

**A64 to THORNER COMPOUND
Gas Pipeline Replacement**

**ARCHAEOLOGICAL
WATCHING BRIEF**

Prepared by

NETWORK ARCHAEOLOGY LTD

For

TRANSCO
(Yorkshire LDZ)

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1 SUMMARY

This report presents the results of an archaeological Watching Brief on the Transco Thorner Gas Pipeline Renewal Project. The route is 2.5km long and runs from an existing pipeline next to the A64, to a compound at Thorner in West Yorkshire. The pipeline runs roughly north to south, immediately to the east of the village of Thorner, north-east of Leeds.

A moderate density of potential archaeology was recorded by West Yorkshire Archaeology Service (WYAS) within the vicinity of the pipeline. To the south-east of Thorner village there are a series of cropmarks (PRN 2070) including a sub-rectangular enclosure (SE 388 402) which lies approximately 40m to the east of the pipeline route. Immediately to the north-east of Thorner a large number of geophysical anomalies were recorded by WYAS, including a possible Romano-British road, and ditches and quarry pits, also probably Roman in date. These anomalies are within an area which is part of a proposed building development, which meant the pipeline was re-routed. At the northern end of the pipeline, adjacent to the Thorner compound, the site of Thorner Mill (PRN 2840) is recorded in the SMR.

The Watching Brief located a Romano-British feature (?foundation trench) possibly associated with a nearby series of crop marks. Black-burnished ware pottery from the site provides a date range of c. AD 120-230. An reused millstone also formed part of this feature.

Medieval and Post-Medieval pottery scatters were also identified and recovered from the pipeline.

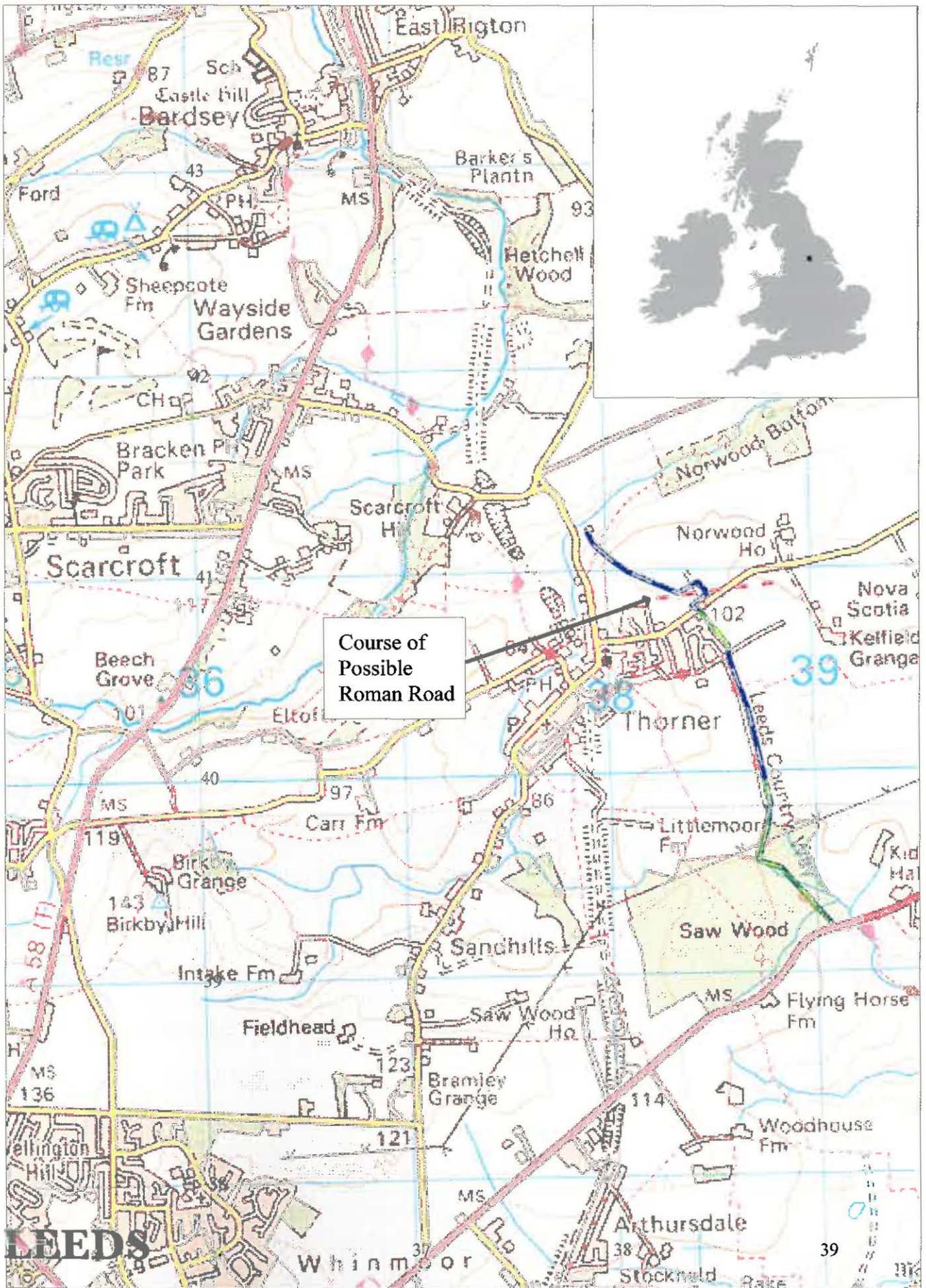


Figure 1 : Location of A64 to Thorer Gas Pipeline Replacement (1:25 000)

(Ordnance Survey 1:50 000 map reproduced with permission of the Controller of Her Majesty's Stationery Office, Crown Copyright Reserved. NAL Licence Number AL52256A)

- topsoil strip
- no topsoil strip (pipe mole-bored)

2 INTRODUCTION

2.1 Project Background

Network Archaeology Ltd was commissioned by Transco (Yorkshire LDZ) in October 1998 to provide an archaeological Watching Brief on a gas pipeline renewal project from the A64 to the village of Thorner in West Yorkshire (Figure 1).

