SUMMARY

This report presents the results of an archaeological evaluation undertaken by Field Archaeology Specialists Ltdat the IECC compound, York Railway Station.

The site lies on land previously used as railway sidings but currently re-developed for ancillary railway buildings. Construction of the railway in the second half of the nineteenth century located an extensive Roman cemetery in the area, which contained both inhumation burials and cremations. Although earlier archaeological investigations around the station have demonstrated extensive damage caused by levelling associated with the former railway construction work, recent excavation of articulated burials at the Railway Hotel indicate that the area is archaeologically sensitive, with the possibility of intact deposits.

The evaluation here reported confirmed the presence of archaeological remains on the site. From the analyses of the material recovered, it would seem that the deposits encountered were all disturbed and redeposited by the construction of the railway. However, given the limited depth of the trenches and the disturbance by recent services it cannot be stated that no intact strata survive on the development area. The disturbance encountered could be localised and the depth of the disturbance remains unknown.

ACKNOWLEDGEMENTS

Field Archaeology Specialists would like to thank Angus Wheeler (Bullen Consultants Ltd) and John Oxley (City of

York Council) for their support and advice during the fieldwork.

LIST OF CONTENTS

Figures

Appendices

1.0 INTRODUCTION

This document reports on an archaeological evaluation and watching brief carried out by Field Archaeology Specialists at the site of the proposed extension to the York IECC building, York Railway Station, for Railtrack plc. The fieldwork took place between the 28th June and 10th August 1999.

The programme consisted of two stages of investigation, the excavation of two small trenches (Interventions 1 and 2) within the security compound which surrounds the current IECC building and the monitoring of geotechnical investigations (five test pits and three boreholes, Int.3-5, 9-10 and Int.6-8 respectively) situated both inside and just beyond the compound.

1.1 AIMS AND OBJECTIVES

The aim of the project was to evaluate the archaeological potential of the proposed development area in order to provide the planning authority with information on the probable character and significance of any archaeological remains at the site. The evaluation provided an opportunity:

- to determine the character of any pre-Roman activity at the site
- to map the extent and character of the Roman cemetery previously contacted at the station
- to locate extensions of the Roman road system crossing the cemetery
- to characterise any post-Roman activity at the site
- to identify and characterise the nature and extent of disturbance at the site caused by the construction of the railway station in the later nineteenth century and any subsequent re-development works.

A scheme of investigation was provided by the Principal Archaeologist, City of York Council (Appendix A). All on-site archaeological works were monitored by the engineering geologist, Mr Angus Wheeler (Bullen Consultants Ltd) on behalf of Railtrack plc.

1.2 LOCATION AND LAND USE

The site lies at NGR SE 5935 5151 beyond the north-western corner of York railway station and in an area formerly used as railway sidings (Fig.1). Within the IECC compound, built in 1989, the area subject to evaluation was covered by rough turf. This lay beyond an apron of concrete hard-standing which surrounded the IECC building itself. Inside the compound the ground surface was flat but had been raised slightly above the level of the derelict sidings.

Outside spreads of stony ballast and various types of hardstanding covered the ground.

1.3 ARCHAEOLOGICAL BACKGROUND

The nature and extent of activities which have taken place in the area around York Railway Station since the mid-nineteenth century means that disturbance of archaeological deposits is likely to be high. The construction of the first railway station in York took place from 1839 to 1841, in an area close to Toft Green within the City Walls, around 120m from the current complex (RCHM(E) 1962). Further work was carried out in 1845, before the current station was built from 1870 to 1877. This layout was not static, as there have been a number of minor alterations since. The high level of deposit disturbance caused by the construction work of the mid to late nineteenth century is well attested archaeologically.

Recent excavations have demonstrated the extent of levelling which occurred prior to construction work. In particular, watching briefs carried out in the region of York Railway Station by York Archaeological Trust in 1972, 1983, 1986 and 1988 produced substantial dumps of material which lay directly over subsoil. An excavation in the forecourt of Foxton's Garage, Leeman Road, just 150m from the station entrance, produced at least 3m of modern and nineteenth century building debris. Common to both this excavation and the watching brief of 1972, however, is the presence of redeposited Roman material. This, along with some redeposited human bone recovered during the 1983 watching brief, supports the understanding that an extensive Roman cemetery lies in the area of, and to the north of, York Railway Station although current knowledge of this cemetery largely derives from observations made during the nineteenth century construction work.

It would appear that a ridged spur, approximately 15m above Ordnance Datum ran south to north, between the Ouse and Holgate Beck. The removal of this spur during the creation of various railway cuttings in 1839-41, 1845 and 1870-7 produced a substantial number of Roman burials. These burials covered the area now defined by 'Station Road south-west of the Cholera Burial Ground, the railway lines immediately south-west of Queen Street bridge as far as the Railway Museum, the Railway Station, the Royal Station Hotel and part of its garden, the approach lines north of the main line as far as the engine shed and Scarborough Bridge and the lines between the Railway Station on the east and Cinder Lane on the west' (RCHM (E) 1962 77). Both cremations and inhumations were present, with a possible delineation between the two rites detectable (though without a physical barrier). Cremations appear to have covered the area now represented by the east side of the current Sorting Office, and for around half a kilometre to the north-west (Raine J 1876). Inhumations covered all of the remainder of the cemetery area. As is well attested throughout York, both inhumation and cremation appear to have run concurrently for some time, with cremation going out of use towards the end of the third century, but inhumation becoming more popular from the middle of the second century.

In total, 318 tombstones were located, 905 tomb monuments of other forms, 432 inscribed coffins and 149 burials. Of the burials whose position can be reliably ascertained, they appear to face either south or east, and occur at a

depth of 1.5 to 1.9 m below the nineteenth century ground surface. Stylistically, the burials demonstrate great variation, with sarcophagae, lead and wooden coffins, and vaulted and gypsum-filled burials all represented. The cremations were similarly diverse, with pottery urns, lead containers, tile covered tombs and stone ash-chests present. The preservation of material appears to have been good, although the records are incomplete, so statistical data relating to gender ratios and areas of differing status is at best ambiguous.

As Roman cemeteries commonly line major roads, as the topography of The Mount demonstrates, it is necessary to understand something of the Roman road network in and around the York Railway Station area. The Royal Commission volume of 1962 classifies Roman roads entering York by a series of numbers, of which Road 8 is of potential relevance to York Railway Station. The cemetery appears to line both sides of this route, which runs from the south-western side of the legionary fortress (at the end of Stonegate), until it reaches modern Blossom Street and forks into Roads 9 to Aldborough and 10/11 to Tadcaster. None of these roads are likely to run through the IECC site. An evaluation by York Archaeological Trust in July 1992 produced evidence of a Roman road which ran approximately parallel to the modern Holgate Road. This evidence is unlikely to concur with any of the numbered roads sited by the Royal Commission volume, though the road may run through the York Railway Station site.

Our understanding of activities within the York Railway Station area in the time span between the disuse of the cemetery in the fourth century, and the commencement of construction work in 1839 is limited. It is possible that post-Roman activity took place, though this can only really be attested by the discovery of a coiled snake pendant in 1874, which has been ambiguously described as 'probably not Roman but Viking' (RCHM(E) 1962: 143).

The 1853 Ordnance Survey map for the area suggests the site of a Dominican Friary in the position of the original station complex close to Toft Green. Angelo Raine cites a document of 1228 in support of this, which describes the granting of the land in 1228 (Raine 1955). Documentary references to this institution continue until 1381, although there is so far no archaeological evidence.

The only other glimpse of the pre-railway landscape derives from the 1853 Ordnance Survey map, which labels this district as Bishop Fields, and shows a post-enclosure field system complete with boundaries and hedge-lines, and a series of minor roads and footpaths. At least one set of tracks and a number of railway buildings are marked, presumably as a result of the 1839-41 development. Since the construction of the current Railway Station complex, the enclosed area occupied by the IECC building has undergone some changes. The 1:25000 Ordnance Survey map published in 1962, suggests that railway tracks ran right across the area currently under investigation. The current IECC building and associated concrete platform, however, were built in 1989. There have been no major changes to the site since that time.

The York Railway Station site is therefore immediately to the west of the Roman colonia, close to the junction of Roads 8 and 11 sited by the Royal Commission, and within the region thought to have used as an industrial and waste ground area during the early Roman period, and later as a substantial cremation and inhumation cemetery.

However, due to the extent of disturbance caused by the construction works of 1839-41, 1845 and 1870-77, few of these deposits are likely to have survived, unless the nineteenth century ground surface was consolidated rather than truncated. This situation has been well attested in recent watching briefs and evaluations within the area.

2.0 MONITORING OF GEOTECHNICAL INVESTIGATION

2.1 INTRODUCTION

A ground investigation survey of the site was undertaken by Geotechnics Ltd and was monitored by Field Archaeology Specialists. Ground works consisted of five trial pits (Int.3-5, 9-10) and three boreholes (Int.6-8), (Fig.2).

Int.3-5 were firstly excavated by hand to a depth of 1.20m and then machine cut to a total depth of 3.00m using a narrow bucket fitted to the back-acting arm of a JCB. These pits measured approx 3.00 x 1.00m. It was not possible to examine in detail the exposed sections for safety reasons. However, it was possible to measure the general deposit sequence from the ground surface and a small assemblage of finds was recovered from the spoilheap of each trial pit.

Two smaller trial pits (Int.9-10) dug by hand against the foundation of the IECC building were only 1.20m deep.

2.2 TRIAL PIT RESULTS

2.2.1 *Intervention 3* (Trial pit 2), 13.22m AOD at the surface

Identity	Depth(m)	Description	Finds
Topsoil	0.00-0.35	grass cover over dark brown silty sandy clay, with frags of brick, gravel and rootlets	not recovered
Cinders	0.35-1.10	coarse ashy clinker with slag, concrete etc.	shell, wood, bone
Made ground	1.10-2.70	dark greyish brown sandy clay (7.5YR 2.5/1) with lumps of red brown clay (5YR 4/4)	Roman pottery, brick and bone
Made ground	2.70-3.00	very dark brown clayey silt (7.5YR 2.5/1) with charcoal and occasional oyster shell, (organic odour)	bone, shell

2.2.2 *Intervention 4* (Trial pit 3), 13.24m AOD

Identity	Depth(m)	Identity	Finds
Topsoil	0.00-0.40	grass cover over dark brown silty sandy clay, with frags brick, gravel and rootlets	not recovered

Identity	Depth(m)	Identity	Finds
Cinders	0.40-1.00	coarse ashy clinker with frags of brick and slag	bone, med pottery, post-med glass and stonewares
Made ground	1.00-1.90	very dark grey sandy silt clay (7.5YR 3/1) with frags of brick	not present
Made ground	1.90-2.30	very dark grey silty clay (7.5YR 3/1) with charcoal, (organic odour)	post-med stonewares and metal key
Subsoil	2.30-3.00	Firm red brown mottled sandy clay	n/a

2.2.3 *Intervention 5* (Trial pit 1), 13.36m AOD

Identity	Depth(m)	Description	Finds
Concrete	0.00-0.15	n/a	not present
Gravel	0.15-0.30	n/a	not present
Cinders	0.30-1.30	sandy ash with coarse slag, some gravel and brick	not recovered
Made ground	1.30-1.90	very dark grey sandy silt clay (7.5YR 3/1) with frags brick, concrete, gravel and oyster shell, railway sleeper at 1.60m	shell
Made ground	1.90-2.30	very dark grey clayey silt (7.5YR 3/1) with occasional shell	clay pipe stem
Subsoil	2.30-3.00	Firm grey brown sandy clay	n/a

2.2.4 *Intervention 9* (Trial pit 4), 13.26m AOD

Identity	Depth(m)	Description	Finds
Paving slabs	0.00-0.05	n/a	n/a
Concrete	0.05-0.15	n/a	not present
Hardcore	0.15-0.45	n/a	not present
Cinders	0.45-1.10	sandy ash with coarse slag, some coal, gravel and slag	not recovered
Made ground	1.10-1.30	brown silty sandy clay	not present

2.2.5 *Intervention 10* (Trial pit 5), 13.26m AOD

Identity	Depth(m)	Description	Finds

Paving slabs	0.00-0.05	n/a	n/a
Concrete	0.05-0.15	n/a	not present
Hardcore	0.15-0.40	n/a	not present
Cinders	0.40-0.65	sandy ash with coarse slag, some coal, gravel and cobbles	not recovered
Sand	0.65-0.95	brown sand with gravel	not present
Made ground	0.95-1.30	brown silty sand clay	not present

2.3 BOREHOLE RESULTS

A similar range of deposits were identified in the boreholes, although with less precision and the likelihood of some contamination between the principle layers. Different types of made ground were recognised.

