### THAMES VALLEY

# ARCHAEOLOGICAL

## SERVICES

Pipeline between Cold Ash and Tilehurst, West Berkshire

**Archaeological Recording Action** 

by David Platt

Site Code: CTP13/43 (SU 5055 7142 - SU 6470 7180)

## Pipeline between Cold Ash and Tilehurst, West Berkshire

## An Archaeological Recording Action for Optimise

by David Platt

Thames Valley Archaeological Services

Ltd

Site Code CTP13/43

#### **Summary**

**Site name:** Pipeline between Cold Ash and Tilehurst, West Berkshire

Grid reference: Between SU 5055 7142 and SU 6470 7180

Site activity: Archaeological recording action

**Date and duration of project:** 1st March -

Project manager: Jo Pine

Site supervisor: David Platt

Site code: CTP13-43

**Summary of results:** Excavations on an easement in advance of pipelaying revealed at least two phases of activity along the pipe's route. A prehistoric pit containing possible Bronze Age pottery was the earliest feature recorded. Three ditches of Roman date were identified most likely forming a field system. The other features remained undated with the exception of a post medieval and a modern ditch.

**Location and reference of archive:** The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited at West Berkshire Museum in due course

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#### Pipeline between Cold Ash and Tilehurst, West Berkshire An Archaeological Recording Action

by David Platt

**Report 13/43** 

#### Introduction

This report documents the results of an archaeological recording action carried out between Cold Ash Reservoir (SU 5055 7142) and Tilehurst (SU 6470 7180) (Fig. 1). The work was commissioned by Mr Mike Lang Hall, of Lang Hall Archaeology, 10 Orchard Close, Woolhampton, Reading, Berkshire RG7 5SD on behalf of Optimise. An 18.5km long water pipeline was to be laid from Cold Ash Reservoir (SU5055 7142) to Tilehurst (SU6470 7180) in West Berkshire. The route in part broadly followed the valley of the River Pang and then as far east as Theale. A significant part of the route was to be located within existing roads. The route is generally considered to lie within a zone which can be rich in archaeological finds and deposits with known archaeology recorded in the environs of Theale recorded during earlier pipeline construction. The floor of the Pang Valley is known to contain a long sequence of alluvial and peat deposits suitable for palaeoenvironmental reconstruction from pollen analysis.

It had been agreed with the Local Planning Authority that the proposed work constitutes permitted development and therefore planning permission is not required. Thames Water and its agents and contractors, however, have clearly defined archaeological obligations under the *Code of Practice on Conservation, Access and Recreation* (Water Industry Act 1989) and therefore Optimise is obliged to consider and mitigate the consequences of its activities.

The fieldwork was undertaken by David Platt, Dan Bray, Jo pine, Christopher Crabb and Lizzi Lewins between 1<sup>st</sup> and 22<sup>nd</sup> March 2013 and the site code is CTP13/43. The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited at West Berkshire Museum in due course.

#### Location, topography and geology

The eastern portion of the pipeline at Tilehurst lay within the existing road network and was not monitored. The first area of pipelaying in open ground was located at Theale golf course to the west of the M4 and finishing at the Cold Ash reservoir located at the northern extent of Cold Ash (Fig. 1). Due to its length the pipeline ranged in height from 45m to 65m above Ordnance Datum along its length and the land use was a mixture of pastoral

and arable fields. The underlying geology was valley gravel with a patch of upper chalk located around the Bradfield area (BGS 1946).

#### Archaeological background

The archaeological potential of the route has been studied in detail and presented in a desk-based heritage Assessment (Hall 2012) with follow-up aerial photographic (Cox 2012) and geophysical survey (Sabin and Donaldson 2012). In summary the route lies in an area previously considered to be lightly settled, at least for the tertiary geological outcrops flanking the Kennet Valley (Richards 1978) but more detailed fieldwork has shown this apparent low density is more likely to be a product of a lack of survey (Lobb and Rose1996; Collard et al 2006). The route passes close to an Iron Age hill fort (Grimsbury) and a Roman villa (Wellhouse Farm) as some of the more notable monuments in the study area. A large portion of the route lies adjacent to that of the Theale-Bradfield pipeline constructed in the 1990s. Archaeological monitoring of that route revealed, most notably, extensive Roman deposits to the north of Theale with Medieval deposits to the east of Bradfield (Raymond 1997). Recovery of pollen samples from peat deposits in the Pang valley recorded a long sequence of environmental reconstruction from the late glacial up to medieval times (Keith-Lucas pers. comm)

#### **Objectives and methodology**

The purpose of the recording action was to determine the presence/absence, extent, condition, character, quality and date of any archaeological deposits within the area of development. The pipeline was mostly to be laid in an open cut with a 15m wide easement and directional drilling beneath roads requiring only small (c. 3 x 2m) areas of topsoil striping for access. Other sections such as that adjacent to Grimsbury Hillfort and the stretch east of Theale to Tilehurst 1 was to lie within roads. Ecological or other sensitive areas would be subject only to a cut trench accessed by bog mats without topsoil removal. Site compounds were to be located in areas which had been used for the same purpose on previous occasions and did not require further archaeological monitoring. An area of known archaeology north of Theale was to be stripped of overburden and archaeological deposits recorded in advance of the main overburden and pipe laying operations.

