- 12 3 4 SF 6 Context [733] Lead/tin alloy medallion 35 mm diameter with hole for suspension. Head of Queen Victoria and the date 1897 on one side. The other side possibly VR with crown above and scroll beneath. This is presumably a commemorative medallion to mark the diamond jubilee.
- 12 3 5 SF 10 Context [1042] Silver? button 23 mm diameter Hand-engraved decoration on the front surface The iron loop for attachment has broken off at the back
- 12 3 6 SF 13 Context [1597] Cu alloy disc/coin, 27mm diameter No detail visible on X-ray
- 12 3 7 SF 14 Context [1597] Cu alloy wire One end is flattened

12.4 Ceramic Vessel

- 12 4 1 SF 4 Context [1337] (Phase 5 3) Stoneware jar of mid to late 19th century date (Plate 12 1)
- 12 4 2 The jar was subject to a programme of conservation and analysis by Archaeological Services
 University of Durham

12.4.3 Objectives

- 12 4 3 1 The objective of analysis was to determine the function of the soil filled vessel and to provide recommendations for conservation
- 12 4 3 2 Investigation included X-rays to determine the jar contents prior to excavation (Plate 12 2) followed by wet excavation to recover the contents
- 12 4 3 3 Elemental analysis (EDXRF) was undertaken to determine the chemical composition of the jar residues

12.4.4 Description and condition

- 12 4 4 1 The vessel ([1337] 4Δ) is a small complete shouldered stoneware jar with a flat base and a rolled nm (Plate 12 1) The inside is pale grey glazed and the outside has a graduated brown glaze with a slight iridescent sheen. The jar is undamaged and unworn, although it has a few manufacturing imperfections in the body and the glaze. It stands 92mm high, is 55mm in diameter at the nm, and 39mm at the base. The walls seem to be evenly made, being 7.2mm thick at the rim.
- 12 4 4 2 When investigated, the jar was filled to within 5mm of the top. Silt and a whitish material were visible in the fill (Plate 12 3)

12.4.5 X-radiography and excavation

12 4 5 1 Before beginning to remove the fill, the vessel was X-radiographed to assess its contents Exposures were made both with the vessel lying flat on an X-ray plate and also with the plate wrapped around its circumference and held in place with an elastic band. The flat exposures gave better results (Plate 12 2) Fills of varying density could be seen in the pot, along with one possible highly corroded metal object, lying diagonally across the fill about two thirds of the way down. Other small bright dense spots, of uncertain interpretation, could also be seen in the fill.

Plate 12.1. Stoneware jar

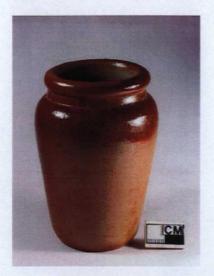


Plate 12.2. Stoneware jar X-ray



Plate 12.3. Stoneware jar fill



- 12.4.5.2 The soil was carefully removed from the pot, using handtools. There was little in the gritty silt fill near the top, with only one tiny fragment of glass and one of ?pot found in the top 4mm. Below this was a lump of fairly clean white clay, whose outline can be discerned on the X-ray. This clay filled the circumference of the pot, with only 1-2 mm of silt around it. Samples of the soil fill were taken from above and immediately below the clay. The clay extended to c. 55mm below the rim. Lying below this, diagonally across the vessel, was a small iron nail, which appears to be complete though slightly bent (Plate 12.4). There are extensive mineralised deposits attached to this nail (Plate 12.5), possibly derived from the clay lying above it. Below the nail, the fill was looser and more gritty, and contained a few fragments of shell.
- 12.4.5.3 A further soil sample was taken from the base of the vessel. Nothing was observed in the fill to account for the small bright spots observed on the X-radiographs. When the vessel was empty, it was washed and allowed to air dry.

12.4.6 EDXRF analysis

12.4.6.1 During excavation of the jar, samples were taken from the soil at 1cm below the rim, below the clay at c. 5.5 cm, and from the base of the vessel. These were analysed using a Links System 200 energy dispersive X-ray fluorescence machine (EDXRF) to determine their inorganic element content, which may elucidate the original use or contents of the jar.

Plate 12.4 Lower stoneware jar fill

Plate 12.5. Nail from within jar





12.4.6.2 The samples were prepared by drying and homogenising. They were then formed into compressed pellets and analysed. The most abundant element found in all three analyses was calcium, probably derived from the white clay in the jar. Iron was also present, as would be expected in soil containing iron artefacts. The only other significantly abundant element was phosphorus. Concentrations of iron and calcium were fairly evenly distributed in results from all three pellets, but the phosphorus content increased slightly and was greatest in the pellet from the base of the jar. Although not high, the level of detected phosphorus was considered to be greater than would be found in a 'normal' soil. The level of phosphorus in the soil surrounding the jar would be required to determine if levels within the jar were relatively high.

12.4.7 Conclusions

12.4.7.1 Investigations into the function of the stoneware jar were inconclusive. The burial context, the excellent condition of the jar and the presence of a nail suggest that the jar may have been used as a witch bottle. However, the chemical analyses provide no evidence for the presence of urine or plant material, both substances being associated with witch bottles. Moreover, although the jar was 'plugged' with clay, it was not fully sealed and, therefore, residues containing evidence of the functions of the jar may not have been retained over time.