2.3.1 *Intervention 6* (Borehole 1), 13.35m AOD

Concrete and fill to 0.15m; sandy ashy clinker with inclusions of brick, slag and concrete to 2.10m; soft brown clay and ash fill to 2.80m; subsoil

2.3.2 *Intervention 7* (Borehole 3), 13.23m AOD

Grass, concrete and sand to 0.20m; sandy ashy clinker with occasional inclusions of brick, slag and concrete to 0.80m; orange brown silt, coarse sand with occasional brown silty clay inclusions to 2.85m; subsoil

2.3.3 *Intervention 8* (Borehole 2), 13.25m AOD

Topsoil to 0.30m; silty sandy ashy clinker with inclusions of brick, slag and concrete to 1.20m; brown clayey sand with some brick to 2.85m; subsoil

2.4 ASSESSMENT

The sequence of deposits was generally consistent in all the interventions. The results of the watching brief indicated that between the ground surface and a depth of approximately 1.10 to 1.30m were a group of distinct deposits which represent the final grading of the nineteenth century railway landscape and more recent re-modelling and construction. At least a further metre of made up ground was present beneath the earliest cinder layer of railway grading. The status of this made up ground could not be assessed or evaluated without more careful examination of the sections and better finds recovery. However, if we assume that the small assemblage is representative, the

presence of late (post medieval) finds at the base of the sequence is significant (Int.4 and Int.5) and would suggest that the made up ground is composed of re-deposited strata.

Subsoil depth varied between different interventions which suggests that the topography of the natural surface is uneven. The highest point was located at between 10.94 to 11.06m AOD, within Int.4 and Int.5 respectively. The subsoil was not contacted in Int.3. In general the surface of the subsoil was deeper in the boreholes, where it was located at 10.55m AOD (Int.6), 10.38m AOD (Int.7) and at 10.40m AOD (Int.8). Ground water was reached at different levels, 6.65m AOD (Int.6) and 8.93m AOD (Int.7).

3.0 ARCHAEOLOGICAL EVALUATION

3.1 EXCAVATION PROCEDURE

Both Int.1 and Int.2 were sited to avoid the buried services which were known to cross the site. Additional precautions were taken to avoid potential damage to any services that were unreported. Before excavation began and at regular intervals during excavation the ground surface was CAT scanned. Furthermore, excavation was onlycarried out under strict archaeological supervision using hand tools and where services were encountered during excavation they were not disturbed, or where this was not possible they were left intact on a supporting column of soil.

At the end of the excavation each intervention was backfilled using a JCB but only after any exposed services had already been carefully covered by hand and only under the supervision of the archaeologist and the consultant geologist.

Both interventions were recorded in plan and section and these are presented here in order to describe the sequence of deposits identified. In each intervention two adjacent sections were drawn in order to illustrate the shape and extent of the exposed strata. Modern, post-nineteenth century features were emptied in spits but in advance of the excavation of the archaeological strata. Written, drawn and photographic records were made of all archaeological deposits.

A local site grid was established for recording purposes based upon two survey stations identified by the consultant geologist. All co-ordinates and alignments expressed in this report refer to the site grid and all heights are expressed AOD.

The recording system employed followed *Field Research Procedure* (Carver 1990), the standard operating system employed by Field Archaeology Specialists. A single index was created with contexts starting at C1000 and features from F1.

Datable finds and environmental samples from selected deposits recovered during the excavation were sent for

assessment to various specialists, their results are summarised below but are presented in full in the appendices.

3.2 EXCAVATION RESULTS

3.2.1 *Intervention 1*

Int.1 was a small trench 3 x 3m situated in an area of rough grass inside the southwestern corner of the compound (Fig.2). It was excavated to a depth of 1.50m between 13.25m and 11.75m AOD (Fig.3).

The deposits consisted of broad horizontal layers which crossed the trench and a few negative features (Fig.4). Natural subsoil was not encountered in this intervention, although it was later sought in an exploratory auger hole cut from the base of the excavation.

The deposits are listed below (Table 1 and Table 2), but the sequence consisted of a layer of topsoil, C1000, 0.40-0.55m thick, which overlay a deposit of cinders, C1001, 0.30-0.60m deep. C1001 was contaminated with bands of clean sand and, near the surface, thin spreads of limestone. Two small scoops, 0.65m apart and 0.15m deep, sunk into C1002 could be the footprint of a tracked or wheeled vehicle.

C1001 was cut by F1 (C1005) and F2 (C1006). F1, a steep sided gully approximately 1.00m deep, contained a sewer pipe which was uncovered on the floor of the excavation, at 12.09m AOD. Its backfill, C1005, consisted primarily of cinders thrown back into the service trench.

F2, the robber trench of a recent brick building or possibly the remains of a dismantled diesel tank fuel store, contained much modern brick rubble and lumps of sandy clay. The remains of the building, F3 (C1007), survived to a height of eight brick courses, between 12.00-12.72m AOD, and obscured much of the southern end of the intervention. The building consisted of two lengths of wall, the outer wall running northwest-southeast across the intervention and a shorter interior wall which abutted it at right angles. A layer of bricks inside the building were the remains of a floor surface. Where the exterior wall crossed the sewer pipe a large immovable concrete raft had been inserted to span the sewer trench. A rubble and gravel dump had been used to infill the building.

C1002 was a sterile layer of loose clean sand and gravel, 0.20m thick and clearly imported onto the site. It overlay C1003 a thin, mixed layer, 0.02-0.17m thick, which contained small fragments of building debris and thin lenses of clean sand.

At the base of the intervention was a grey coloured sandy silt clay, C1004, which could not be fully excavated since it continued beyond the depth of excavation. C1004 survived in two small islands either side of the sewer trench (F1). It was also cut by a broad, shallow feature, F7 (C1016), possibly the corner of a small truncated ditch. F7 itself was cut by the sewer trench (F1) and also obscured by the robber trench (F2) and the remains of the brick building (F3).

C1016 was unusual in that it contained large lumps of naturally concreted sand (maximum 0.20m long) and patches of stiff sandy red brown clay, possibly material quarried from locally available subsoil.

On the floor of Int.1 a small auger hole was sunk through C1004 in order to measure the depth of the remaining strata and to locate subsoil. Subsoil was contacted at a depth of approximately 0.90m, 10.85m AOD. Above the subsoil was made up ground composed of 0.60m of dark grey sandy clay containing charcoal and unidentified flecks of pottery, and near the surface, 0.30m of silty clay, possibly the remainder of C1004.

Above C1004 the sequence of layers excavated belonged to the final levelling of the nineteenth century landscape and the subsequent re-modelling of the area. The topsoil (C1000) appeared to be a recent addition to the site, brought in to improve the appearance of the IECC compound. C1001 and C1002 were the final dressing of the railway construction and consisted of imported layers of sterile makeup, subsequently disturbed by later activity, which were used to carry the railway infrastructure. C1003 had the appearance of a well trampled layer and was perhaps the working surface of the nineteenth century railway. C1004 and F7 were not apparently related to the railway construction but their status was reassessed following the results of specialist analyses of the datable assemblage (pottery and building material).

Finds were recovered in all contexts apart from C1002. C1004, stratigraphically the earliest layer excavated, contained a small mixed assemblage. Although Roman pottery was present (2nd- 4th century), the identification of a quantity of late medieval brick and tile suggested a later date for its deposition. One piece of nineteenth century brick from C1004 provided a *terminus post quem* for the sequence and suggests that the material at the base of the intervention had been reworked from earlier deposits. C1004 also contained a small amount of coal and cinder, recovered from the flot, which indicate final work on the contemporary railway surface nearby.

A small amount of animal bone was recovered from four contexts (C1001, C1003, C1004 and C1016 F7). It included one fused femoral head possibly re-used as a spindle whorl, a number of pieces with cut and saw marks and a piece of unidentifiable cremated bone. No human bone was present, although possible fragments of bone were also noted in the flot.

Table 1: Intervention 1 - Summary of context records

C. no	Identity	F. no	Status	Munsell	Description	Date
1000	layer		S	10YR 3/2	a stiff clayey loam topsoil, grey brown, covered by turf, <0.55m thick	20C
1001	layer		S	10YR 2/1	coarse cinders, black, fragments of slag and gravel, lenses of sand and limestone, loose, <0.60 thick	19C

1002	layer		S	10YR 4/4	clean sand, dark yellowish brown, with equal proportion of mixed stones, loose, <0.20m thick	19C
1003	layer		S	10YR 3/2	mixed loam, very dark greyish brown, fragments of mortar, flecks of charcoal, <0.17m thick	19C?
1004	layer		S	10YR 3/1	sandy loam, very dark grey, fragments of brick/mortar/tile, flecks of charcoal, >0.25m thick	19C
1005	backfill	1	S	10YR 2/1	cinders fill of gully, black, fragments of brick	20C
1006	backfill	2	S	10YR 2/1	mixed cinder fill of robber trench, black, lumps of sandy clay, fragments of brick and tile	20C
1007	makeup	3	S	-	red bricks making exterior and interior walls, bonded in concrete	20C
1016	fill	7	S	10YR 4/3	silty sand fill of ? ditch, brown, fragments of mortar and brick, flecks of charcoal, lumps of concreted yellow sand and stiff red brown clay (5YR 4/4)	19C

Table 2: Intervention 1 - Summary of feature records

F. no	Identity	Contexts	Dimensions(m)	Profile
1	service trench gully	1005	1.00 x 1.00	U shaped
2	robber trench	1006	? x 0.75	U shaped
3	brick building	1007	n/a	n/a
7	? ditch	1016	1.20 min x 0.45 min	n/a

3.2.2 *Intervention 2*

Int.2 was a small rectangular trench, 3.00x 3.80m, excavated in the north-western corner of the compound (Fig.2). This was also excavated to a depth of 1.50m between 13.25m to 11.75m AOD. Although initially intended as a square trench it was extended southwards to avoid a gully (F10, C1020) which contained telecommunications cables.

Due to the complete destruction of deposits on the southern side of the intervention by recent service trenches, archaeological remains were only located in the northern half (Fig.5). The archaeological remains consisted of relatively thin bands of make up spread across the width of the intervention (Fig.6 and Fig.7). All negative features

were of recent date and, with the exception of F11 (C1015), were located in the southern half of the excavation. F11 was a small incomplete pit, but all other features were linear and were generally aligned in an east-west direction.

The excavated sequence (Table 3 and Table 4) consisted of a layer of topsoil, C1008, 0.40m thick, which was capped by a rough turf. Beneath was a thin layer of sterile, angular pebbles, C1009, identified as railway ballast. The ballast was cut by F4 (C1012), a small gully which contained a narrow metal ? gas pipe, situated at 12.29m AOD.

F5 (C1013) a shallow gully, contained lengths of redundant ceramic ducting set contiguously across the intervention at a depth of 12.70m AOD. The interior of the open ducting was empty and it was removed during excavation.

F6 (C1014) a wide, shallow ditch contained the remains of a broken and heavily corroded narrow gauge metal pipe, it was encountered at a depth of 12.25m AOD and was removed during excavation. Against the southern edge of the intervention a corroded, broad metal rod was discovered at 12.40m. It appeared to be the remains of earlier railway signalling equipment which was encased in, or at least covered by, a narrow length of contiguous planking, but it too was in a poor state of preservation. This object was left in situ on a plinth of cinders.

F8 (C1017) was a large ditch of unknown function which continued beyond the base of the excavation. It was at least 1.60m wide and 1.15m deep and had been backfilled with cinders, railway debris and contained redeposited Roman and later finds.

Beneath the ballast (C1009) was a layer of coarse cinders covered by a sterile layer of clean sand and gravel, C1011. On the north side of Int.2 a sequence of relatively thin archaeological deposits were excavated. This group of contexts consisted of alternate layers of dark silty material (C1018, C1022, C1025, C1027 and C1029) as well as cleaner lighter brown clayey sands (C1019, C1021,C1023, C1024, C1026 and C1028).

