

3: Methodology

3.0 Introduction

This chapter describes the sources of both the documentary and artefactual evidence used in this study. It outlines the methods employed in the recording and analysis of the artefactual evidence together with details of how this present study links in with the National Clay Tobacco Pipe Stamp Catalogue (NSC). The chapter concludes with sections describing how the pipe bowl forms have been illustrated and dated.

3.1 Documentary sources

It was intended that this thesis be an artefact-based study of the clay tobacco pipe industry in Yorkshire during the period c1600-1800. Unpublished manuscripts and notes compiled by pipe researchers such as John Andrews (1980s, 1987a, 1987b, 1987c, 1987d 1988, 1991 and 1993) and Adrian Oswald (1991) have been consulted. Although the author has carried out no systematic survey of the primary documentary sources, it was possible to make a limited search of records relating to Yorkshire pipe-makers held at Wakefield Record Office and the Local Studies Library in Rotherham.

Specialist publications relating to clay tobacco pipe studies, including unpublished manuscripts and research notes were consulted. These publications included the BAR series *The archaeology of the clay tobacco pipe* together with the Society for Clay Pipe Research Newsletter and their occasional monograph series. The next stage was to locate references to clay tobacco pipes that were specific to Yorkshire. This was achieved by consulting local archaeological and historical journals. The national bibliographic database compiled by the Medieval Pottery Research Group (www.medievalpottery.org.uk) was also consulted. This database holds references to all types of ceramics from the British Isles and includes references to later material such as clay tobacco pipes. A full list of all the sources used in this study is given in the bibliography.

Finally, it was necessary to locate where the objects themselves were housed in order that a detailed record of them could be made. The *Guide to museums and galleries of Yorkshire and Humberside* lists all the museums and galleries, alphabetically by town, and gives a summary of what each museum holds in its collections. By looking at this guide it was possible to identify all those museums in Yorkshire that were likely to have clay tobacco pipes in their collection thereby creating a list of museums to contact.

3.2 Sources of artefactual evidence

The clay tobacco pipes used in this study come from three main sources. The first, and the one that accounts for the majority of the material, comprises the museum collections that contain material from Yorkshire. Second, the archaeological stores of Units operating in Yorkshire,

such as the Humber Archaeological Partnership in Hull, the York Archaeological Trust in York, and English Heritage at Helmsley, were contacted. Finally, there are a number of private collections, the location of which was discovered through contact with pipe researchers in the area. Although the majority are quite small, two are quite substantial. The first belongs to Mr P Rayner of Beverley near Hull and contains a very large number of pipes collected from fields near Beverley. The second belongs to Mr R Raines of Acaster Malbis near York and contains approximately 500 pipes from his farm. In addition to museum and private collections from Yorkshire there are a small number of larger national collections which include Yorkshire material, such as the National Clay Tobacco Pipe Archive (NCTPA), which is currently housed in the University of Liverpool, and the private collections of Dr D Higgins and S D White, both of which are also based in Liverpool.

The initial approach to these institutions and individuals was made by letter, which outlined the nature of the research and also sought to ascertain the range of material that each collection had. These letters were followed up with a phone call. In some instances the institutions approached did not have any clay tobacco pipes in their collection. For example, the Cannon Hall Museum, Barnsley only had two porcelain bowls of German origin and no English clay tobacco pipes. In other cases, for example the Yorkshire Museum, York, collections of clay tobacco pipes had been dispersed. In such instances these museum could be eliminated from the list and the enquiry was taken no further. Where institutions did hold clay tobacco pipes of seventeenth- and/or eighteenth-century date, an appointment was made to go and record the material. It was possible to borrow some groups so that they could be studied in more detail in Liverpool. These latter groups included excavated material from the York Archaeological Trust, the pipes excavated at Sandal Castle and held by Wakefield Museum and Art Gallery, together with the private collections of Mr Rayner of Beverley and Mr Raines of Acaster Malbis.