A geophysical survey was carried out by West Yorkshire Archaeology Service within an area of proposed housing development to the north east of Thorner (Archaeological Services, WYAS 1997). The survey located a number of anomalies close to the original pipeline which, it was thought may be affected by the renewal pipeline.

2.2 Objectives of the Watching Brief

The main objective of the Watching Brief was to monitor areas of known archaeological potential identified in the Sites and Monument Record (SMR) and by West Yorkshire Archaeology Service (WYAS), and to identify and record any archaeology that was encountered. The report adheres to the standard and Guidance for Archaeological Watching Briefs (1994), of the Institute of Field Archaeologists, and recognises the Transco Brief for Archaeological Watching Brief (Stage 6), (June 1997). The West Yorkshire County Archaeologist was consulted and invited to monitor work in progress.

The specific objectives of the Watching Brief were:

- To locate, recover, identify, and conserve (as appropriate) any archaeological artefacts exposed during pipeline construction.
- To locate, sample, interpret and record any archaeological deposits exposed during pipeline construction.
- To gather sufficient information to establish the presence or absence, extent, condition, character, quality and date of any archaeological remains at selective sites along the pipeline route.
- To recommend mitigatory measures for preservation *in situ* of any archaeological deposits (where feasible and desirable).
- To sample (and submit for analysis) any deposits with the potential to yield palaeo-environmental data.
- To produce and submit a suitable archive to the appropriate museum (Leeds City Museum).
- To produce a report that addresses the above, in a format suitable for publication.

2.3 Location and Topography

The gas pipeline is a renewal of an existing line running for 2.5 km, from the A64 (SE 391 392) to a compound north east of Thorner village (SE 379 412) in West Yorkshire (Figure 1).

The land along the route is fairly flat with ground elevations generally ranging from 90-100m above Ordnance Datum. The northern end has a sharp gradient drop to 75m O.D. from SE 381 411 to the compound at Thorner.

From the A64 northwards, the pipeline route covers relatively flat ground (90-100m O.D.) until the village of Thorner at SE 384 408. At this point the pipeline detours to the east of the original pipeline, runs parallel with a north-south track way before turning west to join the original route again (SE 384 409). This route change was implemented because of a proposed housing development. North of this point the pipe is orientated northwest-southeast with the land then rising fairly steeply to the north from 103-109m O.D. until levelling out in the vicinity of a former limestone quarry. After this, the land slopes downwards fairly sharply to 75m O.D. in the vicinity of the Thorner gas compound which is situated at the base of a small valley.

2.4 Geology, Soils and Land-use

The pipeline is situated on the western edge of a north-south ridge of magnesian limestone dating to the Permian period (290-250 million years ago). It passes through twelve separate fields ascribed plot numbers running consecutively from 1-12 from north to south (Appendix 5).

The soils along the pipeline consist entirely of silt loams with varying clay content with the majority of the land being open farmland consisting of arable fields of varying sizes. The pipeline does, however, bore underneath an area of woodland (Keddal Wood) to the south of Thorner village.

3 METHODOLOGY

3.1 Pipeline Construction

Approximately half of the pipeline route was topsoil-stripped in preparation for trenching (Figure 1). The width of the stripped area was 10m, this area being referred to as the pipeline 'easement'. This 10m width was required to locate the original pipe, for vehicular access, temporary spoil heaps and the construction of the renewal pipeline. The initial topsoiling (Stage 1) was carried out using a JCB, leaving the spoil on the eastern side of the easement. This meant that approximately 6m of the easement was available for archaeological inspection, although ground disturbance by the original pipeline further reduced this to around 4m.

Approximately half of the pipeline was not topsoil stripped, being constructed by the technique of mole-boring the pipe one metre below subsoil level, with reception pits dug at each end for the pipe boring. No archaeological inspection was possible in these areas. The pipe was mole-bored in two stretches along the route (Figure 1). Firstly, between the two main roads to the east of the village of Thorner (SE 38472 40788 to SE 38582 40566) and secondly from north of Saw Woods (SE 38789 39864) to the A64 (SE 39052 39214).

The trenching (Stage 2) was carried out by a mechanical excavator fitted with a narrow (0.3m), toothed bucket which dug approximately 0.8m below the base of the topsoil, through a subsoil layer and into bedrock. The pipe-trench was excavated towards the east side of the easement, adjacent to the topsoil spoil heap, with the subsoil spoil being placed to the west of the pipe trench to separate it from the topsoil. Visibility within the pipe trench was variable due to subsidence of the sides in places.

The pipeline was bored beneath track and road crossings, fed through 2m square by 1m deep reception pits dug at either end of the obstacle.

3.2 Archaeological Methodologies

The emphasis of the Watching Brief was to visit the pipeline to monitor areas of moderate archaeological potential. This meant that a number of areas were not monitored although they were inspected at certain intervals. This included Keddal Wood and the area immediately to the south of the Thorner compound. Delays with access to the stripped areas also meant that an area to the north of Keddal Wood, from SE 388 398 to SE 387 401, was not seen until after the trench had been back-filled (Figure 1). Areas that were monitored had poor visibility due to machinery tracking across the stripped area on a number of occasions. In some places the topsoil had not been completely removed and the presence of a layer of subsoil masking any archaeological deposits meant that the identification of archaeology was reliant on examination of the narrow pipe trench and by hand-removal of test sections.

