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English Heritage Project No. ALSF – 4767

Identification and Quantification of Projects Arising From Aggregates Extraction: Pilot Study

Derbyshire, Nottinghamshire and Oxfordshire

ARCUS project 1069.1(1)
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EXECUTIVE SUMMARY

A pilot study has been carried out as part of an ALSF commission to assemble a database of known archaeological fieldwork projects on hard and soft aggregates extraction sites in Derbyshire, Nottinghamshire and Oxfordshire. The aim of the project was to identify those sites with incomplete or inadequate levels of dissemination, and to assess the potential of these sites. The main findings of the project are as follows:

- *258 projects were recorded in the database, of which 105 (41%) were considered to have incomplete or inappropriate levels of dissemination.*
- *Soft aggregates extraction sites (sand and gravel) account for 85% of the projects in the database*
- *The vast majority (88%) of projects regarded as incompletely or inappropriately disseminated were carried out since PPG16/15 (1990)*
- *A significant majority of these post-PPG16 sites are associated with long-running aggregates extraction sites with multiple fieldwork interventions, regarded as 'active' by the relevant archaeological organisations, despite fieldwork running back to the early 1990s*
- *79% of sites with incomplete or inappropriate levels of dissemination are of regional or national significance. The potential of these sites relates largely to the prehistoric period.*
- *A key recommendation of the project is that synthetic monograph/major journal publication is achieved for multi-intervention aggregates sites active over long periods*

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1 INTRODUCTION AND BACKGROUND

This document presents the results of a desk-based pilot study to identify and quantify inactive past archaeological rescue projects arising from hard and soft aggregates extraction which currently have incomplete or inappropriately low levels of dissemination. The project was funded by the Aggregates Levy Sustainability Fund (ALSF) administered by English Heritage.

1.1 Background

The extraction of hard and soft aggregates has been responsible for many of the rural archaeological projects which have taken place in England since 1900. These projects have ranged from rescue excavation or monitoring of part of a single feature to large scale excavations of multi-period landscapes of over 5ha taking place over several years. They have had a wide range of funding sources, including the public purse (grants from English Heritage and its predecessors, Manpower Services Commission, Local Authorities, etc), private individuals, local and national archaeological societies, and the aggregates industry itself. This funding represents a considerable investment in the archaeology of England and the understanding of our human past.

It has long been recognised that although considerable sums of money have been invested in archaeological fieldwork, especially over the last two decades following the introduction of PPG 16 and the principle of developer funding, there has often been inadequate provision for the analysis and dissemination stages of these projects. In particular, the fragmented nature of long-term field projects has led to a considerable backlog in the publication of results, with several units often having worked on the same quarries. There are a considerable number of unfinished archaeological projects ranging from those of purely local interest to those of international significance. It is likely that in some cases the currently inaccessible information could transform the understanding of our past and assist the curation of the Historic Environment particularly within aggregate areas.

English Heritage, as part of a number of initiatives to quantify the state of the Historic Environment, funded this pilot study to quantify the current situation regarding rescue projects with incomplete or inadequate dissemination within three counties with a long history of aggregate extraction, with a view to forming a strategy to unlock their potential, and to assessing an effective methodology for carrying out the project for the entire country. The project seeks *only* to quantify the current situation with regard to projects arising from soft and hard aggregates extraction.

1.2 The pilot study area

In order to sample a range of hard (crushed rock) and soft (sand and gravel) aggregate producing areas and a range of archaeological landscapes, the study area for the projects includes all terrestrial aggregate-producing landscapes within the counties of Derbyshire, Nottinghamshire and

Oxfordshire. This included the highly productive Trent and Thames Valley sand and gravel areas, and the limestone crushed-rock industry particularly significant in Derbyshire. Projects to be considered include all kinds of archaeological fieldwork relating to both the buried and built historic environment carried out in association with and/or in preparation for aggregates extraction from 1900 to the present day.

1.3 Archive deposition

The data gathered as a result of this project will be archived in the form of a database transferred in its entirety to English Heritage (Historic Environment Enabling Programme and the National Monuments Record) and will be mounted with the Archaeological Data Services (ADS) as a publicly accessible dataset.

In addition, the illustrated Project Report will be submitted to English Heritage in bound format, and a pdf version of the report complete with illustrations and appendices will be compiled for digital dissemination via ADS and the English Heritage website.

2 AIMS AND OBJECTIVES

2.1 Aims

The overarching aim of the project has been to identify and quantify inactive past excavation projects that relate to soft and hard aggregates extraction, which currently have incomplete and inappropriately low levels of archive completion, assessment, analysis and/or dissemination, with a view to forming a strategy to disseminate the information currently inaccessible within this corpus.

2.2 Objectives

The more specific objectives of the project were:

- to develop an appropriate database of Historic Environment interventions associated with aggregate extraction from 1900 to the present;
- to allow projects that are currently inactive and are incomplete or have had inappropriately low levels of archive completion, assessment, analysis and/or dissemination to be identified;
- to develop a rapid methodology to assess existing project outcomes of inactive or incomplete projects to determine whether their level of work and/or dissemination is appropriate;
- where levels of intervention and/or dissemination are unacceptably low to propose an appropriate level of further intervention/dissemination;
- to analyse the data collected to identify trends, significant omissions,

possible future research (including the potential for cross-project synthetic research), to aid English Heritage in formulating a strategy to address incomplete archive completion, assessment, analysis and/or dissemination for Historic Environment projects associated with aggregate areas;

- to review the project methodology and data structure and make recommendations that might lead to improvements in the project methodology and/or project outcomes, in order to inform future projects of this type;
- to report on the findings of the project.

3 METHODOLOGY AND SOURCES

3.1 Research methodology

The project comprised a rapid desk-based assessment of existing information only, and therefore excluded fieldwork and site visits to assess primary archives. The assessment included locating projects through the review of published articles and notes in local journals, examination of publicly available databases of archaeological projects, consultation of county Sites and Monuments Records (SMRs), and consultation with county museum curators and archaeological units working in the areas.

Basic locational data for aggregates extraction in each county was gained from the British Geological Society's (BGS) *Directory of Mines and Quarries*, current Local Mineral Plans, and 1:50,000 geological maps. The general locations of known projects are shown in **Appendix 1**. The plotting of quarry sites and known projects on a GIS database has not been part of the project remit.

Following the initial collation of data, consultations were carried out to verify the data and to address omissions identified during the previous phase of work. The consultations were carried out by telephone and e-mail, and were undertaken to:

- determine the current status of outstanding projects;
- to determine the potential of projects for further work and/or dissemination;
- to identify previously unrecorded projects.

Due to the nature of the assessment, there are unavoidable gaps in the information available. These have been flagged for later consideration.

3.2 Sources consulted

Information sources consulted for the assessment comprised:

Existing datasets:

Derbyshire Sites and Monuments Record;

Nottinghamshire Sites and Monuments Record;

Oxfordshire Sites and Monuments Record;

Journal of the Derbyshire Archaeological Society (DAJ);

Transactions of the Thoroton Society of Nottinghamshire (TTS);

Oxoniensia;

Antiquity;

Antiquaries' Journal;

East Midlands Archaeological Bulletin;

South Midlands Archaeological Bulletin;

Archaeology after PPG16: *Archaeological Investigations in England 1990-1999* (Darvill and Russell 2002);

Trent Valley Landscapes (Knight and Howard 2004);

Rescue Excavation 1938 to 1972 (Butcher and Garwood 1994);

Archaeological Investigations Project (AIP);

English Heritage Historic Environment Enabling Programme datasets;

Trent Valley GeoArchaeology Bibliographic Database.

Follow-up consultations:

Peak District National Park Authority;

Ashmolean Museum;

Bassetlaw Museum, Retford;

Derby Museum and Art Gallery;

Newark Museum;

Nottingham City Museum;

Oxfordshire County Museums Service (Woodstock and Standlake);

ARCUS;

Birmingham Archaeology (BUFAU);

CgMs (formerly John Samuels Archaeological Consultancy);

Lindsey Archaeological Services;

Northern Archaeological Associates (NAA);

Oxford Archaeology (OA);

Thames Valley Archaeological Services (TVAS);

Trent and Peak Archaeological Unit (T&PAU);

Wessex Archaeology.

3.3 Methodology for assessing levels of project completeness

Fieldwork projects considered during the project included all kinds of archaeological fieldwork (geophysics, evaluation, fieldwalking, building recording, etc) associated with both the buried and built historic environment, carried out in association with and/or in preparation for aggregates extraction from 1900 to the present day. Fieldwork carried out for other kinds of development is excluded from the brief.

The tag of **incomplete or inappropriate** archive completion, assessment, analysis and/ or dissemination, is intended to:

- flag up the need to consider the project(s) within any strategy devised by English Heritage to improve the completion of the work and dissemination of Historic Environment information to an appropriate level and to the widest possible audience;
- help ensure that all stakeholders involved in the planning process have easy access to all information derived from fieldwork within the Historic Environment with a view to enabling informed decisions to be made regarding the management and regulation of heritage assets.

Incomplete archive completion, assessment, analysis and/or dissemination is typically where a project has stalled or been terminated before its results have been made available to the various constituencies, both public and professional, that make up the Historic Environment and development control sectors.

It is recognised that projects that produced only negative results may be regarded as complete providing they have a suitable SMR or HER entry. However, other projects which are disseminated only as interim note(s) or where SMR entry has not taken place are, for the purposes of this project, regarded as incomplete.

Inappropriate archive completion, assessment, analysis and/or dissemination, for the purposes of this project, is where it is believed that further work on the project archive and/or further dissemination of the existing results of a project may be desirable. This could include cases where a project may benefit from wider circulation of grey literature reports and/or further formal publication or where there is potential for popular presentation of the outcomes.

Appropriate levels of dissemination, for the purposes of this project, are deemed to have been reached when:

- the data retrieved from any fieldwork is publicly accessible;
- the results have been disseminated and are publicly accessible to a level commensurate with the significance of the results; and
- the archive has been deposited as appropriate.

For projects completed after 1991 this is guided by a MAP2 assessment if it exists. For projects undertaken prior to this date, or those without MAP2 assessments, professional judgement will be used about the appropriateness of work and dissemination undertaken.

As a guide, an **appropriately completed and disseminated project** should have as a minimum:

- a publicly accessible archive;
- a completed SMR/HER entry;
- a publicly accessible report written to the appropriate level in digital and/or hard copy format, summarising and interpreting the date.

A limited print run grey matter report available only through the SMR/HER or originating archaeological unit is regarded as inappropriate dissemination. This is because there are examples where work carried out in the last 10 years and reported on is effectively unavailable because the limited copies of the reports have been lost or are no longer available from the originating unit.

In addition, a final report may be deemed inappropriate where it is believed that it:

- does not cover (without good reason) all elements of the archive;
- is too summary in form;
- where the data covered would benefit from further analysis.

This judgement is by definition subjective, and will be based on an understanding of the level of knowledge at the time the report was written; i.e. a report published in 1973 will be judged against the standards of the time and not against current practice or knowledge.

Where it is unclear to what level work and/or dissemination has taken place a project is regarded as inappropriately disseminated. This is designed to flag up the need for further work at a later date, outside the scope of this brief, to determine the actual status of the project in question.

During data collection, it was decided to include projects regarded as **active** by unit managers within the detailed consideration of the study. The reason for this decision was that a large number of elements of fieldwork dating back as far as PPG16 were awaiting full synthetic publication due to ongoing or expected fieldwork in major aggregates extraction sites. This consideration is discussed further below.

4 SOFTWARE AND STRUCTURE OF DATABASE

The data is presented as a database file (.mdb) in Microsoft Access 2002 format. Each known archaeological intervention is presented as a single record. Where multiple interventions have taken place over time within a single quarry, these are presented as multiple records.

Each record contains 32 fields, as follows.

1. ID (AutoNumber): a unique record number.

2. Name of project (free text): an individual project name, where this is known. Not necessarily the same as the quarry name (e.g. Fleak Close, recorded within Swarkestone Quarry).

3. Region (glossary): English Heritage regions. Drop-down selection from the following:

North East
North West
Yorkshire
West Midlands
East Midlands
East of England
South West
South East

4. County (glossary): Geographical counties, not unitary authority names. Currently constrained for pilot project to

Derbyshire
Nottinghamshire
Oxfordshire

5. Valley system (glossary): Currently constrained for pilot project to

Thames
Trent
N/A (used e.g. for non-valley limestone extraction)

6. Name(s) of quarry(ies) (free text): It has not been possible within the terms of the project to conduct a full historical review of changing quarry names and ownerships. For each quarry, therefore, a single quarry name has been adopted within this field, to ensure consistency, e.g. 'Stanton Harcourt' is used in place of 'Vicarage Field', 'Vicarage Pit', 'Beard Mill' etc.

7. Aggregate deposit type (glossary):

Soft
Hard
Unknown

8. Grid reference easting (world co-ordinates) (number): constrained to a six-figure integer.

9. Grid reference northing (world co-ordinates) (number): constrained to a six-figure integer

10. HER/SMR location (glossary): Location of HER record relating to the site. Currently constrained for pilot project to:

Derbyshire
Peak District National Parks Authority
Oxfordshire
Nottinghamshire
City of Nottingham
None

11. HER/SMR number (free text): site, event or report number, blank if HER record was not located

12. Scheduled Monument number (free text): if applicable

13. Listed building, battlefield or garden numbers (free text): if applicable

14. Fieldwork required by regulatory conditions (glossary)

Scheduled monument consent
Planning condition
Not required
Unknown

15. Funding body (glossary)

Department of Environment (DoE)
Ministry of Works (MoW)
Local authority
Manpower Services
Aggregates Industry
Individual
Other
Unknown

16. Year or year range of intervention (free text).

17. Size of project (glossary). This was used as a broad assessment of the relative scope of the project, as judged from the available documentation. The following terms were used:

Small: Minor and/or non-intrusive works, e.g. test-pitting, a small-scale watching brief or geophysical survey

Medium: Intervention involving a significant excavation element, such as evaluation trenching, or more extensive landscape survey work

Large: A large-scale set-piece excavation, or multi-stranded investigations over a larger area

Very large: Long term and spatially extensive investigations including possibly numerous large-scale excavations and/or extensive landscape survey/environmental sampling.

18. Nature of fieldwork (primary) (glossary). An assessment of the primary type of fieldwork undertaken.

Survey/geophysics

Fieldwalking
Evaluation
Excavation (used for pre-PPG16 rescue excavation in addition to post-PPG 16 mitigations)
Building recording
Environmental
Finds
Watching brief
Unknown

19. Nature of fieldwork (secondary) (glossary). As the previous field, to allow for secondary fieldwork elements, for example an excavation stemming from discoveries during a watching brief.

20. Period (glossary). Terms were drawn from the RCHME Archaeological Periods List. It was not considered necessary for the purposes of this database to distinguish sub-periods such as Early, Middle and Late Iron Age, so these terms were removed to produce a shorter list of 15 terms.

Palaeolithic
Mesolithic
Neolithic
Early prehistoric
Prehistoric or Roman
Later prehistoric
Bronze Age
Iron Age
Roman
Early medieval
Medieval
Post-medieval
Modern
Uncertain
Multi-period

21. Site type class (glossary). NMR Monument Class descriptors were used, as follows:

Agriculture and subsistence
Civil
Commemorative
Commercial
Defence
Domestic
Gardens and parks
Industrial
Maritime
Object
Recreation
Religious, ritual or funerary
Transport

Unassigned
Water and drainage
Multiple

22. Nature of discoveries (free text). A summary of the project results, where available, including the archaeological organisation or individual responsible, where known. The following abbreviations were used for archaeological organisations:

ARCUS	Archaeological Research and Consultancy, University of Sheffield
ASWYAS	Archaeological Services: West Yorkshire Archaeology Service
BUFAU	Birmingham University Field Archaeology Unit and Birmingham Archaeology
CAT	Cotswold Archaeological Trust
NAA	Northern Archaeological Associates
NCM	Nottingham City Museum
OAU	Oxford Archaeology Unit and Oxford Archaeology
OUAS	Oxford University Archaeology Society
TPAT	Trent and Peak Archaeological Trust/Unit
TVARC	Trent Valley Archaeological Research Committee
TVAS	Thames Valley Archaeological Services
ULAS	University of Leicester Archaeological Services
UMAU	University of Manchester Archaeological Unit

23. Current project status (glossary). Older projects were considered complete by definition. The status of more recent projects was determined where possible in consultation with the organisations responsible.

Active	Multi-stage projects where more fieldwork is expected, or projects where post-excavation work is ongoing
Stalled	Multi-stage projects where more fieldwork is expected, but a significant time-lapse has occurred
Complete	Completion of all anticipated fieldwork, with post-excavation complete and a client report submitted
Not known	

24. Most recent project stage (glossary).MAP2 stages were used.

Evaluation
Excavation
Site archive completion
Assessment
Analysis
Dissemination
Archive deposition

25. Archive location known/unknown (glossary)

Known
Unknown

26. Archive details (free text). Location and accession numbers, where available. Includes developer reports where submitted to SMR/HER.

27. Published references (free text). The following abbreviations of journal titles were used:

AJ	Antiquaries' Journal
EMAB	CBA East Midlands Archaeological Bulletin
DAJ	Derbyshire Archaeological Journal
JRS	Journal of Roman Studies
PPS	Proceedings of the Prehistoric Society
SMA	CBA South Midlands Archaeology
TTS	Transactions of the Thoroton Society of Nottinghamshire

28. Significance of data retrieved from project (glossary).

Local:	Negative or limited archaeological evidence, meriting a grey literature report or a brief note in a local journal
Regional:	Significant archaeological evidence, meriting a longer report in a local journal
National:	An major archaeological site, meriting full publication in a national journal or in monograph form
International:	Term not used.

In cases where an organisation has carried out a number of interventions over time within a single quarry, the assessment of importance has been made on the evidence in toto, rather than on a single season's work.

29. Dissemination complete (glossary). Is dissemination of the project complete and of an appropriate level?

Yes
No
Not known

This assessment was based on the *significance of data retrieved from project* attribute described above, as follows:

Projects with *local* significance should have a grey literature report available in a local SMR/HER if results were negative or negligible, and a brief local journal note in addition, if small-scale archaeological evidence was recovered.

Projects with *regional* significance should have a full treatment in a local/county journal.

Projects with *national* significance should have full publication in a national journal, or full monograph publication.

30. Suggested level of dissemination (glossary). Only completed if dissemination was regarded as incomplete or inappropriate.

