

Lincolnshire mortaria

by I.M. Rowlandson and H.G. Fiske

Introduction

The mortaria discussed here are the light-fired (white ware) vessels produced in Lincoln and Lincolnshire in the later 1st to 2nd century AD. These found their way to sites throughout the East Midlands, Northern England, Hadrian's Wall and the Antonine forts in Scotland. The source of the light-fired clays is likely to be Middle Jurassic deposits from within the Lincoln Cliff. These deposits are extremely variable in character and thickness; they outcrop near to the site of the South Carlton kiln site to the north of Lincoln (BGS Map Viewer; Evans 1952; 326-7; Kent 1975 & 1980). Similar deposits are mapped in the cliff edge at Canwick and further south along the Lincoln Cliff where it has been seen in the old ironstone workings at Waddington. An outlying production site is known at Newton on Trent although it is likely that clay was brought to it from the Lincoln Cliff edge, perhaps from the vicinity of South Carlton less than 10 miles away.

It is possible that the relevant Middle Jurassic clay beds were more easily accessible in the area to the south of the hill-top fortress site during the early Roman period when stone quarrying of the Lincolnshire Limestone formation was taking place. More particularly, the area to the south-east of the fortress in the eastern suburb, where the early industrial areas were concentrated including the production site where Lincoln Technological College now is, may have been a place where these deposits were encountered. It was perhaps when these clays were expended, or the development of the Lincoln Lower City settlement by the middle of the 2nd century AD, that encouraged potters to relocate themselves at South Carlton and to the north of the *colonia* at the Lincoln Newport kiln site, where more dependable sources of light-fired clay were available. Recent excavations at the Hykeham Road kiln site upstream from Lincoln have produced evidence of the potters utilising local light-firing clays to the south of the River Witham, probably from the Lincoln Cliff, to produce colour-coated wares (Fiske and Rowlandson in prep a & b).

Earliest evidence

The Lincoln fortress is considered to have been established after the Boudican revolt firstly by the IXth *Hispana* and later by the IInd *Adiutrix* after AD71 which left in 77-8 to create a new base at Chester (Darling 1981; Darling 1988; Darling and Precious 2014; Jones in Stocker ed. 2003). An earlier fort south of the Witham (Darling 1988), possibly Claudian, has also been proposed (Jones in Stocker ed. 2003). The IXth *Hispana* had a base and associated pottery production site at Longthorpe, west of Peterborough prior to the development of the fortress at Lincoln (Darling and Precious 2014, vii; Darling 1981; Dannell and Wild 1987; Frere and St Joseph 1974). The potters associated with the legion at Longthorpe appear to have made a suite of kitchen and table wares, including mortaria, to serve the requirements of the forces based there. At Lincoln a suite of table wares and coarse wares were also produced with many of the fabrics utilising light firing clays (Darling and Precious 2014, 319, Fabrics RDSL, PINK, LEG, GRSA, OXSA and earlier CR fabrics). The fortress also appears to have a proportion of its coarse ware needs provided by shell-gritted and grog-gritted wares in a native

tradition. The similarities of red-slipped table wares produced at both Lincoln and Longthorpe have been discussed by Darling (1981), Dannell (Dannell and Wild 1987) and Jones (2002).

At Lincoln it appears likely that mortaria in the 1st century AD was provided by imports from the Verulamium region, northern Gaul and the Rhone Valley (Darling and Precious 2014, 160-1; Rowlandson in Rayner 2016) along with local light-fired unstamped mortaria. So far, however, we have discovered no kilns dating to this period producing legionary wares at Lincoln. A range of local mortaria considered likely to date to the 1st century AD has been illustrated in the Lincoln Roman Pottery Corpus (cf. Darling and Precious 2014, 166-172, Fig. 139 nos. 1464, 1465, 1486), the kilns for these have also not been found but as with the light-fired table wares are likely to have been in the general area of South Common, the Technical College and/or Broadgate.

