II: Further Inscribed Roman Salt Pans from Shavington, Cheshire

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In the light of the untimely death of Stephen Penney, this jointly authored paper is dedicated to his memory; his passing is a sad loss to his friends and to the worlds of history and archaeology in north-west England. (DCAS)

The discovery of two more ?fourth-century lead salt pans at Shavington confirms Roman salt production at the site; indeed they may represent its culmination rather than its beginning. The inscription FL VIVENTIUS on one pan probably refers to the same individual as the VIVENTIUS EPISCOPUS on the pan found in 1993. It implies that the saltworks was under the control of the church and adds to the small collection of evidence for early Christianity in the north Midlands. The saltworks may have continued in production into the sixth or seventh century.

Introduction

In July 1998 a metal detectorist discovered a Roman lead salt pan on farmland at Shavington near Crewe.[1] The pan (pan 1), which was lying at approximately 70cm depth, was found about 50m north of where an inscribed Roman lead salt pan had been discovered in 1993 (Penney & Shotter 1996). Having recovered the pan, the finder notified one of the authors (SP) of his discovery and reported that immediately adjacent to this find a strong metal detector signal suggested the possibility that a further pan lay undisturbed close by.

Excavation

Following the identification by metal detector of the probable position of the second pan, a trench measuring 2m x 2m was excavated.[2] At about 50cm depth a folded lead salt pan (pan 2) was found aligned north–south in a shallow pit dug into underlying fluvio-glacial sand. The backfill of the pit consisted of a yellowish grey silt sand; no finds were recovered from this context. The north-east corner of the trench cut the edge of a pit from which the finder had removed the first pan (Dodd *et al* 1998, 3–4).

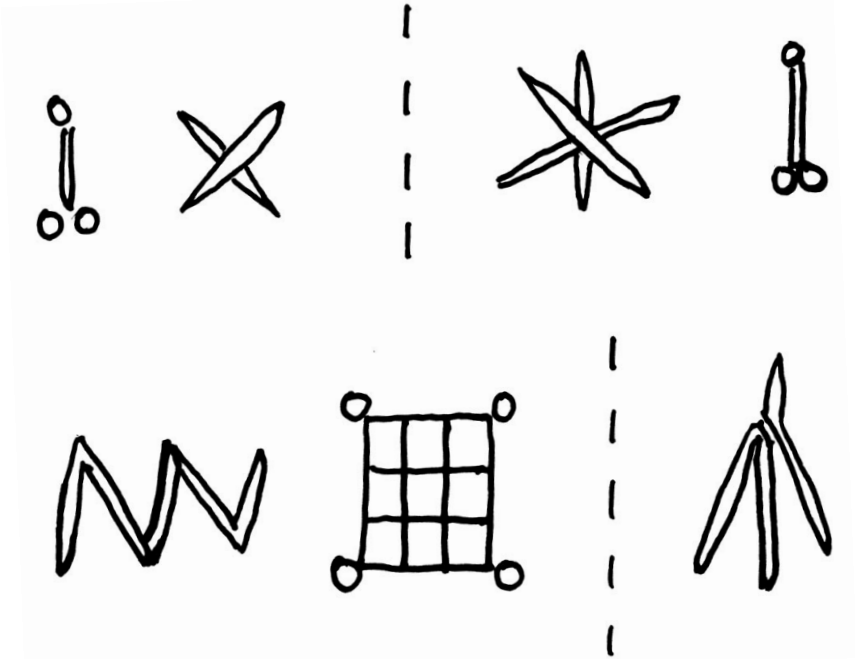
The salt pans

The two salt pans are shallow, rectangular lead pans of a type in use during the late Roman period to heat naturally occurring brine in the manufacture of salt. The known occurrence of Roman lead salt pans is confined to south and central Cheshire, where at least eleven pans have been documented, seven of these inscribed with apparent indications of ownership (Penney & Shotter 1996; Penney 1999).

