

The post-medieval pottery and finds from from Crossrail works C123 at Limmo Pensinsula, London E16 1DN (XRW10)

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The distribution of the finds

Period 2, phase 2

Structure 20

The industrial flue [31] and its backfill [35] are both dated to 1830–1900. The former contained four sherds from a stoneware flagon and flared jar/measure, both with Bristol glaze. Context [35] contained 20 sherds of pottery, of which 10 are tablewares, comprising five plates, three saucers, two cups and a mug (13 ENV), some transfer-printed, some in bone china with red bands around the rim. The three other sherds are from the bases of two refined earthenware jars, probably used for marmalade or jam. None of the pottery is of high quality.

Open area 2

The late 19th-/20th-century consolidation layer [2] contained half a bone china saucer with a date range of 1794–1830, the bowl of a 19th-century clay tobacco pipe <1> (Fig xx) and the neck and mouth of a glass Codd bottle (159g), complete with the glass alley that formed part of the method for stopping gas from carbonated drink escaping. The latter is the latest find, as the form was first introduced in 1870 and remained in used until c 1900, although improved versions were patented from 1882 onwards. This find, therefore, could be contemporary with deposit, but the pottery and pipe are either residual or carefully curated pieces discarded after the shipworks were closed in 1912.

Period 2, phase 3

Structure 25 = now S8

The layer of wood shavings and alluvium [138] in front of the bracing timbers for the river wall at Instone Wharf, contained a Victorian halfpenny dated to 1862 (<17>, complete and in good condition). For a common labourer working a 10 hour day and a six day a week in the mid 1860s, earning 3s 9d per day, this would equate to the pay for c 40 minutes work. More skilled workers could earn 6s 6d per day, while naval officers would have a higher rate of pay. Other finds comprise the remains of a pair of leather shoes and a single boot, probably of 19th-century date (see Richardson report), and three iron objects.

The largest of these is a heavy length of chain, <18> (Fig xx), probably used with an anchor. Iron chains were used in the Roman period but replaced by hemp ropes until 1809, when they were reintroduced by the navy (Jobling 1993, 5, 136). At first the links were of open form but in the mid 19th century they were of stud link form; it is, however, likely that the two types coexisted for some time. **Check DH info** Brief research suggests that the bisected links are generally used at the innermost end of the chain where the greatest strength is needed to withstand winching. This would be rather excessive for the rowing boat remains found in this silted slipway and must either have been used with a larger vessel or a hoist/crane of some

type, perhaps associated with the mast house or that suggested by structure [104]/[111] in the machine shop (in the southern part of the trench).

The two other iron finds from [138] may be machinery parts used in the machine shop; one is a large flat disc with central perforation, <19>, (Fig xx) while the other is a flat sheet with four rows of large perforations, <20> (Fig xx); the latter is damaged and it is impossible to be sure whether it had a straight or rounded edge.

The leather boots

Beth Richardson

Three leather boots were found in the layer of alluvium [138], dated by a Victorian halfpenny to post-1862. The boots were old and worn when thrown away, and two had been cut up for re-use, but they too are dated to the 1860's (or slightly earlier) by their style and construction details. They have straight soles, square toes which are rounded off at the corners and high toe springs (all typical features of mid to late 19th-century boots; Swann 1982, 42), with machine stitching (which was introduced in the shoe industry in 1842) and stacked leather heels ranging in height from one to one and a half inches. They are practical working boots which, at 13 shillings and six pence a pair in the mid 19th-century (Swann 1982, 45), would have cost the best part of a week's wages for a labourer.

The largest (an adult size 11-12) is particularly sturdily made with a low one inch heel, evidence for hobnails, thick internal linings and a straight-topped heel stiffener. The vamp is missing as cut away for reuse but, like the two-piece back quarters, was made from cattle hide used flesh-side out (suede). The fact that the quarters are two-piece would suggest that this is a 'high-low' laced ankle boot of a type common in the late 18th and early 19th-century rather than a similar but slightly later lower 'blucher' boot (cf Mould in Hawkes and Fasham 1997, 127) although its toe shape and high toe spring suggest a mid 19th-century date. Presumably high-lows, described as 'muddy high-lows' by Sam Weller in Dickens' Pickwick Papers (1836-7) were still made and worn alongside the more fashionable Bluchers or it could simply have been a blucher boot made with two-piece quarters.

