

Report 2831

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Archaeological Desk-Based Assessment of the Suffolk Section of Bury PZ - Barnham Cross Water Treatment Works to Little Whelnetham Reservoir Treated Water Main









NPS Archaeology

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Prepared for

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Location:	Barnham to Little Whelnetham Treated Water Main
District:	St Edmundsbury
Grid Ref.:	TL 8643 8077 (Barnham) – TL 8963 6027 (Little Whelnetham)
OASIS Ref:	113337
Client:	Anglian Water Services Limited

Summary

This desk-based assessment considers the archaeological potential of the Barnham cross Water Treatment works to Little Welnetham Reservoir Treated Water Main. The pipeline starts in Thetford at Barnham Cross Water Treatment Works (NGR TL 87008 81645) within the southern part of Norfolk. It then runs through Suffolk terminating south-east of Bury St Edmunds at Little Welnetham Reservoir at NGR TL 89618 60287. This assessment only considers the 29km of this 31km scheme that lies in Suffolk The route runs, through the parishes of Barnham, Euston, Fakenham Magna, Sapiston, Bardwell, Ixworth, Pakenham, Great Barton, Thurston, Rougham, Rushbrooke, Bradfield St George to its destination close to the village of Little Whelnetham, Suffolk.

The route runs across a rural landscape close to areas of high archaeological potential, notably the scheduled Roman villa and triple-ditched fort at Ixworth, the Roman barrow cemetery (part of which is scheduled) at Rougham and the adjacent Roman road which the route follows at the southern end of the scheme.

There are remains of a number of archaeological remains from a range or periods recorded near to the site - prehistoric at Barnham, Euston, Fakenham Magna, Ixworth, and Pakenham; Roman at Fakenham Magna, Ixworth, Pakenham and Rougham; Saxon at Fakenham Magna and Ixworth; medieval at Fakenham Magna and Bardwell and post-medieval Fakenham Magna, Bardwell and Rougham.

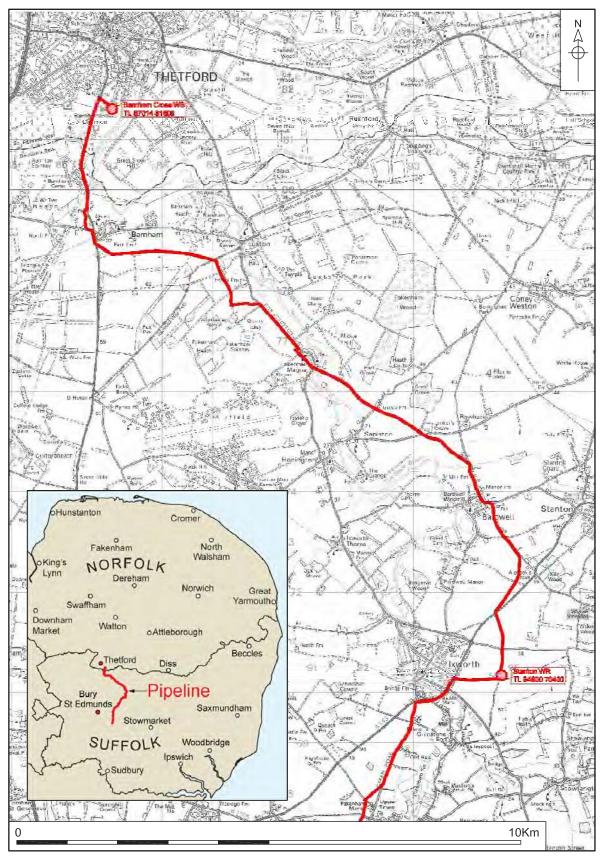
1.0 INTRODUCTION

This desk-based assessment considers the archaeological potential of the route of a pipeline which runs for *c*.29km from Barnham at its northern limit to Little Whelnetham at its southern terminus (Figs 1a, 1b, 1c and 1d). The route runs through, or close to, several areas of archaeological potential including Scheduled Monuments, conservation areas and Sites of Special Scientific Interest (SSSIs).

This assessment considers the archaeological potential of the area and the likely nature, significance and condition of any archaeological remains within the area of the route. The potential impacts of the proposed development on those remains are also considered.

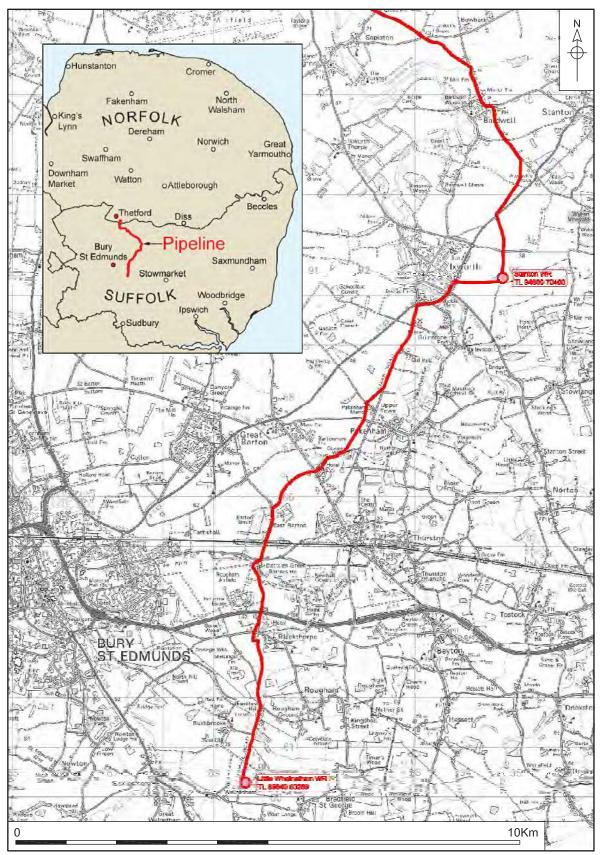
The assessment was conducted in accordance with a Brief issued by Suffolk County Council Archaeological Service (Jess Tipper 9th June 2011) and a Project Design and Method Statement prepared by NPS Archaeology (Ref. NAU/BAU2831/NP) and followed the guidelines set out in *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010).

This report was commissioned and funded by Anglian Water Services Limited.



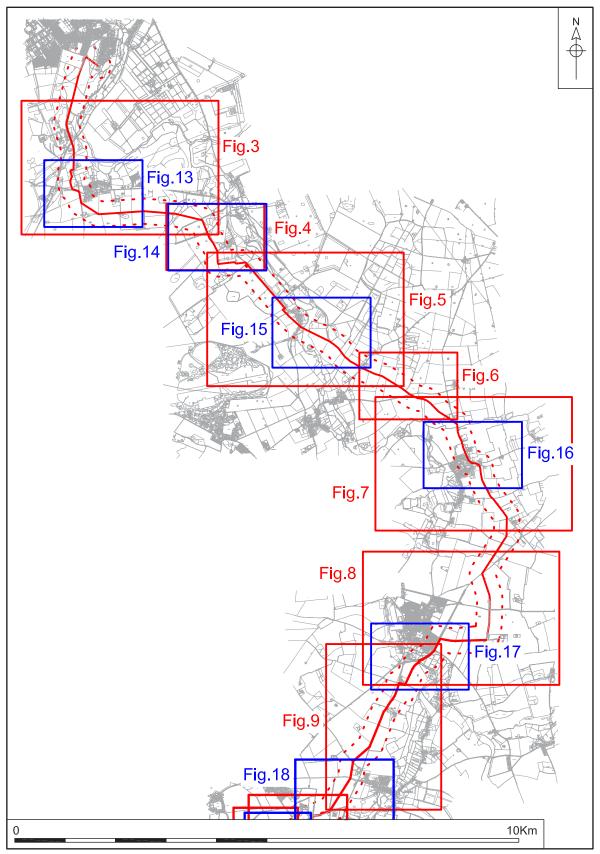
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Figure 1a. Site location - northern section. Scale 1:75,000



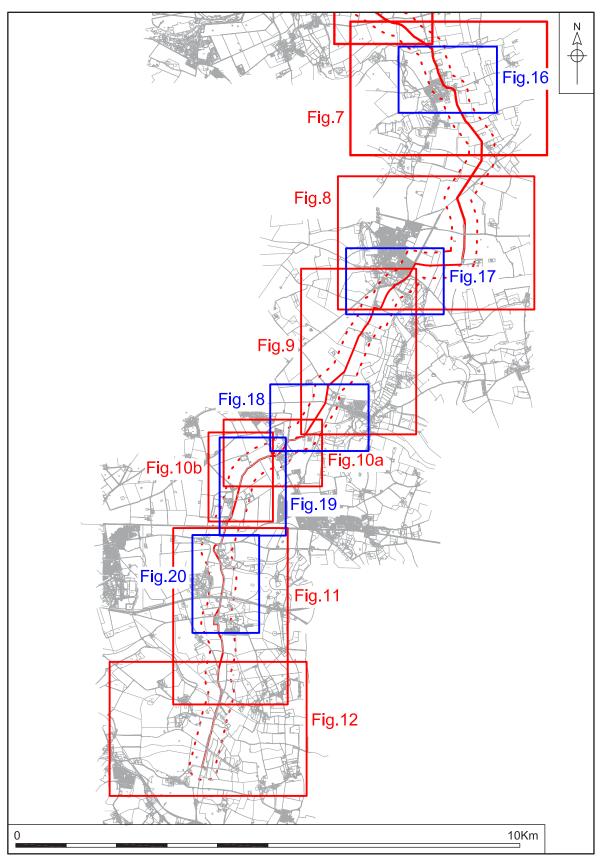
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Figure 1b. Site location - southern section. Scale 1:75,000



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Figure 1c. Location of figures 3 - 9 (archaeological records) and 13 -18 (listed buildings). Scale 1:75,000



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Figure 1d. Location of figures 7 - 12 (archaeological records) and 16 - 20 (listed buildings). Scale 1:75,000

1.1 The regulatory and advisory framework for Cultural Heritage

The treatment of archaeological remains and the Historic Environment is regulated by *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010).

PPS 5 provides advice on the proper treatment of archaeological remains and discoveries, through the development plan and development control systems, including the weight to be given to them in planning decisions and planning conditions. It also explains the importance of archaeology and outlines the process to be undertaken to adequately assess and protect any remains.

PPS5 (policy HE6.1) outlines the requirements for planning applications, and states that:

'Local planning authorities should require an applicant to provide a description of the significance of the heritage assets affected and the contribution of their setting to that significance...As a minimum the relevant historic environment record should have been assessed using appropriate expertise where necessary...local planning authorities should require developers to submit an appropriate desk-based assessment and, where desk-based research is insufficient to properly assess the interest, a field evaluation'

1.2 Local Government Policy

The 'Replacement St Edmundsbury Borough Local Plan 2016' (available online at: http://www.stedmundsbury.gov.uk/sebc/live/localplan/index.html) is the policy document that contains site specific policies and general outline policies covering the district.

1.2.1 General Archaeological Policies

Archaeology is covered in the Local Plan under sections 9.12-9.14 and policy number HC9:

'9.12 Archaeological remains are a finite resource highly vulnerable to damage and destruction and the desirability of preserving such remains and their settings is a material consideration in determining planning applications. There is a presumption in favour of preserving nationally important remains in place.'

Policy HC9 provides:

'In considering proposals which affect sites of archaeological importance and their setting or sites of potential interest, the local planning authority will have regard to:

- the results of any archaeological evaluation required
- the need to preserve archaeological remains in situ
- the need for adequate recording or excavation prior to development commencing'

1.2.2 Conservation Areas

St Edmundsbury Borough Council also provides information about areas it designates as conservation areas, and this is covered in sections 9.8 & 9.9 and policies HC5 & HC6 of the Local Plan.

'9.8 A Conservation Area is 'an area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance'. The special character and appearance of a Conservation Area can be derived from many different aspects, including the scale, style, and materials of the buildings, the historic street pattern, street frontages and building lines, boundary structures, street furniture, trees and open spaces.'

Policy HC6 provides:

'Proposals for new development within a Conservation Area must have regard to the special architectural or historic character or appearance of their setting in the following respects:

- the scale, height, massing, alignment, style and materials of existing buildings
- the form, function and manner of construction of the existing buildings
- the relationship between buildings and spaces
- plot divisions and boundary treatments'

Much of this policy is not relevant to the current project, such as the consideration of demolition of existing buildings, although the pipeline route does run through, or close to, areas designated as conservations areas. Three villages through which the pipeline directly runs are designated as conservation areas, and these are Bardwell, Fakenham Magna and Ixworth. Other conservation areas which lie close to the route of the pipeline, but which are not directly impacted upon, are Barnham, Euston and Pakenham.

1.2.3 Scheduled Monuments and Listed Buildings

Six Scheduled Monuments and 58 listed buildings can be found within a 500m zone centred on the pipeline route.

Monuments are Scheduled by English Heritage, and their website (http://www.english-heritage.org.uk/caring/listing/scheduled-monuments/) states:

'Scheduling' is shorthand for the process through which nationally important sites and monuments are given legal protection by being placed on a list, or 'schedule'. English Heritage takes the lead in identifying sites in England which should be placed on the schedule by the Secretary of State for Culture, Media and Sport...Scheduling is the only legal protection specifically for archaeological sites.'

The Scheduled Monuments recorded along the route of the pipeline are likely to be impacted upon in some way by the groundwork, and this will be discussed in detail later in this report.

Listed buildings are also an English Heritage innovation, and once again their website (http://www.english-heritage.org.uk/caring/listing/listed-buildings/) provides some insight into the thinking behind the listing of a building:

'The older a building is, the more likely it is to be listed. All buildings built before 1700 which survive in anything like their original condition are listed, as are most of those built between 1700 and 1840. The criteria become [sic] tighter with time, so that post-1945 buildings have to be exceptionally important to be listed. A building has normally to be over 30 years old to be eligible for listing.'

The categories of listed buildings are as follows:

- Grade I buildings are of exceptional interest, sometimes considered to be internationally important; only 2.5% of listed buildings are Grade I
- Grade II* buildings are particularly important buildings of more than special interest; 5.5% of listed buildings are Grade II*
- Grade II buildings are nationally important and of special interest; 92% of all listed buildings are in this class and it is the most likely grade of listing for a home owner

Most of the listed buildings found within a 500m corridor centred on the pipeline route are of Grade II and are unlikely to be impacted upon, except in a temporary way by the groundworks for the route.

1.2.4 Ancient Woodland and Parks and Gardens

Three areas close to the pipeline route are designated as Ancient Woodland, and recorded as such in the Suffolk Historic Environment Record (SHER). They are listed below along with their SHER site code:

- Barton Shrub (BRG 017) located towards the edge of the 500m corridor in the parish of Great Barton (see Appendix 1: Archaeological Evidence Figure 10b).
- Elderstub Woods (RGH 024) lie close to the Eastlow Hill tumuli group, on Eastlow Hill Road, within the parish of Rougham. The pipeline runs alongside these woods, and will not impact upon them (see Appendix 1: Archaeological Evidence Figure 11c).
- Rushbrooke Woods (BSG 012) the destination of the pipeline route is the water treatment works already constructed and concealed within them. Any impact upon the woods themselves has already happened with the construction of the treatment works and it is considered that the pipeline will create little additional disturbance (see Appendix 1: Archaeological Evidence Figure 12).

One registered park is present within the area of the pipeline route and it is associated with Euston Hall. Euston Park (EUN 020), listed on the SHER as:

'Park associated with Euston Hall (EUN 019). Also listed as deer park...Landscaped circa 200 ha partly farmland; gardens and pleasure grounds circa 30 ha. 1671 by J Evelyn for Lord Arlington; 1730s-c.1748 by Kent for 2nd Duke of Grafton, modified 1767- 83 by Capability Brown for 3rd Duke. Wooded pleasure grounds, contained by ha-ha, screen church and extend beyond it. Vista between trees from house to basin with island. Serpentine lake c. 2km long, probably by Kent altered by Brown; bridge below weir carried drive from west. Site of canal (possibly originally a mill leat for the water mill) removed by 1731 but traceable in turf near house. Park laid out with E-W avenues by Evelyn, curtailed or removed by Kent and replaced by trees in belts on skyline. To E, beech avenue c. 2km long. Temple or banqueting hall dated 1746 by Kent (see EUN 016). To W pedimented gateway, flanking lodges early C19. Lime avenue, Duke's Ride c.1.7km. Walled garden c.1 ha, C18, with ornamented gateway; house, EUN 019, from early C17; castellated water-mill late C18-early C19 (known to exist in Tudor period?); drawings by Pridaux c.1716; drawings for park and temple by Kent, 1746. Euston Park - gardens and pleasure grounds, c.30 ha, landscaped park, c.200 ha, partly farmland.'

The route of the pipeline crosses a small portion of the park and the avenue known as Duke's Ride, named after the Dukes of Grafton. If ground conditions permit, the part of the route across Duke's Ride will be directionally drilled.

1.2.5 Nature Reserve

The pipeline route (with the permission of the Suffolk Wildlife Trust) will run along verges at the Micklemere nature reserve which is located close to Ixworth (http://www.suffolkwildlifetrust.org/reserves-and-visitor-centres/micklemere/).

The Suffolk Wildlife Trust website describes the site as:

'Micklemere is a small wetland area close to Ixworth near Bury St Edmunds. Something of a fluke Micklemere is not a piece of ancient countryside naturally rich in wildlife, nor is it the product of a clever habitat creation project. What was once improved grazing marsh with little wildlife interest has become in a few short years the wonderful wetland habitat we have today. Micklemere lays in a valley next to the river Black Bourn, part of what was once a corridor of grazing marshes running from Elmswell to Euston. The Ixworth Bypass constructed in the early 1990's cuts across the north west corner of the site and as a result the site now regularly floods. This constant flooding has created a large area of bare ground which when wet attracts large numbers of wetland birds...The

end result of all this work is a wonderfully diverse wetland nature reserve in the middle of Suffolk. The river Black Bourn acts as a corridor along which birds and wildlife move between areas of rich habitat.'

1.3 Assessment Aims and Methodology

1.3.1 Aims

This assessment has a range of aims, but key among them is to provide information to support the development proposals. It will seek to provide that information in a way that allows an appropriate evaluation of the likely archaeological implications of the proposals and, where appropriate, to devise a programme of further evaluation and mitigation to manage and protect the heritage assets during the subsequent development.

Other aims of this assessment are a mix of general and more specific issues, such as identifying, if possible, areas of high, medium and low archaeological potential, identifying targets for further archaeological investigation and providing an overview of the historical development of the site in its local context and its broader position within the wider area.

1.3.2 Methodology

In order to achieve the assessment aims a wide range of source material was examined. The material was examined to provide an overview of the historical development of the area, to identify known archaeological sites and features or areas of archaeological potential and to assess, as far as possible, the likely impacts of the proposed development on the archaeological resource.

1.3.2.1 Archaeological Data

The main source for archaeological data in Suffolk is the Suffolk Historic Environment Record (SHER) in Bury St Edmunds (Appendices 1 and 2). Each site listed on the SHER has an individual identifier, a site code, which incorporates the parish code and a unique number (e.g. FKM is Fakenham Magna, with 022 as the unique number, giving a site code of FKM 022). Listed buildings are slightly unusual, and although they are listed on the SHER, they are also listed by English Heritage, and the number used to identify these within this report is the six-figure listed building number assigned by English Heritage (e.g. 281242).

As part of this assessment a corridor of 250m either side of the pipeline route was searched for known archaeological sites. The data was presented in GIS format, and is located on Figures 3-12 within this report. The information has been broken down by parish, as the most efficient and manageable way of displaying it, with the Anglian Water chainage numbers (as taken from plans provided by the client) relating to each area.

This information, it must be stressed, only relates to the *known*, that is, sites which have been previously recorded, there are likely to be sites and findspots along the route which have not been recorded.

1.3.2.2 Cartographic Data

Historic mapping for the area was consulted at the Suffolk Records Office in Bury St Edmunds (Appendix 3). Due to the sheer volume of mapping for the route of the pipeline, it was thought appropriate to restrict the mapping to Enclosure, Tithe and Ordnance Survey maps. Additional mapping may exist, but it was felt to be outside the remit of this report to make an exhaustive search for such items, when they would not add hugely to the information already gained from the other maps.

Some mapping was unavailable, due to loss, and some are not reproduced within this report due to the condition of the map. The table below lists the Enclosure and Tithe maps consulted.

Parish	Enclosure Map (SRO Ref)	Tithe Map (SRO Ref)
Bardwell	Q/R1 2b (figs 33 a & b)	T41/2 (figs 34 a & b)
Great Barton	Q/R1 5 (fig. 47)	None
Barnham	None	T99/2 (fig. 21)
Euston	None	T86/2 (fig. 26)
Fakenham Magna	None	T42/2 (figs 29 a & b)
Ixworth	E3/14 (not reproduced in this report)	T68/2 (fig. 38)
Pakenham	1034 (fig. 43)	FL 614/3/18 (fig. 44)
Rougham	HA 534/7592 (fig. 50)	None
Rushbrooke	None	T59/2 (fig. 56)
Sapiston	None	None
Thurston	FL 640/1/4 (not reproduced in this report)	T50/2 (not reproduced in this report)
Little Whelnetham	None	FL 650/3/2 (fig. 57)

 Table 1. Historic Mapping along the Pipeline Route

The historic maps shown in this report (Figures 21-60) were photographed by the author from the originals, and the resulting jpegs copied into AutoCAD to enable the pipeline route to be drawn as an overlay. The route was located as accurately as possible using plans provided by the client and each historic map is annotated with the pipeline route and Anglian Water chainage numbers for the section depicted. The maps are presented by parish in the instance of Enclosure and Tithe maps, and by individual sheets, by parish where possible for the Ordnance Survey maps.

Ordnance Survey Sheet Number	Editions Available	Parish(es) Covered	Figure No.
13.15	1905; 1928	Thetford; Barnham	22; 23
22.3	1905	Barnham	24
22.4	1905	Barnham; Euston	25a & b
23.1	1905	Euston	27
23.5	1904	Euston; Fakenham Magna	28
23.9	1904	Fakenham Magna	30
23.10	1904	Sapiston	31
23.14	1904	Bardwell	32
23.15	1904	Bardwell	35
34.3	1884; 1904	Bardwell	36; 37
34.7	1904	Ixworth	39
34.2	1904	Ixworth	40
34.10	1884; 1904	Ixworth	41; 42
34.14	1884; 1904	Pakenham	45; 46

Ordnance Survey Sheet Number	Editions Available	Parish(es) Covered	Figure No.
45.1	1884; 1904	Great Barton	47; 48
45.5	1884; 1904	Rougham	49; 50
45.9	1904	Rougham	51
45.13	1884; 1904	Rougham	52; 53
44.16	1884; 1904	Rushbrooke	56; 57
54.4	1904	Little Whelnetham	58

Table 2. Ordnance Survey Maps along the Pipeline Route

1.3.2.3 Historical Data

A number of individual sources could have been examined as part of this section in the report, but it was not thought appropriate to provide a detailed historical background to the parishes as the focus of this report is the impact of the scheme on the archaeological record. However, some indicator of the wealth and importance of a parish and any early origins was thought to be necessary.

The main sources consulted for this section were the *Domesday Book* for Suffolk, W.A. Copinger's *The Manors of Suffolk* and Wendy Goult's *A Survey of Suffolk Parish History*.

The information gleaned from these sources is presented by parish in Appendix 4.

1.3.2.4 Aerial Photographs

Aerial photographs for the route of the pipeline were consulted in order to ascertain whether any unrecorded cropmark sites were present. Photographs were consulted at both the Suffolk Historic Environment Record in Bury St Edmunds and also at the National Monuments Record (NMR) in Swindon.

At Suffolk HER all available photographs for each parish along the route were consulted.

At the NMR a search of a 500m corridor centred on the pipeline returned over 900 photographs within the area. Consultation of all of these photographs was not thought to be achievable within the timescale for this report, and so a method of honing the results down was sought. Using the Excel spreadsheet provided by the NMR a policy was adopted of only viewing photographs where the 'Sortie Quality' was the highest available, that is A. Within this sample only pictures which lay most completely over the route of the pipeline were consulted. Using this method a sample of 200 photographs was viewed by the author at the NMR. The previously unknown cropmarks which were recorded were plotted onto mapping for the area by eye, as most of the features were simplistic and easy to place.

A discussion of any previously unrecorded sites is provided within Appendix 5a and a full list of photographs consulted at the NMR in Appendix 5b and at the SHER in Appendix 5c.

1.3.2.5 Site Visits

As part of the assessment site visits were undertaken of the route of the pipeline. Access to private land was not sought as part of the assessment, and only freely accessible land was seen.

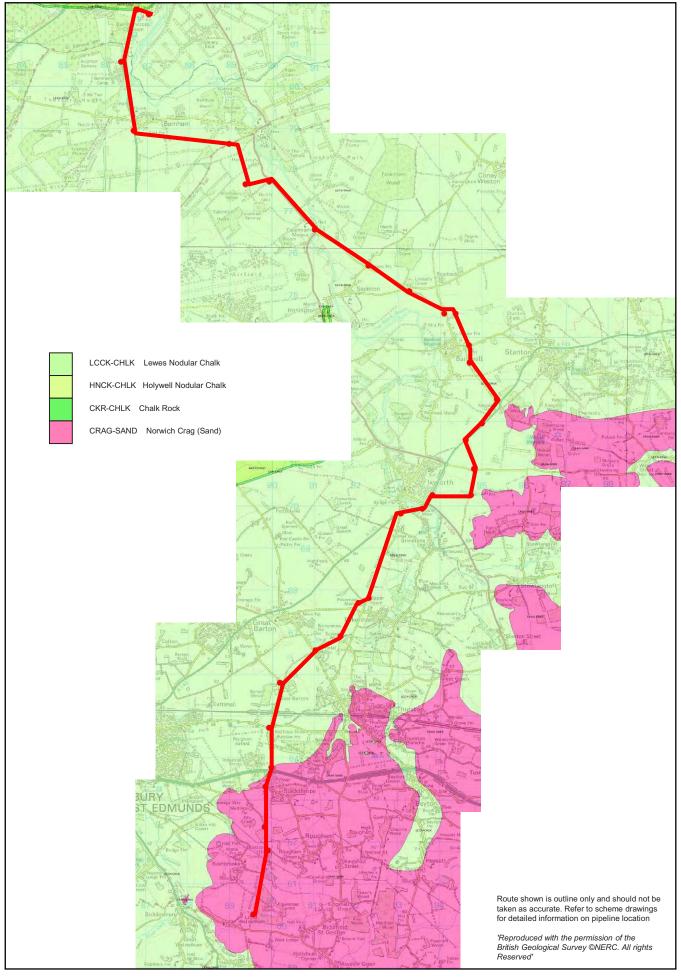


Figure 2a. Geology (Solid) (supplied by Anglian Water)

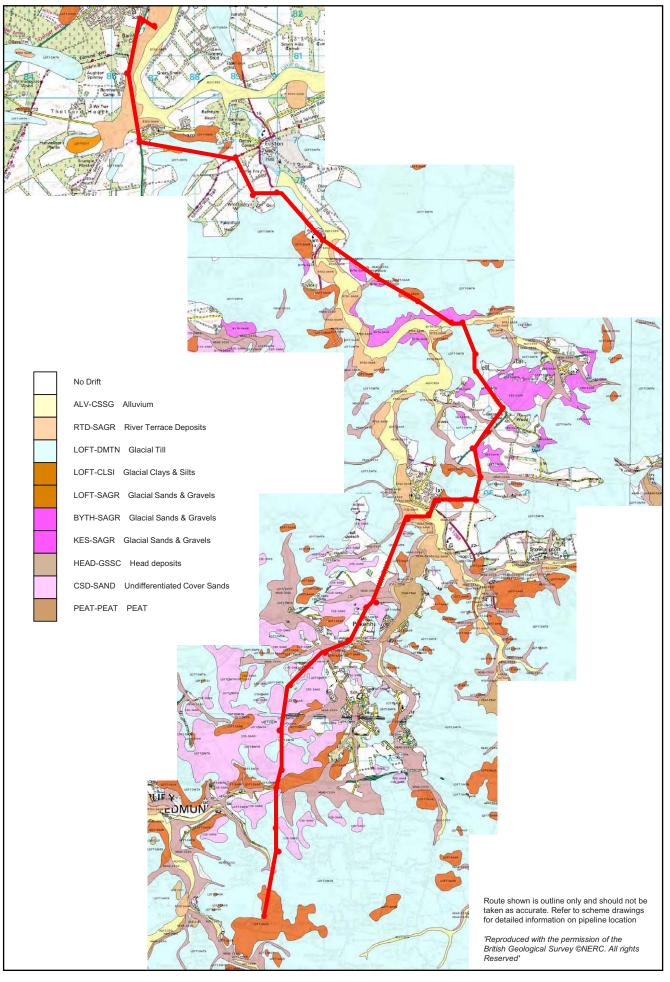


Figure 2b. Geology (Drift) (supplied by Anglian Water)

Notes were taken on any unusual landscape changes or anomalies, and digital photographs taken of any relevant areas. Any data gathered during this phase of work is presented below in Section 4, 'The Pipeline Route'.

2.0 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

2.1.1 Site Location

This desk-based assessment considers the archaeological potential of the route of the Barnham Cross Water Treatment Works to Little Welnetham Reservoir Treated Water Main. The pipeline starts in Thetford at Barnham Cross Water Treatment Works (NGR:TL 87008 81645) within the southern part of Norfolk . It then runs through Suffolk terminating south-east of Bury St Edmunds at Little Welnetham Reservoir at NGR TL 89618 60287. This assessment only considers the 29km of this 31km scheme that lies in Suffolk within the district of St Edmundsbury, with its administrative centre at Bury St Edmunds.

The route mainly runs in close proximity to roads, but does occasionally cross the rural landscape, through fields. The main feature of this pipeline is its proximity to the Black Bourn river along much of its length. Construction of the pipeline will encompass a 15m easement area, 10m of which will be stripped (with the soil arisings being placed on the remaining 5m). The pipe itself will be laid in a narrow trench within the stripped area – the diameter of the pipe will be 280mm to Stanton, increasing to 315mm thereafter..

2.1.2 Historic Landscape Characterisation

Landscape Character Assessment has been carried out for Suffolk, and the results can be found at: http://www.suffolklandscape.org.uk/landscape_map.aspx. The northern part of the pipeline, from Barnham to Fakenham Magna, is characterised as 'Estate Farmlands', a landscape of large geometric fields, plantation woodlands and remnant heathland, whose key characteristics are:

- Flat or very gently rolling plateaux of free-draining sandy soils, overlying drift deposits of either glacial or fluvial origin
- Chalky in parts of the Brecks, but uniformly acid and sandy in the south-east
- Absence of watercourses
- Extensive areas of heathland or acid grassland
- Strongly geometric structure of fields enclosed in the 18th & 19th century.
- Large continuous blocks of commercial forestry
- Characteristic 'pine lines' especially, but not solely, in the Brecks
- Widespread planting of tree belts and rectilinear plantations
- Generally a landscape without ancient woodland, but there are some isolated and very significant exceptions
- High incidence of relatively late, estate type, brick buildings
- North-west slate roofs with white or yellow bricks. Flint is also widely used as a walling material
- On the coast red brick with pan-tiled roofs, often black-glazed

Further south, from just south of Fakenham Magna, through Sapiston, Ixworth and Pakenham, the area changes to 'Plateau estate farmland', a landscape of large

regular fields with small woodlands on light loamy soils, with the key characteristics of:

- Flat landscape of light loams and sandy soils
- Large scale rectilinear field pattern
- Network of tree belts and coverts
- Large areas of enclosed former heathland
- 18th- 19th & 20th century landscape parks
- Clustered villages with a scattering of farmsteads around them
- Former airfields
- Vernacular architecture is often 19th century estate type of brick and tile

The village of Bardwell lies in an area named as 'Ancient plateau claylands', gently rolling heavy clay plateaux with ancient woodlands, with key characteristics of:

- Flat or gently rolling arable landscape of clay soils dissected by small river valleys
- Field pattern of ancient enclosure random patterns in the south but often co-axial in the north. Small patches of straight-edged fields associated with the late enclosure of woods and greens
- Dispersed settlement pattern of loosely clustered villages, hamlets and isolated farmsteads of medieval origin
- Villages often associated with medieval greens or tyes
- Farmstead buildings are predominantly timber-framed, the houses colour-washed and the barns blackened with tar. Roofs are frequently tiled, though thatched houses can be locally significant
- Scattered ancient woodland parcels containing a mix of oak, lime, cherry, hazel, hornbeam, ash and holly
- Hedges of hawthorn and elm with oak, ash and field maple as hedgerow trees.
- Substantial open areas created for WWII airfields and by 20th century agricultural changes
- Network of winding lanes and paths often associated with hedges create visual intimacy

The landscape changes again to the south, and includes Thurston and Rougham to the end of the pipeline. The area is characterised as 'Ancient rolling farmlands', a rolling landscape of medium clay soils studded with blocks of ancient woodland. The key characteristics are:

- Rolling arable landscape of chalky clays and loams
- Dissected widely, and sometimes deeply, by river valleys
- Field pattern of ancient random enclosure. Regular fields associated with areas of heathland enclosure
- Hedges of hawthorn and elm with oak, ash and field maple as hedgerow trees
- Substantial open areas created for airfields and by post WWII agricultural improvement
- Scattered with ancient woodland parcels containing a mix of oak, lime, cherry, hazel, hornbeam, ash and holly
- Network of winding lanes and paths, often associated with hedges, create visual intimacy
- Dispersed settlement pattern of loosely clustered villages, hamlets and isolated farmsteads of mediaeval origin

- Farmstead buildings are predominantly timber-framed, the houses colour-washed and the barns blackened with tar. Roofs are frequently tiled, though thatched houses can be locally significant
- Villages often associated with village greens or the remains of greens

Between all of these blocks of landscape is the Black Bourn river, which is part of an area characterised as 'Valley meadows & fens', and includes flat valley floor grasslands on silty and peat soils with small valley fens. The key characteristics for this landscape are:

- Flat, narrow, river valley bottoms
- Deep peat or mixtures of peat and sandy deposits
- Ancient meres within the valley bottoms & important fen sites
- Small grassland fields, bounded by dykes running at right angles to the main river
- Sparse scattering of small alder carr & plantation woodlands
- Part of a wider estate type landscape
- Largely unsettled, except for the occasional farmstead
- Drier fields turned over to the production of arable crops
- Cattle grazing now often peripheral to commercial agriculture
- Loss to scrub encroachment, tree planting and horse paddocks

2.1.3 Geology

The solid geology of much of the area is chalk, although there is almost a dividing point at the major east-west road, the A14, which appears to divide the chalk bedrock from crag group geology. Wymer notes that the crag sands were not laid down until the Pliocene (5.3-2.5 million years ago), much later than the chalk (Dymond and Martin 1989, 16) (Fig. 2a)

The superficial geology along the pipeline route varies, although it can be seen that along the rivers, including the Little Ouse to the north and the Black Bourn, the area consists of river terrace deposits and alluvium (Fig. 2b). Much of the rest of the route is on Lowestoft Till, although there are pockets of Bytham sand, cover sand and head gravel, sand, silt and clay (British Geological Survey).