Assessment
Analysis
Publication

31. Proposed type of work and dissemination (glossary).

Completion of archive
Full assessment and appropriate analysis
Analysis of assessed material
Deposition of archive
Brief journal note
Short journal article
Monograph or major journal article
Wider dissemination of grey literature report
Popular publication/dissemination

32. Associated projects (free text)

33. Period 1-4 (number): period allocation for the project

1 = Period 1 (1900-1945)
2 = Period 2 (1946-1971)
3 = Period 3 (1972-1990)
4 = Period 4 (1991-present)

The allocation was made on the recorded start date of the project, e.g. a project with year range 1942-1955 would be assigned to Period 1.

5 A BRIEF OVERVIEW OF THE DATA

5.1 Initial quantification

The database contains 258 records, relating to archaeological interventions on 83 separate quarries or areas of quarrying (**Appendix 2**), ranging from the 1890s to 2006. Only those projects considered to represent primary archaeological fieldwork were included. Reports of isolated artefact finds from quarries were therefore omitted, unless they occurred alongside recording of archaeological features, or as part of a wider artefact collection strategy. Desk-based assessment work, occurring in the post PPG 16 environment, was also omitted.

While modern quarries tend to be single bounded entities owned by a single company, the historical situation is more complex, with many smaller pits in different ownerships operating within the same broad area. For example, in the early twentieth century a number of separate small quarries were operating gravel pits in the area north of Dorchester-on-Thames, Oxfordshire (Amey's Pit, Allen's Pit, Mount Farm etc.). For the sake of clarity, these multiple smaller quarries are listed under a single quarry name, in this case 'Dorchester/Berinsfield'.

Stanton Harcourt, Oxfordshire, has the largest number of entries with 21, followed by Holme Pierrepont, Nottinghamshire, with 15, and Yarnton/Cassington/Worton (Oxfordshire), also with 15. These multiple entries reflect quarrying over a considerable period of time in each area. The earliest and latest entries for the three quarries are as follows.

Quarry name	Earliest database entry	Latest database entry
Stanton Harcourt	1937	1995
Yarnton/Cassington/Worton	1934	2005
Holme Pierrepont	1945	2002

Table 1: Earliest and latest entries at three major quarries

Although these are particularly large and long-lived quarries, this observation raises a consideration which is relevant more generally to the management of archaeological work in the context of aggregates extraction. The longevity of major gravel and stone quarries means that archaeological interventions may be spread over considerable periods of time, typically up to twenty years. Over time, the sum of these interventions can build into multi-period landscape studies of great importance. However, due to the extended timescale built into the quarrying process, and the further implications of full post-excavation analysis and funding, a full synthetic publication may not be available until decades after the initiation of the work.

5.2 Identification of gaps in our knowledge regarding archaeological projects in aggregates areas carried out since 1900

During the research, it quickly became clear that the structure of the SMR databases consulted is not geared towards a search of this nature. No rapid means of collecting information specifically on sites arising from aggregate extraction could be found, as the reason for archaeological intervention is not recorded as a searchable field. The data is mainly designed to be accessed by grid reference data. The only identifiable way to identify aggregates sites would be to locate interventions on the maps of SMR/HER sites and cross-reference them with the records on the database to ascertain which were undertaken in association with aggregate quarrying. The amount of time that this would take, anticipated to be several days in each SMR, ruled out the collation of SMR identifiers for the majority of quarry sites recorded in the database. The British Geological Society are currently working on a GIS containing information on all known current and historic quarries for the country. This is not yet available, but in the future could provide a useful rapid method of locating aggregate sites where archaeological work may have taken place.

Backlogs in SMR data entry also affected the availability of information on quarrying sites. This differed for each county, with Derbyshire being the most complete, although there were gaps for the post-PPG16 period. Grey literature reports on interventions in Derbyshire were catalogued and easily located. In Nottinghamshire, the main backlog consists of sites excavated after 1990, whereas in Oxfordshire, projects completed after 1990 were relatively complete and the majority of the backlog consisted of pre-PPG16 projects.

The main source of information on recent and ongoing projects was through grey literature reports of archaeological interventions, but in many cases it was necessary to physically search through the reports, which were not always catalogued, and in Nottinghamshire many reports could not be readily located. In many cases, the local knowledge of the county curators and consultation with minerals planners was required to supplement the information available in the SMR records. For projects undertaken prior to the setting up of county Sites and Monuments Records (mainly in the 1970s), it was noted that most SMR entries would be based on records from local journals, and would be unlikely to contain any more information than the journals themselves.

The literature search of county journals, supplemented where possible with major national publications, was the most useful starting place for gathering information. In addition to detailed excavation reports and review articles, all journals included a section of notes on recent archaeological work in the counties, which allowed otherwise unpublished sites to be identified. There is a skew on the information available in Nottinghamshire, with the Thoroton Society transactions not regularly including excavation reports or notes until the 1960s, meaning that any sites investigated in the first half of the century could be under-represented. Oxfordshire saw the most publication of rescue excavation in the first half of the twentieth century. In many reports on

excavations, particularly notes, there is no mention of the location of archive material. Oxfordshire had the highest instance of recording archive deposition.

There were several problems encountered in consulting archaeological units. In several cases, the units had no database of projects, and no rapid means to access information on projects arising from aggregate extraction. In some cases, units may have been reluctant to share information on ongoing projects with a potentially competing commercial organisation despite the nature of the project. In addition, the timescale involved in the consultation phase did not allow all units to respond to queries. This was also an issue with responses from museum curators. The lack of information for the location of archive deposition for most sites identified through literature searches means that any archives located in private collections, or outside the main county depositories, would be difficult and time-consuming to locate.

To summarise, then, although the project is likely to have identified most archaeological interventions within the pilot area and time period, it has not been possible to trace SMR/HER or archive location for a significant number of projects.

County	HER/SMR record located (%)	Archive location known (%)
Derbyshire	37%	42%
Nottinghamshire	18%	76%
Oxfordshire	28%	52%

Table 2: HER/SMR and archive information, by county

The situation in Nottinghamshire is particularly poor, therefore, with an HER record located for only 18% of sites. The backlog in accessing data here, and in Oxfordshire, is the main reason for this figure.

5.3 Proposals for further research to address perceived omissions

To address the low number of SMR/HER records located, further time would need to be spent checking through data at the local authority SMRs. With no available method of searching specifically for aggregates sites, it would be necessary to physically inspect each record within a set radius of each database record, in order to assess its relevance. It is not envisaged that every entry in the database will prove to correspond to an SMR/HER record, but it is considered likely that a significant number of further records exist. It is unlikely that the full picture will emerge until local SMR/HER backlogs are addressed.

Archive location is also unknown for a significant proportion of projects, although most major museums have now responded to consultations. Data is still awaited from Derby, Bassetlaw (Retford) and Newark Museums, and this information will redress the problem to some extent. Further consultation with archaeological units on archive location might also provide more data, but this is likely to be time-consuming and may well involve physical visits by a researcher to search in unit archives.

5.4 Chronological and spatial trends

5.4.1 General overview

To facilitate a broad discussion of chronological trends within the database, the data was considered under four broad periods, corresponding to changes within planning legislation.

Period 1 1900-1946 Pre Town and Country Planning Act

Period 2 1946-1972 Post Town and Country Planning Act

Period 3 Pre PPG 16/15 fieldwork from 1972 to 1990

Period 4 PPG 16/15 fieldwork from 1991 to present

Each project was assigned to one of the four periods, on the basis of start date. Projects overlapping two periods are therefore assigned to the earlier period for the purposes of analysis.

The total number of projects assigned to each period is summarised in the chart below, with an indication of project sizes. The raw number of projects in each period can be seen to remain relatively stable until PPG 16/15, with an explosion in project numbers in Period 4. The relative proportions of small, medium, large and very large projects remain broadly similar across time. Under-representation of very large projects at Period 4 (post PPG 16/15) may be explained by the fragmentation of large quarry interventions into a number of smaller projects which may be undertaken by different organisations, and which are recorded separately in the database.

Size of project	Period 1	Period 2	Period 3	Period 4
Small	10	17	5	51
Medium	17	21	18	72
Large	8	8	7	17
Very large	1	3	2	1
Total	**36**	**49**	**32**	**141**

Table 3: Recorded interventions by size and period

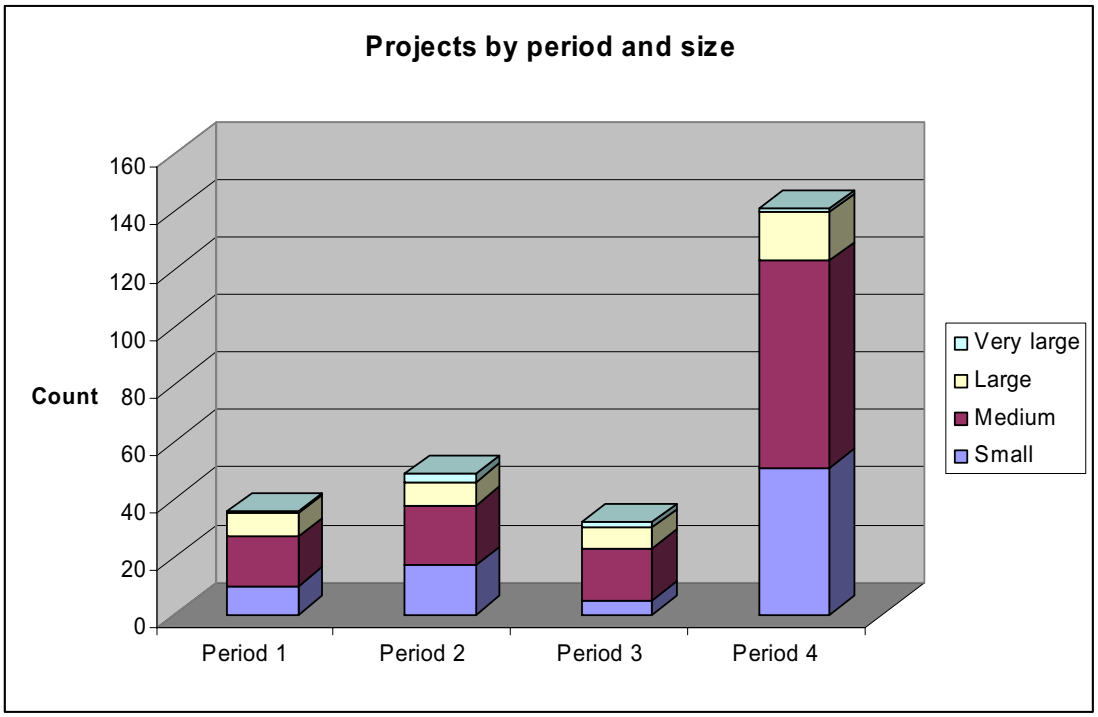


Illustration 1: Archaeological projects by period and size

The apparent dip in project numbers within Period 3 may be due to the slightly shorter time-span represented by this period. A calculation of average number of projects per year across the four periods (below) confirms this suggestion. Projects per year can be seen to rise in Period 2 and remains relatively constant until a roughly fivefold increase after PPG 16/15.

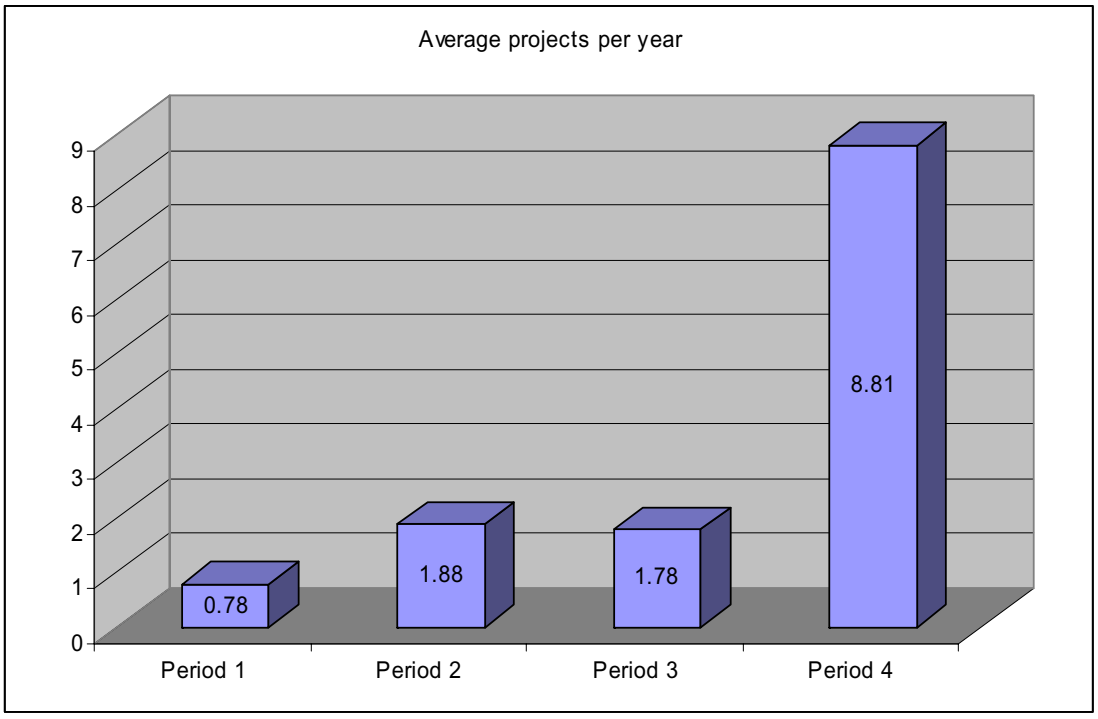


Illustration 2: Average number of projects per year

An assessment of the archaeological significance of projects was also made, as follows:

Significance	Period 1	Period 2	Period 3	Period 4	Total
Local	17	22	5	61	**105**
Regional	17	22	17	66	**122**
National	2	5	10	14	**31**

Table 4: Perceived archaeological significance, by period

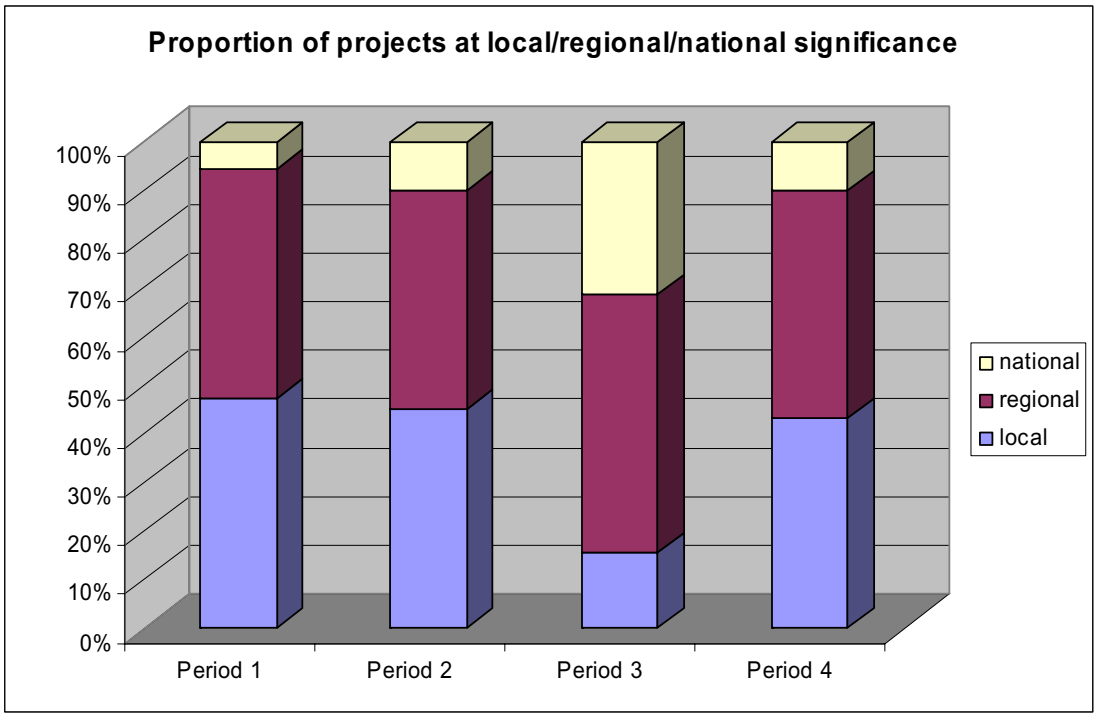


Illustration 3: Proportion of projects at local/regional/national significance

The proportion of projects at the various significance levels remains relatively consistent over Periods 1, 2 and 4, but Period 3 presents something of an anomaly, with much less work at the local scale and proportionately more work of regional and national importance. This period covers the era of 'rescue archaeology', and the emergence of early archaeological units such as the Oxford Archaeological Unit and the Trent Valley Archaeological Research Committee/Trent & Peak Archaeological Trust. The importance of much of the Period 3 work perhaps therefore reflects a growing appreciation of the need to mitigate the impact of aggregates extraction, and a prioritisation of necessarily limited resources towards the most important sites.

The vast majority (85%) of projects within the database relate to soft aggregates extraction, and this pattern reflects the importance of sand and gravel extraction within the Trent and Thames valley systems. Hard aggregates extraction relates mainly to limestone quarrying in the Derbyshire Peak District and in parts of Oxfordshire, and is generally of low archaeological significance, with no projects of national significance listed. Limestone extraction in the Peak District is a large-scale industry and is perhaps under-represented in the archaeological record due to the existence of long-term planning permissions pre-dating PPG16/15, which in some cases

have allowed extraction to continue without archaeological intervention. Mapping of the cropmark record on the river gravels has allowed archaeological interventions to be targeted in advance of aggregates extraction, but visibility in upland limestone landscapes is a more complex issue, with elements of prehistoric, Roman and later landscapes incorporated within boundary systems, and often obscured by later lead mining activity. There is clear potential in these landscapes, but more work needs to be done to establish a methodology for assessing this potential in advance of extraction, perhaps with the emphasis on topographical and walling surveys rather than evaluation trenching.