The base of Int. 2 was augered to measure the depth of strata and locate the subsoil. The results were inconclusive and contradicted the results from the nearby trial pit (Int.8). It suggested only a further 0.36m depth of made ground, above a clayey subsoil, located at a height of 11.39m AOD.

All the features and the latest layers can be dated to the nineteenth century or later by their stratigraphic position. Most of the layers are identical to the sequence of later deposits recorded in Int.1 and belong to similar activity. However, excavation at the northern end of Int.2 produced an interesting group of distinct archaeological layers. These comprised a succession of silty and sandy clay layers perhaps representing accumulated domestic material and clean alluvial river-wash respectively. The current course of the river Ouse runs just 500m to the north-east. The nature of the finds would appear to suggest this interpretation of the deposits also, as the layers of domestic occupation contain higher quantities of bone, pottery, brick/tile , charcoal and mortar, whereas the alluvial layers are less mixed, beside occasional pottery and some brick/tile and shell. However, it is possible that the deposits were layers of backfill from a large feature, extending beyond the limit of the intervention, or redeposited at the site from

elsewhere.

Although some of the layers produced evidence of Roman, medieval and post-medieval activity, the analysis of both the pottery and the brick/tile showed no consistency in their date, nor in their sequence and thus indicate that the contexts were redeposited. 'It is likely that the entire sequence is of post-Roman date and probably can be dated by the one post-medieval sherd, a black-glazed ware in C1018' (Vince, Biv, Appendix B). Small quantities of coal, cinder and modern bottle glass from C1018, recovered in the flot, confirms the status of this group of deposits.

Apart from some animal bone a small assemblage of human bone was present which totalled 51 pieces, (a few additional fragments came from the flot). Although none were articulated, the assemblage represented a minimum of two adults. Some bones appear to be under represented although there was a dominance of anterior skull fragments.

Table 3: Intervention 2 - Summary of context records

C no	Identity	F no	Status	Munsell	Description	Date
1008	layer		S	10YR 3/2	a stiff clayey loam topsoil, grey brown, covered by turf 0.40m thick	20C
1009	layer		S	10YR 4/1	predominantly angular pebbles representing ballast within a sandy clay matrix, <0.11m thick	20C?
1010	layer		S	10YR 2/1	coarse cinders, black, fragments of slag and gravel, <0.20m thick	19C
1011	layer		S	10YR 5/6	sand, yellowish brown, with equal proportion of mixed stones, loose, <0.25m thick	19C
1012	backfill	4	S	10YR 4/6	silty clay fill, dark yellowish brown, high proportion of coarse loose cinders, some stones	20C
1013	backfill	5	S	10YR 2/1	coarse cinder fill, black	20C
1014	backfill	6	S	10YR 2/1	coarse cinder fill, black, with lumps of limestone	19C
1015	backfill	11	S	10YR 3/3	sandy clay loam fill, dark brown	19C
1017	backfill	8	S	10YR 4/6	sandy clay fill, dark yellowish brown, with cinders and fragments of limestone, mortar, bricks/tile	19C?

C no	Identity	F no	Status	Munsell	Description	Date
1018	layer		S	10YR 3/1	sandy silt, very dark grey, mixed with mortar, limestone, brick/tile, 0.12m thick	17-19C
1019	layer		S	7.5YR 4/4	clayey sand, brown, some stone and occasional charcoal, <0.08m thick	
1020	backfill	10	S		(not excavated)	n/a
1021	layer		S	7.5YR 4/4	clayey sand, brown, with gravel and lenses of sand and clay, with mortar and brick/tile, <0.22m thick	1-2C
1022	layer		S	5Y 5/2	clayey loam, olive grey, mixed character with mortar, limestone and brick/tile, <0.20m thick	4C
1023	layer		S	10YR 4/4	sandy clay, dark yellowish brown, with some mortar	16-18C
1024	layer		S	10YR 4/4	clayey sand, dark yellowish brown, with mortar charcoal and sand, <0.12m thick	14-18C
1025	layer		S	7.5YR 3/2	clayey loam, dark brown, occasional sand, charcoal pebbles and mortar, <0.08m thick	16-18C
1026	layer		S	10YR 5/6	sand, yellowish brown, some charcoal and mortar	14-18C
1027	layer		S	7.5YR 3/1	sandy silt, very dark grey, mixed with mortar, limestone and lumps of thick clay, <0.10m thick	
1028	layer		S	7.5YR 4/4	clayey sand, brown, clean with occasional stones, mortar, brick/tile and charcoal, <0.10m thick	
1029	layer		S	10YR 3/1	sandy silt, very dark grey, mottled appearance with stones, mortar, brick/tile, clay and limestone, 0.10m thick	

Table 4: Intervention 2-Summary of feature records

F no	Identity	Contexts	Dimensions(m)	Profile
4	service trench gully	1012	0.50 x 0.70 min	n/a
5	service trench gully	1013	0.45 x 0.26	U shaped
6	service trench ditch	1014	1.65 min x 0.76	U shaped

8	service trench ditch	1017	0.82 min x 1.32 min	n/a
10	service trench gully	1020	n/a	n/a
11	pit	1015	2.10 min x 0.83 min x 0.50	U shaped

4.0 ASSESSMENT

A high proportion of the upper levels of the ground inside the IECC compound has been disturbed by modern service trenches, the construction of the railway and later modifications to the railway landscape. However, archaeological remains were excavated in Int.1 and Int.2 and contacted in all other interventions. In each intervention the sequence of deposits and their depth was broadly similar.

The upper levels consisted of imported layers of make up to a depth of 1.00-1.30m, spread across the site as final preparation for the railway. Below this was a series of archaeological strata the top 0.60m of which, where tested in Int.1 and Int.2, proved to be composed of redeposited material, probably imported to the site during the original construction of the railway.

The recovery of finds of post-medieval date from the lowest levels of the trial pits suggest that disturbance is both deep and extensive and consequently it is likely that all archaeological strata above the subsoil has been disturbed.

The presence of human bone, Roman pottery and possible Roman grave furnishings supports our understanding that an extensive Roman cemetery lay in the area. The medieval pottery and building material in the assemblage would seem to have been brought in from elsewhere.

Damp silty clays discovered at the base of the deeper trial pits and from the base of the auger hole in Int.1 may preserve organic material. These deposits had an organic odour and it is possible they were from former waterlogged deposits which either formed in situ before the ground was drained, or were also brought onto the site from wet deposits elsewhere in York.

5.0 ARCHIVE

The specialists who undertook the assessment of the material recovered from this evaluation suggest that the pottery and ceramic building material of medieval date and earlier be retained for future reference. All material of post-medieval and later date has been assessed and discarded along with other material which was deemed to have no further analytical value.

The Yorkshire Museum has agreed to accept the material archive along with the written, graphic and photographic archive and a copy of this report. A paper copy and CDR of this report will also be archived by City of York Council.

6.0 RECOMMENDATIONS

Given the importance of the archaeology in this area and the fact that the evaluation did produce Roman material and human bone, albeit disturbed, it is recommended that at least a watching brief be maintained throughout any further development work on the site and particularly if the excavations exceed the depth achieved in the evaluation.

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APPENDIX A LAND AT REAR OF RAILWAY STATION, YORK ARCHAEOLOGICAL SCHEME OF INVESTIGATION: EVALUATION

CONTENTS

Directorate of Environmental and Development Services
Planning and Design Group

March 1998; issue 1

INTRODUCTION

1.1_ This document sets out the details of the archaeological evaluation which will be required on this site. There is good reason to believe that there are remains of archaeological importance preserved on this site. The information this evaluation will provide is necessary to allow a reasoned decision to be made on the impact this scheme will have on the archaeological deposits.

1.2 The results of this archaeological evaluation will be used to determine the nature of any mitigation strategy that might be necessary and the scale of archaeological work that it might include.

1.3 The archaeological policy of the planning authority is to seek to preserve at least 96% of archaeological deposits underneath a new development. City of York Council will advise an applicant on how this preservation target can be achieved.

1.4 The final report on the results of this evaluation and an appropriate mitigation strategy will normally be required before an application for this site is taken to Planning Committee. This follows the archaeology policy adopted by City of York Council and the advice issued by the Secretary of State for the Environment contained in Planning Policy Guidance 16 'Archaeology and Planning' (PPG 16).

1.5 This document remains the copyright of City of York Council. It may be used for the purposes of securing competitive estimates from archaeological units. Where it is used for such purposes, it must be used within a formal tender process where appropriate professional procedures will be followed. In this respect, the attention of all parties is drawn to the Institute of Field Archaeologists Code of Conduct and the Institute of Field Archaeologists Code of Practice for those involved in Competitive Tendering.

2.0 SITE DESCRIPTION

2.1 The site lies at NGR SE 59355151 and is located to the west of the York Railway Station. The site consists of two existing buildings (TAN Building and IECC Building).

2.2 Ground level is at around 13m AOD. The land is currently flat.

3.0 SUMMARY ARCHAEOLOGICAL DESCRIPTION AND SUMMARY OF PREVIOUS WORK

3.1 The site lies in an area where there has been little modern archaeological work. However, antiquarian observations in the 19th century during the extensive earthmoving works for the construction of the railway

station and track-beds revealed an extensive Roman cemetery. The cemetery produced a wide range of tombstones, stone, lead and tile coffins, and cremations together with associated grave goods. This cemetery is an extremely important archaeological monument and it is essential that the precise limits of the monument are determined.

3.2 The material from the cemetery is almost all derived from the railway works of 1839, 1845 and 1870-7. The creation of the railway landscape involved extensive cut and fill operations. Unfortunately, the nature of the pre-railway landscape is not well documented, so the extent of these cut and fill operations can only be guessed at. It is likely that archaeological deposits will survive best in those areas which were filled as a result of these operations.

3.3 There has been little recent archaeological work in this area despite a lot of redevelopment in the 1960's onwards in the surrounding area. An archaeological evaluation of the nearby Holgate Dock site was carried out by the York Archaeological Trust in July 1992 at the request of British Rail.

3.4 The main discovery was the remains of a Roman road running across the site approximately parallel to Holgate Road. The top of this feature lies at around 13.25m AOD.

4.0 THE DEPOSIT MODEL

4.1 The approximate levels (metres above OD) are:

Modern	13m AOD
Medieval	
Anglo-Scandinavian	
Anglian	
Roman	12m AOD
Natural	

4.2 This predicts up to 1m of deposit. However, there are few local data points and this estimate may be inaccurate.

5.0 THE EVALUATION PROGRAMME

5.1 The site allows an opportunity to address the following questions:

5.1.1 What was the character of pre-Roman occupation of this area?

5.1.2 Do the Roman cemeteries observed on the site of the Railway Station extend into this area?

5.1.3 What form did post-Roman, pre-medieval activity take in this area?

5.1.4 What was the nature of the medieval exploitation of the site?

5.1.5 What was the nature of the re-modelling of the landscape in this area in the 19th century in order to create the present railway landscape?

5.2 The following details need to be established:

5.2.1 What is the profile of natural deposits across the site?

5.2.2 Are there anoxically preserved deposits, wet deposits, and dry deposits preserved across the site and if so at what depth?

5.2.3 Can a deposit prediction for the site as a whole, indicating the nature and preservation of Roman, Anglian, Anglo-Scandinavian, medieval and post-medieval strata be made?

5.3 The on-site evaluation should consist of the following two phase approach (these may be subject to alteration following detailed discussion with the client and the archaeological contractor). **NOTE:** This evaluation should be commissioned jointly with a structural engineer and an environmental consultant so that contamination and soil type and strengths can be determined and provide information for the design of the foundations of the structure:

PHASE ONE

5.3.1 a borehole survey of the site; 2 Boreholes should be drilled across the site. The boreholes should all be drilled to a depth of 2m into the undisturbed natural deposits, whichever is the shallower. The boreholes should be drilled by a commercial survey company under archaeological supervision. The borehole must be undisturbed 102mm diameter continuous samples. The archaeological contractor will make all appropriate records and take such samples as are necessary to allow a fuller understanding of the origins, character and composition of the deposits. The results of this should be analysed and used, in consultation with the Principal Archaeologist, City of York Council, to refine the design of phase two of the evaluation;

PHASE TWO

5.3.2 For the purposes of estimating a cost for the evaluation, phase two should be assumed to consist of the following maximum programme of work: the excavation of two trenches each 3mx3m and 1.5m deep;

5.3.3 an analysis of existing archaeological information relating to this area;

5.3.4 and an assessment of the documentary evidence which relates to this site.