3.0 THE PIPELINE ROUTE

A number of site visits were made as part of this assessment, although many areas were considered to be inaccessible as they were on private land. The whole route (including the small part in Norfolk is discussed here). A large part of the route runs along the edges of roads, and as such was quite visible. There are, however, stretches of the route which divert through fields, and these areas are perhaps those most likely to encounter archaeological evidence.

The first few hundred metres of the route (chainage numbers 0m to 2500m) follows the Bury Road (A134) from the edge of the town of Thetford through an area known as Barnham Cross Common in Norfolk which is an SSSI (see section 1.2.4, above). The route here follows the road, which is likely to have already undergone significant changes over many years. The area is common land and is not under cultivation. The route crosses the county boundary here and remains

with the A134 until diverting to the west of the Grafton Arms public house and cutting through pasture (chainage numbers 2500 to 3250m; Plate 1).



Plate 1. The fields west of the Grafton Arms public house, looking north

The route crosses Station Road, presumably through a gap in trees and the scrappy hedgerow which line the road. The terrain alters slightly on the southern side of the road, with a significant rise in ground level in the fields south of Station Road (Plate 2). The pipeline runs through the field here, crossing the Bury Road again further south.



Plate 2. Station Road, looking east, showing difference in ground level either side of the road

Upon crossing the A134 again, the route crosses fields, which are currently inhabited by pigs. This area (from chainage numbers 3500m to 7500m) was not accessible, but it was possible to take a photograph from the Bury Road, looking across the location of route (Plate 3).



Plate 3. Looking south-east across fields at chainage number 3500m



Plate 4. Possible site compound area, close to chainage number 7500m, looking south-east

A route parallel to the pipeline was travelled as part of the site visit, along The Street/Euston Road to the north of the pipeline route. Little was visible of the route from this road, due to stands of woodland, although it did appear that the route lies along a ridge which runs east to west. The area being crossed appears to be in

use as arable land on modern aerial photography of the area although pigs and their associated pens were seen on the field nearest to Bury Road.

The route was again picked up close to the A1088 road through Euston, at chainage number 7500m. The route here runs along the edge of the road, near to arable fields. On the opposite side of the road, the northern side, is the River Black Bourn, and the land here slopes down towards it. On the opposite side of the road an extensive area of multi-period cropmarks is recorded (FKM 015). The possible location of a site compound at 7500m is also close to this point (Plate 4).



Plate 5. Field to the north of Butt Lane, around chainage number 8750m, looking north-west



Plate 6. Field to the south of Butt Lane, around chainage number 8750m, looking south-east

Here the route diverts southwards from the road just west of the village of Fakenham Magna (around chainage number 8625m). The route crosses an old track, known as Butt Lane, which leads south-west to a stand of woodland on higher ground, known as Broom Hill. The area to the north of Butt Lane is rough pasture (Plate 5), and to the south arable (Plate 6). It is around chainage number 9000m that the route rejoins the road through the centre of the village (Plate 7).

This diversion of the route from the road crosses site FKM 022 located behind the properties fronting the west side of the road. Saxon and medieval finds have been recorded here following 'unsystematic' fieldwork.

The route exits the village between two listed buildings, and continues along Bardwell Road. The route then crosses the river and runs around 220m to the north of a medieval ringwork, Burnthall Plantation (FKM 005) and continues along this road for some distance (chainage numbers 9500m-12500m), with little change in either terrain or land use (arable).

Another possible site compound is located at the point where the route diverts again from the road, at around chainage number 12500m. The area is under arable cultivation, and no features were noted in the area. The route then crosses the river, crossing the Black Bridge close to chainage number 13000m. The route enters the village of Bardwell on Spring Road, and runs close to the main road. There is a new development of houses on this road, at around chainage number 3250m, which as yet does not appear on mapping. The route runs to the north of the village green in Bardwell, and exits the village on Davey's Lane heading south.



Plate 7. Bardwell village green, looking west

The route continues along this road, which changes its name to Wyken Road further south. At chainage number 15000m, the route diverts into fields, heading south, and then south-east, roughly parallel with the Bury Road (A134). These fields were not directly accessible, but appear to be arable. The route crosses the Bury Road close to chainage number 16250m, and crosses onto the Woolpit Road

(Plate 8). The route continues on this road before joining up with the water treatment works close to the junction with Crown Lane.



Plate 8. Woolpit Road, looking north

The route leaves the water treatment works and heads west along Crown Lane (inaccessible) before joining up with the Ixworth bypass (A143), which curves around the south of the town crossing the Mickle Mere Nature Reserve. The pipeline heads south again from Ixworth, leaving the bypass and joining up with Mill Lane. This area is near to known Roman remains (fort and settlement to the north) and is close to the route of a Roman road (chainage numbers 2000m-2500m). The route continues on this line, close to the road, through arable land.

The route again diverts from the road at around chainage number 3750m, to cross a field diagonally before crossing a drain and bypassing Pakenham Manor. The route then crosses Pakenham Road to the south of the manor house, and runs roughly parallel with Mill Lane. The route cuts through arable and meadow close to Barton Mere (not accessible), and runs close to buildings there (chainage numbers 5750m-6000m). The route crosses the Thurston Road and joins a trackway running to the south of a reservoir (chainage number 6500m). None of this part of the route was accessible.

The route crosses arable land to the east of Mount Road, close to Great Barton Place, before crossing a railway line and continuing close to Mount Road heading south. The route then loops westwards around houses close to Battlies Green, before rejoining the road and heading south, crossing the Rougham junction with the A14 (Plate 9).



Plate 9. A14 flyover close to the Rougham crossroads, looking north

At Blackthorpe the route again takes a small diversion around housing, and joins up with a footpath heading south before reaching Eastlowhill Road near Elderstub Woods (chainage number 10500m). The route runs close to the Eastlowhill Tumuli group, one of which is a Scheduled Monument, on the opposite side of the road to the pipeline. The route then continues on this road, until it changes into Linkwood Road (Plate 10) and reaches the reservoir in Rushbrooke Woods (Plate 11).

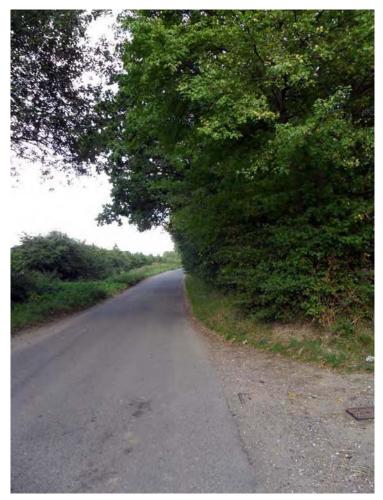


Plate 11. Linkwood Road, looking north, standing beside the end point of the pipeline route



Plate 10. Final destination, reservoir within Rushbrooke Woods, looking east

4.0 AREAS OF HIGH ARCHAEOLOGICAL POTENTIAL

It is acknowledged that the pipeline is unlikely to impact greatly on most sub surface remains in the area as the route runs along the edges of roads and fields for the most part where remains may have already been impacted on. However, it should also be noted that parts of the route run across open areas, which may harbour relatively undisturbed remains.

This section is designed to draw the reader's attention to areas of high archaeological potential along the route of the pipeline, where there may already have been evidence recorded or the nature of the landscape makes it a possibility. The information is summarised here by parish, encountered along the route from north to south with supporting information and detailed descriptions in Appendices 1-5.

4.1 Barnham

Barnham is an area rich in early prehistory, with evidence from the Palaeolithic period as evidenced by discoveries by Basil Brown and John Wymer. These sites tend to be discovered at some depth below the ground surface, and this pipeline and easement route is unlikely to penetrate deep enough to encounter evidence of this antiquity.

The most prolific site in the area are barrows; funerary monuments of possible Bronze Age date. Several cluster close to the route around chainage numbers 3250m-3500m, and although several are only known from aerial photographs, and the fields in which they lay have been much ploughed, there is still the possibility of recovering some evidence for these. One of the barrows recorded here in Barnham is a Scheduled Monument, mostly because it is the best preserved of the group.

Other prehistoric evidence has also been recovered in the area, both in casual find spots and during an earlier pipeline excavation. This proves the survival of evidence of the period, and further enhances the possibility of remains of this date being found within the current pipeline.

Later evidence is much sparser in the area, and it is thought that the main period in evidence here will be prehistoric, although there is some little evidence for all later periods.

4.2 Euston

Almost all of Euston parish is part of the Euston Hall estate, the lands of the Dukes of Grafton, and as such little archaeological work has taken place in the area.

The pipeline here lies close to the edge of an earlier pipeline along which was recorded prehistoric evidence. It is thought, however, that the main period of significance within this parish is post-medieval. The pipeline route crosses Duke's Ride, an avenue of trees which forms part of the pleasure grounds associated with Euston Hall. This avenue is part of the registered park and garden, and the impact upon this will be considered in any groundwork in the area.

4.3 Fakenham Magna

Fakenham Magna and the nearby surrounding area have high potential for several periods of archaeology to be present. The prehistoric and Roman periods have both been found to be present in the area by excavation (FKM 001), and finds from the Mesolithic onwards have also been recorded close to the route of the pipeline (FKM 017), along with a large, probable multi-period site of cropmarks (FKM 015). The intensity of prehistoric and Roman settlement in this area is likely to be due to the proximity of the river, which is a useful resource, and further prehistoric finds have also been recorded by the author, on aerial photographs of the area close to the Bardwell Road, and some of these may well be of prehistoric date.

The Roman settlement of this area is likely to have extended into the Early Saxon period, as evidence of this date is also recorded, both on the sites mentioned above, and in further sites. Later Saxon origins for the village are also possible, as the church here is thought to have Saxon elements.

The main medieval site in the area is of some importance, being a Scheduled Monument, and although this lies close to the edge of the 250m buffer zone around the route of the pipeline, it is possible that activity associated with this site is found within the easement area. The site in question is Burnthall Plantation, a medieval ringwork fortification, probably dating to the Anarchy period and of some importance. Activity associated with this could be in the form of building remains or settlement, although there is no known evidence for this in the vicinity.

The post-medieval period also shows some level of evidence in the area, and the pipeline itself will cut through a known site (FKM 024); that of a double avenue of trees associated with the manor house.

4.4 Bardwell

There is little evidence from Bardwell of any period earlier than medieval, and the village appears to have been a fairly prosperous place at this time. The village green is a focal point for the village, and the route of the pipeline will skirt the village green following the road. This area has a high possibility of recovering remains of medieval date.

4.5 Ixworth/Pakenham

Ixworth has high potential for early archaeological remains to be on or near the pipeline route or easement area, including prehistoric, Roman and Saxon. The area, once again, lies close to the River Black Bourn, which was clearly an important attribute for any settlement activity in the landscape. It is possible that there may be evidence of prehistoric or Saxon remains within the pipeline route, but it is the Roman period which is the defining feature of the landscape around Ixworth town and into the northern part of Pakenham parish.

There are two Scheduled Monuments in the area, one of which lies directly in the path of the pipeline route; the Ixworth Roman villa (IXW 004), which included a bathhouse, lying just to the east of Ixworth Bypass; and a large triple-ditched fort (PKM 005). The pipeline route will skirt the eastern edge of the fort.

Almost all of the activity of prehistoric, Roman and Saxon date lies close to the north or south banks of the river Black Bourn, to the south of the current medieval town. The medieval town clearly developed slightly to the north of the earlier settlement, slightly removed from the river, possibly closer to the Priory which was once here.

4.6 Pakenham

The pipeline route runs at some distance from the village of Pakenham, however, a single record on the HER of a large curving bank (PKM 048), is thought to possibly be an enclosure for Pakenham Manor (see Figure 9c). The pipeline route runs directly across this monument, of which no trace can be seen on the ground, between chainage numbers 3750m and 4000m. Consideration of the most appropriate mitigation measures will be made.

4.7 Barton Mere

Another major area of significance is likely to be Barton Mere (chainage 5750m), where a possible Bronze Age lake village has been recorded. This would be a very rare find, and although the route is not likely to impact directly upon the Mere, it is clear that the evidence in the area is mostly confined to the prehistoric period, and the possibility of remains of this date cannot be ruled out.

4.8 Eastlowhill Road, Rougham

This area is another of importance during the Roman period, with one Scheduled Monument very close to the road, and one closer to the edge of the buffer zone for the site. Another probable Roman villa is recorded; this is the monument nearer the edge of the study area (RGH 009); a Roman road (RGH 017) and a group of barrows, known as the Eastlowhill Group. These barrows include one Scheduled example (RGH 001) which is the best preserved, and has been excavated and shown to be Roman in date, and of elaborate construction. Further tumuli have been recorded close to the main one, and may have been a family group, possibly associated with the villa.

4.9 Rushbrooke

The final part of the pipeline lies between the villages of Little Whelnetham and Bradfield St George, and has little concentrations that imply that the route will encounter significant archaeology. The only possible impacts may be felt on the park of Rushbrooke Hall (RBK 016), which lies alongside Linkwood Road, where the pipeline runs. Rushbrooke Hall is a moated site, which is also a Scheduled Monument and the park was in existence by 1703.

5.0 IMPACT ASSESSMENT

The new pipeline runs for a total length of 31,163.6m and will involve the use of a range of pipe laying techniques (Appendix 6). The pipe width varies from 280mm to 315mm with a 30m section of 180mm pipe. The different methodologies and their potential impacts are described below. The distances employing each methodology are presented in Table 3.

Construction Method	Distance
Directional Drilling	2,615.2m
Open Cut in Road 1206.5m	
Open Cut in Roadside Verge 350.9m	
Open Cut in Fields	26,991m

Table 3. Construction methodology and distance

5.1 Directional Drilling

Directional drilling requires the excavation of insertion and receptor pits at 100m intervals. Insertion and receptor pits measure approximately 2m x 2m and are excavated to a depth of 1.5m.

5.2 Open Cut in Roads and Roadside Verges

Open cut trenching in roads or roadside verges involves the excavation of a 400-500mm wide trench to a depth of between 1m to 1.5m, into which the pipe is directly inserted.

5.3 Open Cut in Fields

Open cut trenching in fields requires the topsoil stripping of a 15m wide easement wide enough to allow pedestrian and vehicular movements, the excavation of a 1m wide trench up to 1.5m in depth into which the pipe is laid and the laying out of the pipe adjacent to the trench. The topsoil strip is undertaken to a maximum depth of 300mm.

5.4 Site Compounds

The exact location and size of any construction compounds has not yet been determined. It is likely that compounds located in arable fields will require topsoil stripping and replacement with a layer of hardcore.

5.5 Valuing the Archaeological Resource

The categories used to assign a value to the archaeological resource are based on those outlined in DMRB (2007):

Value	Criteria
Very High	World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.

Value	Criteria
High	Scheduled Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives. Listed Buildings (including proposed buildings).
Medium	Designated or undesignated assets that contribute to regional research objectives.
Low	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
Negligible	Assets with very little or no surviving archaeological interest.

Table 4. Criteria for assigning a value to the archaeological resource

As can be seen from the table above, the area through which the pipeline will run is valued between negligible through to high. No areas have a very high value. Most of the areas listed within Section 4.0 above are valued between medium and high, with those involving Scheduled Monuments clearly being valued as high.

5.6 Likely Condition of Archaeological Remains

It is important to consider the condition and stability of any archaeological remains that may be present within the development area.

Due to the length of the pipeline route the condition of any archaeological remains within the area will vary considerably. Those areas which are close to roads are likely to have been disturbed in some way, either by successive re-surfacing or other alterations. When the route runs through arable land, this land may have been heavily ploughed and cultivated over many years and thus caused some damage to the buried archaeological resource. It should be noted that factors influencing the preservation of archaeological remains within arable land are many and can vary considerably from field to field or even within fields.

5.7 Development Impacts

The extent of any likely impacts is set out in the table below. It is worth noting that the impacts can be either negative or beneficial and direct or indirect. The criteria for the impacts are taken from DMRB (2007).

Impact	Description		
Major	Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting		
Moderate	Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset		
Minor	Changes to key archaeological materials, such that the asset is slightly altered. Slight changes to setting		
Negligible	Very minor changes to archaeological materials, or setting		
No Change	No change		

Table 5. Criteria for assessing the magnitude of the impacts of the proposed pipeline

5.8 Development Effects

An assessment of the significance of the effects of the development on the archaeological resource can be reached by combining the assessments of value (Table 4) and development impact (Table 5) using a matrix similar to that in DMRB (2007, 5/6) (Table 6, below).

The value of the archaeological resource is on balance considered to be negligible to low and the impact to be minor resulting in a negligible to slight effect.

		No change	Negligible	Minor agnitude of Im	Moderate	Major
	Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight
	Low	Neutral	Neutral/ Slight	Neutral/ Slight	Slight	Slight/ Moderate
Value	Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
	High	Neutral	Slight	Slight Moderate/ Moderate/ Slight Large		Large/ Very Large
	Very High	Neutral	Slight	Moderate/ Large	Large/ Very Large	Very Large

Table 6. Significance of Effects Matrix

The excavation of drill pits and narrow open cut trenching in roads or roadside verges will destroy any archaeological remains that may be present within it although the overall impact in relation to the extents of the buried archaeological resource is likely to be negligible.

Topsoil stripping has the potential to expose archaeological features and deposits, which although not necessarily directly impacted by the excavation of the pipe trench, will be subject to compaction and rutting by vehicular movements and degradation by exposure to the elements for the period that the easement is open. In some areas subsoils may be present that mask archaeological horizons. Depths of 200mm or more of subsoil may provide some protection to archaeological remains. The excavation of the pipe trench will have a significant impact upon any archaeological remains that may be present within the pipe trench. Overall however the impact of the topsoil strip and pipe trench excavation on the archaeological resource should be considered negligible.

Once the scheme is complete it is not thought that there will have been any change to the setting of the archaeological resource.

5.9 Recommendations

The majority of the pipeline construction will involve open cut trenching through arable fields. To assess the impact of the topsoil stripping and trenching on both the known and unknown archaeological resource along the route it is recommended that a programme of archaeological evaluation by trial trenching is undertaken.

The archaeological evaluation will be concerned with recovering information relating to the extent, date, state of preservation, character, function, status and significance of the buried archaeological resource. This information will allow Suffolk County Council Archaeological Service Conservation to devise an

appropriate mitigation strategy to minimise the impact of the pipeline construction on the archaeological remains that have been identified along the route.

6.0 CONCLUSIONS

The area through which the proposed pipeline runs shows areas of significance interspersed with areas where there is no known archaeological record, due to the rural nature of the landscape. The main defining feature of the area, at least between Barnham and Ixworth, is the river Black Bourn. This river appears to have shaped and influenced the landscape of this part of Suffolk from the earliest times, with much settlement along its banks. Many areas which appear to have been occupied from the prehistoric period seem to show continuity through Roman and Saxon times, with many medieval centres also springing up in the vicinity. A case in point could be Ixworth, which has much prehistoric evidence, an important Roman influence which seems to continue through to the Early Saxon period, and then later a medieval priory was built close by, which provided the impetus for further development of the town. Ixworth, also, is the only town that the pipeline runs anywhere near, although some of the villages have been affected in a similar way, such as Fakenham Magna.

Areas are discussed individually above (Section 4.0), but as a general conclusion it is very likely that archaeological remains of significance will be present along the route. Several Scheduled Monuments lie close to the route; the route cuts through two SSSIs and many known archaeological sites. Important sites include the group of barrows close to the A134 Bury Road in Barnham, one of which is Scheduled. This is a significant area of activity of probable prehistoric date between Barnham and Fakenham Magna. The route runs adjacent to a Roman Road for part of its route, firstly south of Ixworth and at the end of the route to the Little Welnetham Water Treatment Works. Euston is a fine example of a post-medieval park/estate landscape, very much altered by the landowners here, the Dukes of Grafton. Ixworth has both Roman settlement of high status and military presence in the form of a fort, with associated settlement activity. Fakenham Magna is an area with multi-period settlement activity, along with a medieval ringwork fortification and settlement. Bardwell appears to be almost purely a medieval invention, with little evidence prior to this.

Overall the condition of archaeological remains along the pipeline route remains unknown and requires a programme of archaeological evaluation to determine the impact of the scheme in more detail.

Acknowledgements

NPS Archaeology would like to thank the staff of the Suffolk Record Office at Bury St Edmunds, Suffolk Historic Environment Record and the National Monuments Record for their assistance in collating the information presented in this report.

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Appendix 1: Archaeological Evidence

A search of the Suffolk Historic Environment Record made on 30 August and 8 September 2011 revealed the mapped extents of 137 sites and monuments of archaeological significance within a 250m corridor either side of the pipeline route. A small part of the route falls within the county of Norfolk, although this desk-based assessment is not required to deal in detail with the significance of any records which fall within the Norfolk section (client instruction).

Appendix 1 deals exclusively with the archaeological evidence recorded in the Suffolk Historic Environment Record, and is ordered out by parish from north to south along the route, with reference to Anglian Water chainage numbers.

The Norfolk Section: Chainage Numbers 0m - 1250m

(Not illustrated)

Several Norfolk HER records can be found within the search corridor for the pipeline, located using the Norfolk Heritage Explorer (http://www.heritage. norfolk.gov.uk/).

These sites include a medieval coin found in a garden (NHER 16473); a Roman coin found on Barnham Cross Common (NHER 17970); a Late Saxon key also found on Barnham Cross Common (NHER 34558); prehistoric potboilers and flints and a Palaeolithic hand-axe recovered from Barnham Cross Common (NHER 5794) and an area of multi-period finds close to the Little Ouse River (NHER 28728, 17397 and 17396). An interesting site also located within Norfolk is that of the remains of a medieval stone cross (NHER 5945), thought to be a marker for the boundaries of the Liberty of Thetford and the Liberty of St Edmund at Bury. This cross base has been much altered, and was apparently smashed into several pieces and set into concrete probably around the time of the establishment of the World War One army camp nearby. The Bury St Edmunds and Thetford (later Great Eastern) Railway line crosses the Bury Road (A134), although this is now dismantled (NHER 13602 and SHER BNH 060) and nothing remains of the line in the road. The pipeline route does, however, go straight through this site.

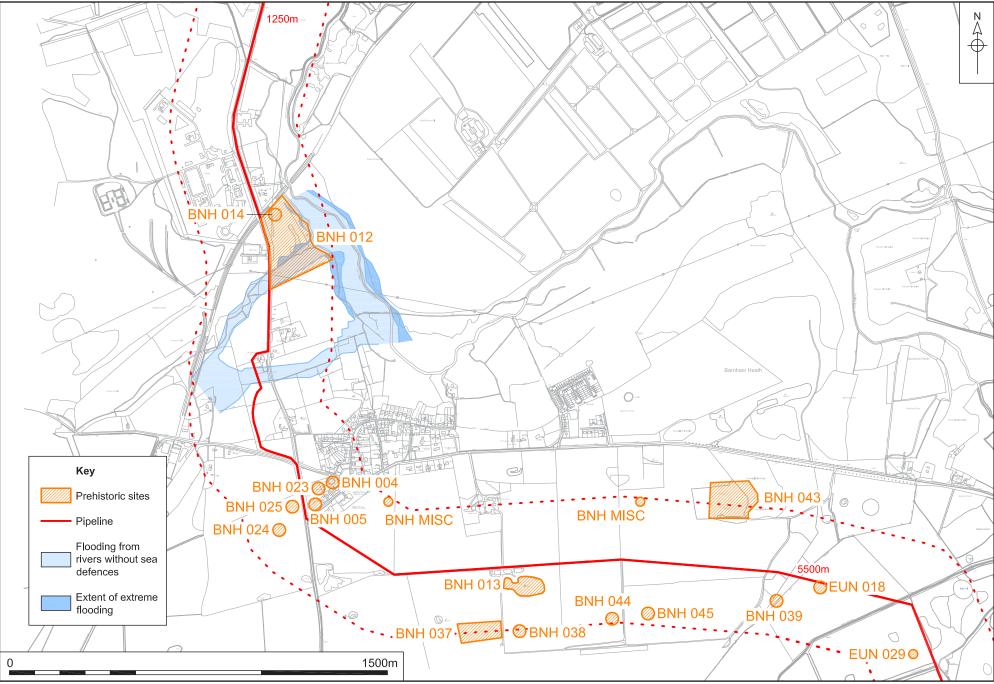
Barnham Parish: Chainage Numbers 1250m – 5500m

Prehistoric Evidence

(Figure 3a)

A complex of around five possible barrows, of possible Bronze Age date, is recorded within this parish. These are clustered close together near to the western edge of the current village, and lie close to the 25m contour line in the valley sloping to the north where the Little Ouse River runs. One of these barrows is a Scheduled Monument (No. 31098; BNH 004), and the English Heritage scheduling text reads:

'Although the bowl barrow in the garden of The Old Mill has undergone minimal excavation, most of the barrow has been left undisturbed and will therefore retain further archaeological information concerning its construction and the manner and duration of its use. Evidence for the local environment prior to and during that time will be also preserved, in soils buried beneath the mound and in the fills of the buried ditch. The barrow is the only survivor of a cluster of at least six which



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Figure 3a. The prehistoric records in Barnham Parish. Chainage Numbers 1250m - 5500m. Scale 1:15,000

originally existed to the north and west. The proximity of the barrow to this group, as well as a number of other barrows in this part of the Breckland region give it additional interest. Together they give some evidence of the character, development and density of the prehistoric population in this area'

The barrow is visible as an earthen mound, which stands to a height of about 1.6m and covers a roughly circular area with a maximum diameter of about 30m. Slight hollows on the north and south sides of the mound are thought to be the result of an investigation into the mound, carried out by A R Edwardson who excavated a 11m by 3m trench across the mound in 1957. This demonstrated that it was built up of turves with a capping of sand. A primary burial, taking the form of a contracted inhumation accompanied by a pygmy cup, was excavated from the centre of the mound. It is thought that the mound is encircled by a ditch 3m wide, which has been infilled and survives as a buried feature (taken from the Scheduling text, accessed at http://list.english-heritage.org.uk/resultsingle.aspx? uid=1018041).

The remains of another tumulus (BNH 005) is situated at the southern end of the meadow (the small triangular meadow containing BNH 004); according to information given by an elderly inhabitant of the village this had, some fifty years ago, been very much bigger, but had been largely removed to facilitate the passage of farm carts entering the gate.

SHER No.	Description
BNH 004	Round barrow at Mill House – SCHEDULED MONUMENT No. 31098
BNH 005	Remains of tumulus
BNH 012	Barnham Pit No. 2. John Wymer states 2 Acheulian hand-axes found here, whilst Basil Brown states they were found in Pit No. 1 (BNH 014)
BNH 013	Palaeolithic Clactonian flint industry site
BNH 014	Prehistoric pit excavated by Basil Brown
BNH 023	Ring-ditch seen on aerial photographs - part of cluster of barrows in area
BNH 024	Ring-ditch seen on aerial photographs - part of cluster of barrows in area
BNH 025	Possible ring-ditch seen on aerial photographs – part of cluster of barrows in area
BNH 037	Euston to Cambridge mains water pipeline recorded concentrations of burnt flint and Bronze Age features
BNH 038	Euston to Cambridge mains water pipeline recorded Iron Age pottery
BNH 039	Euston to Cambridge mains water pipeline recorded 4 small pits – possibly prehistoric
BNH 043	Fieldwalking and excavation of gravel pit site recorded Roman and prehistoric finds and features
BNH 044	Euston to Cambridge mains water pipeline recorded 2 small post-holes – possibly prehistoric
BNH 045	Euston to Cambridge mains water pipeline recorded one small post-hole – possibly prehistoric
BNH MISC	Late Iron Age pottery sherd "from near the barrow"
BNH MISC	Probable Palaeolithic flint object

Three further ring-ditches have been identified from aerial photographs of the area (BNH 023, 024 and 025), and form part of this funeral complex.

Table 7. Prehistoric SHER records in Barnham

The current pipeline route, although it runs close to the road, will travel through this area of high archaeological potential. The road is flanked by the cluster of barrows, and although the one scheduled example is around 130m away, other, less well-preserved monuments lie much closer and may still have extant remains.

Evidence from the very earliest human occupation can also be found in Barnham parish, with one site which lies only 75m south of the pipeline route. East Farm Brick pit (BNH 013) demonstrated the contemporaneity of the Clactonian and Acheulian flint industries (prior to this discovery these two Palaeolithic industries had been thought to be two culturally distinct entities). The excavations at Barnham have called this into question, and it is now believed that they may have been operating at the same time, with the only way of distinguishing between them being the presence or absence of bifaces on the flint. It is thought that the pipeline route will not encounter any of this Palaeolithic evidence during excavations, due to the depth at which artefacts of this period are usually found.

Further evidence of activity in early periods was recorded to the north of the route, nearer to the Norfolk/Suffolk border. Both Basil Brown and John Wymer excavated here, with one site known as 'Barnham Number 2 Pit' (BNH 012). The SHER record for this site is confusing as it states 'John Wymer reports that two Late Acheulian hand-axes were found at this site but Basil Brown quite definitely states that they were found at Barnham Number 1 pit'. The record goes on to say that artefacts found by W.G. Clarke in 1913-14 are recorded on the SHER card for BNH 014, but should be regarded as early finds from BNH 012. Basil Brown operated a salvage operation here in 1951 when gravel extraction commenced, and recovered Iron Age settlement remains, with some evidence of Bronze Age activity.

Prehistoric evidence was recorded along the route of the Euston to Cambridge Pipeline, of which part runs through the parish of Barnham. The fieldwalking phase of works produced burnt and worked flint scatters (BNH 037) and Iron Age pottery (BNH 038). Subsequent excavation of the easement found areas with pits, postholes and other features, all dating to the Bronze Age and Iron Age (BNH 039, 044 and 045). This appears to be settlement evidence, from the same time that the funerary barrows were in use, and it seems likely that these are associated.

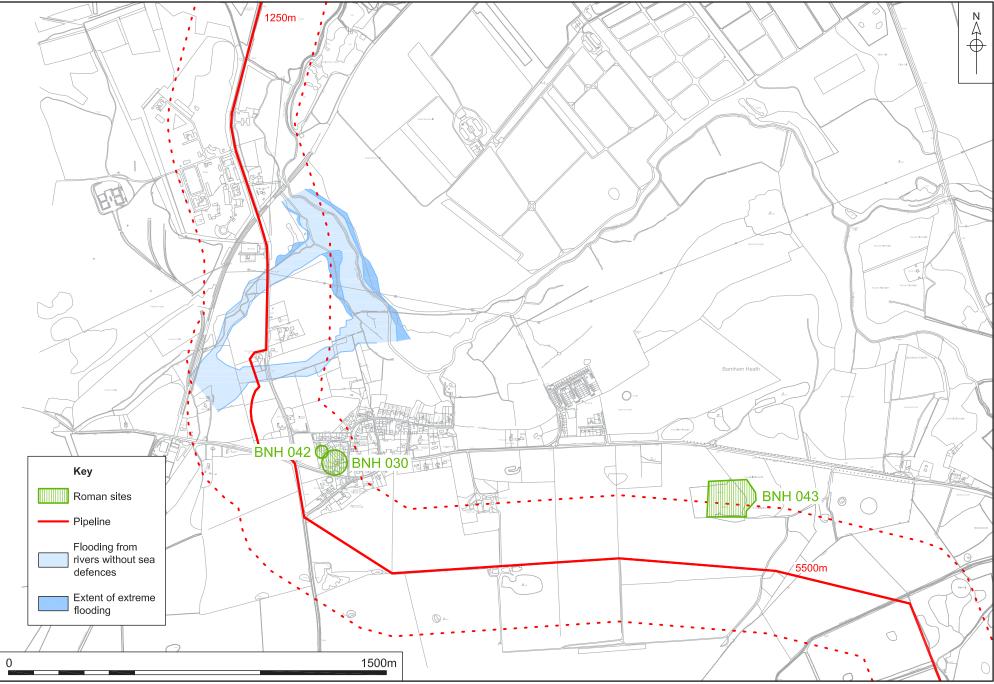
Fieldwalking in advance of gravel extraction at Gravel Hill (BNH 043) found concentrations of burnt flints, and later excavations found a number of prehistoric features, mainly of Iron Age date. The site also produced Mesolithic and Bronze Age evidence.