The general objectives of the project were to:

- a) Excavate and record all archaeological deposits and features within the areas threatened by the proposed development.
- b) Produce relative and absolute dating and phasing for deposits and features recorded on the site.

Establish the character of these deposits in attempt to define functional areas on the site such as industrial, domestic, etc.

c) Produce information on the economy and local environment and compare and contrast this with the results of other excavations in the region.

#### **Results**

An easement strip mainly 15m wide was stripped of topsoil along the full route (excluding the road sections) using a 360° machine under continuous archaeological supervision. This stripping did not remove the subsoil and the archaeologically relevant horizon (top of the natural geology) could not be observed. Further, the pipe cut was made using a trenching machine that did not allow for the inspection of trench sides. Apart from a brief inspection to confirm that, due to thin topsoil, the stripping of these areas had not exposed the natural geology, no monitoring took place.

For the area of known archaeology located to the north of Theale, this easement was stripped of topsoil with a narrower section for the pipe trench stripped to the natural geology to allow excavation and recording of this archaeology (Pl.1-2). This area was subdivided into 7 separate zones divided by roads and field boundaries. These areas were numbered 1-7 and corresponded with the numbering used in the geophysical survey.

#### Area 1 (Pl. 1)

Area 1 contained two pits, 3 and 11. Pit 3 was 0.90m in diameter and 0.12m in depth and contained a single fill (54) which consisted of a mid greyish black clayey silt with occasional gravel inclusions. No finds were recovered. Pit 11 was 0.45m in diameter, this pit was not excavated as it was in a waterlogged area that was not affected by the pipeline trench. A single piece of prehistoric pot, possibly Bronze Age in date, was recovered from the fill of this pit in order to date it.

A total of five ditches were found. Ditch 4 was aligned N – S and was 0.77m wide and 0.25m deep and contained a single fill (55) which consisted of a mid brownish grey silty sand with very frequent gravel inclusions. No finds were recovered. Ditch 5 was aligned E – W and was 0.73m wide and 0.50m deep and contained a single fill (56) which consisted of a mid grey sandy silt with frequent gravel inclusions. No finds were recovered. Ditch 8 was aligned E-W and was 0.45m wide and 0.27m deep and contained a single fill (59) which consisted of a mid grey brown clayey sand with very frequent gravel inclusions. No finds were recovered. Ditch 9 was aligned NW – SE and was 0.50m wide and 0.15m deep and contained a single fill (60) which consisted of a mid brown grey sandy silt with occasional gravel inclusions. No finds were recovered. This ditch cut ditch 10 which was aligned NE – SW and was 0.80m wide and 0.12m deep and contained a single fill (61) consisting of a mid grey brown sandy silt with occasional grave inclusions. No finds were recovered. Two

gullies were found, Gully 6 was aligned E-W and was 0.44m wide and 0.17m deep and contained a single fill (57) which consisted of a mid greyish brown silty sand with frequent gravel inclusions. No finds were recovered. Gully 7 was 0.40m wide and 0.14m deep and contained a single fill (58) which consisted of a mid greyish brown silty sand with occasional gravel inclusions. No finds were recovered.

#### Area 2

Area 2 contained a single ditch 21 which was 1.0m wide and 0.40m deep and contained a single fill (71) which consisted of a dark brown grey sandy silt with frequent gravel inclusions. No finds were recovered.

#### Area 3 (Fig.3; Pls 2-3)

Area 3 contained 2 postholes, a single ditch and 2 pits. Posthole 13 was 0.30m in diameter and 0.18m deep and contained a single fill (63) which consisted of a mid reddish brown clayey silt with occasional gravel inclusions. Post hole 15 was 0.40m in diameter and 0.17m deep and contained a single fill (65) which consisted of a mid reddish brown clayey silt with frequent ravel inclusions. No finds recovered from these postholes. Pit 14 was 0.70m in diameter and 0.18m deep and contained a single fill (64) which consisted of a mid reddish brown clayey sand with frequent gravel inclusions. Pit 16 was 0.48m wide and 0.18m deep and was ovoid in plan. The pit contained a single fill (66) which consisted of a dark grey brown clayey silt with infrequent gravel inclusions. No finds were recovered from either pit. Ditch 12 was aligned ENE – WSW and was 0.93m wide and 0.25m deep and contained a single fill (62) which consisted of a dark grey brown silty sand with frequent gravel inclusions. Four pieces of pottery were recovered and these were identified as reduced sandy wares of Roman date. A single fragment of brick/tile was also recovered.

#### Area 4

Area 4 was stripped of topsoil only as the pipeline was tunnelled under a stream in this area.

#### Area 5(Fig. 4; Pl. 5)

Area 5 contained 5 ditches. Ditch 17 was aligned E-W and was 0.60m wide and 0.17m deep and contained a single fill (67) which consisted of a mid yellow brown clayey sand. Ditch 18 was aligned E-W and was 0.59m in diameter and 0.20m deep and contained a single fill (68) which consisted of a mid yellow brown clayey sand. Ditch 19 was aligned N-S and was 1.40m wide and 0.23m deep and contained a single fill (69) which consisted

of a mid greyish brown sandy silt with frequent gravel inclusions. Ditch 20 was aligned NE – SW and was 0.63m wide and 0.10m deep and contained a single fill (70) which consisted of a dark brown black clayey silt with occasional gravel inclusions. No finds were recovered from these ditches. Ditch 22 was not fully excavated as its fill (72) contained post medieval brick and tile.