Relevant material has been recorded from the following collections: -

Museums and other public bodies

Abbey House Museum, Leeds
Beck Isle Museum of Rural Life, Pickering
Bowes Museum, Barnard Castle
Craven Museum, Skipton
Dales Countryside Museum, Hawes
Doncaster Museum & Art Gallery
Dorman Museum, Middlesbrough
Kelham Island Industrial Museum, Sheffield
Manor House Museum, Ilkley
Mercer Art Gallery, Hartlepool
National Clay Tobacco Pipe Archive, Liverpool
Newark Museum
Pontefract Museum

Richmondshire Museum, Richmond
Rotherham Museum
Ryedale Folk Museum, Hutton-le-Hole
Scarborough Borough Council, Scarborough
Scunthorpe Museum and Art Gallery, Scunthorpe
Sewerby Hall, Bridlington
Sheffield City Museum
Thirsk Museum
Tolson Memorial Museum, Huddersfield
Wakefield Museum & Art Gallery
Whitby Museum
Wilberforce House Museum, Hull
York Castle Museum
Yorkshire Dales Lead Mining Museum, Earby

Archaeological units

Archaeological Research and Consultancy,
University of Sheffield (ARCUS)
Central Excavation Unit (HMBC)
English Heritage Archaeological Store, Helmsley
Humber Archaeology Partnership, Hull
Lampeter Archaeological Unit
North West Archaeological Trust
South Yorkshire Archaeological Unit
Tees Archaeology
West Yorkshire Archaeological Services
Wood Hall Archaeological Trust, Womersley
York Archaeological Trust

Private collections

Akerhagen Collection, Sweden
Austin Collection, Lampeter
Brackenridge Collection, Sheffield
Butterfield Collection, Glusburn
Dagnell Collection, Rainford
Davey Collection, Isle of Man
Denham Collection, Wakefield
Higgins Collection, Liverpool
Mayfield Collection, Potovens
Raines Collection, Acaster Malbis, Nr. York
Rayner Collection, Beverley, Nr. Hull
Richardson Collection
Stothard Collection, Hull
Tierney Collection, Nr. Skipton
White Collection, Liverpool

Summaries outlining the material held in each collection recorded, together with 1:1 drawings showing the range of forms are given in Appendix 3.

The second source of study material comprises the series of plaster blocks compiled by Dr D A Higgins as part of the National Clay Tobacco Pipe Stamp Catalogue (NSC) (see below). These blocks contain impressions of all the stamped marks from approximately two-thirds of England as well as groups from overseas including sites on the east coast of America. By studying these blocks it was possible to locate marked Yorkshire pipes that had found their way to other parts of the country as well as

abroad, particularly to the east coast of America. Impressions of Yorkshire material were identified in the following collections from this source: -

Abbott Hall Art Gallery & Museum, Kendal,
Cumbria
Adrian Oswald Collection
Association for the Preservation of Virginia
Antiquities, Jamestown, USA
Austin Collection, Lampeter
Bassetlaw Museum, Retford, Nottinghamshire
Birmingham Museum & Art Gallery, Birmingham
Carlisle Archaeological Unit, Carlisle
Carlisle Museum & Art Gallery, Carlisle
Central Excavation Unit, English Heritage
Colonial Williamsburg, Department of
Archaeological Research, Williamsburg,
Virginia, USA
Dagnall Collection, Rainford, Lancashire
Department of Archaeology, University of Sheffield
Elkins Collection, Acton, London
Flowerdew One Hundred, Virginia, USA
Fox Collection, Lutterworth, Leicestershire
Grosvenor Museum, Chester, Cheshire
Historic St. Mary's City, Maryland, USA
Jennings Collection, York
North West Archaeological Trust, Liverpool,
Merseyside
Lampeter Archaeological Unit
Lancaster City Museum, Lancaster, Lancashire
Maryland Archaeological Conservation Laboratory,
Jefferson Patterson Park and Museum,
Maryland, USA
Royal Albert Memorial Museum, Exeter, Devon
St John's Church, Hampton, Virginia, USA
Salford Museum & Art Gallery, Salford
Somerset County Museum, Taunton, Somerset
South Yorkshire Archaeology Unit
Stocks Collection, Wallasey, Merseyside
Virginia Department of Historic Resources,
Richmond, Virginia, USA
Virginia Foundation for Archaeological Research,
Virginia, USA
York Excavation Group

The third, and final source of study material, were those groups of pipes that have already been published. The level of recording is variable and, in many cases not as detailed as for the rest of the material in this thesis. As a result the published material is not directly comparable. What these published sources do provide, however, are details of the bowl forms and stamp marks recovered from sites in Yorkshire that give valuable information regarding the development and distribution of Yorkshire products.

3.3 Methodology for the recording and analysis of the artefactual evidence

The recording system employed in the collection of data for this thesis is based on one that was developed at the University of Liverpool by Higgins and Davey (1994). It allows groups of pipes to be recorded in a standard way in order to make the comparison of material within individual groups and between sites easier.

