



# Bowthorpe Tower Growth Scheme, Norfolk – WAT-06660

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# Bowthorpe Tower Growth Scheme, Norfolk – WAT-06660

## *Archaeological Monitoring Report*

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## Summary

Between 15-16th May, 5-6th June 2018, 3rd and 14-19th January 2019 Oxford Archaeology (OA) carried out archaeological monitoring at Bowthorpe Tower Growth Scheme, Norfolk - WAT 06660. The monitoring was carried out on two separate sections of undeveloped agricultural land on the route of a new Anglian Water pipeline. The first section subject to monitoring lay on undeveloped marsh land upon the floodplain of the River Yare, that looped around the site of the deserted medieval settlement of Bowthorpe. The second section lay on undeveloped farmland either side of New Road, to the north of the river and west of the historic settlement. No archaeological features were observed or any artefacts were recovered from the pipeline cutting.

## Acknowledgements

Oxford Archaeology would like to thank Anglian Water for commissioning this project. OA is grateful to John Percival (Planning Archaeologist) who monitored the work on behalf of Norfolk County Council for his advice and guidance. The project was managed for Oxford Archaeology by Nick Gilmour. The pipeline trenching work was monitored by Adele Lord, Dan Firth, Toby Knight and Jon Cousins and the illustrations were produced by Charlotte Walton.

## 1 INTRODUCTION

### 1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) was commissioned by Anglian Water to monitor two sections of a new, c.3km long pipeline trench cut for the Bowthorpe Tower Growth Scheme – WAT-06660 (Fig. 1). These sections comprised the sum of undeveloped land within the scheme that lay on the periphery of the historical deserted medieval settlement of Bowthorpe.
- 1.1.2 Although the Local Planning Authority did not set a brief for the work, this archaeological monitoring was undertaken in accordance with a Written Scheme of Investigation (Gilmour 2018) for the project approved by John Percival of Norfolk County Council Historic Environment Service (NCC/HES). This document outlines how OA implemented the specified requirements.

### 1.2 Location, topography and geology

- 1.2.1 The pipeline lies within the parish of Costessey to the north of the River Yare, with a short section to the south of the river within the parish of Colney; both located on the western urban fringe of Norwich (Fig. 1). The first c.0.5km long section subject to monitoring (Section 1) lay at c.10m OD on marsh land upon the floodplain of the River Yare between the two parishes (Fig. 2; centred on TG 1802 0812). The second c.0.9km long section (Section 2) lay at c.20m OD on farmland either side of New Road, to the north of the river (Fig. 2; centred on TG 1699 0929). The floodplain immediately to the west has been heavily quarried for sand and to the east lies within Bowthorpe Marsh Nature Reserve.
- 1.2.2 The underlying geology comprises Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (undifferentiated). This is overlain by superficial deposits of alluvium (clay, silt, sand and gravel) or River Terrace deposits (sand and gravel) (<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>, accessed 5th February 2019).

### 1.3 Archaeological and historical background

#### *Introduction*

- 1.3.1 The pipeline scheme skirts the deserted medieval village of Bowthorpe (NHER 5352; centred on TG 1775 0910). The name Bowthorpe may derive from Old Scandinavian Búi's (Bow) farmstead (thorpe). As part of the Hundred of Forehoe, the Lord of the manor of Bowthorpe was referred to in the Domesday book as Hagni (the reeve) in 1066 and belonged to King William in 1086. The survey of 1086 lists 19 households comprising 14 villagers, three slaves and two freemen. The ploughland consisted of two lord's plough teams and two men's plough teams. Other resources listed include 10 acres of meadow, woodland for 16 pigs and one mill (Domesday Book online). The medieval manorial site lies in the village at the current Bowthorpe Hall (NHER58791; TG 1779 0905).

- 1.3.2 Opposite the hall, St Michael's church is documented as far back as the Anglo-Saxon period but was abandoned by the 16th century and survives as a ruin (NHER 58792; TG 1771 0909). Its abandonment reflects a low population level for the village by this date. By 1789 the village was merged with Earlham to the east and the village left to ruin. Metal detecting of the site between 1974 and 1987 has brought to light artefacts from the deserted village along with earlier Roman metal artefacts. Anglo-Saxon and Medieval pottery sherds are also recorded being found on the site.
- 1.3.3 A full search of the Norfolk Historic Environment Record (NHER) of a 1km radius centred on the pipeline route was commissioned from NCC/HES. The following is a summary based on the results of the NHER search of this study area, with selected records shown on Fig. 2.