#### Area 6 (Fig. 5)

Area 6 contained 5 ditches. Ditch 23 was aligned NE – SW and was 3.0 m wide and 0.48m deep and contained 2 fills. The primary fill (74) was a mid brownish grey sandy silt with frequent gravel inclusions. No finds were recovered. The secondary fill (73) was a mid greyish brown sandy silt with frequent gravel inclusions and contained 6 fragments of brick/tile. Ditch 24 was aligned NE – SW and was 0.56m wide and 0.27m deep and contained a single fill (75) which consisted of a dark grey brown silty sand with frequent gravel inclusions. No finds were recovered. Ditch 25 was aligned NE – SW and was 0.80m wide and 0.16m deep and contained a single fill (76) which consisted of a pale brownish grey sandy silt with frequent gravel inclusions. A single piece of pottery was recovered and identified as a rim of a Central Gaulish samian dish (Dragendorff form 31) and dated to mid 2<sup>nd</sup> Century AD.

Ditch 26 was aligned E-W and was 1.50m wide and 0.20m deep and contained a single fill (77) which consisted of a dark grey brown sandy silt with occasional gravel inclusions. A single piece if pottery was recovered and this was identified as the rim of an Oxfordshire white ware ring-necked flagon dated to AD 100-240.

Ditch 27 was aligned E-W and was 1.15m wide and 0.40m deep and contained a single fill (78) which consisted of a dark yellow brown silty sand with occasional gravel inclusions. The presence of modern metalwork, tile and wood fragments indicates that this feature is modern in date.

#### Area 7 (Fig. 6; Pl. 6)

Area 7 contained a ditch and a gully. Ditch 28 was aligned NE – SW and was 0.96m wide and 0.30m deep and contained a single fill (79) which consisted of a dark reddish brown sandy clay with frequent gravel inclusions. Gully 29 was aligned NE – SW and was 0.46m wide and 0.12m deep and consisted of a single fill (80) which consisted of a mid greyish brown sandy clay with frequent gravel inclusions. No finds were recovered from either feature.

#### **Finds**

#### Pottery by Jane Timby

The archaeological work resulted in the recovery of just seven sherds of pottery weighing 144 g dating to the prehistoric and Roman periods recovered from four features cuts. The pottery was scanned to assess its likely date and quantified. The resulting data is summarized in Table 1. The earliest piece is that from Pit [11] and is the base of a handmade, closed vessel. The fabric is tempered with coarse calcined flint. The character of the sherd suggests it is likely to be of earlier prehistoric date, possible Bronze Age.

The remaining six sherds are all Roman in date. Gully [25] produced a rim of Central Gaulish samian (freshly broken into two pieces). This is from a dish Dragendorff form 31 and likely to date to the mid-2<sup>nd</sup> century AD. Ditch [26] contained the rim of an Oxfordshire white ware ring-necked flagon with an expanded upper ring (Young 1977, type W3) with a production date of AD 100-240. Ditch [12] produced four sherds, all reduced sandy wares and not closely datable other than Roman. In broad terms all the Roman pottery could be contemporary suggesting a focus of activity in the mid to later 2<sup>nd</sup> century.

#### Struck Flint by Steve Ford

A small collection comprising 15 struck flints were recovered from the site (Appendix 4). All were topsoil/subsoil finds. The collection comprised 12 flakes, a scraper, a serrated lade and a strike-a-light. The flakes are heavily damaged, consistent with a topsoil origin and one flake may have been ploughstruck. One flake may have been retouched. The flakes are all mostly heavy and broad. The serrated blade was lightly patinated. The pieces, where cortex is still present, are all made from local flint, either from gravel or direct from the chalk.

The strike-a-light is the most distinctive item recovered. The piece is a core tool and is 77mm long, 36mm wide and 29mm deep. It has a near triangular section. It is flaked all over with some modern removals and superficially resembles a small axe or adze and may well have started life as such. However, one end is extensively battered. The battering extends slightly down two of the side ridges to suggest the tool was hand held and struck another hard surface at an oblique angle: If the piece had been used as a wedge, the battering would be concentrated on the end only. It is suggested that the piece, in conjunction with a piece of iron ore is a strike-a-light for fire making though there was no evidence of iron staining on the battered end.

Apart from the serrated blade that is of Mesolithic or possibly early Neolithic date, none of the remainder of the collection is chronologically distinctive and is likely to be of later Neolithic or Bronze Age date.

#### Metalwork by Steven Crabb

A total of 8 metal artefacts were recovered all 8 ferrous. All were recovered from post medieval ditch 27. Where identifiable the ferrous objects (Cat. Nos. 1-8) are nails or fragments measuring between 30mm and 67mm long.

#### Stone by Danielle Milbank

A single piece of worked stone was recovered from 12 (62) which is a pale pinkish grey fine grained quartz-rich stone (perhaps metaquartzite) which has been worked on one side to produce a flat, smooth surface with a rounded edge. It has a groove c. 2mm deep on the flat surface which suggests the piece may have been used as a whetstone.