The system was designed to use a series of A3 paper recording forms, which were filled in by hand prior to data entry in a relational database. It proved to be the most efficient means of recording material when visiting museum stores. The *Guidelines for using the clay tobacco pipe record sheets* has not been published and has therefore been presented in Appendix 4 for reference. An example of a paper recording form, which was completed in the field, can be seen in Figure 3.1. Figure 3.2 shows a print out of one of the pipe records from the Access database.

From the outset of the data collection exercise only complete bowls, or bowl fragments where the form was recognisable, and marked stems dating from c1600 to 1800 were recorded. The material from most of the museum collections visited, included excavated material, chance finds and curated pieces. It should be noted that during the course of the data collection exercise all bowls, both plain and marked, were recorded in detail but only the marked stems were recorded. This decision was made for two main reasons. First, the recording of many thousands of plain stems would have made the data set too bulky to manage, and second many of the museum collections recorded did not retain large quantities of plain stem fragments resulting in data that was not comparable.

For the purposes of this research a number of changes were made to the existing recording system. The first was the allocation of an individual pipe number. This is a running sequence of numbers that not only enables individual pipe fragments to be identified within the database, but also links to the NSC. Although the existing system allowed for the allocation of a bowl form, taken from existing typologies, it had no means of simply recording whether the bowl was a heeled or spurred form. One of the changes implemented for this research allowed an H to be recorded for a heeled type and an S for spurred type. The system devised by Higgins and Davey (1994) provided a column for a drawing reference. Originally this was intended to refer back to a set of record sketches made for the particular group that was being recorded. For the purposes of this research, however, the drawing reference column was used to allocate a unique number relating to publication standard drawings that were made during the course of the study. Where the original system required a separate number sequence for each group, this research used a single number sequence for all the material recorded from

Yorkshire. These numbers were then cross-referenced to a set of record cards that hold a drawing of each pipe together with all the information relating to it.

By far the biggest change to the existing recording system was to convert it from a paper to computer format. Initially the paper forms were converted to an Excel spreadsheet, which enabled counts and basic statistical analysis to be carried out more easily. It soon became clear, however, that the Excel system relied on data being repeated for each record, which proved very cumbersome and was time consuming to input. It also became apparent that more complex queries required the use of a relational database such as Access. The allocation of codes for particular pieces of information, such as the collection and the site, enabled the computer to manipulate data about each pipe fragment without the necessity for inputting large amounts of repetitive data. It was therefore decided to convert all the data relating to the clay tobacco pipes collected for this research from Excel to Access. This had the added advantage of then being compatible with the NSC database, which was also in the process of being set up in an Access format.

A copy of the Yorkshire Clay Tobacco Pipe Database, in an Access format, is available on a CD from the author (at cost) and provides details of each of the collections, the sites as well as the pipes themselves.

3.4 National Clay Tobacco Pipe Stamp Catalogue (NSC)

In 1982 Dr David Higgins registered at the University of Liverpool to undertake doctoral research into the tobacco pipe industry of Broseley, Shropshire. As part of his research Dr Higgins devised a system of creating a permanent record of the stamps that appeared on the pipes in his study area. The system required the stamps to be impressed into blocks of plasticine. Plaster casts were then made of these blocks providing a “convenient, easily transportable and accurate method of comparing stamps” (Higgins 1984, 36). From the reference casts it was possible to illustrate type examples of each mark at twice life size. Once the mark had been identified information relating to its likely date, production centre and manufacturer could be recorded. At a meeting of the Society for Clay Pipe Research in 1985 (Higgins 1985b, 5-6) it was suggested that the method be used to record marks on a national basis. The initial response from members of the Society was rather poor but work on a regional catalogue, which was regarded as a trial run, continued (Higgins 1986, 25). In 1988 Dr Higgins was able to obtain a three year Leverhulme Research Fellowship at the University of Liverpool to compile a national database of stamp marks. The principle of the study was that impressions of all the stamped pipes in every collection examined were to be made. The plaster casts taken of these marks provided a permanent reference archive (Higgins 1988, 19). It was at this stage that the data, excluding the drawings, was transferred to