The surface of all stripped areas was visually searched for archaeological deposits and finds, with spoil heaps also being examined for finds. A system of pro-forma record sheets with appropriate fields was used for on-site recording. This system has been developed by Network Archaeology over the past two years, and is in a format acceptable to the IFA. A full and proper written record was made of any archaeological deposits and any significant natural located during surface and/or trench inspection. A full and proper drawn record was made of all archaeological deposits including an OS base plan (at an appropriate scale) showing the location of any excavated areas and find scatters, and section drawings at 1:20 of all

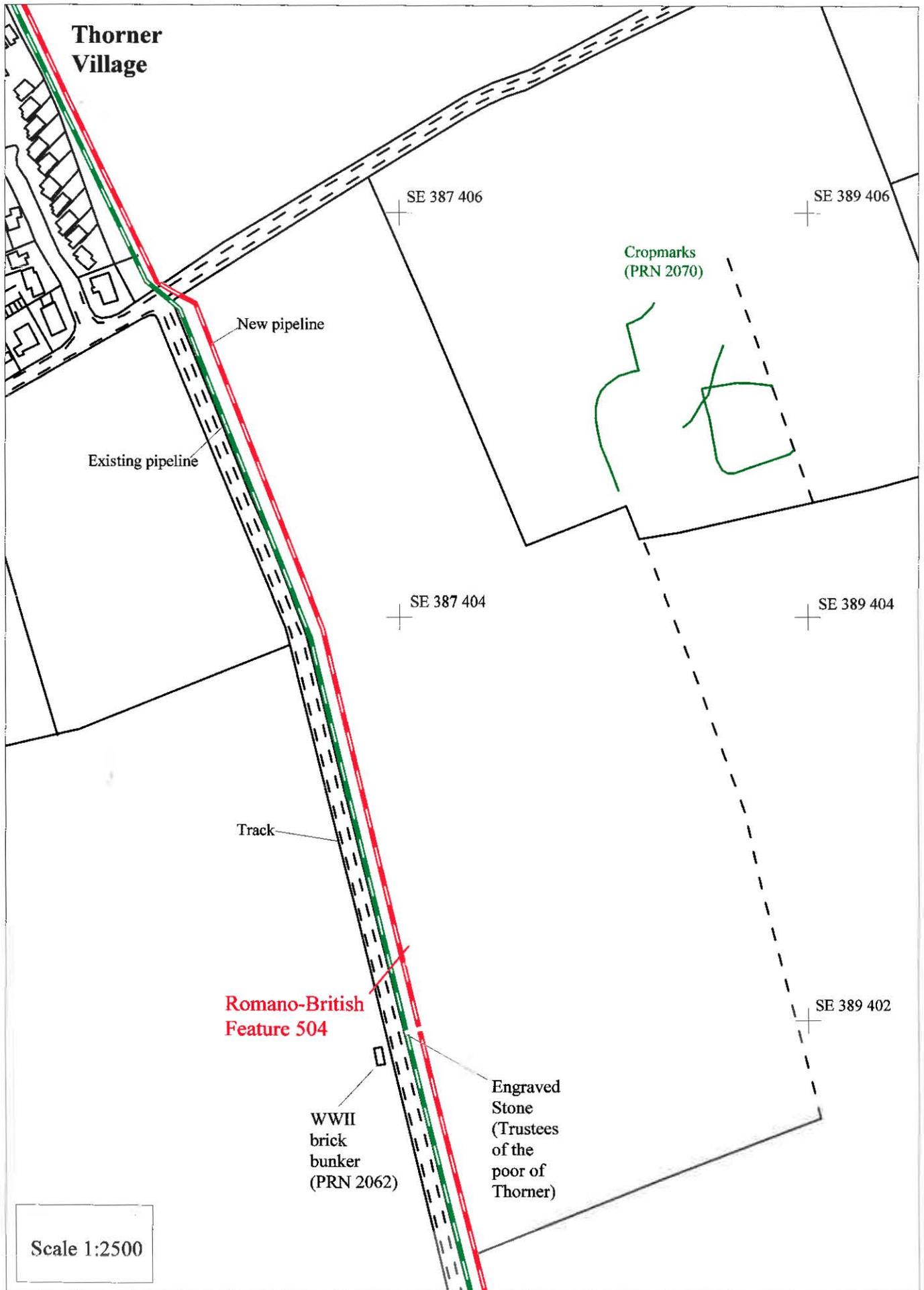


Figure 2 : Location of Romano-British Feature 504 and nearby cropmarks

excavated features or features seen in trench sections. A full and proper photographic record (35 mm format) in monochrome and colour was taken. This included overall shots of the pipeline, work in progress and detailed feature shots.

4 ARCHAEOLOGICAL RESULTS

4.1 *General Archaeological Background*

The potential impact of the pipeline on archaeology was high as a number of archaeological sites were known close to the line.

There are a number of cropmarks (PRN 2070) close to the route of the pipeline, including a sub-rectangular enclosure and several linears, all of unknown date and lying 40m to the east of the easement at SE 388 402 (Figure 2).

A geophysical survey carried out by West Yorkshire Archaeology Service (Archaeological Services, WYAS 1997) in advance of the proposed development highlighted a possible Roman Road and quarry pits.

Thorner village is known to have included a number of Medieval Mills including the site of Thorner Mill (PRN 2840) situated next to Thorner Gas Compound (SE 379 412). It is thought that this water-powered corn mill was probably the site of the Manorial Mill of Thorner.

During the Second World War a brick bunker (PRN 2062) was built immediately to the south of Thorner village at SE 4387 4403. This was unaffected by the pipeline.

4.2 *Romano-British Period*

4.2.1 *Feature 504*

This feature, orientated northeast-southwest, was located within the pipe-trench close to the World War II brick bunker (SE 38703 40222) (Figure 2). It was not visible after topsoil stripping, as it was sealed by a 0.30m deep layer of subsoil. The section within the pipe-trench was at an oblique angle, although the measurements below are for the rectified section. The cut appears to be linear, fairly shallow (*c.* 0.20m deep and *c.* 1.5m wide) with a flat base and steep, near vertical sides. Cut 504 was *c.* 0.30m below the level of the ploughsoil and contained two fills, 505 and 506. Fill 505, a mid orange/brown silty clay, contained a high concentration of very large, flat, dressed sandstone blocks including a large, flat, rounded millstone (Plate 1). The millstone has a diameter of 0.57m, was 0.16m thick and appeared to be unfinished on one edge, suggesting it was never utilised as a millstone. Instead, it was positioned at the base of the cut as part of the lower course of stone within the east facing section of the pipe trench. Unfortunately this artefact was mysteriously taken from the site, therefore no analysis could be carried out on it. Fill 506 comprised a mix of mid orange and dark brown/grey silty clays with a fairly high concentration of large sub-rounded and rounded stones.