5.4 The following methodologies must be used:

5.4.1 All operations should limit destruction to what is necessary to implement this specification. Where the excavation of trenches is undertaken:

5.4.2 All overburden will be removed by mechanical excavator under archaeological supervision, down to the top of archaeological features or layers; thereafter all excavation must be by hand. Areas of intensive modem disturbance will be given a low priority in excavation. Where practicable, the fills of these features will be removed by mechanical excavator. Where burials are encountered, these should be cleaned recorded and lifted together with any associated artefacts. The precise location of the trenches will be determined in consultation with the client and the Archaeologist, City of York Council.

5.4.3 all appropriate records must be made and kept;

5.4.4 all archaeological contexts must be sampled in accordance with a sampling strategy which must be agreed in advance with the EAU and approved in writing by the Assistant Director (Planning and Building Control). In addition to hand collected animal bone from all contexts, contexts selected in consultation with the EAU must be sieved to retrieve more meaningful collections of faunal remains (see also Appendix One below);

5.4.5 all records must be indexed, ordered, quantified, and checked for consistency;

5.4.6 all artefacts and ecofacts recovered and retained from the evaluation must be packed and stored in the appropriate materials and conditions to ensure that minimal deterioration takes place and that all their associated records are complete;

5.4.7 in addition to this basic work to complete the records to Level 2, the environmental samples must be processed and assessed;

5.4.8 the rest of the material archive must be assessed for its potential to contribute to artefactual research;

5.4.9 and the stratigraphic sequence assessed.

5.5 The details and processes outlined in 5.1-5.4 will produce the following output as a concise report:

5.5.1 plan of site showing site location and position of trenches;

5.5.2 portfolio of drawn sections, trench plans, and, where appropriate, drawings of artefacts;

5.5.3 an interpretation of the structural sequence;

5.5.4 an interpretation of the archaeological and research potential of the remainder of the site.

5.5.5 The long term care of the archive must be provided for. All the original material and paper archive must be prepared for deposition with an approved archaeological depository such as the Yorkshire Museum. The archive must be prepared in accordance with the guidelines set out in *Archaeological documentary archives* , IFA Paper No 1, IFA Manchester. These Institutions will normally make a charge to cover the long-term curation of the archaeological archive. The requirements of the receiving Institution must be identified at the time of producing an estimate for this scheme of investigation. A full SMR/UAD entry for the site must be prepared and submitted to the City of York Council. Please contact John Oxley for details of the specific requirements of the SMR/UAD. **Four copies of the report** must be deposited with City of York Council. In addition a copy of the report must be supplied in electronic form. This should be done on a 3.5" PC 1.4mb double sided high density disk, as either an ASCII file, or as a MS Word for Windows or Word Perfect file. If possible illustrations should be supplied in either DXF, .BMP, .JPG, PCX or Windows Metafile format. If in doubt about formats please contact John Oxley on *01904 551346* or e-mail to *john.oxley@york.gov.uk.* Once a report has become a public document by forming part of a planning application, City of York Council will place the information on its WWW pages (at present under construction). Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the Principal Archaeologist.

5.6 All estimates should include allowance for the preparation and publication of a synopsis of the narrative report, material archive and research potential of the site in a form such as is used in *Medieval Britain and Ireland in Medieval Archaeology*.

5.7 The Contractor will be required to demonstrate by providing CV's that the staff appointed to direct, supervise, and work on this project have relevant experience of working both on complex urban sites and the complex archives which they produce.

5.5 All work must be done using the Yorkshire Museum accession and numbering systems.

5.9 The Contractor must use a computer-based recording and retrieval system and report publishing system. The recording system must be based on single context recording and planning. The publishing system should be able to produce text and illustrations in the formats detailed in para 5.5.5 above. The Contractor must have the written approval of City of York Council for the recording system which it wishes to use on this site.

5.10 The Contractor must submit a full project design and/or a schedule of works which it develops from this scheme of investigation to City of York Council for written approval prior to work commencing on-site.

5.11 The Contractor must give at least seven days notice in writing of the start of works on site to *Assistant Director (Planning and Building Control), Planning and Building Control, 9 St Leonards Place, York, YO1 2ET*

5.12 The Contractor will be subject to regular monitoring visits by City of York Council. Reasonable access must be given at all times to the Principal Archaeologist, City of York Council or his agent to the site and to premises used for the purposes of post excavation work to allow this monitoring to proceed. This will ensure that the scheme of investigation is being followed and that high professional standards are being maintained. It can be anticipated that City of York Council will want to inspect a 10% sample of all archaeological records generated by the project.

6.0 REINSTATEMENT

6.1 Ground reinstatement standards are not specified in this document.

6.2 Contractors must ensure that the question of backfilling and surface reinstatement is discussed with the client/landowner prior to any works commencing on-site.

7.0 SUMMARY

7.1 This document sets out the background to, and outlines a programme for the archaeological evaluation on this site. There is good reason to believe that there are remains of archaeological importance preserved on this site. The evaluation will provide information which will allow the planning authority, City of York Council, to take an informed and reasonable planning decision.

7.2 The full report on the results of this evaluation will normally be required before any planning application

affecting this site will be determined.

APPENDIX

1.0 Introduction

1.1_ This appendix describes a set of procedures which must be implemented by archaeological contractors other than YAT and finds processing standards which must be implemented by all contractors.

1.2 It is designed to ensure that the level of expertise possessed by the YAT and the Environmental Archaeology Unit (EAU), University of York, is used in the areas specified below.

2.0 Procedures

2.1 The strategy for sampling archaeological deposits should be developed either by or in consultation with the EAU. The subsequent on-site work and analysis of the processed samples should be undertaken either by or in consultation with the EAU.

2.2 All finds processing, conservation work and storage of finds from this site must be carried out in accordance with the standards agreed by the Yorkshire Museum, the Castle Museum, and YAT those set by the UKIC. These standards form the basis of current practice in York and all contractors will be expected to base their estimates on the implementation of those standards (see section 3 below).

2.3 Contractors other than YAT must sub-contract the ceramic spot-dating programme either to YAT or to such other agency which can demonstrate levels of professional competence and technical expertise, and access to comparative material equal to that possessed by YAT.

2.4 Where the conservation of archaeological objects is necessary, this work should be undertaken either by or in consultation with the Conservation Section of the YAT.

3.0 Finds Processing Standards

3.1 All finds processing standards are agreed with the Yorkshire Museum (acting for North Yorkshire) and the Castle Museum (acting for the City of York).

3.2 *On-site finds processing*

3.2.1 All bulk material must be washed

3.2.2 All bulk material except animal bone marked. Marking and labelling materials indelible and irremovable by abrasion

3.2.3 All bulk finds must be appropriately boxed and recorded on computer

3.2.4 Identification of stone-type and tile must be undertaken on site

3.2.5 All the above to be completed within two months from the end of the excavation

3.2.6 All small finds recorded both in the finds register and on computer

3.2.7 Small find recording system must be compatible with Yorkshire Museum accessioning system

3.2.8 All small finds must be appropriately packaged for optimum survival of data

3.2.9 All the above to be completed within two days of the object having been excavated

3.3 Off-site Finds Processing

3.3.1 All small find and bulk find data must be made available to finds researchers, conservators and curatorial staff

3.3.2 Computer system should be used to monitor location of objects to allow rapid access

3.3.3 All material stored in optimum conditions to ensure survival of data.
Includes
Controlled environment storage where appropriate
Correct packaging with inert materials
Regular checking of the condition of objects
Immediate selection for conservation of vulnerable material

3.3.4 All material stored in buildings with appropriate security (see storage below)

3.4 Conservation

3.4.1 All metal objects will be x-rayed, then selected for conservation. Non- conserved material stored in controlled conditions.

3.4.2 All organic materials will be appropriately treated, including prior specialist recording for materials where there is possible information loss in the process of conservation

3.4.3 Specialist advice must be taken for wood, leather, osseous material and textile conservation and research

3.4.4 All other classes of material must be treated where appropriate

3.4.5 Special packaging undertaken must be provided for all vulnerable objects. All textiles, coins, and painted glass stored in specially- designed systems.

3.5 Storage

3.5.1 All objects stored in appropriate materials and storage conditions

3.5.2 All objects stored to allow rapid access on demand

3.5.3 All storage at appropriate security levels, eg:
Small finds in storage approved by National Security Adviser or Area Museums Service
Bulk finds in storage with lower security rating but still physically secure and alarmed

3.5.4 Storage provided for all material between excavation and the deposition of the archive with the receiving body.

4.0 Summary

4.1 Any contractor other than YAT must include in their quotations the work for which either the YAT or EAU will be responsible as detailed above in section 2. All contractors must follow the finds processing guide-lines given in section 3.

4.2 All such work must be completed within the timescale detailed in the main specification. This will ensure that tile results of the evaluation are assessed quickly by YCC. The processing of any archaeological details for the planning application can then be done without delay.

APPENDIX B Pottery from York Railway Station: Assessment Report

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Introduction

Two hundred and six sherds from at most 188 vessels were submitted for assessment. The pottery is mainly of Romano-British date. It includes a small quantity of early Roman pottery, of late 1st or early 2nd century date, but the majority dates to the late 2nd and 3rd centuries. There is also a small quantity of late Roman pottery, dating to the late 3rd or 4th centuries. None of the Roman pottery comes from large or coherent assemblages and there is a likelihood that all the pottery from Int.2 is in post-Roman deposits and that only one, or perhaps two, of the assemblages from Int.1 is stratified in a deposit of Roman date (1004, interpreted here as a ploughsoil or horticultural horizon and arguably F7, a ditch fill). There is a single sherd of high medieval pottery, two of late medieval date, a few s herds of broadly-datable post-medieval date and a handful of 19th-century wares, consistent in date with the foundation or subsequent use of the railway station.

Aims and Objectives

The aims of the assessment were

- to identify and record all the material
- to provide a date-range for the finds
- to use these to infer previous land use
- to recommend and justify any further necessary work on the finds
- to identify any aspects of the site's archaeology recognisable from the ceramic finds which require further study or preservation

Description

All items were recorded to common name and form level and any significant details of manufacture, decoration or use were recorded as comments. Quantification was by sherd/fragment count alone and the data was entered into a MS Access 7 database.

Prehistoric

None

Roman

One hundred and fifty-seven sherds of Roman pottery were present, coming from at most 139 vessels of thirty-four different wares (Table 1). These wares were predominantly locally produced, including 56 of York manufacture (E1, E2 and E3). Late Roman wares from the Crambeck potteries and the vale of Pickering were present but in small quantities. Non-local wares included Dorset black burnished ware (B1 and B10), Nene Valley colour-coated ware (C1). Imports from outside of the province include South and Central Gaulish samian ware (S1, S3), Dressel 20, Koan and

unidentified amphorae (AP25, AP10 and AA) and Terra Nigra (T2). The ratio of York/local, non-local and imported pottery is 75:16:25, plus 41 unidentified, probably mainly local greywares. The ratio of imported and non-local wares is high, but no higher than other York sites (and lower than on sites in the fortress itself).

Table 1: List of Roman ware codes and quantities

Cname	Full name	Sherds	Vessels
AA?	Unidentified amphora?	1	1
AP10?	Koan amphora	1	1
AP25	DR20	5	3
B0	Misc Burnished	1	1
B1	Black Burnished ware 1	2	2
B10	Black Burnished ware 1	1	1
B12	Crambeck B12	7	6
B18?	Late h/m?	1	1
B2	Black Burnished ware 2	3	2
B2?	Black Burnished ware 2?	2	2
B3	Grey B3	2	2
B6	Black Burnished ware 2	1	1
C0	Misc CC	1	1
C1	NVCC	8	5
E1	Ebor 1	40	36
E2	Ebor 2	13	13
E2?	Ebor 2?	1	1
E3	Ebor 3	1	1
G0	Misc grey	8	7
G1	Dales-type greyware	16	16
G18	Late unburnished handmade	1	1
G4	Grey	3	3
G8	Grey	3	2
K0	Misc calcite gritted	6	2
K1	Calcite gritted	2	2
O0	Pentice-moulded beakers	1	1
O1?	Oxidized?	1	1
OX	Unidentified oxidized Roman wares	1	1
R2	Rustic 2	1	1
S1	SGS	7	7
S3	CGS	10	10
T2	TN	1	1
W1	Ebor white	4	3
W2	Ebor white	1	1

The range of forms found is wide (Table 2). The classes of vessel found include cooking vessels, table ware and

containers. Mortaria are uncommon, with just one possible sherd.

