

## **Component 5**

# **CONSTRUCTION OF A SEARCHABLE BIBLIOGRAPHIC DATABASE**

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*The aim of the Trent Valley GeoArchaeology Bibliographic Database is to provide a single means of access to all bibliographic sources for the archaeology of the Trent Valley. Through the construction of a consolidated, easily accessible bibliography of all sources, including published works and unpublished 'grey' literature, the database will address the recommendations put forward by Trent Valley GeoArchaeology and is seen as a significant aid to future research in the Trent Valley. This document: a) provides a method statement of work comprising Component 5: Construction of a searchable bibliographic database, and b) provides documentation accompanying the electronic data resource as a guide to third parties.*



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# 1. Introduction

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## 1.1 PROJECT DETAILS

**Table 1: ADS Metadata matrix**

Title:	Trent Valley 2002: Trent Valley GeoArchaeology Bibliographic Database
Description:	Sections 2.1–2.2
Subject:	Bibliography, Archaeology
Coverage:	Section 2.3, Appendix 1
Creators:	Section 1.1
Publisher:	Section 3
Identifiers:	Sections 3.5, 4.1
Dates:	Computerization: 2/6/03 – 31/12/03; SMR visitation: Table 2
Copyright:	The University of Nottingham
Relations:	Section 3.5
Language:	English
Resource Type:	Bibliographic Database; citation index
Format:	Microsoft® Office XP Access

PROJECT TITLE: Trent Valley 2002: Trent Valley GeoArchaeology Bibliographic Database

PRINCIPAL DEPOSITOR: M.W. Bishop  
POSITION: County Archaeologist, Nottinghamshire (Convener Trent Valley GeoArchaeology)

INSTITUTION: Nottingham County Council,  
CONTACT: Trent Bridge House, Fox Rd., West Bridgford, Nottingham NG2 6BT  
TEL: 0115 977 2116 FAX: 0115 977 2418 E-MAIL: [mike.bishop@nottscc.gov.uk](mailto:mike.bishop@nottscc.gov.uk)

CREATOR: Stuart Brookes, University of Nottingham  
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TEL: 0115 951 4292 FAX: 0115 951 4812 E-MAIL: [Stuart.Brookes@nottingham.ac.uk](mailto:Stuart.Brookes@nottingham.ac.uk)  
TEL: 0115 951 4839 FAX: 0115 951 4812 E-MAIL: [mark.pearce@nottingham.ac.uk](mailto:mark.pearce@nottingham.ac.uk)

FUNDING: This project was part of the Trent Valley GeoArchaeology 'Trent Valley 2002' project, funded from the Aggregates Levy Sustainability Fund administered by English Heritage.

## 1.2 INTRODUCTION: THE NEED FOR CONSOLIDATION

*“Considerable archaeological, geomorphological and palaeoenvironmental work has been carried out in the Trent Valley. Apart from publications in local journals, most of this work is accessible only through “grey” literature held in SMRs. The lack of a consolidated, easily accessible bibliography is an impediment to research in the Trent Valley. The need is for a reference database with keywords, that can be searched for particular types of information and to identify where full details can be obtained, that covers the whole Trent Valley and that can be readily accessed through the web at defined locations (such as Trent Valley GeoArchaeology’s web site, ADS, SMRs).”*

(Project Outline May 2002)

Understanding of the archaeology of the Trent Valley, which spans several counties and three regions (East Midlands, West Midlands, Yorks and Humberside) is at present fragmented; a situation which is exacerbated by the proliferation of ‘grey’ literature, deposited in SMR archives in the various Counties and Unitary Authorities. Although new sites are identified and excavated on an annual basis there currently exists no coherent listing of these works across the whole Trent Valley area. In the current situation it is clear that no single researcher has ever had more than piecemeal access to documentary sources, nor has a strategy existed to assess pragmatic issues of publication and levels of intervention made across the region as a whole. The building of discrete databases by County and Unitary authorities, or for specific research purposes (by period or geographical location) in a variety of formats has entailed much repetition and fragmentation of data. As a consequence it has not proved possible to compare these sets nor to interrogate the respective methodologies.

In response to the need for greater understanding of the archaeology of the Trent Valley, *Trent Valley 2002* implemented the creation of a searchable reference database that brings together both published and ‘grey’ literature within a single data resource. By unifying bibliographic references of these diverse sources to the same classification criteria the *Trent Valley GeoArchaeology Bibliography* provides for enhanced access of information on the nature and extent of archaeological works. Funding for this project was granted by the Aggregates Sustainability Levy administered by English Heritage during the 2002/3 round and work was carried out on this component from June to December 2003 by the Department of Archaeology, The University of Nottingham.

This report provides an outline of the work undertaken as part of Component 5. In line with the broader research aims of *Trent Valley 2002* outlined above, significant metadata have also been included to allow for the wider dissemination of the resource amongst the major researchers in, and custodians of, the archaeology and palaeoenvironments of the Trent Valley. Accordingly, this report is structured as a guide to third parties wishing to access the resource and includes various documentation identifying the nature and structure of the dataset.

## 2. Nature of the Bibliography

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### 2.1 PURPOSE OF THE BIBLIOGRAPHY

In order to achieve the strategic aims of the *Trent Valley 2002*, the purpose of the *Trent Valley GeoArchaeology Bibliographic Database* (TVGAB) is to provide a single means of access to all bibliographic sources for the archaeology of the Trent Valley. Specifically, this database will:

- Facilitate the access of information on archaeological works across the whole Trent Valley area.
- Provide bibliographic sources to allow the Trent Valley to be seen as a single geographical unit.
- Maximise the effectiveness of future work on the Trent Valley by providing a gateway to all resources in an integrated way.
- Preserve a record of past and current unpublished resources for the Trent Valley.

In order to achieve the principal aims of the project, the TVGAB has two key objectives:

- a) To identify bibliographic data pertaining to archaeological projects within the Trent Valley area (see 2.3)
- b) To record all bibliographic data to a standardised criteria and classification scheme

### 2.2 TOPIC AND CONTENT OF RESEARCH

The resources at the heart of this project are the substantial volume of published sources, including books, journal and web-articles detailing the archaeology of the Trent Valley, that exist either at a regional, local or artefactual level. Bibliographies of aspects of this material already exist in academic literature. Synthetic regional treatments such as those published as part of *The English Heritage East Midlands Archaeological Research Framework Project* ([http://www.le.ac.uk/ar/east\\_midlands\\_research\\_framework.htm](http://www.le.ac.uk/ar/east_midlands_research_framework.htm)) and Knight & Howard 1994, *Archaeology and Alluvium in the Trent Valley*, for example, have provided important introductory bibliographies of archaeological research within the area. Similarly, SMR databases commonly cite bibliographic references as part of the monument recording process, but these, by their very nature, tend to be geographically-circumscribed datasets relating to only part of the Trent Valley area.