Pottery

Twenty-one sherds of Romano-British pottery, weighing 106 grammes were recovered from context 506 which filled feature 504. Four unstratified Roman sherds were found in the vicinity (Finds Nos.26, 28 and 29). The pottery did not evidence any definite sherd joins but

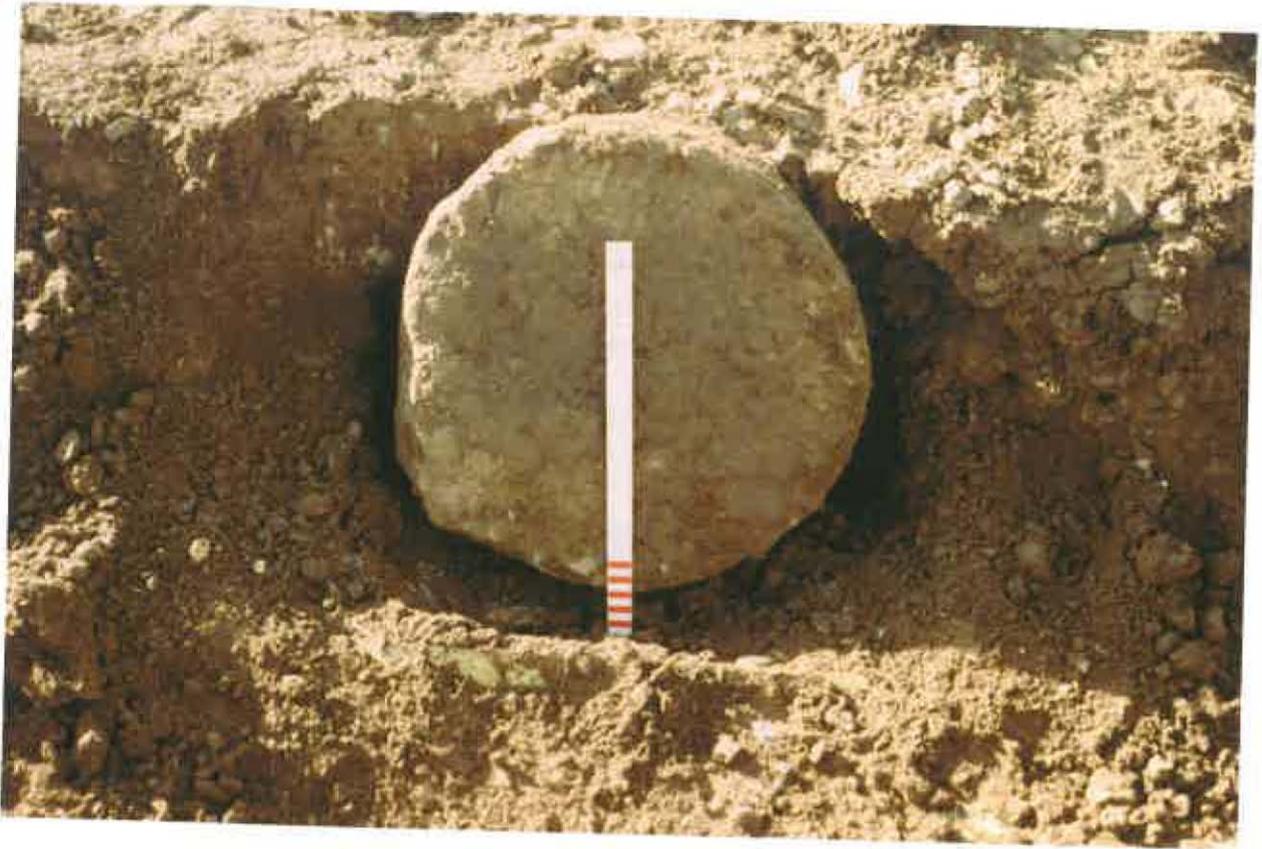


Plate 1: Millstone from within feature 504

does appear to be contemporary. The unstratified fragments of a black- burnished ware (BB1) jar (Find No.26), are the same as those from context 506 (Figure 5), and the unstratified sherd from a probably handmade, closed vessel from (Find No.29), is almost identical to the base found in context 506.

The cooking-pot in handmade, black-burnished ware from context 506 and unstratified (Find No.26) can be dated. The fabric contains shale which is generally found in the BB1 manufactured in the Dorset area. There is evidence of burnished, lattice decoration on a small sherd which appears to be in an acute rather than obtuse style. Acute lattice decoration is generally assigned a date-range of *c.* AD 120-230, although a more precise date would be possible if a rim sherd was present.

The closed, probably handmade, vessel from context 506 and unstratified (Find No.29) is in a coarse fabric containing angular quartz. It is likely to be a locally produced vessel of Roman date. The open form from 506 and from unstratified find 28 appear to be finer versions of the same fabric, also probably manufactured locally, and at least 2nd century in date.

The BB1 vessel and the ?handmade, closed form are both burnt and sooted on the exterior suggesting that they were used for cooking. The remaining greyware vessels would similarly have been used for domestic purposes. There were no higher-status, finewares from the site, the presence of BB1 imported from Dorset suggests that the occupants had access to this market which, in some cases, might imply a military presence. However, the group of pottery is too small to provide clear evidence for any precise function.

The majority of the recovered sherds are in a fairly fresh and good condition, the exceptions being an unstratified greyware closed form sherd (Find No.28), and an open, greyware vessel from 506, both of which show evidence of abrasion. Most of the sherds are relatively small with an average sherd weight of 5.50 grammes. This is particularly noticeable with the BB1 jar which, although quite fresh, has been broken into a number of fragments giving an average sherd weight of 4.74 grammes.