CLAY TOBACCO PIPE RECORDING FORM										Client: S.W. Collection Compiled by: S.W. Collection		Date: 15/1/80 Sheet 1 of 5							
Pipe No.	B	S	M	B&S	Tip	Fl	X	Int	Rim	Heads/Spur	Mark	NC No.	Pos	Type	Method	Decorations	Date	Dwg No.	Comments
24	8403	1			Y	-	-	0	2	B	H			H	R	S	1660-80		See to Hull Type 2
9	8404	1			6	-	-	0	/	B	H			H	R	S			
23	8405	1			7	0	-	-	2	B	H			H	R	S			Mark applied at 90°
25	8406	1			7	-	-	0	-	-	H			H	R	S			See to Hull Type 2 - No rim
14	8407	1			6	-	-	0	0	B	H			H	R	S	1650-80		Has some mould as 8405
4	8408	1			8	-	-	0	/	B	H			H	R	S	1620-40		Mark damaged but appears to be Crown initial
5	8409	1			8	-	-	0	4	B	H			H	R	S			York type 2
6	8410	1			6	9	-	0	3	B	H			H	R	S	1600-80		See to Hull type 2
7	8411	1			6	9	-	0	3	B	H			H	R	S			
8	8412	1			6	9	-	0	3	B	H			H	R	S			
10	8413	1			7	9	-	0	/	B	H			H	R	S			
11	8414	1			8	-	-	0	4	B	H			H	R	S	1620-40		? Horseshoe
12	8415	1			7	0	-	0	-	-	H			H	R	S	1600-80		Head only
13	8416	1			7	9	-	0	0	B	H			H	R	S	1660-80		V-Grade mark -
15	8417	1			7	-	-	0	0	B	H			H	R	S	1600-1610		Has been milled the mark applied.
16	8418	1			6	0	-	0	2	B	H			H	R	S	1600-80		? H?
18	8419	1			5	9	-	0	-	-	H			SV	R	S	1600-1710		? H No rim
19	8420	1			6	0	-	0	0	B	H			SV	R	S	1600-1710		Traditional form
20	8421	1			5	9	-	0	-	-	-			RS	S	S	1700-80		
1	8422	1			4	0	-	0	-	-	-			RS	I	S	1700-90		
TOTAL:																			

Pcode	Ccode	Scode	Acc No		SF No	B/S			
04083	0070	00265	558			B			
From...	to...	H/S	B64	Bur	BX	M4	Rim	TT	TF
1680	1710	H	7	0	0	/	B	-	-
Cname	Sname	Other							
		Milled S Type 4 or 5							
P	T	M	Decoration			Dwg	Rec		
						0975	W		
Comments									
Similar to a Hull Type 3a; milled decoration on the back of the bowl near the stem									

Figure 3.2: Example of a pipe record taken from the Access database.

the mainframe computer at the University of Liverpool. Since 1991 Dr Higgins has continued to record stamped marks in this way and, to date, marks from approximately two-thirds of England have now been impressed as well groups from Scotland and a large body of material from the East Coast of America. The plaster casts are held by the National Clay Tobacco Pipe Archive (NCTPA), which is based within the Department of Archaeology at the University of Liverpool.

It seemed most appropriate to use this established recording system for stamped marks when recording the material from Yorkshire for this thesis. The prototype NSC database was set up with codes so that a relational database could handle the data. Initially this was intended to be used on a mainframe computer but now, with the advances in computer technology since the late 1980s, a desktop computer can be used to process the data. The current research adapted the system designed by Dr Higgins slightly to enable it to be converted to an Access format. This meant that, for the first time, the NSC database could be implemented in the way it was designed to be.

As with pipe recording, the system established for the initial collection of data relating to the stamped marks is based on a series of A3 paper forms all of which are ultimately transferred to an Access database. This method remains the most convenient means of recording stamped pipes in the field. The system comprises of three basic forms. The first records details about the collection

itself. Each collection is allocated a unique four-digit code, which means that full details of the collection need only be entered once. On each subsequent occasion it is only the four-digit code that needs to be entered. A similar form is used to record details of each site. Again a unique number is allocated, this time a six-digit code. The third form records details about the pipe itself, an example of which is given in Figure 3.3. Figure 3.4 is a print out of a pipe record as it appears in the Access database.

As the NSC was always intended to run on a relational database, its conversion to Access was a lot simpler than that of the pipe database. In order for the pipe database and the NSC database to be compatible they share common information such as the unique pipe number allocated to each pipe fragment, as well as the unique codes for each collection and site.

Plaster casts of all the stamps recorded in Yorkshire have been deposited with the NCTPA and it is hoped that those marks recorded during the course of this research will eventually be analysed in full and that each individual die identified will be added to the NSC.

The notes for recording stamped marks, which includes the number codes for the various frame and motif types, have not been published and have therefore been presented in Appendix 5 for reference.