#### Ceramic Building Materials by Danielle Milbank

A total of 15 fragments of ceramic building material (3474g) was recovered from four contexts during the recording action. The majority of the material was tile, with two examples of brick present, and the material is summarised in Appendix 3.

The tile fabric was examined at x10 magnification and was typically sandy, with occasional small well-sorted quartz sand inclusions. The colour varied from slightly orange red to darker red. The fragments were generally fairly hard and well-fired, and all of the fragments had a rough underside, indicating that they were made using a sanded mould.

Context 22 (72) contained a fragment of peg tile 10mm thick, of a hard, evenly-fired, slightly laminated fabric, of broadly medieval or post-medieval date. From this context, a complete brick was recovered which measures 230mm x 105 x 60mm, unfrogged and with sharp arrises. The fabric is a homogenous, evenly fired sandy clay with a red colour, and the characteristics suggest a date in the 18th or early 19th century.

An example from 23 (73) was hard, evenly fired and had a red colour, and was 13mm thick, and likely to be of broadly late medieval or post medieval date.

Context 27 (deposit 78) included a large brick fragment which is of a hard, evenly-fired fabric with frequent coarse sandy inclusions and a red colour. The piece is very abraded but the upper and lower surfaces are flat and even, and overall the characteristics suggest that it is post-medieval in date.

Overall, the ceramic building material assemblage has no notable features and can be broadly characterised as domestic, and is overall late medieval and post-medieval in date.

#### Conclusion

The small length of the pipeline route containing certain or probably archaeological deposits was stripped of overburden and examined as seven areas. The deposits revealed were mostly that of linear features few of which contained dating evidence. Some were of post medieval date, others of certain or probable Roman date, but all of these seems to reflect elements of an enclosed landscape of field boundaries or drains in the respective periods, located away from core occupied areas. A single pit containing prehistoric pottery seemed to occur in isolation and it's significance is unclear. Similarly a collection of struck flint recovered from a topsoil-stripped area point to other earlier prehistoric activity but of uncertain nature.

#### References

BGS, 1946, British Geological Survey, 1:50000, Sheet 268, Drift Edition, Keyworth

Brickley, M and McKinley, J (eds), 2004, Guidelines to the Standards for Recording Human Remains, IFA Pap 7

Collard, M, Darvill, T and Watts, M, 2006, 'Ironworking in the Bronze Age? Evidence from a 10th century BC settlement at Hartshill Copse, Upper Bucklebury, West Berkshire', *Proc Prehist Soc* **72**, 367–421

Cox, C, 2012, Speen WTW Do Reduction pipeline (proposed pipeline from Cold Ash Reservoir to Tilehurst,) Assessment of aerial photographs for archaeology, Air Photo Services, Brinkworth

English Heritage 2005, Research Agenda, English Heritage, London.

English Heritage 2011, *Environmental Archaeology*, Centre for Archaeology Guidelines 1, English Heritage, Portsmouth, (2nd edn)

Hall, M L, 2012, B668 Speen WTW Do Reduction pipeline (proposed pipeline from Cold Ash Reservoir to Tilehurst, West Berkshire), An assessment of the archaeological implications, Lang Hall Archaeology, Woolhampton

Hammond, M, 1981, Bricks and Brickmaking, Shire Publications, Haverfordwest

Harley, L S, 1974, A typology of brick, J British Arch Assoc 37, London

Lobb, S J and Rose, P G, 1996, *Archaeological Survey of the Lower Kennet Valley, Berkshire*, Wessex Archaeol Rep **9**, Salisbury

McKinley, J I and Roberts, C, 1993, *Excavation and post-excavation treatment of cremated and inhumed human remains*, Institute of Field Archaeologists Techn Pap **13**, Reading

NPPF, 2012, National Planning Policy Framework, Dept Communities and Local Govt, London

Raymond, F, 1997, 'The investigation of Roman and Medieval settlements found during the construction of the Theale to Bradfield pipeline', *Berkshire Archaeol J* **75** (for 1994–7), 41–73

Richards, J C, 1978, *The Archaeology of the Berkshire Downs*, Berkshire Archaeol Comm Pubn **3**, Reading Sabin, D and Donaldson, K, 2012, Speen WTW Do Reduction pipeline (proposed pipeline from Cold Ash Reservoir to Tilehurst, West Berkshire, Magnetometer Survey report, Archaeological Surveys, report 440, Chippenham

Young, C J, 2000, The Roman pottery industry of the Oxfordshire region, BAR 43 (reprint), Oxford

**APPENDIX 1**: Feature details

Cut	Fill (s)	Type	Date	Dating evidence
1	52	Field drain	Modern	
2	53	Field drain	Modern	
3	54	Pit	Bronze Age?	Pot
4	55	Ditch	-	
5	56	Ditch		
6	57	Gully	-	
7	58	Gully		
8	59	Ditch	-	
9	60	Ditch	-	
10	61	Ditch		
11		Pit		
12	62	Ditch	Roman?	Pot
13	63	Posthole	-	
14	64	Posthole	-	
15	65	Posthole	-	
16	66	Gully	-	
17	67	Ditch	-	
18	68	Gully	-	
19	69	Ditch	-	
20	70	Ditch	-	
21	71	Ditch	-	
22	72	Ditch	Post-Medieval	Tile
23	73, 74	Ditch	Post-Medieval?	Tile
24	75	Ditch terminus	-	
25	76	Gully	Roman	Pot
26	77	Ditch	Roman	Pot
27	78	Ditch	Post-Medieval	Brick, wood, metal
28	79	Ditch	-	
29	80	Gully	-	