Topsoil Removed

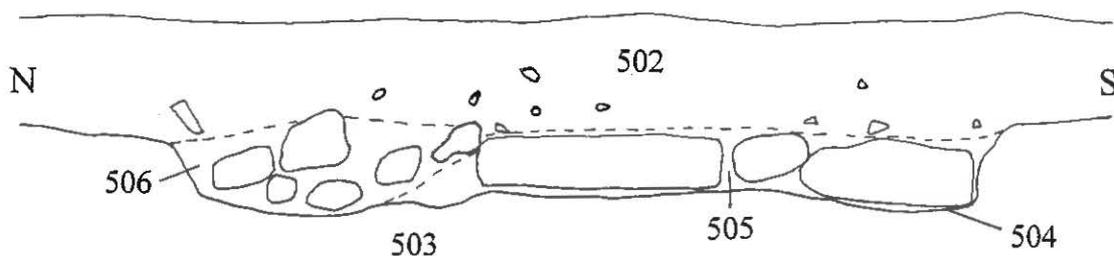


Figure 3 : Romano-British Feature 504 : West facing oblique un-rectified section (Scale 1:20)

Function

As only a small section of the feature was uncovered by the pipe-trench, it is difficult to determine its function or form. The presence of large, dressed sandstone blocks placed in the base of the feature suggests that this may have been a foundation trench containing the lowest course of a stone wall, or, as such a small proportion has been investigated it could merely be a material dump. The feature was probably in use in the second to third centuries AD as the majority of the pottery from fill 506 comprise black burnished ware. This pottery was manufactured in Dorset in *c.* AD 120-230 and suggests that the users had access to a market or trade links. The feature also contained animal bones (cow), burnt flints and burnt bone, which suggests that the feature contained domestic refuse and may therefore be close to a settlement.

It is possible that Romano-British Feature 504 is associated with a series of cropmarks to the east (PRN 2070). These consist of a sub-rectangular enclosure at SE 388 402 with a series of linear cropmarks slightly to the west.

4.2.2 Roman Road

A gradiometer survey on an area of proposed development by WYAS (Archaeological Services, WYAS 1997) located a possible Roman road running approximately east-to-west and cutting the line of the pipeline at SE 3845 4090 (Figure 1). This road was not evident within the pipe-trench at its expected location so three 1m by 0.5m test pits were dug in an attempt to locate it. No evidence of a road was seen, the lack of evidence suggesting that either the road never existed or, that subsequent ploughing or stone robbing has caused damage or even destroyed the remains.

4.3 Medieval/Post-Medieval Period

A number of pottery fragments (29 pieces) were discovered along the pipeline, the majority of which were found to the east of the village of Thorner at SE 383 409 (Figure 4), adjacent to the proposed housing development. All of the artefacts were found within either the topsoil or the underlying subsoil layer, and were not associated with any archaeological features. In total, seventeen sherds were found as part of the main scatter. The majority of these sherds, which were fairly abraded, dated from the 12th century onwards and probably indicate manuring practices within the fields.

It has been suggested (J Le Patourel, 1979) that Thorner was a centre of pottery production in the Middle Ages, producing a wheel-thrown light-firing ware (see Appendix 2). Indeed, ten pieces were evident from the finds scatter. Thorner was also a busy agricultural area with a number of mills, and the presence of this manuring scatter highlights activity. The pottery collection demonstrates the existence on or close to the site of occupation from the 12th-century onwards, continuing into the post-medieval period. The absence of post-medieval slipwares, stonewares and the like suggests that occupation ceased before the end of the 17th century when these types became extremely common.

5 CONCLUSION

A Romano-British feature, possibly the foundation trench for a structure, dating to the 2nd-3rd century AD was discovered within the pipe trench at SE 38703 40222. The feature, containing black burnished ware pottery, may be associated with a number of cropmarks found to the east of the pipeline. After topsoil stripping to the north-east of Thorner, a

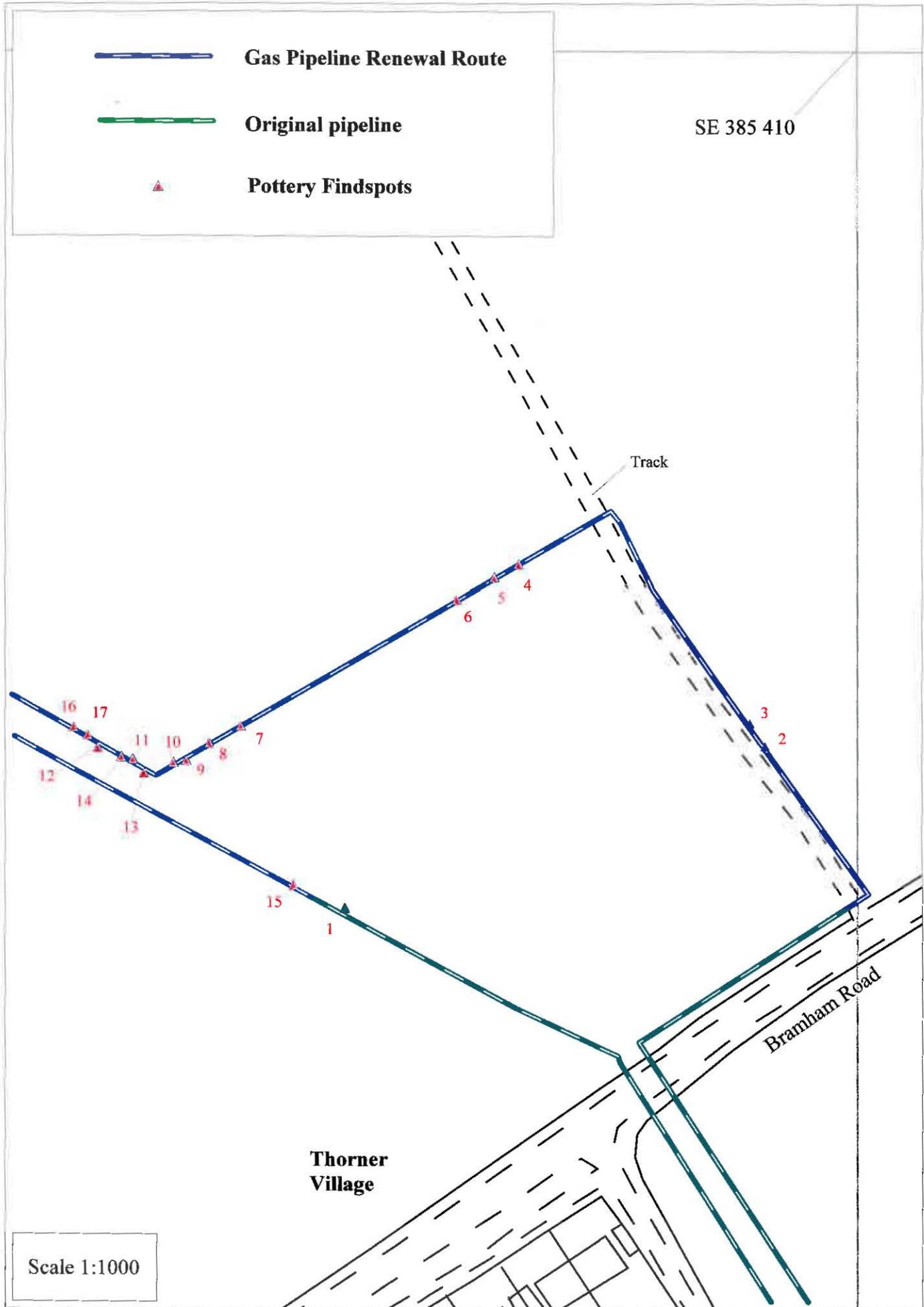
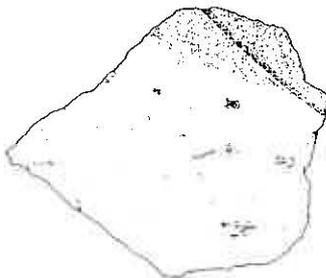


