23181

Fenland Management Project, Norfolk
Excavations at Middleton Saltern Mound, Archive Summary

1. Introduction

1.1 Although fieldwork during the Fenland Project failed to locate evidence of significant Roman domestic settlement in, or along the fringes of, the Nar Valley it was shown that the area had been a focus for Roman industrial activity. Thus, pottery production centres, dating to the 3rd and 4th centuries, are known from Shouldham and Pentney on the south and north edges of the valley respectively. A further kiln, of similar date, was recently excavated at Blackborough End (Gurney 1990, 83-92), only 1km. to the north east of the Middleton saltern mound. In addition, iron smelting is known to have occurred on Wormegay Island and Roman potboiler mounds, in Middleton parish, suggest other industial activities (Silvester 1988, 172). It thus appears that during the Roman period the valley's natural resources, Gault clay, iron ore, salt and possibly peat were being exploited.

1.2 The Middleton saltern mound (Site 23181) lay on the northern slopes of the Nar Valley, at grid reference TF 655 144, and consisted of a low mound, covered in briquetage and pottery. Immediately adjacent to the site lay the marine silts which fill the lower part of the Nar Valley. These deposits are thought to have begun to be deposited in the Iron Age and to correspond, at least in part, to the Iron Age silts of Marshland (Silvester 1988, 126).

1.3 During the Fenland Evaluation Project, it was shown that despite significant plough damage, much still survived beneath the ploughsoil. It was equally clear from the large lumps of fragile briquetage in the ploughsoil, however, that erosion was continuing. It was therefore suggested that the site be excavated. The excavations lasted for a period of 12 weeks during October, November and December 1991.

2. Methodology

2.1 Prior to the start of excavation work, the area was contour surveyed, revealing a mound c. 0.6m. high and 60m. long by 30m. wide. In addition, the ploughsoil was metal detected and produced 3 coins of 3rd and 4th century date. Fieldwalking of the site failed to reveal anything, other than a uniform spread of eroded briquetage fragments and the occasional sherd of pottery, over the whole site.

2.2 The upper element of the ploughsoil, c.0.25m. deep, was then removed by machine, over an area measuring 60m. by 40m. The lower element of the ploughsoil was removed by hand and all artefacts located within a 5m. division of the site grid. All underlying deposits and features were then hand excavated and environmentally sampled, as required.

3. The Excavations

3.1 Approximately 600 contexts were recorded and entered in a context register which incorporates physical, descriptive, correlative, interpretive and locational information.

3.2 At the southern end of the site, removal of the ploughsoil revealed a thin deposit of silt (6), extending as far as the southern edge of the mound. A test pit was dug through the silt and revealed an underlying buried soil (7 and 8), over glacial sand with flints (9).

3.3 It was apparent that there had been two distinct phases of activity on the site. Initially, activity was centred on the mound, which was encircled with an intermittent ditch, of variable width and depth (218, 282, 328, 401, 408, 275, 345, 199, 206). The ditches around the mound were fed with seawater by two feeder channels (143, 155), which linked the shore line, marked by the silt deposit, with the south west corner of the encircling ditches. In the centre of the mound lay a boiling hearth (596). The feature had been much disturbed by ploughing but enough surived to indicate that it had been a highly sophisticated structure, with a clay lined, longitudinal flue and stoke holes at either end. Lining the edge of the flue, the bases of a number of in-situ pedestal bases were recognised. At the eastern end of the flue the clay arch, linking flue and stokehole, survived.

3.4 The boiling hearth was accompanied, immediately to the south, by a clay lined settling tank (472), measuring 6m. long by 1.6m. wide. Around both hearth and tank a briquetage rich layer (222) had built up, whilst salt production was in progress, and had served to increase the height of the natural sandhill. When this phase of activity ended, the whole area was systematically levelled and the debris used to backfill the surrounding ditches.

3.5 The main centre of activity then moved to the northwest of the mound, where two further boiling hearths (97 and 98), similar to that described above, were constructed. The hearths were accompanied by 2 clay lined settling tanks (33 and 59). Although of similar dimensions to that on the mound, the latter examples had each been divided by internal clay divisions into 3 chambers. The whole complex was fed by a wide, shallow feeder channel (102), which cut the earlier feeder channels, and terminated in a large reservoir (495), to the west of the hearths and tanks. At the close of this phase of activity, this area too was systematically levelled and the debris used to backfill the channel and tanks. Hints of a later, less sophisticated phase of activity were found in the area of the mound, where an area of burnt clay was seen to overlie the original hearth. The primitive hearth

(597) was accompanied by a shallow, plough damaged, clay lined settling tank (13). It seems likely that these features were supplied with seawater by a large reservoir (429), cut into the backfilled ditch around the mound.