Type of aggregate	Period 1	Period 2	Period 3	Period 4	Total
Soft (sand and gravel)	30	44	29	116	**219**
Hard (limestone and other rock)	6	5	3	25	**39**

Table 5: Aggregate type, by period

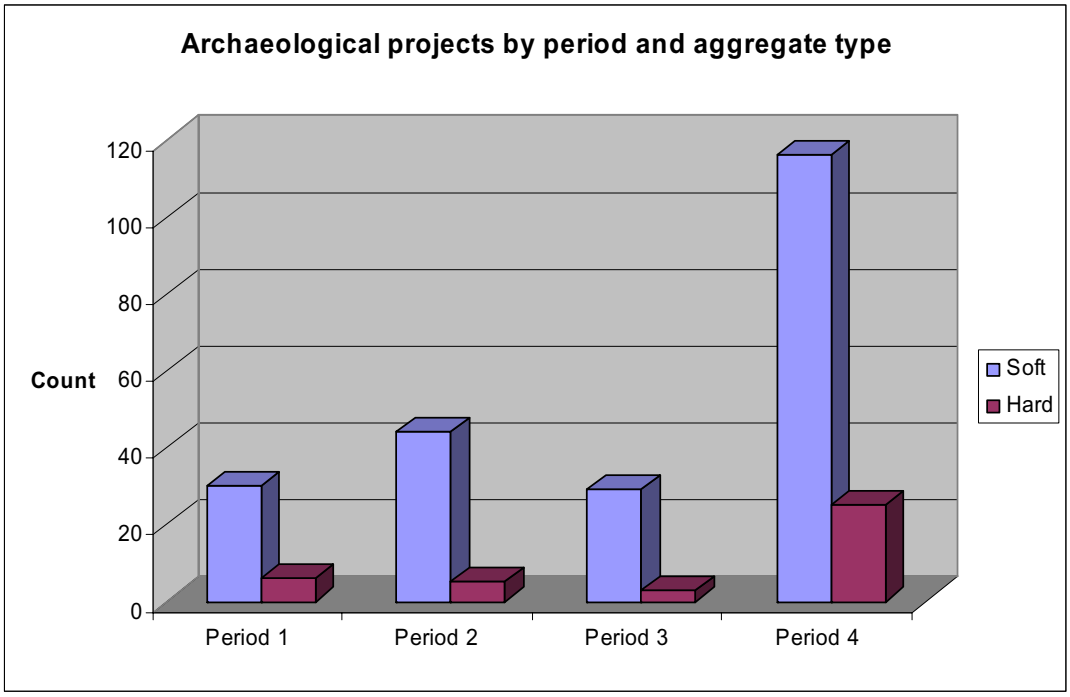


Illustration 4: Aggregate type, by period

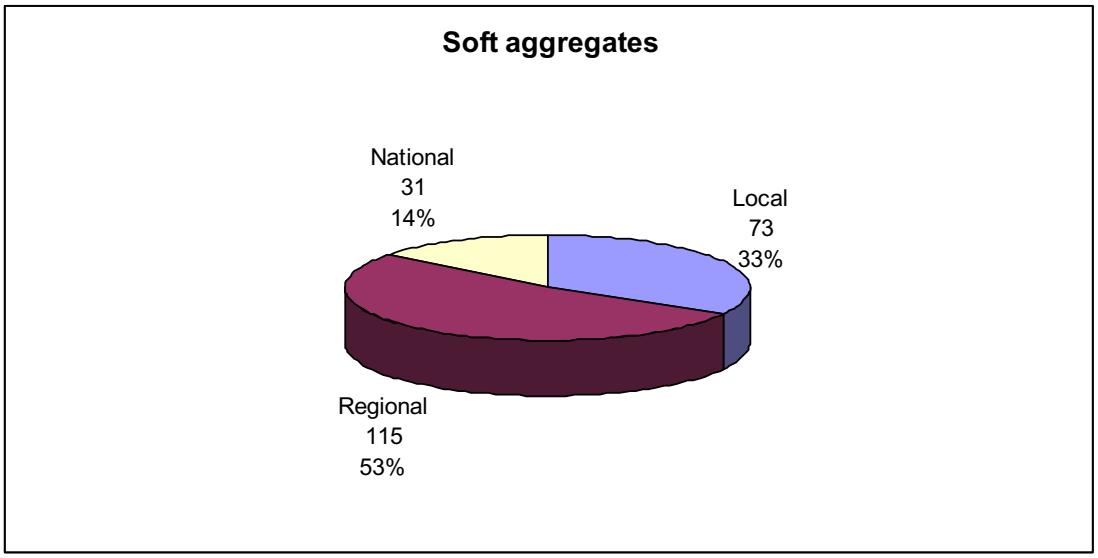


Illustration 5: Soft aggregates and significance levels of projects

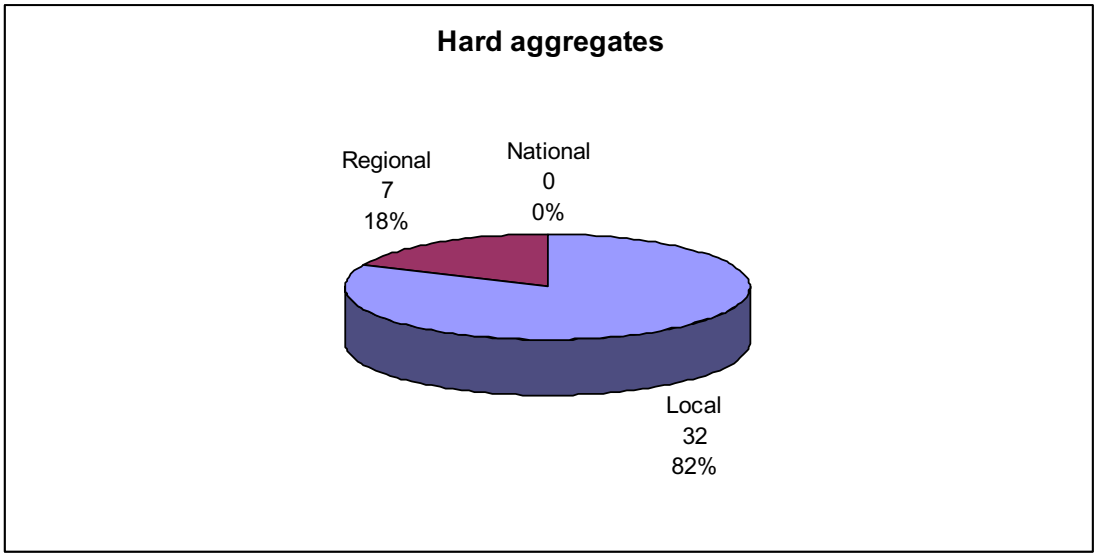


Illustration 6: Hard aggregates and significance levels of projects

5.4.2 Period 1: pre Town and Country Planning Act: 1900 – 1946

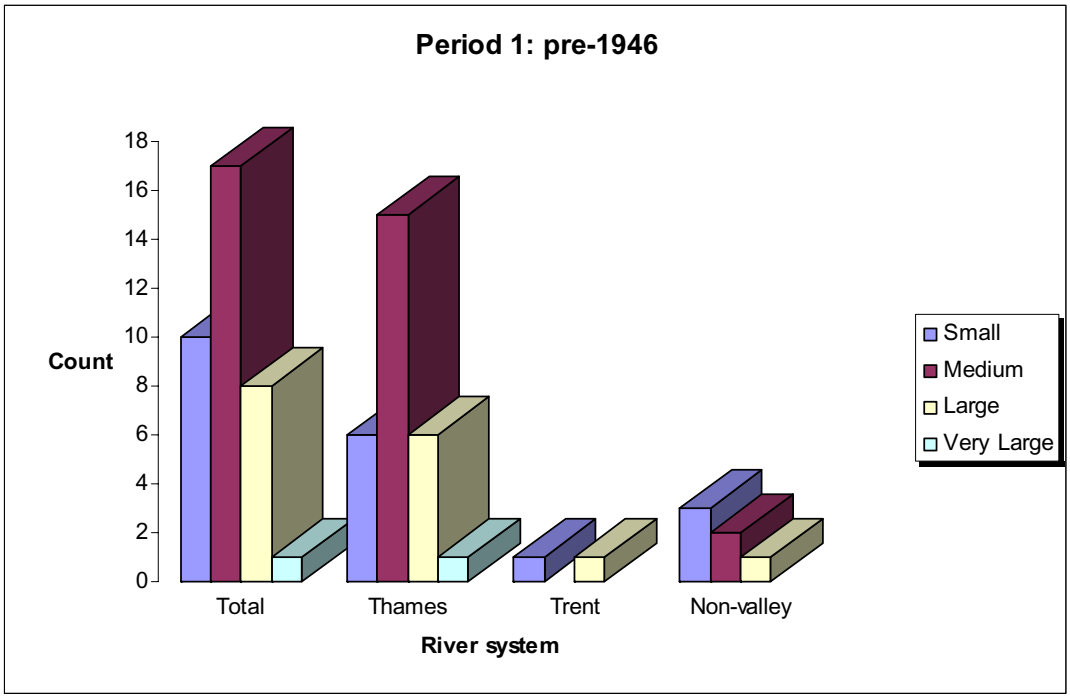


Illustration 7: Period 1 projects by valley system and size of project

Period 1 is dominated by Oxfordshire (Thames Valley) projects (77% of the total). This reflects the early commencement of gravel extraction in the Thames Valley, and an early focus of antiquarian interest in the area, where cropmarks were noted and plotted (from horseback) as early as the 1890s, and organised aerial photography forays flown from the 1920s. Extraction in the Trent Valley is recorded at this early period, but was less widespread, and archaeological interventions fewer (only 2 recorded in this period).

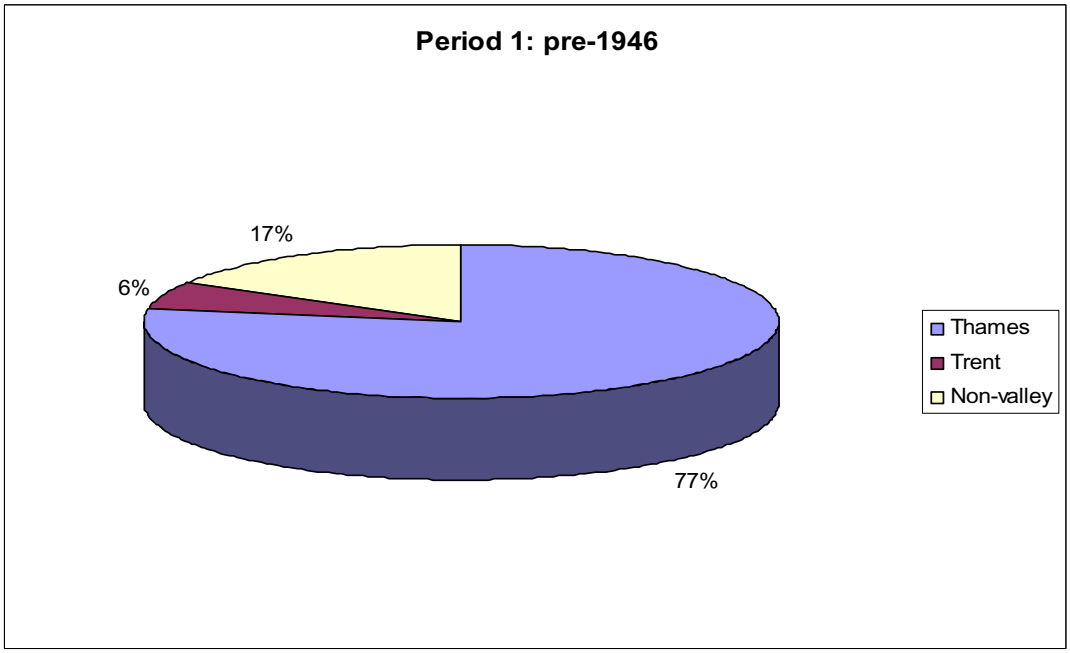


Illustration 8: Period 1 projects by valley system

The vast majority of the references for Period 1 were identified during the literature search, and relate to observations and finds recovery by interested individuals, subsequently reported in local journals. A few records relate to the activities of larger and more organised groups, such as the excavations by Oxford University Archaeological Society at Barrow Hills, Radley in the 1930s and early 1940s. As noted above, a large number of records relating to the recovery of finds from quarry sites exist in the literature. These were only included as archaeological projects within the database if finds collection appeared to have been undertaken methodically (i.e. as a proto-watching brief) or if observations of archaeological features were also made. Plotting of dates of individual records was not within the scope of this project, but it should be noted that the vast majority of Period 1 records date from the 1930s and 1940s, corresponding to the onset of large-scale gravel extraction in the Thames Valley.

Projects at Period 1 were dominated by small- and medium-scale interventions, and were generally of local or regional significance, with only 6% assessed as being of national significance. This is clearly due to the piecemeal and individualised nature of the fieldwork undertaken. Recovery undertaken *during* aggregates extraction, for example when archaeological features are visible in the face of the gravel pit, is likely only to provide limited insights. No fieldwork of national significance was undertaken outside the Thames Valley during this period.