12.4.8 Storage recommendations

12.4.8.1 The stoneware jar is stable and can be stored in conditions of ambient temperature and relative humidity, avoiding extremes of both. The iron nail has been packed with the pot, but sealed into a polythene bag containing indicating silica gel, to inhibit active corrosion. The silica should be regularly monitored and regenerated as necessary.

12.4.10 Discussion (Robin Taylor-Wilson)

12 4 10 1 This vessel has been interpreted as a possible 'witch bottle' due to its unusual situation, evidently deliberately placed in a small pit dug into the floor of Structure [1280]. Traditionally, witch bottles were vessels hidden in buildings as a counter measure to witchcraft, intended to turn any curse back on the witch who cast it. Such practice probably began in the late 16th century and a late 17th century description appears in a volume by Joseph Blagrave that explains the treatment of disease and infirmity through astrological judgement, plants and herbs. ²⁰

'Another way is to stop the urine of the Patient, close up in a bottle, and put into it three nails, pins or needles, with a little white salt, keeping the urine always warm, if you let it remain long in the bottle, it will endanger the witches' life for I have found by expenence that they will be gnevously tormented making their water with great difficulty, if any at all, and the more if the Moon be in Scorpio in Square or Opposition to his Significator, when it is done'

12 4 10 2 The practice was most common in the 17th and 18th centures but certainly continued into the 19th century, when popular belief in witchcraft and magic was still widespread. The vessels were usually filled with varying quantities of bent nails and pins (intended to be a symbolic killing), cloth, human hair, fingernail clippings and unne. The vessel was then normally buned underneath a building, usually under the threshold or the hearth, although some examples have been found under boundary walls and placed in roof spaces. Vanous manifestations of the practice have been documented in volumes on folklore, for example,

To Destroy the Power of a Witch Take three small-necked stone jars, place in each the liver of a frog stuck full of new pins, and the heart of a toad stuck full of thorns from the holy thorn bush. Cork and seal each jar. Bury in three different churchyard paths seven inches from the surface and seven feet from the porch. While in the act of burying each jar repeat the Lord's Prayer backwards. 'As the hearts and livers decay so will the witch's power vanish'. 21

- 12 4 10 2 Stoneware Bellarmine jugs were typically used in the 17th and 18th centures, such as an excavated example from Michelham Pnory, East Sussex, which is likely to have been buried in the mid to late 17th century ²² This example contained numerous copper alloy pins, all broken and highly corroded, cemented together with a matrix of inorganic material, tentatively interpreted as representing replaced organic materials from an effigy of some kind
- 12 4 10 3 From the 18th century, a wider vanety of vessels, particularly small glass phials and glass wine bottles were utilised. A well-known example, is the glass wine bottle found in the foundations of a house, demolished in the 18th century, near Reigate Castie. This example, rare in that the bottle had remained sealed, was build sometime after 1720, and contained almost half a pint of human unne, from which were recovered public hairs, an eyelash and a handful of bent copper pins.

²⁰ Blagrave, 1671

²¹ Martin, 1949

²² Bellam, 1990

²³ Massey and Edmonds, 2000

12 4 10 4 A 19th century example from Lincolnshire, was probably onginally a glass inkwell ²⁴ This contained corroded iron pins, some straight, some bent and two copper alloy objects, possibly dress hooks. It is thought to have been buned after c. 1820 beneath a building situated c. 130m east of the village Methodist church. As such, this perhaps suggests the continuation of an 'amuletic' tradition or practice, rather than the object being a witch bottle in its original form and function as an antidote to evil spells. The example from East Road, Northallerton may have been deposited in similar fashion and although its precise date of bunal is uncertain, the vessel itself is of mid to late 19th century date.

²⁴ Portable Antiquities Scheme website www findsdatabase org uk

13. FAUNAL REMAINS 5/0033

By: Archaeological Services University of Durham

13.1 Introduction

- The excavations at East Road, Northallerton revealed a sequence of archaeological remains dating from the Romano-British period through to the modern era. A range of feature types was identified, including pits, postholes, wells and ditches. Many of the excavated contexts contained faunal remains, which have been submitted for assessment of their potential to provide archaeological information.
- Animal bones were recovered from two sub-phases of medieval activity, two sub-phases of post-medieval activity and modern deposits. Some contexts contained exclusively mammal remains, while others contained only fish remains. A few contexts contained both mammal and fish bones. A catalogue of the material forms Appendix F.