### *Early Prehistoric*

- 1.3.4 Early Prehistoric flint implements have been found as surface finds across the parishes of Colney and Costessey. In particular, the marshes flanking the River Yare (subject to investigation since 1973) have produced a large number of worked flints including Mesolithic blades and tools (NHER 9310; centred on TG18 08). Furthermore, a Palaeolithic flint handaxe was recovered from a field near the weir in the river (NHER 9398). The wider study area findspots have included: Upper Palaeolithic flintwork (NHER 60014; TG 1767 0839); a Mesolithic flint blade (NHER 35739; TG 17939 07916); and further Mesolithic flintwork (NHER 61925; TG 1835 0796 and NHER 11385; centred on TG 176 098).

### *Later Prehistoric*

- 1.3.5 The marshland adjacent to the River Yare has also produced finds of later prehistoric flintwork including Neolithic axes, horseshoe scrapers and Late Neolithic/Early Bronze Age barbed and tanged arrowheads (NHER 9310; centred on TG 18 08). Other findspots on the river banks have included a flint flake (NHER 19140; TG 176 085).
- 1.3.6 There are numerous flintwork finds to evidence Neolithic occupation of the wider study area such as at: NHER61925 (TG 1835 0796), NHER 19827 (centred on TG 1731 0810); NHER 60011 (centred on TG 1791 0840); NHER 25167 (centred on TG 17 08); NHER 7873 – axehead (TG 1703 1034); NHER 9331/9332 – chipped tool (TG 1779 0769); NHER 34566 (centred on TG 1776 0823); NHER 12192 (centred on TG 17 08); and NHER 13409 (centred on TG 1838 0833).
- 1.3.7 Direct evidence for Neolithic occupation was uncovered through excavation in 1999-2000 (NHER 9304; TG 1778 0846). A possible small roundhouse-like structure was revealed, of Early Neolithic date along with a cluster of Late Neolithic/Early Bronze Age pits yielding fragments of 17 Beakers. Considerable quantities of worked flints, including tools, were also found in association with both the Early Neolithic and Late Neolithic/Early Bronze Age features.
- 1.3.8 A further settlement site was excavated by NAU at the John Innes Centre (NHER 9332; centred on TG 1806 0755). This site uncovered a Neolithic occupation layer with flint scatters representative of flint working (including tools and debitage) and several Neolithic features including a ditch, rectangular structure and a possible cobbled floor surface. Approximately 28,000 flints were recovered by the excavation.

- 1.3.9 The continued Bronze Age occupation of the landscape is evidenced by cropmarks of ditches (NHER 54479; centred on TG 1652 1034), a field system and ring ditch (NHER 9316; centred on TG 179 082), a further ring ditch (NHER 61924; TG 1795 0773) and possible mortuary enclosure (NHER 61021; centred on TG 16 09). The discovery of two Bronze Age barrows (NHER 9335; TG 1793 0773 and NHER 9336; TG 1779 0778) and cremation urn (NHER 13978; TG 1721 0971) are also detailed in the record. Excavation of a further barrow (NHER 11431; centred on TG 172 098) in 1979 established an Early Bronze Age date for this monument that contained ten coffin burials of flexed individuals with few associated artefacts.
- 1.3.10 Prehistoric flint working sites that may be indicative of further possible settlement are listed as NHER 61926 (centred on TG 1836 0785), NHER 37646 (centred on TG 16 10) and NHER 39351 (centred TG 1648 1013). Settlement features are also described for record entry NHER 40711 (centred TG 18436 09033). More general flintwork findspots are given as NHER 36052 and 36208 (centred TG 1749 0922) and NHER 9342 (TG 1780 0782).
- 1.3.11 Bronze Age metalwork finds in the study area comprise an Early Bronze Age dagger (NHER 9309; TG 178 086) and Late Bronze Age hoard (NHER 16398; No NGR given).
- 1.3.12 Cropmarks of enclosures, fields and trackways of possible Iron Age date are centred on TG 161 103 (NHER 31518). Three coins are also listed for the period within the study area: a silver coin of the 'Bury Tribe' face-horse type (NHER 21705), and two Iceni coins (NHER 15458 and 16300).