Table 2: List of Roman form codes used and quantities present

Form	Full name	Sherds	Vessels
	Not identified	9	8
18	Dressel 18	3	3
18/31/R	Dressel 18/31/R	1	1
18?	Dressel 18?	1	1
29	Dressel 29	1	1
29/37	Dressel 29/37	1	1
31	Dressel 31	1	1
31?	Dressel 31?	1	1
36?	Dressel 36?	1	1
37	Dressel 37	1	1
A	Amphora	9	7
A?	Amphora?	1	1
B	Bowl	4	4
B?	Bowl?	1	1
B225	Bowl - Gillam type 225	1	1
BD	Carinated bowl, post-Legionary style	3	3
BP	Bowl similar to Crambeck 10	1	1
CLSD	Unidentified closed	4	4
D225	Dish - Gillam type 225	2	1
DP6	Shallow undecorated pie dish with rolled rim	1	1
F	Flagon	3	3
F?	Flagon?	1	1
JP2	Plain jar with beaded or slightly everted rim	1	1
J	Jar	45	39
J?	Jar?	3	3
JB2	Butt-shaped jar with suggestion of lid-seating	2	2
JBKEV	Butt-shaped jar with everted rim	1	1
JC	Cooking pot	1	1
JC?	Cooking pot?	5	4
JC4	Cooking pot with cavetto rim	1	1
JEV	Everted rim jar	1	1
JH3	Huntcliffe jar	2	2

Form	Full name	Sherds	Vessels
JL	Jar with loop handles	4	4
JL?	Jar with loop handles?	1	1
JLS	Jar [*check with BP]	1	1
JP	Jar with beaded or slightly-everted rim	1	1
JR	Rusticated jar	1	1
JW?	Wide-mouthed jar?	1	1
JCUR	Curved-rim jar	2	2
K	Beaker	6	5
K?	Beaker?	2	2
KB3?	Bag-beaker with scroll design?	1	1
KF1	Funnel-necked indented beaker with plain rim and applied decoation	4	2
L	Lid	2	2
LBX	'Castor Box' Lid	1	1
MORT?	Mortaria	1	1
OPEN	Unidentified open form	2	2
P	Platter	3	3
P?	Platter?	2	2
PA	Platter with curved walls and marked division between internal wall and base	1	1
PA2	Platter with curved walls and marked division between internal wall and base without footring	5	1
PA2?	Platter with curved walls and marked division between internal wall and base without footring?	2	2
PLS	Lid-seated platter	1	1

Medieval

Two sherds of medieval pottery were present. One is a fine-textured late 13th or 14th-century whiteware from the North Yorkshire Hambleton Hills potteries (NYWWF) and the other a plain lead-glazed lobed cup, probably of later 14th or 15th century date, made in a fabric containing rounded quartz sand and possibly not of local origin. Both sherds were stratified in recent deposits and might have been brought onto the site in the 19th century. A sherd of late medieval Humber ware (HUM) was found at the base of the excavated sequence in Int.2.

Post-medieval

A single sherd of black-glazed ware (BL) might be stratified in a post-medieval deposit (1018). Some sherds of glazed red earthenware (GRE) might be of 17th or 18th-century date, but were found in later deposits. A handful of pottery is

likely to be of mid 19th-century date and associated with the construction of the railway, even if found in later deposits. These wares include black-glazed ware, refined buff ware (NCBW), Nottingham Stoneware (NOTS) and transfer-printed wares (TPW). These sherds all had unabraded breaks and are unlikely to have been subjected to weathering.

Stratification

Trench Int.1

Pottery was found in five contexts in Int.1. Of these, three were recent. Context 1000 was modern (1989) landscaping, 1006 was the fill of F2, the foundation of a 20th-century railway building and 1001 a spread of cinders associated with the 19th century railway. The remaining two contexts, 1004 and 1016 may be of Roman date. The pottery from 1004, a spread of sandy loam, is an unremarkable assemblage of late 2nd or 3rd-century date. A single possible late Roman sherd was present, of fabric G18, and the only non-local sherd is of central Gaulish samian ware.

The pottery from context 1016, the fill of ditch F7 which is cut through 1004, consists of two sherds of early to mid Roman date, one Ebor ware of early 3rd-century type and one rusticated ware, of late 1st or early 2nd century date.

Two of the sherds from 1004 are abraded and the assemblage is consistent with a ploughsoil or horticultural horizon. If the greyware sherd, G18, is actually a late handmade sandy ware as it appears then the horizon was still exposed during the 4th century. It is likely that F7 is an early 3rd-century or later feature. One of the two sherds found in its fill is probably derived from the loam the ditch is cut through and it is possible that the ditch is actually of post-Roman date on this evidence.

The Roman wares found in the recent deposits may have been disturbed from the site itself or brought onto the site with hardcore.

Table 3: Wares from Int.1 (sherd counts)

Cname	1000	1001	1004	1006	1016
B1		1			
B3			1		
E1			2		
E2			1		1
E2?			1		
E3		1			
G18			1		
G8			3		
GRE	1				
K1		1			
MISC SKW				1	
R2					1
S1				1	
S3			1		

Trench Int.2

Thirteen contexts in Int.2 produced pottery. Of these, six (1008, 1010, 1011, 1012, 1015 and 1017) can be dated to the 19th century or later by their stratigraphic position. The remainder appear to be tip lines, either as part of a landscaping exercise or the fills of a large feature. The lowest, and therefore earliest, of these layers produced a sherd of late medival Humber ware (context 1026). However, this sherd is interpreted by the excavator as intrusive and cannot be used to date this feature. Six later layers also produced pottery (contexts 1025, 1024, 1023, 1022, 1021 and 1018). Individually, the *termini post quos* for these layers are: mid-late 2nd century, mid 4th century, mid 2nd century, 4th century, late 1st-early 2nd century and late 3rd or 4th century (plus early modern) respectively. There is no consistency in these dates, nor in their stratigraphic order. This suggests that the pottery had been redeposited. The latest two deposits, 1018 and 1021, both produced abraded Roman sherds and one could make a case for the lower deposits being of Roman date and the upper ones of early modern date. However, even then context 1022 contained earlier pottery than context 1024, which it lay over. On balance, it is likely that the entire sequence is of post-Roman date and probably can be dated by the one post-medieval sherd, a black-glazed ware in context 1018. This vessel was produced in a pinkish fabric, probably produced using Coal Measures clay. Such vessels were produced from the late 17th century into the 19th century and, in this interpretation, these tip lines could have been associated with the construction of the railway, perhaps levelling the ground before construction began, or might have been fills in an earlier post-medieval feature, such as a quarry.

Table 4: Wares from Int.2 (sherd counts)

Cname	1008	1010	1011	1012	1015	1017	1018	1021	1022	1023	1024	1025	1026
AA?									1				
AP10?									1				
AP25					3		2						
B0											1		
B1									1				
B10							1						
B12						2	2			2	1		
B18?					1								
B2						1	2						
B2?						1					1		
B3						1							
B6												1	
BL	1		1			2	1						
C0									1				
C1					3	4	1						
E1		2	2	1	4	19		1	5		4		
E2			1		2	3	1		2		2		
G0						3	5						
G1			1	1	2	6	3		1		2		
G4						3							
GRE	1					1							
HUM													1
K0						6							
K1											1		
LMED													1
NCBW						2							
NOTS						2							
NYWWF	1												
O0									1				
O1?		1											

OX						1							
R/MTILE								1					
S1			2			3	1						
S3			1	1	1	3	2					1	
STSL	1												
T2					1								
TPW			3		1	4							
W1			2			2							
W2							1						

Recommendations and conclusions

The pottery from York Railway Station indicates occupation of some sort on the site in the mid Roman period with the probability that earlier and later Roman material was brought onto the site in more recent times, along with a little later medieval pottery. This interpretation is based on very little evidence and should be tested in any further archaeological work on the site. The collection includes four Roman sherds of types not found in J Monaghan's corpus of Roman pottery from York. They should therefore be drawn for future reference. The pottery collection should be retained for future re-evaluation.

Acknowledgments

Barbara Precious identified the Roman pottery and Alan Vince identified the medieval and later wares. The report was written by Alan Vince.

York Railway Station - Pottery inventory

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
1	1000	PMED	GRE	BOWL	1	1		CUGL;FABRIC HAS STREAKS OF WHITE CLAY; RED-STAINED SST SAND	117
1	1001	ROM	B01		1	1		RIM CF MON 3777	
1	1001	ROM	E03		1	1			
1	1001	ROM	K01	JH3	1	1			
1	1004	ROM	B03	DP6	1	1	DR 1		123
1	1004	ROM	G18	JLS	1	1	DR 2		132
1	1004	ROM	E01	J	1	1		FTM DEPOSIT INT	
1	1004	ROM	E01	JBKEV	1	1		SHLDR	
1	1004	ROM	E02	JP	1	1			
1	1004	ROM	E02?	PA2?	1	1		VABR CF MON 4078	
1	1004	ROM	G08	J	1	1			
1	1004	ROM	G08	JC?	2	1		J SCALE INT	
1	1004	ROM	S03	18/31/R	1	1		FTRG ABR	125
1	1006	MED	MISC SKW	LCUP	1	1		ROUNDED QUARTZ SAND C.1.0MM DIAM; ROWN TINGED GLAZE	
1	1006	ROM	S01	18	1	1		FTRG FRESHISH	120
2	1008	PMED-EMOD	BL	BOWL	1	1		FINE RED FABRIC;CF WRENTHORPE	106

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1008	PMED	GRE	BOWL	1	1		ABR;CUGL;LOOKS LIKE RED RYEDALE	105
2	1008	MED	NYWWF	JUG	1	1		CLOSESET GROOVES ON UPPER BODY;REDUCED CORE AND INT	102
2	1008	PMED	STSL	POSS	1	1		PROB NOT STAFFS	104
2	1010	ROM	E01	J	1	1			
2	1010	ROM	E01	OPEN	1	1		BURNT STAINED	
2	1010	ROM	O01?	MORT?	1	1		FRAG MFL?	
2	1011	PMED-EMOD	BL	PANC	1	1			45, 46
2	1011	ROM	E01	F	1	1		HANDLE 2R	
2	1011	ROM	E01	F	1	1		HANDLE 3R	
2	1011	ROM	E02	J	1	1		GREY CORE	
2	1011	ROM	G01	CLSD	1	1			
2	1011	ROM	S01	18	1	1			50
2	1011	ROM	S01	29	1	1			61
2	1011	ROM	S03	31	1	1		LWR WALL;WORN INT;ABR	
2	1011	EMOD	TPW	CUP	1	1		WILLOW PATTERN	63
2	1011	EMOD	TPW	CUP	1	1			62
2	1011	EMOD	TPW	TPOT	1	1		WILLOW PATTERN	49

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1011	ROM	W01		2	1		ABR INT;CF 1017	
2	1012	ROM	E01	J	1	1			
2	1012	ROM	G01	K?	1	1		OX INT	
2	1012	ROM	S03	B?	1	1		WORN IN BURNT	
2	1015	ROM	AP25	A	3	1		1FAB ABR	
2	1015	ROM	B18?	JC	1	1		BDL;HMADE POSS B18 LATE FAB	
2	1015	ROM	C01	K	2	1		WHT PA	91
2	1015	ROM	C01	KB3?	1	1		PA SCROLL;B38?	91
2	1015	ROM	E01	J	2	2			
2	1015	ROM	E01	JL	1	1			
2	1015	ROM	E01	OPEN	1	1			
2	1015	ROM	E02	J?	2	2			
2	1015	ROM	G01	J	1	1			
2	1015	ROM	G01	JP2	1	1		SHLDR CF MON 3828	
2	1015	ROM	S03	B	1	1		B38?	71
2	1015	ROM	T02	P	1	1		ABR	
2	1015	EMOD	TPW	PLATE	1	1		WILLOW PATTERN	