Ill II.1 Shavington 1998: salt pan 2

Pan 1

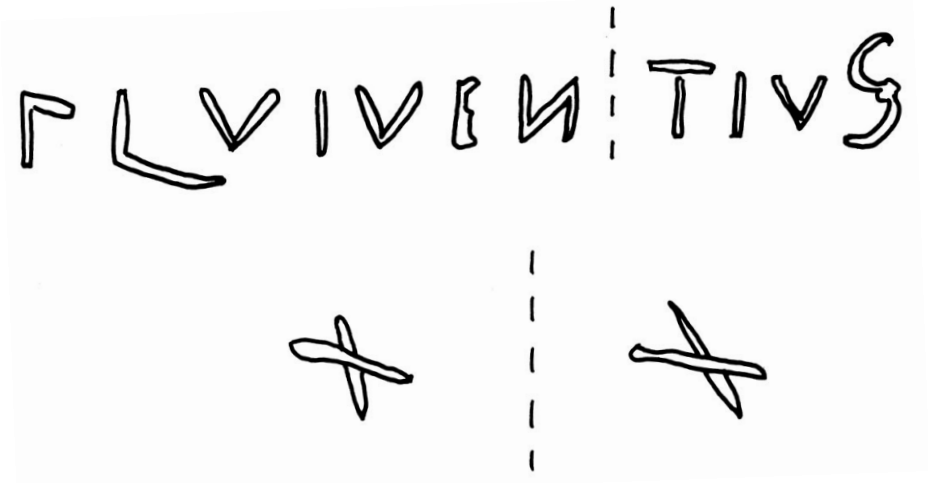
Pan folded to 118 x 59 x 20cm. The original dimensions were approximately 103 x 101 x 14cm; constructed from 9mm-thick lead sheet. An 11mm-wide square-sectioned moulding runs around the pan rim. Two opposite sides of the pan are centrally pierced by lifting holes beneath arched strengtheners applied to the exterior face. The pan carries low-relief inscriptions 50–60mm high on the outer face of each pierced side



Ill II.2 Shavington 1998: inscriptions on salt pan 1. (Not to scale)

Pan 2

Pan folded to 127 x 51 x 15cm. The original dimensions were approximately 108 x 98 x 12cm; constructed from 8mm-thick lead sheet. A 14mm-wide square-sectioned moulding with crimped decoration runs around the pan rim. Two opposite sides of the pan are centrally pierced by 12mm-diameter lifting holes beneath arched strengtheners applied to the exterior face. The pan carries low relief inscriptions 35–50mm high on the outer face of each pierced side



Ill II.3 Shavington 1998: Inscriptions on salt pan 2. (Not to scale)

Topography and Geology

All the Shavington salt pans were located in low-lying land to the east of Shavington village within a broad valley drained by Swill Brook, a minor tributary of the River Weaver.

With rock salt beds of the Northwich Halite Formation underlying this area at a depth of about 500m,[3] the conditions would have been suitable for the formation of brine springs. These emerged in river valley locations in areas of 'wet rock head', where rock salt deposits were subject to active solution beneath exposures of porous rock — in this case marlstone. Today brine springs have been almost obliterated from the Cheshire landscape by industrial brine pumping and agricultural drainage.

The geology and topography around Shavington and Swill Brook coincide to provide a convincing setting for early salt production. The discovery of a single scrapped salt pan (Penney & Shotter 1996) allowed some doubt to remain as to whether Roman salt production could necessarily be identified at this site. However, the presence of three Roman salt pans in an area which must have been conducive to brine formation now leaves little doubt that salt production on a significant scale was occurring in this valley during the late Roman period.

Shavington in its Roman context

The speed with which Roman arms moved northwards and westwards in the early years of conquest meant that the territory covered by the modern county of Cheshire rapidly

became 'frontier country'. Although there are many gaps in our understanding of the political geography of the area in the pre-Roman Iron Age, there is some reason to see it as militarily sensitive from an early stage because of the known factionalism between the Brigantian leaders, Venutius and Cartimandua, and because of its proximity to north Wales. Roman armies had already penetrated the area in the 50s and 60s AD from bases such as Little Chester, Wroxeter and Whitchurch. There was probably also a base in the Chester area by the 60s to facilitate the transportation of troops by sea to locations further north. It would seem certain from coin evidence (Shotter 1998) that, by this time, Middlewich itself lay on a route which represented the earliest line of penetration from the north-west Midlands into north-west England.