There is also less specifically-located finds evidence - some Iron Age pottery (BNH MISC) coming from 'near the barrow', and a Palaeolithic flint object found near the brickyard (BNH MISC).

Roman Evidence

(Figure 3b)

Fieldwalking and excavations at Gravel Hill (BNH 043, mentioned with the prehistoric evidence above) also recovered Roman finds. This evidence was in the form of a sparse scattering of pottery, possibly deposited during manuring.



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Figure 3b. The Roman records in Barnham Parish. Chainage Numbers 1250m - 5500m. Scale 1:15,000

SHER No.	Description
BNH 030	Roman coin and other Roman finds found during monitoring (Saxon finds also)
BNH 042	Three Roman coins found in garden of 21 St Martin's Lane
BNH 043	Fieldwalking of gravel pit site recorded Roman and prehistoric finds and features

Table 8. Roman SHER records in Barnham

Further Roman evidence was found at St Martin's Lane in Barnham (BNH 030), consisting of a coin of Claudius (AD 268-270) found in the garden, and the find of 'lots of coins' reported by builders on the site. Monitoring of the site during erection of an extension revealed a *c*.100mm thick surface with Roman pottery and animal bone, but no features.

Three more Roman coins were found in the garden at 21 St Martin's Lane (BNH 042) - one each of Allectus (AD 293-296), Valentinian I (AD 367-375) and Constantius II (AD 330-337).

The pipeline route runs close to this evidence for Roman activity, and may impact on any remains *in situ* here. The monitoring of the site at St Martin's Lane noted that settlement of Roman date was probably nearby.

Saxon Evidence

(Figure 3c)

An evaluation and excavation to the east and west of Thetford Substation (BNH 062) revealed a Saxon sunken-featured building, with other evidence in the form of two undated boundary ditches and a buried soil.

SHER No.	Description
BNH 030	Two Saxon daggers (Roman finds also)
BNH 062	Sunken featured building and 2 undated ditches found during evaluation and excavation at Thetford Substation

Table 9. Saxon SHER records in Barnham

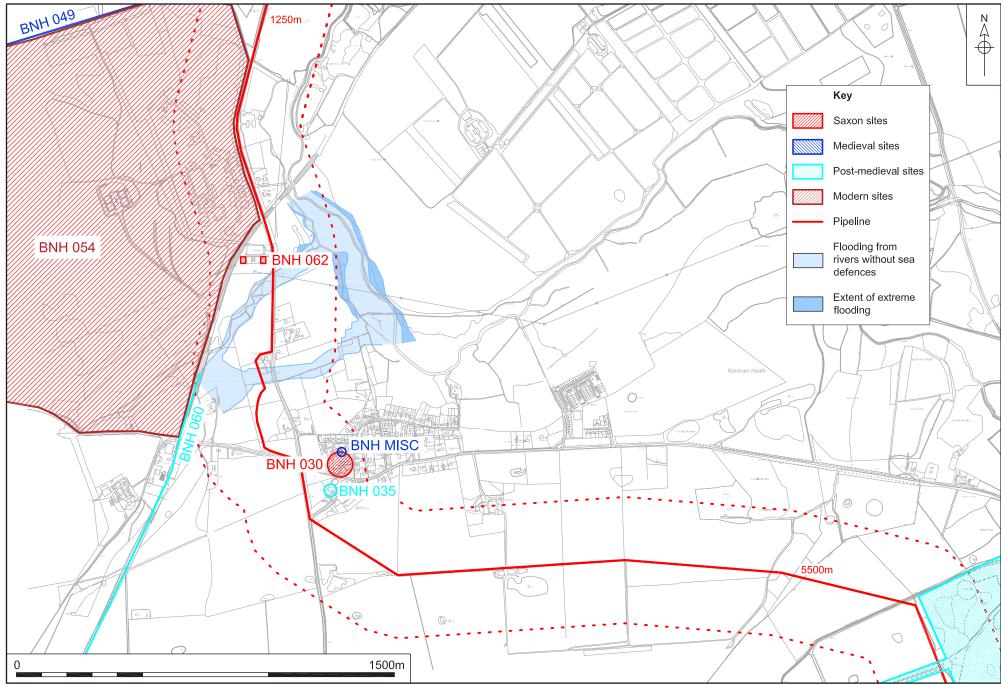
Two Anglo-Saxon scramasaxes (daggers) one of which was inlaid with gold, were found whilst digging trenches for council houses in December 1950 (BNH 030).

The pipeline route runs roughly 35m to the east of the Saxon sunken featured building at Thetford Substation (BNH 062), although it is thought that road construction and construction of the substation itself could have destroyed any remaining evidence for Anglo-Saxon settlement.

Medieval Evidence

(Figure 3c)

The major medieval feature in the landscape in Barnham is a boundary bank or earthwork (BNH 049) which runs along the Suffolk side of the Norfolk-Suffolk border. The feature is likely to represent the southern boundary of Thetford Warren.



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Figure 3c. The Saxon to Modern records in Barnham Parish. Chainage Numbers 1250m - 5500m. Scale 1:15,000

SHER No.	Description
BNH 049	Boundary earthwork on Suffolk side of border, probably marks southern edge of Thetford Warren
BNH MISC	Silver penny found at 8 St Martin's Lane

Table 10. Medieval SHER records in Barnham

A much-clipped silver penny (BNH MISC) was recovered from the garden of 8 St Martin's Lane and, due to its condition, could be of any date from Edward I through to Henry VII.

The pipeline route runs away from the village centre, and as such is not likely to be located within any area of dense medieval occupation.

Post-medieval Evidence

(Figure 3c)

Only two records of this date were found in the SHER for this area, that of a tower mill (BNH 035), dated to 1821, and a dismantled railway line (BNH 060). The mill was probably built by George Bloomfield of TheInetham, it ceased work in 1930 and was stripped out *c*.1968. The railway line ran through Ingham, Culford and Barnham.

SHER No.	Description	
BNH 035	Tower mill, dated 1821	
BNH 060	Dismantled railway line	

Table 11. Post-medieval SHER records in Barnham

Modern Evidence

(Figure 3c)

The only modern record in the SHER for this area is that of Barnham camp (BNH 054), which was originally a World War II complex and possible munitions store. During the Cold War there were also military buildings here and formerly a secret atomic bomb store, now considered to be of national historical significance. Part of the area is a Scheduled Monument (No. 30608), although this falls just outside the search area for this project, located where the Gorse Industrial Estate lies.

SHER No.	Description	
BNH 054	Barnham Camp - Second World War army camp, Cold War military camp and atomic bomb store complex (part Scheduled Monument)	

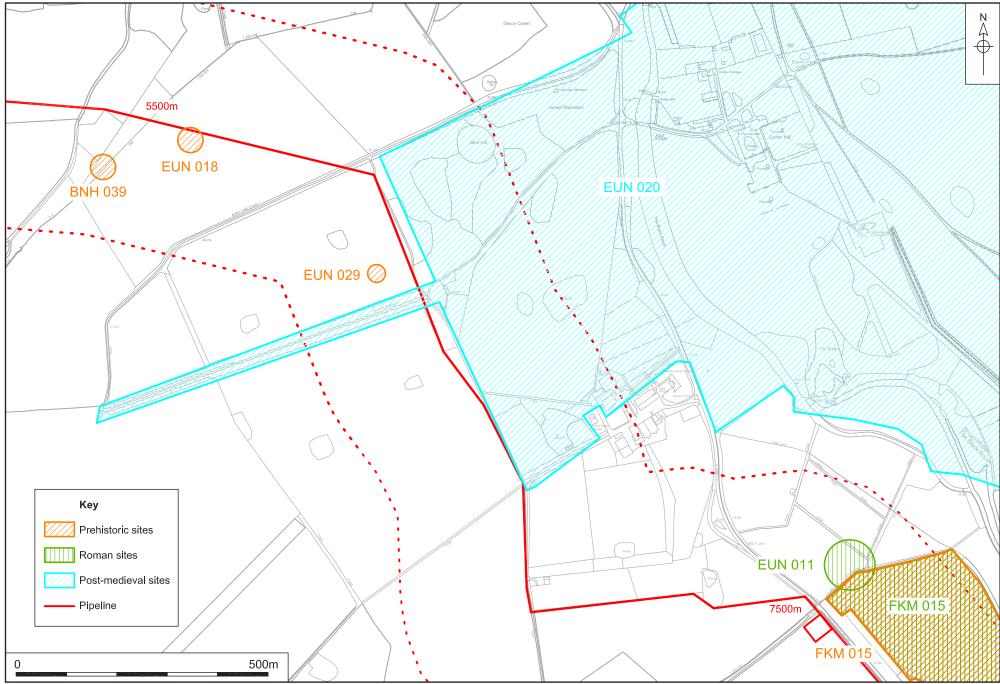
Table 12. Modern SHER records in Barnham

Euston Parish: Chainage Numbers 5500m – 7500m

Prehistoric Evidence

(Figure 4)

The Euston to Cambridge pipeline (already mentioned as part of Barnham parish) also encountered prehistoric material within Euston parish. The evidence from this part of the pipeline was similar to that previously discussed above, within Barnham parish. Several charcoal-filled pits were recorded, probably of Bronze Age date.



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Figure 4. The prehistoric, Roman & Post-medieval records in Euston Parish. Chainage Numbers 5500m - 7500m. Scale 1:7500

SHER No.	Description
EUN 018	Euston to Cambridge mains water pipeline recorded a lithic scatter and 2 charcoal filled pits
EUN 029	Barbed and tanged flint arrowhead – Bronze Age

Table 13. Prehistoric SHER records in Euston

The only other prehistoric evidence was a casual find of a flint barbed and tanged arrowhead of Bronze Age date (BNH 029).

Roman Evidence

(Figure 4)

The only Roman evidence from this area is that of Roman pottery (EUN 011) found during excavation by Mrs Caton.

SHER No.	Description
EUN 011	Roman pottery

Table 14. Roman SHER records in Euston

Post-medieval Evidence

(Figure 4)

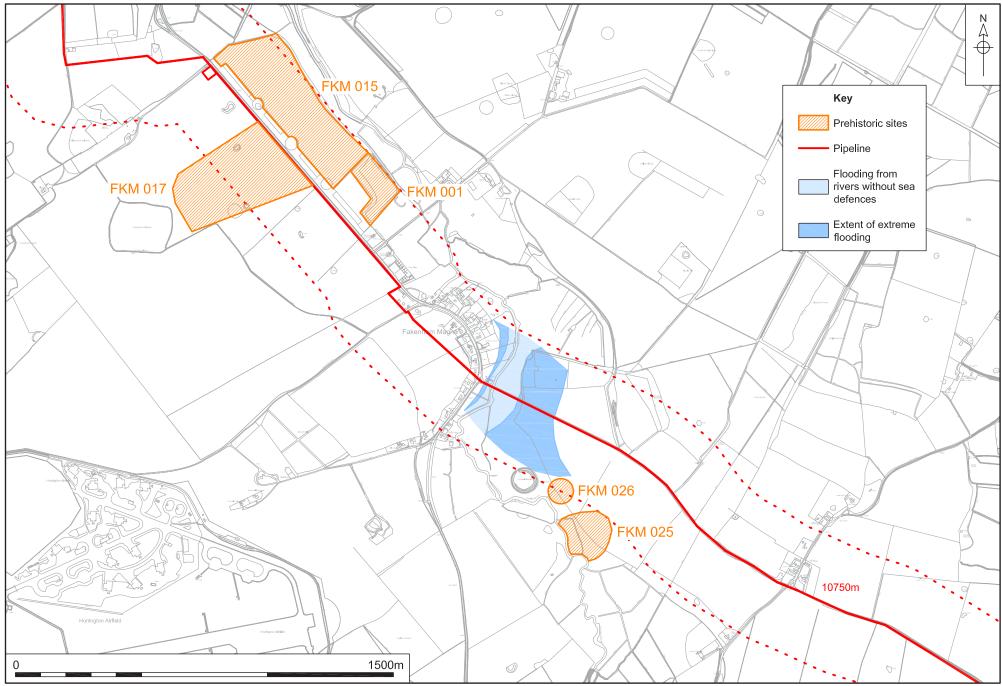
The pipeline route runs through the western edge of the area which is part of the designated park and garden of Euston Hall (EUN 019, outside search area). The hall was built in the 1660s for Lord Arlington, and he received a license to impark in 1671, an area of 2000 acres. The pipeline cuts through the very edge of the designated area, across the track known as Duke's Ride, of this area the English Heritage listing states:

'The Triumphal Arch and Lodge (listed grade II) are situated on the west boundary of the registered site marking the point where Duke's Ride leaves the park. They are dated 1758 (date on the building) and are single-storey, white-brick buildings joined by a high arch with triangular pediment above curves, the design of the whole being originally Kent's, the building being remodelled during the early C19. The Arch marks the original entrance to the park and leads to a grass track down through the west park which crosses the A1088 and enters the grounds of the Hall at what is now the second main approach over a river bridge to arrive at the stables on the north side of the building.'

The pipeline will cross Duke's Ride, which is listed as a processional way lined with lime trees, leading out from the park to the western entrance gateway. The pipeline may alter the area of this monument which should be considered as an area of significance. Consideration of appropriate mitigation measures will be made.

SHER No.	Description
EUN 020	Registered park and garden associated with Euston Hall (EUN 019)

Table 15. Post-medieval SHER records in Euston



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Figure 5a. The prehistoric records in Fakenham Magna Parish. Chainage Numbers 7500m - 10750m. Scale 1:15,000

Fakenham Magna Parish: Chainage Numbers 7500m – 10750m

Prehistoric Evidence

(Figure 5a)

A large site partially excavated by Basil Brown in the 1940s is recorded on the SHER as FKM 001. This site was a gravel extraction site and Basil noted around 200 Roman hut sites, along with evidence from other periods, including the prehistoric. The prehistoric material consists of Palaeolithic through to Neolithic finds, a pit with Bronze Age pottery, a leaf shaped flint dagger, scraper and a bronze ring, and Iron Age pottery possibly associated with a hearth.

Immediately north-west of site FKM 001 is an area of cropmarks (FKM 015) (which remain undated), Bronze Age pottery and three silver Iron Age coins amongst Roman and other finds.

On the opposite side of the road to the two previous sites is an area where Mesolithic and Neolithic finds were recovered (FKM 017).

The pipeline route runs alongside the road at this point, with the sites mentioned above flanking it on either side.

SHER No.	Description
FKM 001	Multi-period settlement site, including Roman and Saxon as well as prehistoric
FKM 015	Multi-period site, included Bronze Age and Iron Age pottery and 3 Iron Age coins, worked flint
FKM 017	Mesolithic and Neolithic finds
FKM 025	Bronze Age sickle blade (also Roman finds)
FKM 026	Neolithic flint arrowheads

 Table 16. Prehistoric SHER records in Fakenham Magna

The remaining two sites lie close to the River Black Bourn, to the south-west of the pipeline, and include a Bronze Age sickle blade (FKM 025) and Neolithic finds (FKM 026).

Roman Evidence

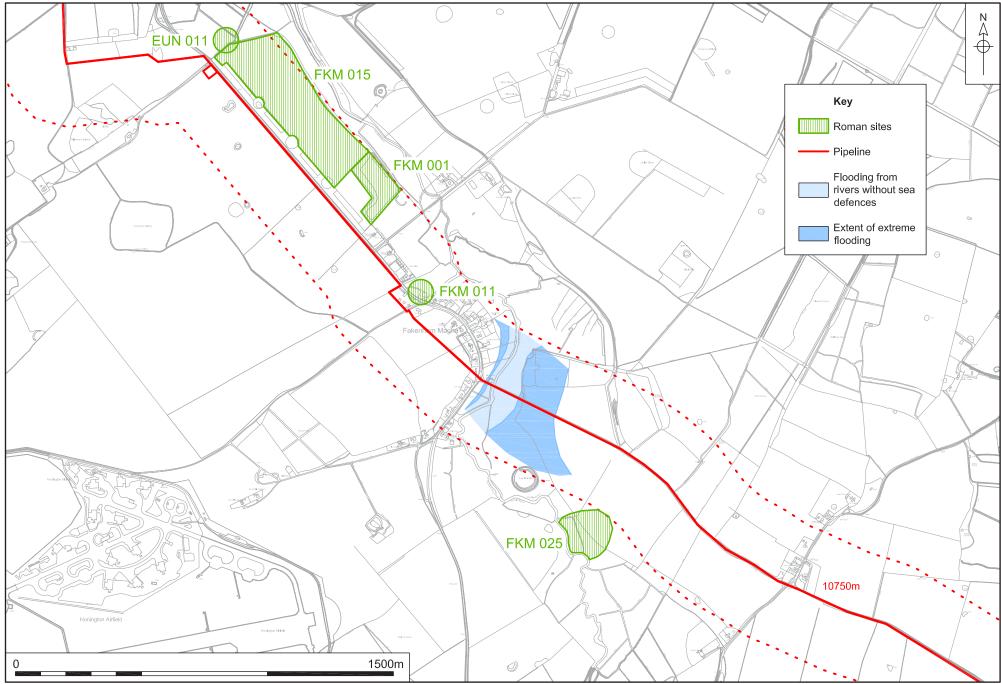
(Figure 5b)

The multi-period site mentioned above, which was excavated by Basil Brown prior to gravel extraction (FKM 001) also recovered settlement activity of Roman date. The site included hut sites with possible hearths and a wharf.

Near to this (to the north-west) is another multi-period site, which includes range of metal detector finds of Roman date (FKM 015).

SHER No.	Description
FKM 001	Multi-period settlement site, including prehistoric and Saxon as well as Roman
FKM 011	Roman pottery found near Rectory in bomb crater
FKM 015	Multi-period site, including Roman finds (other periods also)
FKM 025	Roman finds (BA also)

Table 17. Roman SHER records in Fakenham Magna



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Figure 5b. The Roman records in Fakenham Magna Parish. Chainage Numbers 7500m - 10750m. Scale 1:15,000

Roman finds were also recovered from other areas in the parish, implying a further background of activity of this period. Close to the village of Fakenham Magna pottery of 1st and 2nd century date was found close to the Rectory in a bomb crater (FKM 011). Towards the edge of the corridor is another site which had Roman finds (FKM 025) as well as Bronze Age.

Saxon Evidence

(Figure 5c)

Some Saxon evidence was recovered from the mainly Roman occupation site in the north of the parish (FKM 001). Basil Brown notes that some of the hut sites here were of Saxon origin, and an inhumation burial was found beneath the floor of one of them, with grave goods of Early Saxon date.

SHER No.	Description
FKM 001	Multi-period settlement site, including prehistoric and Roman as well as Saxon
FKM 015	Multi-period site recovered Saxon finds (and other periods)
FKM 016	St Peter's Church – evidence for Saxon origins
FKM 022	Saxon finds recovered during unsystematic fieldwork (also medieval)

Table 18. Saxon SHER records in Fakenham Magna

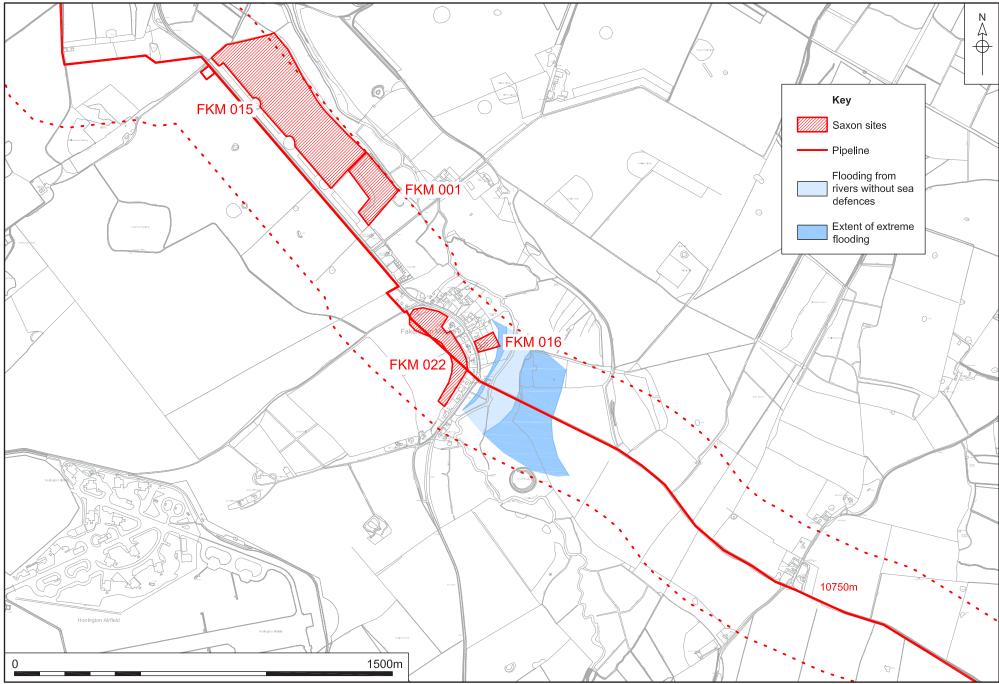
The parish church of Fakenham Magna is recorded as having Saxon evidence (FKM 016) in the form of 'excellent long and short work in nave'.

Saxon finds were recovered from two areas, one lying close to the settlement site mentioned above (FKM 001), which recovered Saxon coins and a strap end (FKM 015). The second site lies nearer to the village centre and was recovered during 'unsystematic' fieldwork in the area, recovering a scatter of Saxon material.

Medieval Evidence

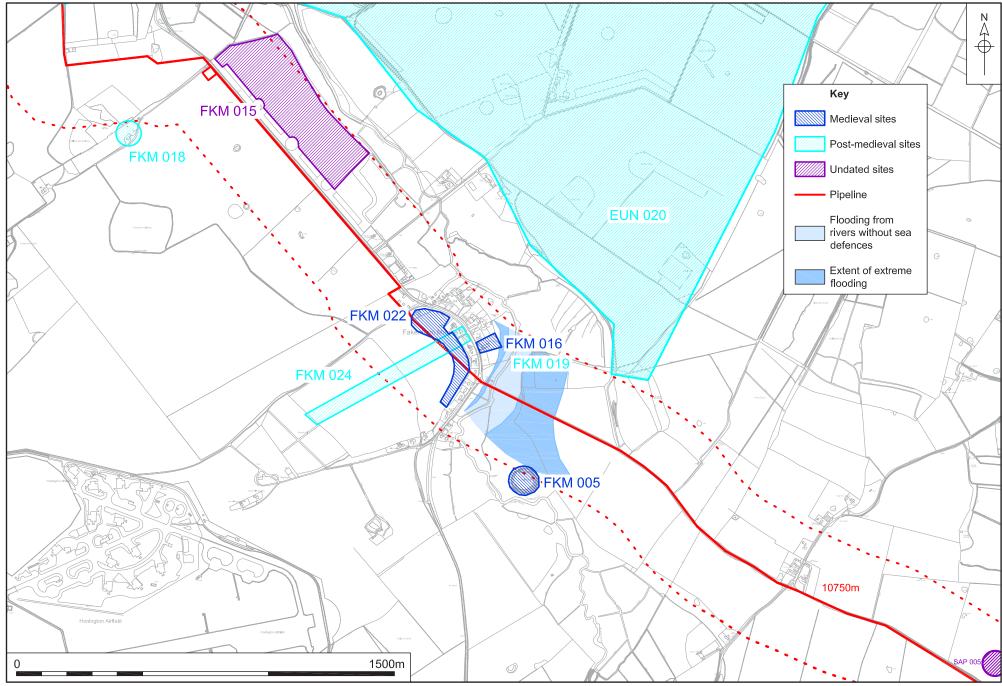
(Figure 5d)

The most important site in the SHER relating to the medieval period in this area is also a Scheduled Monument (No. 31086), and is a medieval ringwork fortification (FKM 005). The HER itself lists the monument as undated, but the English Heritage listing states that the monument is a medieval ringwork. The site lies within Burnthall Plantation, and takes its name from it. The monument is prominently sited on a low spur projecting into the flood plain on the east bank of the Black Bourn River, and lies about 15m from a ford across the river. The ringwork, which has an overall diameter of approximately 110m, is visible as a penannular earthwork enclosure incorporating an inner bank, a ditch and a slight counterscarp bank. On the north-west side a causeway, 5m wide, which crosses the ditch, marks the original entrance. The inner bank, ditch and counterscarp bank are most clearly defined on the southern side of the enclosure. Here the bank stands to a height of approximately 1.4m above the level of the ground surface in the interior and measures about 9m wide at the base. A section of the bank, approximately 30m in length, has been flattened on the western side of the earthwork, immediately to the south west of the entrance. The ditch measures about 13m wide and up to 2m below the counterscarp bank. The counterscarp bank measures approximately 0.4m in height and 1.4m wide. The surface of the interior of the enclosure is lower than the level of the ground outside the



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Figure 5c. The Saxon records in Fakenham Magna Parish. Chainage Numbers 7500m - 10750m. Scale 1:15,000



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Figure 5d. The medieval, post-medieval & undated records in Fakenham Magna Parish. Chainage Numbers 7500m - 10750m. Scale 1:15,000

earthwork. No excavations of the ringwork are known to have taken place, however, its similarity to Red Castle in Thetford suggests an Anarchy (1135-1154) date.

The pipeline will not impact on this monument, as it lies towards the edge of the 250m corridor, to the south of the route itself.

SHER No.	Description
FKM 005	Burnthall Plantation ringwork fortification – SCHEDULED MONUMENT No. 31086
FKM 016	St Peter's Church
FKM 022	Medieval finds recovered during unsystematic fieldwork (also Saxon)

Table 19. Medieval SHER records in Fakenham Magna

The church of St Peter is a medieval parish church (FKM 016) with Saxon origins (see above) and is Grade I listed. The church shows many periods, including 13th-14th- and 15th-century alterations and additions.

Medieval finds were recovered from 'unsystematic' fieldwork close to the village (FKM 022), along with Saxon finds (see above).

Post-medieval Evidence

(Figure 5d)

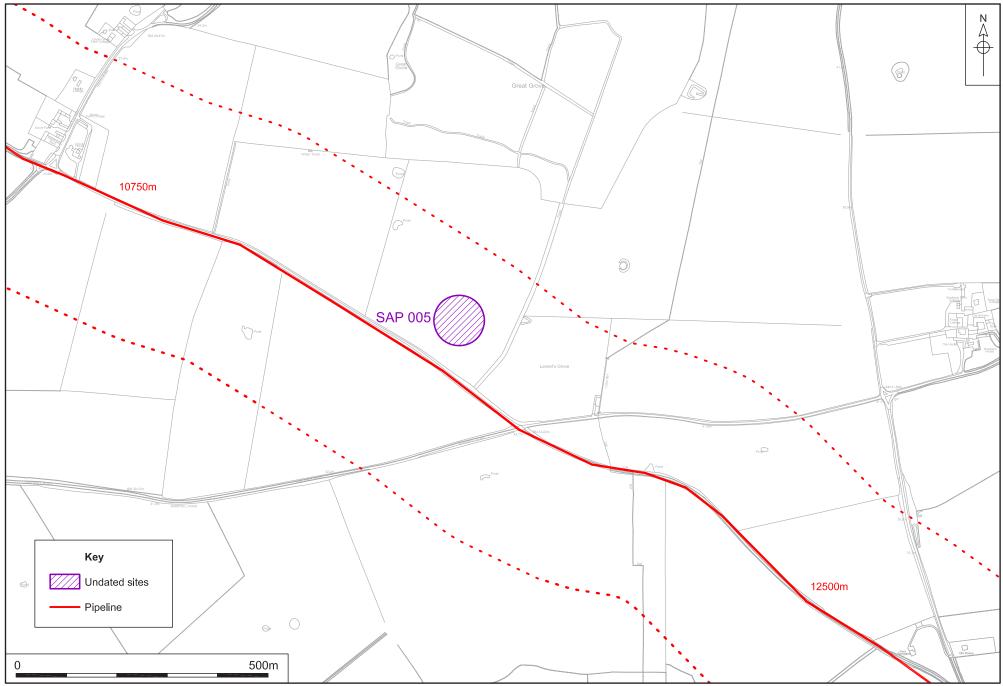
The post-medieval evidence for the area includes a lime kiln marked on mapping from the 19th-century. (FKM 018), and is still marked on the 1983 Ordnance Survey map as a disused pit.

A circular cropmark which is approximately 50m diameter is recorded within the area (FKM 019) and consists of a roughly circular unbanked earthwork with a shallow ditch and a definite causeway to the north (another possible secondary one to the south-west). No internal features are evident and it lies in a low-lying position approximately 100m east of the Black Bourn River. Neither the 1767 map of Fakenham Lordship nor the 1839 tithe map depicts the earthwork, although both sources record the land unit as 'Castle Fen'. Both maps show the area to be pasture. An area of woodland approximately 500m to the north-north-east is shown on the modern-day Ordnance Survey map as 'Castle Oaks'. It is possible that this site is linked in some way with Burnthall Plantation to the south, although typologically is likely to be of later date.

SHER No.	Description
FKM 018	Lime kiln/pit marked on mapping
FKM 019	Circular cropmark – possibly a mill mound?
FKM 024	Fakenham Hall double avenue of trees

Table 20. Post-medieval SHER records in Fakenham Magna

Fakenham Hall, which lies just to the north of the church in Fakenham Magna, is a listed building now divided into two dwellings. The monument which falls within the buffer zone for this pipeline is for a double avenue of trees leading from the southwest of the hall, over the road and towards Broom Hill (FKM 024). On the 1767 Fakenham Lordship map the avenue is shown as stretching from the opposite side of the road to the hall towards Broom Hill. On the 1839 Tithe Map much of the area is now arable, and it appears that only part of the avenue survives. The 1946



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Figure 6. The undated records in Sapiston Parish, Chainage Numbers 10750m - 12500m. Scale 1:7500

aerial photograph shows the avenue 'much decimated' and by the 1991 aerial photograph little remains of the trees which once formed part of this avenue.

The pipeline directly crosses the site of this avenue of trees, and may find evidence for them below-ground, although agricultural activity has most likely already removed any trace.

Undated Evidence

(Figure 5d)

A complex of cropmarks (FKM 015) has been recorded within the parish, and includes pits, ditches, trackways, possible sunken featured buildings and gravel test pits. Although the cropmarks have not been tested, and are therefore undated, the site has also produced finds of many periods, including Roman and Saxon, and may be related to occupation activity of multiple periods.

SHER No.	Description
FKM 015	Cropmark complex – pits, ditches, trackways, ?SFBs, undated at present

Table 21. Undated SHER records in Fakenham Magna

Sapiston Parish: Chainage Numbers 10750m – 12500m

Undated Evidence

(Figure 6)

A single entry for this parish was recorded in the SHER - a pottery find, although no further information was available for this record, and it remains undated (SAP 005).

SHER No.	Description
SAP 005	Pottery with no period recorded

Table 22. Undated SHER records in Sapiston

Bardwell Parish: Chainage Numbers 12500m – 15000m

Prehistoric Evidence

(Figure 7a)

Only two records were recorded for the prehistoric period within Bardwell parish, and included a rapid assessment prior to development, which recovered several worked flints (BAR MISC) close to the village centre. The second record was for a complete copper alloy axe of Bronze Age date, excavated from *c*.2 feet deep at Knox Lane and a Late Palaeolithic flint implement from *c*.4 feet deep.

SHER No.	Description
BAR 068	Bronze Age axe and Palaeolithic flints
BAR MISC	Rapid assessment prior to development recovered 3 worked flint

 Table 23. Prehistoric SHER records in Bardwell



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Figure 7a. The prehistoric, Roman & Saxon records in Bardwell Parish. Chainage Numbers 12500m - 15000m. Scale 1:15,000

Roman Evidence

(Figure 7a)

The only Roman evidence within the search area for Bardwell is that of a fine large brass of Claudius (AD 41 - 54) found near to the church (BAR 026).

SHER No.	Description
BAR 026	Large brass of Claudius found near Church (see medieval also)

Table 24. Roman SHER records in Bardwell

Saxon Evidence

(Figure 7a)

The only Saxon evidence from the area is that of the find of a coin (BAR 004). The coin was found in a garden close to the church, and is a silver coin of Beonna, King of East Anglia (c. AD 760).

SHER No.	Description
BAR 004	Coin of Beonna, King of East Anglia, c. AD 760 – medieval evidence also

 Table 25. Saxon SHER records in Bardwell

Medieval Evidence

(Figure 7b)

The main medieval focus of the village is the church of St Peter (BAR 026), and close to this, found in the fabric of a demolished house was 13th-century carved stones and pillar bases (BAR 004).