**Appendix 2:** Catalogue of Pottery

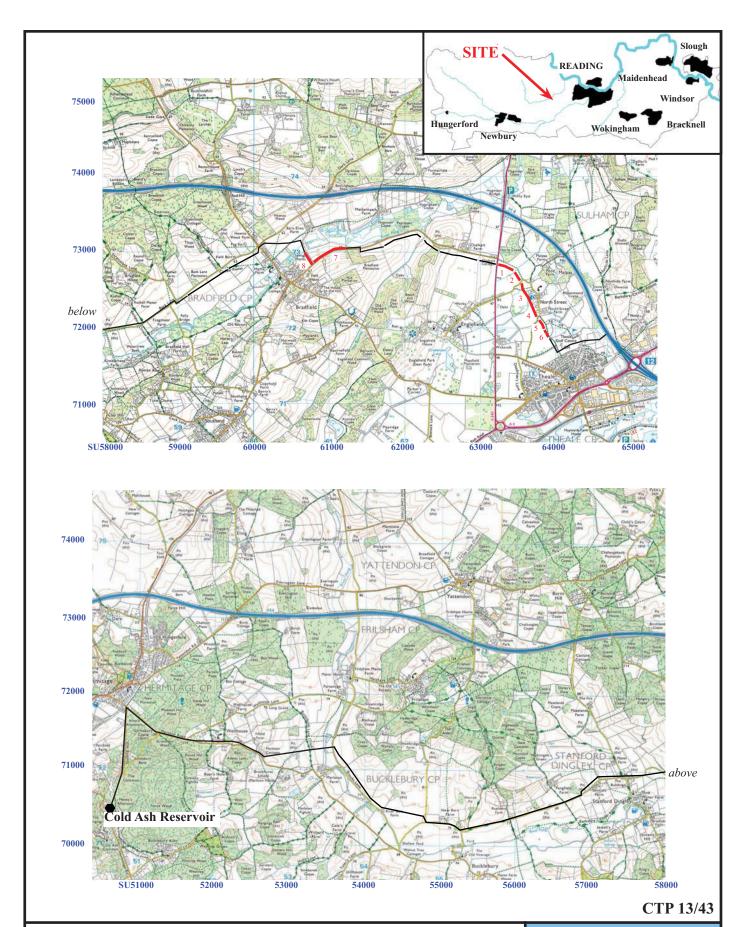
Cut	Deposit	Prehistoric	Roman			No	Wt (g)
			Samian	Oxford	Other		
11		1				1	104
25	76		1			1	4
26	77			1	0	1	11
12	62				4	4	25
TOTAL		1	1	1	4	7	144

Appendix 3. Catalogue of ceramic building material

Cut	Deposit	Type	Area	No	Wt (g)	
12	62	Ditch	3	1	2	
22	72	Ditch	2	10	2838	
23	73	Ditch	6	3	76	
27	78	Ditch	6	1	558	

Appendix 4. Catalogue of struck flint

Cat No	NGR East	NGR North	Intact flake	Intact blade	Broken flake	Core	
1	462728	172998			1		Scraper
2	462739	172990			1		
3	462745	172988			1		
					(retouched?)		
4	462751	172993	1		2		
10	462136	173266				1	
11	462140	173263	1(ploughstruck?)				
12	462065	173246			1		
13	462046	173240		1 (serrated,			
				patinated)			
14	461822	173172		1 /	1		
15	461804	173166					Strike-a-light
16	461817	173181			1 (patinated)		
17	459124	172443			1		