Another large man's boot (an adult size 10) is also lined but made from a thinner leather much of which has deteriorated in the ground. It is however identifiable as a blucher boot, with a high vamp and evidence for machine-stitched lapped quarters which would have laced over a missing tongue. The smallest boot (adult size 6 and a half) is a possible woman's boot, made from finer leather, possibly calf, with a higher heel (one and a half inches). Its vamp has also been cut away for re-use but the linings and high quarters survive, stitched with fine machine stitching and re-inforced internally with a textile tape or braid.

The pottery (specialist report)

Lyn Blackmore

Introduction

A total of 25 sherds (16 ENV, 1.008kg) of pottery dating to the late 19th century was recovered from three contexts on the site and the data entered onto the MOLA Oracle database, noting fabric, form, sherd count, estimated number of vessels, weight and other attributes. The data was converted to an Excel spreadsheet to aid interpretation.

The finds (specialist report)

Lyn Blackmore

The clay pipe

The clay tobacco pipe <1> (Fig xx) is of Atkinson and Oswald type 30 with plain, unmilled rim and moulded decoration of four large symmetrically arranged rose leaf motifs, one front, one back and one on each side, which extend to *c* 75% of the height of the bowl; these appear to grow out of the textured branch-like spur that projects from the front, ie on the same alignment as the stem, not perpendicular to it as is normally the case. The form and decoration of the bowl show that this pipe dates to after 1850, and it was probably made in London (J Pearce pers comm.).

The iron

<S> Iron chain

<18> [138], period 2, S3

Incomplete and laminating, extant L 2.135m. Comprising 15 equally sized, fire-welded flat oval links of two different types: one open (L 200mm, W 116mm, Diam >34mm), the other of stud form (L 200mm, W 123mm, Diam >34mm), strengthened by a waisted bracing bar (W at ends >44mm, Diam at centre >26mm). No stamps are visible.

Iron chains were used in the pre-Roman period and occasionally from the 17th century onwards, but until the early 19th century 1809 hemp ropes were most commonly used to anchor boats, (Bradney 1987, 2; Jobling 1993). In 1803 a stud-linked iron chain was patented and produced by Samuel Brown, a lieutenant in the Royal Navy (Wikipedia ref), and the use of forged and fire-welded anchor chains was adopted by the Royal Navy in *c* 1809 (Jobling 1993, 5, 136), with Brown and Co Ltd contracted as their supplier (an arrangement that lasted until 1916; Wikipedia ref). The first factory was opened at Millwall in 1812, and this is a likely source of chain <18>, although a second factory opened in 1816 at Pontypridd, Wales, later became the main production centre. At first the links were of open form but in 1812 the stud link form with a central brace appeared and had become the main form by the mid 19th century, having the advantage of preventing the chain from knotting (Bradney 1987, 3, 6; Jobling 1993, 136). The stronger braced links would be particularly suited for use at the innermost end of the chain where the greatest strength is needed to withstand winching, and for larger chains used for greater depths. The present chain, however, appears to have the two types in an alternating sequence of two plain, six braced and seven plain links. As the ratio of link length:diameter is only slightly more than 5:1, the plain loops technically form a middle link chain (Bradney 1987, 7). Modern calculations suggest that a stud link chain with a diameter of 32mm weighs *c* 23kg per metre, while middle link chains weigh *c* 20kg per metre (Bradney 1987, 25). A weight of *c* 40kg can thus be estimated for <18>.

<S> Iron disc

<19> [138],

Near complete flat disc, with only slight damage to the rim (Diam *c* 333mm, Th *c* 8mm) with central perforation (Diam 24mm).

<S> Iron perforated sheet

<20> [138],

Incomplete flat sheet (L 230mm, W 205mm, Th *c* 3mm) with two rows of three large perforations (Diam 19–28mm), *c* 17mm apart, the outermost *c* 12mm in from the possibly curved outer edge, and two further rows *c* 45mm in from these (measuring edge to edge) and again 17mm apart.

Bibliography

Atkinson, D R and Oswald, A, 1969 London clay tobacco pipes, *J British Archaeol Assoc* 32, 171–227

Bradney, 1987 A practical guide to the mooring and anchoring of small boats, Bradney Chain and Engineering Co Ltd, Dudley

Hawkes, J,F, and Fasham, P,J, 1997 Excavations on Reading Waterfront Sites, 1979–1988, Wessex Archaeology Report No. 5

Jobling, H J W, 1993, The history and development of English anchors ca 1550 to 1850, MA Dissertation, Texas University

Porter, D H, 1998 *The Thames Embankment: Environment, Technology, and Society in Victorian London*. Akron, Ohio

Swann, J, 1982 *Shoes*, Batsford, London