In addition to these published sources there are a large number unpublished 'grey' literature documenting archaeological work within the Trent Valley. These sources can relate to specific archaeological interventions, such as desk-based assessments, fieldwork and specialist reports, or take the form of more general or thematic surveys, produced by, for example, individual researchers or student dissertations. Whilst many of these sources are logged with SMR archives, further unpublished material is often held in museums, by archaeological units, universities, and by individual excavators and researchers.

In line with the principal objectives of the project, the TVGAB brings together these various sources in one unified dataset. However, given certain resource constraints, the database aimed at comprehensive coverage of a prioritised range of data. These included: 'grey' literature reports; publications relating to specific archaeological interventions; and bibliographic references already cited within SMR records. In addition to these data, TVGAB includes more general literature on archaeology, monument surveys, heritage management and specialised artefact analyses, as resources and time allowed. Equally, although some citations of popular magazines (such as *British Archaeology*), current awareness literature, and newspapers were included, these were not comprehensively searched for references.

As the database is intended to operate only as a gateway to identifying resources, data on relevant articles and reports includes only citation information in addition to a limited classification index. Data fields have been structured to conform to the Harvard author-date citation system for books, articles and 'grey-literature', based on the *AGPS Style Guide* 5<sup>th</sup> ed. (AGPS 1994). The details required for this system are:

1. **name/s** of author/s, editor/s, compiler/s (surname, and initials or given name), or the institution responsible
2. **year** of publication
3. **title** of publication and **subtitle** if any
4. **series title** and individual **volume** if any
5. **edition**, if other than first
6. **publisher**
7. **place of publication**
8. **page number(s)** if applicable

The relationship of this system to the data-fields in the TVGAB are outlined in Section 4.1 whilst details of the classification criteria applied comprise Section 4.2. It should be noted that the database only includes abstracted information where this has been supplied in electronic form from existing datasets. In these cases, data is included in a non-searchable 'Further Information' field and is retained in its original format.

### **2.3 GEOGRAPHICAL AND TEMPORAL LIMITS**

The River Trent is 280km long, rising on Biddulph Moor in North Staffordshire and running east and northwards to the Humber. Trent Valley 2002 takes the whole floodplain of the Trent Valley and its major tributaries as its geographical focus. Within the use of the Bibliography an area described by 88 parishes dissected by this floodplain is taken as the geographical limits of recorded data. These parishes are listed in Appendix 1. No temporal end-points to archaeological data were introduced, though for the practical purposes general surveys of post-medieval and twentieth-century historical, cultural and/or political development were not comprehensively searched or entered. Reports and volumes published up until July 2003 (or up to the date of SMR visitation, Table 2) were entered, though necessary omissions to recent, post-c.2001, interventions were imposed when reports were still active in the planning process.

### 3. Methods

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#### 3.1 PROGRAMMING

Data collection and validation was co-ordinated from the University of Nottingham following a schedule developed to maximise data entry over the project life. The project involved a two-stage programme of data collection: the collation of existing electronic archives of 'grey literature' (e.g. desk-based assessments, field evaluations, post-planning determination projects, research projects, building surveys, estate management surveys and geophysical investigations, university theses, specialist reports) and published sources (e.g. journal articles, monographs, web-articles); and the physical checking of this data. The second stage of this programme involved visiting the offices of archaeological curators, contractors and consultants and library collections. All major SMRs with data on the Trent Valley were visited, in addition to those archaeological units/trusts with substantial records of intervention in the survey area.

Database construction was carried out in consultation with the ADS. As part of this liaison an optimum data structure was identified. The TVGAB will be archived on ADS servers and web delivery of the Bibliography will be via the ADS HEIRPORT.

#### 3.2 COLLECTION OF 'GREY LITERATURE'

The TVGAB contains electronic and paper-based datasets provided and reformatted for inclusion from the following sources:

1. *Archaeological Investigations Project* (data supplied on the 3/10/03). See [http://csweb.bournemouth.ac.uk/consci/text\\_aip/aipintro.htm](http://csweb.bournemouth.ac.uk/consci/text_aip/aipintro.htm)
2. English Heritage Excavation Index for England, accessed via the ADS on the 26/6/03. See <http://ads.ahds.ac.uk/catalogue/collections/blurbs/304.cfm>
3. *Archaeological Research & Consultancy at the University of Sheffield* reports (data supplied on the 28/8/03)
4. P.C. Buckland BIBLIOGRAPHY OF QUATERNARY ENTOMOLOGY (data supplied on the 26/8/03)
5. *The Potteries Museum Archaeology Unit* reports (including Stoke-on-Trent City Museum data)(data supplied on the 2/10/03)
6. *Wessex Archaeology* reports (supplied on the 25/09/03)
7. *Trent & Peak Archaeological Unit* reports (supplied on the 16/09/03, archive visitation 24/09/03 – 10/10/03)
8. Electronic 'grey literature' listings from the following Sites and Monuments records

Sites and Monuments Record Office	Date digital data supplied	Dates of visitation
Nottinghamshire	14/07/03	16/10/03 – 15/12/03
Lincolnshire	14/07/03	22/10/03
Derbyshire	5/08/03	30/10/03 - 31/10/03
Leicestershire	21/08/03	5/11/03
North Lincolnshire	6/08/03	13/11/03
Staffordshire	24/07/03	28/11/03 – 10/12/03
Stoke-on-Trent	-	11/12/03
Humberside	13/11/03 (paper)	-

**Table 2. Collection of SMR data**

### 3.3 COLLECTION OF PUBLISHED SOURCES

In addition to 'grey literature' listings, published sources have been entered from the SMR records of the counties of Staffordshire, Nottinghamshire, Lincolnshire and Derbyshire, in addition to electronic data produced by keyword searches of the *BIAB*; *COPAC*; *The Early Medieval Coin Corpus*.