### *Roman* (c.AD43-410)

- 1.3.13 Two possible Roman roads pass broadly east to west through the northern part of the study area (NHER 15768/54453 and NHER 5244). Their alignments are evidenced by cropmarks and undated linear features. Evidence for field systems and ditches are also present on Bishy Barnabee Way (NHER 39797; centred on TG 1783 0875) and Three Score Road (NHER 40711; TG 18436 09033). Pottery surface finds are also listed to suggest settlement in the vicinity of St Michael's church (NHER 9337; TG 1813 0779) and at NHER9311. Pottery sherds have also been found at NHER16292 (centred on TG 175 099) and along the bank of the River Yare (NHER 12454; TG 1786 0798) with dredging of the river producing further sherds along with a human skull (NHER 9294; TG 1717 0913).
- 1.3.14 Metal-detecting of Bowthorpe during the 1970-80s, prior to the extensive modern development of the housing estate within the loop of the River Yare (upon the deserted medieval village) has resulted in numerous Roman coins and brooches being brought to light, detailed below in Table 1.

NHER	Description	NGR
Coins		
NHER 9311	Two copper alloy Roman coins of Constantine I and Hadrian	Not given
NHER 33059	Silver and copper alloy Roman coins	TG 16 09 (point)
NHER 9338	Roman coin of Vespasian was found on the banks of the River Yare	TG 1792 0794
HER 13924	Roman sestertius of Faustina Junior	TG 17 09 (point)

NHER	Description	NGR
NHER 154	Roman coins	TG 17 07 (point)
NHER 30662	Two 3rd century AD coins	TG 17 09 (point)
NHER 24041	Roman coin	TG 17 09 (point)
NHER 52580	Two Roman coins	TG 16 09 (point)
NHER 23827	Roman coins	TG 17 09 (point)
NHER 23770	4th century Roman coin	TG 17 09 (point)
NHER 24229	Roman coin. An Antoninianus of Carausius dating to 287-293	TG 18 08 (point)
NHER 23967	Roman coin of Valens	TG 17 09 (point)
NHER 23966	Roman coin of Constantine I	TG 17 09 (point)
NHER 23968	Roman coin of Constans or Constantius, dated to 347-78	TG 17 09 (point)
Brooches		
NHER 33059	Roman brooch	TG 16 09 (point)
NHER 21949	Colchester derivative brooch	TG 18 08 (point)
NHER 25166	Roman dolphin brooch	Not given
NHER 15475	Roman dolphin brooch	TG 18 08 (point)

Table 1: NHER list of Roman metalwork findspots within study area

### Anglo-Saxon (c.AD410-1066)

- 1.3.15 Several entries relating to the Anglo-Saxon period are placed within the study area. There are two separate references to metalwork findspots to suggest the presence of cemetery sites (NHER 17994; TG 17 09 (point) and NHER 24833; NGR not given). Evidence for Anglo-Saxon settlement in the study area has been uncovered by recent archaeological work at Three Score Road where three excavated sunken-featured buildings contained Early Saxon pottery and loom weights (NHER 40711; centred TG 18436 09033). A further occupation site was excavated at Bishy Barnabee Way where sunken featured buildings and post hole alignments were revealed (NHER 35757; centred TG 1781 0885). Surface findspots of Middle Saxon pottery are also listed (NHER 37094; centred TG 1721 0969 and NHER 20909; centred TG 1723 0964).
- 1.3.16 As described above for the Roman period, metal-detecting from the 1980s to modernity of Bowthorpe and its surrounding environs has found a huge amount of multi-period metalwork artefacts. The NHER list of metalwork artefacts found within the study area, of Anglo-Saxon origin is summarised below in Table 2.

NHER	Description	NGR
Coins		
NHER 20194	Late Saxon coin	Not given
NHER 9311	Middle Saxon sceatta coin	Not given
NHER15622	Middle Saxon silver coin Frisian sceatta dating to the late 7th/early 8th century	Not given
NHER 22751	Late Saxon coins	Not given
Brooches		
NHER 17994	Early Saxon brooch fragments (and a possible vessel or bucket mount)	
NHER 20666	Middle Saxon caterpillar brooch	
NHER 20860	Late Saxon disc brooch with interlaced decoration	TG 17 08 (point)
NHER 36097	Two Late Saxon brooches (Scandinavian type)	centred on TG 16 09
NHER 22218	Late Saxon brooch	TG 17 09 (point)
NHER 20861	Small Early Saxon cruciform brooch	TG 17 08 (point)