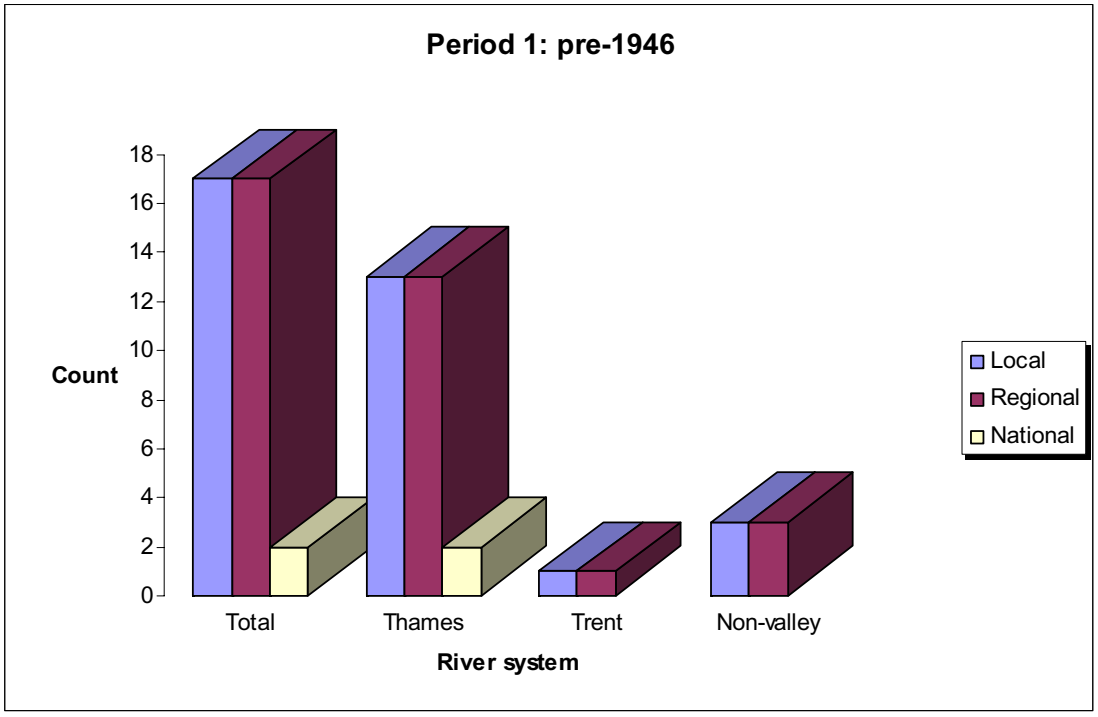


Illustration 9: Period 1 projects by significance and river system

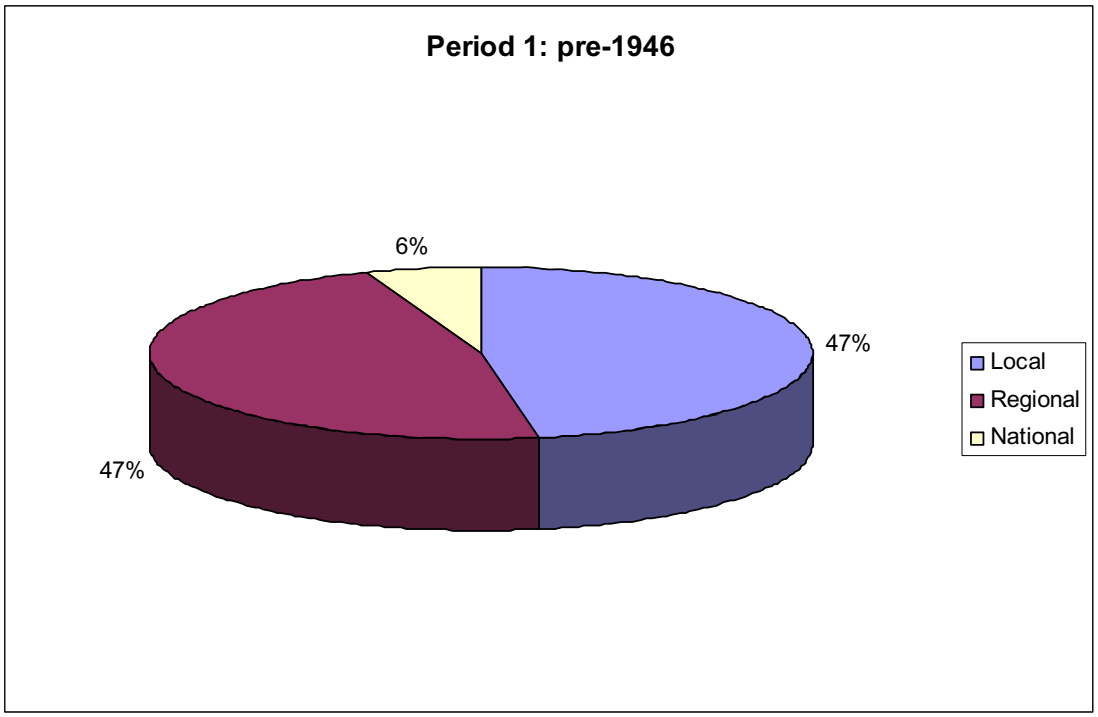


Illustration 10: Significance levels of Period 1 projects

5.4.3 Period 2: Town and Country Planning Act 1946-1972

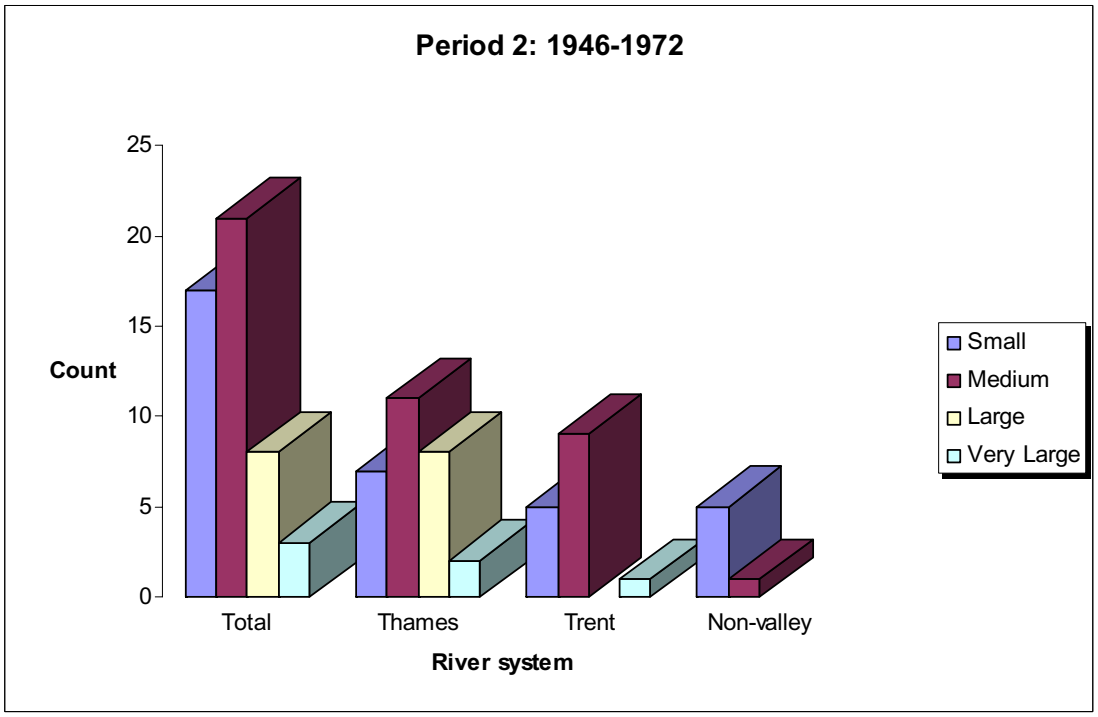


Illustration 11: Period 2 projects by size and river system

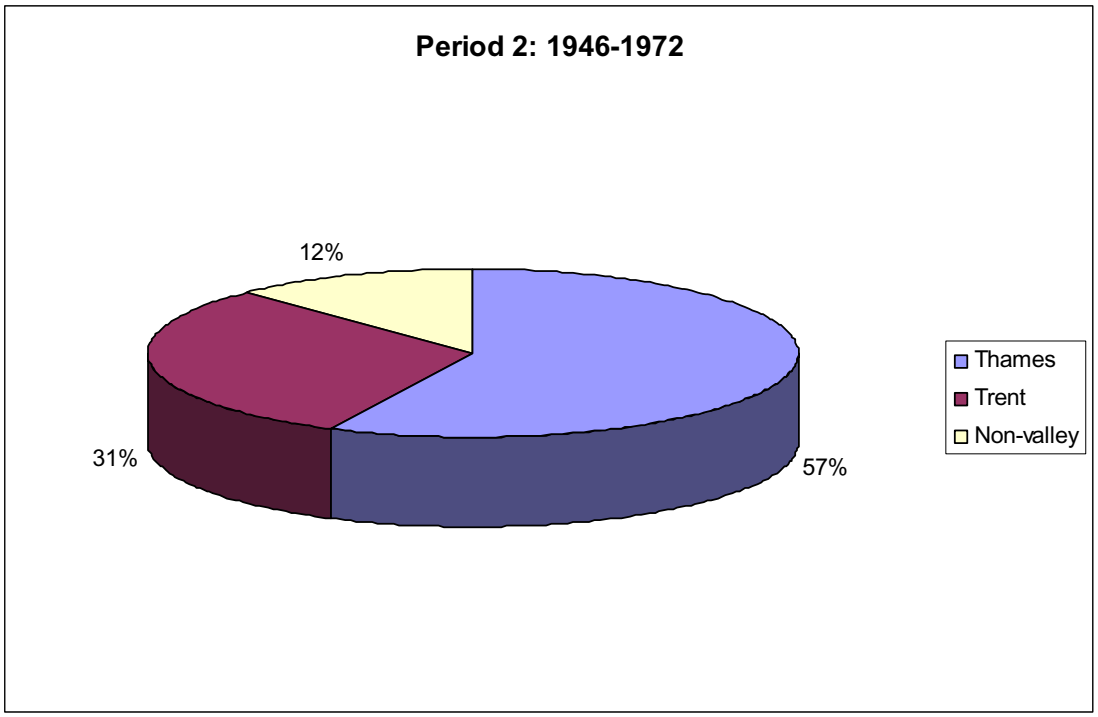


Illustration 12: Period 2 projects by river system

Period 2 continues to be dominated by work in the Thames Valley (57%), although Trent Valley projects also constitute a significant proportion (31%). In contrast to the 'antiquarian-style' work at Period 1, Period 2 begins to be dominated by 'rescue archaeology', the targeting of interventions to archaeology at risk. Photography of complex cropmark landscapes on gravel terraces, particularly in the Thames Valley during the 1930s, allowed areas of significance to be identified *before* the onset of gravel extraction, allowing targeted excavation of important landscapes, such as the henge monuments and cursus at Dorchester-on-Thames, excavated by OUAS during the late 1940s and early 1950s. The majority of work was still of local or regional significance, although projects of national significance rose from 6% to 10%. Despite this increase in the overall significance of the archaeological work, fieldwork was still undertaken in general by interested individuals and amateur groups, although by the end of the 1960s and 1970s organisations such as the Trent Valley Archaeological Research Committee were beginning to carry out rescue fieldwork in a more professional, though chronically underfunded environment.

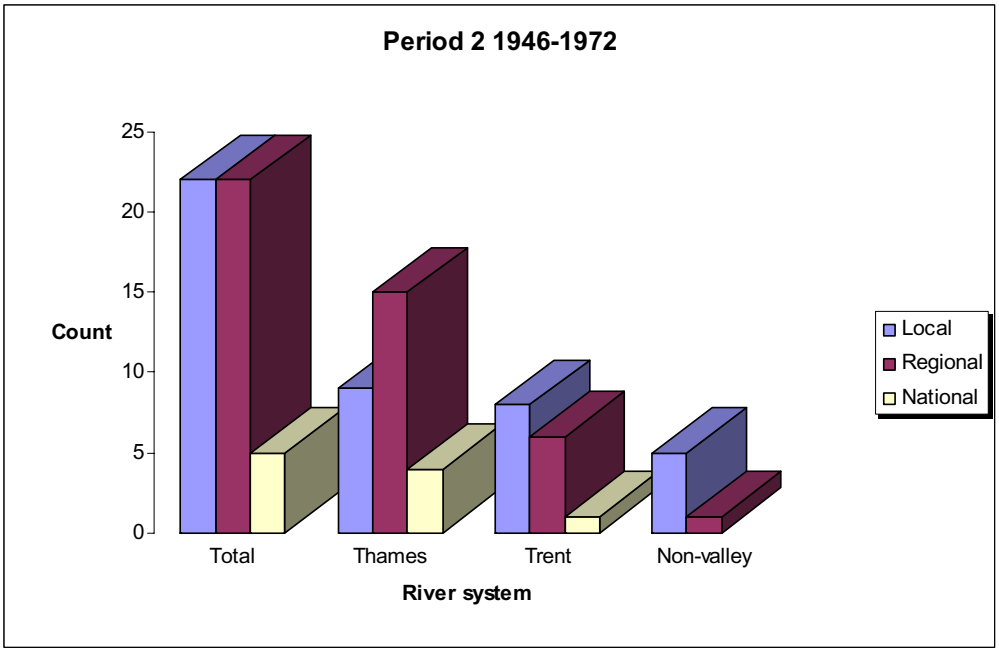


Illustration 13: Period 2 projects by river system and significance

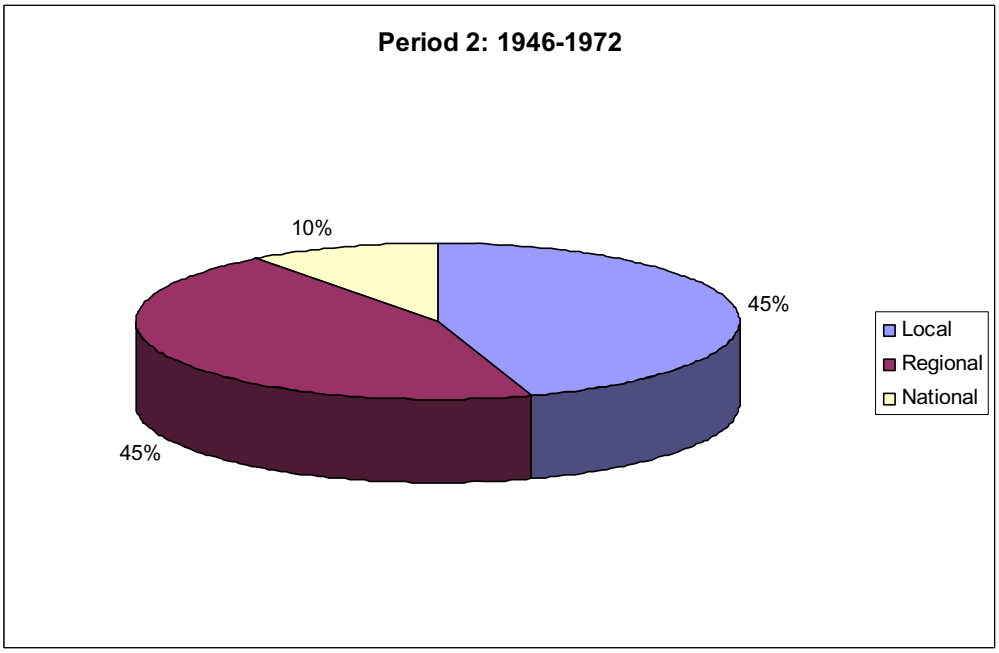


Illustration 14: Significance levels of Period 2 projects

5.4.4 Period 3: Pre PPG 16/15 1972-1991

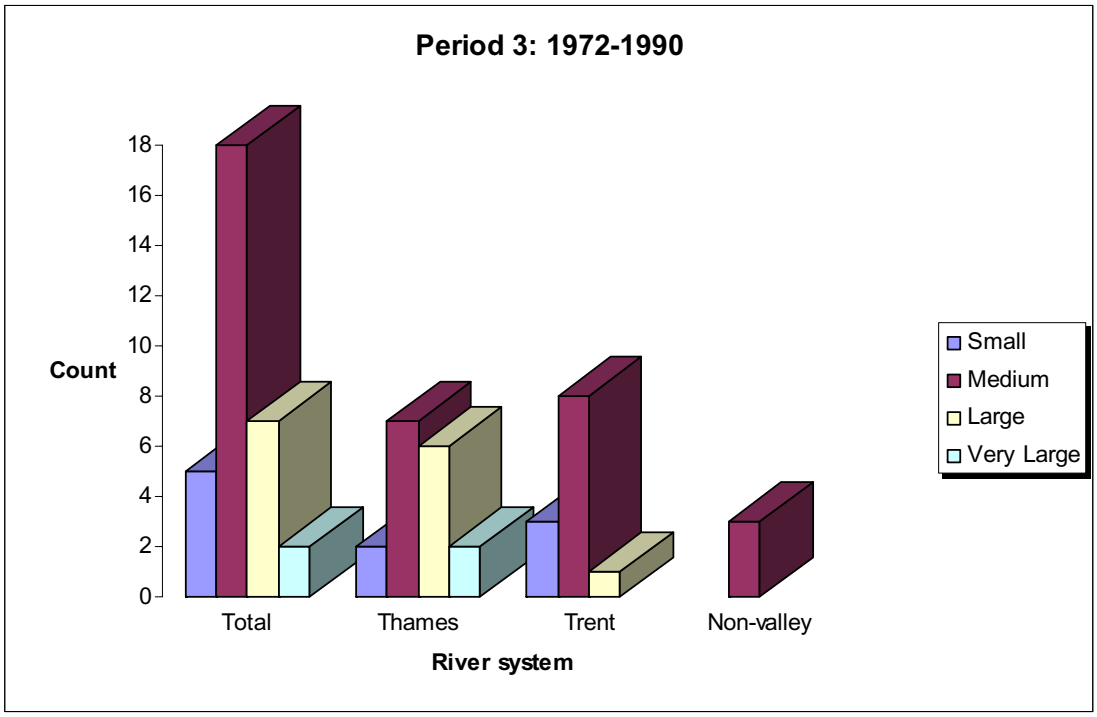


Illustration 15: Period 3 projects by size and valley system

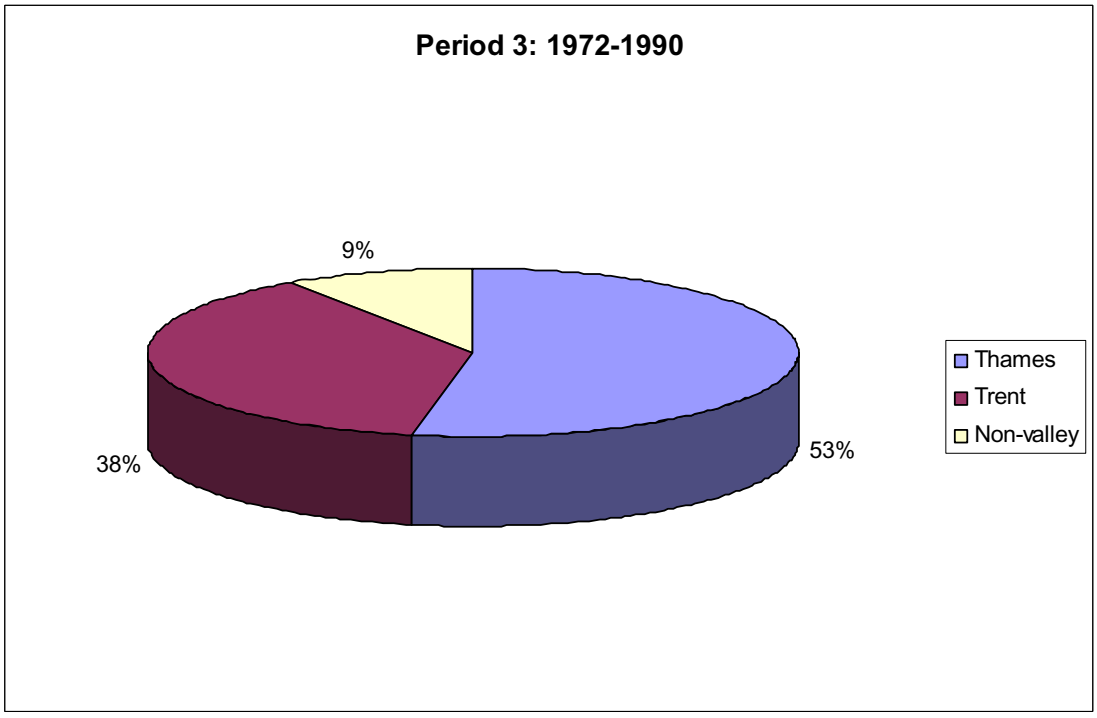


Illustration 16: Period 3 projects by valley system

Thames Valley projects continue to dominate at Period 3 (53%), with the proportion of Trent Valley projects again slightly increasing to 38%. The difference between the major valley systems at this period is in the scale of fieldwork undertaken, with six projects assessed as 'large', and two 'very large' in the Thames Valley, and only one 'large' project in the Trent Valley.

The difference in scale is perhaps due to the differing chronologies of gravel extraction in the two valleys, with major work ongoing in the Thames Valley, particularly during the 1970s and 1980s, leading to large-scale rescue excavation of a number of important sites, such as Mount Farm (Dorchester/Berinsfield), Gravelly Guy (Stanton Harcourt), and the earliest stages of Yarnton/Worton/Cassington. As will be seen in Period 4, this was a high point of work in the Thames Valley, with a subsequent slowing of extraction from the 1990s as the major quarries were worked out. In contrast, extraction in the Trent Valley was of a smaller scale during this period, with the exception perhaps of Holme Pierrepont/Colwick, where a number of important discoveries were made.

The 1970s and 1980s also saw the gradual development of archaeological 'units' carrying out fieldwork on a professional footing, although without the developer funding initiated by PPG 16/15. With tight resources, and an accelerating pace of development, archaeological work in this period was targeted much more closely to sites of greater archaeological significance. Projects of national significance increase to 31%, and projects of local significance drop to only 16% (from 45% at Period 2). For the reasons discussed above, this pattern is particularly marked in the Thames valley, where only one of seventeen recorded projects is of local significance. The increasing professionalisation of archaeology in this period also led to a downturn in work by amateurs and amateur groups, and this is perhaps a secondary reason for the decrease in work at the local level.

