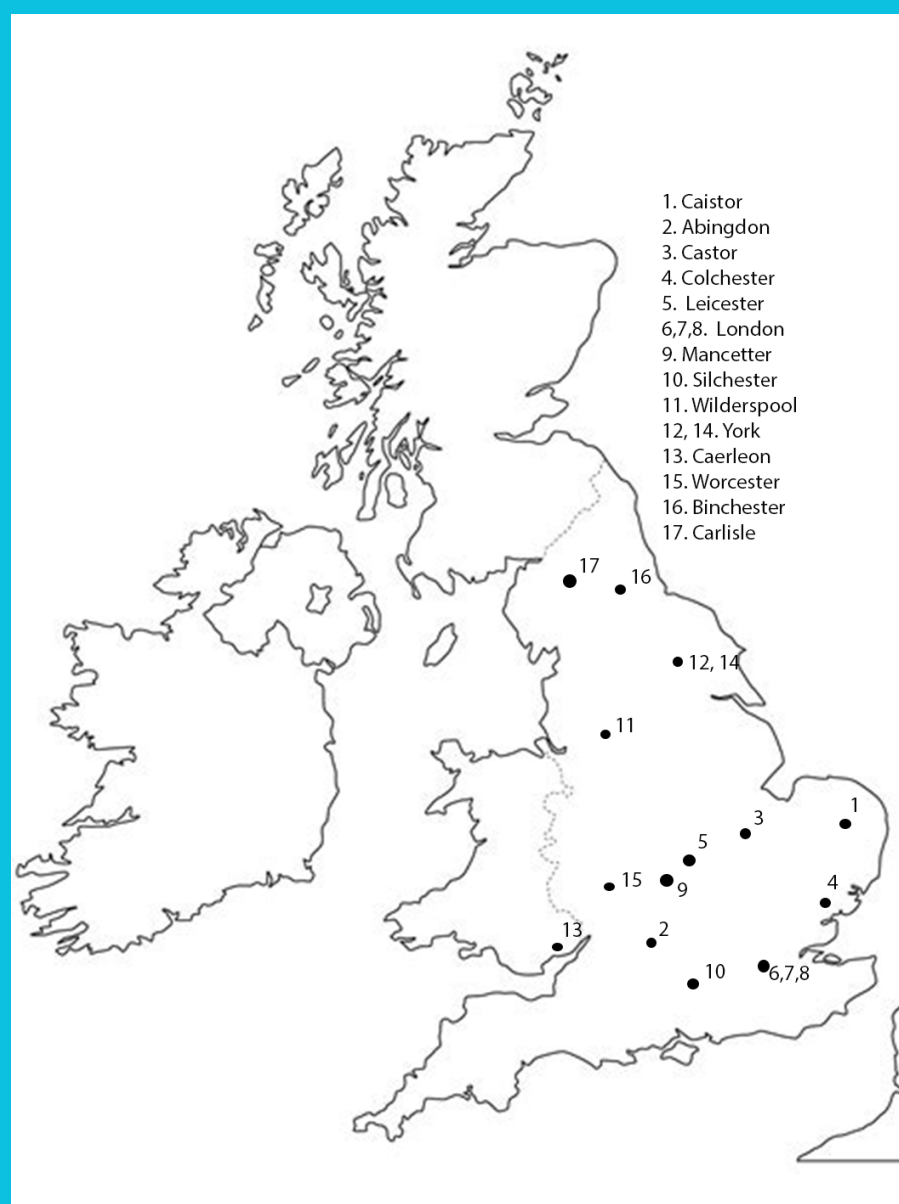


High temperature industry in Roman Britain, an archaeological investigation of the relationship between glass and ceramic production



Aim: To investigate and evaluate the links between the ceramic and glass industries of Roman Britain



Roman Britain: A background

The Roman Empire reigned for over 1000 years. It invaded Britain in AD 43 and from then until AD 401 over three and a half centuries later, Britain became a province of the Roman Empire.

Throughout this period Britain was heavily influenced by the Roman Empire in many ways such as clothing, architecture and the products and techniques of local industries. This was due to military presence, new trade opportunities and incentive to adopt Roman culture from high status individuals.

This research is focused on the glass and ceramic industries of Roman Britain.

Ceramic Production in Roman Britain:

In the post-conquest period, there is a clear shift in the archaeological record in Roman Britain. Pottery assemblages grow greatly in quantity and range of vessel types. This indicates an increase in workshop-produced pottery (Cooper, 1996) which shows a shift from a domestic based industry to larger scale production (Pitts, 2008).

Glass Production in Roman Britain:

The research into glass production is based off of Freestone's 2002 paper in which he proposes a model for primary and secondary glass production centres. The common compositional make up of Roman type glass tends to be a soda-lime-silica type composition. The glass production in Roman Britain also relied on recycling glass and cullet for production.

Definitions

Ceramics- Pottery products such as bowls, cups, bricks and tiles.

Crucible- A ceramic pot in which glass is melted in a furnace.

Cullet- Collections of fragments of broken glass to be used for melting down and turning in to new glass products.

Moils- A spherical glass waste fragment from the end of a blowing rod during the glass blowing process.

Primary Glass Production Site- Sites that produce glass from raw materials in the Near East/ Mediterranean.

Secondary Glass Production Site- Receive transported glass chunks from primary sites, and melt and rework this glass into new products.

Legions/Legionary Fortress- the military group of the Roman Empire and their base

Vessel Fragments- Pieces of broken glass from completed glass vessels e.g. bottles, bowls

Discussion

Two main reoccurring themes:

Links with military sites and links with Ceramic Production sites

Links with Military sites:

The Roman military began to arrive in Britain in 41AD. These armies required significant resources and brought new technologies with them that were quickly adopted. The Roman conquest led to an increased military presence across the country. It can be seen that 8 out of 17 glass production sites are situated within close proximity to military sites/fortresses.

Recovered from possible glass production sites such as Colchester and Bonn, Carlisle (Cool, 2022) were glass fragments of mould-blown prismatic bottles. Similar glass bottles have been recovered across the Roman Empire as it was a very common glass vessel form (Isings, 1957). The evidence that supports production of these bottles is the presence of glass blowing waste on multiple sites in Roman Britain.

Links with Ceramic Production Sites:

Throughout history we see deep links between high temperature industries, the extensive crossover in resources required, technology and markets for trading brings them into close contact with one another which resulted in working relationships between industries (Jackson, 2010).

Crucibles are clear connections between ceramic and glass production, a great example of this being the Ebor ware crucible recovered from Coppergare, York.

Cooper, N.J., 1996. Searching for the blank generation: consumer choice in Roman and post-Roman Britain.

Cool, H.E.M., 2022. Glass Bottles and Military Production. *Britannia*, 53, pp.373-383.

Isings, C., 1957. Roman Glass from Dated Finds. *California*. Wolters

Jackson, C.M., 2010. A compositional analysis of Roman and early post-Roman glass and glassworking waste from selected British sites. Towards an understanding of the technology of glass-making through analysis by inductively-coupled plasma spectrometry of glass and glass production debris from the Roman/Saxon sites at York, Leicester, Mancetter and Worcester (Doctoral dissertation, University of Bradford).