Additional published sources were entered into the database from literature searches. These included physical searches of the library holdings of the University of Nottingham East Midlands collection; the Institute of Archaeology, University College London; The British Library; and the Department of Archaeology, University of Nottingham, graduate dissertation holdings.

### 3.4 CONSISTENCY AND ERROR CHECKING

Data comprising the Bibliography has been checked to two degrees of accuracy. Data was designated as 'checked', when recorded by two or more sources, and 'final checked' when the citation was physically inspected for accuracy. Due to replication of data, the 'checked' field has not been retained in the final deposited database.

An outcome of this method of error checking is that a small number (c.8%) of records comprising the TVGAB represent unsubstantiated data referenced to only a single bibliographic listing (Table 5). These citations have been neither 'checked' nor 'final checked'. In some cases these might be reports produced by contractual fieldworkers but not deposited to relevant SMRs. In other cases, they represent bibliographic citations not identified in any of the targeted libraries. Note regarding the source and status of these data is made in the 'Further Information' field.

Unless errors have been identified in received data, the original formatting of electronic data has been retained throughout. Unique identifiers back-linking data to source datasets are included in the 'Identifier' field, and the 'where seen' field records the first place where volumes were physically checked (See 3.5). Inconsistencies between data received from two or more sources were generally resolved by the physical inspection process. Note of these changes and further clarifications are made in the 'Further Information' field. All editorial comments are included in the 'Further Information' field in square '[' ]' brackets.

### 3.5 PROCEDURES FOR UPDATING, COMBINING, OR ENHANCING SOURCE DATA

Bibliographic data comprising the TVGAB has been received from a variety of diverse sources. In order to facilitate the back-linking of data to original material, unique identifiers have been used whenever possible. In addition to the TVGABs own unique identifiers, received digital information can be re-identified by the inclusion of source codes in the 'Identifier' table.

Codes included in this field are as follows:

- AIP data retains supplied unique identifiers made from the code/county/ref columns, i.e. B.17.1/0002 - is - desk-based assessment.Derbyshire.1/0002;
- English Heritage Excavation Index for England data has been included with those identifiers supplied by the ADS, e.g. EHNMR 16489 and MonUID DR8679
- Nottinghamshire, Derbyshire and Lincolnshire SMR unique report identifiers are prefixed by R (for 'report', to distinguish these from identifiers relating to monument identifiers or other sources), i.e. Nottingham SMR report number 125 – is – Notts SMR R125

- Humberside and North Lincolnshire SMR Source codes are recorded as supplied, e.g. Humbs SMR HU896, North Lincs SMR source LS7549
- Staffordshire SMR event codes are recorded as supplied, e.g. Staffs SMR ST758
- International Standard Book numbers (ISBN), International Standard Series numbers (ISSN) are used where these have been identified

Whilst many of the citations derive from these original sources, all included data has been modified: firstly, to fit the TVGAB field structure, and secondly, in the addition of classification criteria outlined in Section 4.2. Transcripts of original material which do not fit the data structure, including abstracted information, have been retained within the 'Further information' memo field. This data has not been comprehensively edited and often includes data artefacts from these originating sources. As it was felt that this information could aid the re-identification of sources (often data includes page numbers, interpretative information, report format, etc.) it has been retained unedited in the TVGAB. Both the citation and abstracted information is wholly in the public domain.

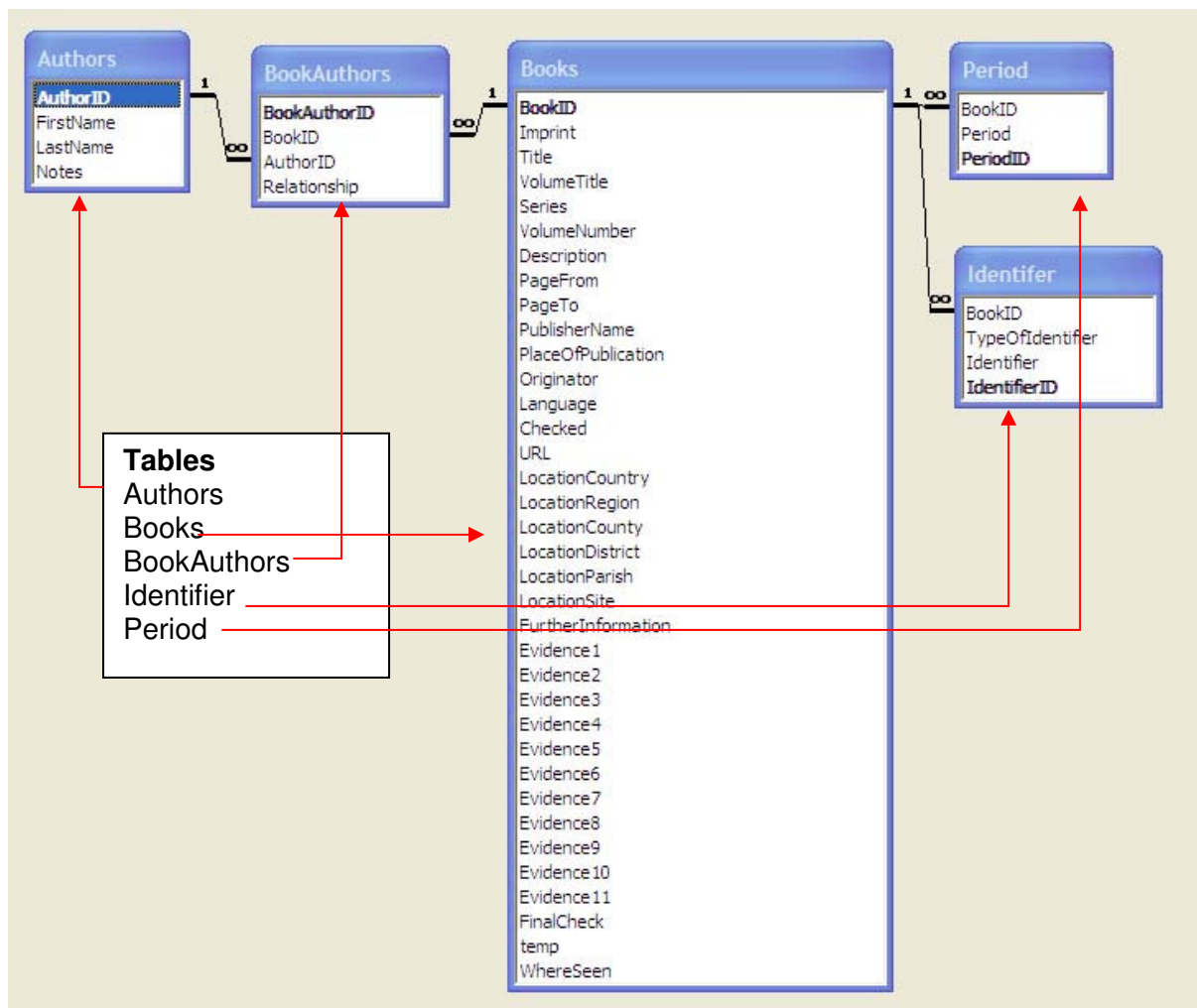
Currently no procedures are in place to allow for the revision of the TVGAB dataset, nor to supplement the dataset with annual updates.