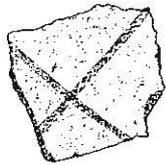
Figure 4 : Medieval/post-Medieval Pottery Scatter

Romano-British

26 [2:3]



506 [2:3]



506 [1:2]



506 [1:2]



Medieval

15 [1:2]



19 [1:2]



Figure 5: Romano-British and Medieval pottery [scale in brackets]

concentration of Medieval and Post-Medieval pottery was found, providing evidence for occupation in the area dating from the 12th century up until the 17th century AD.

6 ARCHIVE

The archaeological archive comprising all primary records and artefacts has been deposited with Leeds Museum;

Department of Leisure Services
Museums and Galleries Division
Town Hall
The Headrow
Leeds LS1 3AD
Tel: 0113 391 0446

The finds and archive follow procedures laid down by West Yorkshire Archaeology Service and Leeds Museum Services and have been prepared (including artefact processing) in accordance with Guidelines for the preparation of excavation archives for long term storage (Walker 1990, UKIC). The Accession number for the archive is D.1999.1 followed by a part number for each individual find (*e.g.* D.1999.1.1, D.1999.1.2, D.1999.1.3).

7 ACKNOWLEDGEMENTS

The work was commissioned by Transco (Yorkshire LDZ). Particular thanks are due to Mike Parkinson and Ian Rodnell from Transco for their co-operation and assistance. Jenny Marriot (West Yorkshire Archaeology Service) provided valuable information on the project. Thanks are also due to Mr. J Richardson for allowing access to the land on behalf of the landowner. Barbara Precious, Alan Vince and Richard Moore are thanked for their specialist reports. The report was written by Mark Allen.

8 REFERENCES

Le Patourel, H.E.J., 1979, 'Medieval Pottery', in Andrews, D.D. and Milne, G. (eds.), *Wharram: a Study of Settlement on the Yorkshire Wolds*. Vol. 1: Domestic Settlement, 1: Areas 10 and 6: 74-107.

Bramham Road, Thorner, West Yorkshire, Gradiometer Survey, September 1997. Archaeological Services, WYAS.

Transco, June 1997, Stage 6 Archaeological Watching Brief (Internal Report).

APPENDICES

Appendix 1

The Romano-British Pottery by B J Precious

The Roman Pottery from Torner , East of Leeds , TOR98, for Network Archaeology
B J Precious
31/01/2000

The Pottery

The pottery has been recorded according to the Study Group for Roman Pottery (SGRP) guidelines, using codes currently in use at the City of Lincoln Archaeological Unit, and sherd count and weight as a measure. The full archive giving full details of the pottery is presented in Appendix 1 (TOR98 - Roman Pottery)

The site produced a small group of Roman pottery consisting of 25 body-sherds weighing 138 grammes, and probably representing no more than four individual vessels. The majority come from Context 506, 21 sherds weighing 106 grammes, with the rest coming from the vicinity and being unstratified. Although there are no definite sherd joins most of the pottery appears to be interlinked. The fragments of a BB1 jar from Contest/find 26 are the same as those from Context 506, and the single sherd from a probably handmade, closed vessel from Context/find 29 is almost identical to the base from Context 506.

Dating

A cooking-pot in handmade, black-burnished ware (BB1) from Context 506 and Context/Find 26 is the only pottery from the site that is securely datable. The fabric of the BB1 cooking-pot contains shale which is generally found in the BB1 manufactured in the Dorset area. There is evidence of burnished, lattice decoration on a small sherd which appears to be in an acute rather than obtuse style. Acute lattice decoration is generally assigned a date-range of c AD 120-230, although more precise dating can be obtained if rims are present. Unfortunately this is not the case at TOR98, as there were no rims sherds from the site. Obtuse lattice is usually present from the early 3rd to the mid 4th century.

The closed, probably handmade, vessel from Context 506 and Context/Find 29 is in a coarse fabric with angular quartz, and is likely to have been a local product, of Roman date. The open form from Context 506 and the closed vessel from Context/Find 28 appear to be finer versions of the same fabric, also probably manufactured locally, and of at least 2nd century date.

Function

The BB1 cooking pot and the ?handmade, closed form are both burnt and sooted on the exterior suggesting that they were used for cooking. The remaining greyware vessels would also have been used for the same purpose. There were no higher-status, finewares from the site, but the presence of BB1 imported from Dorset suggests that the occupants had access to this market which, in some cases, might imply a military presence. However, the group is too small to provide clear evidence for any precise function.

Condition

The majority of the sherds are fairly fresh and in good condition. The exceptions are a greyware, closed form from Context/Find 28 and an open, greyware vessel from 506, both of which show evidence of abrasion. Most of the sherds are relatively small, with an average sherd weight of 5.50 grammes. This is particularly noticeable with the BB1 jar which, although quite fresh, has been broken into a number of fragments giving an average sherd weight of 4.74 grammes.