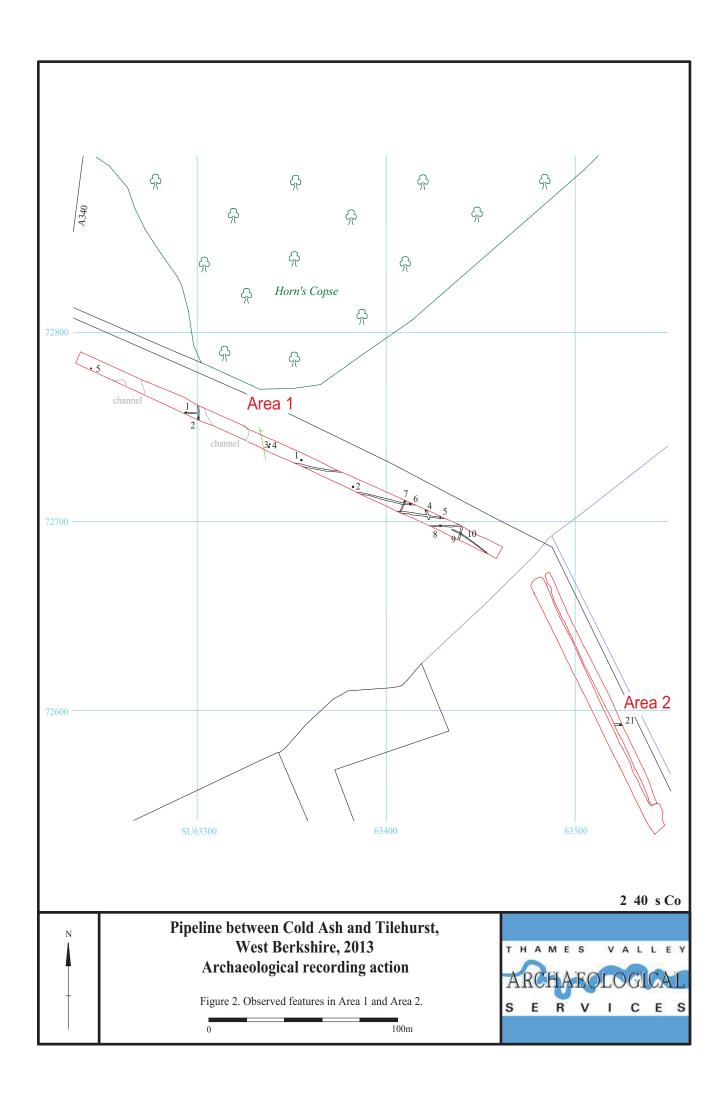


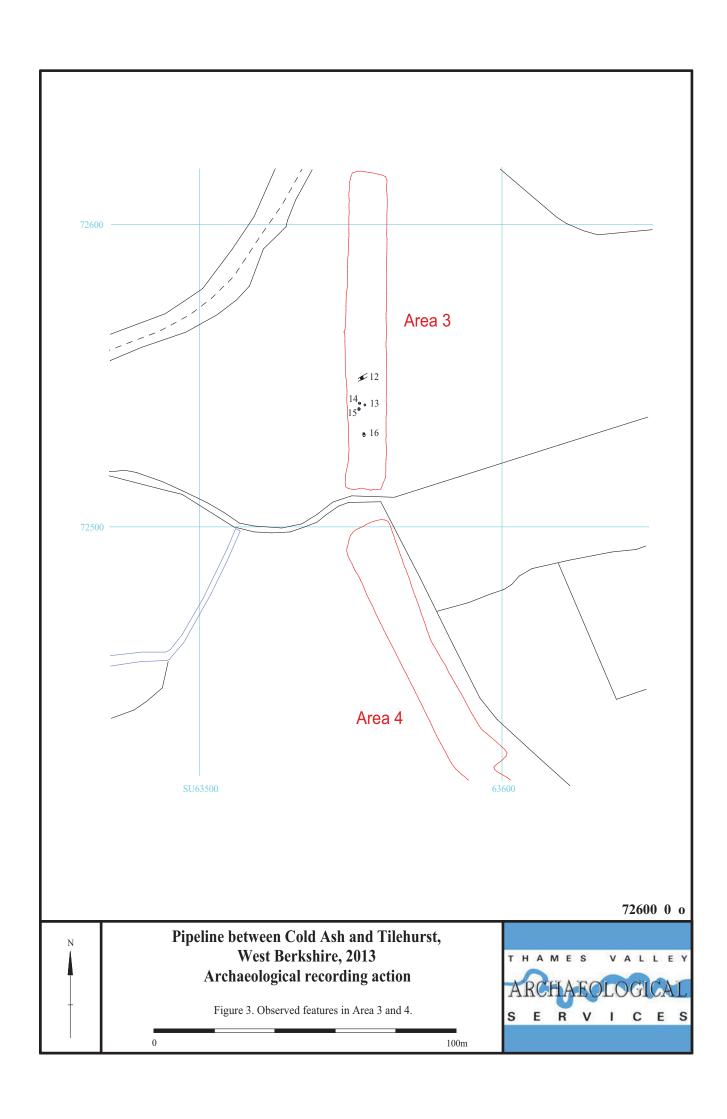
#### Pipeline between Cold Ash and Tilehurst, West Berkshire, 2013 Archaeological recording action