There is now little doubt that permanent military dispositions were being laid out in Cheshire as early as the governorship of Quintus Petillius Cerialis (AD 71–3) and that by the late 70s–early 80s the area was well on the way to being consolidated in Roman hands, with the completion of the legionary fortress at Chester. Meanwhile, Roman forces were pushing ever-further northwards, until in the late 80s a decision was evidently taken to limit the extent of the province by the fortified road, now known as the Stanegate, which may have eventually run from South Shields (on the Tyne estuary) to Kirkbride in the west. Although the Roman historian, Tacitus, plainly regarded this limiting of territory as a 'sell-out' of Roman interests, the evidence is that consolidation behind the Stanegate was pursued with considerable vigour.

The period between *c* 90 and 120 saw the building of new forts, the establishment of civilian communities outside the forts and the development of a supporting infrastructure. Cheshire will have benefited from this, with the permanent emplacement of Legion XX at Chester: its 5,500 men, not to mention other soldiers housed in auxiliary forts, represented a large market. Industrial sites sprang up at other locations such as Holt, Heronbridge, Wilderspool, Wigan and Walton-le-Dale and, as peace settled on the area, some of the forts also evidently gave way to industrial activities — as appears to have happened at Middlewich and Northwich.

High in importance would have been the production of salt — not least because the feeding of so large a military establishment as the North-West possessed required that much of the foodstuffs supplied to them, particularly meat and fish, needed to be cured in brine as a regular part of its processing (cf Jackson & Potter 1996). Salt production is known to have remained strong in central Cheshire, and the need for this vital commodity did not decrease over the years. We can readily postulate, therefore, that sites such as that at Shavington would have developed in significance with the passage of time.

Until the discovery of the first salt pan in 1993, no Roman sites or finds had been recorded from Shavington, and little Roman material was known from the surrounding area. Whilst a scatter of Roman finds has been reported from the neighbouring parishes of Wybunbury to the south and Weston to the east, lack of fieldwork in this part of Cheshire, and generally unfavourable conditions for cropmark formation (Collens 1999, 36), are likely to have led to an under-representation of the Roman presence in this area. However, some indications of wealth in the vicinity are provided by a small hoard of *denarii* (Shotter

2000) and a stray Samian sherd (CSMR 2676), both from Weston. In addition, in Shavington itself a small number of Roman finds (coins, brooches and pottery) have recently been recorded a short distance to the south-east of the lead pans site in an adjoining field.[4] These finds can be dated to the second to the fourth centuries, a pattern which is repeated in those from Weston and Wybunbury.

As the Shavington salt pans are of apparently late Roman date, it is quite possible that they represent the culmination of Roman salt-making at the site. The evidence for an earlier presence in the vicinity, provided by the stray finds, suggests that the brine springs may have acted as a focus of activity from at least the second century. Salt-making at Middlewich (eight miles north of Shavington) at this earlier date is attested by large quantities of briquetage (Bestwick 1975), and only excavation near the salt pans' location is likely to resolve whether there was an earlier phase of salt production here as well. However, it is worth noting that the only other two Cheshire sites where Roman briquetage has been found are both in Moston parish, mid-way between Middlewich and Shavington (Price 1997). The brine supply at Shavington is, therefore, likely to have been identified at an early date.

The saltworks complex

The discovery of three buried salt pans, supported by the evidence of local geology and topography, points to the existence of a Roman saltworks at Shavington. Other excavated saltworks sites provide some indication of what other components may remain to be investigated there.

The focus of Roman saltworking units was the brine pit, dug around a brine spring to facilitate access. Circular pits were dug into the natural sand at Middlewich, where they appear to have been unlined (Bestwick 1975, 67). Prior to evaporation brine was stored in settling tanks — plank-lined pits or sunken halved barrels at Droitwich, Worcestershire (Woodiwiss ed 1992), or in some instances at Middlewich, in spherical amphorae set into the ground (Bestwick 1975, 67).