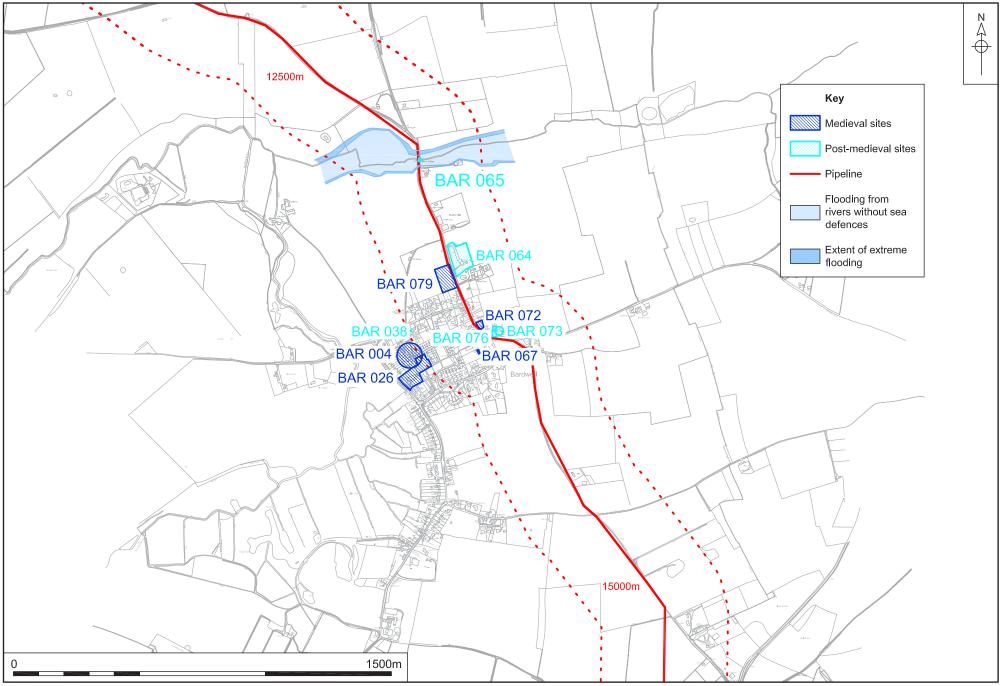
SHER No.	Description
BAR 004	Circa C13 carved stones and pillar bases from fabric of demolished house, near church – Saxon evidence also
BAR 026	Church of St Peter & St Paul (see Roman also)
BAR 067	Croft House – medieval floor foundation layer found within 14th-century open hall
BAR 072	Evaluation at land adjacent to Holly House revealed 2 ditches, a post- hole and a clay building platform of 12th – 14th century date
BAR 079	Evaluation revealed settlement activity dating to the Saxo-Norman period; excavation revealed further settlement activity of medieval date

Table 26. Medieval SHER records in Bardwell

Two archaeological interventions in the parish revealed medieval evidence. At Croft House, where monitoring was undertaken on removal of the interior floor surface of a 14th-century house, the medieval foundation layer was seen (BAR 067).

At land adjacent to Holly House an archaeological evaluation was undertaken in 2008, prior to development on two cottages (BAR 072). The evaluation revealed two ditches, a post-hole and a clay building platform, with pottery of 12th - 14th-century date. The route of the current pipeline runs alongside the road, close to this evaluation, and is the nearest of the medieval records to the route.

An evaluation on land to the west of Spring Road in 2010 (BAR 079) recovered a dense concentration of archaeological features in the south-eastern part of the



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Figure 7b. The medieval & Post-medieval records in Bardwell Parish. Chainage Numbers 12500m - 15000m. Scale 1:15,000

site. These features consisted of pits, ditches and post-holes probably of 10th- to 12th-century date, and are likely to be settlement activity. The pipeline route runs along Spring Road in Bardwell, close to the site of this settlement activity, and may impact upon any archaeological evidence here. Subsequent excavation by NPS Archaeology in 2011 (Crawley *in prep*) showed further settlement activity of medieval date.

Post-medieval Evidence

(Figure 7b)

The main features of the post-medieval landscape within Bardwell are structural, such as Bardwell Hall Manor, which is depicted on an estate map of 1730 (BAR 064). The house depicted here is apparently unrecognisable as the present house on the site, known as Moat House, although a long narrow pond or canal in the grounds is still visible and is water-filled.

Another upstanding building of archaeological interest is Beech Farm, a 17thcentury house with a single outbuilding and a small complex of farm buildings, including a barn (BAR 073).

The Black Bridge was named on Hodskinson's map of 1783 (BAR 065), and crosses a tributary of the Black Bourn River, possibly known as the Blackwater.

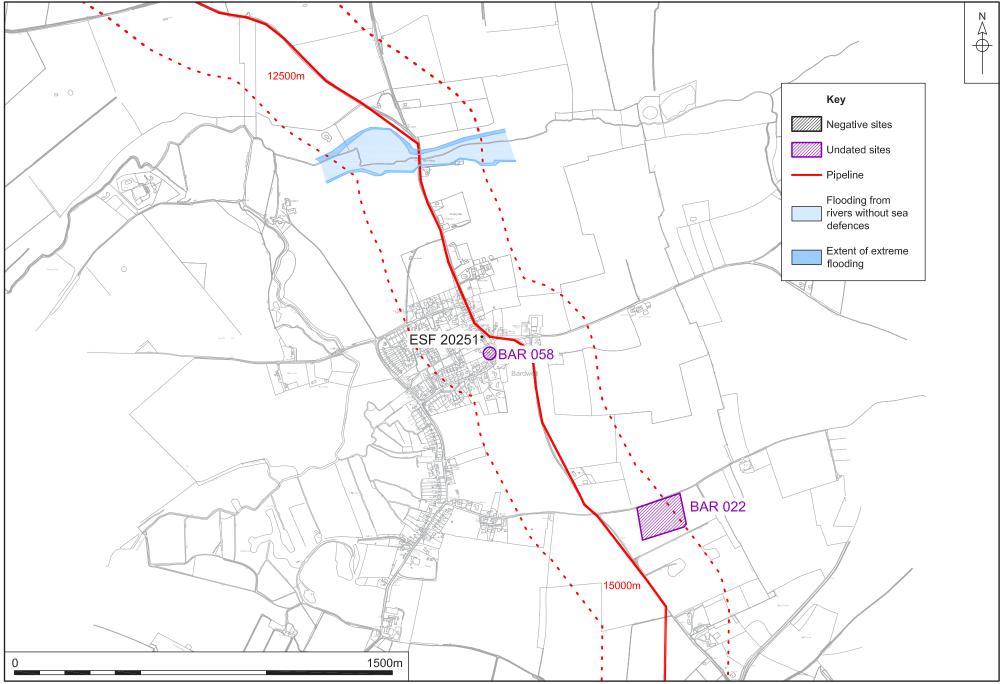
A tower mill, lying to the north-west of the village, is dated to 1823, and was depicted on the Tithe Map of 1840 (BAR 038). The mill ceased to be driven by wind in 1925, and was driven by power for several years. The sails were apparently also removed in 1925, and the site is listed as one of the most important industrial archaeology sites in Suffolk.

SHER No.	Description
BAR 038	Tower mill dated 1823
BAR 064	Bardwell Hall Manor, now Moat House
BAR 065	Black Bridge – marked and named on Hodskinson's map of 1783
BAR 071	Monitoring at land to the rear of The Dun Cow found a large ditch
BAR 073	Beech Farm, 17th-century house with farm buildings
BAR 076	Evaluation at land adjacent to Beech Farm revealed post-medieval features

Table 27. Post-medieval SHER records in Bardwell

An evaluation at land to the rear of the Dun Cow recorded a large ditch (BAR 071) fronting onto School Lane, probably part of a circuit which followed the inside edge of the roads.

Another evaluation, this time at land adjacent to and west of Beech Farm, recorded five compacted chalk surfaces, the foundations for two walls probably associated with a complex of farm buildings, as well as three undated pits or ditches (BAR 076). It is thought likely that most of these features were of a post-medieval date.



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Figure 7c. The negative & undated records in Bardwell Parish. Chainage Numbers 12500m - 15000m. Scale 1:15,000

Undated Evidence

(Figure 7c)

Some evidence remains undated within the parish, including an indistinct, possibly rectilinear field system of cropmarks recorded from aerial photographs (BAR 022).

SHER No.	Description	
BAR 022	Cropmarks of an undated field system	
BAR 058	Undated features found during monitoring	

Table 28. Undated SHER records in Bardwell

Monitoring of footing trenches in 1993 revealed several features, which remain undated due to the lack of dating evidence, but may be medieval to post-medieval in date (BAR 058).

Negative Evidence

(Figure 7c)

Monitoring of groundworks at Laurel House recorded no archaeological evidence at all (ESF 20251).

louse found no archaeological evidence

Table 29. Negative SHER records in Bardwell

Ixworth Parish: Chainage Numbers 15000m – 0m - 1500m

Prehistoric Evidence

(Figure 8a)

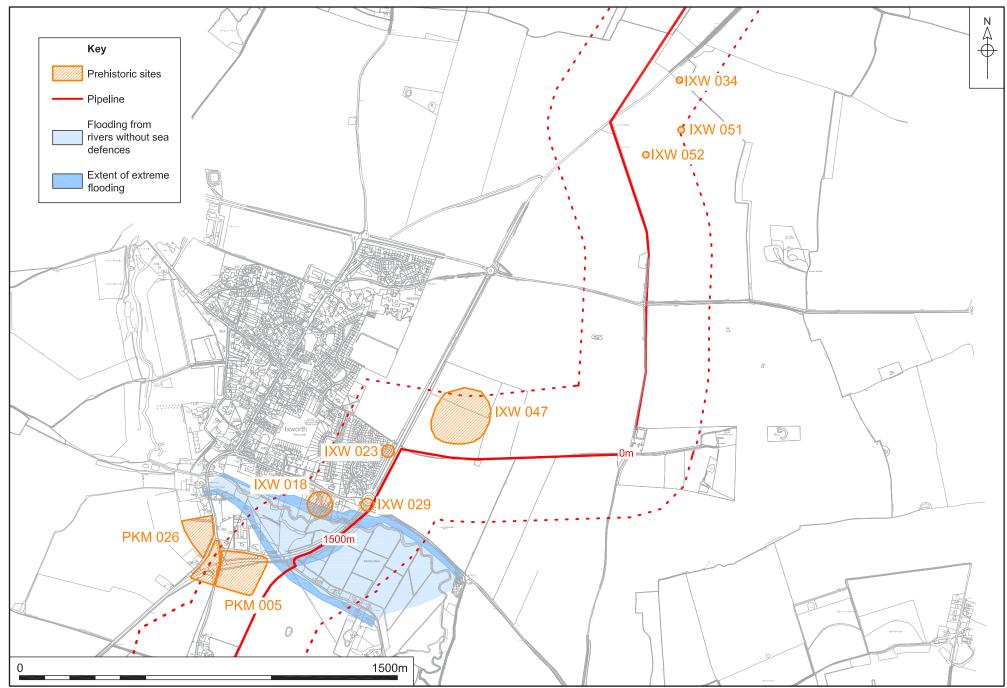
Evidence of the prehistoric period in Ixworth parish is confined to finds only, with no excavated evidence at all.

An area to the north-east of the town of Ixworth has recorded a concentration of burnt and worked flints (IXW 034, 051 052).

SHER No.	Description
IXW 018	Field opposite Cross House – Iron Age brooch (other periods also)
IXW 023	Forgery of 'Norfolk Wolf' type stater found metal detecting in advance of Ixworth bypass
IXW 029	Possible Iron Age coin found (also Roman)
IXW 034	Burnt flint scatter and also a few worked flints
IXW 047	Fieldwalking survey recovered portions of 2 bronze celts and worked and burnt flints (later periods also)
IXW 051	Burnt flint scatter
IXW 052	Burnt flint scatter

Table 30. Prehistoric SHER records in Ixworth

Closer to the town several further sites with prehistoric finds have been recorded, including during metal detecting ahead of the Ixworth Bypass, where a forgery of a Norfolk Wolf type stater was found (IXW 023); an Iron Age brooch was found in the field opposite Cross House (IXW 018); a possible Iron Age coin (IXW 029);



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Figure 8a. The prehistoric records in Ixworth Parish. Chainage Numbers 15000m - 0m - 1500m. Scale 1:15,000

and portions of two bronze celts and worked and burnt flint were found during fieldwalking (IXW 047).

Roman Evidence

(Figure 8b)

The main site of Roman date in the area is that of a Roman villa, with associated bathhouse (IXW 004), which is also a Scheduled Monument (No. SF 55). The villa was first recognised during ploughing in 1834, when the hypocaust system of a bathhouse was found; this was emptied of soil in 1849. In 1948 deep ploughing revealed further evidence - an apsidal building, hypocaust, a room with painted plaster, a well and much debris were recorded. Close to the villa site a ceremonial disc and chain were found in a field in 1950 (IXW 016); probably associated with the occupants of the villa.

The pipeline route runs to the north and west of this site, close to the road line. Although it does not impact directly onto the Scheduled Monument, it is certainly possible, given the volume of Roman activity here and also just to the south at Pakenham, that Roman evidence could be disturbed by the route.

SHER No.	Description
IXW 004	Roman villa and bathhouse – SCHEDULED MONUMENT SF55 (Saxon evidence also)
IXW 005	Riverside Paddocks -thin scatter of Roman finds (other periods also)
IXW 016	Roman ceremonial disk and chain found in this field
IXW 018	Field opposite Cross House – Roman metalwork and one pit (other periods also)
IXW 028	Scatter of Roman coins and a brooch (later periods also)
IXW 029	Roman coins found (also prehistoric)
IXW 033	Roman metalwork scatter (Saxon also)
IXW 047	Fieldwalking survey recovered a Roman key and pottery (other periods also)

Table 31. Roman SHER records in Ixworth

Much of the remaining Roman data for the area is in the form of finds, although during construction work at a field opposite Cross House on Stow Road, a pit containing Roman pottery was found (IXW 018) along with Roman metalwork.

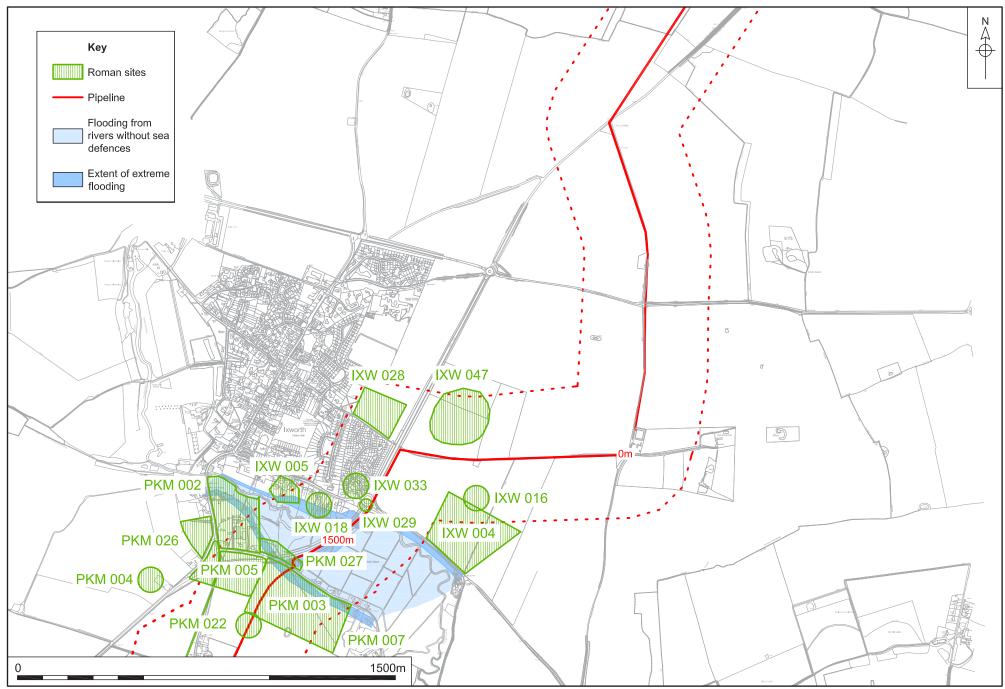
Many of the Roman finds recovered here are likely to be related to either the fort just to the south, within Pakenham parish, or with the villa site (see Table 31 for details).

Saxon Evidence

(Figure 8c)

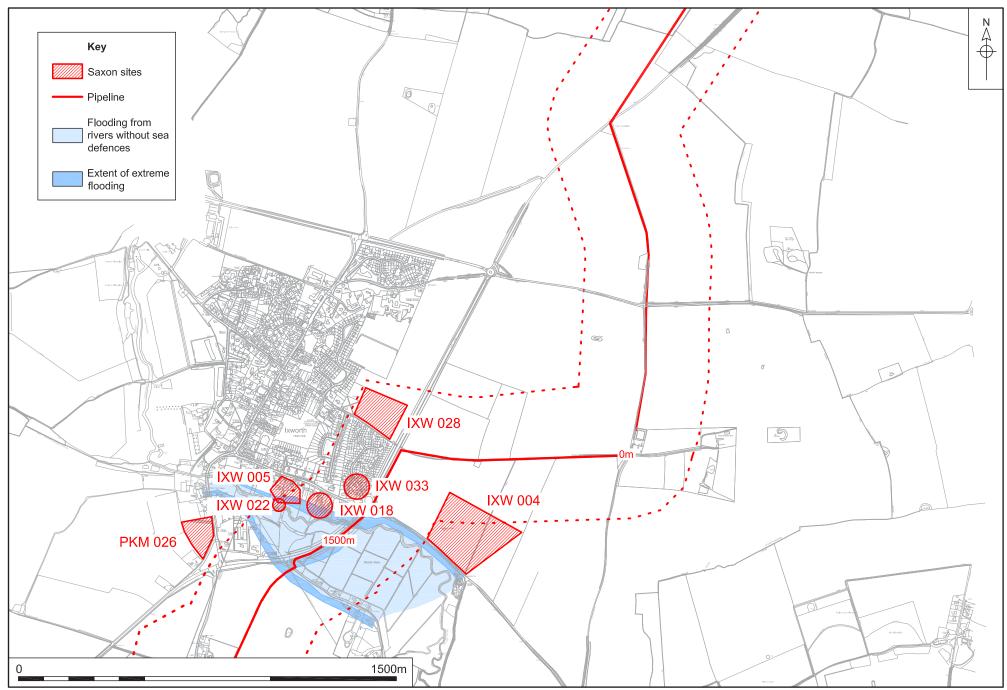
Ixworth has evidence both for Early Saxon settlement and a cemetery of the same date. It is possible that because the area seems to have been so densely populated during the Roman period, the Early Saxon continuation of this is not so unusual, and the presence in the area of the Black Bourn River also makes it an ideal place for settlement.

The site of the Roman villa has recovered evidence for Early Saxon occupation of the ruins (IXW 004). This settlement consisted of pottery, loomweights, possible



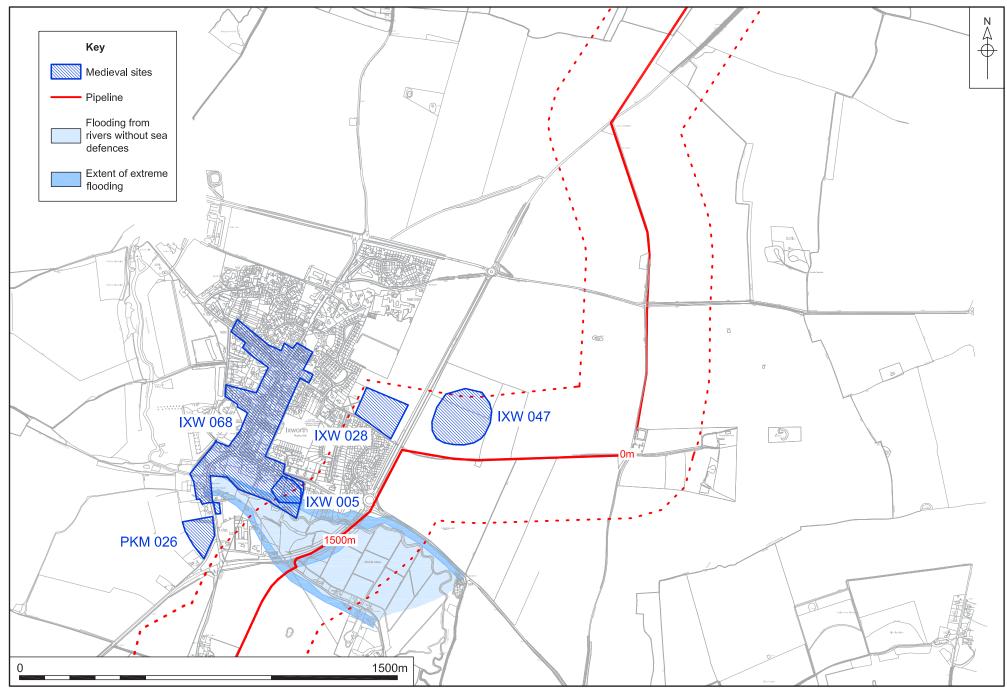
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Figure 8b. The Roman records in Ixworth Parish. Chainage Numbers 15000m - 0m - 1500m. Scale 1:15,000



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Figure 8c. The Saxon records in Ixworth Parish. Chainage Numbers 15000m - 0m - 1500m. Scale 1:15,000



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Figure 8d. The medieval records in Ixworth Parish. Chainage Numbers 15000m - 0m - 1500m. Scale 1:15,000

chalk floors, and also three hut sites have been located to the south-east of the villa. The cemetery site (IXW 005), possibly associated with this occupation activity, was first noted in the mid 19th century, with many finds being recovered. The finds were all of the kind placed in graves of this period, including cruciform brooches found on the shoulders of a skeleton, an iron sword, spearhead, knife and shield bosses. Fragments of cremation urns were also found in the garden of Byways in 1946, with around twelve urns represented. An unusual find from the site was that of a lead weight with a gilded bronze relief human head set into it; the head is probably Irish and of 8th-century date, and resembles the head of the crucified Christ on a mount from Hofstad in Norway, and may come from a shrine. The weight it was set into is thought to be Viking, and of 9th- or 10th-century date. A Late Saxon sword was also recovered from this area. In 2001 evaluation trenches prior to development revealed thee graves of Early Saxon date, so it seems certain that this area was indeed a cemetery.

Very close to the cemetery site a complete iron sword of 9th-century date was found (IXW 022), partially on the surface close to the River Black Bourn. It is thought that the sword may have been dredged up from the river itself.

SHER No.	Description
IXW 004	Early Saxon occupation at Roman villa site – SCHEDULED MONUMENT
IXW 005	Byways and Riverside Paddocks – Early Saxon inhumation cemetery and finds (other periods also)
IXW 018	Field opposite Cross House – Saxon metalwork (other periods also)
IXW 022	River Black Bourn – complete 9th-century iron sword probably dredged from river
IXW 028	Saxon hooked tag and another object (other periods also)
IXW 033	Saxon sceatta found (Roman also)

Table 32.	Saxon	SHER	records i	in Ixwo	orth
	ouxon		10001401		51.011

There is a background 'noise' of Saxon finds in the area, including a Middle Saxon coin and strap end (IXW 018); a hooked tag and possible Middle Saxon ring (IXW 028) and a Middle Saxon silver sceatta (IXW 033).

The pipeline route, does not impact directly on any of the known Saxon sites, but the volume of data in the area would suggest that some archaeological evidence for the period would be present along the route.

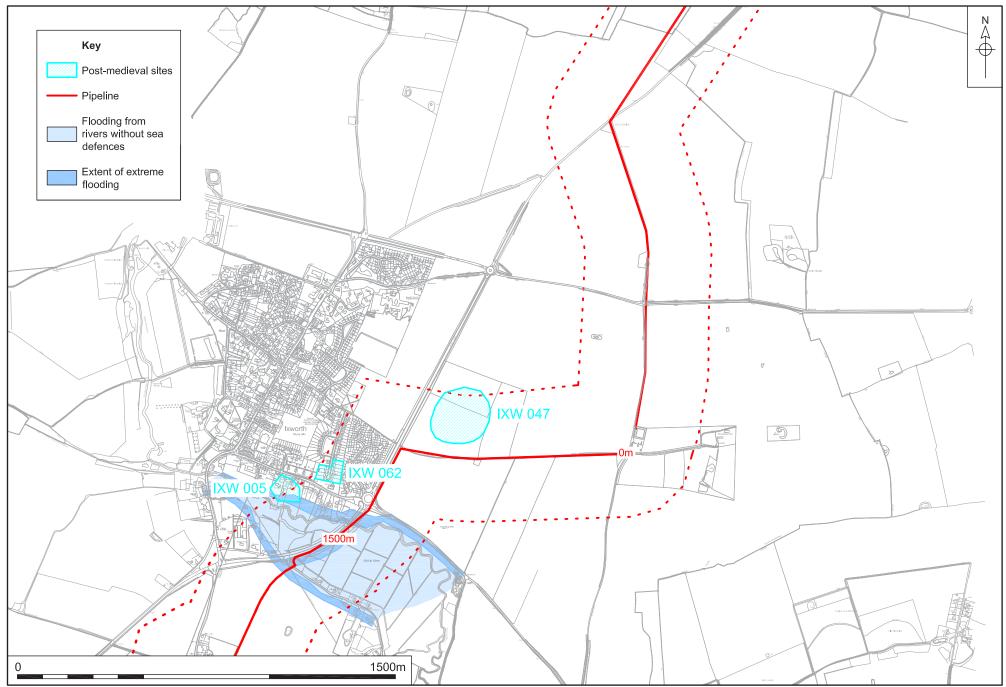
Medieval Evidence

(Figure 8d)

The defined area of the medieval town of Ixworth (IXW 068) falls slightly within the search area for the pipeline, although most lies beyond. The town of Ixworth was granted a charter for a market and two fairs in 1384.

SHER No.	Description
IXW 005	Riverside Paddocks - thin scatter of medieval finds (other periods also)
IXW 018	Field opposite Cross House – medieval metalwork (other periods also)
IXW 028	Diffuse scatter of metalwork (earlier periods also)
IXW 047	Fieldwalking survey recovered medieval pottery (other periods also)
IXW 068	Medieval town of Ixworth

Table 33. Medieval SHER records in Ixworth



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Figure 8e. The post-medieval records in Ixworth Parish. Chainage Numbers 15000m - 0m - 1500m. Scale 1:15,000

The remainder of the medieval evidence in the area is confined to finds and finds scatters (see Table 33 above for details). The bulk of the medieval evidence for the area is likely to lie closer to the church, which is located well outside the search area.

Post-medieval Evidence

(Figure 8e)

An evaluation at 25-34 New Road recorded two groups of three post-holes, with one group dated to the post-medieval period (IXW 062). No further interpretation of these features has been put forward.

SHER No.	Description
IXW 005	Riverside Paddocks –thin scatter of post-medieval finds (other periods also)
IXW 047	Fieldwalking survey recovered post-medieval pottery (other periods also)
IXW 062	Evaluation at 25 – 34 New Road recorded post-medieval post-holes

Table 34. Post-medieval SHER records in Ixworth

The remainder of the evidence for the post-medieval period is of finds (see Table 34 above for details), and the post-medieval centre of the town is likely to echo the medieval period, and lies outside the search area.

Negative Evidence

(Figure 8e)

Monitoring of groundworks at site ESF 19621 revealed no archaeological evidence.

SHER No.	Description
ESF 19621	Monitoring of groundworks revealed no archaeological evidence

Table 35. Negative SHER records in Ixworth

Pakenham Parish: Chainage Numbers 1500m - 5000m

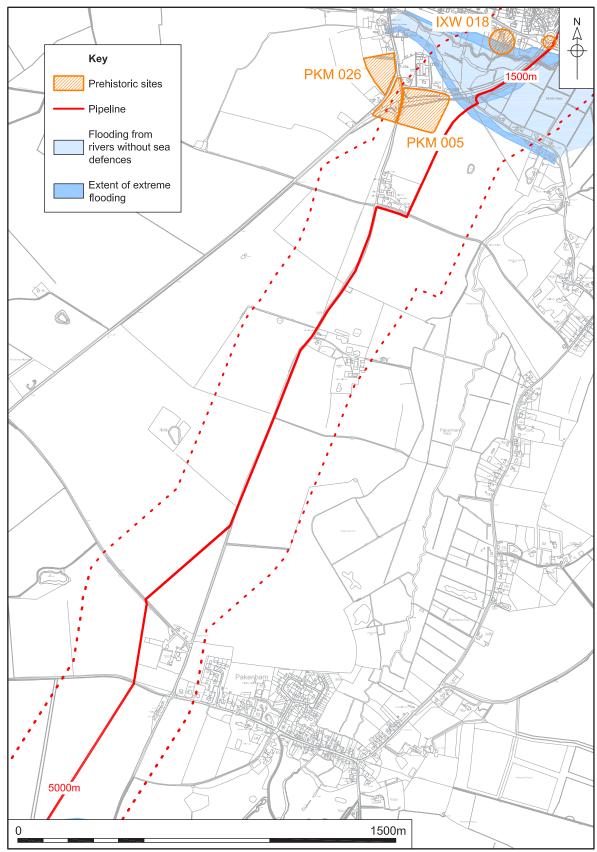
Prehistoric Evidence

(Figure 9a)

Excavations at the Roman fort in Pakenham also recovered prehistoric evidence (PKM 005) in the form of a group of small pits containing worked flint and groovedware pottery of Neolithic date and some shallow Iron Age features and coins. The route crosses the defined area of site PKM 005. Close to this site three Iron Age coins were found whilst metal detecting (PKM 026).

SHER No.	Description
PKM 005	Neolithic and Iron Age features also found at Roman fort site
PKM 017	Barton Mere - Bronze Age – Iron Age ?finds and ?lake village
PKM 026	Iron Age coins (later finds also)

Table 36. Prehistoric SHER records in Pakenham



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Figure 9a. The prehistoric records in Pakenham Parish. Chainage Numbers 1500m - 5000m. Scale 1:15,000

Roman Evidence

(Figure 9b)

The largest and most important site within Pakenham parish is a Roman fort (PKM 005), through which the pipeline route runs. Part of the site is designated a Scheduled Monument (No. SF 116) and is thought to be an important military fort with all of the associated buildings and settlement necessary to the Roman army. Further settlement is known to the north (PKM 002). Further settlement is recorded to the east of the fort (PKM 007). Close to, and associated with, the fort are finds of pottery, glass and animal bone (PKM 004) and a scatter of metalwork and pottery from the western side of the fort (PKM 026).

At Ixworth Repeater Station an area was examined as part of the Ixworth bypass (PKM 027), and revealed modern rubble dumping under which much of the area was covered in hillwash, with Roman pottery from the base. A ditch and post-holes were found on the southern edge of the area, and a section was opened in the north of the area for environmental sampling of deposits on the edge of Mickle Mere. One monolith sample revealed a reduction in soil disturbance, less intense farming, in the post-Roman period, followed by renewed activity in the 7th century.

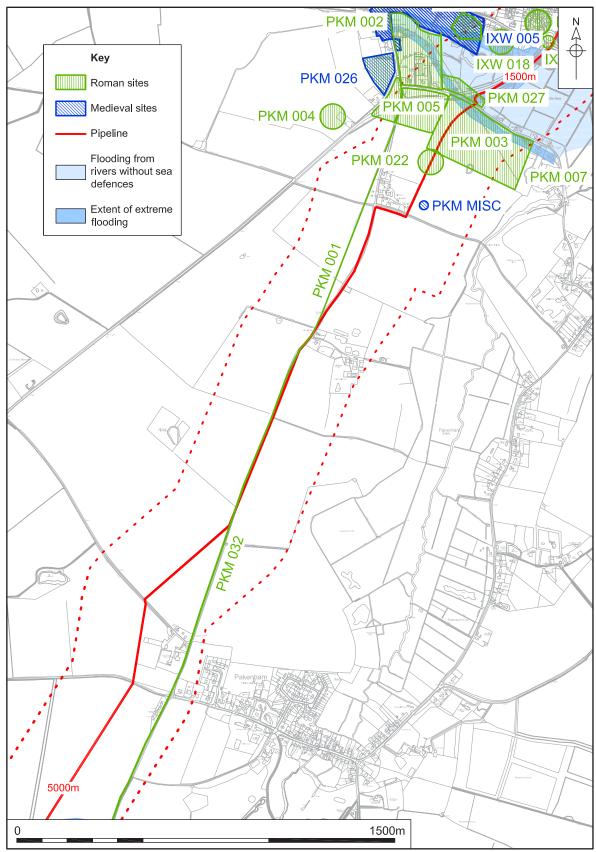
Several Roman coins were found near to all of this activity (PKM 022), and were of various dates.

SHER No.	Description
PKM 001	Possible Roman cemetery
PKM 002	Roman settlement includes northern part of Roman fort (PKM 005)
PKM 003	See PKM 007
PKM 004	Pottery, glass and animal bone probably associated with the fort (PKM 005)
PKM 005	Large triple ditched fort and settlement area – SCHEDULED MONUMENT No. SF 116
PKM 007	Large settlement area east of fort site
PKM 022	Roman coin
PKM 026	Scatter of metalwork and pottery from west side of fort (PKM 005, other periods also)
PKM 027	Ixworth Repeater Station – area examined as part of Ixworth Bypass – Roman finds in hillwash
PKM 032	Section of Roman road

Table 37. Roman SHER records in Pakenham

Slightly to the south of this dense concentration of Roman activity, a possible cemetery was found (PKM 001). The site was first noted by a man digging for brickearth in 1810, and was described as a square area full of pots set in rows.

A section of Roman road is also recorded in the area, leading south away from the dense activity close to the fort (PKM 032).



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Figure 9b. The Roman and medieval records in Pakenham Parish. Chainage Numbers 1500m - 5000m. Scale 1:15,000

Saxon Evidence

(Figure 9c)

Saxon metalwork was recovered from a mainly Roman site (PKM 026), consisting of an Early Saxon wrist clasp and a Late Saxon to early medieval buckle.