## 4. Content and Structure

### 4.1 DATA STRUCTURE

The TVGAB was created as a Microsoft® Office XP Access relational database management system in consultation with Jen Mitcham of the ADS. In the TVGAB the database document contents and table relationships are as follows:

Tables	Forms
Authors	Authors
Books	Books
BookAuthors	Books subform
Identifier	Switchboard
Period	IdentifiersSubform
Swiithboard items	PeriodBook



**Fig. 1 TVGAB Table relationships**

The principal table 'Books' is used to store bibliographic data, location information and the classification criteria. The table allows compilers to enter data to variable levels of detail. For example, information on a specific journal article would not require data in the 'VolumeTitle' or 'URL' fields. Similarly, a volume detailing archaeological interventions throughout Lincolnshire, would not require entries in the 'LocationDistrict', or 'LocationParish' fields. Alternatively,

separate records may have been entered for each of the articles in an edited monograph with a relationship created via the 'VolumeTitle' and 'Identifier' fields.

Further tables are related to the Books table, allowing for the inclusion of Author, Period and Identifier information. These can all be accessed via the 'Books' form which derives data directly from the data tables.

**'Authors' Table:**  
First Name + Last Name  
Relationship

**'Books' Table:**  
Title  
Volume Title  
Series

**'Books' Table:**  
Evidence 1 - 10

The screenshot shows the 'Books' form with the following data and structure:

Author	Rel.
Hurley, M.	author
Margeson, S.	author
Nenk, B.S.	author
*	

Article/Chapter Title: Medieval Britain and Ireland in 1991: 276. Burslem, St Johns Church

Monograph Title; Unpublished Report / Manuscript Title:

Series Title: Medieval Archaeology

Description: An article in a published serial

Publisher Name: Maney Publishing

Place of Publication: Leeds

Organisation: Stoke-on-Trent Museum Archaeology Unit

URL:

Language: En

Country: England

County: Staffordshire

District: Stoke On Trent

Parish: Stoke-On-Trent

Site: ST JOHNS CHURCH, BURSLEM

Imprint: 1992 Volume Number: 36

Page From: 261 To: 261

Evidence Classification:

- Bibliography / Museums / Conservation
- Environmental Studies
- Monuments
  - Religious, ritual and funerary
  - Domestic
- Archaeological objects / Art history
- Historic landscape / Rural and Urban settlement / Horticulture
- Excavation / Field evaluation
- Collateral Studies (texts, coins, inscriptions, place-names)
- Cultural, Political and Historical Survey
- Military Studies / Warfare and Defence / Administration

Period
Medieval (1066 – 1540)
*

Type of Identifier	Number
EHNMR	655790
*	

Further Information:  
Salvage recording located medieval pottery in a grave which was aligned to the foundations of the church. Unpublished report is held by Staffordshire County Council. SMR. SMR number (Staffordshire): 07041

Record: 566 of 2312

**'Period' Table:**  
Period

**'Identifier' Table:**  
Type of Identifier  
Identifier

**Fig. 2 TVGAB Table form, including the Books subform, IdentifiersSubform and Authors form**

## 4.2 DATA STANDARDS

Data fields in the TVGAB are structured to address the dual objectives of bibliographic citation and source classification. The following provides a guide to the content of each of the fields used.

**Table 3: Field List**

<b>Field Name</b>	<b>Description</b>
BookID	Each publication reference has a unique individual number produced as an Access AutoNumber
Author / Editor and Relationship	Names are normally given in full in the form in which they appear on the title page (with surname preceding initials). Names recorded are qualified as 'author', 'editor' or 'auth/ed' (in the case of articles / chapters authored by the same individual editing the volume), in the relationship field. Multiples of all variations are recorded in the same field.
Description	Describes the type of document as either: "An article/chapter in a published monograph"; "An article in a published serial"; "A published monograph"; "An unpublished document/manuscript"
Imprint	Year of publication. NB: for serials where volumes span periods, e.g. 1979-80, only the later date has been entered.
Title	Title of the article or chapter
VolumeTitle	Title of the Monograph or of the unpublished report / manuscript. Square brackets [ ] denote editorial expansions of the original (or a translation if the title is not in English).
Series and VolumeNumber	This comprises the Series/report series or Journal title, without abbreviations. The VolumeNumber field records either journal volume number, or series identifiers in the case of client reports, with the part number following (in brackets) if required.
PageFrom and PageTo	The extent of an article or chapter in a serial or monograph is identified by a run of page numbers, entered in separate fields.
PublisherName and PlaceofPublication	Records publisher name or that of the originator in the case of unpublished works and the town in which the publisher is based. British publishers are given precedence when a work is published simultaneously in different countries. Where it is stated that a commercial publisher is acting 'with' or 'for' another organisation this is indicated after the publisher's name.
Originator	Name of the Organisation to which data can be sourced, e.g. Trent & Peak Archaeological Unit digital archive. Where the field is empty, this denotes data not derived from existing datasets.
Identifiers	These provide back links to the Originator, by referencing unique numbers included with supplied data. In the case of SMR listings, report numbers are prefixed by R. Other forms of unique identifiers recorded include International Standard Book numbers (ISBN), International Standard Series numbers (ISSN) or University of Nottingham Shelf Marks.
Language	Main language of the documents abbreviated as follows: English (en), French (fe), German (ge)
URL	Web address if published electronically. This is included for articles in online

serials ('e-journals') that are available via the Internet (such as *Internet Archaeology*). Accepted standards recommend that the date of access is quoted when citing online references. This has not been recorded and the final date of the project 1/1/04 can be taken as date of accession. It is assumed that all URLs are correct when entered into the Bibliography and at this final date.

