

Three millennia of Salt Production: Briquetage and Salt structures on the East Coast of Lincolnshire, England

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Description of the Regions

Lincolnshire is mid-way along the North Sea coast of Eastern England. It is situated between the estuary of the River Humber in the north and the Wash to the south. Very little is known of prehistoric and Roman saltmaking on the northernmost part of the coast, possibly due to coastal erosion in the area.

The presentation will concentrate on the more-southerly area, sometimes known as the Lindsey Marshland, located south from Ingoldmells to Skegness. Farther south from there, the better-known Fenland will also be examined (Lane 2018).

Lindsey Marshland

This area has sites that have been revealed on ancient surfaces after severe storms have removed the sand from the beaches. Rarely, but significantly, briquetage, the ceramic remains of the salt making process, has also been noted off the coast. Inland from the Ingoldmells/Skegness coastal area, sites are also known situated in a former embayment now buried by up to two metres of post-Roman silting. Such sites are only revealed in the sides of ditches or when pipelines pass through the area.

Fenland

Much better known archaeologically is the Fenland. This is a large expanse of former wetland, that has been the subject of several programmes of survey, the most recent and extensive the Fenland Survey and subsequent excavation phases during the 1980s and 90s. Sites are located up to 30 km from the modern coast and date from the mid-Late Bronze Age through to the seventeenth century AD. As with the Marshland, some sites are known from beneath post-Roman silting. Therefore, the full extent of Roman and earlier saltmaking is unknown in both areas. The Fenland extends into the counties of Cambridgeshire, Norfolk and Suffolk, but this presentation will concentrate on the Lincolnshire material.

Surveys and excavation in the Fenland

Extensive Surveys in the Lincolnshire Fenland have been conducted since the 1950s (Hallam 1970; Simmons 1980; Hall & Coles 1994). This has resulted in the collection of thousands of pieces of fired clay identified as briquetage. In the majority of earlier surveys there was no descriptive standardisation of terms and only after the Fenland Survey and the subsequent post excavation analysis of Elaine Morris did a settled terminology appear (Lane & Morris 2001; Morris 2007). Morris categorised the Fenland briquetage into four classes;

Containers, the remains of ceramic 'troughs' used in heating/boiling the saline water.

Pedestals, cylindrical, pyramidal or horned, often found in a near-complete state and used to support the containers within the heating structure. Other support-types such as bars, clips and spacers are also contained in this category.

Structural material, from hearths or ovens

Miscellaneous, the fragmentary and unidentifiable pieces.

This at least partial standardisation enabled assemblages from different sites to be compared and the processes that took place on each site detailed. Given that the material is all industrial waste not too many chronological indicators were forthcoming other than the Late Bronze Age horned pedestal (e.g. from Welland Bank Quarry) and the pyramidal examples from the Middle Iron Sites on the western fen edge. The latter sites were associated with 'gutter-shaped' troughs, although container sherds generally were very fragmentary.

Fenland Survey in Lincolnshire encompassed systematic fieldwalking and plotting of sites and existing landscape features such as the remains of former creeks. Locations of many of the salterns were along the now-extinct creek systems. Curiously the sites were well-spaced out along creeks, with usually only a single hearth rather than multiple heating structures. It is not known if all the sites were operating at the same time, but the spacing suggests that Fenland saltmaking was not operating at an 'Industrial' level.

Excavated examples of prehistoric and Roman Fenland salterns generally consisted of a single central hearth or oven-like heating structure with a series of one or more clay-lined pits on one or both sides of the heating unit. These pits were termed 'settling tanks' and presumed to store the strengthened salt water ahead of boiling and allowing the sediment held in suspension to fall out. In most cases this configuration of features was surrounded by a near-complete ditch with undug 'entrance'. Whether this ditch was a practical drainage solution to rid the site of any water that might have been spilt during the on-site processes, or of an alternative, as yet unknown, purpose is for discussion.

A new (to this area) method of making salt was evident in the medieval period. This method may have been introduced in the Anglo-Saxon period and involved scraping salt-laden silt from the muddy foreshores of estuaries and filtering it through peat-lined 'filtration units', before boiling the brine in lead pans. The waste desalinated silt was piled into heaps that are easily visible in the field and especially on Lidar mapping of the area, enabling the centres of saltmaking to be easily identified.