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
1	1016	ROM	E02	PLS	1	1	DR 3	WALL BURNT LIP;N AFRICAN STYLE	178
1	1016	ROM	R02	JR	1	1		RUST	
2	1017	ROM	G01	J	1	1	DR 4	APPLIED PHALLUS; OXIDISED INT	379
2	1017	ROM	B02	B225	1	1		LWR WALL	
2	1017	ROM	B02?	BD	1	1			
2	1017	ROM	B03	BD	1	1			
2	1017	ROM	B12	BD	1	1			
2	1017	ROM	B12	J	1	1		BVL; AS IN 1023	
2	1017	PMED-EMOD	BL	BOWL	1	1		COAL MEASURES REDWARE	276
2	1017	PMED-EMOD	BL	PANC	1	1		COAL MEASURES REDWARE	260
2	1017	ROM	C01	KF1	1	1		BASC?	269
2	1017	ROM	C01	KF1	3	1		SC	262;263;264
2	1017	ROM	E01	J	10	10			
2	1017	ROM	E01	J	1	1			
2	1017	ROM	E01	JL	1	1			
2	1017	ROM	E01	K	1	1		V THIN	

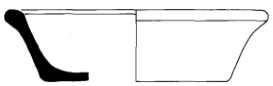
Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1017	ROM	E01	PA	1	1			
2	1017	ROM	E01	PA2	5	1		BURNT UNDER	
2	1017	ROM	E02	CLSD	1	1			
2	1017	ROM	E02	JL	1	1		BURNT EXT	
2	1017	ROM	E02	L	1	1		KNOB	
2	1017	ROM	G00	J	2	1			
2	1017	ROM	G00	J	1	1		MIN CALC	
2	1017	ROM	G01	J	2	2			
2	1017	ROM	G01	JB2	1	1		SHLDR;CF MON 3767;AS 1022	
2	1017	ROM	G01	JCUR	1	1			
2	1017	ROM	G01	JCUR	1	1		SHLDR	
2	1017	ROM	G04	A	3	3			
2	1017	PMED	GRE	UNK	1	1		CUGL;FABRIC CF <117>	256
2	1017	ROM	K00	J	5	1			
2	1017	ROM	K00	K?	1	1		V THIN WALL	
2	1017	EMOD	NCBW	-	1	1			202
2	1017	EMOD	NCBW	CLOSED	1	1		HORIZ WHITE AND BLACK PAINTED LINES	203

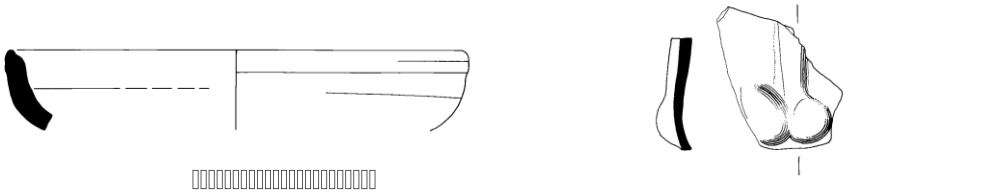
Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1017	EMOD	NOTS	SJ	1	1			227
2	1017	EMOD	NOTS	TPOT?	1	1		STAMPED	217
2	1017	ROM	OX	JEV	1	1		NECK;SILTY	
2	1017	ROM	S01	18	1	1			268
2	1017	ROM	S01	18?	1	1		FTRG	206
2	1017	ROM	S01	29/37	1	1		DEC	249
2	1017	ROM	S03	31?	1	1			231
2	1017	ROM	S03	36?	1	1			233
2	1017	ROM	S03	37	1	1		UPPER WALL;OVOLO;FRESH	248
2	1017	EMOD	TPW	BOWL	1	1		WILLOW PATTERN	258
2	1017	EMOD	TPW	BOWL	1	1		WILLOW PATTERN	255
2	1017	EMOD	TPW	PLATE	1	1		WILLOW PATTERN	201
2	1017	EMOD	TPW	PLATE	1	1		WORN ON BASE ANGLE;WILLOW PATTERN	254
2	1017	ROM	W01		1	1		ABR;INT;SHL 1011	
2	1017	ROM	W01	F	1	1			
2	1018	ROM	AP25	A	1	1		VABR 1FAB	
2	1018	ROM	AP25	A	1	1		BURNT 1FAB	

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1018	ROM	B02	D225	2	1		J;BDL?	
2	1018	ROM	B10	JC4	1	1		SHLDR	
2	1018	ROM	B12	JW?	1	1			
2	1018	ROM	B12	K	1	1		ROUL	
2	1018	PMED-EMOD	BL	PANC	1	1		COAL MEASURES PINK FABRIC; BLACK GLAZE;WEAR ON INNER LIP OF RIM	
2	1018	ROM	C01	LBX	1	1		ROUZ	8
2	1018	ROM	E02	B	1	1		FTM	
2	1018	ROM	G00	J	2	2			
2	1018	ROM	G00	J	1	1		ORANGE INT;?BURNT;E3	
2	1018	ROM	G00	J	1	1		STRING	
2	1018	ROM	G00	JC?	1	1		J STRING	
2	1018	ROM	G01	J	2	2			
2	1018	ROM	G01	J	1	1		RUST	
2	1018	ROM	S01	P?	1	1		FRAG	10
2	1018	ROM	S03	B	1	1		ABR	9
2	1018	ROM	S03	P	1	1		FLAKED BURNT	
2	1018	ROM	W02	F?	1	1			

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1021	ROM	E01	JL?	1	1		VABR	325
2	1021	ROM/MED	R/MTILE	FLAT	1	1		MIGHT BE Roman OR MED	325
2	1022	ROM	A10?	A	1	1		GOLD MICA;CALC;NO BLK SAND	
2	1022	ROM	AA?	A?	1	1		MICA	
2	1022	ROM	B01	B	1	1		LA;LWR WALL	320
2	1022	ROM	C00	K	1	1		LOCAL?	
2	1022	ROM	E01		3	3			
2	1022	ROM	E01	J	1	1			
2	1022	ROM	E01	J	1	1		BURNT EXT	
2	1022	ROM	E02	BP	1	1			
2	1022	ROM	E02	J	1	1			
2	1022	ROM	G01	J	1	1			
2	1022	ROM	O00	CLSD	1	1		SILTY	
2	1023	ROM	B12	J	2	1		BVL;J;AS IN 1017	
2	1024	ROM	B00		1	1			
2	1024	ROM	B02?	JC?	1	1			
2	1024	ROM	B12	L	1	1		UPPER WALL;BURNT	

Int	C no	Period	Ware	Form	Sherds	Vessels	Action	Description	Find
2	1024	ROM	E01	J	1	1			
2	1024	ROM	E01	K	1	1			
2	1024	ROM	E01	P	1	1		N A TYPE	
2	1024	ROM	E01	PA2?	1	1		LW WALL;CF MON 4080	
2	1024	ROM	E02	CLSD	1	1			
2	1024	ROM	E02	JL	1	1		BURNT	
2	1024	ROM	G01	J?	1	1			
2	1024	ROM	G01	JB2	1	1		SHLDR CF MON 3767;AS 1017	
2	1024	ROM	K01	JH3	1	1		SHLDR	
2	1025	ROM	B06	JC?	1	1			
2	1025	ROM	S03	P?	1	1			352
2	1026	LMED	HUM	CLOSED	1	1		GLAZE INT AND EXT	441





Roman pottery from York Railway Station (scale1:4)

APPENDIX C Ceramic Building Materials York Railway Station, York

S Garside-Neville, *Brick and Tile Services*

Introduction

Approximately 106 fragments of ceramic building material were viewed for the purposes of this assessment. The material ranged from Roman to post medieval in date. An Excel 5 spreadsheet for this information is available.

Roman material

The Roman material consists of roof tile (tegula and imbrex), box flue tile half box flue, and brick. The box flue and half box tile was used to carry hot air from the underfloor heating up the walls of a room. There are a couple of plain pieces that show signs of square cut vents. There is only one form of keying present for the box flue and half box, incised lines, which is associated with earlier Roman buildings dating between the 1st and early second centuries. The brick present could actually be fragments of tegula, but its identification is uncertain as the thickness of tegula and of brick (used in walls and hypocausts) overlaps. However, most the fragments present here are thin enough to be tegula. In addition, the general thinness of the imbrex and tegula may point to a later Roman date, as does the presence of one particular fabric which has been associated with 6th legion material, ie. cbm dated from the 2nd century onward.

Medieval material

Medieval roofing tile is represented by plain tile, which takes its usual York form of a single centrally placed peghole. There are many fragments that do not have pegholes so these have been classified as 'plain', however the range of fabrics is very typical of a York peg tile assemblage. A recognised 13th century fabric is present, as is one that starts around the 14th century. There are several fragments of thin brick which could be 'wall tiles' which were used as infill for timber-framed buildings.

Of particular interest is the presence of three fragments of floor tile, two of which join, in context 1017. These tiles are well worn, so that no glaze is present. There is no evidence of any type of pattern (eg. imprints), and this may mean that they are plain glazed floor tiles, which date between the 14-16th centuries.

Post-medieval material

Some of the bricks, judging by their measurements, are probably early post medieval in date. There are also small fragments of pan tile, which will be no earlier than the 17th century in date, and are probably 18th century or later. In addition, there is at least one fragment of plain tile which shows signs of refined moulding sand and manufacture, so it is probably 19th century.

Conclusion

The Roman material has some 1st to early 2nd century forms, however other elements (such as measurements) point to a later date. This material may be associated with the Roman cemetery known in this area, and used in

mausoleums or tile tombs. When complete, the half box flue would have been of a similar size to a tegula, which was often used within the York tile tombs. The presence of an albeit small piece of box flue is a little more puzzling, though it could have been used in some sort of decorative monument or in some other capacity. The medieval material covers the period from the 13th to the 16th century, though the emphasis is on the 14th century and later. The presence of floor tile, and to a lesser extent the plain tile, is surprising. However, it is possible that this material is the product of dumping, associated with clearance of the area around the Old Railway Station, closer to the medieval buildings of York.

This sample should be retained for further study, at which point much of it could be discarded after thorough recording by a recognised cbm specialist.

Context Listing

Int	C no	Find	Form	Br(mm)	Th(mm)	Comments	Date range	Spot date
1	1004	133	plain				13-16th	19th
		145	plain			fabric M1	13-16th	
		145	plain				13-16th	
		146	plain				13-16th	
		147	plain				13-16th	
		149	brick			modern, 19th C or later	19th+	
		150	plain			14thC+ fabric	14-16th	
		151	brick		46		14-15th	
		152	plain			14thC+ fabric	14-16th	
		153	peg			14thC+ fabric	14-16th	
		160	imbrex				Roman	
		161	plain				13-16th	
		345	tegula		21	rounded flange, flange height 39, fabric R6	Roman	
		345	tegula		27	no flange, upper cutaway	Roman	
		358	brick		40		14-15th	
		359	brick		42	medium sanding	14-15th	
		360	rbrick				Roman	
		361	brick		55	at least 55mm thick, slop moulded	16th+	
		362	plain?				13-16th	
		363	flue		19	vent	Roman	
		364	tegula?		29	probably tegula	Roman	
		448	brick	111	54	slop moulded, reused	16th+	
1	1006	121	brick			similar to 289	17th+	17th+
		289	brick	107	66	?slip	17th	

Int	C no	Find	Form	Br(mm)	Th(mm)	Comments	Date range	Spot date
2	1012	171	brick			probably Roman	Roman	Roman
1	1016	176	plain			14thC+ fabric	14-16th	14-16th
2	1011	44	imbrex		17		Roman	13-16th
		48	plain				13-16th	
		65	plain				13-16th	
2	1015	99	imbrex		22		Roman	1st-E2nd
		101	rbrick				Roman	
		175	tegula		27	abraded	Roman	
		244	tegula		20	no flange	Roman	
		245	rbrick		30	reused	Roman	
		246	flue		17	incised	1st-E2nd	
		349	rbrick		42		Roman	
2	1017	219	plain				13-16th	19th +
		221	plain				13-16th	
		222	plain				13-16th	
		229	rbrick				Roman	
		234	brick?				Med+	
		236	plain			fabric M1	13-16th	
		237	plain				13-16th	
		238	plain				13-16th	
		274	pan				17-19th	
		278	rbrick		38		Roman	