LocationCountry  
/Region/County/  
County/Parish/Site

Location descriptors entered as separate fields. Sources are located to smallest possible area, e.g. county, district or parish. LocationSite gives a free-text description of the site location as recorded in the cited document.

Period

What the periods discussed. Period qualifiers used are derived from the ADS OASIS project criteria as follows:

- Prehistoric – 500 000 - 43
- Palaeolithic – 500 000 – 10 000
- Lower Palaeolithic – 500 000 – 150 000
- Middle Palaeolithic – 150 000 – 40 000
- Upper Palaeolithic – 40 000 – 10 000
- Mesolithic – 10 000 – 4000
- Early Mesolithic – 10 000 – 7000
- Late Mesolithic – 7000 – 4000
- Neolithic – 4000 – 2000
- Early Neolithic – 4000 – 3000
- Middle Neolithic – 3500 - 2700
- Late Neolithic – 3000 – 2200
- Bronze Age – 2500 – 700
- Early Bronze Age – 2500 – 1500
- Middle Bronze Age – 1600 - 1000
- Late Bronze Age – 1000 - 700
- Iron Age – 800 – 43
- Early Iron Age – 800 - 400
- Middle Iron Age – 400 - 100
- Late Iron Age – 100 – 43
- Roman - 43 – 410
- Early Medieval – 410 – 1066
- Medieval – 1066 – 1540
- Post Medieval – 1540 – 1901
- Modern – 1901 – present
- Undated

FurtherInformation

Includes a range of further information, not directly searchable, including descriptions of the source in terms of format, appearance and presentation. This field also includes various data received from source databases, including HBSMR and AIP information not directly of relevance to the TVGAB field structure. As such, a number of abbreviations are included unaltered from the source data, these include: 'pls' (plates = half-tone illustrations/photographs); 'figs' (figures = line drawings and small plans); 'ills' (unspecified illustrations from Briefing book references); 'tables' (tabulated data. NB graphs are 'figs'); 'refs' (indicates the presence of five or more references); 'maps' (separately bound plans and other cartographic material); 'index' (specific to the reference); 'microfiche' (indicates that the item is accompanied by material on microfiche). The edition for re-issued documents may be recorded. Normally, only substantially revised versions will be included as separate entries.

Editorial comments are included in square '[' ]' brackets. Of particular note are '[unchecked]' comments, recording those sources not identified physically, and '\*C14' comments, recording cited radio-carbon dating information.

Where Seen?

Place where volumes were physically inspected, e.g. Nottinghamshire Sites and Monuments Record Office (Notts SMR)

### 4.3 CLASSIFICATION CRITERIA

The classification scheme used for the Bibliography is a modification of that developed for the *biab* by Cherry Lavell for the *British Archaeological Abstracts* in the late 1960s. Entered as yes/no data fields all documents can fall into multiple non-hierarchical classifications of the following:

Bibliography/Museums/Conservation	Including bibliographic surveys, gazetteers, museum catalogues and conservation reports
Environmental Studies	Environmental evidence, including geology, bore-hole logs, pollen and plant macro-fossil reports, bone reports and dating techniques (e.g. dendrochronology, radio-carbon dating)
Monuments	Monuments are defined by the NMR Monument type thesaurus criteria and are further divided into:
Religious, ritual and funerary	Including all monument types listed under this heading by the NMR Monument type thesaurus
Domestic	Including all monument types listed under this heading by the NMR Monument type thesaurus
Archaeological objects / Art history	Includes discrete studies of archaeological objects, (usually portable) resulting from past human activity, including metal-detector and chance finds. Included are also more general artefact and art historical surveys, including architecture.
Historic landscape / Rural and Urban settlement / Horticulture (including survey/aerial photography)	Includes all monument types listed under the NMR Monument Type Thesaurus criteria for: "agriculture and subsistence"; "garden parks and urban spaces"; "water supply and drainage"
Excavation / Field evaluation	Including excavation, field-walking, geophysical survey, building surveys
Collateral Studies (texts, coins, inscriptions, place-names)	Including single coin finds, and any primary source work
Cultural, Political & Historical Survey	General surveys
Military Studies / Warfare & Defence / Administration	Includes all monument types listed under the NMR Monument Type Thesaurus criteria for: "civil"; "defence"

**Table 4: Classification list**

## 5. Discussion

### 5.1 DATA WEAKNESSES AND VARIABILITY IN COVERAGE

An overview of collected data has identified several trends in the pattern of research and publication in the Trent Valley area (Table 5). How much these patterns reflect actual archaeological work within the survey area is however more difficult to assess. In part, trends in the data are likely to be the result of data collection and maintenance procedures at Sites and Monuments Record level. For instance, the inclusion of published sources data supplied by the SMRs of Staffordshire, Nottinghamshire, Lincolnshire and Derbyshire allowed for the more rapid identification of relevant works than was possible for other areas where more orthodox library searches were adopted to collect data. Similar procedural issues are likely to undermine the comprehensiveness of 'grey' literature listings for different regions. It is likely that coverage of bibliographical data is more complete for those areas where SMR listings were supplemented by bibliographical archives of the major contractual archaeology units; for example southern Nottinghamshire (Trent & Peak Archaeological Unit) or north-west Leicestershire (University of Leicester Archaeological Service). In this regard it is unfortunate that greater co-operation was not granted the TVGAB by major contractual units operating in the archaeologically-sensitive areas of eastern Nottinghamshire and western Lincolnshire, such as John Samuels Archaeological Consultants or Lindsey Archaeological Services.