SHER No.	Description
PKM 026	Saxon metalwork (other periods also)

Table 38. Saxon SHER records in Pakenham

Medieval Evidence

(Figure 9c)

Some medieval metalwork was also found on the mainly Roman site (PKM 026) mentioned above, and included a seal matrix and a token. The stray find of a medieval finger ring (PKM MISC) was also recovered from the parish. The route of the pipeline stays well away from what would be the medieval centre of Pakenham, and that distance may reflect the paucity of evidence from this period.

SHER No.	Description
PKM 026	Medieval metalwork (other periods also)
PKM MISC	Stray find of a finger ring

Table 39. Medieval SHER records in Pakenham

Post-medieval Evidence

(Figure 9c)

The site of Pakenham Hall (PKM 044) falls within the search area, close to the site of the current Old Hall Farm. Pakenham Hall was a mansion belonging to the Spring family in the 16th and 17th centuries, with Sir William Spring, Baronet, owning twenty-three heaths here in 1674. The house is shown on Hodskinson's map of 1783 with an avenue shown to the west of the house, between the two roads, at that point the house was owned by J. Godbold, Esq. The house was finally demolished between 1804, when it was shown on the Enclosure map and 1810, when it was no longer depicted on estate maps.

SHER No.	Description
PKM 044	Site of Pakenham Hall, 15th-century house, demolished between 1804 and 1810

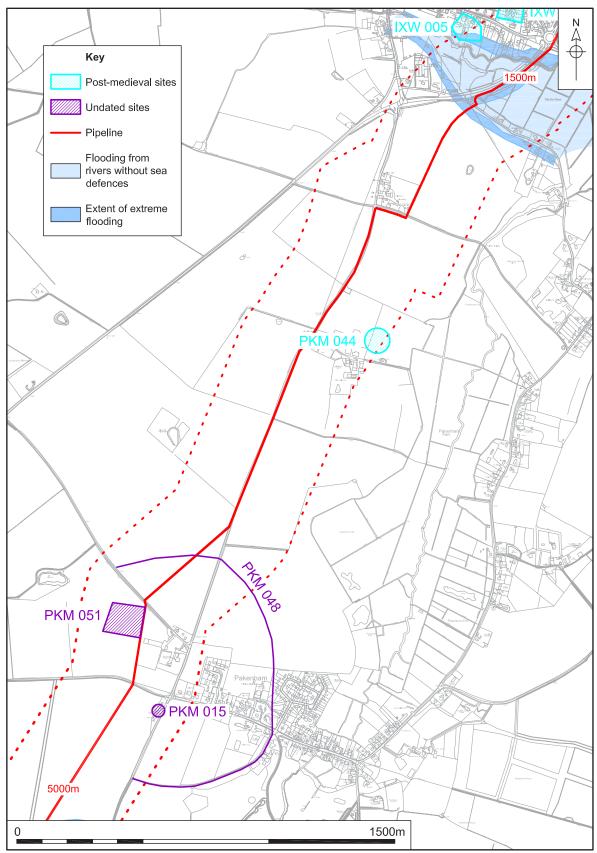
Table 40. Post-medieval SHER records in Pakenham

Undated Evidence

(Figure 9c)

Three undated sites lie close to the village of Pakenham, with only one actually crossing the route of the pipeline. A large curving bank (PKM 048) appears to encircle Pakenham Hall, although only part of the circuit is still visible.

Cropmarks which are hexagonal in shape lie in the field to the south of Pakenham Manor (PKM 051).



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Figure 9c. The Post-medieval and Undated records in Pakenham Parish. Chainage Numbers 1500m - 5000m. Scale 1:15,000

A human skeleton was found in the garden of a house (PKM 015) close to the Roman road (PKM 032).

SHER No.	Description
PKM 015	Human skeleton found in garden
PKM 048	Large curving bank
PKM 051	Cropmarks in field next to Pakenham Manor

Table 41. Undated SHER records in Pakenham

Thurston Parish: Chainage Numbers 5000m - 5750m

Prehistoric Evidence

(Figure 10a)

Possible occupation evidence of Iron Age date (THS 001) was the only recorded archaeological evidence from the parish of Thurston which fell within the search area. Basil Brown visited this site when advised that a black deposit had been noticed, but much of this had been removed before he arrived. A single sherd of Iron Age pottery was found on the edge of a small hearth, and another hearth was found around 18 (*c*.6m) feet away.

SHER No.	Description
THS 001	Iron Age occupation evidence

Table 42. Prehistoric SHER records in Thurston

Great Barton Parish: Chainage Numbers 5750m - 8000m

Prehistoric Evidence

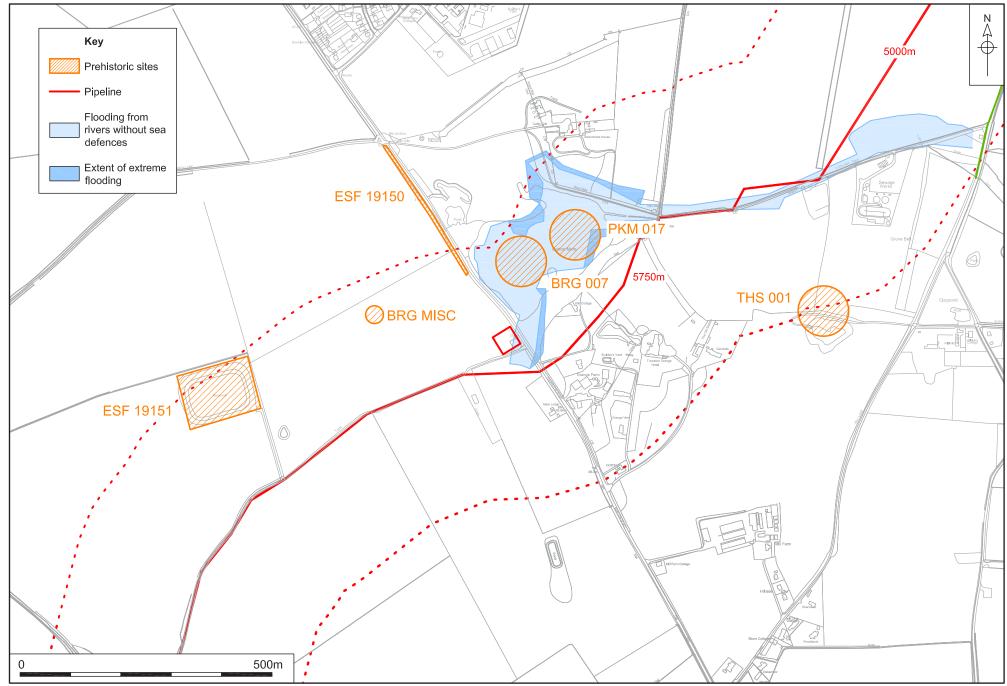
(Figure 10a)

Barton Mere lies at the junction between the parishes of Great Barton, Pakenham and Thurston (see PKM 017 for part of site), and covers 1 acre in total. In the 19thcentury finds such as deer bones, a wolf tibia, and 'bayonets' were recovered from the Mere, and wooden stakes were seen to be sticking up from the bottom. Excavations when the mere was dry found a series of sediments, with a bronze spearhead recovered from an upper layer. A oval wattle structure was also found, with fourteen uprights, with the bottom of the structure filled with broken flints suggesting that it had been a diving or dipping place.

Various monitoring works recorded worked flints in the area (ESF 191519151), and flint implements were also found on the surface (BRG MISC).

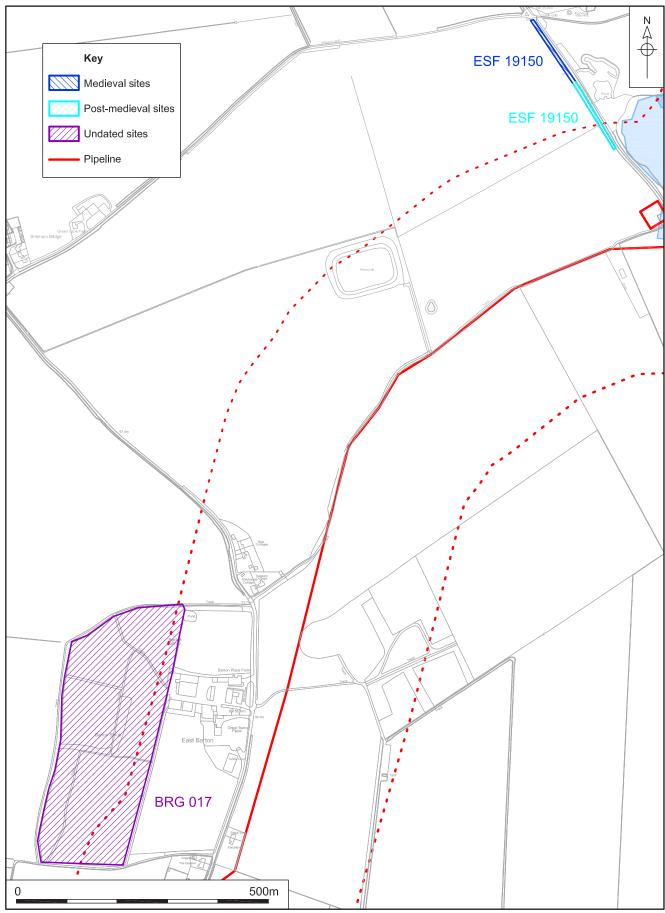
SHER No.	Description
BRG 007	Barton Mere – Bronze Age lake village
BRG MISC/ ESF 19150	Thurston Road Mains Renewal monitoring – flints found (other periods also)
BRG MISC/ ESF 19151	Farm reservoir monitoring – 1 flint found
BRG MISC	Two flint implements found on surface

Table 43. Prehistoric SHER records in Great Barton



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Figure 10a. The prehistoric records in Thurston & Great Barton Parishes, Chainage Numbers 5000m - 5750m. Scale 1:7500



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Figure 10b. The medieval, Post-medieval & Undated records in Great Barton Parish. Chainage Numbers 5750m - 8000m. Scale 1:7500

Medieval Evidence

(Figure 10b)

Medieval pottery was recovered from the Thurston Road Mains Renewal monitoring (ESF 19150).

SHER No.	Description
BRG MISC/ ESF 19150	Thurston Road Mains Renewal monitoring – medieval pottery (other periods also)

Table 44. Medieval SHER records in Great Barton

Post-medieval Evidence

(Figure 10b)

The Thurston Road Mains Renewal monitoring also recorded a post-medieval ditch (ESF 19150).

SHER No.	Description
BRG MISC/ ESF 19150	Thurston Road Mains Renewal monitoring – post-medieval ditch (other periods also)

Table 45. Post-medieval SHER records in Great Barton

Undated Evidence

(Figure 10b)

On the very edge of the search area lies Barton Shrub, and area designated as Ancient Woodland (BRG 017).

SHER No.	Description
BRG 017	Barton Shrub – Ancient Woodland

Table 46. Undated SHER records in Great Barton

Rougham Parish: Chainage Numbers 8000m - 11750m

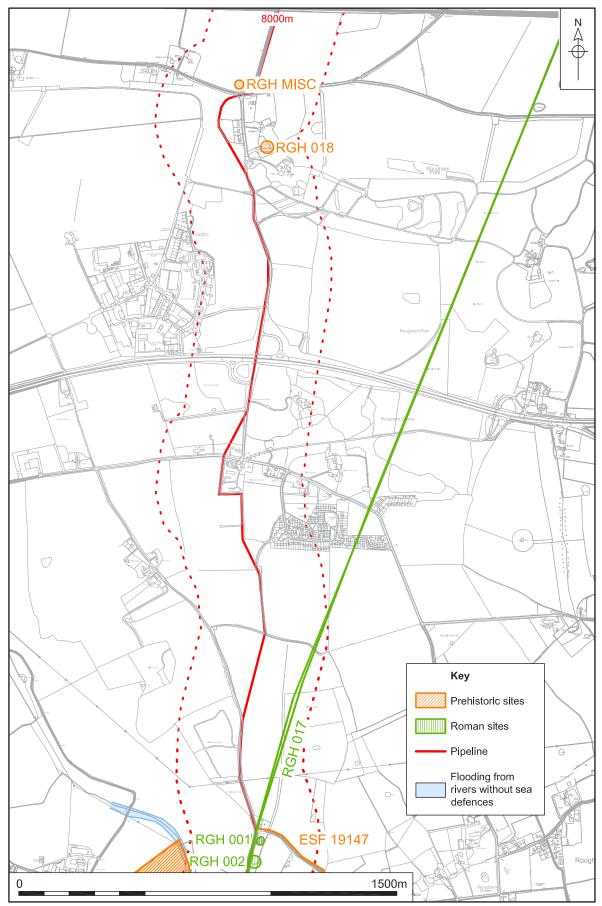
Prehistoric Evidence

(Figure 11a)

The prehistoric evidence from the area is confined to finds only, with two Neolithic polished flint axes (RGH 018 and RGH MISC) and a flint scatter with possible Iron Age pottery (ESF 19147).

SHER No.	Description
RGH 018	Neolithic polished flint axe
RGH MISC	Neolithic polished flint axe - found 'on surface in old cow field, couple of fields up from Battlies Corner'
RGH MISC/ ESF 19147	Eastlow Hill, Rougham Mains Renewal – flint scatter and possible Iron Age pottery

Table 47. Prehistoric SHER records in Rougham



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Figure 11a. The Prehistoric and Roman records in Rougham Parish. Chainage Numbers 8000m - 11750m. Scale 1:15,000

Roman Evidence

(Figure 11a)

Several important sites of Roman date are recorded within the area, including a barrow complex, known as the Eastlow Hill group. The main tumulus recorded here (RGH 001), is also a Scheduled Monument (No. SF 212) and was originally marked on C J Greenwoods Map of Suffolk in 1825. In 1844 the mound was partially excavated by Professor J.H. Henslow who found a chamber with walls of flint and mortar with tile courses at intervals, on a flint and mortar platform with a tiled roof. The chamber contained an inhumation burial in a lead coffin, which had been encased in an outer wooden coffin. The mound still exists, although is densely covered in trees.

A further three barrows are part of this group (RGH 002), although none of these are visible any more. Barrow A was said to have been quarried away by labourers, and contained a tiled chamber within which were a cremation in a glass vessel and a large iron lamp. By 1871 it is said to have been destroyed. Barrow B was excavated in 1843 by Professor Henslow, and found another central tiled chamber containing a broken glass vessel which held a cremation and a coin of Trajan, and other finds. By 1871 the barrow is reported to still exist, although in a mutilated state, and by 1971 the mound had become four spoil heaps. Barrow C was also opened by Professor Henslow, although this one was partly under the road, and much damaged. The old ground surface contained two vases, each containing a cremation. By 1871 this mound had also been destroyed.

This group of Roman funerary monuments lie very close to the route of the pipeline, in fact, if the HER description is correct, then Barrow C lay partly under the road, which is possibly also Roman, and may be the most likely find in the area. The Roman road along which part of pipeline route runs at this point (RGH 017) is the road which runs from Pakenham through to Long Melford, and is around 4,000m long.

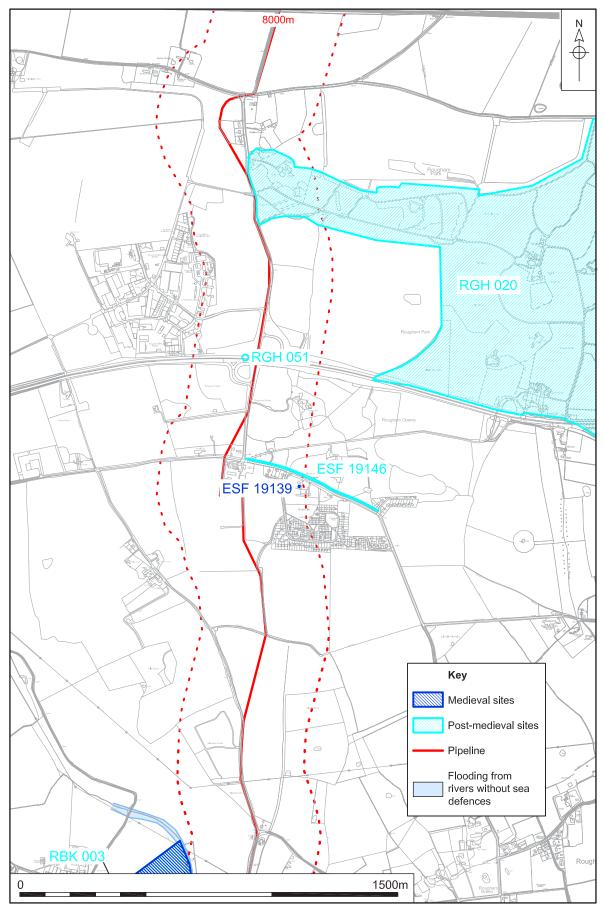
SHER No.	Description
RGH 001	Eastlow Hill Tumulus SCHEDULED MONUMENT SF 212
RGH 002	Tumuli - part of the Eastlow Hill group
RGH 009	Roman building – probable villa – SCHEDULED MONUMENT SF 211
RGH 010	Roman pottery scatter south of probable villa (RGH 009)
RGH 017	Section of Roman road

Table 48. Roman SHER records in Rougham

Further Roman evidence is that of a probable villa site (RGH 009), located roughly 200m to the south-east of the Eastlow Hill barrows, another Scheduled Monument (No. SF 211). The account by J.S. Henslow in October 1843 states that:

'Many fragments of pottery and tile occur scattered over some fields a few hundred yards to the S of these barrows and upon digging about a spade's depth in one of them, a considerable area appeared to have been floored with brick and mortar'

The site was relocated through fieldwalking by Myrtle Taylor and Mavis Baker in 1975-1982, and finds of Roman date recovered include 3rd- and 4th-century coinage, an early 1st-century brooch, various bronze and lead objects (including a



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Figure 11b. The medieval and Post-medieval records in Rougham Parish. Chainage Numbers 8000m - 11750m. Scale 1:15,000

bracelet fragment), iron scissors, a glass bead, two lead figurines and pottery, painted plaster and hypocaust tile, tegulae, imbrices, a dense scatter of tesserae, opus signinum and flint rubble.

A scatter of Roman artefacts was found in the field south of the villa (RGH 010).

Medieval Evidence

(Figure 11b)

The only medieval evidence within the search area of Rougham parish was from an evaluation at Layers Farmhouse (ESF 19139), a Grade II listed timber-framed Wealden house. Three trenches recovered the footings of a demolished range of the building, dating to the medieval period.

SHER No.	Description
RGH MISC/ESF 19139	Layers Farmhouse evaluation found wall footings for demolished range

 Table 49. Medieval SHER records in Rougham

Post-medieval Evidence

(Figure 11b)

Rougham Hall is a large derelict mansion (RGH 020) constructed *c*.1834 with associated park, fishponds, lodges and stables.

Another post-medieval entry is that of a milestone at Rougham Heath Crossroads on the A14, which was marked on maps of 1783 and later, and was repositioned in 2002 for road improvement (RGH 051).

SHER No.	Description
RGH 020	Rougham Hall – derelict mansion of 1834 and park
RGH 051	A14 Rougham Heath Crossroads - mile stone marked on maps of 1783 and later, repositioned for road improvements in 2002
RGH MISC	Rougham Mains Replacement – 2 post-medieval pits or ditches

Table 50. Post-medieval SHER records in Rougham

Monitoring of the Rougham Mains replacement recorded two post-medieval pits or ditches and finds (RGH MISC).

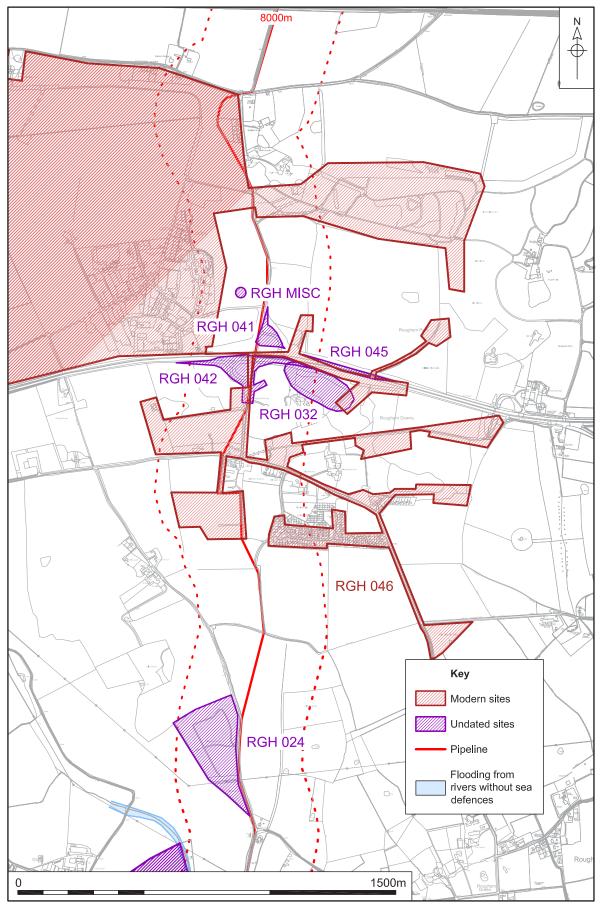
Modern Evidence

(Figure 11c)

Rougham Airfield (RGH 046) was used in both the First World War and the Second World War. In the First World War the airfield was used by the Royal Flying Corps as a night landing site. The aerodrome was built in 1941-2 and was occupied by the USA until 1945, when it was returned to the use of the RAF. In 1946 the air ministry took possession of the site and returned it to civil use. The runways have been removed, but the hangars are used for storage and the control tower still stands and is used as a museum.

SHER No.	Description
RGH 046	Rougham Airfield – First and Second World War

Table 51. Modern SHER records in Rougham



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Figure 11c. The Modern and Undated records in Rougham Parish, Chainage Numbers 8000m - 11750m. Scale 1:15,000

Undated Evidence

(Figure 11c)

There are several undated sites recorded in the SHER, including an area designated as Ancient Woodland, - that of Elderstub Woods (RGH 024). Undated earthworks are also visible in a field to the south of the A14 (RGH 032). A ringditch cropmark shows in a field to the east of Rougham Industrial Estate, although an aerial photograph in colour of this location shows an electricity pole, and therefore the cropmark may be related to this.

SHER No.	Description
RGH 024	Elderstub Woods – Ancient Woodland
RGH 032	Rougham Downs – series of earthworks visible
RGH 041	Rookery Crossroads walkover survey – no further information
RGH 042	Rookery Crossroads walkover survey – no further information
RGH 045	Rookery Crossroads walkover survey – no further information
RGH MISC	Ring-ditch cropmark in field to east of Rougham Industrial Estate

Table 52. Undated SHER records in Rougham

Three sites had no further information available at the time of writing (RGH 041, 042 045).

Rushbrooke, Bradfield St George and Little Whelnetham Parishes: Chainage Numbers 11750m – 13000m

Prehistoric Evidence

(Figure 12a)

Two prehistoric sites are recorded within this area, although both represent finds only, with no excavated context.

SHER No.	Description
RBK 003	Fieldwalking recorded prehistoric finds
WLL 006	Bronze Age metal find

Table 53. Prehistoric SHER records in Rushbrooke and Little Whelnetham

Roman Evidence

(Figure 12a)

A section of Roman road is extant in this area (WLL 005), and is a continuation of the Pakenham to Long Melford road mentioned above (RGH 017 PKM 032). This section of road shares its route with the pipeline.

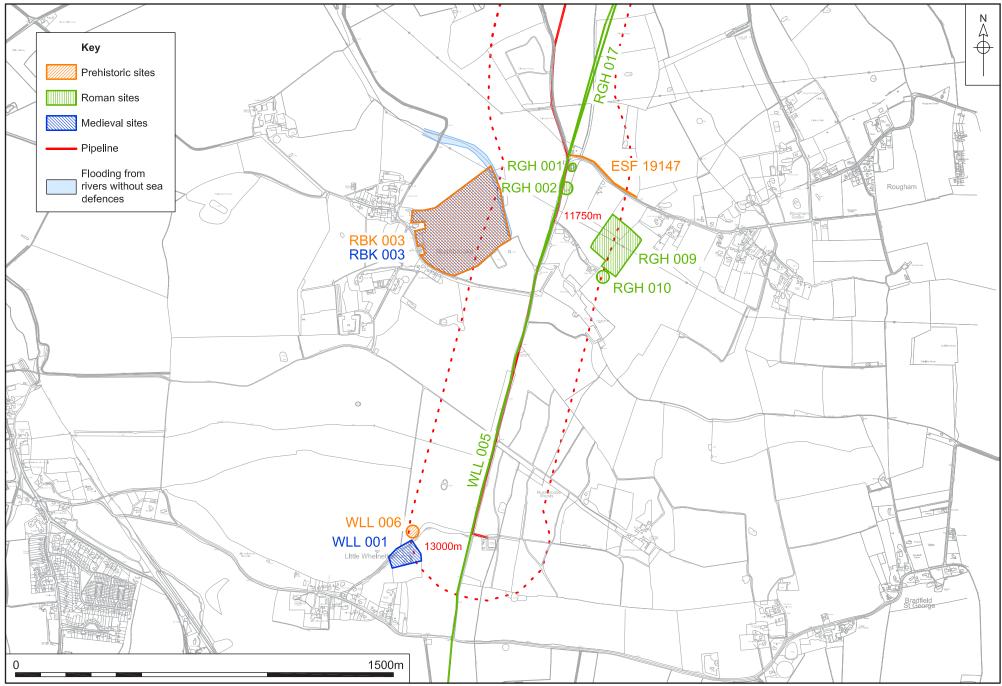
SHER No.	Description
WLL 005	Roman road section

Table 54. Roman SHER records in Little Whelnetham

Medieval Evidence

(Figure 12a)

A moated site is recorded within Little Whelnetham, and consists of three sides of a square with a spur on the northern side (WLL 001). The north and south arms



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Figure 12a. The Prehistoric, Roman and medieval records in Rushbrooke, Bradfield St. George & Little Whelnetham Parishes. Chainage Numbers 11750m - 13000m. Scale 1:15,000

are still wet, although the eastern arm is dry. This site is probably the site of the Rectory.

Fieldwalking in the area recovered medieval finds (RBK 003).

SHER No.	Description
RBK 003	Fieldwalking recorded medieval finds scatter
WLL 001	Moat on Parsonage Lane

Table 55. Medieval SHER records in Rushbrooke and Little Whelnetham

Post-medieval Evidence

(Figure 12b)

Rushbrooke Hall Park (RBK 016) was in existence by 1703, when it was purchased by Sir Robert Davers from Lord Jermyn. The park abuts the road close to where the pipeline will run.

Fieldwalking in this area also recovered post-medieval finds (RBK 003).

SHER No.	Description
RBK 003	Fieldwalking recorded post-medieval finds
RBK 016	Rushbrooke Hall Park

 Table 56. Post-medieval SHER records in Rushbrooke

Undated Evidence

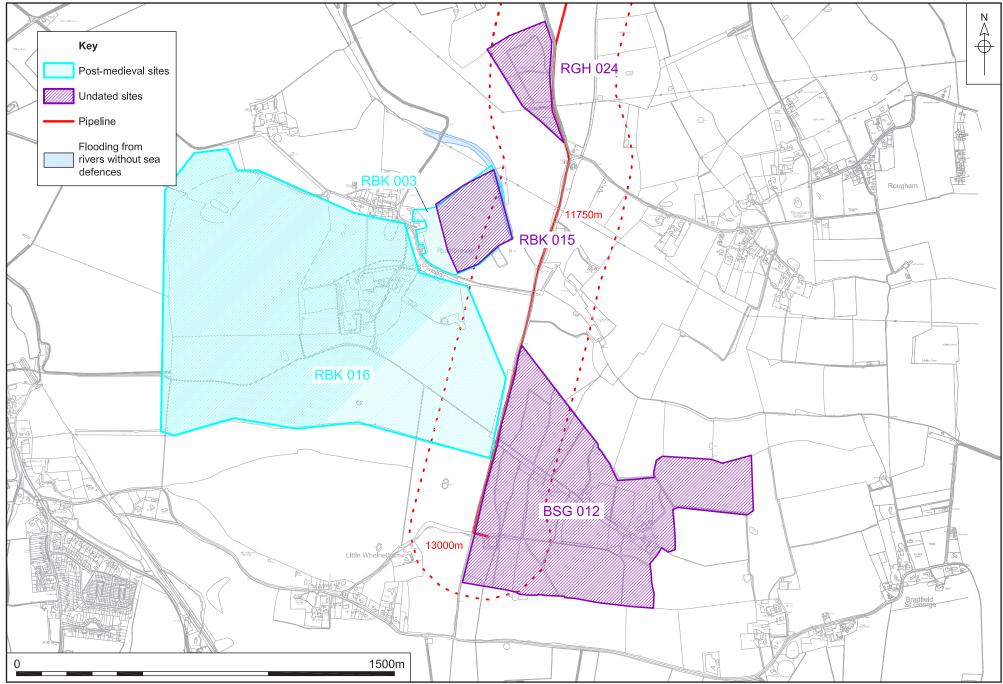
(Figure 12b)

Two undated sites appear in the SHER, included the designated Ancient Woodland named Rushbrooke Woods (BSG 012). Cropmarks of a field system and trackways has been recorded to the east of the church, with a sub-rectangular enclosure around the church (RBK 015).

The Rushbrooke Woods are the final destination of this pipeline. A water treatment works is already in place, concealed within the trees.

SHER No.	Description
RBK 015	Cropmarks in field east of church
BSG 012	Rushbrooke Woods – Ancient Woodland

Table 57. Undated SHER records in Rushbrooke and Bradfield St George



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Figure 12b. The Post-medieval and Undated records in Rushbrooke, Bradfield St. George & Little Whelnetham Parishes. Chainage Numbers 11750m - 13000m. Scale 1:15,000

Appendix 2: Listed Buildings

This section deals exclusively with listed buildings recorded in the Suffolk Historic Environment Record (SHER) which lie within a 250 corridor either side of the proposed pipeline route. It is ordered by parish name from north to south of the route with reference to Anglian Water chainage numbers which fall within each parish. The number of the listed building is the preferred reference, which also relates to the buildings on the English Heritage list of buildings. All buildings are Grade II listed, unless otherwise stated.

Barnham Parish Chainage Numbers 1250m - 5500m

(Figure 13)

Most of the listed buildings within this parish lie some way to the east of the pipeline route within the village itself, others lie to the west and north of the route itself. None of the buildings will be impacted on by the works.

LB No.	Description
284133	East Farmhouse - early C19
284136	1 Mill Lane - late C18 and mid C19
284137	3 & 4 Mill Lane - pair of estate cottages - mid C19
284139	Meadow Cottage - C17
284140	Carine Cottage - <i>c.</i> 1600
284143	The Olde House - early C16 and later, restored 1980
284144	Memorial Cottages - house extended to form 2 cottages late C17

Table 58. Listed buildings within the parish of Barnham

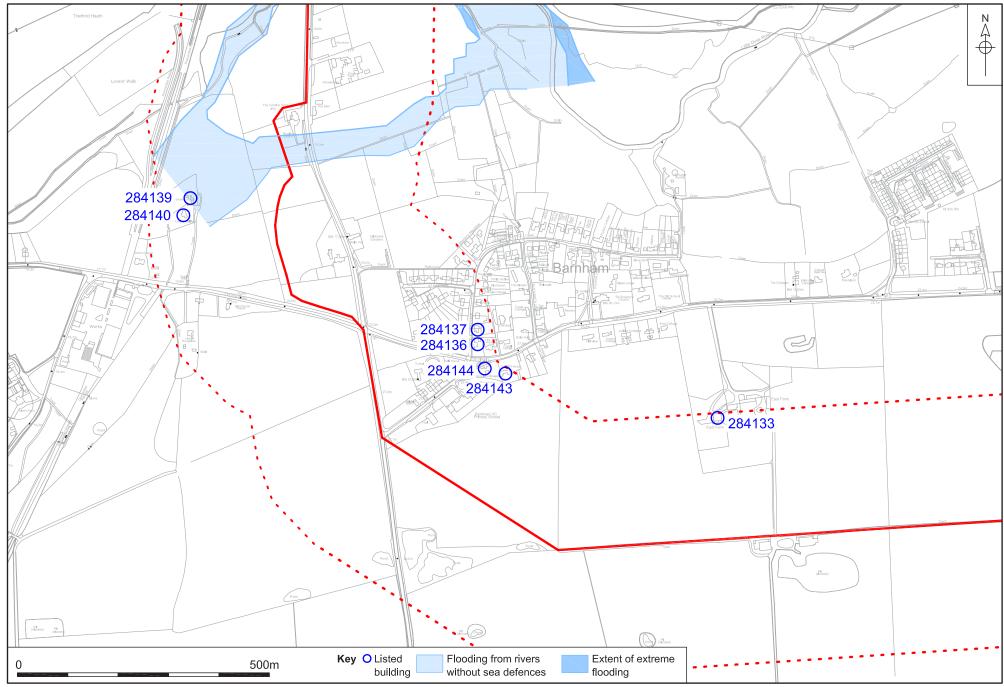
Euston Parish Chainage Numbers 5500m - 7500m

(Figure 14)

The only listed building in the area for Euston parish are the two lodges and gateway at the entrance to the avenue known as Duke's Ride, which is associated with Euston Hall (outside the search area). The route of the pipeline runs within 50m of these buildings, crosses Duke's Ride (Figure 4) and is close to the perimeter of the designated park and garden.