NHER	Description	NGR
NHER 9332	Early and Late Saxon brooches	centred on TG 1806 0755
Miscellaneous		
NHER 17034	Late Saxon garment hook	TG 17 09 (point)
NHER 23771	Late Saxon stirrup strap mount	TG 17 09 (point)
NHER 22217	Late Saxon strap end	TG 17 09 (point)
NHER 24833	Metal work finds	Not given

*Table 2: NHER list of Anglo-Saxon metalwork findspots within study area*

### **Medieval (c.AD1066-1540)**

- 1.3.17 With the construction of the extensive 1980s housing estate over the deserted medieval village of Bowthorpe, there are few entries within the record detailing settlement remains. However, in 1965 the remains of a house of possible medieval origin was found here with medieval brick, mortared flints and pottery sherds unearthed (NHER 9312/NHER 15296; centred TG 1761 0955). Of note was the discovery of medieval walls and pits containing pottery fragments during construction of the bypass to the north in 1973 (NHER 9341; TG 1788 0783). A stone-lined well is also recorded (NHER 15296; TG 1768 0948). Both entries NHER 54452 and NHER 54451 detail the presence of possible medieval trackways. The only further remains of note in the locality consist a surface scatter of medieval pottery recovered from the fields (NHER 11385; TG 176 098).
- 1.3.18 As described in Section 1.3.5 above, the marsh land of the River Yare at Bowthorpe has been subject to investigation since 1973 and yielded a large amount of multi-period metalwork. A few of the medieval highlights consist of a 14th century strap end made of two plates with a cast 'animal-head' terminal, a Viking disc brooch, a medieval gilded bronze stud decorated with a crown and fleur-de-lis, a medieval signet ring and a Charles I half groat coin (NHER 9310; centred on TG 18 08). Furthermore, as described above for the Roman and Anglo-Saxon periods, metal-detecting of the wider environs of Bowthorpe has produced items of medieval date, detailed below in Table 3.

NHER	Description	NGR
Coins		
NHER 15296	Medieval coins	TG 1768 0948
NHER 30662	Medieval Flemish coin	TG 17 09 (point)
NHER 9332	Medieval coins	centred on TG 1806 0755
Brooches		
NHER 18986	Medieval silver brooch	TG 17 09 (point)
NHER 18987	Medieval silver brooch	TG 17 09 (point)
NHER 24040	Medieval ring brooch	TG 17 09 (point)
Miscellaneous		
NHER 23828	Medieval belt/harness stud	TG 17 09 (point)
NHER37311	Medieval metal finds.	TG 17 07 (point)

*Table 3: NHER list of medieval metalwork findspots within study area*

### *Post-medieval* (c.AD1540-1750)

1.3.19 Within the study area, earthworks of linear ditches are described as possible post-medieval drainage features (NHER 54438; centred TG 1687 0896). A fieldwalking event in 1976 recovered a number of post-medieval pottery sherds (NHER 11385; centred TG 176 098). Post-medieval finds are also listed for multi-period entries NHER 17994 (TG 17 09 (point)), NHER 44080 (centred on TG 17 07), NHER 52663 (centred on TG 16 09) and NHER 60013 (centred on TG 1767 0883).

## 1.4 Previous work in NHER search area

1.4.1 The list of monuments described in Section 1.3 is the result of numerous archaeological events (fieldwalking, magnetometry survey, watching briefs, evaluations and excavations) that have taken place within Bowthorpe and the study area. These events are shown of Fig. 2 with a summary presented below in Table 4.