13.2 Mammal Bones (Hand Collected)

13.2.1 Medieval, Phase 3; Sub-phases 3.1 & 3.3

- 13 2 1 1 Eight contexts from the earliest medieval phase, 3 1, produced faunal remains, the species present being cattle, sheep and horse Context [1500] produced a bone from either a very large breed of domestic fowl or a turkey. This would be a significant find as turkeys are believed to have first been brought to Britain in 1526 by Yorkshireman William Strickland, who acquired six birds from Native American traders and sold them for two-pence each in Britain However, the condition of the bone is noticeably superior to other finds from this phase and it is considered highly probable that this material was introduced intrusively
- 13 2 1 2 Medieval Phase 3 2 contained 25 contexts with animal bones, the majority being cattle and sheep. The fragments from eight contexts were not identifiable to species. Cattle remains, present in ten contexts, appear slightly more abundant than those of sheep, which were present in only seven contexts. Pig bone was present in only two contexts, one of which, context [1614], produced one pig metapodial bone with pathological deformation of the shaft.

f3.2.2 Post-medieval, Phase 5; Sub-phases 5.1 & 5.3

13 2 2 1 The earlier post-medieval Phase 5 1 produced noticeably more sheep bones, present in 12 contexts, compared to cattle bones, which were present in only five contexts. The species present are enhanced by horse remains from one context and dog remains from one context. The sheep bones are of particular interest, as the finds are either mostly or exclusively metapodials. This suggests the deposition of specialised waste rather than general domestic debris. Most of these sheep bones were recovered from a cluster of mostly sub-square pits, well-dated to the mid- to late 18th century.

- 13 2 2 2 The coincidence of specialised faunal waste with a specific feature type is of interest and strongly suggests a commercial rather than a domestic function. The metapodials could be a by-product of the skinner, tawyer or parchment maker and were also used by roofers to peg stone roof slabs. These metapodials appear to derive from a range of types, which may represent the sourcing of gracile hill sheep as well as robust lowland sheep. There appears to be a large enough sample for the methical data to give an insight into the range of stature of the sheep procured.
- The later post-medieval phase, 5 3, produced the largest number of contexts, 40, containing animal bones. This assemblage has a noticeably different character to that from Phase 5 1. Cattle and sheep bones occur in 10 and 13 contexts, respectively. The cattle bones include examples from veal calf as well as mature beef. Pig bones are more numerous than in any previous phase with finds present in eight contexts. The pig bones include an example, from Context [577], of an 'improved' type with short, heavily built bones. This phase appears to offer the best opportunity for information on the age range of the slaughter population. A large vanety of other species is present with horse represented in one context, dog in three and domestic fowl in five, a marked increase in the representation of domestic fowl. The domestic fowl bone from Context [940] is a very large and robust specimen, compatible with the find from Context [1500] from Phase 3.1, which as discussed above is considered to be probably intrusive. Cat and rabbit are represented for the first time in this phase, with cat remains in one context and rabbit in five. The majority of the faunal debns from this phase appears to represent domestic consumption. This is corroborated, in part, by the presence of dog gnawing marks, which were not observed in phases preceding 5.3.

13.2.3 Modern, Phase 6

13 2 3 1 The modern group from Phase 6 has produced only two contexts with finds of cattle, and one each with sheep and pig bones, which possibly may be disturbed from earlier deposits. The majority of the material in this phase is of domestic fowl, cat and horse bones. These would seem to be mortalities from continuing backyard production of fowl along with the inhumation of domestic pets.

13.3 Mammal Bones (From Bulk Samples)

- Only three of the contexts chosen for sampling produced hand recovered finds, which may be due to the majority of the samples not denving from contexts with hand recovered finds. Phase 5.1, context [378] produced further examples of sheep metapodials, while context [401] produced a metatarsal and one immature second phalanx. Evidence from the latter is too limited to allow assessment of what proportion of these metapodials may have been deposited with the phalanges still in articulation.
- 13 3 2 Context [638] from Phase 5 3 produced a fragment of pig skull while context [878], from the same phase, produced part of a calf skull Contexts [767], [784] and [788], also from Phase 5 3, produced rabbit bones, with parts of several individuals represented in Context [788]

13.4 Mammal Bones Discussion

- Preservation of the faunal remains was generally fair with some outstandingly well-preserved bones and a few in equally poor condition, principally from Phase 3.2
- The sheep bones from Phase 5 1 offer the greatest potential, among those of the domestic farm animals, for chronological companson of the supply to this site with respect to ageing and metrical data
- A trend can be seen through the phases, with a greater proportion of contexts in medieval,

 Phase 3 yielding cattle bones compared to Phase 5, post-medieval contexts, where a greater

 proportion produced sheep bones. This trend would require further examination to ascertain

 whether this is a genuine pattern or a product of deposition and recovery.
- The improved pig from Phase 5 3 is significant. While there is pictonal and historical evidence for this change in the phenotype of the pig, the archaeological evidence has been generally disregarded. An indication of the dating of this find to the 19th century would be of great interest in helping to establish the time delay between the publicising of the 'improved' stock and their entry into the everyday food chain. Evidence has been uncovered that, for sheep, this delay is more considerable than the historical records imply
- 13 4 5 The combination of domestic fowl and rabbit bones in Phase 5 3 may suggest backyard production for domestic consumption, with a reduction in reliance on butcher's meat, which may be reflected by the comparative paucity of beef bones