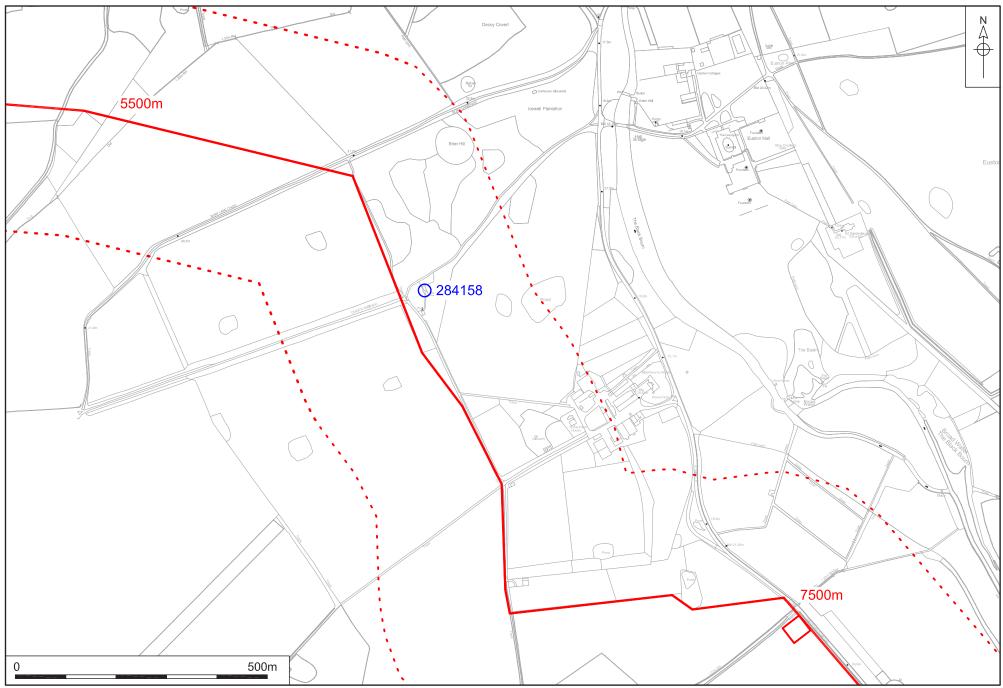
LB No.	Description
284158	Two lodges and gateway at the entrance to Duke's Ride - early C19

Table 59. Listed buildings within the parish of Euston



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Figure 13. Listed Buildings in Barnham Parish. Scale 1:7500



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Figure 14. Listed Building in Euston Parish, Chainage Numbers 5500m - 7500m. Scale 1:7500

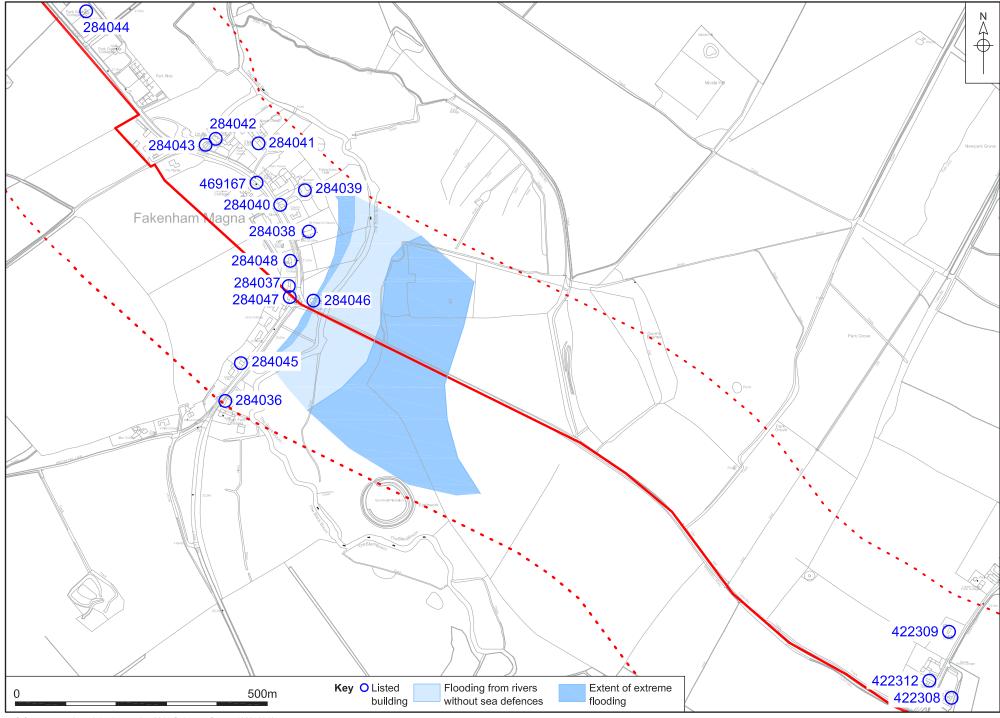
Fakenham Magna and Sapiston Parishes Chainage Numbers 7500m - 10750m

(Figure 15)

Many of the listed buildings in the parishes of Fakenham Magna and Sapiston are located within the 250m survey corridor either side of the proposed pipeline route. The pipeline diverts southwards from the road through the village at the northwestern side of the village and rejoins the road some 300m further along. Listed buildings that flank the route will not be directly impacted on by works associated with introduction of the pipeline

LB No.	Description
284036	Chalk Farmhouse - late C17 to early C18
284037	Bridge Cottage - early C17
284038	Church of St Peter - Grade I
284039	The northern house and southern house at Hall Farm former farmhouse now divided into 2 dwellings - mid C19, older core
284040	Walls and gate piers to Fakenham Hall - part C17 and part early C19
284041	Field Farmhouse - late C16, later additions
284042	Field Cottage - C16 and C17
284043	Rectory Cottage - mid C19
284044	Park Gate Cottages pair of estate cottages - mid C19
284045	River View - surviving half of a pair of cottages - C18
284046	The Old Smithy - now garages to Pump Green Cottage - early C19
284047	Pump Green Cottage - early C17 and C18
284048	Church Cottage - early C17
422308	Grove House - early C19
422309	Cottage 300m north of Grove House - estate cottage mid C19
422312	Heath Cottage - C17
469167	K6 Telephone Kiosk - 1935

Table 60. Listed buildings within the parishes of Fakenham Magna and Sapiston



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Figure 15. Listed Buildings in Fakenham Magna & Sapiston Parishes, Chainage Numbers 7500m - 10750m. Scale 1:7500

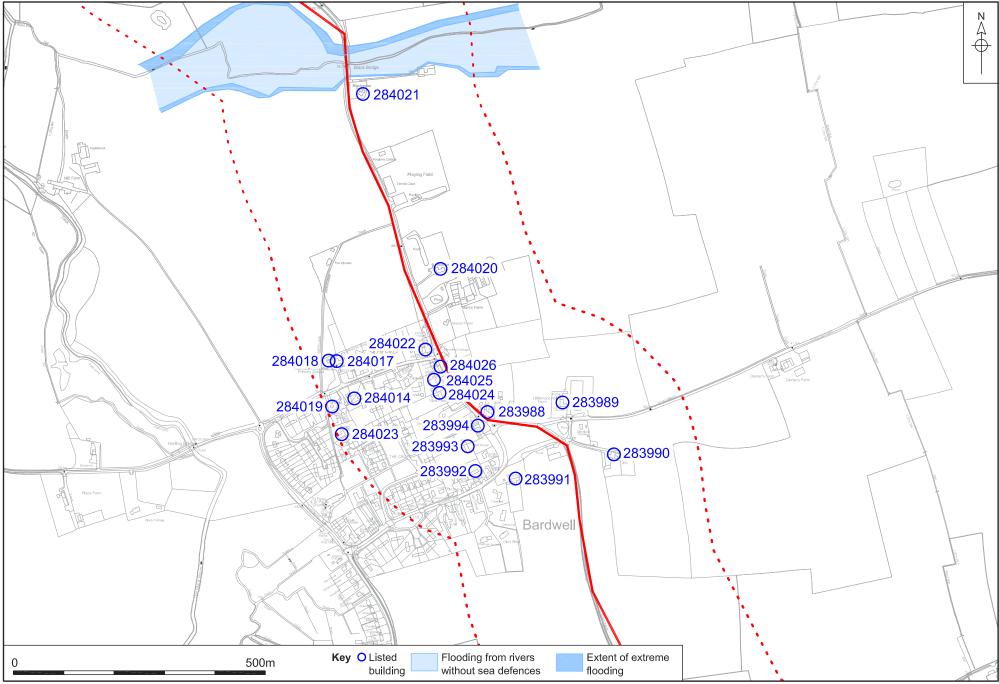
Bardwell Parish Chainage Numbers 12500m - 15000m

(Figure 16)

Several listed buildings in Bardwell lie close to the route of the pipeline as it follows the road through the village, however it is envisaged that the route will be on the highway and not within property boundaries.

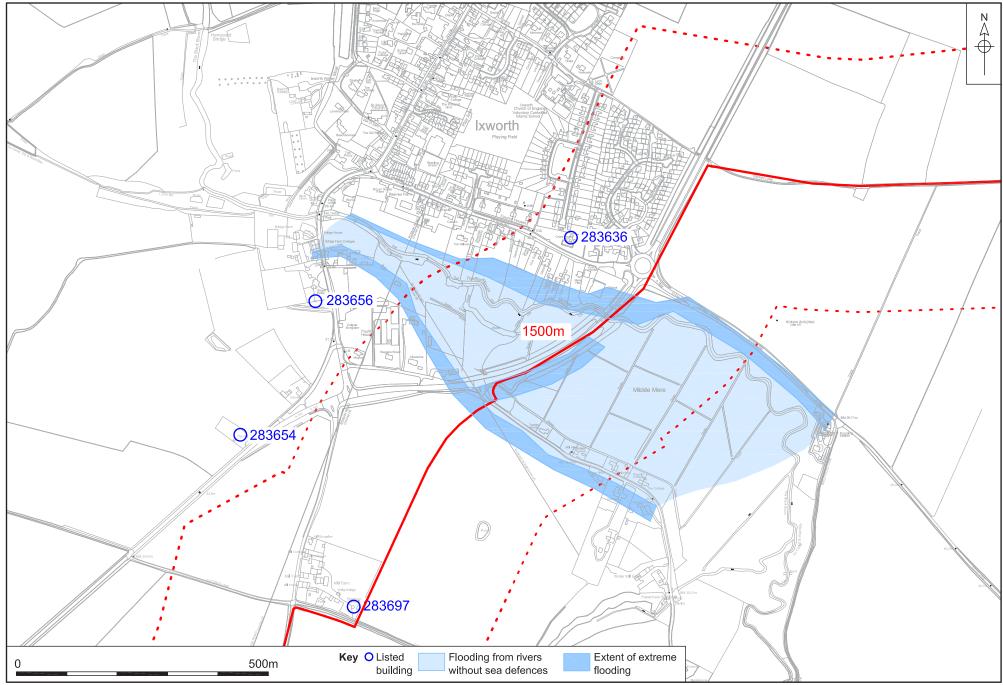
LB No.	Description
283988	Holly House - dated 1866 over doorway
283989	Littlemoor Hall - C16 & C18
283990	Six Bells Inn - C17 with C19 extensions
283991	Booty Hall - C16 with C17 alterations
283992	The Old Farmhouse - C16 core
283993	Croft House - C15
283994	The Chestnuts - C18
284014	Watermill - early C19
284017	Bardwell V.C. School - dated 1855
284018	The School House - mid C19
284019	Windmill - <i>c.</i> 1830
284020	Moat House - late C16
284021	Blackwater Cottage - late C16
284022	The Cottage - C17
284023	The Old Rectory - former Rectory - C16 core - early C19 additions
284024	Vine Farmhouse - C18
284025	The Dun Cow Public House - early to mid C16 core, later additions
284026	Dun Cow Cottage - C18

Table 61. Listed buildings within the parish of Bardwell



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Figure 16. Listed Buildings in Bardwell Parish, Chainage Numbers 12500m - 15000m. Scale 1:7500



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Figure 17. Listed Buildings in Ixworth Parish, Chainage Numbers 0m - 1500m. Scale 1:7500

Ixworth (and part of Pakenham) Parishes Chainage Numbers 0m - 1500m

(Figure 17)

All of the listed buildings in the route survey corridor area located away from the pipeline route itself, and are therefore not directly impacted on at all.

LB No.	Description
283636	Cross House - late C18
283654	The Willows - 2 cottages now one house - late C18
283656	Summer House to Stayer Cottage - early C19
283697	Pakenham Windmill - <i>c</i> .1820

Table 62. Listed buildings within the parishes of Ixworth and part of Pakenham

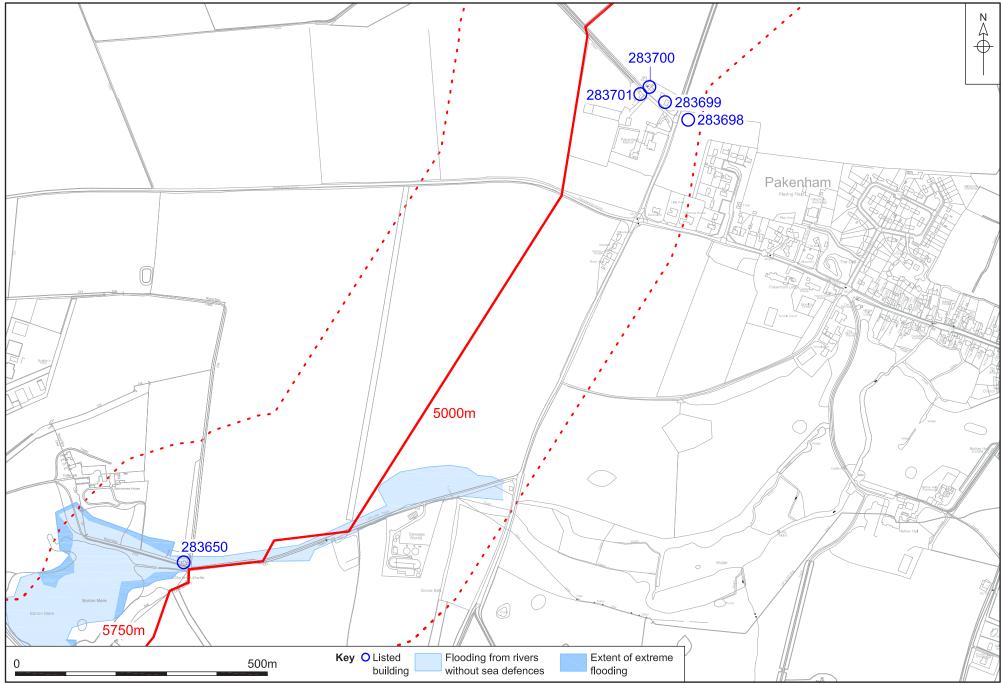
Pakenham Parish Chainage Numbers 1500m - 5750m

(Figure 18)

Most of the listed buildings within the area are located away from the route of the pipeline, with the centre of Pakenham to the east of the area. The only building which is nearby is Lodge Cottage (283650), lying 35m to the north-west of the proposed route.

LB No.	Description
283650	Lodge Cottage to Barton House - <i>c</i> .1870
283698	1 & 2 Upper Town - house now 2 cottages - late C17
283699	No.3 Upper Town - late C16
283700	Well Cottage Penn Cottage - one house divided into 7 cottages - C17
283701	Whits Cottage - C16

Table 63. Listed buildings within the parish of Pakenham



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Figure 18. Listed Buildings in Pakenham Parish, Chainage Numbers 1500m - 5750m. Scale 1:7500

Thurston and Great Barton Parishes Chainage Numbers 5750m - 8000m

(Figure 19)

Three listed buildings fall within this area, as the route here diverges from the centres of both Great Barton and Thurston villages. Little impact will be felt by any of the buildings which do appear here.

LB No.	Description
281242	Barton Mere Farmhouse - early C17 or earlier
284423	Shrub End - late C16
284430	Keepers Cottage - late C15 hall house with C16 alterations

Table 64. Listed buildings within the parishes of Thurston and Great Barton

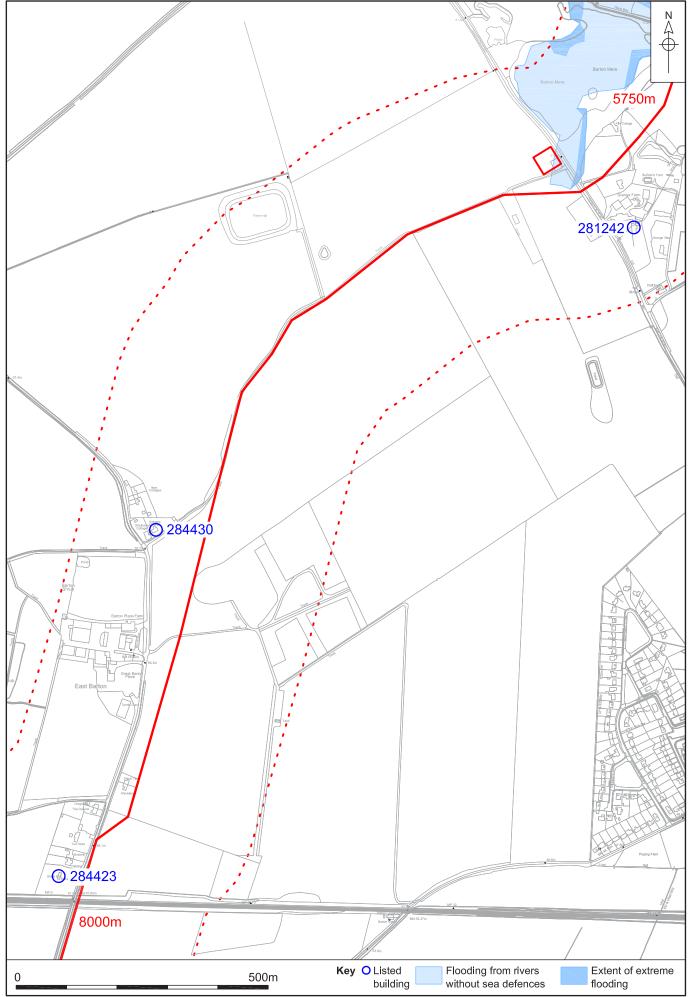
Rougham Parish Chainage Numbers 8000m - 11750m

(Figure 20)

Three buildings are located within the search corridor for the route in Rougham parish. Each site is located more than 1000m to the east of the pipeline route.

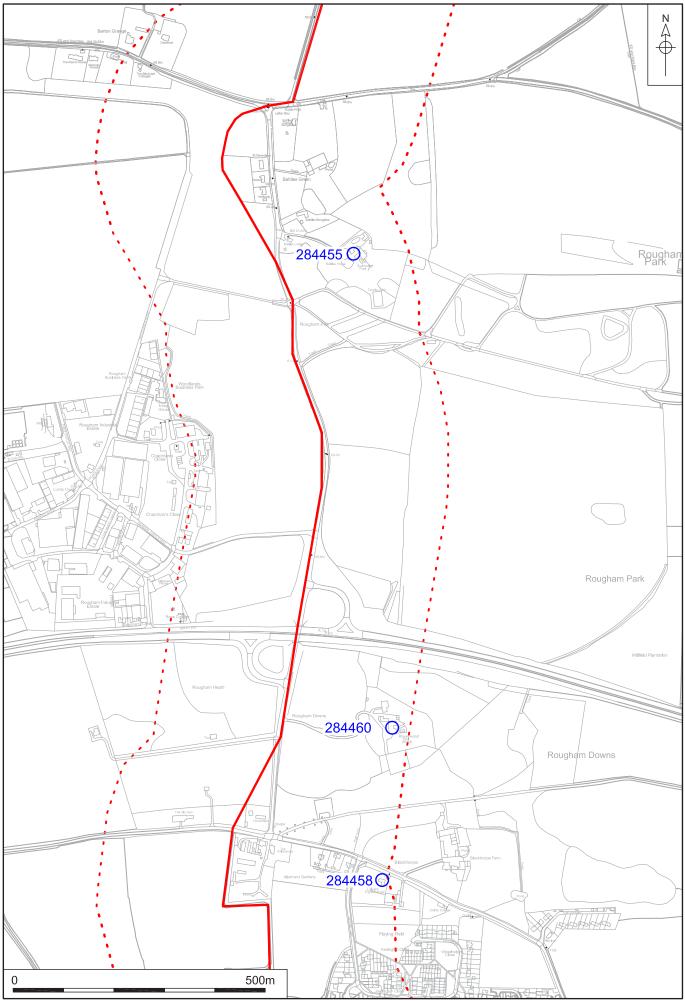
LB No.	Description
284455	The Battlies House - C16, C18, early C19 & early C20
284458	Layers Breck Farmhouse - C15, a Wealden house
284460	The Rookery - C16 and later

Table 65. Listed buildings within the parish of Rougham



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Figure 19. Listed Buildings in Thurston & Great Barton Parish, Chainage Numbers 5750m - 8000m. Scale 1:7500



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Figure 20. Listed Buildings in Rougham Parish. Scale 1:7500

Appendix 3: Cartographic Evidence

Barnham Parish

(Figures 21-25)

An Enclosure Map was not available for the parish of Barnham, so the first map to be consulted was the Tithe Map of 1840 (Figure 21).

The pipeline route enters the parish on the main road from Thetford (now the A134) and diverts into fields to bypass The Grafton Arms public house, and other houses along the main road. The Tithe map shows a house in the position of the current public house, and could in fact be the same building - the Grafton Arms was certainly in existence by 1869, when it is mentioned in the Post Office Directory for the parish, with Edward Deeks as the proprietor. The route here, between chainage numbers 2750m and 3250m crosses fields. The tithe map shows five fields, whilst in modern times there are four, and the boundary between a couple of these may only be arbitrary, being the remnants of hedgerows.

Within the triangular segment divided by roads in Barnham is a windmill (BNH 035), and possibly a tumulus, which could be the Scheduled Monument (BNH 004). The pipeline does not affect either of these features.

The pipeline crosses fields again at around 3500m, and continues for some time across the rural landscape. Where the route crosses the fields diagonally from the main road the shape of the field is almost unchanged until modern times, although buildings have now spread to the main road. The ponds shown on the tithe map are still in existence, just to the south of the route here. The route crosses to the south of East Farm, also shown on the Tithe map. It is while crossing these fields that the route enters the parish of Euston.

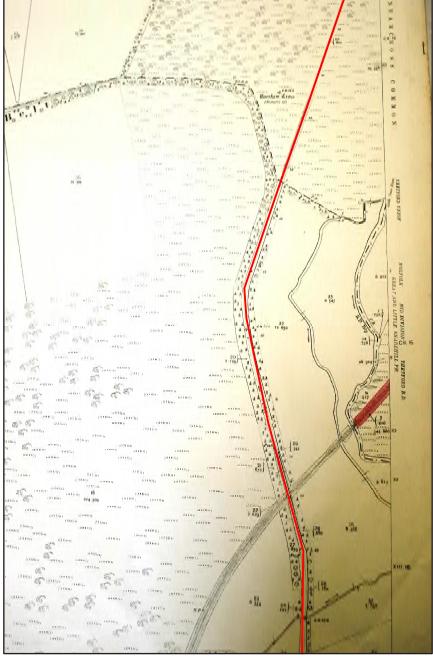
The next available map was the Ordnance Survey 2nd edition of 1905 (Figures 22, 24, 25a and 25b). Sheet 13.15 (Figure 22) in this series shows the route running close to the road now known as the A134, and the introduction of the railway line (no longer in existence) crossing the road diagonally just south of Barnham Cross Common. Sheet 22.3 (Figure 24) depicts the Grafton Arms public house and where the route curves across fields the layout is almost identical to that visible in modern times. The middle field of the three it crosses, however, is depicted as allotment gardens. On Sheet 22.4 (Figure 25a) the route crosses one field diagonally and then runs eastwards across open ground. This area is similar to the Tithe Map, although just to the south of the route a clay pit is depicted near to a building which may be a barn associated with East Farm. Further eastwards (Figure 25b) the area has a similar layout to the previous map, and depicts Bury Lane, which the pipeline crosses close to chainage 5250m, and the avenue known as Duke's Ride, part of the Euston Hall estate, just visible to the south,.

The 3rd edition OS map of 1928 Sheet 13.15 (Figure 23) is the only other historical map for the parish and shows that little had change since the 1905 survey of the same area.



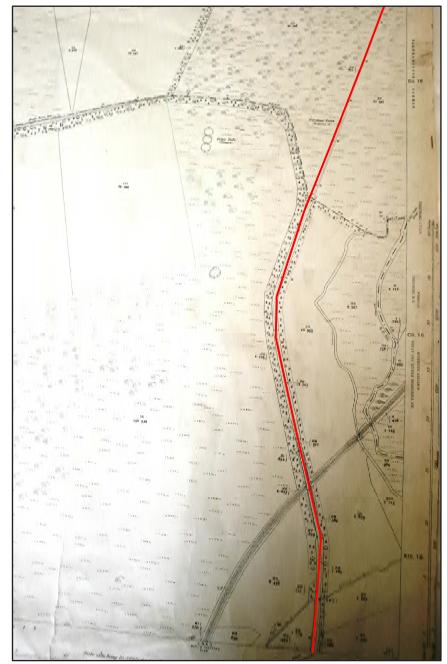
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Figure 21. Tithe Map for Barnham Parish, 1840. Chainage Numbers 2250m - 4500m



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Figure 22. OS Map Sheet 13.15, 1905, northern part of Barnham Parish. Chainage Numbers 1000m - 2500m



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Figure 23. OS Map Sheet 13.15, 1928, northern part of Barnham Parish. Chainage Numbers 1000m - 2500m

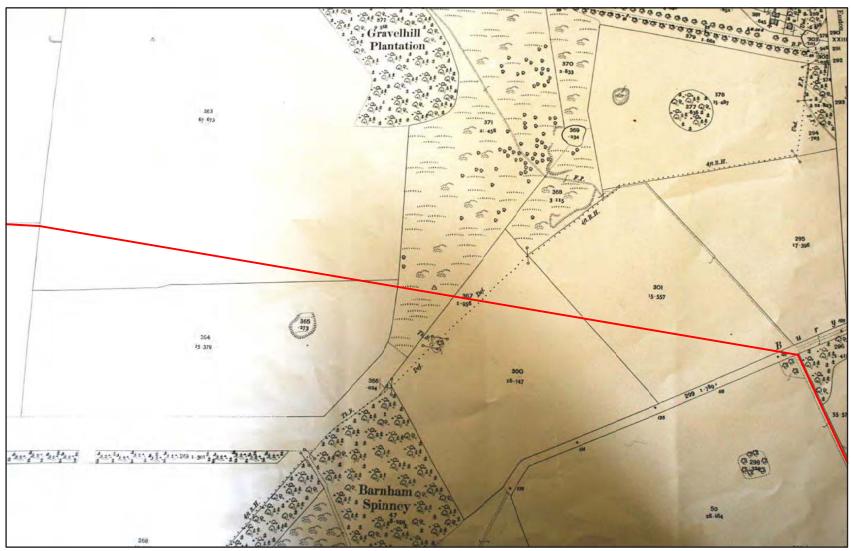


Figure 24. OS Map Sheet 22.3, 1905, Barnham Parish. Chainage Numbers 2500m - 3500m



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Figure 25a. OS Map Sheet 22.4, 1905, Barnham Parish. Chainage Numbers 3500m - 4750m



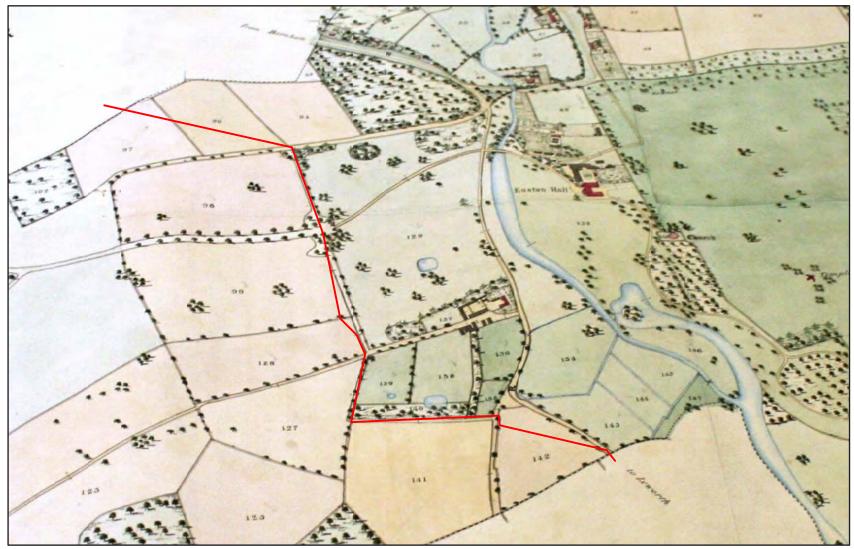
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Figure 25b. OS Map Sheet 22.4, 1905, Barnham Parish. Chainage Numbers 4750m - 6000m

Euston Parish

No Enclosure map was available for the parish of Euston, hence the first historic map available was the Tithe map of 1840 (Figure 26), which depicts Euston Hall and its surrounding grounds (registered park EUN 020). The route of the pipeline crosses the track known as Bury Lane (depicted) and the avenue known as Duke's Ride. Hall Farm is also depicted close to the main road through Euston (now the A1088).

The 1905 2nd edition Ordnance Survey map Sheet 23.1 (Figure 27) shows the avenue known as Duke's Ride in the bottom left hand corner. Sheet 23.5 dated 1904 (Figure 28) depicts the point at which the route rejoins the main road (the A1088) alongside which there stands of trees are depicted.



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Figure 26. Tithe Map for Euston Parish, 1840. Chainage Numbers 6000m - 7500m

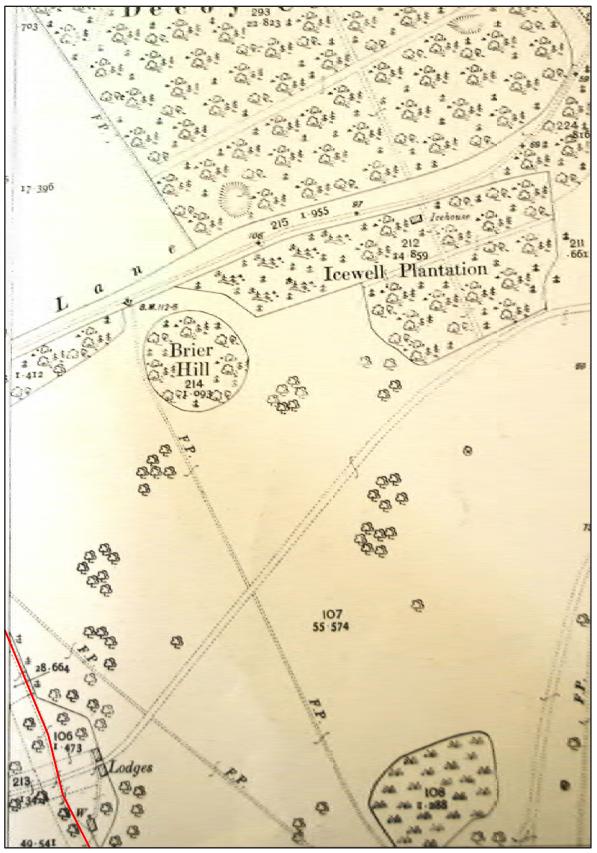
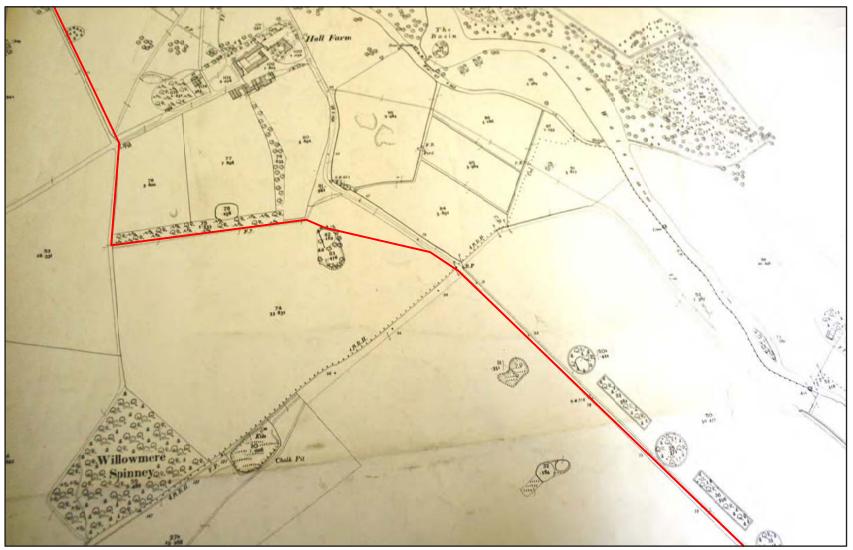


Figure 27. OS Map Sheet 23.1, 1905, Euston Parish. Chainage Numbers 6000m - 6250m



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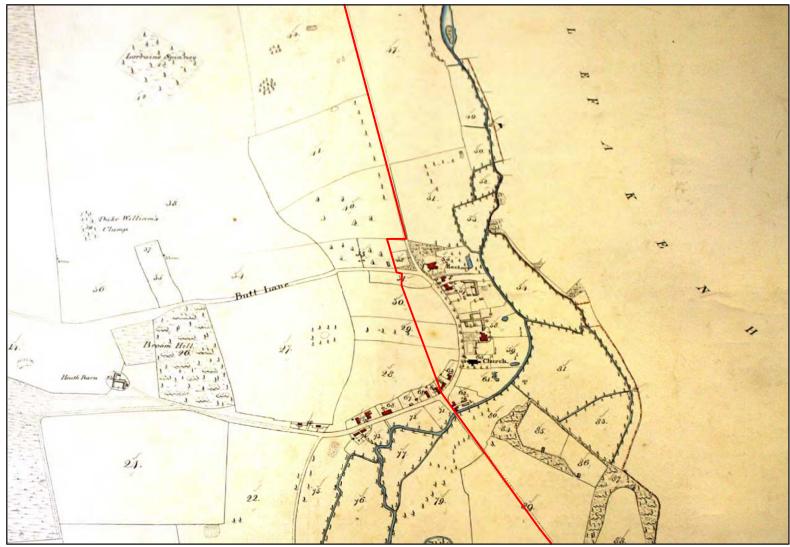
Figure 28. OS Map Sheet 23.5, 1904, Euston Parish. Chainage Numbers 6500m - 8000m

Fakenham Magna Parish

(Figures 29a, 29b and 30)

The Tithe map for Fakenham Magna, dating to 1841 (Figures 29a and 29b), shows the route along the main road, bypassing the village to the west, cutting across a track known as Butt Lane and through fields, before emerging between the two listed buildings, The Smithy and Pump Green Cottage. The route continues along the Bardwell Road, crossing the River Black Bourn (Figure 29b) and continuing close to the road. The Scheduled Monument, Burnthall Plantation is depicted on this map, to the west of the pipeline route.

