with reports on specific fieldwork projects underway in the county, but it began with a description of the way in which many of those projects start, through the planning process. John Little outlined the way in which PPG 16 (discussed earlier in this volume) has affected the nature of archaeology in South Yorkshire. Later in the day John Little also presented a summary of some of the projects undertaken by the SYAFRU during the year.

Steve Webster and Jane Lilley of the SYAFRU and York Archaeological Trust respectively described the major excavations in Church Walk and Low Fishergate, Doncaster undertaken during 1993 and 1994.

Peter Gordon-Smith of English Heritage rounded off the morning with a description of the major developments recently completed at Conisbrough Castle aimed at improving its potential as a tourist attraction.

Post-excavation research on the finds from an archaeological excavation is a vital part of the process, often radically changing our interpretations of the site and the activities which occurred on it. Such work is not always given the prominence which it deserves. Mike Parker Pearson of the Department of Archaeology and Prehistory, Sheffield University, tried to redress this with a talk on the post-excavation work associated with the excavations at Sutton Common.

Bellpits are often the only remains of early mineral extraction and Graham Hague of Sheffield Trades Historical Society presented the results of recent research in this fascinating area.

John Hislop of Barnsley discussed his research on the historic parks in the Barnsley district; Wortley Hall, Cusworth Park and Cannon Hall, illustrating the reasons why they have been listed by English Heritage. The afternoon was suitably rounded off with a tribute to the late Freddie Preston by Professor John Collis

of Sheffield University. Freddie Preston was an active and enthusiastic archaeologist. He was the principal author and driving force behind the Hunter Archaeological Index and every archaeologist working in South Yorkshire remains deeply in his debt.

The day was a great success and the Department of Continuing Education and the SYAS would like to thank those who helped with the organisation, chaired and introduced the sessions.

Jim McNeil

THE SOUTH YORKSHIRE ARCHAEOLOGY ADVISORY AND LIAISON PANEL

Individuals from a variety of different archaeological and conservation backgrounds sit on the South Yorkshire Archaeology Advisory and Liaison Panel. Members represent local museums, building conservation interests and the amateur archaeological sector as well as the Archaeology Service itself. The panel reports to the elected members of the South Yorkshire Joint Archaeology Committee on a quarterly basis.
Advisory and Liaison Panel meetings provide a forum for discussion of matters which are of common interest. Officers of the SYAS, the SYAFRU also present reports at each meeting. During the financial year 1994 - 1995 areas of discussion included the problems of archaeological theft, continued work on the wetland site of Sutton Common and the preparation of a display on the impact of treasure hunting and the use of metal detectors on the region's archaeological resource.

John Turner, committee clerk for the South Yorkshire Joint Archaeology Committee took over from myself as secretary and members of the panel would like to thank John for adding this task to his current workload. Thanks are also offered to Denis Ashurst for his continued excellent work as chairman and to our parent committee for their support

S.P. Whiteley

JOINT COMMITTEE FOR THE SOUTH YORKSHIRE ARCHAEOLOGY SERVICE

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J.H. Little, County Archaeologist

M.J. Francis, Sites and Monuments Record Officer

S.P. Whiteley, Acting Sites and Monuments Record Officer (April - October 1994, February 1994 to present), Sites and Monuments Records Assistant (October 1994 - Jan. 1995).

T. Owen, Clerical Assisstant

The following staff have been employed by SYAFRU during 1994 -1995

T. Allen
S. Atkinson
H. Benge
S. Boulter
M. Brennand
G. Bruce
A. Burgess
A.M. Chadwick
C. Coleman
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T. Dove
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C. Haggerty
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J. Redhead
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K. Speight

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B. Jones
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CLIENTS

The South Yorkshire Archaeology Field and Research Unit undertook evaluations, surveys, excavations and desktop studies on behalf of the following clients