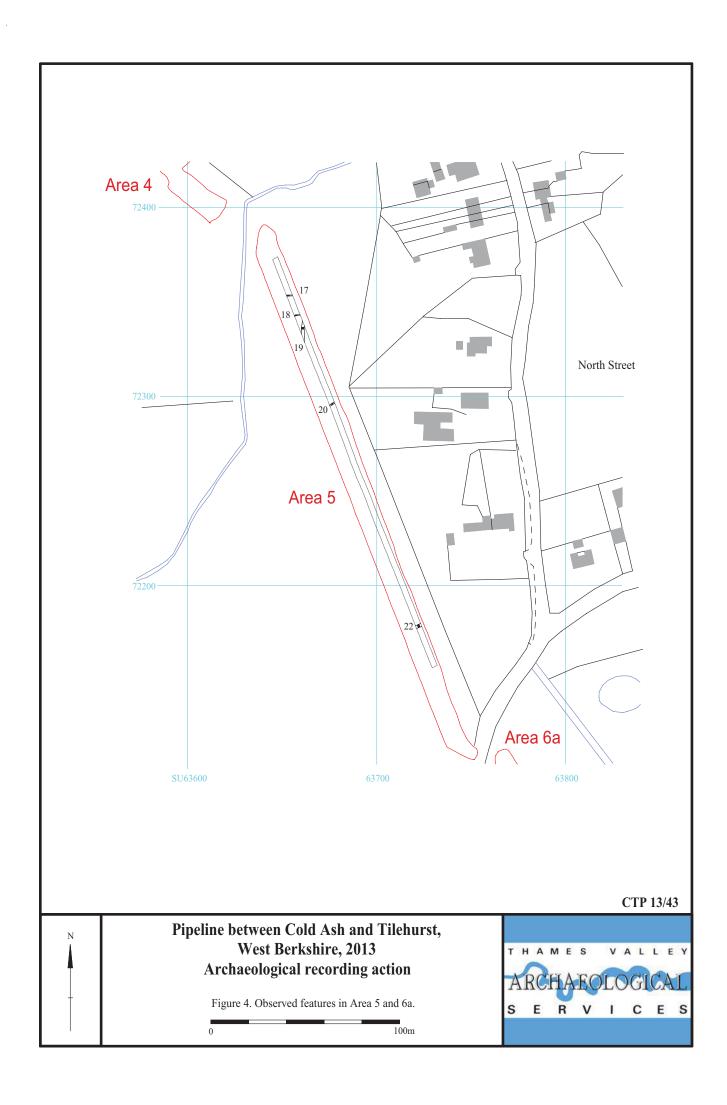
Figure 1. Location of pipeline route, showing location of areas examined in detail.

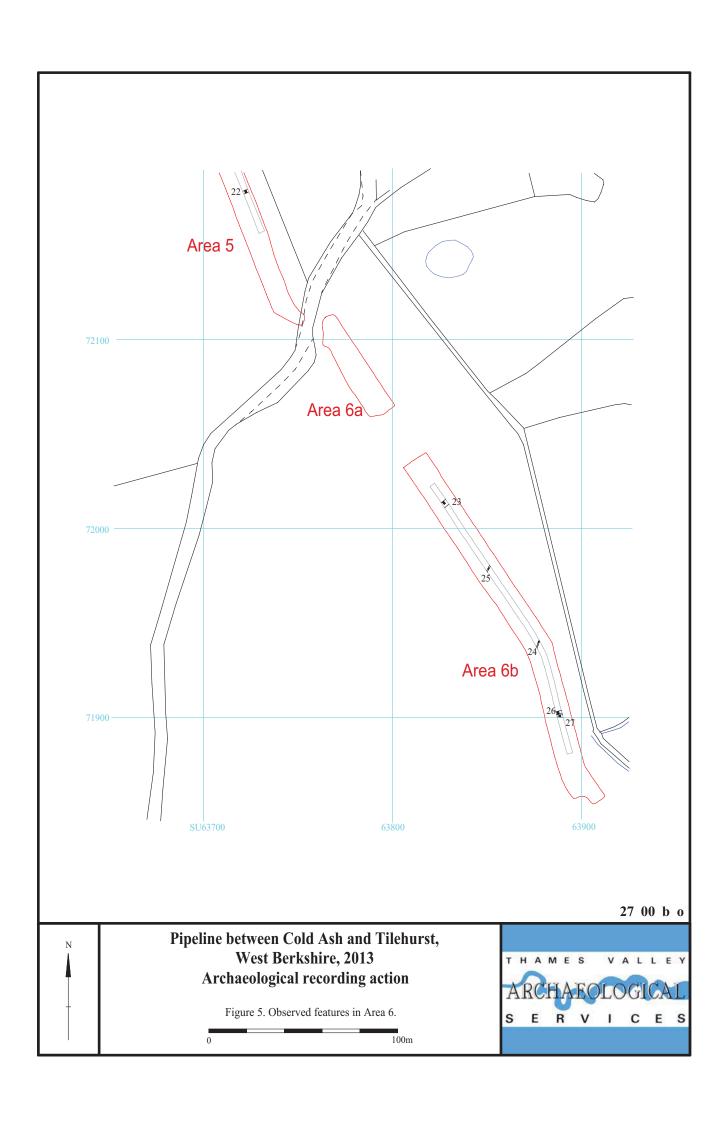
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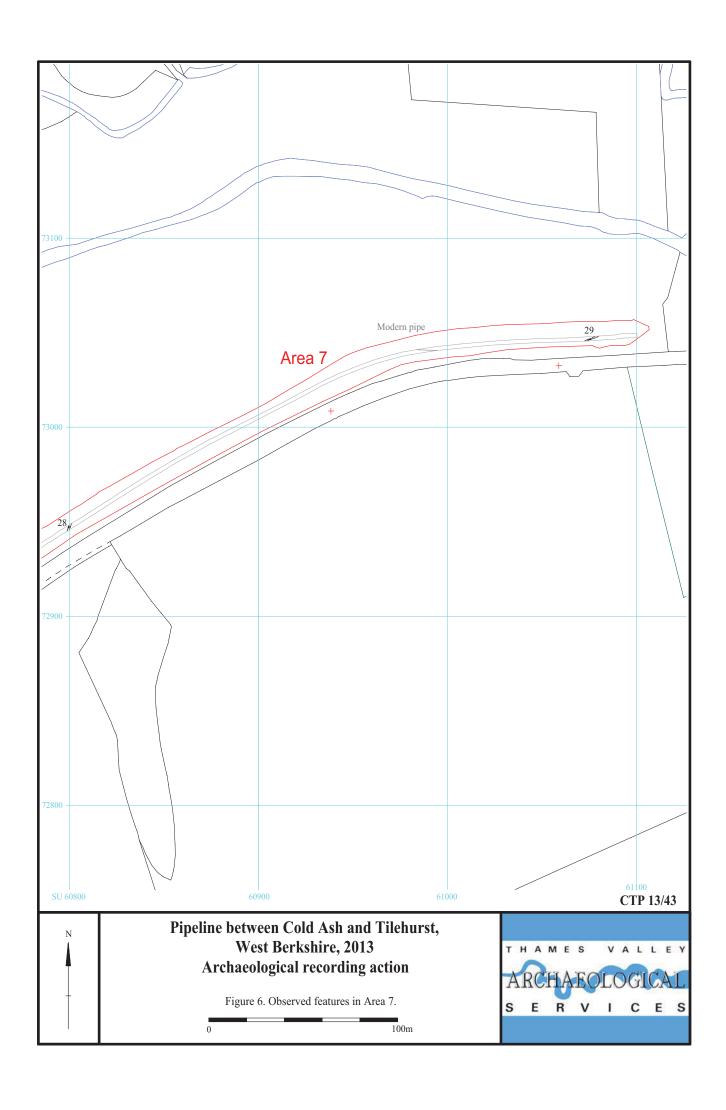