Fabrics

Fabric descriptions of the main fabric types have been provided by in the National Roman Fabric Reference Collection (Tomber and Dore 1998) which offers broad descriptions of the main fabrics from the Technical College (Tomber and Dore 1998, LTC WH[Website hyperlink]) and South Carlton (Tomber and Dore 1998, SOC WH[Website hyperlink]). Further detailed fabric descriptions relating to the Lincoln Fabric series are presented in the Lincoln Roman pottery corpus (Darling and Precious 2014). Illustrations of the fabrics from the Lincoln Newport kiln show that the majority of the products conformed to the fabric descriptions already extant for the South Carlton industry (Rowlandson with Hartley & Monteil 2015; Rowlandson et al. in prep.). It should be noted that a small proportion of vessels from these production centres appear to have been fired to a pink surface colour (in the case of some of the Technical College kiln products), a pink firing throughout (examples from the Lincoln Newport kiln) and occasionally over-fired vessels fired to browner or greyer hues (see Darling and Precious 2014 for examples).

It has been noted that there can be some difficulties in distinguishing Lincolnshire products from other sites producing white ware mortaria in the East Midlands (Darling and Precious 2014, 183). One of the key distinguishing factors evident to the authors when considering the difference between Lincoln products and the products of other white ware industries such as Mancetter-Hartshill is the presence of white mica within the Lincolnshire fabrics, typically visible on the surfaces. Mancetter-Hartshill mortaria were produced using iron-poor clay from Carboniferous deposits and white mica is not typically noted as one of the characteristics of these fabrics (Tomber and Dore 1998, MAH WH).

Success has been achieved with splitting Lincolnshire products from other industries using spectrographic analysis where the Lincolnshire products contained higher proportions of titanium than other samples (Hartley and Richards 1965). A project of Neutron activation analysis (NAA) was undertaken in the 1990s showing it was possible to split Lincolnshire mortaria, flagons and legionary wares “adequately from a wide variety of other Roman material” (Darling 1994; Rush 1994). A scheme to investigate a group of mortaria from Castleford showed that samples from the Lincolnshire mortaria kilns samples could be split from material from Mancetter-Hartshill, Aldborough and the proposed local products of the Castleford Pottery shop potter (Hartley in Rush et al 2000) using ICP-AES and –MS and Thin-Section Analysis (Badreshany 2019; Rowlandson 2019). It is hoped that the scientific analysis from this project can be drawn together for publication to

disseminate the results of recent kiln excavations and scientific analysis to more fully illustrate the products of the industry.

Kilns

Please note that the database should be consulted for the full distribution data for each of the potters mentioned in the text.

Lincoln Technical College

The area to the south east of the uphill fortress and subsequent *colonia* appears to have been a focus of industrial activity in the early Roman period with activity on the Broadgate East site including a building with a furnace and a limited number of grey ware pottery wasters (Steane 2016, 453; Darling and Precious 2014, Fig. 119, 1174); this area has been proposed to represent the legionary *canabae* perhaps stretching eastward towards the site of the Lincoln Technical College (idib. 471). Regrettably any kiln structures from the earliest period of pottery production are likely to have been destroyed by the terracing and development of the Lower City area during the early 2nd century AD or may remain deeply buried. Research by Wheeler (2005) has highlighted a kiln found by Padley in 1824 in the Temple Gardens. Although no pottery was retrieved by Padley, excavations at the Greestone Centre to the north of the find spot have produced evidence for industrial activity and quarrying in the Early Roman period including a significant quantity of legionary wares (Rowlandson in Rayner 2016).