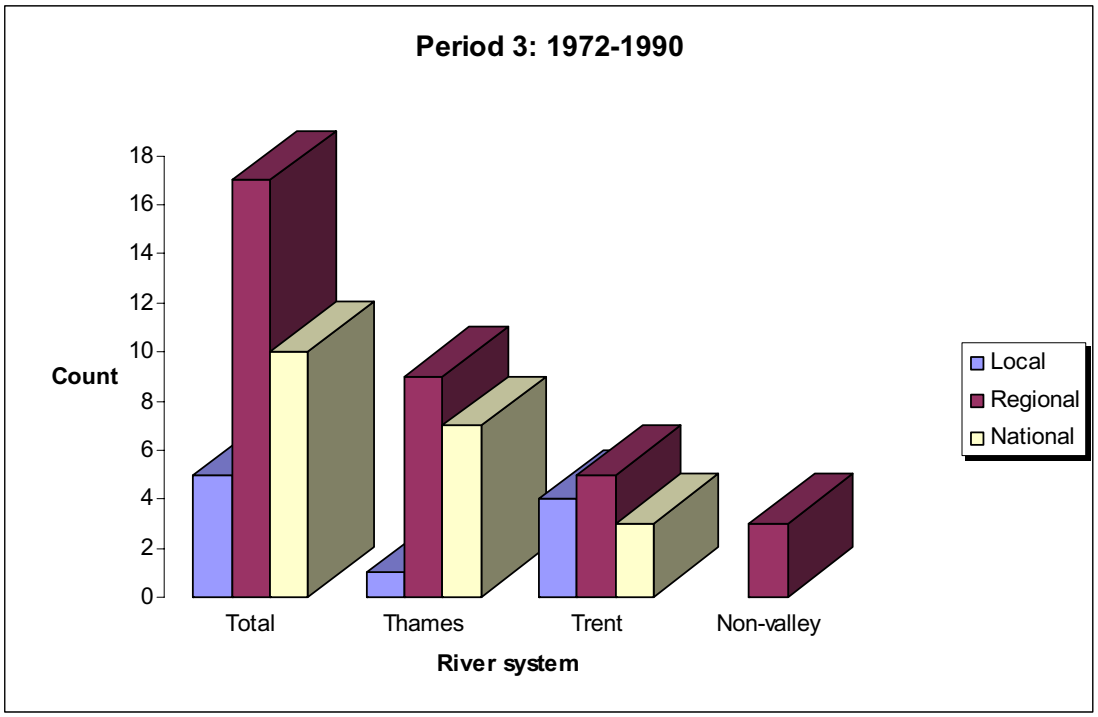


Illustration 17: Period 3 projects by significance and valley system

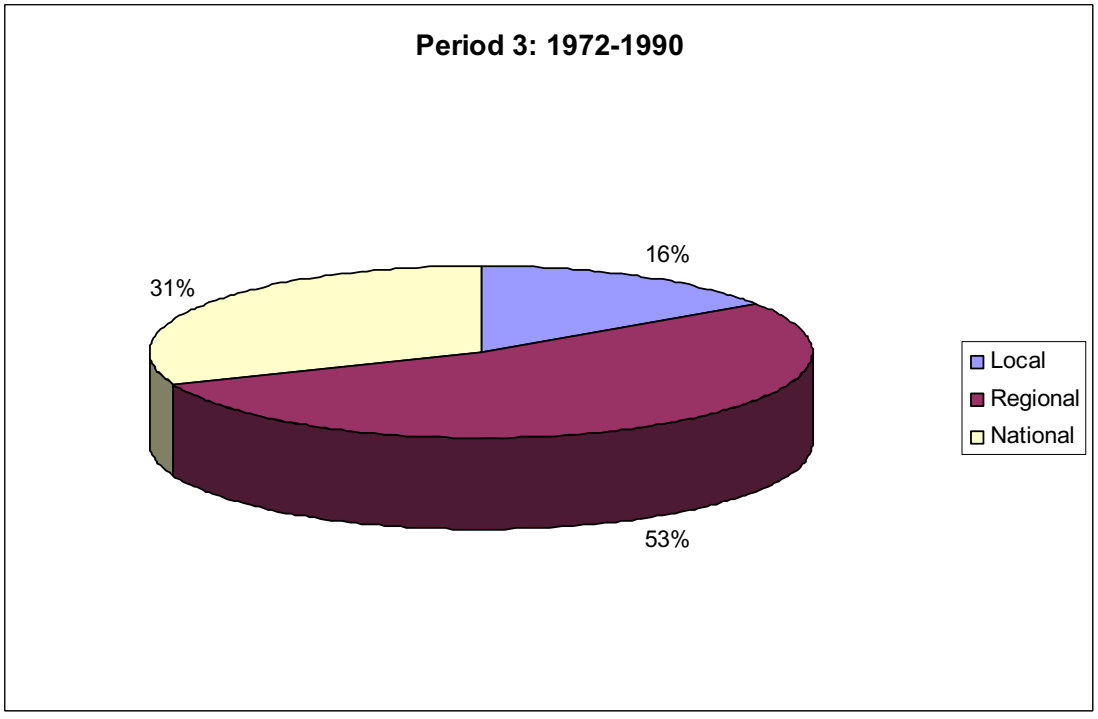


Illustration 18: Significance levels of Period 3 projects

5.4.5 Period 4: Post PPG16/15. 1991-present

The explosion in the raw numbers of archaeological projects in the period following PPG16/15 is the main feature of the Period 4 data, with 141 projects

recorded, in comparison to 32 in Period 3. The magnitude of the increase may be partly explained by the separate recording of different phases of work within single quarries, but it is clear nonetheless that PPG16/15 initiated a major increase in the frequency and scale of archaeological intervention on aggregates sites.

There is also a clear shift in the spatial focus of work, from the historically dominant Thames Valley, to the Trent Valley. Trent Valley sites now account for 58% of the recorded database, with the Thames Valley reduced to 26%. This is clearly a reflection of the chronological development of the aggregates industry, with Oxfordshire sites slowing down or worked out from the 1990s, and a significant stepping-up of extraction in the Trent Valley at the same time. A number of major Trent Valley gravel quarries were opened or extended during the early 1990s, including Girton, Hoveringham, Holme Pierrepont, Rampton, Willington, Shardlow and Swarkestone, leading to a major series of multi-phase archaeological interventions, many of which are still ongoing.

The integration of archaeological interests within the planning process has also led to a recovery in the numbers of small-scale and local-significance projects. These generally reflect archaeological watching briefs or evaluations with negative or limited results, undertaken through the planning process, rather than the amateur or individual recording undertaken in earlier periods.

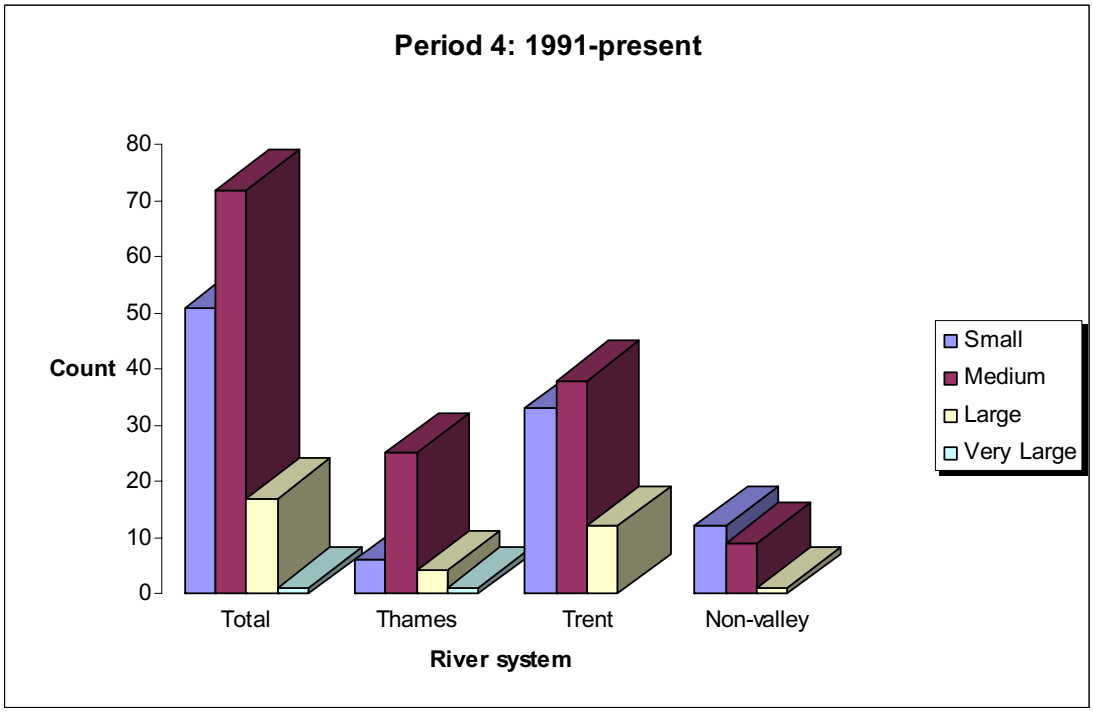


Illustration 19: Period 4 projects by size and valley system

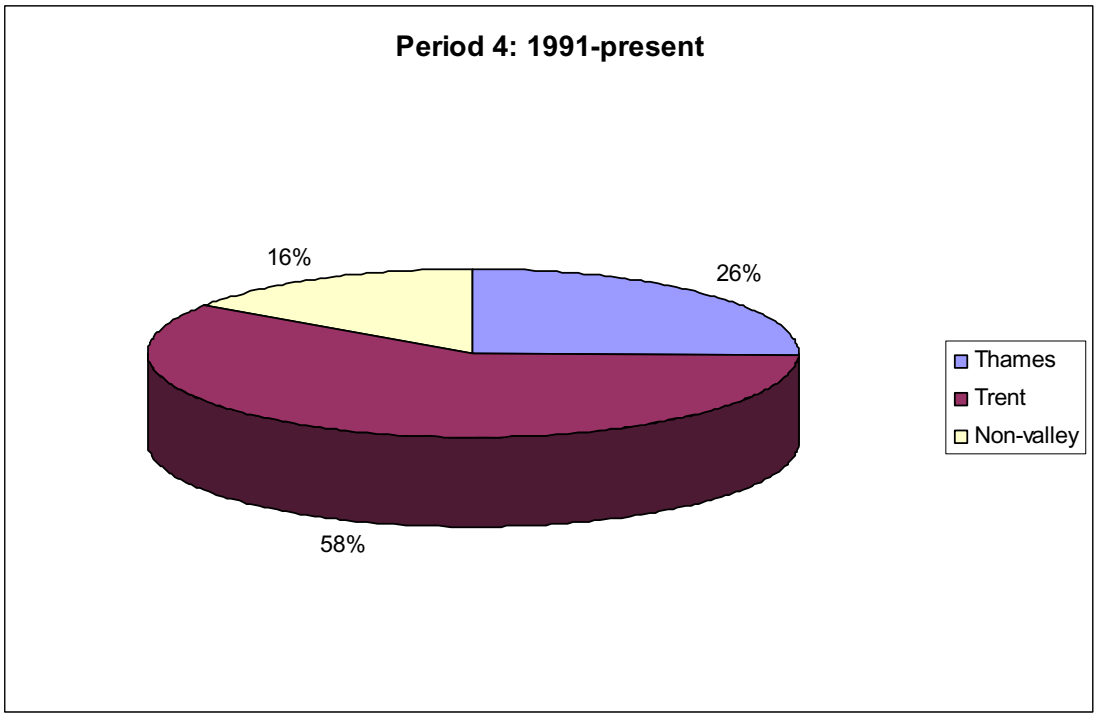


Illustration 20: Period 4 projects by valley system

The PPG16 environment has resulted in almost complete professionalisation of archaeological fieldwork, with very little involvement from amateur groups or individuals. The increased quantity of work generated through the planning process has led to the proliferation of professional archaeological units and consultancies undertaking such work, and a considerable number of these organisations are represented within the database. A corresponding proliferation in the range of archaeological fieldwork undertaken has also occurred, with the fairly narrow focus of earlier periods on rescue excavation, watching brief and finds recovery replaced by a 'landscape' approach encompassing walkover, topographic and geophysical survey, fieldwalking, environmental sampling and watching brief, in addition to evaluation and excavation. This proliferation is shown in **Illustration 21**.

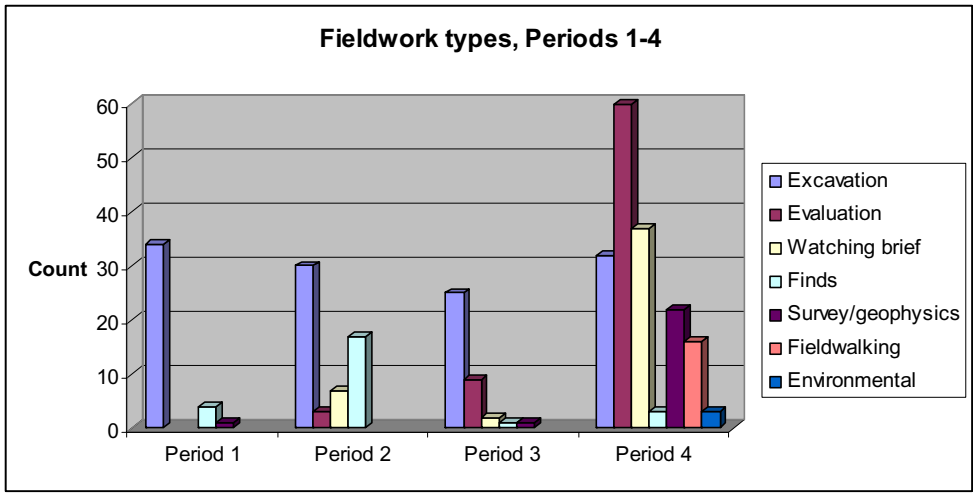


Illustration 21: Fieldwork types recorded at Periods 1-4

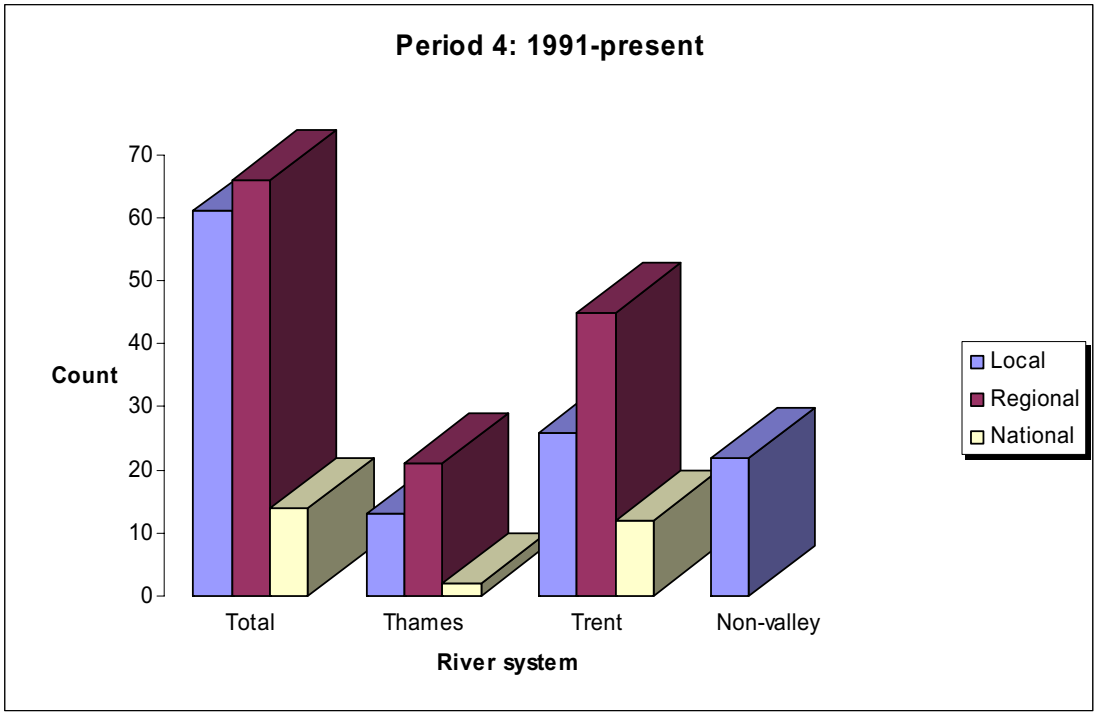


Illustration 22: Period 4 projects by significance and river system

After the anomaly at Period 3, the relative proportions of projects at local, regional and national importance are similar to Periods 1 and 2, although the total number of projects is vastly increased. It is also notable that the Trent Valley dominated projects of national importance for the first time.

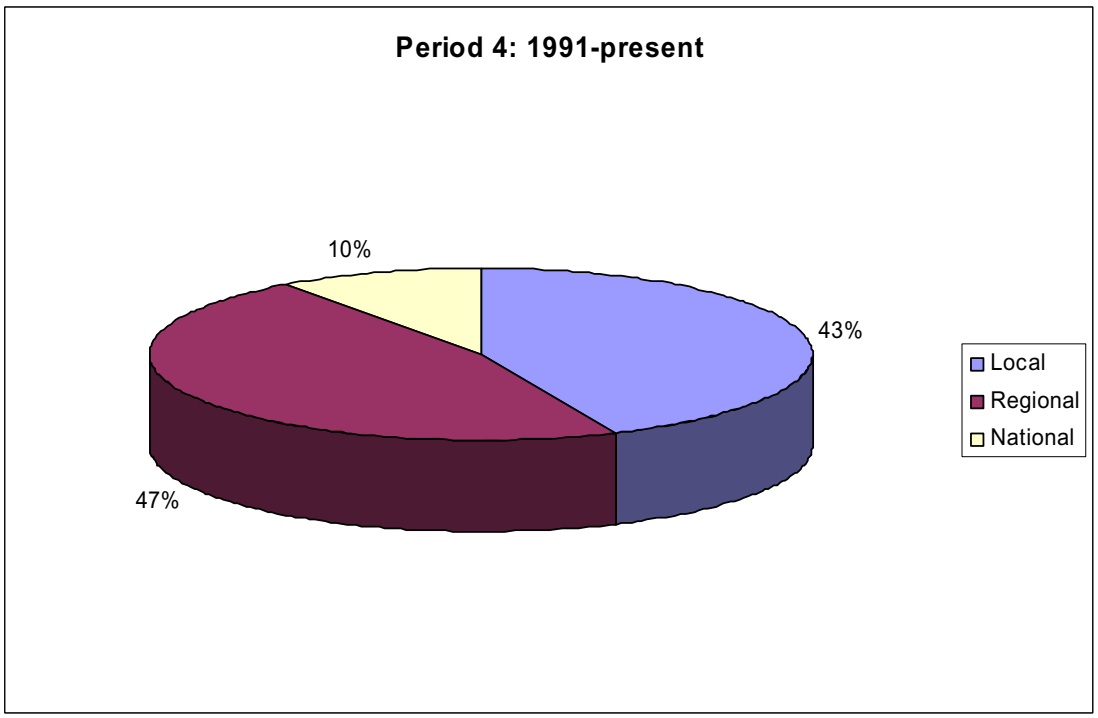


Illustration 23: Significance of Period 4 projects

5.5 Potential of incomplete or inappropriately disseminated projects

A major decision was made during data collection to include projects listed as 'active' within Period 4, despite the targeting of the project to 'inactive past projects'. A significant proportion of nationally significant sites in Period 4 are long-running gravel quarries with histories of regular archaeological interventions stretching back to the onset of PPG16/15. The majority of these sites are still considered 'active' by the relevant project managers, but it was felt that to exclude them from the database would run the risk of passing over the very group of sites the project originally aimed to identify. Projects listed as 'active' are almost by definition incomplete, although several different situations were identified:

a) Fieldwork is ongoing with recent work undertaken and further work imminent.

b) Further work is anticipated by the relevant organisation despite a significant time lapse since the last intervention.

c) Fieldwork stages are complete but post-excavation work is ongoing in advance of full publication.