The 1904 Ordnance Survey map Sheet 23.9 (Figure 30) shows no significant changes compared with the earlier map and again depicts Burnthall Plantation.



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Figure 29a. Tithe Map for Fakenham Magna Parish, 1841, northern part. Chainage Numbers 7500m - 9250m



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Figure 29b. Tithe Map for Fakenham Magna Parish, 1841, southern part. Chainage Numbers 9000m - 10250m

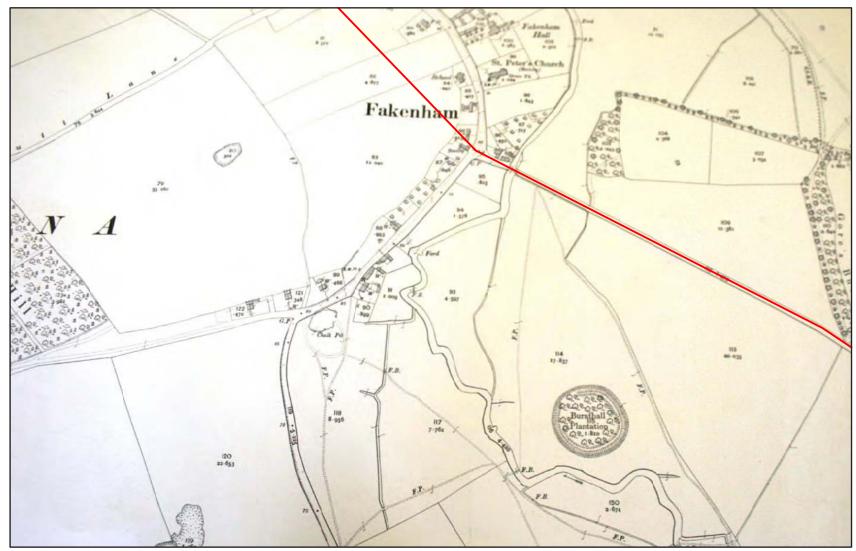




Figure 30. OS Map Sheet 23.9, 1904, Fakenham Magna Parish. Chainage Numbers 8750m - 9750m

Sapiston Parish

There was no Enclosure or Tithe map available for the parish of Sapiston, and the only Ordnance Survey map available was the 1904 map Sheet 23.10 (Figure 31). This part of the pipeline is very rural in character with few structures. It does however cross what is now known as Coney Weston Road, close to chainage number 10750m.

Bardwell Parish

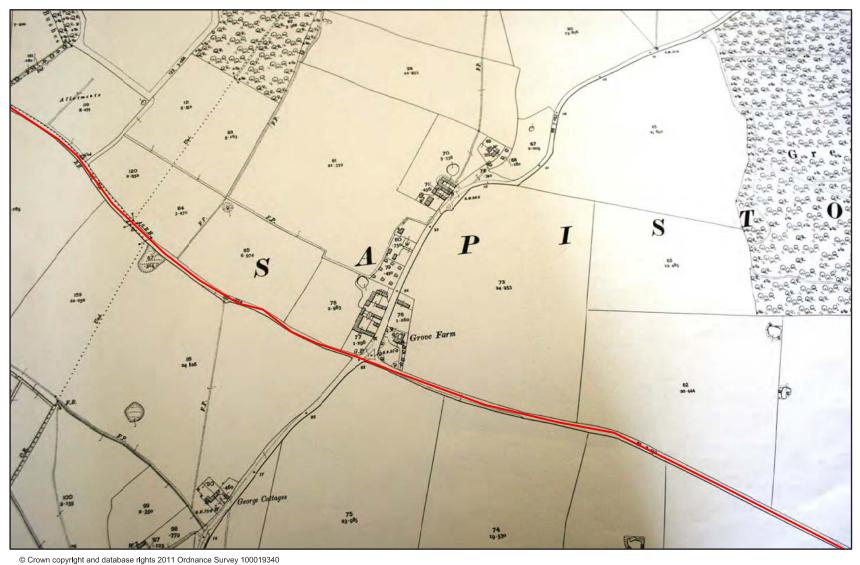
The northern limit of the parish is depicted on the 1904 2nd edition Ordnance Survey Sheet 23.14 (Figure 32) only.

The Enclosure map for Bardwell (Figures 33a and 33b) is dated 1831 and shows the route as it comes in from Fakenham Magna. Bardwell village is shown in the centre of Figure 33a, bounded by roads on four sides, a similar arrangement as seen today, although now the village has spread to fill the area, whereas in 1831 it is only partly filled. The village green is depicted, and the route runs along the northern edge of this, leaving the village on Davey's Lane to continue south. The route diverts from the Wyken Road into fields to the south of Bardwell.

The Tithe map of 1839 (Figures 34a and 34b) shows little changes in field and road layout in the few intervening years between it and the Enclosure map. The Hall, The Bells Inn, Parsonage House and a Meeting House are all depicted on this map.

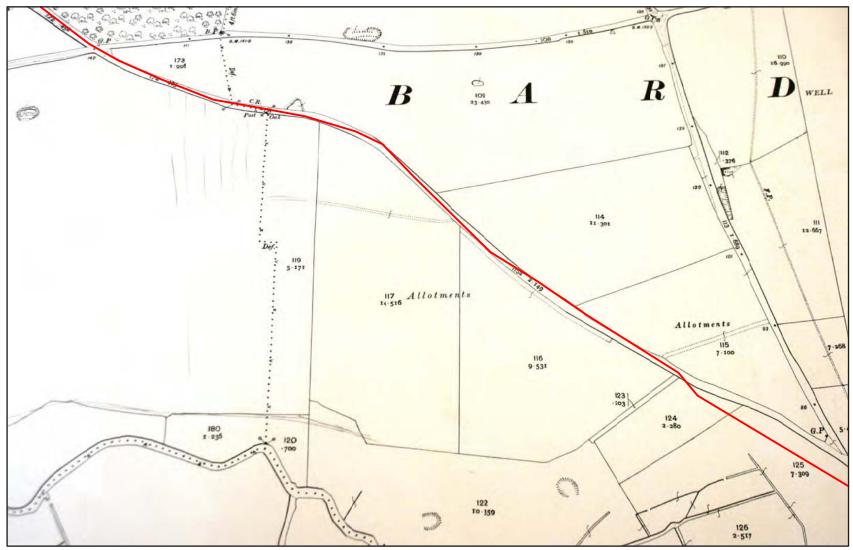
There appears to be no 1st Edition Ordnance Survey map for the northern part of Bardwell, but there is Sheet 34.3 for the southern part (Figure 35). This 1884 map shows no features of interest along the route of the pipeline, although where the route diverts from the Wyken Road it passes by an area known as 'Alecock's Grave'. The origins of this name are unknown, but it is suggested that at some point in antiquity an individual of that name may have been buried here. The route crosses old field boundaries, where several smaller fields have been combined to make one larger one.

The 2nd edition 1904 Sheet 23.15 for Bardwell (Figure 36) shows the road coming in from Fakenham Magna along Spring Road which is the modern name of the road. The Smithy, the Rectory, Manor Farm and the Six Bells Inn are all depicted on this map, and all, except the Smithy, are also depicted on the Tithe Map. The 1904 map Sheet 34.3 (Figure 37) for the southern part of Bardwell shows no change from the 1884 edition, with Alecock's Grave depicted, and the fields through which the route diverts still sub-divided, rather than the single larger example of modern times.



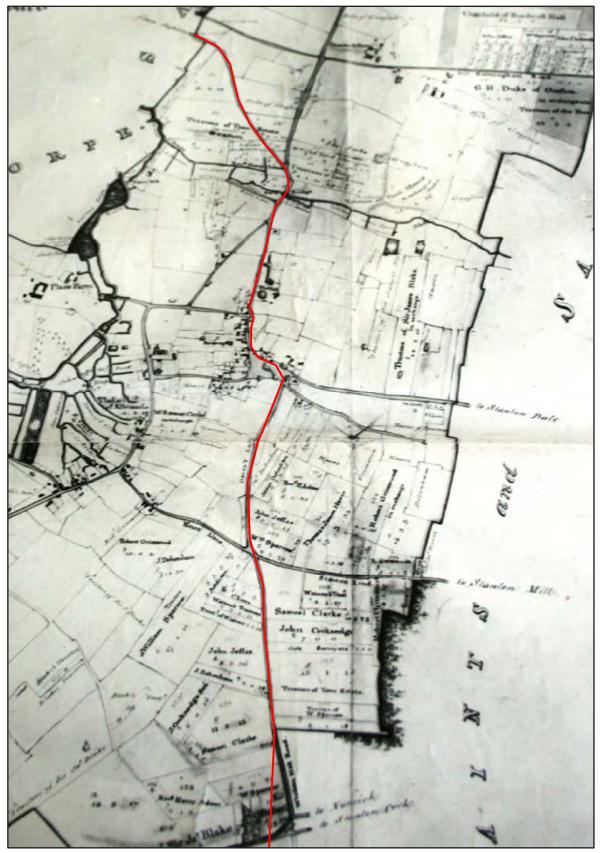
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Figure 31. OS Map Sheet 23.10, 1904, Sapiston Parish. Chainage Numbers 9750m - 11500m



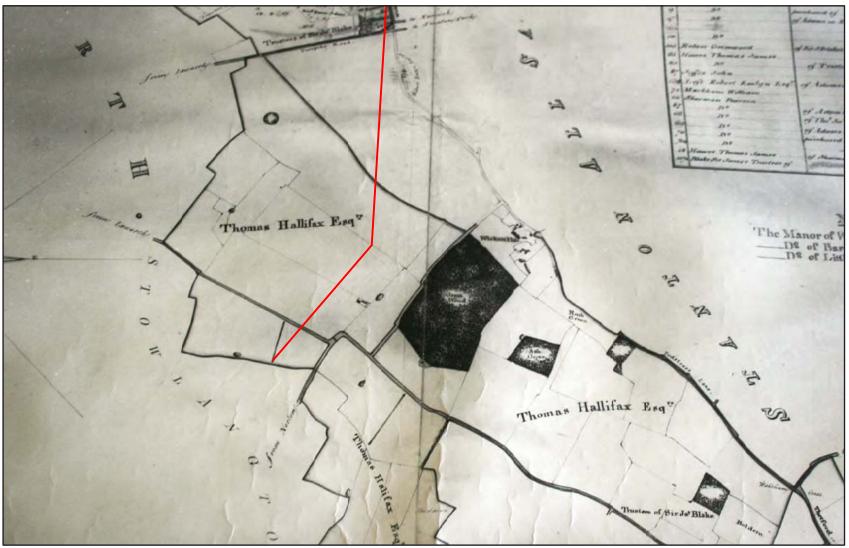
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Figure 32. OS Map Sheet 23.14, 1904, Bardwell Parish. Chainage Numbers 11500m - 12750m



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Figure 33a. Enclosure Map for Bardwell Parish, 1831, northern part. Chainage Numbers 12750m - 15250m



© Crown copyright and database rights 2011 Ordnance Survey 100019340 Figure 33b. Enclosure Map for Bardwell Parish, 1831, southern part. Chainage Numbers 15250m - 16000m

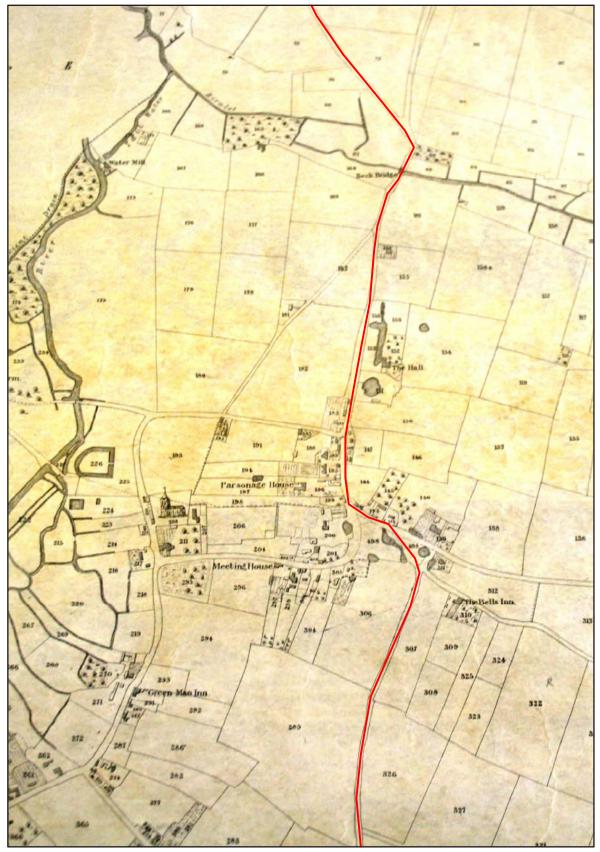


Figure 34a. Tithe Map for Bardwell Parish, 1839, northern part. Chainage Numbers 12500m - 14250m

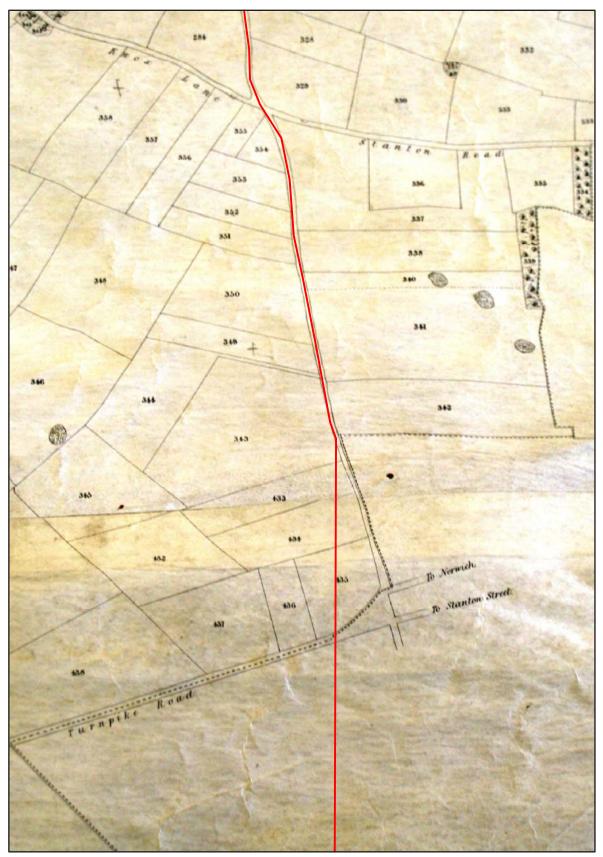
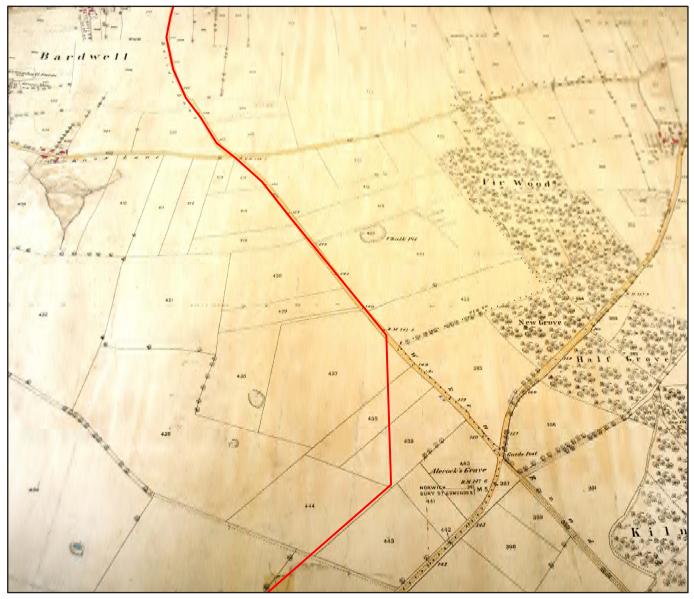
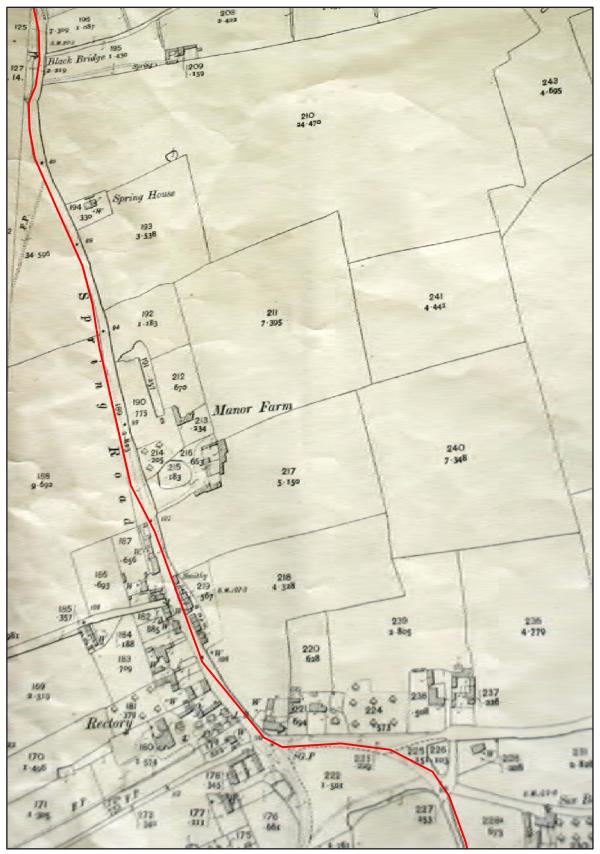


Figure 34b. Tithe Map for Bardwell Parish, 1839, southern part. Chainage Numbers 14500m - 15250m



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Figure 35. OS Map Sheet 34.3, 1884, Bardwell Parish. Chainage Numbers 14250m - 16000m



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Figure 36. OS Map Sheet 23.15, 1904, Bardwell Parish. Chainage Numbers 13000m - 14000m



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Figure 37. OS Map Sheet 34.3, 1904, Bardwell Parish. Chainage Numbers 15250m - 15750m

Ixworth Parish

The earliest available map of the parish of Ixworth was the 1847 Tithe Map (Figure 38), which shows the route where it enters from open land, and crosses the 'Turnpike Road' (now the A143 Stanton Road). The pipeline route then joins another road, which in modern times is named Woolpit Road. This road continues south, where it cross the Walsham Road, and eventually joins the A1088 Stow Lane. The pipeline route, however, diverts westward from a lane named as Crown Lane on modern maps. It is close to this point that the route also meets with the water treatment works close to Wood Street Farm (depicted on the Tithe Map). The route continues along Crown Lane, which on the Tithe Map goes into Ixworth itself. In modern times Crown Lane has been cut into two segments by the Ixworth Bypass, and it is here that the route continues. It has a little difficult to locate where exactly the route of the bypass cuts through the countryside on the Tithe Map, but the shape and location of the Black Bourn river helps place it. Stow Lane, the modern A1088 are depicted on the Tithe Map, just to the north of the river.

The 1904 2nd Edition Ordnance Survey map Sheet 34.7 (Figure 39) shows where the route comes into Ixworth parish, joining the A143 road, and crossing over to join with Woolpit Road. No significant features are depicted on this map. The next map sheet to the south (Sheet 34.2) (Figure 40) shows the route continuing along Woolpit Road and turning west into Crown Lane. Wood Street Farm is depicted on the very eastern edge of the map (not shown).

The Ordnance Survey 1st Edition 1884 map Sheet 34.10 of Ixworth (Figure 41) also shows part of Pakenham parish. This figure depicts the proposed pipeline route as it follows the curve of the modern bypass east of Ixworth itself, and shows how this road carves through the area labelled as Mickle Mere (now a nature reserve). The location of the Scheduled Monument Roman villa site (IXW004 on Figure 8b) is also depicted, just to the north of Stow Lane entitled 'Baths (Site Of)'. To the north of the route, close to Bridge Farm and the Woolpack Inn is an area labelled 'Human Remains Found AD 1880' and it is perhaps significant that this is close to the Roman fort (PKM005, also a Scheduled Monument) and settlement. The route continues southwards along Mill Lane to the south of Ixworth, passing Mill Cottages, close to Pakenham Windmill.

The 1904 Ordnance Survey Sheet 34.10 (Figure 42) shows little change in the area.

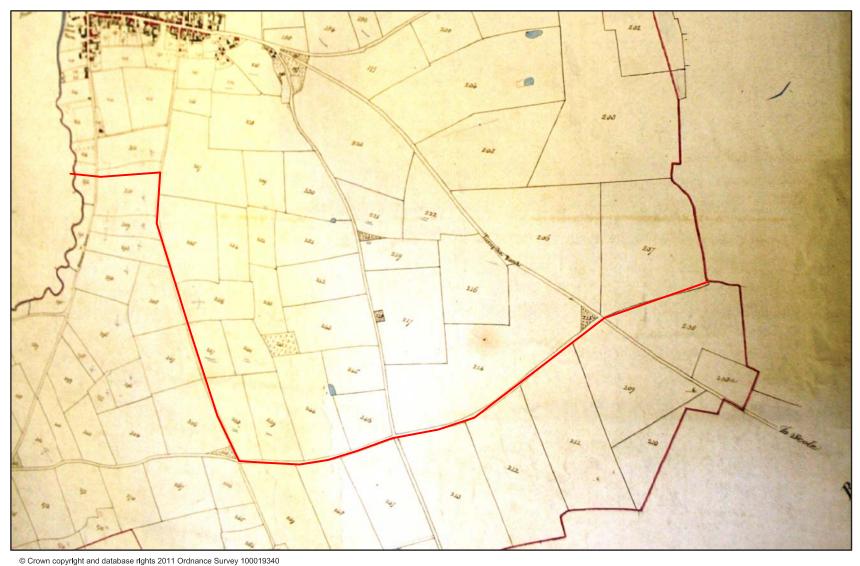


Figure 38. Tithe Map for Ixworth Parish, 1847. Chainage Numbers 16000m - 0m - 1250m

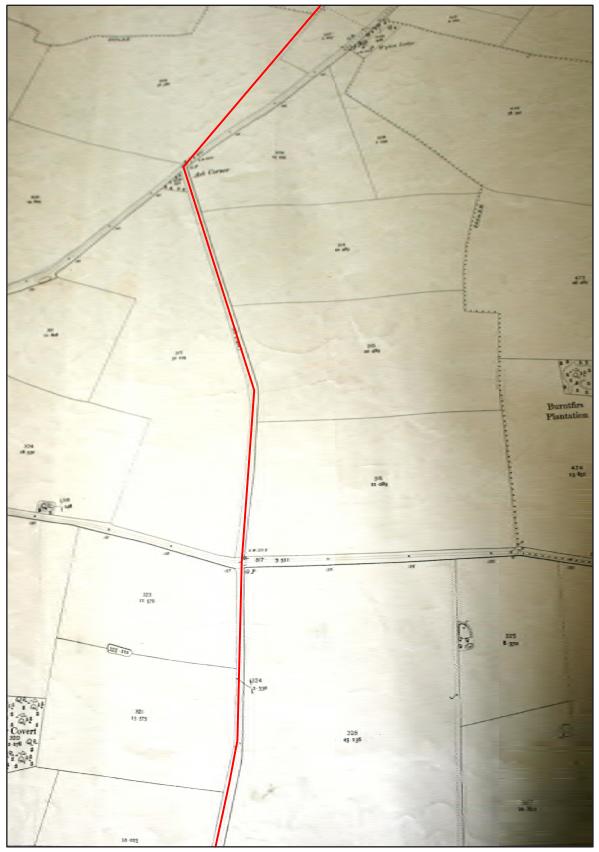
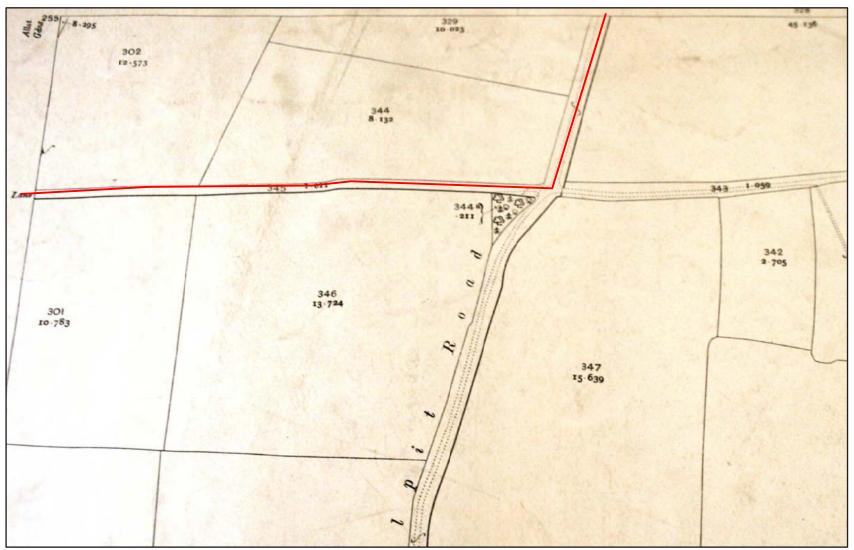
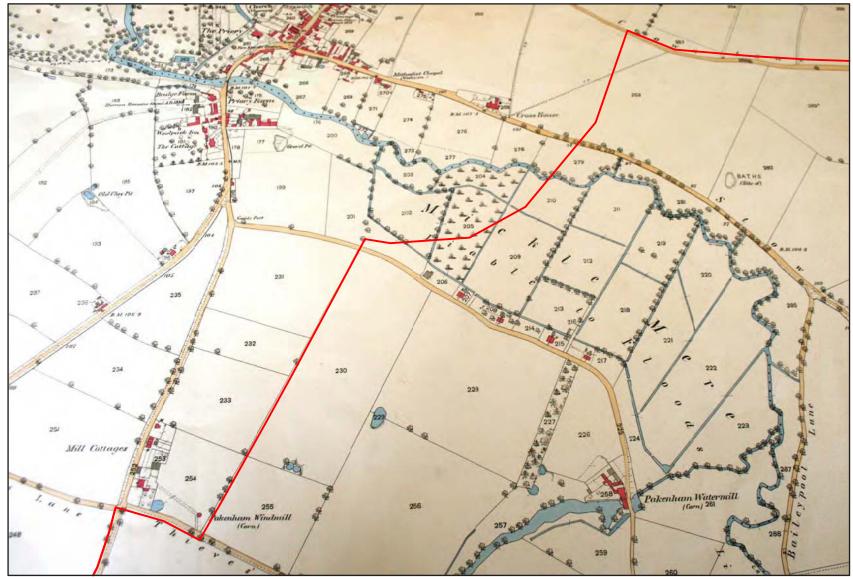


Figure 39. OS Map Sheet 34.7, 1904, Ixworth Parish. Chainage Numbers 16000m - 17250m



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Figure 40. OS Map Sheet 34.2, 1904, Ixworth Parish. Chainage Numbers 0m - 500m



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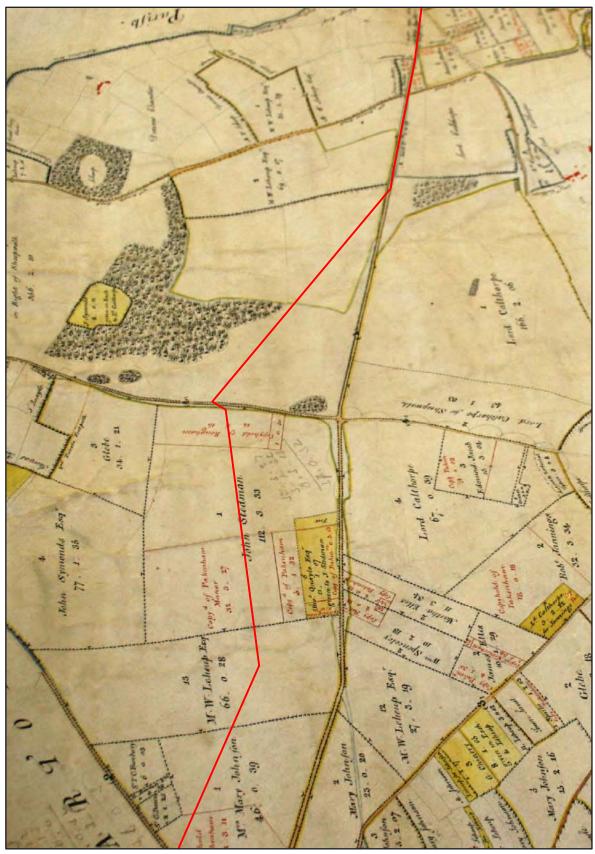
[©] Crown copyright and database rights 2011 Ordnance Survey 100019340 Figure 42. OS Map Sheet 34.10, 1904, Ixworth Parish. Chainage Numbers 500m - 2500m

Pakenham Parish

The earliest map available for Pakenham parish is the Enclosure map of 1804 (Figure 43), which shows Mill Lane running roughly north-south through the parish. The route of the pipeline diverts from the road at this point, and runs across fields. The Enclosure map shows that the main landowner in the early 19th century was Lord Calthorpe. Pakenham itself appears as little more than scattered collections of buildings, with no major centre at this time. The route continues south and crosses the Pakenham Road before continuing through fields parallel and west of Mill Lane owned by John Stedman, M.W. Leheup and Mrs. Mary Johnson.

The Tithe map for the parish dates to 1843 (Figure 44), and shows that Pakenham has developed more of a centre, albeit linear, mainly along what is now called The Street, with a smaller number of houses on Mill Lane, which become known as Upper Town.

The northern part of the route through the parish is depicted on the 1884 1st Edition Sheet 34.14 (Figure 45) which shows the route entering Pakenham along Mill Lane and diverting westward around Upper Town and Manor Farm which are likely to be the buildings shown on the Tithe map. The 1904 OS map Sheet 34.14 (Figure 46) shows no changes in the layout of fields along the pipeline route and the structures are predominantly similar.