Statement of Potential

The assemblage is too small to provide precise functional or dating evidence. The greyware fabrics provide tentative evidence for local manufacture. Although there are no rims from the site, the BB1 vessel could be reconstructed and illustrated to demonstrate the potential date-range of the site, but it is very fragmentary (Context 506 & Context/Find 26).

Storage and Curation

The BB1 jar should be carefully packed to prevent further fragmentation, and all the pottery should be retained for further study.

TOR 98 ROMAN POTTERY

CTX/FI ND	FABRIC	FORM	DEC	COND	VESS	DRAW NO	COMMENTS	JOIN	SHS	WT
26	BB1	CP		GOOD	1	D?	BSSBURNT EXT; SAME IN	506?	2	22
26	ZZZ						BB1 ONLY DORSET SHALE			
26	ZDATE						120-230		1	5
28	GREY	J	WM	ABR			BS; GROOVES CORDON AT SHLDR			
28	ZZZ						GREY ONLY; PROB 2C+		1	5
28	ZDATE						RO			
29	GREY	CLSD	HM?	GOOD			BASE COARSE SAND AS IN	506?	17	68
29	ZZZ						BURNT EXT; NR 504		3	32
29	ZDATE						RO	26?	1	6
506	BB1	CP	LA	GOOD	1	D?	BSS BASE; BURNT EXT SAME IN			
506	GREY	OPEN		ABR INT	1		BASES			
506	GREY	CLSD	HM?	GOOD			BASE COARSE SAND AS IN			
506	ZZZ						BB1 DORSET; SMASH FRAGS			
506	ZDATE						120-230			
	TOTALS								25	138

Appendix 2

The Medieval and post-Medieval Pottery by A Vince

Introduction

Twenty-eight sherds of pottery, weighing 317gm, was submitted for identification and assessment. The pottery was catalogued in an Access 97 database recording common name code, form, number of sherds, number of vessels, weight in gm, part of vessel, description and action.

Description

Anglo-Saxon

No pottery of pre-conquest date was present.

Medieval

Nineteen sherds of medieval pottery were found. Fifteen of these were gritty ware (code *gw*), a wheelthrown light-firing ware with coarse temper (all the Thorner examples contained fragments of coarse sandstone, probably of Lower Carboniferous age). This ware was introduced to the north of England at some point between the Norman conquest and the middle of the 12th century and rapidly became the standard coarseware used. Thorner itself is suggested by J Le Patourel to be one of the sources of this ware. Le Patourel has noted that there is a chronological progression from squared to rounded rim profiles with the squared rims being 12th century and the rounded ones 13th century. Examples of both are present at Thorner.

The remaining four wares present were each represented by single sherds:

Cooking pot in a reduced fabric with coarse sandstone temper (coded here: *tor98c*). This might simply be an overfired/misfired sherd of gritty ware but the vessel appears to have a globular shape and angular rim which distinguish it from gritty wares. Furthermore it appears to have a coarser, albeit petrologically similar texture.

A jug in a Northern English medieval whiteware (coded here: *nemw*). Like the gritty ware, this vessel has a light-coloured fabric with a coarse, sandstone-derived quartzose temper. However, in contrast to the gritty ware it contains several visible large flakes of muscovite (up to 2.0mm across) and so is likely to be derived from a different source.

A sherd from a glazed jug made from a red-firing clay, but also with sandstone-derived coarse sand temper (coded here: *tor98b*). The glaze is mainly worn away but remains in two horizontal grooves, about 10mm apart, and is of brown colour.

A sherd from a Humber ware jug or other large vessel (such as a cistern). Such vessels were produced at a number of centres in the Humber estuary and are characterised by

their silty texture. Humber wares were first produced in the early 14th century but are characteristic of the late medieval and early post-medieval period.

Post-medieval

Four sherds of post-medieval pottery were found:

a handle from a Midlands purple jar or jug with thick brown/purple glaze (code *mp*). Such vessels were produced from the 15th century onwards but are particularly common in the 16th century.

Two sherds from blackware cups (code *cstn*). One is a small vessel, with oval handle and enclosed form. The fabric is fine-textured with no large inclusions and might be a product of the Wrenthorpe potteries. It is likely to be of 16th century date. The other is from a vessel with a slightly coarser fabric and comes from a larger vessel, perhaps 20-25cm diameter at the rim and probably a conical profile. It might be slightly later in date (late 16th or 17th century).

A sherd from a red earthenware dish with white slip-trailed decoration on the rim. The fabric contains sparse rounded dense off-white clay pellets and is probably a Coal Measure red-firing clay (code *stre*). In Staffordshire such vessels were first produced in the mid-17th century but this example is likely to have a northern source.

Modern

Two sherds of red earthenware flowerpots were found. Such vessels are likely to be of 19th or 20th century date.

Assessment of Potential

This collection demonstrates the existence on or close to the site of occupation from the 12th-century onwards, continuing into the post-medieval period. The absence of post-medieval slipwares, stonewares and the like suggests that occupation ceased before the end of the 17th century when these types became extremely common.