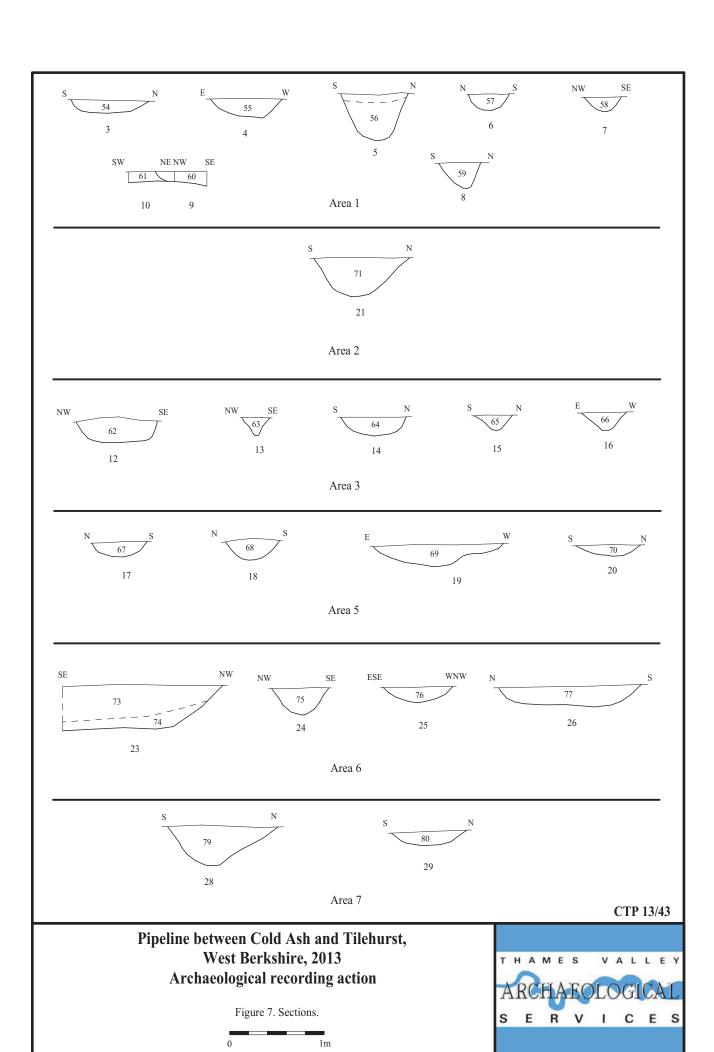




Plate 1. Area 1, ditch 10 in foreground, looking north west.



Plate 2. Area 3, looking south, Scales: 2m and 1m.

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Plates 1 - 2.





Plate 3. Area 3, section of ditch 12, looking north east, Scale: 1m.



Plate 4. Area 6, section of ditch 25, looking south west, Scales: 0.3m and 0.1m.

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Pipeline between Cold Ash and Tilehurst, West Berkshire, 2013 Archaeological watching brief

Plates 3 - 4.





Plate 5. Area 5, looking south, Scales: 2m and 1m.



Plate 4. Area 7, looking west, Scales: 2m and 1m.

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Plates 5 - 6.



### **TIME CHART**

#### **Calendar Years**

Modern	AD 1901
Victorian	AD 1837
Post Medieval	AD 1500
Medieval	AD 1066
Saxon	AD 410
Roman Iron Age	BC/AD
Bronze Age: Late	1300 BC
Bronze Age: Middle	1700 BC
Bronze Age: Early	2100 BC
Neolithic: Late	3300 BC
Neolithic: Early	4300 BC
Mesolithic: Late	6000 BC
Mesolithic: Early	10000 BC
Palaeolithic: Upper	30000 BC
Palaeolithic: Middle	70000 BC
Palaeolithic: Lower	2,000,000 BC
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