4. The Finds

4.1 During the excavations, a total of 428kg. of briquetage was recovered. Although most of the material was recovered from stratified contexts, in a relatively unabraided condition, much of the assemblage (30% by weight) was retrieved from the plough-soil (5 and 10). All of this latter material was located within a 5m. division of the site grid. Although the majority of the briquetage was derived from stratified contexts, the number of individual contexts producing significant quantities was limited and included the briquetage rich layer 222 (13.7 kg.), mound encircling ditch segments 282 and 328 (7.7 kg. and 7.2 kg. respectively) and ditches 431 and 579 (53 kg.), to the east of the main encircling ditch. Rapid visual scanning of the material suggests that the briquetage can be divided into six main groups; pedestals, trough fragments, small caking vessels, "handle" shaped artefacts, artefacts with a single flat surface and unrecognisable broken fragments.

4.2 A total of 17.5kg. of pottery was recovered from the site. The majority of this material consisted of local, Nar Valley coarse Ware, datable to the 3rd and 4th centuries A.D., and it is this material which provides the main dating evidence for the site. The majority of this material (c. 60% by weight) was recovered from the ploughsoil and few srtatified contexts produced anything other than the occasional sherd. The exceptions to this included a complete coarse ware jar and c. 0.6kg. of pottery from the large pit or reservoir (85), c. 2kg. of pottery from the intermittent ditch around the mound (contexts 430, 280, 258, 152) and c. 0.75kg. of pottery from the fill of settling tank 33. Small amounts of local, Iron Age pottery occurred as a residual element in a number of sealed contexts whilst small quantities of medieval fabrics were recovered from the ploughsoil.

4.3 Few small finds were recovered from the site (18 in total). Most were recovered from the ploughsoil, with the aid of a metal detector, and consisted of 3 bronze coins, provisionally dated to the 3rd or 4th century A.D. and 12 unidentifiable iron, bronze and glass fragments. Stratified contexts produced only 3 small finds; a bronze bracelet with decorated terminals (260), an unidentified bronze object (123) and a schist hone stone (333).

4.4 During the excavation a total of 42 pieces of struck flint, mostly consisting of flakes and scrapers, was recovered. All of this material occurred as a residual element in later contexts.

5. Environmental Samples

5.1 A total of 16 bulk samples was taken during the excavations, for later bulk sieving and the recovery of macro-fossils and charcoal. It was hoped that these would provide information on the fuel used to drive the salt making process. Most of the samples were taken from the ashy deposits filling the flues and stokeholes (154\BS 2, 105\BS 4, 108\BS 6, 107\BS 7, 138\BS 9, 162\BS 10, 190\BS 12, 217\BS 13, 162\BS 14) of the abandoned boiling hearths and settling tanks (14\BS 1, 60\BS 3, 92\BS 5). A fill of feeder channel 102 (157\BS 8) and a fill of the intermittent ditch 199 around the mound (177\BS 11) were also sampled. In addition, bulk samples were obtained from the buried soil (6\7\BS 15), sealed beneath the marine silts, bordering the salt production area and the briquetage rich layer (222\BS 16) on the crest of the mound.

5.2 Samples, totalling 6 in number, were also taken for foraminifera analysis and were obtained from the fills of feeder channels (149\LS3, 157\LS 4), settling tanks (99\LS 5 , 26\LS 9), reservoirs (115\LS 2) and the marine silt bordering the site (6\LS 1). It was hoped that analysis of these samples would elucidate the nature of the marine influence on the site and the presence of any special conditions in channels and feeder channels.

5.3 Pollen monoliths were obtained from the pre-marine silt buried soil (6\7\LS 9) and from the lowest element of 222 (LS 10), the briquetage rich layer making up the mound, in the hope of understanding the vegetation, at the time of activity on the site.

5.4 The buried soil (6\7) was also sampled for soil micromorphological analysis (LS 7), as was the briquetage rich layer (222) covering the centre of the mound (LS 11) and a grey sand (285) overlying the edge of the mound (LS 285). It was hoped that study of the samples would shed some light on conditions under which these were deposited.

5.5 A very small, and statistically invalid, sample of animal bone was recovered from the site (4.5kg.). The material occurred in numerous contexts, without any concentrations and the lack of animal bone probably reflects the non-domestic nature of the site but also the acidic qualities of the soil (See Appendix 1 for details).

6. Preliminary Discussion

6.1 The excavations at Blackborough End have allowed the examination of a complete Roman saltern site, without the complications imposed by the presence of earlier or later activity on the site. Understanding has also been aided by the fact that no contemporary domestic activity occurred on, or immediately adja-

cent to, the site. It is, therefore, a reasonable assumption that all features were concerned with the salt productuion process. Full analysis of the evidence provides a rare opportunity to study all the features associated with Roman salt production on a site where the activity must be seen as industrial in scale. Once analysis of the site is complete and a report has been prepared a clear picture of industrial scale salt production in the Roman fens will be available.