Int	C no	Find	Form	Br(mm)	Th(mm)	Comments	Date range	Spot date
		279	plain				13-16th	
		288	slate		4		19th	
		374	pipe			19thC +	L19th +	
		383	plain				13-16th	
		384	floor		23	very worn, bevelled edge, dark brown glaze on edge	14-16th	
		385	tegula		28	signature	14-16th	
		386	plain				Roman	
		387	plain				13-16th	
		388	plain				13-16th	
		389	brick				Med +	
		390	plain			19thC +	19th +	
		391	plain				13-16th	
		392	rbrick				Roman	
		393	rbrick		30		Roman	
		394	brick		54		Med +	
		395	tegula		20		Roman	
		396	tegula		25		Roman	
		398	pan		14		17-19th	
		399	plain				13-16th	
		400	brick		53	slop moulded	16-18th	
		401	brick		52		16-18th	
		403	plain				13-16th	
		404	floor		20	worn, similar to 384 and 428	14-16th	
		424	imbrex		18		Roman	
		425	rbrick			reused	Roman	

Int	C no	Find	Form	Br(mm)	Th(mm)	Comments	Date range	Spot date
		426	tegula		21		Roman	
2	1017	428	floor	107	23	joins with 384 to give breadth, worn	14-16th	19th +
		429	plain	220			13-16th	
		430	imbrex		24		Roman	
		432	tegula		31		Roman	
		452	brick		49		14-15th	
		453	brick	109	50	slop moulded, indented border, turning mark	16-18th	
		454	brick	115	55	slop moulded, indented border	16-18th	
		455	rbrick		23	reused	Roman	
2	1018	11	rpot				Roman	13-16th
		12	rbrick			reused	Roman	
		339	flue		15	vent	Roman	
		340	rbrick				Roman	
		342	rbrick				Roman	
		355	plain				13-16th	
2	1022	299	rbrick				Roman	1st-E2nd
		319	imbrex		14		Roman	
		371	imbrex		16		Roman	
		372	rbrick				Roman	
		373	half box		36	incised	1st-E2nd	
2	1023	344	brick		54	slop moulded, silty fabric	16-18th?	16-18th
2	102	435	plain				13-16th	14-18th

Int	C no	Find	Form	Br(mm)	Th(mm)	Comments	Date range	Spot date
	4							
		437	plain			mortar, fabric M1	13-16th	
		439	imbrex		16		Roman	
		446	tegula		19	flange height 42mm, lower cut away	Roman	
		447	brick		51	slop moulded	16-18th	
2	1025	369	plain				13-16th	13-18th
		440	imbrex		18	reduced core	Roman	
		443	tegula		22		Roman	
		444	peg			reused	13-16th	
		445	brick		56	fine moulding sand	13-18th	
2	1026	449	brick		53	slop moulded	14-18th	14-18th
		450	brick		52	slop moulded	14-18th	
		451	plain			mortar	14-16th	

APPENDIX D Evaluation of biological remains from York Railway Station

John Carrott, Deborah Jaques, Frances Large and Darren Worthy

Summary

Four sediment sample from deposits revealed by excavations at York Railway Station were submitted for an evaluation of their bioarchaeological potential.

The very few recovered biological remains were of no interpretative value. No further work is recommended on the current material.

KEYWORDS: YORK RAILWAY STATION; YORK; NORTH YORKSHIRE; EVALUATION; ROMAN TO EARLY MODERN; CHARRED PLANT REMAINS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS; HUMAN BONE

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5 August 1999

Introduction

An archaeological excavation was carried out by Field Archaeology Specialists at York Railway Station, York, in June 1999. Four sediment samples ('GBA' *sensu* Dobney *et al.* 1992) were recovered from the deposits.

Most of the pottery recovered from the deposits was of Roman date with occasional fragments from later periods (to early modern) although the pottery assessment report suggests there is a likelihood that much of the Roman potteryis from post-Roman deposits. These samples were submitted to the EAU for evaluation of their bioarchaeological potential.

Methods

The sediment samples were inspected in the laboratory and descriptions of their lithologies were recorded using a standard *pro forma*. Two of the samples were processed, following the procedures of Kenward *et al.* (1980; 1986) for recovery of plant and invertebrate macrofossils.

Plant macrofossils were examined from the residues and washovers resulting from processing, and the washovers were examined for invertebrate remains. The residues were also examined for other biological and artefactual remains.

Table 1 shows a list of the samples and notes on their treatment.

Results

The results of the evaluation are presented in context number order. Archaeological information provided by the excavator is given in square brackets,deposits containing predominantly Roman pottery but which are suspected of being of post-Roman date are given as '?Roman'.

Context 1004 [Roman layer. ?Dump/occupation debris]

Sample 100401 (10 kg bulk sieved to 300 µm and washover)

Moist, mid brown, crumbly (working soft), slightly sandy (possibly grains from rotted mortar) slightly clay silt. Medium-sized stones (20 to 60 mm), fragments of bone, and rotted mortar were present in the sample.

The tiny washover (approx. 5 ml) was mostly charcoal (to 3 mm) with some sand, a few tiny pieces of cinder, and a few scraps of plant detritus. *Heterodera* sp. egg capsules and two fragments of invertebrate (one ?modern) were also noted.

The modest residue was mostly stones (to 80 mm) and sand with some mortar and bone, and a little coal (to 65 mm), brick/tile, pot, cinder, fragments of shellfish, and a single fragment of unidentified land snail.

The bone remains totalled sixty-four fairly well-preserved (but very fragmented) small fragments (8 of which were burnt) most of which were unidentifiable (total weight 12 g). The identifiable fragments comprised one caprovid second phalanx (appeared to be acid-etched probably by passage through the gut of a dog), one ?cat (?*Felis* f. domestic) phalanx, two herring (*Clupea harengus* L.) vertebrae and a herring quadrate, and a small mammal tibia (?mouse/vole) which appeared to be a modern contaminant.

Context 1016 [?Roman]

Sample 101601 (Description only)

Just moist, mid orange brown to mid grey brown, brittle to crumbly (working soft), sandy, clay silt to silty clay with patches of light grey clay. Medium-sized stones (20 to 60 mm) and rotted mortar were present in the sample.

No further investigation of this sample was warranted.

Context 1018 [?Roman layer. Probably represents an accumulation of dumped material]

Sample 101801 (8 kg bulk sieved to 300 µm and washover)

Moist, light to mid grey brown (locally more brown and more grey), crumbly (working soft), slightly sandy (possibly from rotted mortar) slightly clay silt with clasts of light brown clay. Rotted mortar was present in the sample.

The tiny flot (approx. 5 ml) was mostly charcoal (to 12 mm) with a little sand and two charred grains.

The modest residue was mostly stones (to 40 mm) and sand with some mortar (some fragments were painted) and bone, and a little brick/tile, pot, coal, cinder, glass, and a few unidentified shellfish fragments.

The bone was quite well-preserved (though, again, highly fragmented) comprising seventy-three small fragments (6 of which were burnt) with a total weight of 26 grammes. The identifiable remains consisted of one pig (*Sus* f. domestic) tooth fragment, one cow (*Bos* f. domestic) carpal, and four small fragments of human bone (identifiable as human by its texture but not identifiable to skeletal element).

Context 1021 [?Roman]
Sample 102101 (Description only)

Just moist, light to mid brown to mid grey brown with orange patches, crumbly (working soft and slightly plastic), very slightly sandy clay silt with medium-sized stones (20 to 60 mm) present.

No further investigation of this sample was warranted.

Discussion and statement of potential

The recovered ancient biological remains were too few to be of interpretative value.

Recommendations

No further work is recommended on the present material. The recovered bone should be integrated with the hand-collected assemblage.

Retention and disposal

Any remaining sediment samples may be discarded unless they are to be sieved to recover any remaining bone or artefacts.

Archive

All 'environmental' material is currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here. Artefacts were removed from the sample residues to be returned to the excavator.

Acknowledgements

The authors are grateful to Andy Copp of Field Archaeology Specialists for providing the material and the archaeological information.

References

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Table 1. List of the sediment samples evaluated from York Railway Station (with notes on their treatment).

Context	Sample*	Notes
1004	100401	10 kg bulk sieved to 300 µm and washover
1016	101601	Description only
1018	101801	8 kg bulk sieved to 300 µm and washover
1021	103101	Description only

* EAU internal reference number

APPENDIX E Glass material from York Railway Station

The small assemblage contained five sherds of glass, all recovered from Int.2, Find 366 (C1025) was heavily patinated, but all of the fragments appear to be post-medieval in date. The recovered artefactual remains were too few to be of interpretative value and no further work is recommended on the material.

Int	F no	C no	Find	Quantity	Identity
2		1011	56	1	small circular base, transparent glass, stamped 12298, modern 20th C
2	8	1017	211	1	flat transparent glass, 44 x 43mm, 2mm thick, plain window glass, 19-20th C
2	8	1017	285	1	transparent pale blue glass, small curved fragment, ? piece of decoration, ?post medieval
2	8	1017	286	1	small fragment of translucent pale green glass in abraded condition, slight patina on exterior, interior shiny blue patina, 5mm thick
2		1025	366	1	small fragment of opaque brown glass, heavily patinated, 49 x 31mm, 4mm thick, shiny scaley surface, ? post medieval

APPENDIX F Clay pipes from York Railway Station

Three short fragments of clay pipe stem were recovered from the excavations. Find 118, C1000 (Int.1) had a circular profile and was the largest piece, 9mm thick with an internal diameter of 3mm. Find 192 in F8 C1017 (Int.2) was oval in profile with a rough surface finish and was covered in a brown patina, 6mm thick with an internal diameter of only 1mm. Another piece from C1017, Find 287, was in a pale white clay, 7.5mm thick with an internal diameter of 2mm. All pieces were shorter than 40mm.

The recovered remains were too few to be of interpretative value and no further work is recommended.

APPENDIX G Slag from York Railway Station

The small assemblage contained five lumps recovered from Int.2. Four of the pieces were coarse lumps Find 110 (C1008), Find 68 (C1011), Find 232 and 421 (C1017 F8) were associated with the dump of cinders used to level the ground surface of the railway. Find 301, C1022, was more dense and is probably from a different source.

The recovered remains were too few to be of interpretative value and are probably of recent origin. No further work is recommended on the material.

APPENDIX H Metalwork from York Railway Station

Twenty three metal artefacts were recovered, most of these were ferrous but it included two copper alloy nails and a piece of narrow lead. Preservation of the iron is poor with heavy corrosion present on the larger pieces, some smaller fragments were corrosion product. The copper alloy nails also showed signs of mild bronze disease.

Int	F no	C no	Find	Quantity	Metal	Description
1		1001	114	1	Cu	small square sectioned nail, round head, broken 22mm long
1	2	1006	122	1	Cu	small square sectioned nail, round head, broken, 31mm long
2		1008	109	1	Fe	small flat finger of worked iron 75 x 26mm, unidentified
2		1008	108	1	Fe	small bent rod of iron, one tip sharpened, ? rail attachment
2		1008	107	1	Fe	small band of iron, ? handle, with two lumps of corrosion product attached
2		1010	88	1	Pb	short ribbon of lead, 5mm wide x 1mm thick, ? window lead
2		1011	67	1	Fe	corroded pipe or jubilee clip type collar, 48mm diameter
2	8	1017	408	1	Fe	large fragment of metal pipe, incomplete
2	8	1017	407	1	Fe	large fragment of metal pipe, incomplete
2	8	1017	409	1	Fe	large fragment of metal pipe, incomplete
2	8	1017	417	1	Fe	small fragment of metal pipe, incomplete
2	8	1017	412	1	Fe	small lump of corrosion product, unidentified
2	8	1017	413	1	Fe	small fragment of ? metal pipe
2	8	1017	414	1	Fe	small fragment of ? metal pipe
2	8	1017	418	1	Fe	small fragment of ? metal pipe
2	8	1017	419	1	Fe	small fragment of ? metal pipe
2	8	1017	420	1	Fe	small fragment of ? metal pipe
2	8	1017	411	1	Fe	small fragment of ? metal pipe
2	8	1017	415	1	Fe	small fragment of ? metal pipe
2	8	1017	410	1	Fe	small fragment of ? metal pipe
2	8	1017	347	1	Fe	heavy flanged railway bracket
2	8	1017	416	1	Fe	small lumps of corrosion product, unidentified
2		1015	367	1	Fe	small lumps of corrosion product, ? short wide nail

Ferrous material

A small assemblage of ferrous material was visually examined. All finds were from Int.2 and from contexts associated with the construction

of the railway or levelling of the railway landscape. The identifiable pieces consist of railway furnishings or fittings and lengths of metal pipe from the service trenches.