Although projects in group a) are listed as 'incomplete' in the database, they are perhaps only marginal to this discussion, in that dissemination clearly cannot proceed with fieldwork ongoing. Depending on the time lapse since the last fieldwork intervention, projects in group b) might be regarded as 'stalled', or even 'complete', rather than 'active', although the preferences of unit managers were respected when compiling the database.

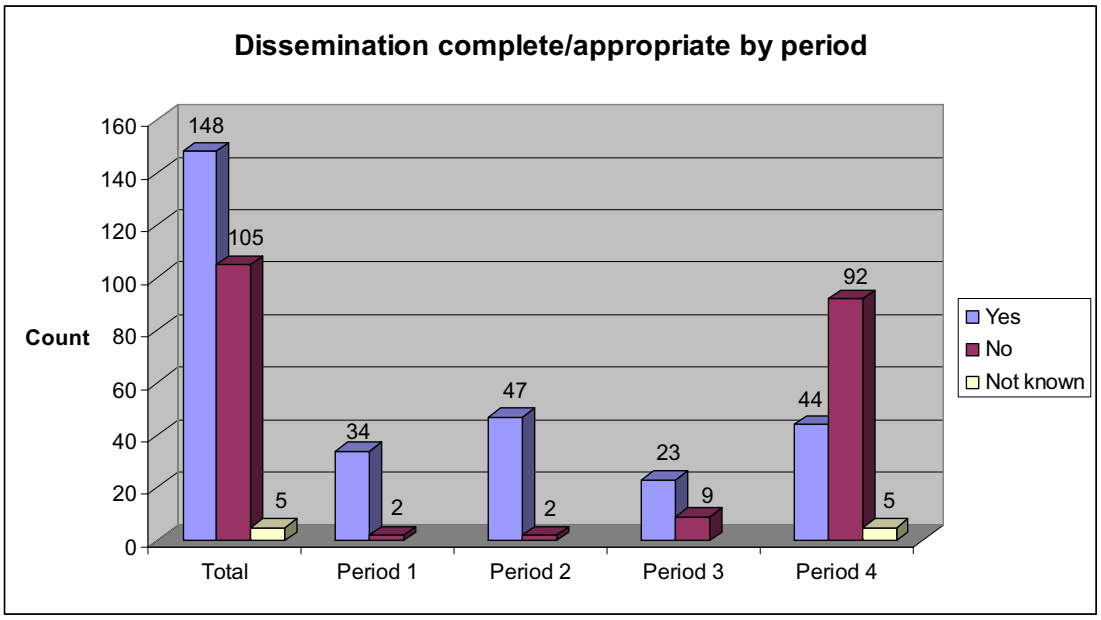


Illustration 24 Numbers of incomplete/inappropriately disseminated projects by period.

The numbers of projects considered incomplete or inappropriately disseminated in each of Periods 1-4 is shown in **Illustration 24**. The five

projects shown as 'Not Known' relate to minor PPG16/15 projects where developer reports could not be traced. Numbers of these projects are relatively low before PPG16, and generally relate to unpublished rescue excavation projects, or rescue excavation projects only published as interim notes.

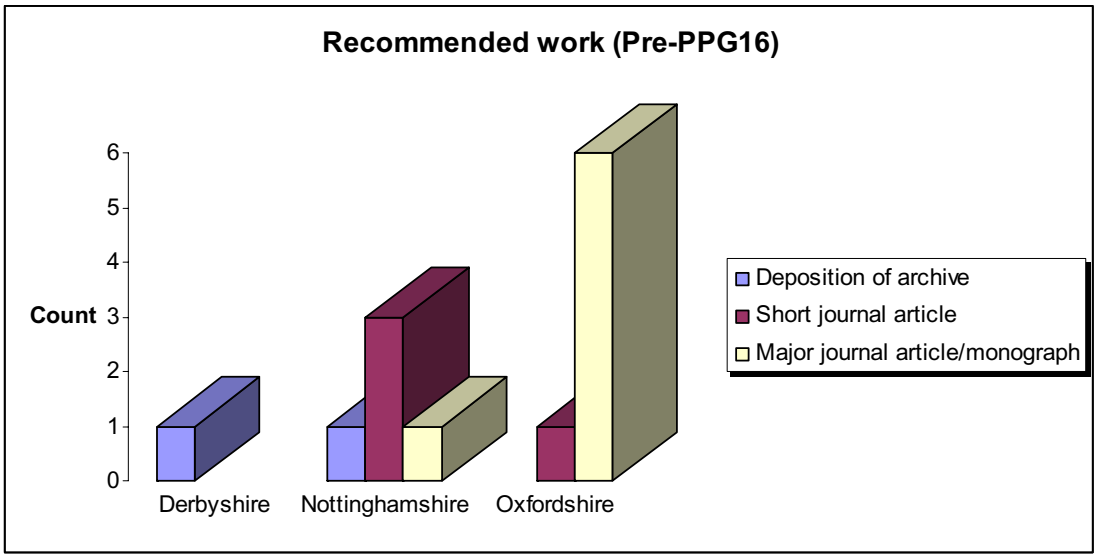


Illustration 25: Summary of incomplete pre-PPG16 work (Periods 1-3)

The vast majority of projects considered incomplete or inappropriately disseminated are therefore within Period 4, post-PPG16. The issue of projects currently considered active is considered above, and the number of projects falling into this category is illustrated in **Illustration 26** below. Particularly in the Trent Valley, active projects outnumber those considered complete.

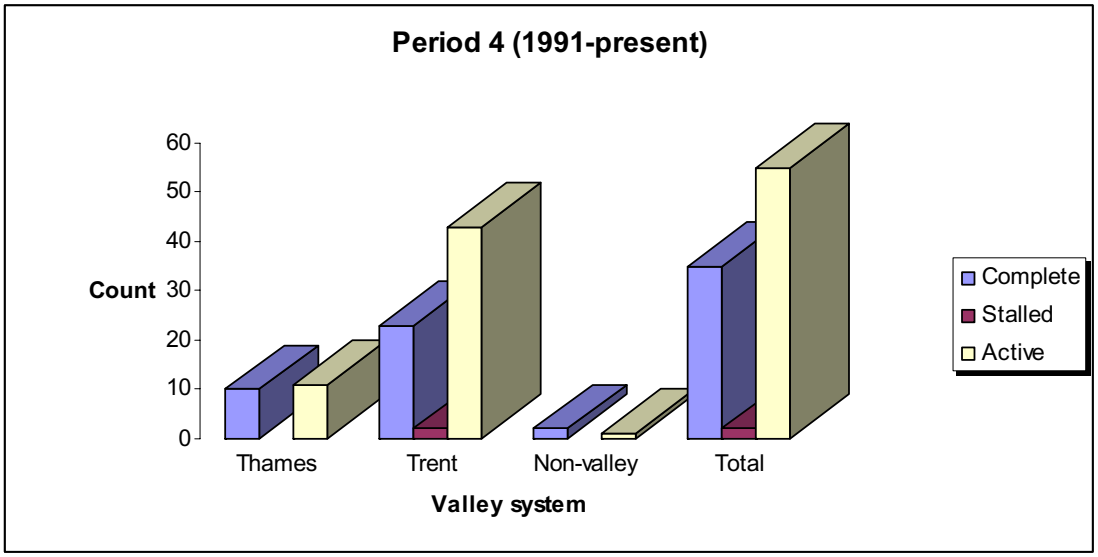


Illustration 26: Active/stalled/complete projects with incomplete dissemination at Period 4.

Post-PPG16 fieldwork has resulted in multiple interventions over time within the same quarries, as extraction proceeds each year from area to area. The 92 Period 4 projects recorded as incomplete represent only 35 separate quarries, with up to nine interventions per quarry. The accumulation of multiple interventions within the same quarries over time is a major feature of post PPG16 work, particularly in the Trent Valley where new quarries and quarry extensions were established in the early 1990s. Examples of the most populous quarries are given in **Table 6**, all but one in Nottinghamshire.

Quarry name	Number of Period 4 interventions	Earliest Period 4 record	Latest Period 4 record
Hoveringham, Notts.	9	1992	2005
Besthorpe, Notts.	7	1992	2000
Shardlow, Derbys.	6	1994	2006
Lound, Notts.	6	1994	1999
Scrooby Top, Notts.	6	1996	2004

Table 6: Archaeological interventions at long-running quarries

Timescales of a decade or more are not uncommon for extraction at major gravel quarries. This is the consideration which determined inclusion of 'active' projects in the database. In many cases, fieldwork carried out in the early 1990s is still awaiting full analysis and publication because of the extended timescales and multiple interventions involved. Most of these projects have been published as interim notes or in summaries of fieldwork within local journals. However, the significance of these sites lies in the fact that multiple interventions over time have allowed landscape-scale work, with environmental sampling alongside large-scale excavation. The true value of this work will only be appreciated when synthetic publication is achieved.

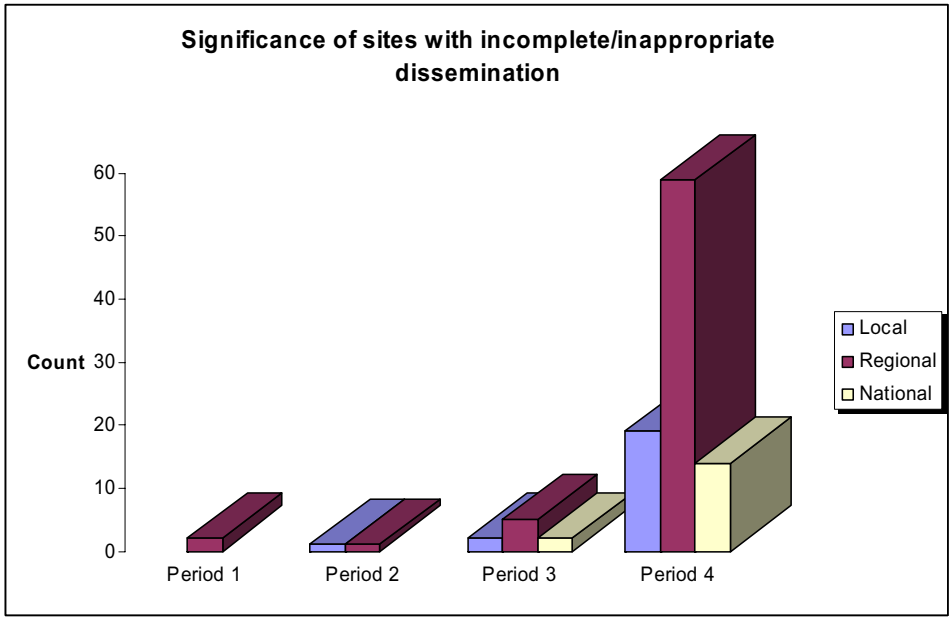


Illustration 27: Significance of identified sites by period

As can be seen from **Illustration 27**, the vast majority of sites judged to have inappropriate or incomplete dissemination are located at Period 4 (post PPG16), and this includes many sites of regional and national importance. It should be remembered that many of these records are elements of multi-stage quarry projects, and that only 35 individual quarries are represented. The recommended style of publication for much of this work is therefore a major journal or monograph publication synthesising the multiple elements within a single quarry.

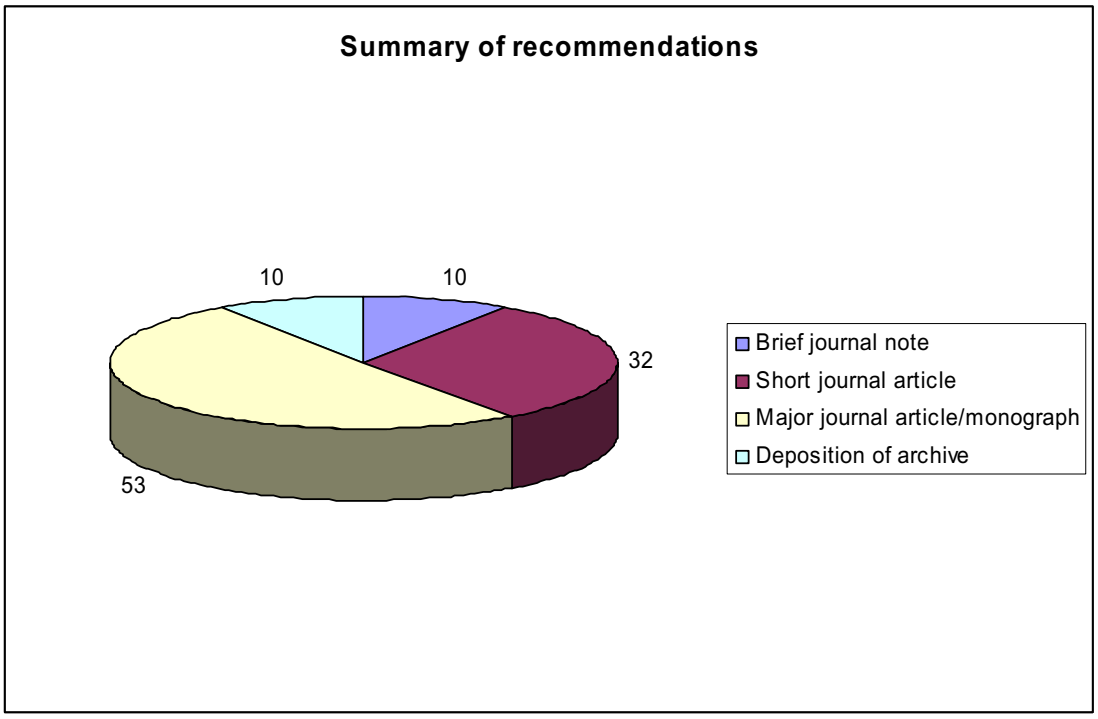


Illustration 28: Summary of recommendations for identified sites (all periods)

The recommendations for further dissemination are therefore dominated by multiphase post-PPG16 gravel quarry sites in the Trent and Thames Valleys, with the Trent Valley sites considerably more numerous. A significant number of these are judged to be of national significance, when the multiple project strands are viewed in synthesis, with a large number of other projects at regional significance.

Given the number of incomplete/inappropriately disseminated sites judged to be of regional or national importance, it is clear that the potential of this work is very significant. The majority of nationally important sites relate to the prehistoric period, with five Neolithic or Bronze Age sites and five later prehistoric or Roman sites. Four multi-period sites were judged of national significance; these multi-period landscapes were dominated by prehistoric evidence, with early medieval elements also present. The potential of nationally important sites therefore spans the Neolithic to Early medieval periods.

Sites of regional importance spanned a wider date range, from the Mesolithic to the Medieval period, although the majority of these sites date between the Neolithic and Roman periods.

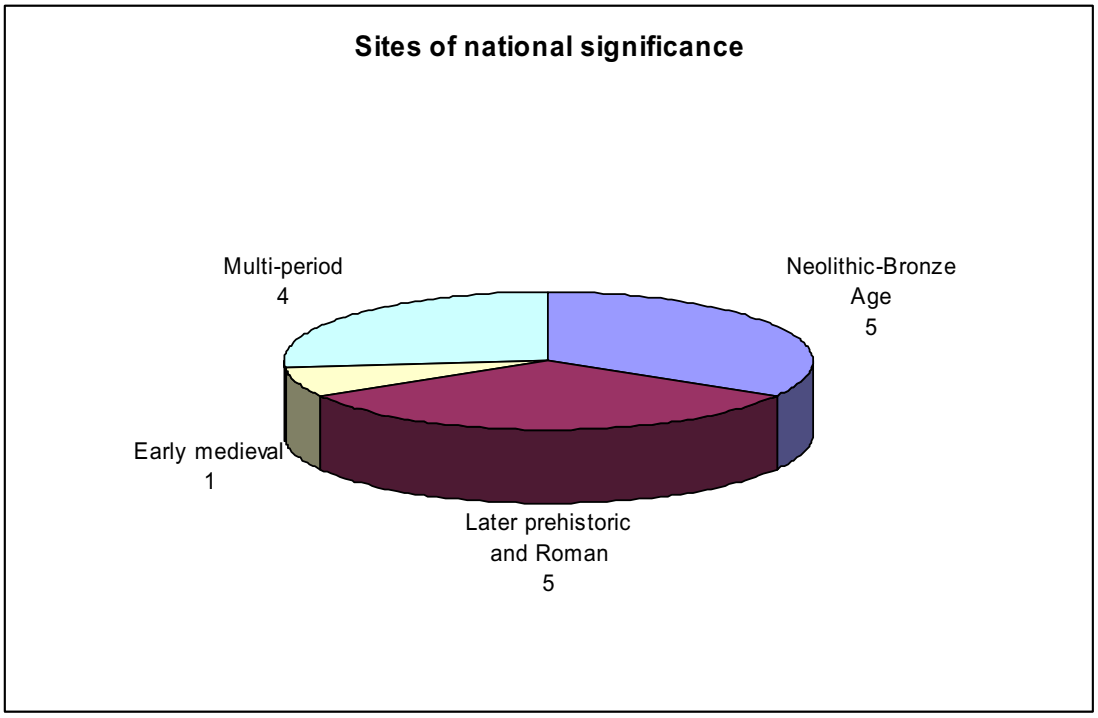


Illustration 29: Date range of identified sites of national significance

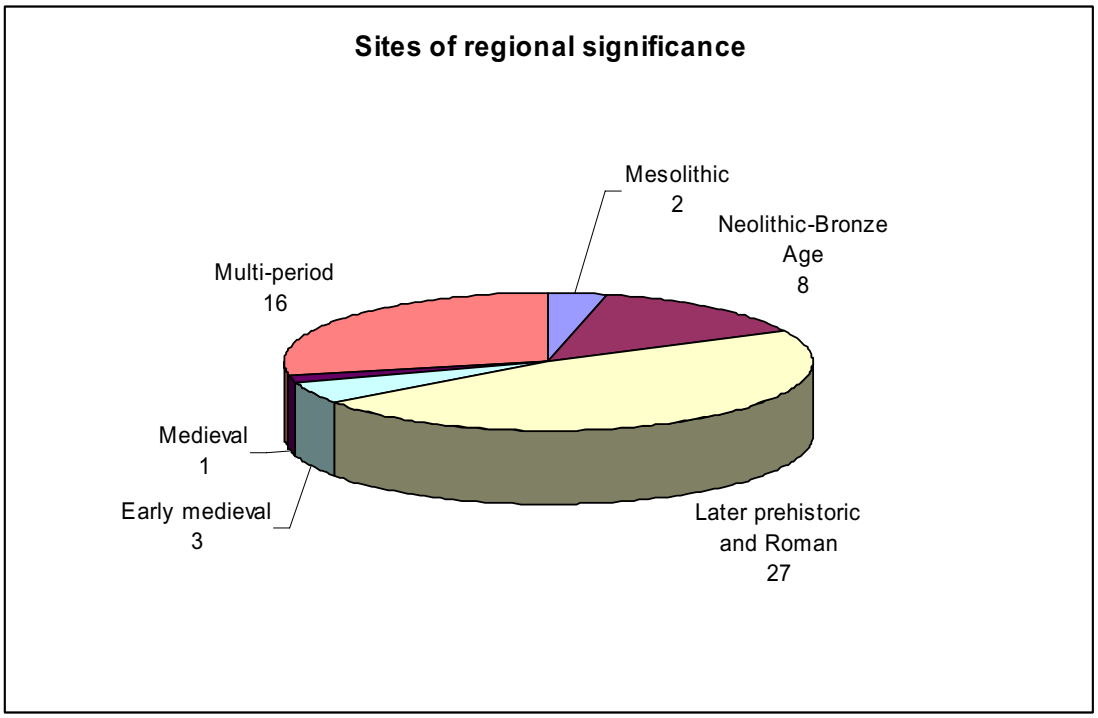


Illustration 30: Date range of identified sites of regional significance

6 CRITIQUE OF METHOD AND DATA STRUCTURE

The methodology and data structure employed during the project was outlined in the original brief from English Heritage and in the project design by ARCUS. The procedures thus established were followed during the project with a single minor adjustment, the addition of a field to the database to incorporate the numerical Period assignment of the project (Periods 1-4). A number of methodological issues arising from the project will be discussed here, and some minor technical issues associated with data structure.