The site known as the Technical College kiln was found in 1936 (Baker 1937a & b, Taylor 1937, 233):

“Workmen digging the foundations for extensions to Lincoln Technical College, Cathedral Street, Lincoln, discovered a Roman pottery kiln dated to the late 1st to early 2nd century AD. The kiln, which had been built in a small pit in the ground, was thought to be rectangular in form. The oven in which the pottery was stacked measured three feet by two feet inside. It was lined with clay which formed a wall six to seven inches in thickness, giving an overall measurement for the kiln of four feet by three feet. The vessels produced were domestic mortaria [...] each vessel had been stamped with a single potter's mark: VITALIS.” (Baker 1937)

Although there was limited publication of the mortaria by Baker and Taylor (1937) a broader range of mortaria forms from the kiln were illustrated by John Samuels for his PhD research (1983). The two main potters we know from this site are *Vitalis 1* and *Atepacius 2*. The output of potter *Vitalis 1* would fit the date range AD90-120 from the rim profiles. Two stamp dies of his are known and he exported much of his production to the North-east of Britain, including Corbridge, Malton and York (Rigby & Stead 1976). *Vitalis 1* of Lincoln should not be confused with several other potters of the same name, from Wroxeter (Ellis 2000), Mancetter-Hartshill (Dool & Wheeler et al 1985), York (Monaghan 1997) and Colchester (Hull 1963).

The other main potter working at this site was *Atepacius 2*. His presence is based upon the pottery fabric, slip and trituration material he used, his likely date range (AD110/120-140, may be 140+, Hartley pers. comm.), and the fact that a stamped mortaria of his was found here in association with those of *Vitalis 1* (Darling 1984). *Vitalis 1* seems to have started operating at the Technical College kiln site slightly earlier than *Atepacius 2* (AD110/120-140, Hartley pers. comm.). The distribution of

mortaria by *Atepacius 2* outside Lincolnshire includes Lancaster, Castleford, Carlisle and possibly Leicester and Corbridge.

A third potter who may have been working on the Technical College site since one of his mortaria was found there is *Biso or Ibiso* (Hartley 2009). His rim forms date his output to AD110-140. He used two distinct fabrics and may have had a second workshop at Chester (McCarthy 1990) although his examples in Lincoln fabric are much more common.

Newton on Trent, Lincs

Excavated in 1983 (Field & Palmer-Brown 1991), two kilns of Flavian-Trajanic date (broadly 70-120 AD) contained apparently abandoned fills of reduced coarse wares and four mortaria, the latter were clearly intended to be cream but were all reduced to some degree (Hartley in Bidwell, Croom & Hodgson 2018). The nearest known kilns to Newton on Trent producing mortaria in the 2nd century AD were those in Lincoln at the Technical College site, Lincoln Newport and South Carlton. It is possible that the iron-free clay used in Lincoln here was taken to Newton on Trent from the same source in the vicinity of Lincoln used by the South Carlton potters who, as with the examples found here, used similar trituration grit (Samuels in Field and Palmer Brown 1991; Darling and Precious 2014, p167 LRF153, Pl.3.52). Two stamped and two unstamped mortaria were recovered mixed in with utilitarian grey ware jars and bowls, the two stamps were from different early dies of *Q. Iustus Crescens* who is likely to have moved production subsequently to South Carlton or Lincoln Newport although none of his stamps have been found there (Hartley in Bidwell, Croom & Hodgson 2018, 30-2). Only one other example of a mortarium stamped with one of his early dies is known, from Doncaster (Ibid.).

South Carlton, 2 miles north of Lincoln

The forms and style of stamp of the three main potters working here (*Aesico*, *Crico* and *Vorolas*) were effectively identical, but though the distribution of their mortaria was similar in local sites and North-east England. The work of *Crico* is known from Antonine Wall sites along with a few other Lincoln products (see database for detail).

Crico worked at South Carlton in the date range AD140-165 based on his Antonine Scottish finds. He probably also worked at Lincoln Newport. and three or more dies of his are known. A kiln site with stamped mortaria of *Aesico* was found in the early 20th century in 'North Lincolnshire', the location is unconfirmed but is thought likely to be South Carlton (Wenham & Heywood 1997). His date range is considered to be AD140-170 and three dies are known. The third main potter, *Vorolas*, worked at South Carlton in AD140-180, seven or more dies of his are known. Almost 100 stamped mortaria of his have been found at South Carlton (Rushworth & Croom 2016).