13.5 Fish Bones Discussion

- Phase 5 3 produced a large fish bone assemblage, from 74 contexts, most of which was in an excellent state of preservation. The recovered finds mainly consisted of head bones from small to extremely large Gadus spp. which compnses cod, ling, hake, haddock and whiting. There were also a few vertebrae of salmonid, hering, sole and other small round fish, very large eel vertebrae and a small number of crab fragments, whelks and oyster shells. A number of bones could only be identified to genus or family level due to morphological similarities between genera and species.
- Context [696] contained 14 very large haddock clethrum (the collar of the fish, beneath the gills), one of which exhibited a chop mark suggesting that the heads were being processed for their cheek meat and, possibly, the tongues. Furthermore, a small number of the large vertebrae have been chopped through at right angles to the saggital plane, suggesting that the heads were removed for processing. The filleting of fish is indicated by knife marks on other vertebrae.
- A small fish bone assemblage was recovered from Phase 6 deposits, and it is considered that this material is likely to be residual in context

13.6 Other Faunal Remains

1361 Phase 5 3, context [1058] composed entirely oyster shell, while cockle shells were evident in other contexts from Phase 5 3 Crab was also preserved in contexts from Phase 5 3 Context [564] contained some whole, unopened pairs of cockle shells. These may have been disregarded as they were dead and, hence, inedible

13.7 Conclusions and Recommendations for Further Work

13.7.1 Mammal Bone Assemblage

- 13 7 1 1 For the medieval sub-phases, a fragment count of the species present is recommended together with an archive record of the limited ageing and methoal data. Furthermore, the apparent chronological change from cattle based to sheep based assemblages requires testing by a catalogue of the identifiable fragments for each species from Phases 3 and 5
- 13 7 1 2 The unusual assemblage of sheep metapodials from Phase 5 1 necessitates a detailed record, a documentary search by the excavator for historical evidence relating to the occupier or use of the site and companson with similar assemblages from Black Fnars, Newcastieupon-Tyne²⁵ and York ²⁶
- 13 7 1 3 The sheep bones, in particular, from the later post-medieval Phase 5 3 assemblage could be studied as a deposit of mainly domestic refuse. This would provide an interesting contrast, m terms of both age and body part representation, with both the preceding specialised, possibly industnal, assemblage
- 13 7 1 4 Phase 6 requires no further work

13.7.2 Fish Bone Assemblage

13 7 2 1 The fish assemblage is a good size and further work is recommended. Full analysis of the assemblage should incorporate the identification of smaller fish and measuring of the complete bones to elucidate the size of the extremely large fish. Data should thus be analysed with respect to comparable fish assemblages

²⁶ O'Connor, 1984

²⁵ Gidney, 1988, Rackham 1987

14. PLANT MACROFOSSILS & OTHER REMAINS FROM BULK SAMPLES 510034

By Archaeological Services University of Durham

14.1 Introduction

- 14 1 1 The excavation at East Road recorded an array of features from the Roman, medieval and post-medieval penods Samples were taken from 22 contexts for assessment
- 14 1 2 Evaluation of the samples pnmanly determines the quantity and preservation quality of waterlogged and charred plant macrofossils in each context. Subsequently, identification of botanical remains ascertains the potential environmental and socio-economic data each context can produce, while assessment of the context matrixes will indicate the provenance of the samples.
- Previous environmental assessment of medieval deposits exposed during the evaluation at East Road found that a low concentration of charred breadwheat, oat and barley grains had been preserved over time ²⁷ These findings were consistent with medieval cereal species found elsewhere in northern England ²⁸

14.2 Methodology

5000ml samples from 22 contexts were manually floated and sieved through a 500μ mesh. The residue was retained and described. The flots were directly, then scanned at x40 magnification for waterlogged and charred botanical remains. Plant macrofossils were identified via companson with modern reference material held by Archaeological Services,. University of Durham. The abundance of each waterlogged species was noted and total counts of charred species were logged. Where present in high quantities, fish bone was also picked from the flots for analysis.

14.3 Results

The processed samples contained a diversity of remains in both residues and flots including brick, bones, glass, iron, pot, industrial waste, hammerscale and molluscs. Cinder/clinker, coal, charcoal and fish bone dominated the flot matrixes. Charred plant macrofossils were present in 17 sample flots while waterlogged plant macrofossils were found in 14 samples. The full set of results is detailed in Table 14a.

²⁷ ASUD, 2000a

²⁸ Huntley and Stallibrass, 1995

Table 14a: Results

Context	335	378	401	452	638	746	748
Sample	11	13	14	12	15	16	17
Volume processed (ml)	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Volume of flot (ml)	50	90	55	75	225	60	25
Volume of flot assessed	50	90	55	75	225	60	25
Residue contents	, 00	, 00					
Bnck	√		/				
Fish bone	1				✓	1	1
Glass					·	1	,
Iron	1					1	
Mammal bone	/	1	1		1		
Mammal bone (burnt)	[1	
Mortar					✓	1	
Pot	1	1				1	
Shell	1						
Flot matnx (relative abundance)	1			<u> </u>			
Charcoal		1	2	1		2	1
Cinder/Clinker		3	4	3	1	2	3
Coal	2	2	3	3	·	_	2
Coarse sand	3	3		2			_
Fly pupana					1		1
Fish bones			1		5	4	3
Hammerscale	1					1	
Mammal bone	1	1	1	1			
Mammal bone (burnt)	1 1						
Molluscs	1 1					1	1
Slag	1	1	1				1
Wood	<u></u>					1	
Charred Remains (total counts)							
(c) Barley	İ					1	
(c) Breadwheat	1						
(c) Oat	-	2					
(c) Cerealia indeterminate		3	2	2		2	
(g) Legume (<4mm)	1		_				
(g) Legume (>4mm)		2	2	1			
(t) Hazelnut fragment	1		1				
(x) Creeping buttercup	L	L		L	L	1	
Waterlogged remains (relative							
abundance)							
(a) Orache				_	1		1
(t) Elder			1	2	1		
(t) Bramble						2	1
(r) Fool's parsley						1	1
(r) Spurge	1	_			1		1
(r) Bittersweet	l	1					