Region	total grey	total other	checked grey	%	checked other	%	unchecked grey	unchecked published	total	total checked	total %
Derbyshire	216	462	194	89.8	429	92.9	22	33	678	623	91.9
Nottinghamshire	658	1082	581	88.3	1039	96.0	77	43	1740	1620	93.1
Leicestershire	109	155	93	85.3	151	97.4	16	4	264	244	92.4
Lincolnshire	101	183	85	84.2	176	96.2	16	7	284	261	91.9
North Lincolnshire	106	183	101	95.3	177	96.7	5	6	289	278	96.2
Staffordshire	211	182	201	95.3	172	94.5	10	10	393	373	94.9
Stoke-on-Trent	92	152	89	96.7	150	98.7	3	2	244	239	98.0
Multi-district	38	272	15	39.5	217	79.8	23	55	310	232	74.8
<b>Total</b>	<b>1531</b>	<b>2671</b>	<b>1359</b>	<b>88.8</b>	<b>2511</b>	<b>94.0</b>	<b>172</b>	<b>160</b>	<b>4202</b>	<b>3870</b>	<b>92.1</b>

**Table 5 Data entry by county and unitary authority**

A summary of these data sources show that of the 4,202 references entered, interventions in Nottinghamshire, perhaps unsurprisingly, considerably outweigh those in other regions, making up nearly 43% of 'grey literature' sources, and 41% of other references; with interventions in Staffordshire and Derbyshire next common. This is roughly comparable with figures comparing the size of the Trent Valley 2002 Project area within each of these counties; with Nottinghamshire comprising 35%, and Staffordshire and Derbyshire c. 16% respectively (Baker 2003, 24). Of note is the dearth of 'grey' literature from North Lincolnshire, which at c.7% of the total stands in some contrast to the nearly 148.2 km<sup>2</sup> area making up c.22% of the Trent Valley; although it is assumed that many of the published sources for North Lincolnshire have been subsumed within volumes assigned to 'Lincolnshire' or 'Multi-district'.

In most cases it was possible to identify c.90-95% of these reports either in County SMRs, via AIP references or directly from source contractual units. However, on average a shortfall of around 30% was recognised between reports produced, and cited independently via either the AIP, the English Heritage Excavation Index for England, or by field-work practitioners, and actually archived in the relevant SMRs. In order to address this imbalance the TVGAB

was granted a months extension at the end of 2003 to continue the programme of re-identification by contacting contractual units directly. As a result of this extended programme an overall success rate of nearly 90% across published and unpublished works had been achieved two weeks before completion of the project (Table 5).

Several further areas of weakness in the collection and collation of reference data are recognised within the TVGAB:

1. There is a general lack of synthetic works in the database. As a result of the prioritised list of sources outlined in 2.2, the dataset does not include more general archaeological or historical surveys of relevance to the Trent Valley area.
2. There is weak coverage of work pertaining to post-medieval and modern cultural heritage.
3. Given the methods of collection adopted (3.5 & 5.1) it is probable that the TVGAB represents a subjective dataset of sources, i.e. the dataset is in part dependent on what has already been cited elsewhere. Given necessary constraints in resources it was impossible to address this subjectivity by more random data-collection procedures.
4. The difficulties in identifying unpublished university reports, student dissertations and theses suggest that these organisations are currently not ensuring that work is logged with SMR archives. This represents a significant loss to the dissemination of academic research on archaeological works in the area.
5. Although the employed classification criteria was shown in practice to be versatile enough to provide for the clear and logical arrangement into general topics, some adjustments could be made to future versions of the TVGAB to permit the definition of more specialised criteria. For example, the large number of citations referring to archaeological notes or find-spots (e.g. those recorded in the journals *Archaeological Excavations*, *East Midlands Archaeological Bulletin*, *Lincolnshire History and Archaeology* 'Archaeological Notes', etc.) could have been designated unique descriptive criteria.

## 5.2 RECOMMENDATIONS

Several recommendations are suggested:

1. Significant difficulties were encountered in collating those electronic references received from different sources, such as SMRs, AIP or English Heritage Excavation Index for England. It is clear from information received that data standards have not been adopted multi-laterally across these organisations. The MIDAS data standard defines sources as any physical material that has been used to provide a source of information for the inventory. Examples include publications, unpublished manuscripts, correspondence, maps, plans, photographs, museum collections, sound recordings and film footage, databases and other digital media. The lack of standardisation suggests an urgent requirement for these organisations to adopt systematic procedures in line with standards established by the AACR2. This recommendation has the further benefit of allowing the direct and mechanised exchange of data between 'grey' literature listings and library corpuses.
2. In keeping with the above recommendation, the apparent lack of systematic classification principles in archaeological citation suggests a need to establish more specialist sorting concepts within archaeology as a discipline. Given the wide range of potential user-groups for archaeological bibliographical databases such as the TVGAB, a logical way of classifying citations needs to be established allowing all readers to easily find what they're looking for. Although the NMR monument type thesaurus provides some guidance on how the breakdown of archaeological concepts can proceed when applied to defining archaeological materials, this system is only useful for one aspect of archaeological activity. In order to provide for a more universal archaeological classification, thesauruses defining categories – in the sense of facet

analysis – need to be established. Beyond archaeological materials (e.g. monuments) classification categories might also include: properties (e.g. political, economic, ideological, environmental, etc.); parts (time and space criteria); processes (e.g. urbanisation, subsistence, ecology, etc.); activities (excavation, interpretation, etc.); or agents (e.g. contractual units, university researchers, etc.).

3. The shortfall in 'grey' literature recognised in SMR holdings suggest that the migration of reports from contractual units to SMRs is currently not being comprehensively carried out. It is probable that a proportion of this shortfall is the result of individually-logged specialist reports, later subsumed within final amalgamated reports. However, it is clear that greater metadata need to be supplied indicating a) the relationship between constituent reports, and b) the date of report production, its draft version, and its relationship to archaeological works. It is suggested that copies of all reports, including specialist reports, are logged at the relevant SMRs.
4. It is suggested that the TVGAB would profit from an enhancement of data pertaining to post-medieval and modern cultural heritage, in addition to further bibliographic surveys of published works, in order to address the lack of more synthetic data.
5. Although the use of primary SMR data in student research is a significant element comprising academic study, the lack of academic work archived in SMRs is worrying. Recommendations addressing this oversight may include the implementation of contractual obligations preceding the use of SMR data, or increased outreach work highlighting the importance of SMR archives.
6. It is suggested that a programme of annual updating is implemented in order to ensure the research potential of the TVGAB for future users.

## **6. ARCHIVE DEPOSITION**

The complete documented database has been created in collaboration with the ADS from the outset. Final deposition with the ADS will see the TVGAB form a searchable special collection database linked to the ADS site-level catalogue for access on-line via the ADS HEIRPORT portal. No long-term commitment for archive enhancement is in place, though it is possible that future 'grey literature' updates will be provided as part of the ADS OASIS Project (Hardman pers. comm.). However, no provision currently exists to update published sources. As a record of previous (pre-2003) interventions it is nevertheless suggested that the archive be retained indefinitely by the ADS.