6.2 It is, of course, important to distinguish between industrial salterns and sites where activity appears to have occurred in more intimate association with domestic settlements. This latter situation is suspected at a number of sites along the Norfolk section of the Fen Causeway (Silvester 1991, 109) and it is probable that the evidence from Blackborough End will provide a contrast with that from the site excavated by Charles Green at Denver (Gurney 1986, 93-145).

6.3 As well as comparing broadly contemporary techniques of salt production, potentially useful informatiom may come from a comparison of the structural evidence from Blackborough End with that from earlier and later sites in the Fens where salt production is evidenced. The most important examples concern the medieval saltern site at Parson's Drove in Cambridgeshire (French, 1992) and the Iron Age salt production site at Toll Bar Drove, Cowbitt, Lincolnshire (Lane, 1992).

Bibliography

<**> Bradley, R., 1992
<***> "Roman salt production in Chichester Harbour: Rescue excavations at Chidham, West Sussex." Britania XXIII

<**> Fawn, A.J., Evans, K.A., McMaster, I. and Davies, G.M.R., 1990
<***>"The Red Hills of Essex", Colchester Archaeological Group

<**> Fowler, G., 1950
<***> "A Romano-British village near Littleport, Cambs.", Proc. Cambridge Antiq. Soc. 43, 7-20

<**> French, C., 1992
<***> "Excavations at Parson's Drove, Cambridgeshire. An interim report."

<**> Gurney, D., 1986
<***> "Settlement, religion and industryon the fen-edge; three Romano-British sites in Norfolk", E. Anglian Archeol. 31

<**> Gurney, D., 1990
<***> "A Romano-British pottery kiln at Blackborough End, Middleton", Norfolk Archaeology Vol. XLI

<**> Gurney, D., forthcoming
<***> "Shell Bridge, Holbeach St. Johns: Excavations by Ernest Greenfield, 1961", E. Anglian Archaeol.

<**> Kenny, E.J.A., 1933
<***> "A Roman Bridge in the Fens", Geogr. J. 82, 1-8

<**> Lane, T., 1992
<***> "Excavations at Toll Bar Drove, Cowbitt, Lincolnshire. An interim report."

<**> Potter, T.W., 1981
<***> "The Roman occupation of central Fenland" Britannia 12, 79-133

<**> Silvester, R.J., 1988
<***> "The Fenland Project, Number 3: Norfolk Survey, Marshland and the Nar Valley", E. Anglian Archaeol. 45

<**> Silvester, R.J., 1991
<***> "The Fenland Project, Number 4: Norfolk Survey, The Wissey Embayment and Fen Causeway", E. Anglian Archaeol. 52

<**> Swan, V.G., 1981
<***> "Caistor by Norwich reconsidered and the dating of Romano-British pottery in East Anglia", in Anderson, A.C. and A.S. (eds.), "Roman pottery research in Britain and north west Europe", British Arch. Rep. Int. series 123, 146-147.

Bibliography

<**> Bradley, R., 1992
<***> "Roman salt production in Chichester Harbour: Rescue excavations at Chidham, West Sussex." Britania XXIII

<**> Fawn, A.J., Evans, K.A., McMaster, I. and Davies, G.M.R., 1990
<***>"The Red Hills of Essex", Colchester Archaeological Group

<**> Fowler, G., 1950
<***> "A Romano-British village near Littleport, Cambs.", Proc. Cambridge Antiq. Soc. 43, 7-20

<**> French, C., 1992
<***> "Excavations at Parson's Drove, Cambridgeshire. An interim report."

<**> Gurney, D., 1986

<***> "Settlement, religion and industryon the fen-edge; three Romano-British sites in Norfolk", E. Anglian Archeol. 31

<**> Gurney, D., 1990
<***> "A Romano-British pottery kiln at Blackborough End, Middleton", Norfolk Archaeology Vol. XLI

<**> Gurney, D., forthcoming
<***> "Shell Bridge, Holbeach St. Johns: Excavations by Ernest Greenfield, 1961", E. Anglian Archaeol.

<**> Kenny, E.J.A., 1933
<***> "A Roman Bridge in the Fens", Geogr. J. 82, 1-8

<**> Lane, T., 1992
<***> "Excavations at Toll Bar Drove, Cowbitt, Lincolnshire. An interim report."

<**> Potter, T.W., 1981
<***> "The Roman occupation of central Fenland" Britannia 12, 79-133

<**> Silvester, R.J., 1988
<***> "The Fenland Project, Number 3: Norfolk Survey, Marshland and the Nar Valley", E. Anglian Archaeol. 45

<**> Silvester, R.J., 1991
<***> "The Fenland Project, Number 4: Norfolk Survey, The Wissey Embayment and Fen Causeway", E. Anglian Archaeol. 52

<**> Swan, V.G., 1981
<***> "Caistor by Norwich reconsidered and the dating of Romano-British pottery in East Anglia", in Anderson, A.C. and A.S. (eds.), "Roman pottery research in Britain and north west Europe", British Arch. Rep. Int. series 123, 146-147.