[a-arable weed, c-cereal, g-grassland, r-ruderal, t-tree/shrub, w-wide niche] Relative abundance is based on a scale from 1 (lowest) to 5 (highest)

Table 14a: Results (continued)

Sample	Confext	767	784	788	812	874	878	880		
Volume processed (ml)										
Volume of flot (ml) 110 500 250 150 150 50 100 Volume of flot assessed 110 150 250 150 150 50 100 Residue contents Residue contents Residue contents V										
Volume of flot assessed										
Residue contents										
Binck Clay pipe		110	150	250	150	150	50	100		
Clay pipe Fish bone Glass Industrial waste Iron Mammal bone Mortar Pot Shell Shotgun cartridges Fior matrix (relative abundance) Charcoal Cinder/Clinker Coal Cinder/Clinker 3 1 2 3 2 3 2 Coal Coal 1 1 1 1 2 Fibre Fish bones 4 5 5 4 4 3 4 Hammerscale Molluscs Slag 1 1 1 1 Charred Remains (total counts) (c) Breadwheat (c) Cerealia indeterminate (a) Orache Waterlogged remains (relative abundance) (d) Orache Waterlogged remains (relative abundance) (d) Orache (d) Orache (f) Bramble (f) Birch (f) Black bindweed (f) Spurge 1 1 1 1 1 1 1 (f) Black bindweed (f) Spurge 1 1 1 1 1 1 1 (f) Brample (f) Spurge (f) Spurge (f) Indication of the state of the stat		Residue contents								
Fish bone Glass Glass Industrial waste Iron Mammal bone Mortar Pot Shell Shotgun cartndges Flot matrix (relative abundance) Charcoal Coarse sand 1 1 1 1 1 1 2 Fish bones Hammerscale Molluscs Slag Molluscs Slag 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1		ļ			✓			
Glass	Clay pipe	1				✓				
Industral waste		✓	✓	✓	✓	✓				
Iron	Glass	1	ĺ		✓		✓			
Mammal bone	Industrial waste	ŀ						✓		
Shotgun cartndges	Iron	✓		✓ .			✓			
Shotgun cartndges	Mam <i>m</i> al bone	1		✓		!	'			
Shell	Mortar	1	✓	✓		✓	ı			
Shotgun cartndges	Pot	į			✓		ı	✓		
Flot matrix (relative abundance) Charcoal 1	Shell	/				✓	✓ .			
Flot matrix (relative abundance) Charcoal 1	Shotgun cartndges				✓					
Cinder/Clinker	Flot matrix (relative abundance)									
Coal	Charcoal	1	1			1	1	1		
Coarse sand Fibre Fish bones Hammerscale Molluscs Slag 1 1 1 1 Charred Remains (total counts) (c) Breadwheat (c) Cerealia indeterminate (a) Orache Waterlogged remains (relative abundance) (a) Orache (b) Bramble (c) Orache (c) Cerealia indeterminate (d) Orache (e) Cerealia indeterminate (f) Bramble (f) Bramble (f) Bramble (f) Bramble (f) Spurge (f) Sp	Cinder/Clinker	3	1	2	3	2	3	2		
Fibre Fish bones Hammerscale Molluscs Slag 1 Charred Remains (total counts) (c) Breadwheat (c) Cerealia indeterminate (a) Orache Waterlogged remains (relative abundance) (a) Orache 1 (b) Bramble 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Coal	1		1						
Fish bones	Coarse sand	1	1			1	2			
Hammerscale	Fibre									
Molluscs Slag	Fish bones	4	5	5	4	4	3	4		
Slag	Hammerscale		}		1					
Charred Remains (total counts) (c) Breadwheat 2 (c) Cerealia indeterminate 5 (a) Orache 1 Waterlogged remains (relative abundance) (a) Orache 1 (a) Orache 1 (b) Bramble 1 (c) Cerealia indeterminate 1 (a) Orache 1 (c) Bramble 1 (d) The control of the cont	Molluscs					1				
(c) Breadwheat (c) Cerealia indeterminate (a) Orache Water/ogged remains (relative abundance) (a) Orache 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Slag	1				1	1			
(c) Cerealia indeterminate	Charred Remains (total counts)									
(a) Orache Waterlogged remains (relative abundance) (a) Orache (b) Bramble (c) Birch (r) Fool's parsley (r) Spurge 1 1 1 1 1 1 1 1 1 1 1 1 1	(c) Breadwheat		2							
Waterlogged remains (relative abundance)	(c) Cerealia indeterminate	5	4	4			1	2		
Waterlogged remains (relative abundance) (a) Orache 1 1 1 1 (t) Bramble 1 1 1 1 1 (t) Birch 1 1 1 1 1 (r) Fool's parsley 1 1 1 1 1 (r) Black bindweed 1 1 1 1 (r) Spurge 1 1 1 1	(a) Orache		1							
abundance) (a) Orache	Waterlogged remains (relative									
(a) Orache	abundance)									
(t) Bramble	(a) Orache	1		1	1	1		1		
(t) Birch							1			
(r) Fool's parsley 1 1 1 1 1 (r) Black bindweed 1 1 1 1 (r) Spurge 1 1 1 1	(t) Birch									
(r) Black bindweed 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 1		1	1 1	1	1 1	1 1		
(r) Spurge		1			1 1					
r) Stinging nettle		1 1				1	1			
cressing in the same of the sa	(r) Stinging nettle									