Additional copies of the TVGAB will be supplied to all the local authority SMRs in the Trent Valley.

## **7. ACKNOWLEDGEMENTS AND REFERENCES**

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# APPENDICES

## Appendix 1: List of Parishes covered by the survey

County	District or Unitary Authority	Parish	Lincolnshire	West Lindsey	Torksey
Derbyshire	Derby	Derby	Lincolnshire	West Lindsey	Walkerith
Derbyshire	Erewash	Breaston	Lincolnshire	West Lindsey	Wildsworth
Derbyshire	Erewash	Draycott & Church Wilne	Lincolnshire	West Lindsey	Beckingham
Derbyshire	Erewash	Ockbrook	Nottinghamshire	Bassetlaw	Bole
Derbyshire	South Derbyshire	Aston Upon Trent	Nottinghamshire	Bassetlaw	Cottam
Derbyshire	South Derbyshire	Barrow Upon Trent	Nottinghamshire	Bassetlaw	Dunham On Trent
Derbyshire	South Derbyshire	Catton	Nottinghamshire	Bassetlaw	Fledborough
Derbyshire	South Derbyshire	Drakelow	Nottinghamshire	Bassetlaw	Gamston
Derbyshire	South Derbyshire	Egginton	Nottinghamshire	Bassetlaw	Laneham
Derbyshire	South Derbyshire	Elvaston	Nottinghamshire	Bassetlaw	Marnham
Derbyshire	South Derbyshire	Findern	Nottinghamshire	Bassetlaw	Misterton
Derbyshire	South Derbyshire	Foremark	Nottinghamshire	Bassetlaw	Normanton On Trent
Derbyshire	South Derbyshire	Foston and Scropton	Nottinghamshire	Bassetlaw	North Leverton with Hablethorpe
Derbyshire	South Derbyshire	Hatton	Nottinghamshire	Bassetlaw	Ragnall
Derbyshire	South Derbyshire	Hilton	Nottinghamshire	Bassetlaw	Rampton
Derbyshire	South Derbyshire	Hoon	Nottinghamshire	Bassetlaw	Saundby
Derbyshire	South Derbyshire	Ingleby	Nottinghamshire	Bassetlaw	South Leverton
Derbyshire	South Derbyshire	Marston On Dove	Nottinghamshire	Bassetlaw	Sturton Le Steeple
Derbyshire	South Derbyshire	Melbourne	Nottinghamshire	Bassetlaw	Treswell
Derbyshire	South Derbyshire	Newton Solney	Nottinghamshire	Bassetlaw	Wakeringham
Derbyshire	South Derbyshire	Repton	Nottinghamshire	Bassetlaw	West Burton
Derbyshire	South Derbyshire	Shardlow and Great Wilne	Nottinghamshire	Bassetlaw	West Stockwith
Derbyshire	South Derbyshire	Stanton By Bridge	Nottinghamshire	Gedling	Burton Joyce
Derbyshire	South Derbyshire	Stenson Fields	Nottinghamshire	Gedling	Colwick
Derbyshire	South Derbyshire	Swarkestone	Nottinghamshire	Gedling	Stoke Bardolph
Derbyshire	South Derbyshire	Twyford And Stenson	Nottinghamshire	Newark and Sherwood	Averham
Derbyshire	South Derbyshire	Walton Upon Trent	Nottinghamshire	Newark and Sherwood	Balderton
Derbyshire	South Derbyshire	Weston Upon Trent	Nottinghamshire	Newark and Sherwood	Bathley
Derbyshire	South Derbyshire	Willington	Nottinghamshire	Newark and Sherwood	Besthorpe
Humberstone	East Riding of Yorkshire	Reedness	Nottinghamshire	Newark and Sherwood	Bleasby
Humberstone	East Riding of Yorkshire	Twin Rivers	Nottinghamshire	Newark and Sherwood	Bulcote
Leicestershire	North West Leicestershire	Castle Donington	Nottinghamshire	Newark and Sherwood	Carlton On Trent
Leicestershire	North West Leicestershire	Kegworth	Nottinghamshire	Newark and Sherwood	Caythorpe
Leicestershire	North West Leicestershire	Lockington-Hemington	Nottinghamshire	Newark and Sherwood	Coddington
Lincolnshire	North Kesteven	North Scarle	Nottinghamshire	Newark and Sherwood	Collingham
Lincolnshire	North Lincolnshire	Alkborough	Nottinghamshire	Newark and Sherwood	Cromwell
Lincolnshire	North Lincolnshire	Amcotts	Nottinghamshire	Newark and Sherwood	East Stoke
Lincolnshire	North Lincolnshire	Belton	Nottinghamshire	Newark and Sherwood	Elston
Lincolnshire	North Lincolnshire	Bottesford	Nottinghamshire	Newark and Sherwood	Farndon
Lincolnshire	North Lincolnshire	Burringham	Nottinghamshire	Newark and Sherwood	Fiskerton Cum Morton
Lincolnshire	North Lincolnshire	Burton Upon Stather	Nottinghamshire	Newark and Sherwood	Girton
Lincolnshire	North Lincolnshire	Crowle	Nottinghamshire	Newark and Sherwood	Gonalston
Lincolnshire	North Lincolnshire	East Butterwick	Nottinghamshire	Newark and Sherwood	Grassthorpe
Lincolnshire	North Lincolnshire	Eastoft	Nottinghamshire	Newark and Sherwood	Gunthorpe
Lincolnshire	North Lincolnshire	Epworth	Nottinghamshire	Newark and Sherwood	Hawton
Lincolnshire	North Lincolnshire	Flixborough	Nottinghamshire	Newark and Sherwood	Hoveringham
Lincolnshire	North Lincolnshire	Garthorpe and Fockerby	Nottinghamshire	Newark and Sherwood	Kelham
Lincolnshire	North Lincolnshire	Gunness	Nottinghamshire	Newark and Sherwood	Langford
Lincolnshire	North Lincolnshire	Haxeby	Nottinghamshire	Newark and Sherwood	Lowdham
Lincolnshire	North Lincolnshire	Holme	Nottinghamshire	Newark and Sherwood	Meering
Lincolnshire	North Lincolnshire	Keadby with Althorpe	Nottinghamshire	Newark and Sherwood	Newark
Lincolnshire	North Lincolnshire	Luddington and Haldenby	Nottinghamshire	Newark and Sherwood	North Clifton
Lincolnshire	North Lincolnshire	Messingham	Nottinghamshire	Newark and Sherwood	North Muskham
Lincolnshire	North Lincolnshire	Owston Ferry	Nottinghamshire	Newark and Sherwood	Norwell
Lincolnshire	North Lincolnshire	Scunthorpe	Nottinghamshire	Newark and Sherwood	Rolleston
Lincolnshire	North Lincolnshire	West Butterwick	Nottinghamshire	Newark and Sherwood	South Clifton
Lincolnshire	North Lincolnshire	West Halton	Nottinghamshire	Newark and Sherwood	South Muskham
Lincolnshire	North Lincolnshire	Whitton	Nottinghamshire	Newark and Sherwood	South Scarle
Lincolnshire	West Lindsey	Blyton	Nottinghamshire	Newark and Sherwood	Spalford
Lincolnshire	West Lindsey	Brampton	Nottinghamshire	Newark and Sherwood	Staythorpe
Lincolnshire	West Lindsey	East Ferry	Nottinghamshire	Newark and Sherwood	Sutton On Trent
Lincolnshire	West Lindsey	East Stockwith	Nottinghamshire	Newark and Sherwood	Syerston
Lincolnshire	West Lindsey	Fenton	Nottinghamshire	Newark and Sherwood	Thorpe
Lincolnshire	West Lindsey	Gainsborough	Nottinghamshire	Newark and Sherwood	Thurgarton
Lincolnshire	West Lindsey	Gate Burton	Nottinghamshire	Newark and Sherwood	Weston
Lincolnshire	West Lindsey	Kettlethorpe	Nottinghamshire	Newark and Sherwood	Winthorpe
Lincolnshire	West Lindsey	Knaith	Nottinghamshire	Nottingham	Nottingham
Lincolnshire	West Lindsey	Laughton	Nottinghamshire	Rushcliffe	Barton In Fabis
Lincolnshire	West Lindsey	Lea	Nottinghamshire	Rushcliffe	East Bridford
Lincolnshire	West Lindsey	Marton	Nottinghamshire	Rushcliffe	Flintham
Lincolnshire	West Lindsey	Morton	Nottinghamshire	Rushcliffe	Holme Pierrepont
Lincolnshire	West Lindsey	Newton On Trent	Nottinghamshire	Rushcliffe	Kingston On Soar
Lincolnshire	West Lindsey	Scotter	Nottinghamshire	Rushcliffe	Kneeton
Lincolnshire	West Lindsey	Thonock	Nottinghamshire	Rushcliffe	Radcliffe On Trent