Minor potters believed to have been active in the Lincoln/South Carlton are *Bilicedo*, based at Lincoln or South Carlton or possibly both, from AD140-190 (Rigby & Stead 1976) and *Catto* who was there during the Antonine period (Monaghan 1997 No. 3389) and has two known dies.

Lincoln Newport

A previously unknown 2nd century AD pottery workshop in the Newport suburb of Lincoln was excavated in 2013. Many of the mortaria recovered were similar in both form and fabric to those produced in the nearby South Carlton workshop and one potter, *Crico*, appears to have worked at both sites. The stamps of four further potters, *ATO/OTA*, *Cupitus*, *JILIVS (INC 87)* and *Senicio/Senico*,

previously considered to have been working in Lincolnshire, were also retrieved from the Newport site thus finally locating their workshops close by, though some activity at Dragonby by *JILIVS (INC 87)* is also possible. Mortaria from the Newport workshop also had a wide distribution in the north and into Scotland. The output was focused on specialist vessels including colour-coated beakers, flagons, tazze, mortaria, decorated vessels, parchment wares and a costrel that would have required greater skill to manufacture than the standard local grey ware repertoire. It is likely that contributing factors to the location of this workshop were the proximity to Lincoln, the route of Ermine Street north and a source of light-firing Jurassic clays. (Rowlandson with Hartley & Monteil 2015; Rowlandson et al. in prep.).

The potter who stamped his work *ATO* retrograde (possibly representing tria nomina) or *OTA*, reading from left to right was already known as a Lincolnshire potter, but the discovery of several of his stamped mortaria at this site have shown that he was working in Lincoln itself, at Newport. Because of the finds in Scotland his work can be dated circa AD140-165 and he is likely to have been associated with *Crico* who worked here and at South Carlton. The work of potter *Cupitus* is very similar to that of potters from South Carlton and is roughly contemporary, he has three known dies. Four stamped mortaria of *JILIVS (INC 87)* were found here but only two further definite stamped example is known, from Dragonby (May 1996, No. 1407) and a further recently shown to the authors from Saxilby, Lincs. The products of *Senico* (sometimes *Senicio* and even *Sennico*) are most widely found in Northern England and one has been found in Scotland at Newstead. Nine dies are known and his work dates to AD130-160.

Distribution area

The excavations in Lincoln itself have retrieved relatively few examples of stamped mortaria from these workshops with many more being recorded from sites to the north and north-west of Lincoln. As the fortress and *colonia* at Lincoln has a great depth of strata burying layers dating to the 1st and 2nd centuries AD there has been a bias towards the excavation of late Roman or post-Roman deposits. Deeply stratified early and mid-Roman deposits have seldom been reached, thus the published assemblage from Lincoln is heavily biased towards mortaria of the 3rd and 4th centuries AD (Darling and Precious 2014, 299-300 and 323). As mortaria typically only make up 1% of Roman pottery assemblages from Lincoln the sample of local mortaria from the later 1st and 2nd centuries AD has hitherto been small (Darling and Precious 2014, 299-301). The excavations at the Newport production centre in Lincoln has confirmed Hartley's attribution of further potters also working in Lincoln (Rowlandson et al. 2015, Rowlandson et al. in prep.). Although there are at present relatively few stamped mortaria from the Lincoln and South Carlton industries recorded from occupation sites at Lincoln itself it would still appear likely that it was the major market for the local potters.

Decline

The end of this Lincoln industry is generally considered to be at the end of the 2nd century AD, marked by an influx of products from the Mancetter-Hartshill industry in the 3rd century AD (Darling and Precious 2014, 299). Subsequently, unstamped late Roman mortaria were produced in the Lincoln area at sites such as Swanpool (Webster and Booth 1947, Darling 1977, Darling and Precious 2014).