NHER Event	Organisation	Associated NHER Monument numbers and description	NGR
Prehistoric			
ENF133789	NAU Archaeology	Neolithic worked flints (Find Spot 60011)	Centred TG 1791 0840
Roman			
ENF95983	NAU Archaeology	Roman ditches and field system, Bishy Barnabee Way: Phase 2 (Monument 39797)	Centred TG 1783 0875
Anglo-Saxon			
ENF91083	Archaeological Project Services	Early Saxon occupation site, Bishy Barnabee Way (Monument 35757)	Centred TG 1781 0885
ENF95936	NAU Archaeology	Early Saxon occupation site, Bishy Barnabee Way (Monument 35757)	Centred TG 1785 0885
Medieval			
ENF136348	Ancient Monuments Laboratory	Bowthorpe deserted medieval village (Monument 5352) - Geophysical Survey (magnetometry)	Centred TG 1779 0921
Multi-period			
ENF120953	NAU Archaeology	Undated features, prehistoric flint and pottery, medieval and post-medieval finds, Roundwell public house (Monument 51561)	Centred TG 16807 10444
ENF122743	Northamptonshire Archaeology	Possible kiln site (Monument 55992), 55993 Probable ditches of unknown date (Monument 55993), Possible Bronze Age ring ditch (Monument 55994), Possible kiln site (Monument 55995), Probable ditches of unknown date (Monument 61168)	Centred TG 1729 0606
ENF133800	NAU Archaeology	Early Neolithic and Late Neolithic/Bronze Age occupation site and Roman field system (Monument 9304)	Centred TG 1778 0841
ENF137898	Archaeological Solutions	Prehistoric lithic working site, post medieval finds scatter, and undated features (Monument 39351)	Centred TG 1637 1013
ENF141515	NPS Archaeology	Large prehistoric ring-ditch/enclosure and multi-period features and finds (Monument 61924)	Centred TG 1792 0771
ENF141516	NPS Archaeology	Undated and post-medieval features and prehistoric finds (Monument 61925)	Centred TG 1835 0796

NHER Event	Organisation	Associated NHER Monument numbers and description	NGR
ENF141519	NPS Archaeology	Prehistoric worked flints and post-medieval and modern features (Monument 61926)	Centred TG 1836 0785
ENF5519	NAU Archaeology	Mesolithic worked flints and medieval and post-medieval pottery sherds (Find Spot 11385)	Centred TG 1766 0981
ENF86654	NAU Archaeology	Prehistoric flint working site and multi-period finds, Earlham/Bowthorpe Marshes (Monument 9310)	Centred TG 1825 0871
ENF87044	NAU Archaeology	Neolithic flint working and occupation site and multi-period finds (Monument 9332)	Centred TG 1804 0771
ENF87452	NAU Archaeology	Palaeochannels, various undated features, and Neolithic and medieval or post-medieval finds (Monument 60012)	Centred TG 1794 0827
ENF87766	NAU Archaeology	Multi-period features and prehistoric flint (Monument 34566)	Centred TG 1776 0823
ENF90305	NAU Archaeology	Neolithic flint working and occupation site and multi-period finds (Monument 9332)	Centred TG 1807 0772
ENF90328	NAU Archaeology	Neolithic flint working and occupation site and multi-period finds (Monument 9332)	Centred TG 1798 0754
ENF92211	NAU Archaeology	Prehistoric flint and post medieval pottery sherd from Land at Chapel Break, Bowthorpe (Findspot 36052)	Centred TG 1749 0922
ENF92292	NAU Archaeology	Multi-period pottery sherds and prehistoric flints, Chapel Break (Monument 36208)	Centred TG 1696 0954
ENF92448	NAU Archaeology	Neolithic flint working and occupation site and multi-period finds (Monument 9332)	Centred TG 1798 0754
ENF93087	NAU Archaeology	Undated hollow way and post-hole and post-medieval or modern gully (Monument 34565), Multi-period features and prehistoric flint (Monument 34566), Site with no archaeological finds or features (Negative evidence 34567), Site with no archaeological finds or features (Negative evidence 34568), Neolithic worked flints (Find Spot 60011), Palaeochannels, various undated features, and Neolithic and medieval or post-medieval finds (Monument 60012), Early Neolithic and Late Neolithic/Bronze Age occupation site and Roman field system (Monument 9304)	Centred TG 17870 08398
ENF93405	NAU Archaeology	Saxon burnt patch and pottery sherds at Chapel Break, Bowthorpe (Monument 37094)	Not given
ENF94359	Cambridge Archaeological Unit	Prehistoric flint working site, Early Iron Age ditch and post holes, and Roman and post medieval finds (Monument 37646)	Centred TG 1654 1032
ENF94739	Cambridge Archaeological Unit	Late Bronze Age hoard, Prehistoric worked flint and pot, and medieval sword chape (Find Spot 16398), Prehistoric lithic working site, post medieval finds scatter, and undated features (Monument 39351)	Centred TG 1637 1013
ENF95982	Archaeological Solutions	Cropmarks of ring ditch (Monument 12791), Prehistoric flint working site, Early Iron Age ditch and post holes, and Roman and post medieval finds (Monument 37646)	Centred TG 165 103

