

Exhibition Hipposandals, plague pits, and chamberpots



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Tunnel: The Archaeology of Crossrail
The Museum of London
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<https://www.museumoflondon.org.uk/tunnel>

For the **Charterhouse** see
<http://www.thecharterhouse.org/visit-us/>

London's latest railway, Crossrail, which has been under construction since 2009, is set to open to passengers in 2018. This technologically challenging project required 42 km of new tunnels, ten new stations, and the upgrading of 30 existing stations, with massive surface disruption for Londoners. Largely unseen, though, is the archaeology accompanying the excavations. These excavations have yielded tens of thousands of historical artifacts, recovered by more than 200 archaeologists working on the project in close collaboration with the construction teams.

Highlights among their discoveries include part of the jaw bone of a woolly mammoth that must have roamed the Thames Valley during the last Ice Age, which was spotted by a sharp-eyed construction worker while draining a dock at Canary Wharf; decapitated human burials and iron "hipposandals" (temporary horseshoes) from Roman Londinium; skates from medieval London made out of polished animal bones used for ice-skating on the frozen marsh at Moorfields; and a chamberpot from Victorian times sporting a pantomime-horror male face surrounded by the printed motto

"Oh what I see/ I will not tell". About 500 of the finds are now on display in a celebratory new exhibition, *Tunnel: The Archaeology of Crossrail*, organised by the Museum of London with Crossrail, which surely offers something for just about everyone, including the medically minded.

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Among the more fascinating discoveries are unidentified skeletons from a mass grave for plague victims, dating from the Black Death of 1348–50, which killed up to half of the population of London. They were found while upgrading Farringdon station, in Charterhouse Square, next to the site of the 14th-century Carthusian monastery, near West Smithfield market and St Bartholomew's Hospital. Appropriately, one skeleton is now on display in the museum of the Charterhouse, which opened this year. According to Don Walker, Senior Human Osteologist at the Museum of London Archaeology (MOLA) and a contributor to Crossrail Archaeology's newly published *Charterhouse Square: Black Death Cemetery and Carthusian Monastery, Meat Market and Suburb*: "The emergency burial ground at Charterhouse has been long attested in historical records but only glimpses had previously been seen by archaeologists. In fact very few Black Death burial grounds have been excavated in London and so the results are hugely important for archaeologists and those studying the development of diseases."

The 25 skeletons appeared while engineers were vertically boring a

circular grout shaft some 4.5 m in diameter—a life-size model of which forms a section of the exhibition. Such shafts were used at five Crossrail locations. They enabled a cement-like substance to be surgically injected, like filler for the wrinkled face of London, through small-diameter pipes radiating horizontally from the bottom of the shaft, to compensate for the loss of soil produced by tunnelling, which would otherwise threaten the stability of buildings.

The skeletons came in three layers from three different periods: 1348–50, the second half of the 14th century, and the first half of the 15th century. DNA analysis of teeth revealed the presence of the plague pathogen *Yersinia pestis* in four of them, from each period. Isotopic analysis also proved helpful: strontium and oxygen isotopes give information on geology and water local to individuals, hence their place of origin; carbon and nitrogen isotopes are informative about variations in diet, nutritional level, general health, and level of stress. Of ten individuals from Charterhouse Square, six probably grew up in London, while four probably came from outside London: one from eastern England, two from central or eastern England, and one from northern England or Scotland. Clearly, 14th-century London was a magnet for migrants, as now. However, the London-born individuals show evidence of poor health or nutritional stress in childhood, including rickets, suggesting that urban life was not always good. Thus, in intriguing ways, *Tunnel* vividly reminds us that human existence changes much less over the passing centuries than our technology.

Andrew Robinson
andrew@andrew-robinson.org

Andrew Robinson is the author of *The Indus: Lost Civilizations* (Reaktion Books, 2015).



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