Bibliography

Austen, P.S., 1991, *Bewcastle and Old Penrith: A Roman outpost fort and a frontier vicus: Excavations 1977-78*, Cumberland and Westmoreland Antiq. & Arch. Soc. Res. Ser. no.6

Badreshany, K., 2019, The ICP-AES and –MS and Thin-Section Analysis of Roman Vessels from the Flass Lane Excavations at Castleford, West Yorkshire, DARC Report No. 2019/03, Unpublished report for Archaeological Services WYAS

Baker, F. T., 1937a, Roman pottery kiln at Lincoln, *Lincolnshire Magazine*, no 3, 7, 187-90

Baker, F.T., 1937b, A note on the Lincoln Technical College kiln, *J Roman Stud*, 27, 233

Bidwell, P., Croom, A., & Hodgson, N., 2018, The Annexe of the Roman Fort at Slack, West Yorkshire: Excavations by B.R. Hartley in 1968–9, *Britannia*, 49, 1-51

BGS Map Viewer, British Geological Survey Geology of Britain viewer
<https://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Dannell, G. B. & Wild., J. P., 1987, *Longthorpe II, the Military Works-depot: an episode in landscape history*, Britannia Monograph Ser. 8, London

Darling, M. J., 1977, *A Group of late Roman pottery from Lincoln*, The archaeology of Lincoln, 16/1

Darling, M.J., 1981, Early red-slipped ware from Lincoln, in Anderson, A.C. and Anderson, A.S. (eds), *Roman Pottery Research in Britain and North-west Europe. Papers presented to Graham Webster*, BAR Int. Ser. 123, 397-416

Darling, M. J., 1984, *Roman Pottery from the Upper Defences*, The Archaeology of Lincoln, 16/2

Darling, M. J., 1988, The pottery, in Darling, M. J. & Jones, M. J., *Early Settlement in Lincoln*, *Britannia* 19, 9-37

Darling, M.J., 1994, The South Carlton Roman Pottery Project, in Jones, M., J. (ed), *Lincoln Archaeology 1993-4, Annual Report City of Lincoln Archaeology Unit 6*, , City Lincoln Archaeology Unit, Lincoln, 35-6

Darling, M.J. and Precious, B.J., 2014, *A Corpus of Roman Pottery from Lincoln*, Lincoln Archaeological Studies No. 6, Oxbow Books, Oxford

Dool, J., Wheeler, H., et al, 1985, Roman Derby: Excavations - 1968-1983, *The Journal of the Derbyshire Archaeological and Natural History Society* 105, 1985.

Ellis, P., 2000, The Roman Baths and Macellum at Wroxeter Excavations 1955-85, English Heritage

Evans, W. D., 1952, *The Jurassic rocks of the Lincoln District*, Proc. Geol. Assoc., London, Vol. 63

Field F. N. & Palmer-Brown, C. P. H., 1991, New evidence for a Romano-British greyware pottery industry in the Trent Valley, *Lincolnshire Hist Archaeol*, 26, 40-56

Fiske, H.G. and Rowlandson, I.M., in prep a, A report on the excavation of a Roman pottery production site off Hykeham Road, Lincoln (HYRL09), Unpublished developer report on excavations undertaken by PCAS Ltd.

Fiske, H.G. and Rowlandson, I.M., in prep b, Evidence for the production of late Roman colour-coated wares to the rear of Hykeham Road, Lincoln, *Journal of Roman Pottery Studies*

Frere. S.S. and St. Joseph, J.K., 1974, The Roman Fortress at Longthorpe, *Britannia* 5, 1-129

Hartley K. F., 2009, Mortaria Stamps, in Boyer, P., Proctor, J. and Taylor-Wilson, R., *On the Boundaries of Occupation: Excavations at Burringham Road Scunthorpe and Baldwin Avenue Bottesford, North Lincolnshire*, Pre-Construct Archaeological Monograph 9, London

Hartley, K.F. and Richards, E.E., 1965, Spectrographic Analysis of some Romano-British Mortaria, *Bulletin of the University of London Institute of Archaeology* No. 5, 25-43

Hartley, K.F. and Tomber, R. with Webster, P. (eds), 2007, A Mortarium Bibliography for Roman Britain, *JRPS* 13