NHER Event	Organisation	Associated NHER Monument numbers and description	NGR
ENF96851	Norfolk Archaeological Unit	Saxon settlement, Early Neolithic to Bronze Age pits, and Iron Age and Roman ditches, Three Score (Monument 40711)	Centred TG 18436 09033
ENF118496	Archaeological Project Services	Early Saxon cemetery and multi-period finds (Monument 24833)	Centred TG 17520 07894
ENF133246	Archaeological Solutions	Possible Roman road (Monument 15768), Cropmarks of enclosures, fields and trackways of possible Iron Age date (Monument 31518), Prehistoric, Roman and post-Roman features (Monument 33423), Cropmarks of possible Roman road and undated ditches (Monument 54453), Unnamed (Monument 61954), Site of post medieval brick kiln (Monument 7916)	Centred TG 1604 1021
ENF103135	Archaeological Solutions	Prehistoric flint working site, Early Iron Age ditch and post holes, and Roman and post medieval finds (Monument 37646)	Centred TG 16568 10283
ENF137901	Archaeological Solutions	Late Bronze Age hoard, Prehistoric worked flint and pot, and medieval sword chape (Find Spot 16398)	Centred TG 1669 1012
ENF142783	Chris Birks Archaeological Services	Cropmarks of undated or possible prehistoric and Roman ditches (Monument 54443), Undated ditches and possible pits (Monument 63086)	Centred TG 1726 1001
ENF141514	NPS Archaeology	Large prehistoric ring-ditch/enclosure and multi-period features and finds (Monument 61924)	Centred TG 1800 0777
ENF130816	NPS Archaeology	Large prehistoric ring-ditch/enclosure and multi-period features and finds (Monument 61924)	Centred TG 1800 0777

*Table 4: Summary of NHER events within the study area by period*

## 2 EVALUATION AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 The original aim of the project was set out in the Written Scheme of Investigation (Gilmour 2019). The archaeological monitoring sought to avoid damage to heritage assets, without any record of these being made.

#### *Regional Research frameworks*

- 2.1.2 This excavation takes place within, and will contribute to the goals of Regional Research Frameworks relevant to this area:

*Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment* (Glazebrook 1997, East Anglian Archaeology Occasional Papers 3);

*Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy* (Brown & Glazebrook 2000, East Anglian Archaeology Occasional Papers 8); and

*Research and Archaeology Revisited: A Revised Framework for the East of England* (Medlycott 2011, East Anglian Archaeology Occasional Papers 24).

### 2.2 Fieldwork Methodology

- 2.2.1 The WSI (Gilmour 2018) required continuous monitoring of two separate sections of pipeline trenching works along the parts that lay upon the marsh land flanking the River Yare (Fig. 2).
- 2.2.2 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.
- 2.2.3 All archaeological features and deposits were recorded using OA East's pro-forma sheets. Pipeline trench locations, plans and sections were recorded at appropriate scales and digital photographs were taken of all relevant features and deposits.
- 2.2.4 The site conditions were good with intermittent showers.

## 3 RESULTS

### 3.1 Introduction and presentation of results

- 3.1.1 A 30m wide topsoil strip was carried out along the pipeline route (Plate 1). The pipeline cut was 0.5m wide and c.1.1m deep (Plate 2). In both Section 1 and 2 its route was overlain by a loose dark greyish brown silty sand topsoil up to 0.2m thick. This overlay the natural geology comprising loose light yellowish orange brown sand and gravel.
- 3.1.2 No archaeological finds or features were collected or observed.

### 3.2 Significance

- 3.2.1 The monitoring of the pipeline trenching works at Bowthorpe Tower Growth Scheme has demonstrated that no archaeological deposits or artefacts of significance were impacted by the scheme.

## APPENDIX A      BIBLIOGRAPHY

- |                                  |      |   |
|----------------------------------|------|---|
| Brown, N and Glazebrook, J (eds) | 2000 | <i>Research and Archaeology: A framework for the Eastern Counties 2: research agenda and strategy</i> . East Anglian Archaeology Monograph, Occasional Paper 8              |
| Gilmour, N.                      | 2018 | <i>Bowthorpe Tower Growth Scheme – WAT-06660. Written Scheme of Investigation. Archaeological Monitoring</i> . Oxford Archaeology East. Dated 30th April 2018 (unpublished) |
| Glazebrook, J (ed)               | 1997 | <i>Research and Archaeology: A framework for the Eastern Counties 1: research agenda and strategy</i> . East Anglian Archaeology Monograph, Occasional Paper 3              |
| Medlycott, M.                    | 2011 | <i>Archaeology Revisited: a revised framework for the East of England, East Anglian Archaeological Occasional Papers 24</i> (EAA 24)  |