COLLECTION: YAT										CALCULUS AUDIO UNIT												
COUNTY	PAR	SITE	SCOD	CREF	DCOD	ROD	CCOD	ACC	MARK	POS	EX	DR	DDATE	P1	P2	P3	P21	P22	P23	P32	P33	PTEXT
Yorks	YorL	Jugoslavichy London	105	100-28	1772	1772	129	1983-45 (1073)	(10)	H	R		1680-1710									? John Dawson
"	"	"		89	1773			1983-45 (1071)	(10)	H	R		"									"
"	"	"		30	1774			1983-45 (1071)	(10)	H	R		1680-1710									
"	"	"		45	1775			"	(10)	H	R		1680-60									
"	"	"		52	1776			"	(10)	H	R		"									
"	"	"		53	1777			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		54	1778			1983-45 (1071)	(10)	H	R		1680-100									? 60
"	"	"		55	1779			1983-45 (1071)	(10)	H	R											Will deameter stem
"	"	"		56	1780			1983-45 (1073)	(10)	H	R		1680-60									V. badly abraded barrel
"	"	"		57	1781			1983-45 (1073)	(10)	H	R		1680-60									V. badly abraded barrel
"	"	"		58	1782			1983-45 (1073)	(10)	H	R		1680-60									V. badly abraded barrel
"	"	"		59	1783			1983-45 (1073)	(10)	H	R		1680-60									Base of fully finished
"	"	"		60	1784			1983-45 (1073)	(10)	H	R		1680-60									? Richard Shapstone (1675-1706)
"	"	"		61	1785			1983-45 (1073)	(10)	H	R		1680-60									Abraham Barnes (1665-81)
"	"	"		62	1786			1983-45 (1073)	(10)	H	R		1680-60									? AR of AF
"	"	"		63	1787			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		64	1788			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		65	1789			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		66	1790			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		67	1791			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		68	1792			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		69	1793			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		70	1794			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		71	1795			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		72	1796			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		73	1797			1983-45 (1073)	(10)	H	R		1680-60									
"	"	"		74	1798			1983-45 (1073)	(10)	H	R		1680-60									

Figure 3.3: Example of a completed stamp recording form for use in the field.

Pipe Code	02724	Cast Ref	490.24	Die Code	1873	Status	T
Collection	0147	Site	00815	Acc No.	WH92 20 840	SF No	
C Name	O	S Name	N				
Other	Castle					Position	H
No. of examples	1	From...	1660	to...	1680		
Comments	Appears to have a P above the castle tower; ?same die as cast 548.08						

Figure 3.4: Example of a stamp record taken from the Access database.

3.5 Illustrations

All the illustrations that appear in this thesis are at 1:1 in the case of bowls and at 2:1 in the case of stamped marks, unless otherwise stated. Bowl forms have been selected for illustration either to give an indication of the range of material from a particular collection or site, or because their form varies from the established typologies.

The author has prepared all the figures unless otherwise stated. In the case of the 2:1 marks, the NSC dies numbered up to 1393 have been drawn by David Higgins; those numbered 1393 to 1709 by David Williams, with all the remaining dies drawn by the author.

3.6 Dating and the quoting of date ranges

Preliminary dating of the bowl forms has been done with reference to three published typologies – York (Lawrence 1979), Hull (Watkins 1979) and, as London set the fashion for bowl forms in the early seventeenth century, London (Atkinson & Oswald 1969). These typologies place the bowls within a twenty to forty year date range. In the case of marked bowls or stems, where the maker is known from documentary sources, a more accurate date is sometimes possible. It is hoped that the detailed analysis of data collected for this thesis will help to refine the current typologies for Yorkshire. It should be noted, however, that it has not been possible to go back through the 7000+ records in the database and re-date the fragments according to this current research therefore the fragments in the database have been dated using the conventional typologies. Throughout the thesis all dates given are approximate but the abbreviation for circa (*c.*) has not been included in either the text or tables. The date *c.*1640-1660, for example, will therefore appear as 1640-1660.

3.7 Summary

The current research has attempted to track down as many clay tobacco pipes from Yorkshire as possible. Although a large number of museum and private collections have been studied for this thesis, it is by no means exhaustive and there are almost certainly other collections that have not been included in this study. Having said that, however, the collections that have been recorded provide a good chronological and geographical coverage of the study period and area.

The current research has taken existing recording systems that have only previously been used to record pipes from specific excavations. They have been modified for the purposes of this thesis and, for the first time, have been used to record material over a wide geographical area producing one of the largest data sets of its kind to date. This data is analysed and discussed in the following chapters.