1. The primary data collection methodology was essentially a three-stage process, beginning with a literature search, followed by consultations with local HER/SMRs, and finally making contact with individual archaeological organisations and museums of record to address gaps in the data. Although the methodology proved essentially robust, problems obtaining data at the second stage (HER/SMR) placed an unforeseen pressure on the third stage (consultations with archaeological organisations and museums). These problems arose from two main areas:

- Inability to specifically identify aggregates extraction sites within the local HER/SMR database, other than by reading each record individually (all counties);
- Backlogs in the digitising/accession of HER/SMR records. This problem was particularly marked in Nottinghamshire, where no major update has taken place since 1991, and developer reports after this date were not available, and in Oxfordshire, where, conversely, post-PPG16 work is particularly well-recorded but where there is a backlog in digitising older projects.

The result of these problems was to create a large numbers of 'gaps' in the record, where questions regarding the status of the project, publication, and archive deposition were only answerable by recourse to relevant project managers at archaeological units, and to individual museums of record, with significant time implications for the individuals concerned. In a future national project, therefore, it would be desirable to anticipate the limitations of HER/SMR data and to build in further time and costs for the final consultations, perhaps to the extent of paying time costs incurred by other organisations during these consultations.

2. The original specification of the project limited the database to 'inactive' projects. During data collection it became clear that aggregates projects can be exceptionally long-lived. A number of long-running gravel quarry projects highlighted by the project are regarded by the relevant unit managers as 'active', even though the earliest stages of the project were carried out during the early 1990s. These currently 'active' projects can therefore be seen to span the entire currency of PPG16/15, and a decision was made to include them within the database. In a future extension of the project it is recommended therefore that active projects are included within the brief.

3. The original brief specifies that 'all kinds of archaeological fieldwork … carried out in association with … and/or in preparation for aggregates extraction' should be included within the database. This definition was found to be relatively robust, but two classes of intervention proved problematic during data collection:

- The recovery of stray finds from aggregates sites. This type of record is prevalent during early aggregates extraction, particularly during Period 1. The specific context of such finds is generally unknown, a typical scenario being the recovery of objects by a quarry worker which are then shown to an antiquarian collector or to a museum curator. In general, these records were excluded from the database, as they were not considered to constituted 'fieldwork' in any meaningful sense. However, where finds collection was carried out in a methodical way, or when archaeological features were recorded in addition to finds collection, these records have been included.
- Desk-based assessment carried out post-PPG16/15. The initial stage of many post-PPG16/15 projects is a desk-based assessment, often including a rapid walkover survey. It was decided that these projects did not constitute 'fieldwork' in any meaningful sense, and they were consequently excluded from the database.

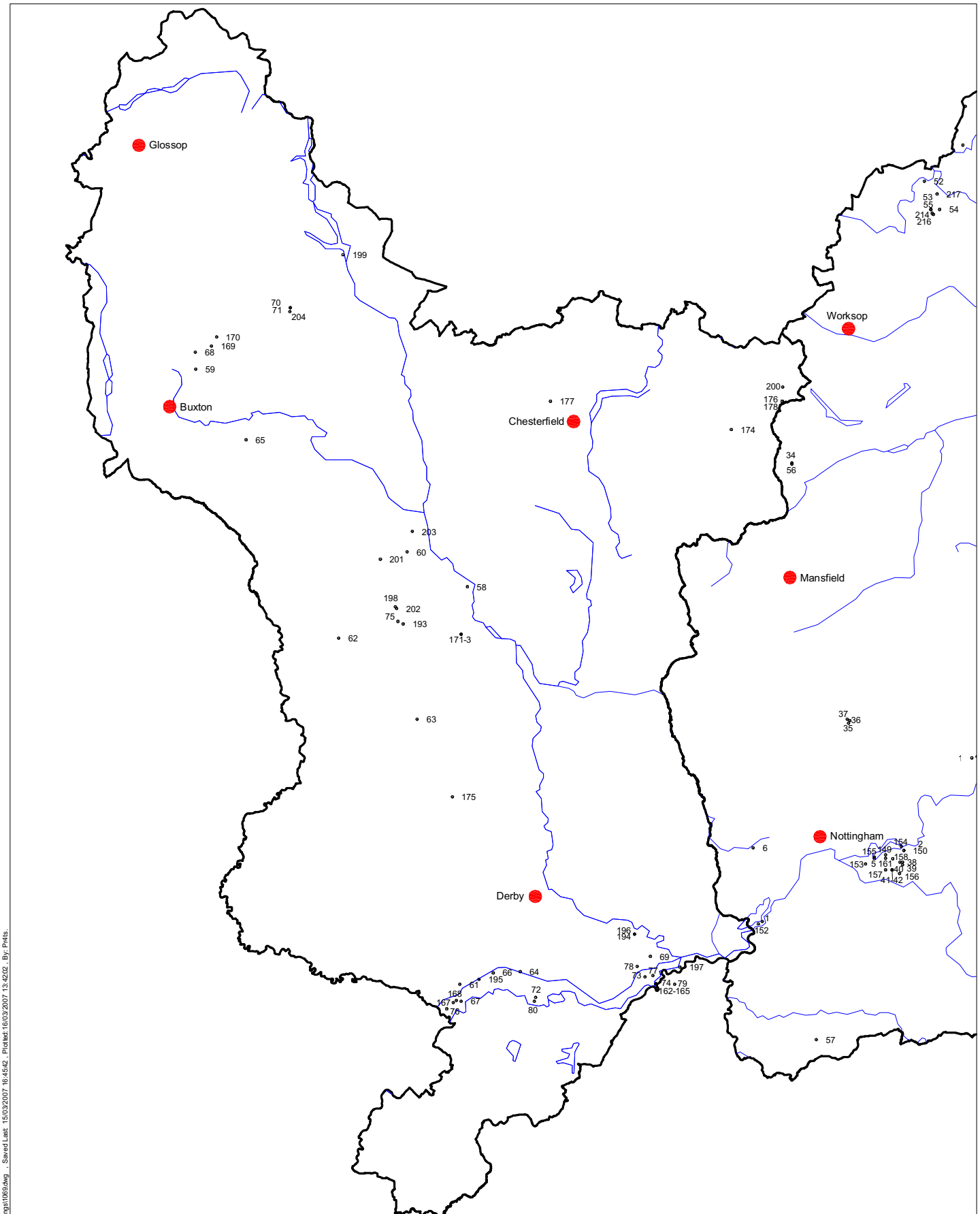
In future projects it is recommended that the definition of included projects should therefore be expanded to clarify these issues.

4. The data structure as defined in the brief and project design proved to be robust. A few technical points are worth discussion:

- The 'Year or year range of intervention' field (field 16), was designed as a free text field rather than a number field, to allow multiple years or a range of years to be entered. This made the separation of projects into Periods 1-4 a problematic procedure. To remove this problem, a new field was added, 'Period 1-4' (field 33) to allow simple recording of the period allocation.
- The 'Scheduled Monument Number' and 'Listed building, garden or battlefield number' fields (fields 12 and 13) were not used in any record. Consideration should be given to the usefulness of these fields in any future database.
- The 'Most recent project stage' field (field 24) used MAP2 project stages as glossary terms. It proved very difficult to apply these terms meaningfully to older projects, and even post-PPG16/15 work has not always been carried out using these stages. It is recommended, therefore, that a broader list of glossary terms is compiled for any future database. A useful selection of terms might be: *ongoing fieldwork, fieldwork complete, post-excavation in progress, developer report submitted, publication work in progress, publication complete, archive deposited*. Similar considerations should be used when selecting terms in the 'suggested level of dissemination' field (field 30).
- The 'Proposed type of work and dissemination' field (field 31) allowed only one selection from a glossary of terms. This proved unhelpful

where two or more recommendations could have been made, for example suggesting monograph publication and archive deposition. It is recommended that an additional field is added to allow for a further selection.

APPENDIX 1: DISTRIBUTION MAPS



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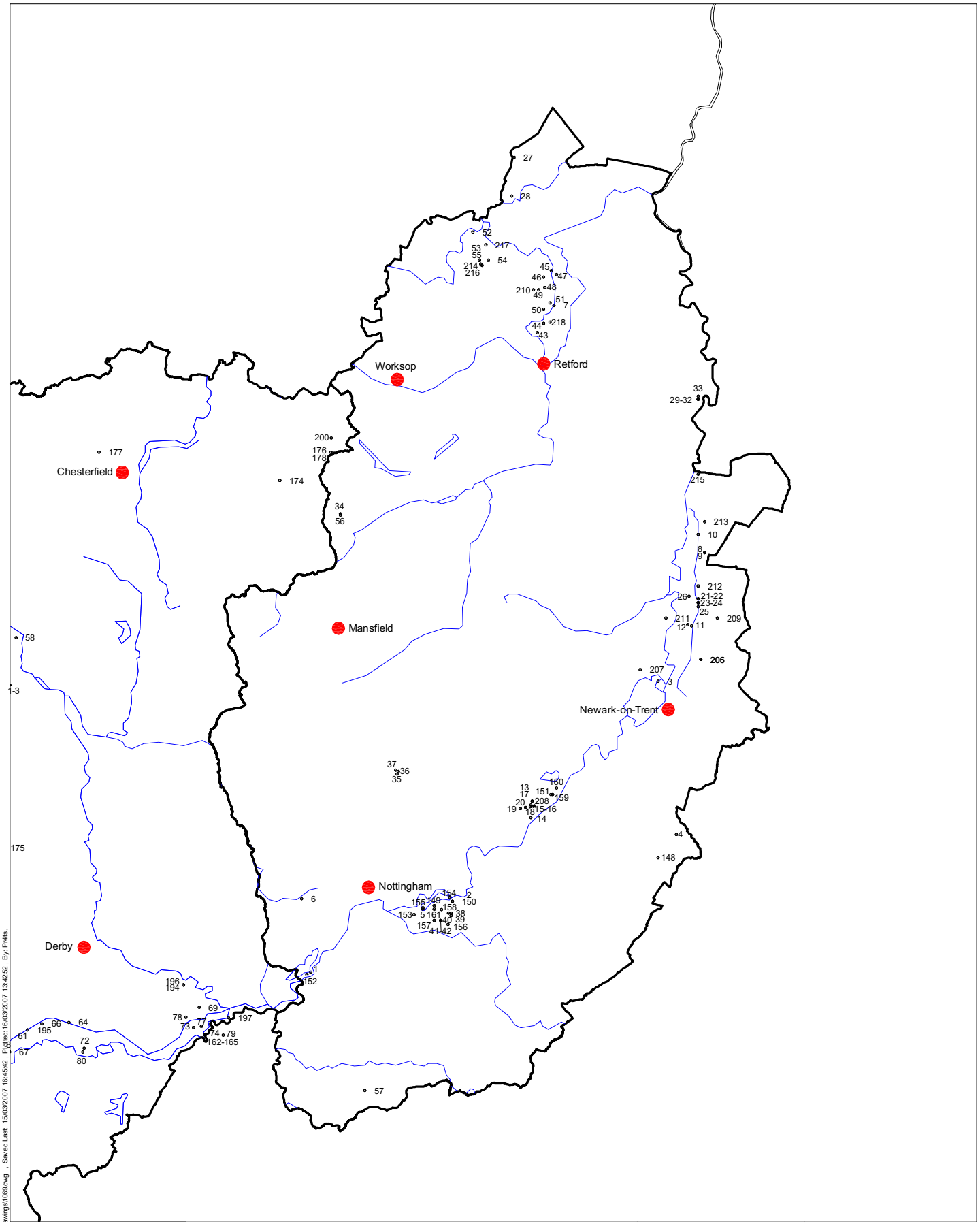
N

Project:
Identification and Quantification of Projects Arising From Aggreqates Extraction: Pilot Study

Title
Distribution of sites in Derbyshire

Scale	Date
1:400000@A4	March 07
NGR	Drawn
431015 357945	TES
Project No.	Illustration No.
1069	**31**



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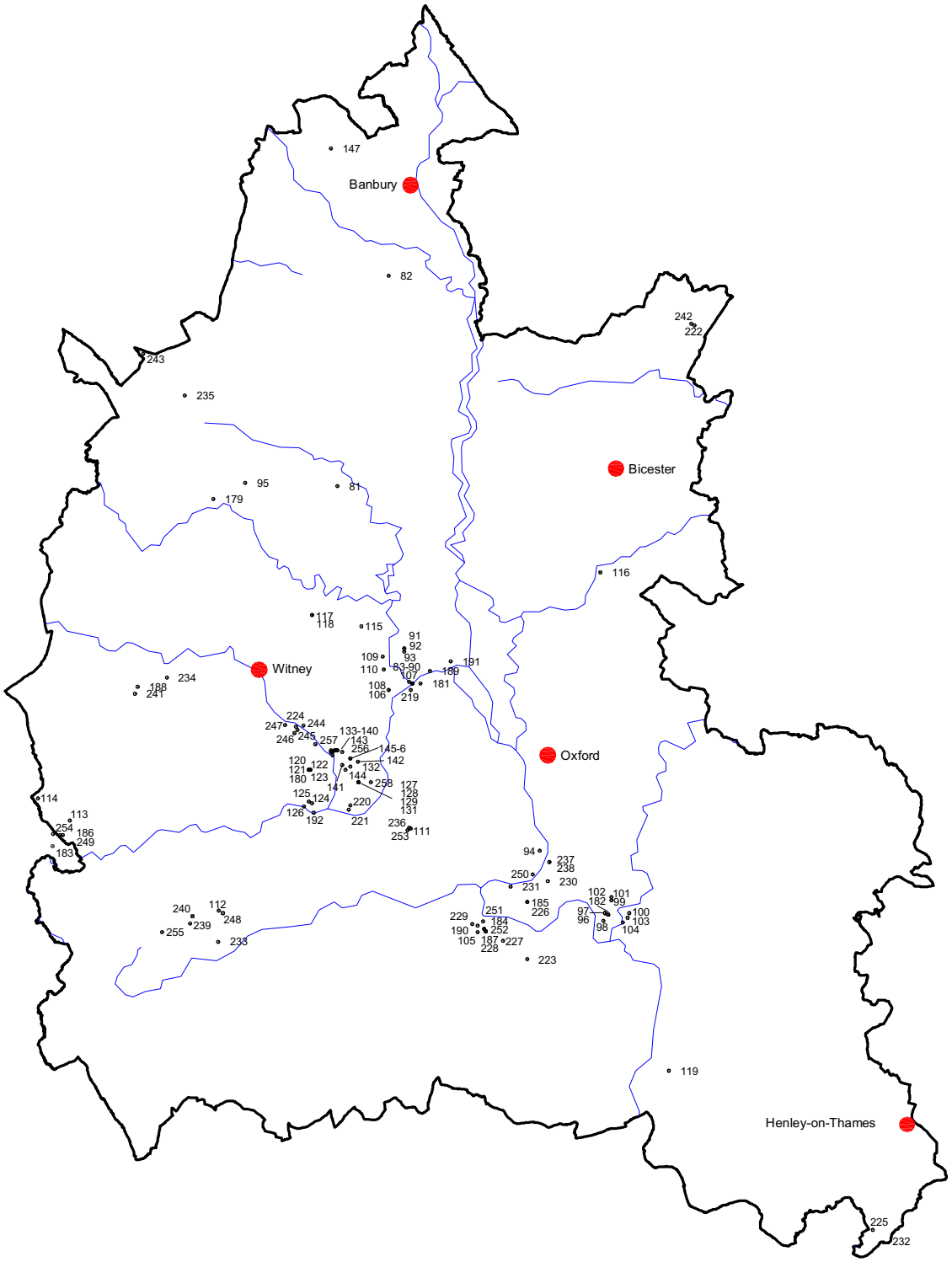
Project: **Identification and Quantification of Projects Arising From Aggreqates Extraction: Pilot Study**	Scale 1:400000@A4
	Date March 07
Title Distribution of sites in Nottinghamshire	NGR 466090 361903
	Drawn TES
	Project No. **1069**
	Illustration No. **32**



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Project: **Identification and Quantification of Projects Arising From Aggreqates Extraction: Pilot Study**	Scale 1:400000@A4
	Date March 07
Title Distribution of sites in Oxfordshire	NGR 448250 211756
	Drawn TES
	Project No. **1069**
	Illustration No. **33**