<b>Nottinghamshire</b>	Rushcliffe	Ratcliffe On Soar	<b>Staffordshire</b>	Lichfield	Mavesyn Ridware
<b>Nottinghamshire</b>	Rushcliffe	Shelford and Newton	<b>Staffordshire</b>	Lichfield	Whittington
<b>Nottinghamshire</b>	Rushcliffe	Sutton Bonington	<b>Staffordshire</b>	Lichfield	Wigginton
<b>Nottinghamshire</b>	Rushcliffe	Thrumpton	<b>Staffordshire</b>	Newcastle Under Lyme	Kidsgrove
<b>Staffordshire</b>	Cannock Chase	Brereton and Ravenhill	<b>Staffordshire</b>	Newcastle Under Lyme	Newcastle Under Lyme
<b>Staffordshire</b>	Cannock Chase	Rugeley	<b>Staffordshire</b>	South Staffordshire	Dunstall
<b>Staffordshire</b>	East Staffordshire	Barton Under Needwood	<b>Staffordshire</b>	Stafford	Barlaston
<b>Staffordshire</b>	East Staffordshire	Branston	<b>Staffordshire</b>	Stafford	Colwich
<b>Staffordshire</b>	East Staffordshire	Burton Upon Trent	<b>Staffordshire</b>	Stafford	Gayton
<b>Staffordshire</b>	East Staffordshire	Rolleston On Dove	<b>Staffordshire</b>	Stafford	Hopton & Coton
<b>Staffordshire</b>	East Staffordshire	Stretton	<b>Staffordshire</b>	Stafford	Ingestre
<b>Staffordshire</b>	East Staffordshire	Tatenhill	<b>Staffordshire</b>	Stafford	Marston
<b>Staffordshire</b>	East Staffordshire	Tutbury	<b>Staffordshire</b>	Stafford	Salt & Enson
<b>Staffordshire</b>	East Staffordshire	Wychnor	<b>Staffordshire</b>	Stafford	Sandon
<b>Staffordshire</b>	East Staffordshire	Yoxall	<b>Staffordshire</b>	Stafford	Stone
<b>Staffordshire</b>	Lichfield	Alrewas	<b>Staffordshire</b>	Stafford	Stone Rural
<b>Staffordshire</b>	Lichfield	Armitage with Handsacre	<b>Staffordshire</b>	Stafford	Stowe
<b>Staffordshire</b>	Lichfield	Colton	<b>Staffordshire</b>	Stafford	Swynnerton
<b>Staffordshire</b>	Lichfield	Edingale	<b>Staffordshire</b>	Stafford	Tixall
<b>Staffordshire</b>	Lichfield	Elford	<b>Staffordshire</b>	Stoke On Trent	Stoke On Trent
<b>Staffordshire</b>	Lichfield	Fisherwick			
<b>Staffordshire</b>	Lichfield	Hamstall Ridware			
<b>Staffordshire</b>	Lichfield	King's Bromley			

## Appendix 2: Archive contents

The archive of the TVGAB is contained on one CD-ROM disk and comprises:

- the TVGAB, which is a relational database created as a Microsoft® Access relational database (TVGAP\_bibliography.mdb),
- and a digital copy of this report in Microsoft® Word (TVGA\_deposition.doc) and Microsoft® PowerPoint (TVGA\_deposition\_cover.pps).

Full archive disks are to be stored in the following locations:

- Archaeological Data Service
- Nottinghamshire County Council
- Humber Archaeology Partnership
- Lincolnshire County Council
- Derbyshire County Council
- North Lincolnshire Council
- Potteries Museum Field Archaeology Unit
- Leicestershire County Council
- Staffordshire County Council
- Trent & Peak Archaeological Unit
- University of Leicester Archaeological Service
- ARCUS
- Wessex Archaeology