Doncaster Metropolitan Borough Council, Borough Engineers Department
Doncaster Metropolitan Borough Council, Directorate of Planning and Design Services
Doncaster Metropolitan Borough Council, Economic Development Unit
Mr. M. Gough
Haslam Homes Ltd.
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Rotherham Metropolitan Borough Council
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English Heritage
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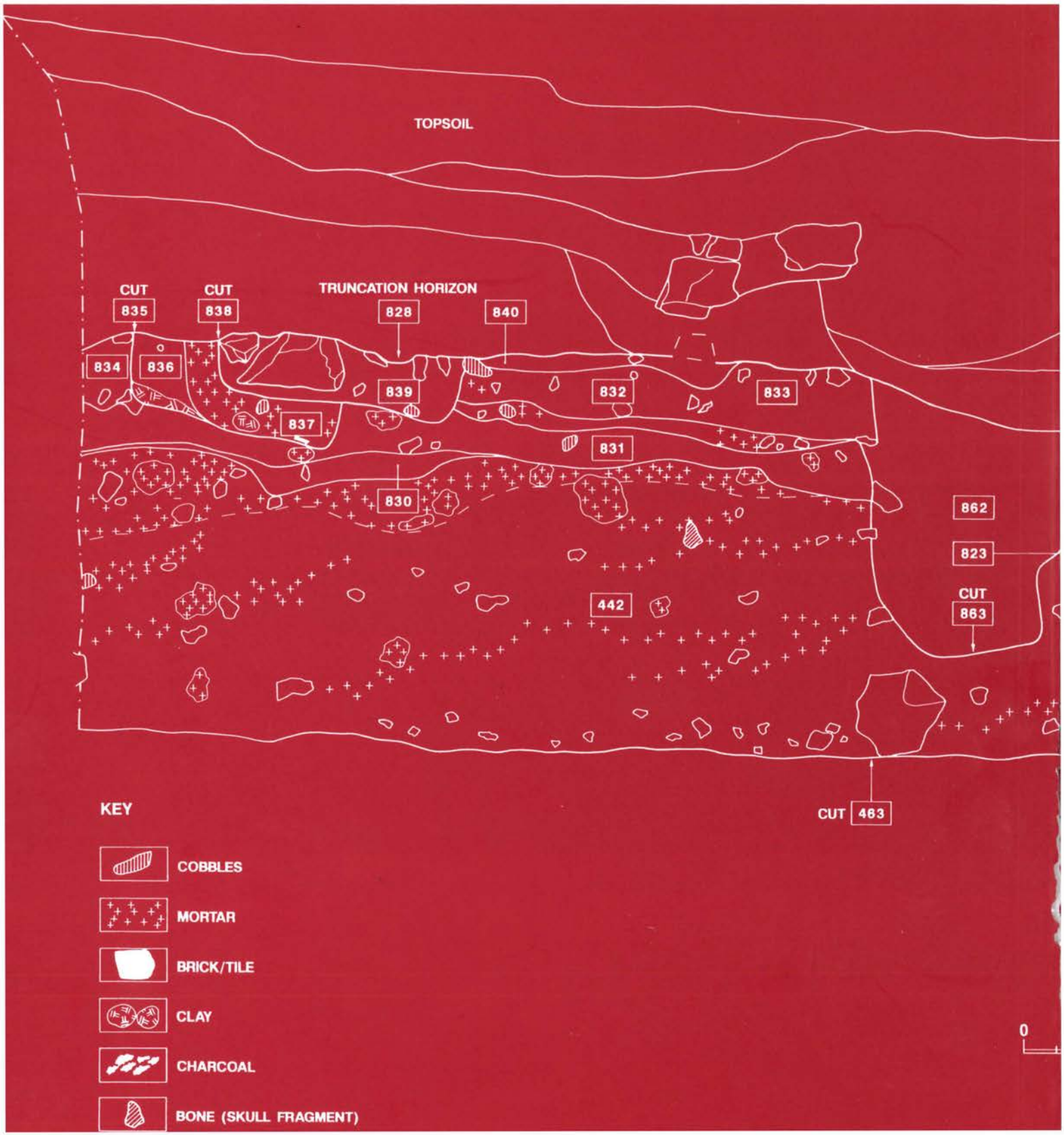
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CUT
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CUT
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TRUNCATION HORIZON
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862
823
CUT
863
442
CUT
463
KEY
COBBLES
MORTAR
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CHARCOAL
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