Surveys and Excavations in the Lindsey Marshland

Lindsey Marshland area has had a varied history of salt investigation. Early excavations on the beaches, following storms (eg Swinnerton 1932) brought attention to the area. Inland from the coast, however, the burial of the sites by later silting prevented the large-scale discovery of sites. Only recently has the density of the sites inland from the beaches become more apparent. Because of the overlying silt these sites are not seen in their entirety, with only a slice cut through them during the making of field boundary or roadside ditches. This not only limited the discovery of features but also the amount of briquetage that could be collected. Over the past few years, a number of sites have been revealed during the creation of pipelines crossing the area. Work is

ongoing on these sites but should finally result in the discovery and analysis of a fully complete (and well-preserved?) site.

One major find under the sand on Ingoldmells beach in 1980 was several salt containers stacked one inside the other. None were complete but enough survived to enable Andrew Crosby (2001) to suggest they represented containers 600mm long by 75mm deep at one end reducing to 50mm deep at the other. The wide ends were 260 mm and the shallow end narrower at 160mm.

Little or no post Roman saltmaking is known from the Marshland in the Ingoldmells -Skegness areas.

Differences in the pre-medieval salt sites between Fenland and Marshland

Although separated by some 50km the Marshland and Fenland sites appear to have been in contemporaneous use. Despite this, and despite our relative lack of knowledge of the Marshland sites, there does appear to be some significant if subtle differences between sites in the two areas. Results of the Fenland survey indicate single-hearth sites spread out along former creeks. Although the overlying silts do not allow the contemporary landscape in the Marshland to be reconstructed there does appear to be differences in the saltmaking evidence. There is a suggestion of multiple hearths in the Marshland sites as opposed to single hearths in the Fenland. Moreover, while the locations of the Marshland sites cannot be identified through fieldwalking, air photography or Lidar, there does appear to be a greater overall density of the sites in Marshland.

Marshland sites do not appear to have the surrounding ditches common on the Fenland sites, nor is there evidence of 'settling tanks' on the Marshland sites, while these are common in the Fenland from the Late Iron Age through the Roman period. From the higher numbers of briquetage pieces with a green salt glaze and/or cracked and overfired pieces it may be suggested that the heating structures of the Marshland sites were fired hotter, more industrial or less well-controlled than their Fenland counterparts. There is also a suggestion of the presence of some smaller, thin-walled ceramic vessels in the Marshland, not dissimilar to 'augets' that are not known in the Fenland.

So, what might this mean? The answer may lie in the presence or not of lost settlement of *Salinae*. Recorded by Ptolomy before AD 122 this apparent coastal town was in the vicinity of Skegness (Strang 1997). There is no trace of a supposed Roman town in the Skegness area now. Such a town, identified by a salt name and in the proximity to numerous salt sites, may suggest possible Roman administration, controlling an industrial area of salt production on the coast with easy access to port facilities to move the salt.

As stated above, the only problem with this is the lack of evidence for *Salinae* itself. But, there are records of a visit to Skegness in the early 1500s in which Skegness was described as '*some time a great haven town... there was once a haven and a walled town. The old town is now clean consumed and eaten up with the sea*'. There are records from 1345 of places called Chesterland and Castelland, both Roman sounding. There are also records of the land once extending a further 6 km east of the present coast.

Landscape changes and Salt sites

Location and broad dating of the salt sites in the Fenland and Marshland demonstrates a changing coastline. In Marshland coastal erosion has been identified from documents and from the positions

of salterns on the current shore. Such erosion suggests that a much larger area of the densely located sites now lies beneath the sea.

In the Fenland Mid-Late Bronze Age, and sites up to the Middle Iron Age, tend to hug the western Fen edge, presumably the inner edge of wide and extensive salt marshes, while the late Iron Age and Roman sites extend along the broadly east-west aligned creeks. Traces of these creeks disappear under later, post Roman silting in both the Fenland and Marshland.

Conclusions

Hundreds of salterns are now known in the Lincolnshire Fenland and Marshland regions. Briquetage from the Fenland sites has been analysed and a number of the site excavated. Together, this information appears to show a difference in briquetage types and site features between the Fenland and Marshland. Influence on the salting of the Marshland may have come from a putative Roman town, Salinae, now believed to be eroded into the sea. More pipelines coming ashore in the vicinity of Ingoldmells may throw more light on the nature of the Marshland sites.

References

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