

ANCIENT MONUMENTS LABORATORY

REPORT

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TITLE Snape and Iken, Suffolk; Two
possible salt-works of Roman
date in the Alde Estuary

Sites: Snape and Iken
County: Suffolk
Reference Nos: SNP 023, IKN 008
Type of Site: Probable salt-workings
Period: Roman
Geology: Glacial outwash deposits and intertidal sediments
Director: J. Plouviez

Two possible salt-works of Roman date in the Alde Estuary.

SNP 023, Snape.

This site had been previously examined by Jude Plouviez, who excavated a small oval hearth and noted an exposure of reddened soil extending for some 50m. along the shoreline of the Alde Estuary (Plouviez, unpublished). The purpose of the present investigation was to re-examine and sample the deposits in an attempt to provide evidence for the function of the hearth and for the nature of the local coastal environment of the Roman period.

The deposits are exposed in a low cliff, about 50cm. in maximum height. Salt-marsh vegetation including Salicornia spp., Juncus maritimus and Aster tripolium is present above this 'cliff', and is subject to tidal flooding. The foreshore below it consists of mud with pebbles, providing substrates for epifaunal and infaunal invertebrates (including Hydrobia ulvae, Littorina littorea, Scrobicularia plana, Macoma balthica and Cerastoderma edule) and plants including Spartina X townsendii, Fucus and filamentous algae). On slightly higher ground above the site, grass heath with gorse bushes is present, growing on sandy soil.

The earlier excavation was partly cleared out and a column sample removed from the exposed face. Excavation below 70cm. from the salt-marsh surface was impractical due to flooding. The following section was exposed at point 'A' (see plan):

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|----------|--|
| 0-8cm. | Salt-marsh turf and dark grey humose clay; abundant fleshy and fibrous roots; sharp boundary. |
| 8-65cm. | Reddish-brown (5YR 4/3) silty clay loam; abundant fired clay fragments; rare tile fragments; slightly stony, with mainly rounded small flints and pebbles of quartz, quartzite and sandstone; rare fragments of slag and other fused material; rare small bone fragments up to 7mm.; charcoal flecks; roots common at top, rare at base; sharp boundary. |
| 65-70cm. | Light yellowish-brown (10YR 6/4) sand with ochreous mottles; rare small, mainly rounded, pebbles, predominantly of flint; very rare small fragments of fired clay up to 6mm.; rare charcoal flecks. |

At the earlier excavation the surface of the sand was seen to be a darker grey in colour, but this was unfortunately not observed in the present section.

Samples of the reddened deposit and the subjacent sand were disaggregated in hot water and washed out over a 0.5mm. mesh sieve. The sieved fraction was dried and sorted. Apart from a few charcoal flecks the sand was devoid of biological remains. The reddened deposit likewise produced only charcoal, mostly as fragments too small for identification, but including a fragment of gorse or broom charcoal (Ulex/Sarothamnus). A sample from the interior of the hearth, taken by Jude Plouviez, had previously produced gorse/broom charcoal.

'Slag' fragments from the reddened deposit were of two types. A fragment from depth 10-20cm. is dark grey and porous. The sample from 30-40cm. produced a small fragment of slightly greenish white fused material. On external characteristics this resembles material deposited on kiln linings when pottery is being salt-glazed; it seems possible that this fragment is, in fact, fused salt (S. Jennings, pers. comm.).

IKN 008, Iken.

At this site a similar exposure of reddened deposits is visible at low tide. A sample of this deposit produced fragments of Sambucus nigra seeds and charcoal flecks, but the presence of small crustaceans indicates that the deposit is being reworked.

Discussion

On archaeological grounds these sites have been interpreted as salterns. The greenish-white fused material from SNP 023 provides some support for this view. Although only generally low temperatures would be required for salt production by evaporation, accidental spillage of salt cake into the fire, where locally high temperatures would occur, could presumably result in the production of such fused material. On the evidence of charcoal, gorse and/or broom seems to have been the fuel used, suggesting similar local vegetation to that of today.

In the absence of relevant biological remains from these sites reconstruction of former local coastal environments cannot be attempted. Theoretical considerations are likewise of little assistance, since the factors influencing sea-levels in this area during the Roman period are complex and their relative importance is difficult to assess. Subsidence has occurred in the southern North Sea area, in the order of 1m. per-1000 years (Coles 1977, 301), so in the Roman period the land may have stood some 2m. higher than today. However there was a transgression, Lytham IX, at this time, reaching its maximum just before 350 A.D.

(Tooley 1974). Besides these wider factors, the development of Orford Ness would have had marked local effects. The spit is believed to have developed as far south as Orford by the 12th century (Steers 1964, 387) but its form and extent in the Roman period are unknown. If the spit was absent at this period tidal range would have been greater than it is today. In summary, then, there are too many unknown factors to permit any theoretical assessment of the position of the Roman coastline. However, these sites do provide clear evidence for Roman industrial activity in what is now an intertidal zone, and the net effect of the factors mentioned was clearly to produce a lower mean tide level than that of today. Far more fieldwork will be required before any more precise statements may be made.

- *Coles, B.P.L. (1977) 'The Holocene Foraminifera and Palaeogeography of Central Broadland'. Unpublished Ph.D. thesis, University of East Anglia.
- Plouviez, J. (unpublished) Snape SNP 023. Suffolk Archaeological Unit Site Report.
- Steers, J.A. (1964) The Coastline of England and Wales (2nd ed.) Cambridge.
- Tooley, M.J. (1974) 'Sea level changes during the last 9000 years in north-west England' Geog. Journal 140, 18-42.

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