### *Electronic sources*

Open Domesday: Domesday Book online. British History Online.  
<https://opendomesday.org/place/TG1709/bowthorpe/>

## APPENDIX B

## OASIS REPORT FORM

### Project Details

OASIS Number	oxfordar3-315791		
Project Name	Bowthorpe Tower Growth Scheme, Norfolk – WAT-06660		
Start of Fieldwork	15/05/2018	End of Fieldwork	19/01/19
Previous Work	No	Future Work	No

### Project Reference Codes

Site Code	XNFBOW18	Planning App. No.	
HER Number	ENF144247	Related Numbers	

Prompt	Water Act 1989 and subsequent code of practice
Development Type	Anglian Water pipeline
Place in Planning Process	Not known/Not recorded

### Techniques used (tick all that apply)

<input type="checkbox"/> Aerial Photography – interpretation	<input type="checkbox"/> Grab-sampling	<input type="checkbox"/> Remote Operated Vehicle Survey
<input type="checkbox"/> Aerial Photography - new	<input type="checkbox"/> Gravity-core	<input type="checkbox"/> Sample Trenches
<input type="checkbox"/> Annotated Sketch	<input type="checkbox"/> Laser Scanning	<input type="checkbox"/> Survey/Recording of Fabric/Structure
<input type="checkbox"/> Augering	<input type="checkbox"/> Measured Survey	<input type="checkbox"/> Targeted Trenches
<input type="checkbox"/> Dendrochronological Survey	<input type="checkbox"/> Metal Detectors	<input type="checkbox"/> Test Pits
<input type="checkbox"/> Documentary Search	<input type="checkbox"/> Phosphate Survey	<input type="checkbox"/> Topographic Survey
<input type="checkbox"/> Environmental Sampling	<input type="checkbox"/> Photogrammetric Survey	<input type="checkbox"/> Vibro-core
<input type="checkbox"/> Fieldwalking	<input type="checkbox"/> Photographic Survey	<input type="checkbox"/> Visual Inspection (Initial Site Visit)
<input type="checkbox"/> Geophysical Survey	<input type="checkbox"/> Rectified Photography	<input checked="" type="checkbox"/> Watching Brief

Monument	Period	Object	Period
none	Choose an item.	none	Choose an item.
	Choose an item.		Choose an item.
	Choose an item.		Choose an item.

Insert more lines as appropriate.

### Project Location

County	Norfolk	Address (including Postcode) Nearest address: Section 1: Hall Farm, Watton Road, Colney, Norwich, NR4 7TX Section 2: Tesmonde Close, Norwich, NR5 9FA
District	South Norfolk	
Parish	Costessey	
HER office	Norfolk	
Size of Study Area	c.1.4km length of pipeline	
National Grid Ref	Centred on TG 1802 0811	

### Project Originators

Organisation	OA East
Project Brief Originator	John Percival (NCC/HES)
Project Design Originator	Nick Gilmour (OA East)



Project Manager  
Project Supervisor

Nick Gilmour (OA East)  
Adele Lord, Dan Firth, Toby Knight and Jon Cousins (OA East)

## Project Archives

	Location	ID
Physical Archive (Finds)	na	na
Digital Archive	OA East	ENF144247
Paper Archive	Norwich Castle Museum	ENF144247

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Remains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<input type="checkbox"/>	<input type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Digital Media

