

Anchor Warehouse

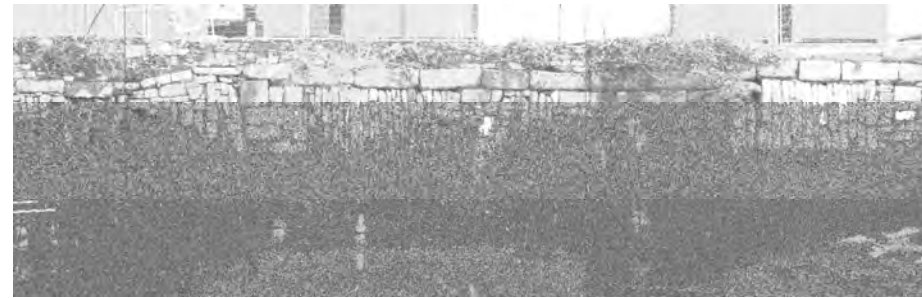


...one of the earliest superphosphate factories in the world...

The East End

History: - Late 18th/early 19th century

The quay beneath you appears to have been constructed for a number of businesses including Fox and Co.'s stores, a brewery and shipwrights, sometime in the 18th century. Infill was dumped behind vertically set walling between sections or pylons of horizontally laid stonework, which is still visible from the southern bank of the river (see below).



This development appears also to have included a tenement with gardens and outbuildings, recorded on the Tithe map of 1841. This tenement does not appear to have lasted long, as the site was subject to a major redevelopment in the mid 19th century. The *Bone Mills* in Penryn, advertised in the *West Briton* on April 15th 1842 are likely to have been on this site.



Parts of the late 18th/early 19th century buildings were recorded during the archaeological watching brief in 2005, including the cobbled floor of the tenement yard (right).

The 19th century

The majority of the surviving building was part of an imposing 19th century riverside redevelopment later called Anchor Warehouse. An advert for the *Steam Mill Bone Manure Company* heralds the completion of the bone and manure mill on site by February 1844. This was probably founded by the Meade brothers, merchants in Penryn, who undertook bone milling as well as the import of other manures such as guano. Agricultural interests serving Cornwall's

expanding industrial population fuelled demand for manures; imported cattle were slaughtered in Penryn's abattoirs, with their hides going to local tanyards and the bones crushed for manure.

Anchor Warehouse was constructed as a purpose-built steam-powered bone (slew) mill and manure processing works, replacing the previous tenements and extending over the former shipwrights dock. The precise layout of this is detailed in a remarkably early planning application to Penryn Borough Council, dated 1859.

The slew mill

The millstones at the far end of the car park to your left, formed part of the slew mill, used to crush the bone meal. This was originally sited within the main bone mill to the east of the engine house, but was repositioned to the west in the late 19th century, to allow for expansion of the warehousing.

The slew mill comprised three granite drums, one found *in-situ* forming the base of the mill, the other 'runner stones' were originally held upright and turned on an axle rotating in a circular trough, in similar manner to a cider mill.

Superphosphates and the agricultural revolution

The business at the Anchor Warehouse rapidly expanded into production of superphosphates (by dissolving bone meal with sulphuric acid), producing some of the world's earliest chemical fertilisers. The 1859 plan clearly marks a phosphate machine and phosphate shed, which probably included superphosphates as they are commonly known. A letter from J and J Mead, of the Manure Works, Penryn, in the *Royal Cornwall Gazette*, February 1860, records:

The manner in which the manure trade has been carried on by us for the last 17 years is such, we hope, as raises us in public confidence. No other firm in Cornwall has published analyses of superphosphate year after year as we have done.

It seems likely that superphosphates were being produced for sale at Anchor Warehouse from at least 1843, the same year Lawes' Deptford factory started to advertise the product (1 July 1843). Deptford was previously considered to be 'the first factory for the manufacture of artificial fertilisers' (Rothamsted website).

Anchor Warehouse was one of the oldest superphosphate factories in the world and seemingly the oldest to have been archaeologically recorded. It is arguably the developments of the 1840s that elevate the Anchor Warehouse from a 'run of the mill' industrial building to a cutting edge development of national importance.

Inside the building, fireboxes and long brick-lined flues were found below the present floor level. Most of these connected with the extant internal chimney, which marked the eastern extent of the building at the time.

Two Lancashire boilers provided mechanical power for the slew mill, lifts, sharpening stones and various chemical processes that took place on the site. The original boiler flue was re-used to provide extraction, draught and a condenser for a possible sulphuric acid making machine or other furnace. The condenser would have prevented excess debris clogging the more inaccessible parts of the flue. The flue was later

elaborated to include two new shuttered flues, each provided with a condenser, apparently allowing for continuous use and maintenance. The success of the enterprise rapidly outgrew its premises and throughout the late 19th century, the buildings were massively but hastily enlarged to eventually create a three-storey warehouse with two central loading bays as well as an attic.



The storage areas were linked by cross passages, stairways, and four internal lifts transporting goods through hatches between the different levels (left).

Externally six main loading doors with cathead lifts provided for imports and exports both by sea via the river to the south and by cart to the east.



A late 19th century extension east of the chimney (right) provided further storage as well as improved access and unloading facilities for the abattoir carts, including lifts over the three storey loading doors (left).



Further information

Please also see the panels at the west and north sides of the building. A more detailed publication in the *Industrial Archaeological Review* is pending whilst the full archive report is available from the Historic Environment Service, Cornwall County Council, The Kennall Building, Old County Hall, Station road, Truro, TR13AY.

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