Hull, M.R., 1963, *The Roman Potters' Kilns of Colchester* (Reports of the Research Committee of the Society of Antiquaries of London, n. XXI), Oxford

Jones, M.J., 2002, *Roman Lincoln: Conquest, Colony & Capital*, Tempus, Stroud

Kent, P., 1975, The Grantham Formation in the East Midlands: Revision of the Middle Jurassic, Lower Estuarine Beds, *Mercian Geol.* 5, 305-327

Kent, P., 1980, *British Regional Geology: Eastern England from the Tees to The Wash* 2nd ed., HMSO, London

McCarthy, M. R., 1990, *Roman, Anglian and Medieval Site at Blackfriars Street, Carlisle* (Research S.), Cumberland And Westmorland Antiquarian And Archaeological Society

Monaghan, J., 1997, *Roman Pottery from York*, The Archaeology of York The Pottery 16/8, Council for British Archaeology, York

Rayner, T., 2016, Archaeological Assessment Report: Excavation at Greestone Centre, Lincoln, Allen Archaeology Limited Unpublished report number AAL 2016149

Rigby, V. & Stead, I.M., 1976, Coarse pottery, in Stead, I M, 1976, *Excavations at Winterton Roman Villa and other Roman sites in North Lincolnshire, 1958-1967*, Dept. Environment Archaeol. Rep. No 9, London, 1976, 136-190

Rowlandson, I.M., 2019, The Prehistoric and other Roman pottery from an archaeological excavation at Flass Lane, Castleford, West Yorkshire (Site code FLA16, SE47391 23531), Unpublished report for Archaeological Services WYAS

Rowlandson, I.M., with Hartley, K.F. and Monteil, G., 2015, The Roman pottery from Newport, Lincoln (LINP13) in Rayner, T., Archaeological Scheme of Works: Land off Newport, Lincoln, Unpublished assessment Allen Archaeology Ltd. Report Number AAL 2015098

Rowlandson, I.M., Hartley, K.F. and Fiske, H.G., in prep a., Evidence for the production of mortaria, flagons and colour-coated wares in the Newport suburb of Lincoln, *Journal of Roman Pottery Studies*

Rush, P., 1994, South Carlton Roman Pottery Project: Second Report, Unpublished typescript report

Rush, P., with Hartley, K.F., 2000, 'The Mortaria', in *Rush et al.*, 167-192

Rush, P., Dickinson, B., Hartley, B. and Hartley, K.F., 2000, *Roman Castleford Excavations 1974-85 Vol III The pottery*, Yorkshire Archaeology 6. Short Run Press, Exeter

Rushworth and Croom, 2016, *Segedunum. Excavations by Charles Daniels in the Roman Fort at Wallsend (1975-1984)*, 2 vols. Archaeologia Aeliana Series 5

Samuels, J., 1983, The Production of Roman Pottery in the East Midlands, Unpublished PhD, Nottingham University

Steane, K., 2016, *The Archaeology of The Lower City and Adjacent Suburbs*, Lincoln Archaeological Studies No.4, Oxbow, Oxford

Stocker, D., ed., 2003, *The City by the Pool: Assessing the archaeology of the city of Lincoln*, Lincoln Archaeological Studies No. 10, Oxbow, Oxford

Taylor, M. V., 1937, Roman Britain in 1936, *J Roman Stud*, 27, 223-50

Tyers, P.A., 1996, Roman Pottery in Britain, Batsford, London

Webster, G., 1944, The Roman pottery at South Carlton, Lincs, *Antiq J*, 24, 129-43

Webster, G. & Booth, N., 1947, The excavation of a Romano-British pottery kiln at Swanpool, Lincoln, *Antiquaries Journal*, 27, 61-79

Wenham, L.P., Heywood, B, 1997, *The 1968 to 1970 excavations in the vicus at Malton, North Yorkshire*, Yorkshire Archaeological Report No. 3, Yorkshire Archaeological Society, Leeds

Wheeler, R.C., 2005, J S Padley as an Antiquary, *Lincolnshire Hist Archaeol* 39, 20-23