[a-arable weed, c-cereal, g-grassland, r-ruderal, t-tree/shrub]
Relative abundance is based on a scale from 1 (lowest) to 5 (highest)

Table 14a: Results (continued)

Context	1142	1182	1207	1489	1498	1544	1550	1597
Sample	25	26	27	28	29	30	31	32
Volume processed (ml)	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Volume ofiflot (ml)	150	20	20	20	35	20	25	160
Volume of flot assessed	150	20	20	20	35	20	25	160
Residue contents			,					
Fish bone	√							
industnal waste						ĺ		✓
iron	✓							✓
Pot	✓			✓	✓	✓	İ	✓
Flot matnx (relative abundance)								
Calluna wood		1						
Charcoal			1		2	3	3	1
Cinder/Clinker	4	2	2	3	2 3	1	3	4
Coal	2	2	1	2 2	2	2	1	
Coarse sand	1	2	4	2		3	3	
Fish bones	1				2			1
Hammerscale	ļ							2
Mammal bone				1				1 _
Charred Remains (total counts)								
(c) Barley						1	3	1
(c) Breadwheat	2				'	2	10	1
(c) Oat	1			1	1	2		
(c) Cerealia indeterminate	5		2	2 2	6	10	22	
(g) Legume (>4mm)	1							1
(g) Legume (<4mm)				1		1		
(t) Hazelnut fragments	1					3		
Waterlogged remains (relative abundance)								
(t) Elder	2		1		1			

[a-arable weed, c-cereal, g-grassland, r-ruderal, t-tree/shrub] Relative abundance is based on a scale from 1 (lowest) to 5 (highest)

14.4 Discussion

- Fill [1182], from Phase 2.1 ditch [1183], produced a small volume of flot containing cinder/clinker and coal. Although coal is not thought to have been a major fuel source until the early medieval penod in northern England, ²⁹ it is possible that such material may on occasion have been burnt as fuel. Due to the absence of charred botanical remains in the flot, there is no further evidence to indicate the date of the context. The sample of fill [1207] from Phase 2.2 ditch [1208] also produced a similar flot to fill [1182] and contained only degraded charred cereal grain, which can produce little data regarding the context age.
- 14 4 2 Fill [1550], from Phase 3 1 well [1551] contained breadwheat and barley, although the majority of charred remains were too degraded to enable identification. The context contained domestic waste
- Phase 3 2 fill [335], from well [336], contained an array of deposits within the flot and residue including iron, pot, shell, sand, hammerscale, slag and bone. No charred remains were present. Fill [1142] of Phase 3 2 ditch [1143] produced a relatively large volume of flot predominated by cinder/clinker with lesser quantities of coal, indicating that the provenance of the material was mainly from burnt fuel waste. Fish bone, iron, pot and a small number of charred plant macrofossils were present in the context, the latter including charred cereal grain, legumes and hazelnut fragments. Therefore, it appears that some domestic waste is present in the flot.
- 14 4 4 Fills [1489] and [1498], from Phase 3 2 ditches [1490] and [1495], produced relatively small volumes of flot containing charcoal, cinder/clinker, coal, sand and bones, while pot was present in the residue. Both contained charred cereal grain including oat and legumes, both of which were consumed during the medieval period in the region. Although the characteristics of the residues and flots indicate that the waste may be of domestic origin, the low volumes of flot and the degraded condition of much of the charred grain suggests that waste may be residual and not dumped directly into the contexts.
- 14 4 5 Fill [1544] from Phase 3 2 ditch [1546] produced a small volume of flot containing fuel waste (coal, cinder/clinker and charcoal) and a moderate number of charred botanical remains including barley, breadwheat, oat, legumes and hazelnut fragments. This composition of charred food products is consistent with medieval finds elsewhere in the region 31. The absence of chaff and predominance of grain within the fiot indicates that the material was processed elsewhere and transported to the site 32. The deposit contained domestic waste.
- Phase 5 1 fills [378] (pit [379]), [401] (ditch [400]) and [452] (well [451]) possessed similar flot and residue compositions and produced moderate to small volumes of flot. These three contexts contained charred plant macrofossils. However, the quantities were not high enough to indicate the direct disposal of food waste. Furthermore, the diversity of remains in contexts [335], [378], [401] and [452] indicates that the material may be of both industrial and domestic ongin.

