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Assessment of Glass from Exavations at Bedminster Glue Factory, Bristol

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Summary

This assessment describes 17th-18th century and later glass and debris from glassworking found in evaluation trenches. The total weight of material examined was about 6kg. Recommendations for further work are included.

Keywords

Glass Technology Post-medieval

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Introduction

A number of evaluation trenches excavated by the Avon Archaeological Unit produced evidence for 18th-19th century structures and artefact-rich layers that predated them. A number of these layers contained post-medieval glass and debris from glass working. In particular, layer 312 pre-dates an 18th-19th century wall and is itself predated by context 333. Layer 407 pre-dates a dump of 17th-18th century pottery.

The finds

The glass finds are summarised in Table 1. The total weight of material examined was about 6kg. Some of the bags of glass waste were sub-samples taken from a few large pieces that were not examined for this assessment.

The olive green vessel glass appears to be mainly bases of bottles, though there is one neck (from context 600) with an applied band just below the rim. The form of the bottles suggests a 17th-18th century date. The other vessel glass includes two colourless, stemmed drinking glasses (one of lead glass, the other not), a variety of pale blue-green vessel fragments, mainly from bottles, and a few pieces of flat glass. The majority of this other vessel glass comes from the unstratified contexts in each trench and it is most likely 19th or 20th century in date.

There is also a range of glass, described here as cullet. This is good glass, of similar appearance and probably of similar composition to the olive green bottles, but mainly in the form of chunks or dribbles, with a few thin rods/strips. This is interpreted as glass broken out of discarded crucibles or waste from the manufacture of glass bottles. In addition, there is a range of inhomogeneous vitreous material, much of it vesicular, described here as glass waste, which represents by-products from glass making or melting operations. There is also a small amount of clinker, probably deriving from the use of coal as fuel.

Glass working in the 17th and 18th century

The MPP Step 1 report on the glass industry (Crossley 1993) identified priorities for future work which included the need for field evidence of the development of production methods late in the 17th century when the first conical furnace buildings occur. The report highlighted our lack of knowledge of the location and degree of survival of evidence in the urban centres of glass making which developed from the 17th century onwards. Though little or nothing may remain above ground, we should expect massive buried deposits and structures, due to the design of furnaces in the coal-using period.

Discussion and recommendations

The 17th-18th century material suggests glass working at that date somewhere nearby, though not in the excavated areas as the finds came from dumps which were not associated with industrial features. Further excavation on the site has the potential to identify glass working features, as well as permitting the recovery of a larger sample of glass working debris from contexts which may be more closely datable than those from the evaluation trenches. The Bedminster Glue Factory site provides an opportunity to learn more about the

Bristol glass industry, and may be able to fill in some of the gaps identified by Crossley *(ibid)*. It is therefore highly desirable that further excavation is carried out.

Even if no furnace features are found, there is a good chance of associating the finds with a glass works known only from documentary sources as it is unlikely that glass working debris was transported far from its source. The nature of the debris will allow products of the glass works to be identified, and may help identify or date the introduction of different technologies.

Specialists should be appointed to the project team who can provide typological catalogues and discussions of the products and waste materials associated with glass working. In addition, provision should be made for scientific investigation and analysis of a proportion of the finds, as was done with the material from Bolsterstone Glasshouse (Ashurst 1987). This would confirm the tentative associations of the cullet and glass waste with bottle making, and will identify any other types of glass being worked. If crucible fragments (cf Table 1, context 403) or pieces of furnace superstructure are found, their investigation should help in understanding the type and operating conditions of the furnace.

References

Ashurst, D 1987 'Excavations at Bolsterstone Glasshouse'. *Post-medieval Archaeology* **21**, 147-216

Crossley, D 1993 *The glass industry, step 1*. An unpublished report for English Heritage's Monuments Protection Programme

Context	Olive green vessel glass	Other vessel/ window glass	Cullet	Glass waste	Clinker	Comments
Trench 1						
101		ves				
105	ves	J				
106	ves					
140	<i>y</i> es	Ves				XRF detected lead in
110		<i>j</i> 08				vessel stem
151				yes		glass on fired clay
Trench 2						
200		ves	ves			
204			ves			
207	ves	ves	ves	ves		
210	J	J - ~	ves	J - ~		
213			ves			
214			ves	ves		
221			ves	ves		
221	Ves	Ves	yes	yes		
224	yes	yes	VAC			
233		yes	yes			XPE detected no lead in
244		yes				vossal stom
						also a crustal of 2 alaita
247			VOC			also a crystar or ?calche
247			yes			fuel esh elec
257		yes			yes	Tuel ash shag
238					yes	
Turnal 2						
Trench 5						
u/s				yes		
300			yes	yes		
308			yes			
310			yes			
312	yes		yes	yes		
313	yes		yes			
333		yes	yes	yes		
Trench 4						
400	yes	yes	yes	yes		
402		yes		yes		
403			yes			opaque white material
						(possible crucible fabric)
						adhering to glass chunk
405		yes				
407	yes			yes		vessel glass is seedy
408			yes	yes		
414				yes	yes	
430				yes		
528		yes	yes	-		
569				yes		
600	yes	yes	yes	yes	yes	includes glass on a stone
605		yes	yes	yes		-

Table 1: Summary of material examined