Medieval/Post Medieval Pottery Summery

Plot	sfno	Cname	form	nosh	nov	wt	part	description	action
2	1	mp	jug	1	1	46	bs	wide strap handle;4 vert grooves;purple glaze	
2	4	cstn	tyg	1	1	15	bs	oval handle;wide diam vessel;fine silty texture with sparse white fine sst frags	
2	5	gw	jar	1	1	4	bs		
2	6	tor98b	jug	1	1	4	bs	two widely-spaced horiz grooves;brown glaze;oxid red sst sand temp with gry core and black int	
2	7	stre	dish	1	1	6	r	white-slip-trailing under plain glaze	
2	8	gw	jar	1	1	7	bs	red clay inclusions;sst sand	
2	9	gw	jar	1	1	11	r	sst sand	draw
2	10	gw	jar	1	1	5	bs		
2	11	gw	jar	1	1	11	r	squared rim;sst sand	
2	12	gw	jar	1	1	9	base		
2	13	tor98a	-	1	1	7	bs	shl=14;off-white fabric with white rounded clay pellets;fried dark glaze; date?	
2	14	tor98a	-	1	1	6	bs	shl=13	
2	15	tor98c	jar	1	1	16	r	gloubular vessel;reduced grey;coarse sst inclusions up to 2mm across	draw
2	16	cstn	tyg	1	1	10	bs	small cup;fine silty fabric-Wrenthorpe?	
2	17	gw	jar	1	1	25	base		
2	18	gw	jar	1	1	7	base		
2	19	gw	jar	1	1	12	r	or Hillam ware?	
2	20	humb	jug	1	1	11	bs	thick walled vessel;possibly cistern;fine shale/slate inclusions alongside quartzose sand	
2	21	misc nky	object	1	1	42	lump	large fragment of white silty clay sparse (musc laths);one flat surface covered with light green glaze	
2	23	misc nw	flp	1	1	4	bs		
2	24	misc nw	flp	1	1	4	bs		
2	25	gw	jar	1	1	10	bs		
5	27	nemw	jug	1	1	19	bs	light green glaze (iron not copper?);strap handle scar;reduced code and int;sst sand plus sparse flakes of muscovite	
2a	31	gw	jar	3	3	18	bs	all contain sst sand	
2a	30	gw	jar	1	1	1	bs		
2a	3	gw	jar	1	1	7	bs		

Appendix 3

The Animal Bone by Richard Moore

Five fragments of bone were recovered from context (506). All have heavily pitted surfaces, probably indicating that the soil conditions were acidic. The largest fragment is part of the shaft of a long-bone from a cow-sized animal. From its cross-section, it is probably a radius, but it could be a metacarpal. One of the smaller fragments is of similar robustness, and may be from the same bone. The other three fragments are very small. One may be part of the blade of a rib.

Context	Animal	Bone	Side	Comments
506	Cow-sized	?Radius		Shaft fragment.
506	Cow-sized			Shaft fragment.
506	Cow-sized			?rib blade fragment.
506	unidentified			2 small unidentified fragments.
Total weight: 15g				

Appendix 4

Field Archive

The project code for the Thorner Compound Gas Pipeline Replacement is *TOR 98*. The work was carried out by Network Archaeology Ltd, 25 West Parade Lincoln LN1 1NW. Tel: 01522 532621.

The finds and archive are deposited with Leeds Museums and Galleries Division, City Museum, Town Hall, Municipal Buildings, Headrow, Leeds LS1 3AD.

Their preparation follow procedures laid down by West Yorkshire Archaeology Service and Leeds Museum Services and have been prepared (including artefact processing) in accordance with Guidelines for the preparation of excavation archives for long term storage (Walker 1990, UKIC). The Accession number for the archive is D.1999.1 followed by a part number for each individual find (*e.g.* D.1999.1.1, D.1999.1.2, D.1999.1.3).

Museum Accessions Number: D.1999.1

Pipeline Code: TOR 99

The Archive Comprises:

1. Photographic Archive

Colour slides 1-35

Photographic Register

2. Paper Archive

Set of annotated construction strip maps 1-4, 1:2500

Section Drawing of Romano-British feature [504] scale 1:20

Set of field Plot Context sheets 1-12

Set of field Context Sheets 201-203 and 501-506

Copies of the Archaeological Report (No. 130) reside with West Yorkshire Sites and Monuments Record. Copies also reside with Network Archaeology and with Transco.

3. Artefacts

Artefacts Catalogue

Finds No	Description	Co-ordinate	Comments
1	Post-med pot	SE 38412 40828	
2	Discarded	SE 38488 40868	modern button
3	Med pot	SE 38480 40870	
4	Post-med pot	SE 38432 40900	
5	Med pot	SE 38424 40896	
6	Med pot	SE 38419 40894	
7	Post-med pot	SE 38378 40878	
8	Med pot	SE 38370 40868	
9	Med pot-unstratified	SE 38365 40866	
10	Med pot-unstratified	SE 38360 40870	

Finds No	Description	Co-ordinate	Comments
11	Med pot-unstratified	SE 38352 40864	
12	Med pot-unstratified	SE 38346 40862	
13	Med pot-unstratified	SE 38359 40856	
14	Med pot-unstratified	SE 38350 40858	
15	Med pot-unstratified	SE 38408 40820	
16	Post-med pot-unstratified	SE 38332 40870	
17	Med pot-unstratified	SE 38336 40872	
18	Med pot-unstratified	SE 38280 40874	
19	Med pot-unstratified	SE 38128 40980	
20	Med pot-unstratified	SE 38094 41008	
21	Unidentifiable ceramic piece-unstratified	SE 38090 41024	
22	discarded	SE 38082 41042	
23	Modern -unstratified	SE 38050 41116	
24	Modern-unstratified	SE 38042 41109	
25	Med pot-unstratified	SE 38040 41115	
26	Roman pot x 2-unstratified	SE 38702 40224	
27	Med pot -unstratified	SE 38682 40262	
28	Roman pot-unstratified	SE 38703 40222	
29	Roman pot -unstratified	SE 38703 40222	
30	Med pot -unstratified	SE 38033 41120	
31	Med pot x 3 -unstratified	SE 38033 41120	
506	3 cow size animal bones, 2 unidentified animal bone fragments Roman pot x 21	SE 38703 40222	

Totals:

25 romano-british pottery sherds
 22 medieval sherds pottery
 4 post-medieval pottery sherds
 2 modern pottery sherds
 5 bone fragments

Landowners

The recovered artefacts were recovered on land owned by:

John Richardson
 Estate Office
 Hawnby
 York
 YO6 5LS

He has consented to donate the finds to Leeds museum and as such a letter of transferal has been signed and is included in the archive.

Appendix 5

Location of fields crossed by the pipeline

Construction Plot/Field No.	Co-ordinate
1	SE 3797 4117
2	SE 3828 4091
2A	SE 3848 4087
3	SE 3852 4076
4	SE 3854 4065
5	SE 3870 4023
6	SE 3875 4002
7	SE 3879 3987
8	SE 3880 3979
9	SE 3876 3967
10	SE 3885 3950
11	SE 3891 3938
12	SE 3903 3923