APPENDIX 2: GAZETTEER OF SITES

ID	Name of project	Name(s) of quarry(ies)	County	Dissemination complete/appropriate?
1	Attenborough	Attenborough	Nottinghamshire	Yes
2	Holme Pierrepont palaeochannel	Holme Pierrepont	Nottinghamshire	Yes
3	South Muskham	South Muskham	Nottinghamshire	Yes
4	Staunton	Staunton	Nottinghamshire	Yes
5	Colwick medieval fish weir	Colwick	Nottinghamshire	Yes
6	Colwick Anglo-saxon fish weir	Colwick	Nottinghamshire	Yes
7	Chainbridge Lane, Lound	Lound	Nottinghamshire	Yes
8	Waycar Pasture, Girton	Girton	Nottinghamshire	No
9	Girton Quarry evaluation 1997	Girton	Nottinghamshire	No
10	Girton Northern Extension	Girton	Nottinghamshire	No
11	Langford Lowfields rapier	Langford Lowfields	Nottinghamshire	Yes
12	Langford skulls	Langford Lowfields	Nottinghamshire	No
13	Hoveringham western extension	Hoveringham	Nottinghamshire	No
14	Hoveringham W extension Ph2	Hoveringham	Nottinghamshire	No
15	Holme Dyke, Gonalston	Hoveringham	Nottinghamshire	No
16	Holme Dyke, Gonalston	Hoveringham	Nottinghamshire	No
17	Gonalston, Holme Dyke	Hoveringham	Nottinghamshire	No
18	Gonalston Lane, Hoveringham	Hoveringham	Nottinghamshire	No
19	Gonalston Lane Crossing	Hoveringham	Nottinghamshire	No
20	Gonalston Lane	Hoveringham	Nottinghamshire	No
21	Besthorpe Quarry Phase 1	Besthorpe	Nottinghamshire	No
22	Besthorpe Quarry Phase 2	Besthorpe	Nottinghamshire	No
23	Besthorpe Quarry Phases 3/4	Besthorpe	Nottinghamshire	No
24	Besthorpe Quarry	Besthorpe	Nottinghamshire	No
25	Besthorpe Quarry	Besthorpe	Nottinghamshire	No
26	Besthorpe Quarry	Besthorpe	Nottinghamshire	No
27	Finningley Quarry	Finningley	Nottinghamshire	No
28	Newington Quarry	Newington	Nottinghamshire	No
29	Rampton Quarry	Rampton	Nottinghamshire	Yes
30	Rampton Quarry	Rampton	Nottinghamshire	No
31	Rampton beaker	Rampton	Nottinghamshire	No
32	Moor Pool Close, Rampton	Rampton	Nottinghamshire	No
33	Rampton Quarry	Rampton	Nottinghamshire	No
34	Boon Hills Farm, Warsop	Nether Langwith	Nottinghamshire	Yes
35	Burnt Stump, Calverton Quarry	Burnt Stump	Nottinghamshire	No
36	Burnt Stump, Calverton Quarry	Burnt Stump	Nottinghamshire	No
37	Burnt Stump, Calverton Quarry	Burnt Stump	Nottinghamshire	No
38	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	No
39	Holme Pierrepont extension	Holme Pierrepont	Nottinghamshire	No
40	Lane Conery, Holme Pierrepont	Holme Pierrepont	Nottinghamshire	No
41	Holme Pierrepont quarry	Holme Pierrepont	Nottinghamshire	No
42	Holme Pierrepont Quarry	Holme Pierrepont	Nottinghamshire	No
43	Tiln Quarry	Tiln	Nottinghamshire	No
44	Pig Pens, Tiln	Tiln	Nottinghamshire	No
45	East Carr, Mattersey	Lound	Nottinghamshire	No
46	East Carr, Mattersey	Mattersey	Nottinghamshire	No
47	East Carr, Mattersey	Lound	Nottinghamshire	No

48	Wild Goose Cottage, Lound	Lound	Nottinghamshire	No
49	Lound Quarry extension	Lound	Nottinghamshire	No
50	Sutton Grange, Lound	Lound	Nottinghamshire	No
51	Chainbridge Lane, Lound	Lound	Nottinghamshire	No
52	Gibbet Hill Lane	Scrooby Top	Nottinghamshire	Yes
53	Scrooby Top NW extension	Scrooby Top	Nottinghamshire	No
54	Scrooby Top S extension	Scrooby Top	Nottinghamshire	No
55	Scrooby Top NW extension	Scrooby Top	Nottinghamshire	No
56	Nether Langwith Quarry	Nether Langwith	Nottinghamshire	Yes
57	East Leake Quarry	East Leake	Nottinghamshire	No
58	Human burials at Megdale	Cawdor	Derbyshire	Yes
59	Cave sites, various quarries	Dove Holes, Hoe Grange	Derbyshire	Yes
60	BA pottery, Stanton Moor	New Park, Stanton	Derbyshire	Yes
61	BA urns, Willington	Willington	Derbyshire	Yes
62	Low Moor Farm, Parwich	Parwich	Derbyshire	Yes
63	Kirk Ireton gravel pit	Kirk Ireton	Derbyshire	Yes
64	Beaker sherds from Stenson	Stenson	Derbyshire	Yes
65	Calton Hill, Taddington	Calton Hill	Derbyshire	Yes
66	Findern cursus	Findern	Derbyshire	Yes
67	Willington	Willington	Derbyshire	Yes
68	Bull ring henge, Dove Holes	Dove Holes	Derbyshire	Yes
69	Ambaston Lane, Shardlow	Shardlow	Derbyshire	No
70	Bradwellmoor Barn	Bradwell Moor	Derbyshire	Yes
71	Bradwellmoor Barn	Bradwell Moor	Derbyshire	Yes
72	Fernello Sitch, Swarkestone	Swarkestone	Derbyshire	No
73	Hicken's Bridge, Aston	Shardlow	Derbyshire	No
74	ARC quarry, Shardlow	Shardlow	Derbyshire	Yes
75	Aldwark, near Brassington	Longcliffe	Derbyshire	Yes
76	Willington quarry extension	Willington	Derbyshire	No
77	Argosy Washolme	Shardlow	Derbyshire	No
78	Chapel Farm, Shardlow	Hemington	Derbyshire	No
79	Argosy Washolme log boat	Shardlow	Derbyshire	No
80	Fleak Close, Captain's Pingle	Swarkestone	Derbyshire	No
81	Medieval pottery, Asterleigh	Asterleigh	Oxfordshire	Yes
82	R-B site, Bloxham	Bloxham	Oxfordshire	Yes
83	Tolley's pit, Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
84	Cassington ring ditches	Cassington/Yarnton/Worton	Oxfordshire	Yes
85	Smith's Pit 2, Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
86	Partridge's Pit, Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
87	Cassington Mill	Cassington/Yarnton/Worton	Oxfordshire	Yes
88	Cassington Mill	Cassington/Yarnton/Worton	Oxfordshire	Yes
89	Cassington Mill	Cassington/Yarnton/Worton	Oxfordshire	Yes
90	Cassington Mill	Cassington/Yarnton/Worton	Oxfordshire	Yes
91	Purwell Farm, Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
92	Purwell Farm, Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
93	Purwell Farm, Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
94	Chinnor quarry	Chinnor	Oxfordshire	Yes
95	RJ Hobbs' Pit	Dean	Oxfordshire	Yes
96	Dorchester henge	Dorchester/Berinsfield	Oxfordshire	Yes
97	Dorchester monuments	Dorchester/Berinsfield	Oxfordshire	Yes
98	Amey's Pit ands Allen's Pit	Dorchester/Berinsfield	Oxfordshire	Yes
99	Mount Farm, Berinsfield	Dorchester/Berinsfield	Oxfordshire	Yes
100	Wally Corner, Dorchester	Dorchester/Berinsfield	Oxfordshire	Yes

101	Mount Farm, Berinsfield	Dorchester/Berinsfield	Oxfordshire	Yes
102	Dorchester-on-Thames	Dorchester/Berinsfield	Oxfordshire	Yes
103	Queensford Farm, Berinsfield	Dorchester/Berinsfield	Oxfordshire	Yes
104	Queensford Mill	Dorchester/Berinsfield	Oxfordshire	Yes
105	Drayton cursus	Sutton Courtenay	Oxfordshire	Yes
106	Foxley Farm, Eynsham	Eynsham	Oxfordshire	Yes
107	Partridge's Pit, Eynsham	Cassington/Yarnton/Worton	Oxfordshire	Yes
108	Twelve Acre Farm	Eynsham	Oxfordshire	Yes
109	City Farm	Hanborough	Oxfordshire	Yes
110	New Wintles Farm	Eynsham	Oxfordshire	No
111	New Plantation	Tubney Wood	Oxfordshire	Yes
112	Sandy Lane, Hatford	Hatford	Oxfordshire	Yes
113	Langford Downs, Lechlade	Langford	Oxfordshire	Yes
114	Langford	Langford	Oxfordshire	Yes
115	Tuckwell's Pit	Hanborough	Oxfordshire	Yes
116	Merton M40 borrow pits	Merton	Oxfordshire	Yes
117	Brown's Pit, North Leigh	North Leigh	Oxfordshire	Yes
118	IA pottery, North Leigh	North Leigh	Oxfordshire	Yes
119	North Stoke cursus	North Stoke	Oxfordshire	Yes
120	Sander's Pit, Standlake	Standlake	Oxfordshire	Yes
121	Ring ditch, Standlake	Standlake	Oxfordshire	Yes
122	Standlake Downs	Standlake	Oxfordshire	Yes
123	Standlake Down	Standlake	Oxfordshire	Yes
124	Standlake	Standlake	Oxfordshire	Yes
125	Standlake	Standlake	Oxfordshire	Yes
126	Old Shifford Farm	Standlake	Oxfordshire	Yes
127	Linch Hill	Stanton Harcourt	Oxfordshire	Yes
128	Beard Mill, Linch Hill	Stanton Harcourt	Oxfordshire	Yes
129	Barrow Field,	Stanton Harcourt	Oxfordshire	No
130	Black Ditch, Vicarage Pit	Stanton Harcourt	Oxfordshire	Yes
131	Barrow Field, Linch Hill	Stanton Harcourt	Oxfordshire	Yes
132	Devil's Quoits henge	Stanton Harcourt	Oxfordshire	Yes
133	Vicarage Field	Stanton Harcourt	Oxfordshire	Yes
134	Dix's Pit	Stanton Harcourt	Oxfordshire	Yes
135	Beard Mill	Stanton Harcourt	Oxfordshire	Yes
136	Beard Mill	Stanton Harcourt	Oxfordshire	Yes
137	Amey's Pit and Dix's Pit	Stanton Harcourt	Oxfordshire	Yes
138	Vicarage Field	Stanton Harcourt	Oxfordshire	Yes
139	Partridge's Pit, Dix's Pit	Stanton Harcourt	Oxfordshire	Yes
140	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
141	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
142	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
143	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
144	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
145	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
146	Stanton Harcourt	Stanton Harcourt	Oxfordshire	Yes
147	Wroxton hoard	Wroxton	Oxfordshire	Yes
148	Kilvington Quarry, Flawborough	Kilvington	Nottinghamshire	No
149	Holme Pierrepont test pits	Holme Pierrepont	Nottinghamshire	Yes
150	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	Yes
151	Coneygre Farm, Thurgarton	Hoveringham	Nottinghamshire	Yes
152	Attenborough	Attenborough	Nottinghamshire	Yes
153	Adbolton, Holme Pierrepont	Holme Pierrepont	Nottinghamshire	No

154	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	Yes
155	Colwick	Holme Pierrepont	Nottinghamshire	Yes
156	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	Yes
157	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	Yes
158	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	Yes
159	Coneygre Farm, Thurgarton	Hoveringham	Nottinghamshire	No
160	Thurgarton	Hoveringham	Nottinghamshire	Yes
161	Holme Pierrepont	Holme Pierrepont	Nottinghamshire	Yes
162	Shardlow stocking area	Shardlow	Derbyshire	Yes
163	Shardlow stocking area	Shardlow	Derbyshire	No
164	Shardlow southern extension	Shardlow	Derbyshire	No
165	Shardlow southern extension	Shardlow	Derbyshire	Yes
166	Shardlow	Shardlow	Derbyshire	No
167	Willington	Willington	Derbyshire	Yes
168	Willington Phase 7	Willington	Derbyshire	No
169	Dove Holes Quarry	Dove Holes	Derbyshire	Yes
170	Bee Low	Bee Low	Derbyshire	Yes
171	Dene Quarry	Dene	Derbyshire	Yes
172	Dene Quarry	Dene	Derbyshire	Yes
173	Dene Quarry	Dene	Derbyshire	Yes
174	Bolsover Moor	Bolsover Moor	Derbyshire	Yes
175	Mercaston	Mercaston	Derbyshire	Yes
176	Whitwell Quarry Area E	Whitwell	Derbyshire	Yes
177	Whitwell Quarry Area E	Whitwell	Derbyshire	Yes
178	Whitwell Quarry Area E	Whitwell	Derbyshire	Yes
179	Chadlington	Chadlington	Oxfordshire	Yes
180	Standlake	Standlake	Oxfordshire	Yes
181	Cassington	Cassington/Yarnton/Worton	Oxfordshire	Yes
182	Dorchester	Dorchester/Berinsfield	Oxfordshire	Yes
183	Claydon Pike	Fairford/Lechlade	Oxfordshire	Yes
184	Sutton Wick Area C	Sutton Courtenay	Oxfordshire	Yes
185	Appleford Sidings	Sutton Courtenay	Oxfordshire	No
186	Little Faringdon	Little Faringdon	Oxfordshire	Yes
187	Sutton Wick	Sutton Courtnenay	Oxfordshire	Yes
188	Shilton, Burford Quarry	Burford	Oxfordshire	Yes
189	Cassington western extension	Cassington/Yarnton/Worton	Oxfordshire	No
190	Drayton cursus	Sutton Courtenay	Oxfordshire	Yes
191	Yarnton Cassington Project	Cassington/Yarnton/Worton	Oxfordshire	No
192	Samson's Ford, Standlake	Standlake	Oxfordshire	Yes
193	Ivonbrook Quarry	Ivonbrook	Derbyshire	Not known
194	Elvaston	Elvaston	Derbyshire	No
195	Hill Farm, Willington	Willington	Derbyshire	No
196	Elvaston	Elvaston	Derbyshire	Yes
197	Hemington Quarry extension	Hemington	Derbyshire	Yes
198	Ivonbrook Quarry	Ivonbrook	Derbyshire	Not known
199	Win Hall Quarry	Win Hall	Derbyshire	No
200	Whitwell Quarry	Whitwell	Derbyshire	Not known
201	Wattscliffe Quarry	Wattscliffe	Derbyshire	No
202	Ivonbrook Quarry	Ivonbrook	Derbyshire	Not known
203	New Pilhough Quarry extension	New Pilhough	Derbyshire	Not known
204	Hope Limestone Quarry	Hope	Derbyshire	No
205	Manor House Farm	Little Carlton	Nottinghamshire	Yes
206	Langford Lowfields	Langford Lowfields	Nottinghamshire	No

207	Manor House Farm	Little Carlton	Nottinghamshire	No
208	Hoveringham Quarry extension	Hoveringham	Nottinghamshire	No
209	Carlton Ferry Lane	Collingham	Nottinghamshire	Yes
210	Lound western extension	Lound	Nottinghamshire	No
211	Cromwell Quarry extension	Cromwell	Nottinghamshire	No
212	Besthorpe Quarry	Besthorpe	Nottinghamshire	No
213	Girton Quarry, Newark	Girton	Nottinghamshire	No
214	Scrooby Top quarry	Scrooby Top	Nottinghamshire	No
215	Rampton	Rampton	Nottinghamshire	No
216	Scrooby Top	Scrooby Top	Nottinghamshire	No
217	Scrooby Top	Scrooby Top	Nottinghamshire	No
218	Tiln North	Tiln	Nottinghamshire	No
219	Eynsham, Wharf Farm	Eynsham	Oxfordshire	No
220	Pinnocks Farm 1992	Northmoor	Oxfordshire	No
221	Park Farm	Northmoor	Oxfordshire	No
222	Foxley Fields Farm	Finmere	Oxfordshire	No
223	Appleford Sidings	Sutton Courtenay	Oxfordshire	Yes
224	Gill Mill, Ducklington	Gill Mill	Oxfordshire	No
225	Sonning Eye Area 1	Caversham	Oxfordshire	No
226	Appleford Sidings	Sutton Courtenay	Oxfordshire	No
227	Cross Trees Farm	Sutton Courtenay	Oxfordshire	No
228	Sutton Wick	Sutton Courtenay	Oxfordshire	Yes
229	Stonehill Lane, Sutton Wick	Sutton Courtenay	Oxfordshire	No
230	Pumney Farm	Radley	Oxfordshire	No
231	Tuckwell's Pit (Thrupp)	Radley	Oxfordshire	Yes
232	Sonning Eye Northern extension	Caversham	Oxfordshire	No
233	Shellingford Quarry extension	Shellingford	Oxfordshire	No
234	Worsham Quarry, Asthall	Worsham	Oxfordshire	Yes
235	Flick Quarry, Rollright	Rollright	Oxfordshire	Yes
236	Tubney Wood quarry extension	Tubney Wood	Oxfordshire	No
237	Barrow Hills, Radley	Radley	Oxfordshire	Yes
238	Barrow Hills, Radley	Radley	Oxfordshire	Yes
239	Bowling Green Farm	Stanford-in-the-Vale	Oxfordshire	Yes
240	Bowling Green Farm	Stanford-in-the-Vale	Oxfordshire	Yes
241	Burford Quarry, Shilton	Burford	Oxfordshire	Yes
242	Foxley Fields Farm	Finmere	Oxfordshire	No
243	Flick Quarry, Rollright	Rollright	Oxfordshire	Yes
244	South Leigh Gill Mill	Gill Mill	Oxfordshire	No
245	Gill Mill, Ducklington	Gill Mill	Oxfordshire	No
246	Ducklington Gill Mill Area 4	Gill Mill	Oxfordshire	No
247	Gill Mill, Ducklington	Gill Mill	Oxfordshire	No
248	Manorhouse Farm, Hatford	Hatford	Oxfordshire	No
249	Little Faringdon Phase 2	Little Faringdon	Oxfordshire	No
250	Eight Acre Farm, Radley	Radley	Oxfordshire	Yes
251	Sutton Wick	Sutton Courtenay	Oxfordshire	Yes
252	Otney Areas A-C	Sutton Courtenay	Oxfordshire	No
253	Tubney Wood	Tubney Wood	Oxfordshire	No
254	Tubney Wood Quarry	Tubney Wood	Oxfordshire	No
255	Wicklesham Quarry	Wicklesham	Oxfordshire	Yes
256	Gravelly Guy	Stanton Harcourt	Oxfordshire	Yes
257	Mingies Ditch	Hardwick	Oxfordshire	Yes
258	Watkins Farm	Northmoor	Oxfordshire	Yes

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