32 Hillinan, 1981

²⁹ Huntley 1994, 1995

³⁰ cf ASÚD 2000b

³¹ Huntley and Stallibrass, 1995

- Phase 5 3 pit fills [638], [766], [784], [788], [812], [874] and [880] all produced large volumes of flot mostly compnsing flsh bones. Such quantities of fish bone extracted from small volumes of processed material indicate the direct dumping of waste into these contexts. Moreover, the high quantities of bone also suggests that the remains may have originated from industrial as opposed to domestic waste. Identification of the fish bones may further elucidate their use and provenance. Phase 5 3 pit fills [746], [748] and [878] also contained large proportions of fish bone but in smaller quantities due to the lower volumes of flot. These contexts also contained iron, glass, charcoal, hammerscale and slag which suggest a mixed provenance of material from industrial and domestic sources. Furthermore, the lower volumes of flot present suggest that waste was not dumped directly into these three contexts.
- The processing of fill [1597] from Phase 5 3 pit [1598] produced a large volume of flot containing fuel remains as well as bone and hammerscale. Industrial waste, iron and pot was present in the residue. It was considered by the excavators that the context formed part of a cess pit, however, the absence of waterlogged seeds, fly puparia or insects suggests that cess pit conditions did not exist, while the flot and residue composition indicate the presence of industrial waste products.
- A small number of waterlogged seeds were found in the context flots, derived from ruderal, weed and shrub species. These flots, however, do not contain components indicative of waterlogged conditions, such as organic matter, insect fragments or bryophytes.

 Consequently, the flot matrixes indicate that aerobic conditions were experienced within the contexts over time, not suitable for fragile organic matter preservation. Therefore, it is likely that most waterlogged seeds may not be contemporary to the contexts. However, it is possible that the more durable seeds, e.g. bramble, which may survive in aerobic conditions for short penods, may have been preferentially preserved over time.

14.5 Conclusions and Recommendations for Further Work

- 14 5 1 Fills [1182] and [1207] date to the Roman period. However, due to an absence of well preserved charred plant macrofossils within the flots, environmental assessment cannot substantiate or provide dating evidence.
- Phase 3 2 fills [335] and [1142] and Phase 5 1 fills [378], [401] and [452] produced flots and residues containing a diverse array of remains alongside low numbers of charred botanical remains, suggesting a mixed provenance of material. The remains recovered from Phase 3 1 fill [1550] and Phase 3 2 fills [1489], [1498] and [1544] comprised material of domestic origin including small quantities of charred cereal grain, much of which was too degraded to enable identification.
- Phase 5 3 fills [638], [767], [784], [788], [812], [874] and [880] produced large volumes of flot primarily composed of flsh bones. Identification of these remains may elucidate the provenance of the material and is strongly recommended. Similarly phased fills [746], [748] and [878] also contained fish bone, but in low quantities. All of the aforementioned 10 contexts that contained fish bones also contained low numbers or no charred botanical remains. Phase 5 3 fill [1597], initially thought to form part of a cess pit, contained a single barley and breadwheat charred cereal grain and no waterlogged seeds.

Due to the limited number of well preserved charred plant macrofossils within the 22 context flots, none of the contexts have the potential to produce data regarding domestic food consumption or the socio-economic status of the site. Therefore, full analysis or further evaluation of the botanical remains is not recommended.

PART C: SUMMARY OF THE ARCHAEOLOGICAL RESOURCE & RESEARCH AGENDA

15. SUMMARY OF THE ARCHAEOLOGICAL RESOURCE

15.1 Natural Sub-stratum

- Natural, unmodified, geological material was exposed in plan across areas of maximum impact and in localised areas, such as the base of cut features, in areas of minimum impact Some variations in composition, as is typical of the boulder clay in the region, were recorded
- 15 1 2 The relative heights recorded on untruncated natural deposits at the site demonstrate that this part of Northallerton lies on land that slopes down slightly from north to south. Across the site, this was manifest as a drop in the height of the natural sub-stratum of c 0 80m over a distance of c 60m from north to south.
- 15 1 3 In the absence of previous archaeological investigation on such a scale in Northallerton, the identification of the height at which natural geological deposits occur, thereby establishing overall depths of archaeological material and modern overburden, is an important finding which can inform archaeological development control in the town in future

15.2 Roman Activity

- The archaeological evidence indicates that the earliest recorded evidence for human activity at the site dates from the late 1st century AD, the period of the Roman invasion of northern England Evidence for such activity survived in relatively fragmentary form, parts of linear features and simple linear structures, broadly indicative of land or stock management, being recorded. These features were set out on alignments which are at odds with those established in the medieval penod and which remain fossilised in the property boundanes today. The ceramic material derived from this phase composed less than 1% of the site total in both weight and sherd count.
- 15 2 2 This evidence of activity at the site during the Roman period is significant, despite its rather fragmentary form, since it represents hitherto unknown utilisation of the area at the time of Roman military occupation of northern England

15.3 Medieval Activity

No evidence of Saxon activity was recorded during the investigations. The archaeological record indicates that utilisation of the site began from the 12th century onwards, a time when Northallerton was becoming established as a market town on the main route north from York. The site was occupied by parts of a ladder of narrow burgage plots and access pathways, set out to the east of properties fronting onto High Street. Evidence of re-definition of the plot boundanes was recorded and the plots themselves are likely to have served a variety of backlot functions, including kitchen gardens, orchards, pasture or for keeping animals. A variety of discrete features were encountered, small refuse pits and wells being examples, these being entirely consistent with the backlot situation of the site during this era. Evidence of structural remains of medieval date was recorded in the southern part of the site, representing the footings and associated surfaces of what may have been small outbuildings.