Other metal

Two small square sectioned nails were recovered from Int.1. both were broken at the end and came from contexts associated with the railway or later. A short length of window lead wad present.

The recovered remains were few and have no interpretative value. The assemblage is of modern origin and no further work is recommended on the material.

APPENDIX I Mortar and plaster from York Railway Station

The assemblage consists of lime mortar, some wall plaster and a lumps of concrete. The lime mortar is undiagnostic apart from three possible pieces of opus signinum (Find 135, 405 and 406). Some of the lime mortar fragments contained small inclusions which were uniformly mixed, these pieces could be post medieval (Find 337 and 338).

A few pieces of wall plaster were attached to lumps of lime mortar. Some of the wall plaster had a lime wash surface and Find 79 had a red ochre surface painted over the lime wash, it could be Roman or medieval.

The recovered finds were too few to be of interpretative value and no further work is recommended.

Int	F no	C no	Find	Identity	Description
1		1004	135	lime mortar	small fragment of ? opus signinum, Roman
1		1004	144	concrete	
2	11	1015	79	wall plaster	small fragment, red ochre surface over a lime wash, ?Roman/medieval
2	11	1015	83	? wall plaster	small fragment, rough surface with lime wash and large charcoal inclusions
2	8	1017	284	lime mortar	small fragment with attached wall plaster
2	8	1017	405	lime mortar	fragment of ? opus signinum, large charcoal inclusions, Roman
2	8	1017	406	lime mortar	fragment of ? opus signinum, chalk inclusions and medium charcoal, Roman
2		1018	40	wall plaster	small fragment, unidentified
2		1022	335	lime mortar	small fragment with wall plaster attached
2		1022	336	wall plaster	small fragment, ? with lime wash
2		1022	337	lime mortar	small fragment with small charcoal inclusions, well mixed, ? post medieval
2		1022	338	lime mortar	small fragment with small charcoal inclusions, well mixed, ? post medieval
2		1022	356	lime mortar	large fragment with large charcoal inclusions
2		1022	357	lime mortar	large fragment with large charcoal inclusions
2		1022	431	lime mortar	small fragment with small charcoal inclusions
2		1024	433	lime mortar	small fragment with small charcoal inclusions
2		1024	434	lime mortar	small fragment with small charcoal inclusions
2		1026	456	lime mortar	large fragment with small charcoal inclusions
2		1026	457	lime mortar	large fragment with small charcoal inclusions

APPENDIX J: Bone Report York Railway Station (Malin Holst)

Human bone

The human bone recovered from the evaluation of York Railway Station carried out in June 1999 consisted of 51 fragments, which were distributed over eight contexts (1008, 1011, 1012, 1015, 1017, 1018, 1024 and 1025). The largest concentration of human bone (47%) was retrieved from context 1015, which consisted entirely of skull and tibial shaft fragments.

The preservation of the human bone was very good, with very little surface erosion and only occasional post-mortem breaks. The hand and foot bones, such as the hand phalanx or metatarsal were complete, suggesting that these escaped damage from later disturbance owing to their small size.

Skull fragments were the most commonly recovered bone element from the site with 47%. Interestingly, the anterior part of the skull was most frequently represented, which may suggest only superficial disturbance of the grave by later intrusion of the cemetery. Lower limb bones were also common (35%), although only one femur and two tibiae (one left and one right bone) in a fragmentary condition could be identified. One left scapula was found to be fragmented into three pieces. Three rib fragments consisting of one second right rib and two shaft fragments were found to be distributed between the contexts. Only one foot and one hand bone were recovered.

Table 1 Human bone count

Bone Type	Number of fragments Retrieved	Percentage of Total
Skull	24	47%
Lower Limb	18	35%
Scapula	3	6%
Ribs	3	6%
Hand	1	2%
Foot	1	2%
Unidentified	1	2%

It is interesting to note that the majority of the elements found were from the right side of the skeleton. No upper limb bones, clavicles, vertebrae, pelvic bones or fibulae were noted in the contexts excavated.

None of the postcranial skeletal elements were represented more than once. However, the large number of anterior skull fragments suggests the presence of a minimum of two individuals. Additionally, the right and left tibiae recovered are very different in colour, size and health status (discussed below).

The age could only be assessed by bone fusion, as none of the skeletal elements which are normally used to estimate age on archaeological skeletons were present. All bones with epiphyses were fused, suggesting an age of adolescent or older. When assessing the age of the mandible (1011), it was thought that the individual belonged to the older age group, as two of its molars had been lost ante-mortem.

The sex of the individuals could not be established for certain, as none of the characteristics which are normally used to assess age were

recovered. However, a large part of frontal bone was present in context (1015) and the lack of glabellar ridges, as well as the sharpness of the orbital rims indicated that this was a possible female.

The dental health of the skeletons recovered could only be assessed from one right half of lower jaw bone, which contained one tooth (context 1011). The dental health of this individual was poor, as the first and second molars had been lost ante-mortem, which may have been due to caries, as no inflammation (periodontitis) of the jaw bone could be observed. This is supported by the severe carious lesion observed on the only surviving tooth, the second premolar.

The only pathological lesions observed on the bone were observed on the left tibia from context 1015. This bone showed evidence for marginal and central osteophytes, as well as eburnation on the condyles, indicating osteoarthritis of the left knee. Additionally, the shaft of the tibia exhibited new and lamellar bone formation on the medial and lateral shaft surfaces, which was irregular and diffuse. Periostitis on the tibiae is common in archaeological skeletons and can be the result of a non-specific infection of the leg - for example through trauma at the shins, varicose veins or ulceration - or may have been caused by an infectious disease, such as leprosy or syphilis. However, one can only diagnose a non-specific infection, if the complete skeleton is present and one can observe the distribution of lesions. As only one bone with the lesions was present, it must be assumed that the infection was non-specific.

Despite the fragmentary nature of the human bone sample from York Railway Station, interesting information could be gained about the skeletons recovered. At least two individuals were represented, although it is possible that each context represents a different individual. The sample consisted of adults only, some of whom were probably older adults, which is suggested by the bad dental health and osteoarthritis, occurring ususally in the older age groups. sex could only be estimated in one of the individuals, who consisted of a possible female. Dental health of the jaw recovered was poor and suggests the consumption of a soft sugar rich diet. One of the individuals was suffering from osteoarthritis of the knee, as well as an infection of the left lower leg.

Further information about these individuals could be gained by a more detailed analysis of the phasing of the site, as well as their relation to archaeological and documentary evidence about known burials in the area.

The non-human bone

The non-human bone consisted of a mixed assemblage of small, medium size and large mammals. There was little skull representation, while ribs were the most commonly found bone element. One horn or antler was represented, which showed evidence for cutting at its proximal end (context 1004). Some of the bones show butchery marks, which varied from one to several parallel cuts (1011). A small number of the bones showed evidence for joint disease on the epiphyses.

Context 1004 produced a worked medium size mammal femoral head, which had just fused and was worked to produce an weight. The fovea at the centre of the femoral head was drilled through to produce an even hole, while the femoral head was cut horizontally off at the neck. It is possible that this implement had been used as a spindle whorl. This was the only worked bone recovered from the site.

Further information could be gained by specific bone element and species identification.

The cremated bone

Three of the contexts found produced cremated bone (1003, 1017 and 1018). All of these consisted of one small fragment each, of 10mm sieve size category. All three fragments were well calcined on the outer cortex of the bone, while the medullary cavity was still dark grey. This suggests relatively high burning temperatures, resulting in the loss of the organic element of the bone.

Table 2 Bone inventory

Int	C no	Find	Human Bone	Non-Human Bone	Other	Total
1	1001	115		3 unidentified frags		3
1	1003	163			1 unidentified cremated bone frag	1
1	1004	135		1 antler (sawn), 4 rib frags, medium sized mammal, 1 small mammal pelvis, 11 unidentified frags		17
1	1004	189			1 worked femoral head, just fused (Spindle Whorl?)	1
2	1008	103	1 left 5th metatarsal, 3 frags of left scapula, adult	3 large mammal ribs, 8 unidentified frags		15
2	1010	89		1 small, 1 medium size mammal rib frag, 5 unidentified frags		7
2	1010	164		3 unidentified frags		3
2	1011	57	right part of mandibular ramus with PM2 in situ, PM2 Severely carious, M1& M2 lost AM, PM1, Canine, second incisor lost PM. very small, adult	1 small mammal femur, 3 ribs (medium to large), 1 with 8 cut marks on visceral surface, 4 unidentified frags		9
2	1012	165	1 right zygomatic, 1 rib shaft frag, adult	2 unidentified frags		4
2	1015	84	13 skull frags (parietal, frontal), 9 left tibia shaft frags, 2 tibial condylar frags, adult, Female?, Metopic suture; Irregular, diffuse woven & lamellar bone on medial & lateral tibial shaft surfaces; eburnation, slight central & marginal osteophyte formation on condyles	1 small, 1 medium sized mammal humerus, 1 small mammal pelvis, 1 large mammal tooth, 3 large, 1 small mammal ribs, 13 unidentified frags		43
1	1016	179		1 medium sized mammal ulna		1
2	1017	190	1 second right rib, 1 parietal frag, 1 distal ½ of right tibia, 2 probable distal tibial frags, 1 unidentified frag, adult	12 rib frags (small to large mammal), 1 vertebral frag of medium sized mammal, 1 large mammal phalanx, 1 large mammal vertebra, 1 medium sized mammal pelvic and 1 skull frag, 8 unidentified frags	1 cremated bone frag	35
2	1018	14	neck and whole shaft of left femur (4 frags), 6 skull frags (mainly parietal, 1 occipital), adult	2 rib frags (1 small, 1 large? mammal), 1 large mammal phalanx, 19 unidentified frags (some with butchery marks)	1 cremated bone frag	33
2	1022	308		1 medium sized mammal tooth & 1 jaw fragment, 1 large mammal phalanx, 1 medium sized mammal femur, 5 small mammal long bones, 1 medium sized mammal vertebra, 1 metacarpal, 24 unidentified frags		35
2	1022	323		1 medium to large mammal scapula, 4 unidentified frags		5

Int	C no	Find	Human Bone	Non-Human Bone	Other	Total
2	1024	334	1 first proximal hand phalanx, 1 rib shaft frag, adult	1 large mammal phalanx, 1 pig tooth, 1 small mammal jaw frag, 6 rib frags (small to large mammal), 6 unidentified frags		17
2	1025	350	2 skull frags	1 medium sized mammal scapula, 7 unidentified frags		10
2	1026	442		1 small mammal long bone?		1

APPENDIX K: INDEX TO FIELD FILE

CODE		DESCRIPTION	RECORD	FORMAT
		Indices		
YO1		Index of notebooks		
YO2		Index of contexts	1	A4
YO3		Index of features	1	A4
YO4		Index of structures		
YO5		Index of drawings	1	A4
YO6	.0	Index of photographs	7	A4
	.1	Index of film processing	1	A4
YO7	.0	Index of finds	20	A4
	.1	Index of finds by context		
	.2	Index of finds by grid square		
	.3	Sample Register		
	.4	Artefact Register		
	.5	Finds Storage Register		
YO8		Index of geophysical data files		
YO9	.0	Index of survey stations	1	A4
	.1	Index of co-ordinate files		
	.2	Index of topographic files		
YO10		Index of interventions		
Y1		**Notebooks**		
		Contexts		
Y2	.0	Context Record	30	A4
	.1	Skeleton Record		
	.2	Coffin Record		
	.3	Masonry Record		
	.4	Timber Record		
		Features		
Y3	.0	Feature Record	11	A4
	.1	Auger Record		
		Structures		
Y4		Structure Record		
		Site drawing		
Y5	.0	Legend		
	.1	Plans	2	A3
	.2	Maps	1	A4
	.3	Sections	4	A3
		Photographs		
Y6	.0	Black and white negatives	42	35mm
	.1	Colour negatives	80	35mm
	.2	Colour slides		
	.3	Colour enprints	80	35mm
	.4	Black and white prints		
		Finds		
Y7	.0	Finds Location Record		
	.1	Artefact Record		
		Survey		
Y8	.0	Record of geophysical data files		
	.1	Record of .RAW data file		
	.2	Record of .FLD data file		
	.3	Surface Reconnaissance Record		