At Middlewich brine was evaporated over horizontal-draught brine kilns (evaporation hearths) constructed from clay, whilst circular kiln structures may have been used to dry the salt. Large quantities of briquetage, coarse-fired clay kiln furniture, were associated with these structures. There is no evidence that lead pans were used in association with these types of kiln. To provide sufficient support for a working set of two to three lead pans, stone-lined flues, of the type excavated in Droitwich in fifth- to seventh-century contexts (Hurst ed 1997, 17), would have been required. It is envisaged that such structures must have been present in close proximity to the presumed brine pit(s) at Shavington. Open-sided timber buildings, like those identified at Middlewich (Bestwick 1975, 66), may have provided shelter for these working units.

Lead-working would probably also have been carried out in the vicinity of the saltworks. The discovery at both Shavington (Penney & Shotter 1996) and Middlewich (Penney 1999) of stockpiled scrap lead in the form of cut pan fragments is persuasive evidence that lead was re-cycled for the manufacture of new pans. It has been argued in connection with late Roman 'baptismal' tanks that these are likely to have been made where they were

wanted, since the transport of lead would have been easier if it was in pig form (Guy 1981, 273). It is similarly suggested that itinerant leadsmiths are likely to have made use of scrapped lead retained on site rather than transport complete pans, weighing in excess of 100kg, over considerable distances. It is therefore envisaged that lead-working hearths would have been located near the site. The pans would have been cast flat on a sand bed before being beaten into shape.

Inscribed Roman lead pigs provide much information concerning the extraction and trade in British lead (Still 1999); the date range for these pigs spans the mid-first to late second century. By the late Roman period significant quantities of scrap were doubtless supplementing the fresh output of lead-mining and processing areas such as Flintshire, Derbyshire and the Mendips. It is clear that the leadsmiths responsible for the late Roman salt pans in Cheshire were working at a time when some of the most spectacular examples of Roman leadworking were being produced. The circular baptismal tanks are generally accepted as fourth-century in date (Guy 1981; Watts 1988), whilst it has been estimated that some 70% of Roman lead coffins in Britain date to the fourth century (Toller 1977, 10).

A Christian enterprise?

The pan inscriptions shed some light on the ownership of this saltworks. The inscription on pan 2, FL VIVENTIVS (Flavius? Viventius), presumably refers to the same individual as that recorded on the pan found nearby in 1993. The inscription on that pan, VIVENTI [EPIS]COPI, has been taken to indicate that it may have been owned by a bishop Viventius, who was presumably based in Chester (Penney & Shotter 1996, 362–3). The extent and distribution of bishoprics in late Roman Britain is a matter of some conjecture, but it has been suggested that by the second half of the fourth century the number of British bishops may have been in double figures (Thomas 1981).

The two saltires in shallow relief on the other side of pan 2 are likely to be no more than purely decorative. However, the presence of the Christian name Viventius could just mean that these devices should be interpreted as *crux decussata* (St Andrew's cross), a Christian symbol recognised in late Roman Britain and apparently represented on late Roman baptismal tanks (Watts 1988).

The devices on pan 1 are difficult to interpret — if, indeed, there is any symbolism to interpret. Side 1 could again possibly show a *crux decussata* and the iota-chi Christian symbol. However, without any overtly Christian inscription on pan 1, any such interpretation would be hard to justify. On the other side of pan 1 the zig-zag motif could represent an MV ligatured; the other two motifs defy interpretation and again could be purely decorative.

The implication of the inscription on the 1993 salt pan find is that salt manufacture at Shavington may have been a source of income for the local Christian community. The fourth-century church in all probability benefited from gifts and endowments by wealthy benefactors. The Shavington salt pans, or at least the VIVENTI [EPIS]COPI pan, should probably be seen in this light. It is interesting to note that the wealth of another late Roman bishop is demonstrated by a silver lanx from Risley Park (Derbyshire) which carries an

inscription recording it as a gift to a church from a bishop Exuperius — EXVPERIVS EPISCO[P]VS (Mawer 1995, 27–8).