- The archaeological evidence indicates that, at some point during the medieval penod, there was a relatively significant variation in land management at the site. Numerous parallel north-south onentated boundaries being created, at right angles to the existing burgage plot boundaries. This seems to have been a rather more irregular arrangement of boundaries and it may have been that the site was turned over, for example, to communal arable cultivation or pasture. It is possible that this re-structuring was related to a decline in the fortune of the town from the mid to late 14th century, in the wake of the Black Death, as indicated by documentary evidence and in common with many other settlements in the region
- The evidence of medieval activity at the site is unsurprising in terms of either its quantity or nature, but this is nevertheless significant archaeological data, given the previous lack of controlled archaeological investigation in the town. The various sub-phases of medieval activity combined to produce 41.5% and 31% by sherd count and weight, respectively, of the ceramic assemblage from the site. In addition, later phases of activity produced significant additional medieval material, residual in context. Since medieval pottery production was generally local in nature, it is almost certain that a proportion of the site assemblage will be of previously unknown types, albeit conforming to regional traditions.
- There was a hiatus in activity at the site during the late medieval period, represented by the accumulation of a site-wide developed soil, possibly during the 15th century. This can be seen as reflecting a lack of usage of the site, perhaps related to abandonment of the settlement margins and probably reflects a long-term economic recession known to have affected the whole of north-eastern England in the 15th century.

15.4 Post-medieval Activity

- Activity related to a specific commercial operation of mid to late 18th century date was identified at the site. This was probably a penod by which the town had begun to re-establish its commercial identity in the post-medieval era. A notable cluster of features, which contained faunal waste from the activity of a tawyer, parchment maker or roofer, was recorded. The street frontage property directly to the west presumably housed the premises of the tradesman, with the backlot being a suitable place for refuse disposal. This important sub-phase of post-medieval activity produced 11% and 26.8% by sherd count and weight, respectively, of the ceramic assemblage from the site.
- While the precise layout and usage of properties at the site during the 19th century can be reasonably accurately established from cartographic and documentary sources, the archaeological evidence has provided some important specific information regarding plot usage. Around the turn of the 20th century, for example, a portion of the backlot of the premises of a fishmonger occupied part of the site. A dense concentration of features, predominantly shallow refuse pits, produced a significant assemblage of faunal material derived from the fishmongering trade. Such evidence is significant, providing a good example of how archaeological data can inform on a site-specific activity, which can, in turn, inform a broader view of socio-economic aspects of post-medieval life, in this case the diet of the population and trading networks of such towns during the late Victonan/Edwardian era

Many structures of post-medieval date were encountered at the site, mostly below ground, although standing remains derived from a 19th century or earlier building were recorded in the northernmost excavation area prior to ground reduction. The floor levels of this structure produced a ceramic vessel believed to be a witch bottle, notable evidence of late 19th century amuletic tradition derived from a more sinister earlier practice. The remainder of the activity derived from 19th century usage of the site comprised a variety of features of low-moderate archaeological significance.

16. RESEARCH AGENDA

16.1 Original Research Agenda

Pnor to the excavation, and on the basis of the findings of the earlier monitoring and recording and that trenching evaluation, it was considered that archaeological remains at the site had the potential to illuminate knowledge of medieval and post-medieval settlement in Northallerton. The onginal WSI, compiled in April 2000, for archaeological investigations at the site, had set out a broad research agenda, from which site-specific research objectives were to be formulated in light of the findings of the fieldwork.

16.2 Revised Research Agenda

- The revised research agenda for the archaeological excavation is summansed in terms of the following six objectives
 - To set the recorded evidence of activity during the Roman period into a local and regional context,
 - To identify evidence for the layout or use of land as part of the development of the medieval town core.
 - To identify evidence of generalised or repeated medieval or post-medieval activities, such as pitting, well-building, horticulture and agriculture,
 - To identify evidence for change of site activities from medieval to early modern times,
 - To identify evidence for medieval and post-medieval crafts or small scale proto-urban industnes, such as brewing or butchery,
 - To analyse medieval and post-medieval deposits to show the taphonomy of their components, such as charred materials, ceramic building material, pottery sherds and bone as a by product of food production and consumption against bone used in crafts
- Part B of this report has described in detail the archaeological evidence generated by the project and Section 15, above, has summarised the archaeological resource as represented by the project data. This section aims to establish the potential of the archaeological resource to address each of the objectives on the research agenda. Each objective will be addressed through a brief discussion section, with, where possible, reference to the draft report of the North East Regional Research Framework for the Historic Environment (NERRF). This is an English Heritage-funded initiative that aims to provide a viable, realistic and effective academic basis for the undertaking of archaeological investigations. For each archaeological era, a Research Agenda and Research Strategy has been compiled.

³³ North East Regional Research Framework, www durham gov uk