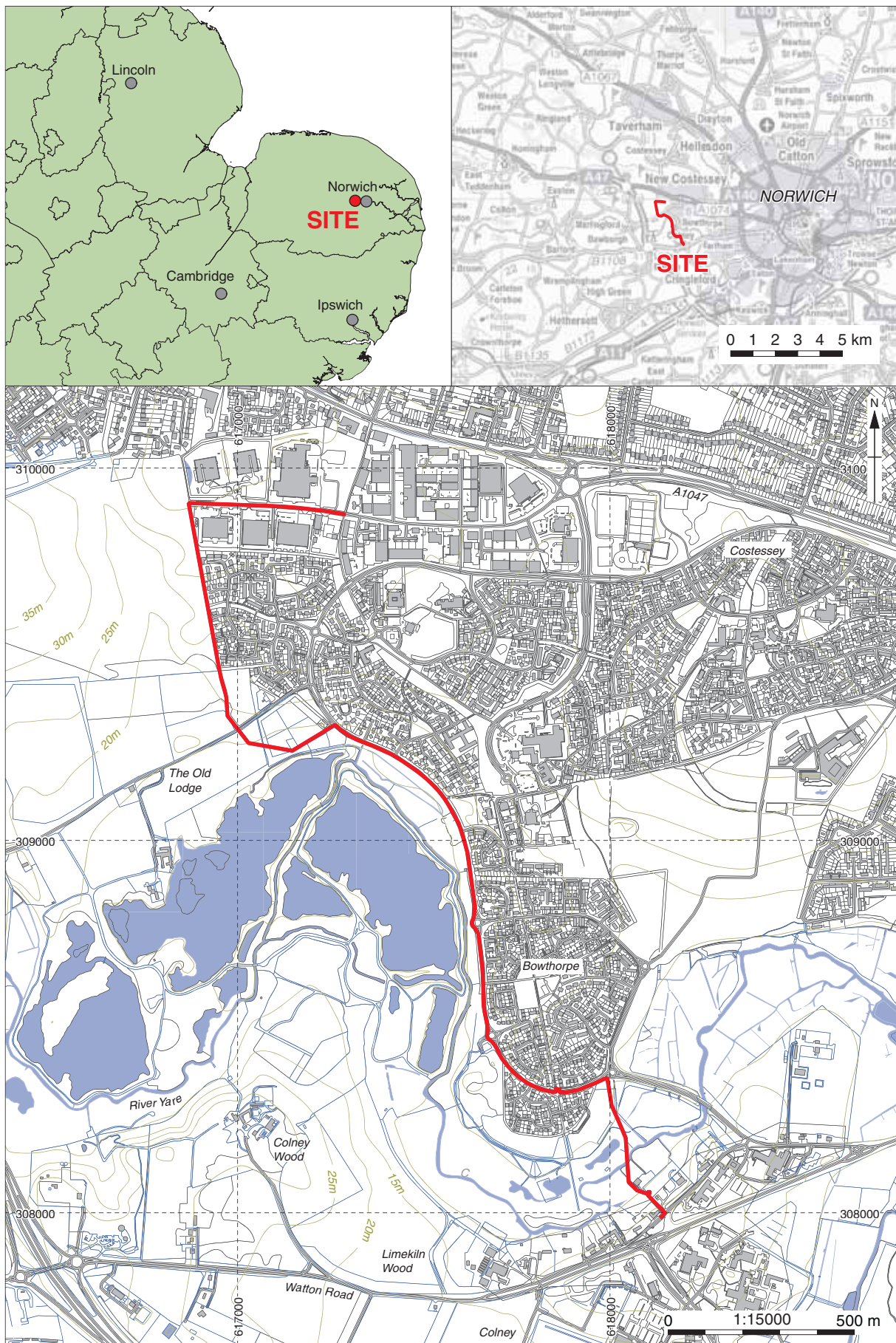
Database	<input type="checkbox"/>
GIS	<input type="checkbox"/>
Geophysics	<input type="checkbox"/>
Images (Digital photos)	<input checked="" type="checkbox"/>
Illustrations (Figures/Plates)	<input checked="" type="checkbox"/>
Moving Image	<input type="checkbox"/>
Spreadsheets	<input type="checkbox"/>
Survey	<input type="checkbox"/>
Text	<input checked="" type="checkbox"/>
Virtual Reality	<input type="checkbox"/>

## Paper Media

Aerial Photos	<input type="checkbox"/>
Context Sheets	<input type="checkbox"/>
Correspondence	<input type="checkbox"/>
Diary	<input checked="" type="checkbox"/>
Drawing	<input type="checkbox"/>
Manuscript	<input type="checkbox"/>
Map	<input type="checkbox"/>
Matrices	<input type="checkbox"/>
Microfiche	<input type="checkbox"/>
Miscellaneous	<input type="checkbox"/>
Research/Notes	<input type="checkbox"/>
Photos (negatives/prints/slides)	<input checked="" type="checkbox"/>
Plans	<input type="checkbox"/>
Report	<input checked="" type="checkbox"/>
Sections	<input type="checkbox"/>
Survey	<input type="checkbox"/>

## Further Comments





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Figure 1: Site location showing route of Anglian Water pipeline scheme WAT-06660 (red)



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Plate 2: The pipeline trench cut in Section 1, looking south



Plate 1: Topsoil stripped pipeline cut at northern end of Section 1, adjacent to Three Score Road, looking south



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