The two Viventius salt pans can therefore be numbered amongst the very few Roman finds from the North-West which can be positively identified as having Christian connotations. It is now generally believed that an amphora fragment from Manchester carrying a graffito cryptogram is unlikely to have any Christian significance (Mawer 1998, 39–40). However, an inscribed silver spoon carrying the chi-rho monogram between an alpha and omega found in the late nineteenth century thirteen miles north-east of Shavington, at Whitemore Farm mid-way between Congleton and Biddulph, is unambiguously in the Christian tradition (Painter 1975; Mawer 1995, 44).

Post-Roman activity

The discovery of a sixth- or seventh-century bronze penannular brooch with punched decoration within a few metres of the first Roman salt pan find[5] suggests that the Shavington brine spring(s) may have been a focus for continuing activity beyond the Roman period. Whilst there is clear evidence of salt production at Droitwich between the fifth and seventh centuries (Hurst 1997, 17), no archaeological evidence of salt manufacture in this period has so far been identified in Cheshire. This important find perhaps provides the first tentative evidence that there may have been a sub-Roman salt industry at Shavington.

No salthouse is recorded in Domesday Shavington, where two manors were held by Godwin and Dot. The thirteenth-century reference to a *salina de Schavinton* may be significant, but does not provide conclusive evidence of medieval saltworking at Shavington, as it is possible that this could relate to a salthouse at Nantwich belonging to the manor of Shavington (Dodgson 1971, 38). The field name 'Witch-house Field' (ie wyche house = salthouse) in the neighbouring parish of Rope[6] is, however, clear evidence of a saltworks operating little more than 1km west of Shavington. This is probably to be related to the rash of small saltworks which sprang up in some salt-bearing areas away from the traditional salt towns as these lost their monopoly during the sixteenth and seventeenth centuries. There is also possibly significant field-name evidence from Shavington itself (Penney & Shotter 1996, 364).

Conclusion

The discovery of three Roman lead salt pans at Shavington clearly indicates the presence of an important late Roman salt production site nearby. The discovery of other earlier Roman material in the vicinity suggests that the Shavington brine springs may have served as a focus for activity from at least the second century, whilst the nearby discovery of a later penannular brooch also raises the possibility of a sub-Roman salt industry at this site. The Christian associations of the fourth-century saltworks gather strength from the recurrence of the name Viventius, whilst the implications of the existence of a bishop Viventius are far-reaching.

Shavington is clearly a potentially key site in our understanding of the organisation and operation of the late Roman salt industry in Cheshire. Further archaeological investigation is clearly needed to understand more fully the operation and chronology of this site.

Notes

[1] The authors are grateful to Mr Gordon Sandland for promptly reporting this find.

[2] The excavation was undertaken by Earthworks Archaeological Services under the direction of Mr Will Walker and grant-aided by Cheshire County Council.

[3] British Geological Survey 1:50,000 series, Sheet no 123 (Stoke-on-Trent).

[4] *Sestertii* of Hadrian and Antoninus Pius, two bow brooches and a stray rim sherd in Wilderspool fabric. The authors are grateful to Messrs Andy Harper, John Bailey and Phil Baddiley for so willingly making their finds available for recording.

[5] To be published by Susan Youngs of the British Museum in a study of this distinctive brooch type. Thanks to Gordon Sandland for making this find available for recording.

[6] Located at NGR SJ 696 520. Dodgson 1971, 69. Thanks to George Twigg for drawing this reference to the attention of the authors.

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A Note on the Life of Stephen Penney

Stephen Penney was educated in Norfolk and graduated in archaeology from Queen's University, Belfast in 1974. His first post was as Research Assistant at the Ashmolean Museum, from where he moved north to become Assistant Keeper of Archaeology at Lancaster Museum until 1983. He returned to Oxford, this time as Curator of the Museum of Oxford, and then moved to Cheshire as Curator of the Salt Museum and Stretton Watermill in 1988.

Stephen always maintained a close interest in archaeology, having been Chairman of the Lancaster Archaeological Society, Vice-Chairman of the Lancashire Archaeological Society and a Committee Member CBA North-West Regional Group. In Cheshire he co-directed excavations at Anderton Boat Lift and at Shavington, where a number of Roman lead salt pans have been discovered, and carried out and published research on bog bodies in the region. He also established a finds identification service at the Salt Museum, and in doing so contributed much to the fruitful co-operation which exists today between archaeologists and metal detectorists.

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