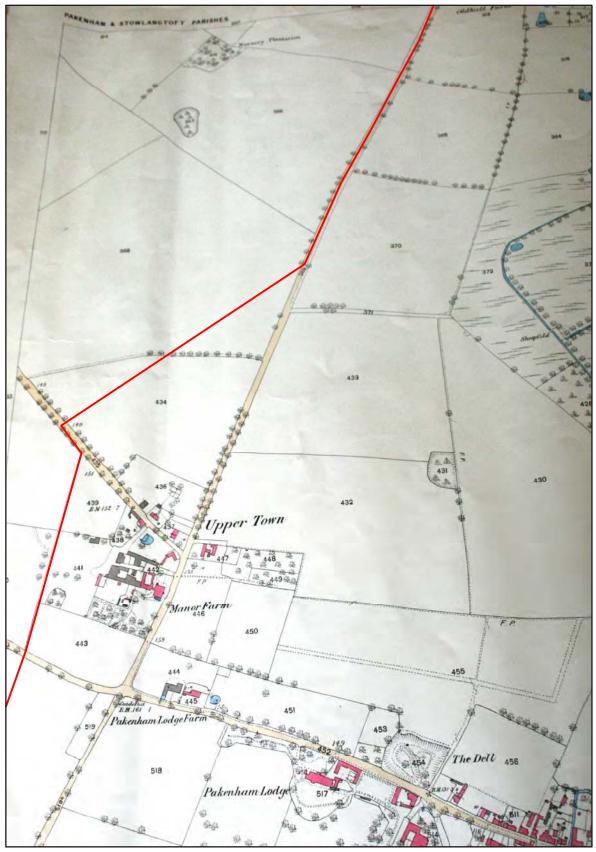


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Figure 43. Enclosure Map for Pakenham Parish, 1804. Chainage Numbers 3000m - 5000m

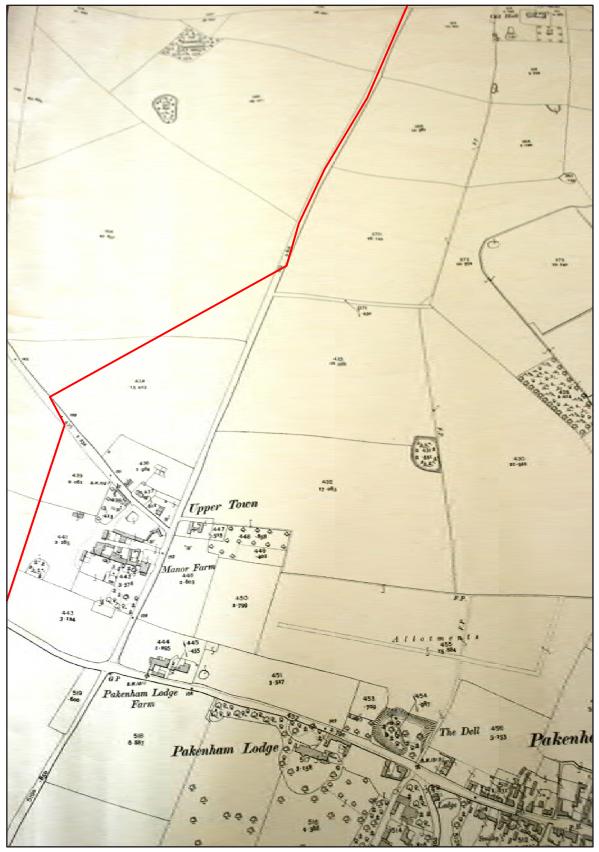


© Crown copyright and database rights 2011 Ordnance Survey 100019340 Figure 44. Tithe Map for Pakenham Parish, 1843. Chainage Numbers 3000m - 5000m



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Figure 45. OS Map Sheet 34.14, 1884, Pakenham Parish. Chainage Numbers 3000m - 5000m



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Figure 46. OS Map Sheet 34.14, 1904, Pakenham Parish. Chainage Numbers 3000m - 5000m

Great Barton Parish

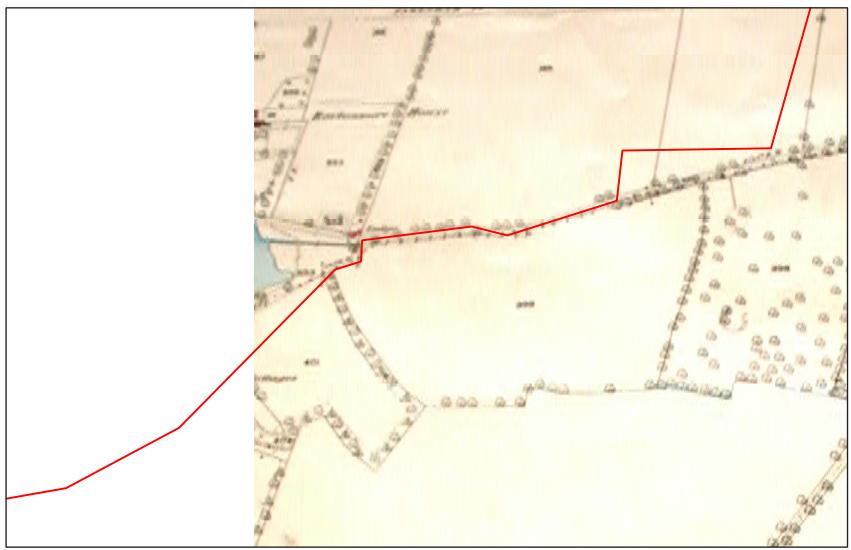
The Enclosure map of 1805 for Great Barton (Figure 47) shows the route where it appears to the south of Barton Mere (a small part of which is visible at the top left hand corner of the figure). The building depicted close to the route near Barton Mere is likely to be Grange Farm, which is still present today. The pipeline route runs through the lands of Sir Charles Davers, and joins up with a road named as '7th Private Road' on the Enclosure map, and now a track. Where the route diverts from the this road (at Chainage Number 7000m) the Enclosure map shows land which belongs to T. Jeffes, Sir T.C. Bunbury and Charles Lanchester (who also owned Great Barton Place) and Barton Shrub woodland, which lies beyond it. Little further information can be gleaned from this map and no features of significance have been identified.

The next map available is the 1884 1st Edition Ordnance Survey map Sheet 45.1 (Figure 48), which shows the route as it winds between Barton Mere and Barton Mere Farm, which is now known as Grange Farm. The 1904 Ordnance Survey map Sheet 45.1 (Figure 49) shows the same part of the route, and the only change from the last map is the construction of Thurston Grange, which is now a hotel.



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Figure 47. Enclosure Map for Great Barton Parish, 1805. Chainage Numbers 6000m - 8250m



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Figure 48. OS Map Sheet 45.1, 1884, Great Barton Parish. Chainage Numbers 5000m - 6000m



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Figure 49. OS Map Sheet 45.1, 1904, Great Barton Parish. Chainage Numbers 5000m - 6000m

Rougham Parish

The pipeline route enters Rougham parish in the area known as Blackthorpe, close to the modern A14 trunk road, at the Rougham crossroads. The first map available was the Enclosure map of 1813 (Figure 50) which shows the route entering the parish close to Blackthorpe Heath. Most of the land hereabouts is owned by Roger Kedington, and the route crosses fields, one of which is depicted as Houghton Croft. The route joins up with 'Elder Stubb Road', on the western side of which is ElderStub Wood. The road then changes to Eastlow Hill Road, and the main Eastlow Hill tumulus is depicted at the very bottom of the map.

The next available map is the 1884 Ordnance Survey map Sheet 45.5 (Figure 51) which shows the introduction of the railway in the northern part of the map, with the pipeline route continuing south along a road. The route enters fields to skirt Battlies Farm, and then continues along the road. The 1904 OS map Sheet 45.5 (Figure 52) shows no differences in the field layout to the earlier map, and Battlies Farm is still depicted, with Battlies House and Green on the opposite side of the road.

The 1904 Ordnance Survey map Sheet 45.5 further to the south (Figure 53) shows the route as it goes through Blackthorpe, and depicts the Old Bury Road, (now the A14) also shown on the Enclosure map. The route lies along a road, but runs close to Rougham Heath, which is depicted on the enclosure map as Blackthorpe Heath. The route again diverts from the road to bypass the centre of Blackthorpe, and crosses fields. The 1904 map shows the route rejoining a road or track which is no longer present, and crossing another which is no longer extant, before continuing across fields to join up with Elderstub Lane. The route of the old track is visible in field boundaries in the area.

In the southern part of the parish the 1884 Ordnance Survey map sheet 45.13 (Figure 54) depicts the route meeting up with Elderstub Lane, which runs close to Elderstub Wood (RGH 024) at this point. The route continues close to the road, which then changes to Eastlowhill Road, named after the tumulus (Scheduled Monument and site RGH 001) close to it. Another tumulus (RGH 002) is also recorded, just to the south of the previous one. The route continues on this road, passing The Lake, and a Roman building (Scheduled Monument and site RGH0009) to the east. The 1904 map of the same area (Figure 55) shows no changes in layout compared with the earlier example.

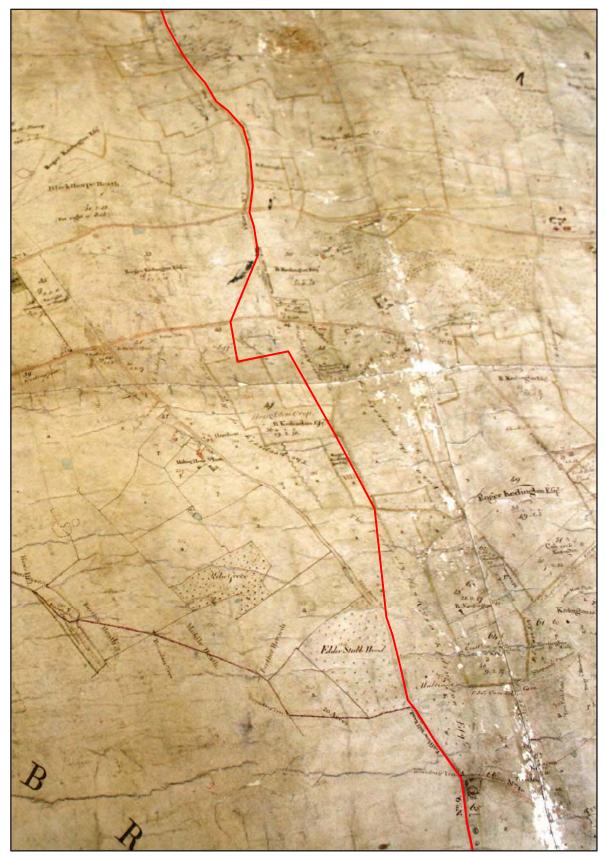


Figure 50. Enclosure Map for Rougham Parish, 1813. Chainage Numbers 9500m - 11750m

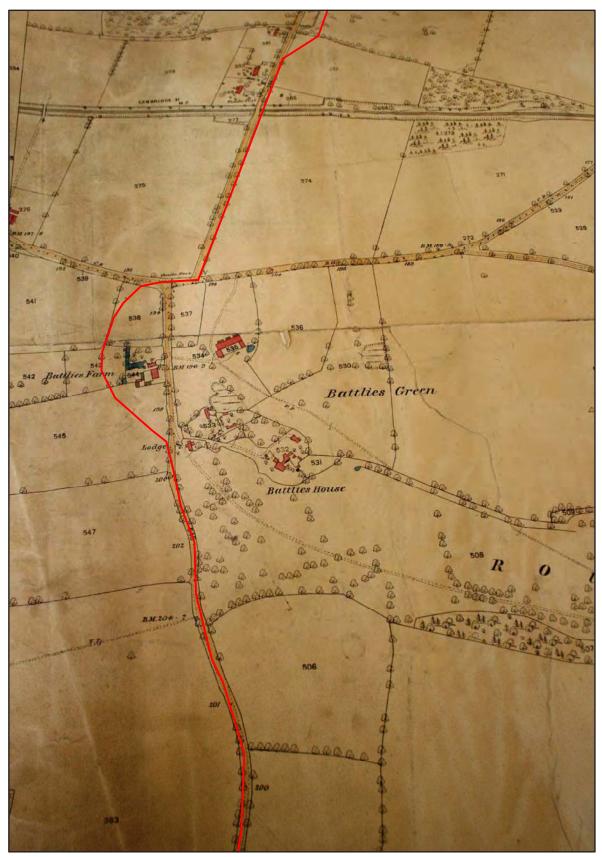


Figure 51. OS Map Sheet 45.5, 1884, Rougham Parish. Chainage Numbers 7500m - 9250m

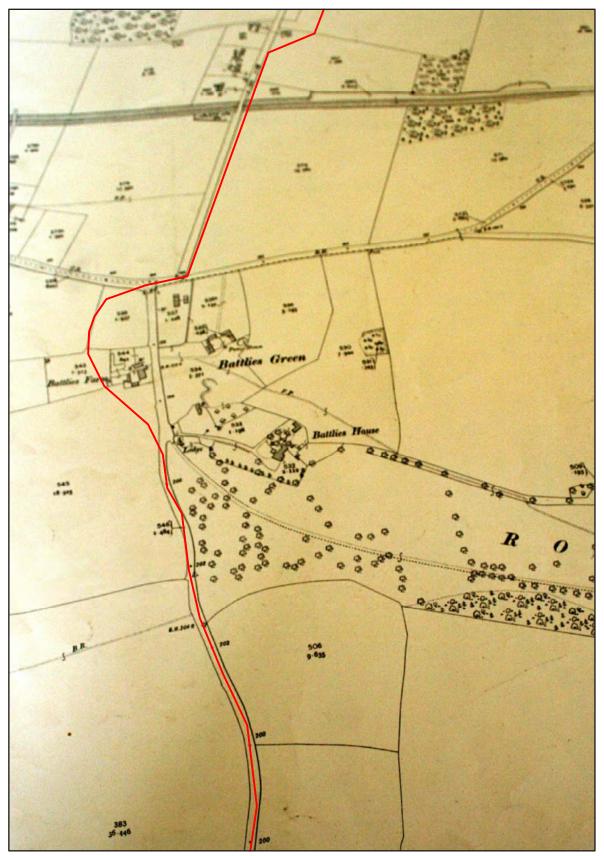


Figure 52. OS Map Sheet 45.5, 1904, Rougham Parish. Chainage Numbers 7500m - 9250m

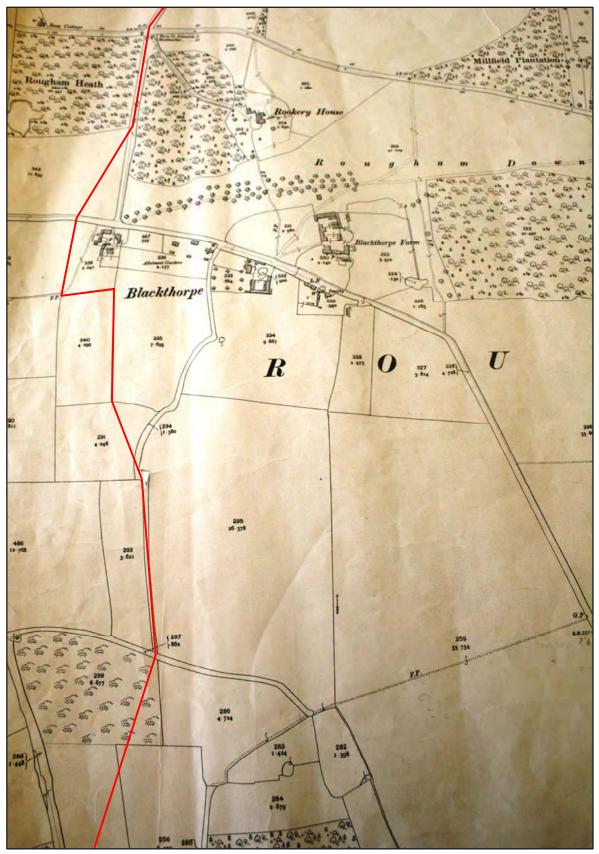


Figure 53. OS Map Sheet 45.9, 1904, Rougham Parish. Chainage Numbers 9250m - 11000m

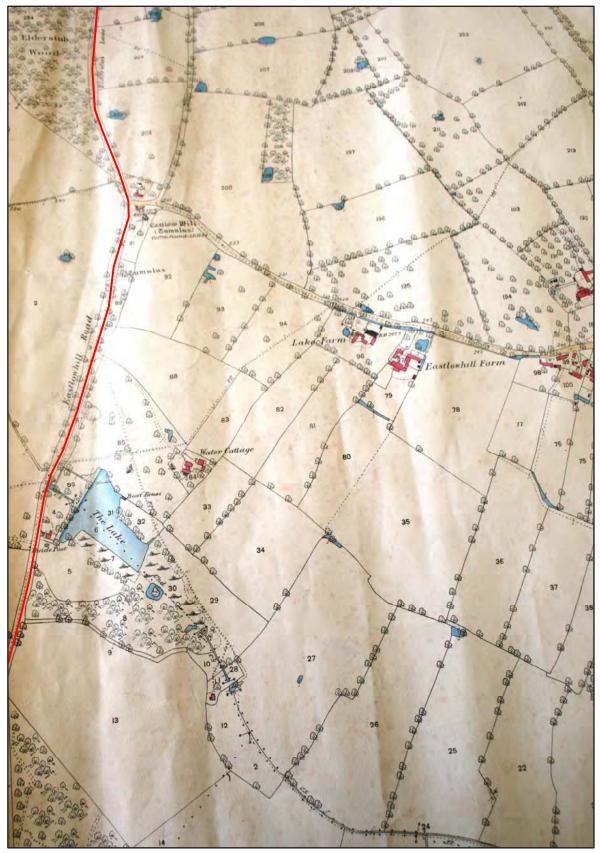
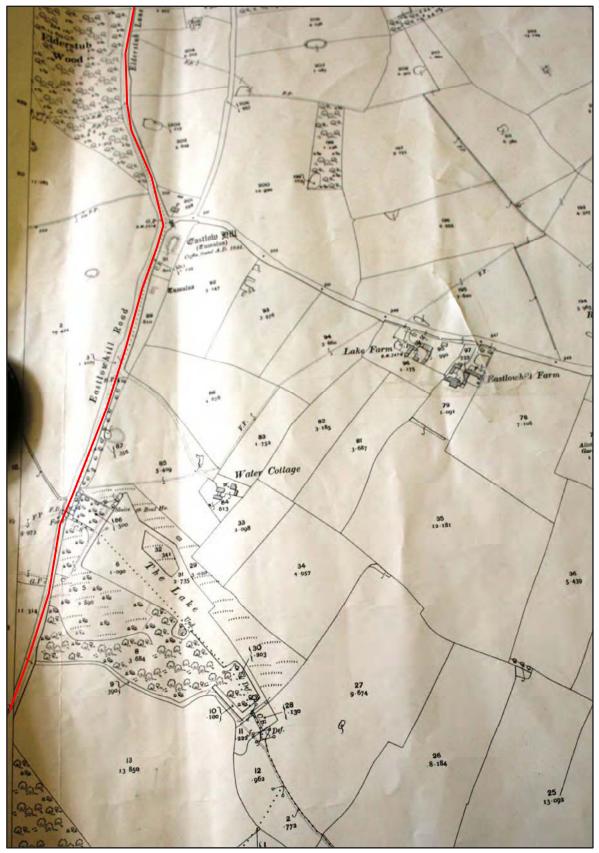


Figure 54. OS Map Sheet 45.13, 1884, Rougham Parish. Chainage Numbers 11000m - 12250m



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Figure 55. OS Map Sheet 45.13, 1904, Rougham Parish. Chainage Numbers 11000m - 12250m

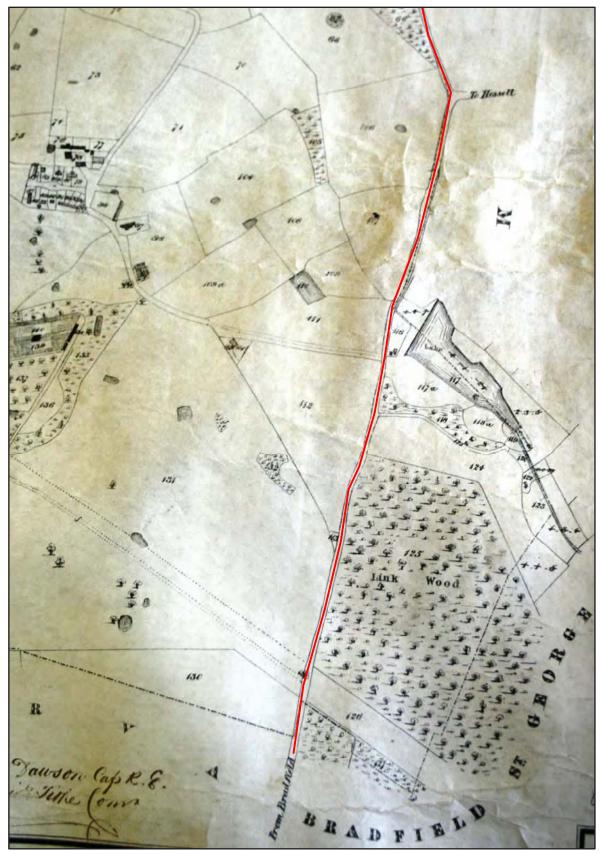
Rushbrooke and Little Whelnetham Parish

The earliest map for Rushbrooke parish is the tithe map of 1840 (Figure 56), which shows the route running along Eastlowhill Road, passing the lake, and 'Link Wood', now known as Rushbrooke Woods. Rushbrooke Hall, a moated site, is also depicted on this map, as is an avenue of trees which leads from the hall to the road. The avenue possibly continues on the opposite side of the road, bisecting two sections of woodland.

The 1841 Little Whelnetham tithe map (Figure 57) shows the final part of the route, where it terminates at a water treatment works within Rushbrooke Woods.

The 1884 1st edition Ordnance Survey map Sheet 44.16 for this part of the route (Figure 58) simply shows the route running along Linkwood Road, with Rushbrooke Hall and its avenue to the west. The avenue clearly continues onto the opposite side of the road, cutting through two sections of wood. The next OS map to be issued is the 1904 Sheet 44.16 which shows the same features (Figure 59).

The final map of the area is the 1904 OS Sheet 54.4 (Figure 60) which shows the terminus of the route as it enters Rushbrooke Woods in Little Whelnetham. The route ends opposite an old track, here depicted as Parsonage Lane, and with a moat shown just to the south of the track.

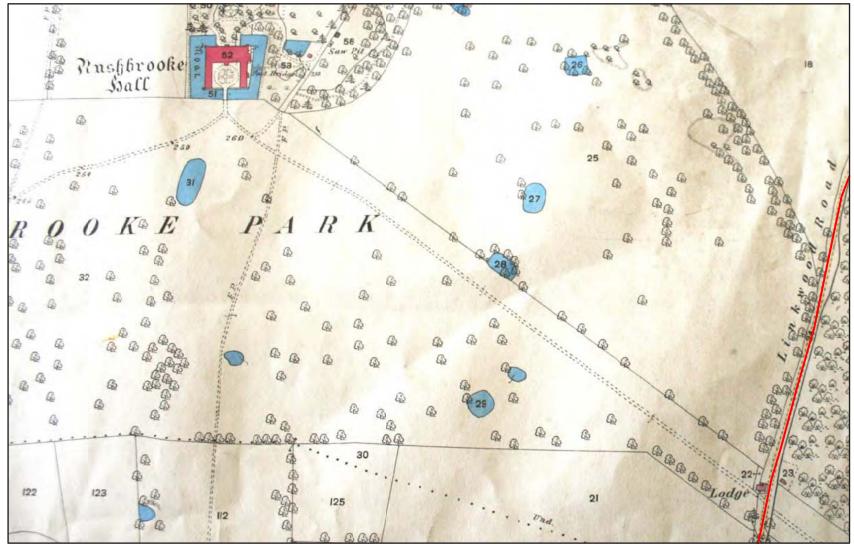


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Figure 56. Tithe Map for Rushbrooke Parish, 1840. Chainage Numbers 11250m - 12750m

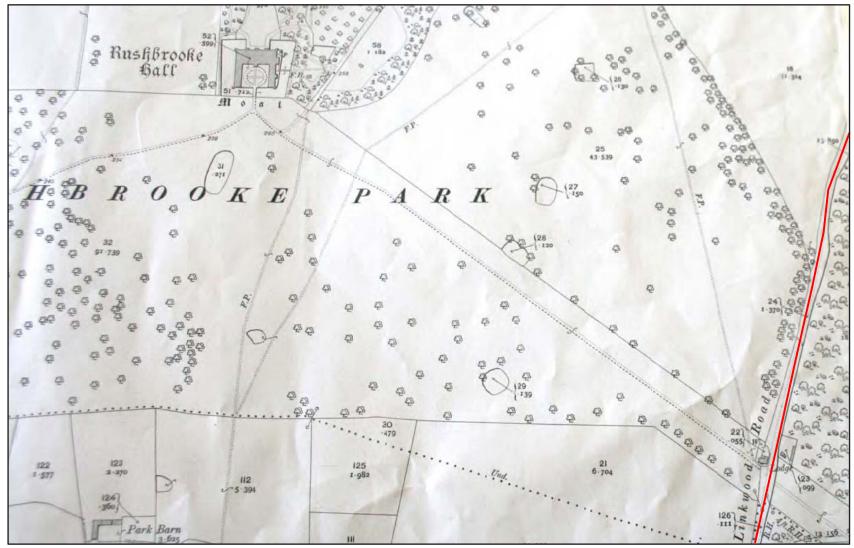


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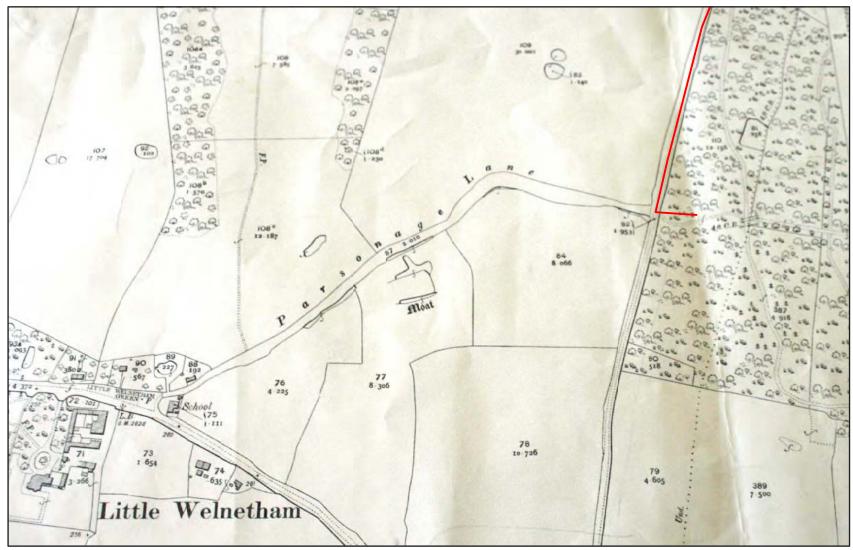
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Figure 58. OS Map Sheet 44.16, 1884, Rushbrooke Parish. Chainage Numbers 12500m - 12750m



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Figure 59. OS Map Sheet 44.16, 1904, Rushbrooke Parish. Chainage Numbers 12500m - 12750m



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Figure 60. OS Map Sheet 54.4, 1904, Little Whelnetham Parish. Chainage Numbers 12750m - 13000m

Appendix 4: Historical Evidence

The historical evidence for each parish has been drawn mainly from W.A. Copinger's The Manors of Suffolk (1905) and Wendy Goult's A Survey of Suffolk Parish History (1990). The summaries of historical evidence for each parish are presented below in parish order along as encountered along the route from north to south.

Barnham Parish

Barnham, meaning Beorn's homestead (Goult 1990), once lay within the hundred of Blackbourn, and contained three manors during Saxon times. One of these manors was held by Scula, one of Edward the Confessors thanes and consisted of two carucates of land, one border, two serfs, two ploughteams, one acre of meadow, one mill, 25 pigs, 1sheep and was worth 3shillings. By the time of the Domesday Survey (1086) this manor stood at 14 pigs, three cattle and 12 sheep, and was held by Earl Hugh. The second Saxon manor was held by Bos and consisted of half a carucate of land, three bordars, two serfs, one ploughteam in lordship, and half a ploughteam belonging to the men, two rouncies (horses or nags), 13 pigs and 85 sheep. Also three freemen with four acres and half a ploughteam. This manor is held by William de Warenne at the Domesday Survey, and the value had increased from 16 shillings to 2 shillings. The third manor was held by the Abbott of Bury, and consisted of three freemen with one carucate of land, two ploughteams, one mill, and half a church with eight acres, with a value of 2shillings. Fulcher held 8acres and one plough here also.

The principal manor of Barnham was given by Reginald le Brun to the monks of Thetford, in the reign of Henry I (1100-1135). Later, Martin, the Prior of Thetford, agreed to renounce his rights in one carucate of land here to John LeStrange, in exchange for 2 shillings of land in Tothington, Norfolk. The Prior of Thetford acquired more land here, and in 1364 he had licence to receive in mortmain here and in Barningham three messuages, 20 acres of land and one of meadow from Edmund Goneville and others. In 1392 he received licence from the Abbot of Bury to buy the tenement of Pleyfords in Barnham, standing near the rectory house of St Martins parish.

At the Dissolution the manor reverted to the Crown and in 154 John Perient probably had possession of it (Copinger 1905, 272). The manor was sold in 158 by Robert Drury to Thomas Croftes, and it passed to his son, Sir John Croftes in 1612, and thence to Sir Henry Croftes in 1628.

The manor known as Calthorp was named after the owner, one William Calthorp, who held it in the reign of Henry II (1154-1189). In 1271 a William Calethorpe had free warren here, and in the 1440s another William Calthorp owned the manor. Shortly after this the manor passed to the Peyton family, and in 1548 John Peyton sold the manor to Sir John Croftes. Thereafter the manor reverted to and stayed in the Peyton family.

The manor known as Baggotts was the inheritance of Simon de Walton, Bishop of Norwich during the reign of Henry III (1216-1272). His daughter, Agnes, married Sir James de Shyrle, and through her the manor passed to the Shirley family, where it remained for several generations. In 1517 Francis Shirley sold it to

Thomas Croftes, and it then stayed with the Croftes family for a number of years. The next lord is listed as Charles, 2nd Duke of Grafton, who died in 1757. By 1905, the publication date of Copinger's book on the Manors of Suffolk, this manor was still in the hands of the Dukes of Grafton.

Euston Parish

Euston, or Eustuna, in the Blackbourn hundred belonged to the Abbot of St Edmund at the time of the Domesday Survey, and was held of him by Adelnud. The Abbot continued to hold 'soc and sac' and commendation over the land, meaning he still had judicial rights, although the tenant worked the land. Adelnud had two freemen here with one carucate of land, four villeins, two ploughteams in lordship, half a plough belong to the men, three acres of meadow and two mills.

Euston Manor was in the possession of Philip, Lord Bassett, who died in 1272 and from him it passed to his daughter Alicia, Countess of Norfolk. Alicia was wife of Roger Bigod, Earl of Norfolk, and she died in 1280 before which the manor of Euston may have already passed to Robert Verley. Verley died in 1279 and the manorial rights passed to his son Philip, who died in 1329. Walter de Pateshall succeeded. He was an infant and the lands were placed by the Crown into the hands of Thomas de Totyngton until the heir came of age. In 1349 the manor apparently passed to the sisters of William (?Walter) de Pateshall.

In 1427 the manor was held of Thomas Beaufort, Duke of Exeter by John Rokewode. In 1513 Edward Rokewode confirmed the manor to William Focer Clark along with the advowson of the church. The manor stayed with the Rookwood family for a while and Queen Elizabeth I herself stayed at the Hall in 1578, on her way to Norwich.

In 1655 the estate passed to Sir George Fielding, Earl of Desmond, and on his death, the estate, in near ruins, was sold to Henry Bennett, Earl of Arlington. Bennett was Secretary of State to the newly reinstated King Charles II. The Earl built the present Euston Hall, and in 1671 was granted licence to im-park 2,000 acres of land at Euston, Great Fakenham, Sapiston and Coney Weston; he was also granted free-warren rights. Arlington's heiress, Isabella was married at the age of 5 years to Henry Fitzroy, the son of King Charles II and his mistress Barbara Villiers. Fitzroy was created 1st Duke of Grafton in 1675, and this young couple inherited the manor and the Hall in 1685, when the old Earl died. The house remains in the hands of the Dukes of Grafton.

Great Fakenham (or Fakenham Magna) Parish

The village of Fakenham Magna was apparently known in earlier documents as Fakenham Aspes, although the name now varies between Great Fakenham or Fakenham Magna, to differentiate it from the town in Norfolk and the (now lost) village of Little Fakenham. It was situated in the Blackbourn hundred.

The village at the time of Domesday was held by Alestan the Thane, who had five carucates of land as a manor, with fourteen villeins, seven bordars and ten serfs. There were also five ploughteams in lordship and four belonging to the men, so the land must have been fairly rich. There was also sixteen acres of meadow, woodland for eight pigs, one mill, four rouncies (three at the time of the Survey), sixteen forest mares, twelve beasts (cattle), forty pigs (only 20 at the Survey) and

three hundred sheep. Two churches with forty acres, a ploughteam and half and acre of meadow were also recorded.

At the time of the Domesday Survey the whole was held by Peter de Valognes, as gift of the king, his uncle. This Peter also held of the Abbott of St Edmunds two freemen with one carucate of land, three villeins, four bordars, one plough in lordship and half a plough belonging to the men, four acres of meadow and woodland for four pigs.

In 1225 the manor was left to Joan de Neville (married to Hugh) and her sister Margaret de Ripariis. It appears that after this the manor reverted to the Crown, and in 1243 was granted to Beatrice, Countess of Provence (the mother of Henry III). In 1253 the manor was mentioned in the will of Isabella de Valognes, daughter of the aforementioned Peter, whose son William Comyn inherited the estate. In 1302 the manor was once again in the hands of the Crown, and was granted to Roger Bigod for life in exchange for the manors. A little later the manor was granted to Edmund Comyn, who died in 1314. A third of the estate was given to his widow Mary, and the king also saw that the estate passed to Comyn's daughters.

In 1428 Thomas de Pakenham succeeded to the estate, although before 1451 the manor was again in the Crown's hands. It was granted to Reginald de West by Henry VI (1422-1461) and to Sir Thomas Cobham in 1468. On his death it passed to Sir Edward de Burgh, 2nd Baron Burgh, through Anne Cobham.

In 1564 the manor was sold by the 5th Baron Burgh to Sir William Cordell and again in 1614, when it was purchased by William Rushbrooke. The Rushbrooke's held the manor until 1674, when it was sold again, this time to Sir Lionel Tollemache; this gentleman sold the manor on to Thomas Taylor.

In 1692 Charles, the 2nd Duke of Grafton bought the manor and it remained in the Grafton family into the 20th century.

Ringmere Manor or Grange is a sub-manor within the parish, which was granted in 1528 by Henry VIII to Charles Brandon, Duke of Suffolk (his brother-in-law). The manor passed to his son John and later to Sir William Cordell, who died in 1592. In 1837 this manor passed to the Graftons.

Sapiston Parish

Sapiston was located within the Blackbourn hundred. No manor was mentioned at Sapiston in the Domesday Survey. The largest holding here was that belonging to the Abbot of St Edmund, who held eleven freemen with 1½ carucates of land, two ploughteams, two mills and six acres of meadow. Also $\frac{2}{3}$ parts of a church with six acres of free land in alms, with a value of 25 shillings. Peter de Valognes held lordship over four of the freemen here, with eighty acres of land, one thrall and one ploughteam valued at thirteen shillings.

There were three other small holdings here which were later divided into the two manors which formed part of the parish. The first holding, with Peter de Valognes as tenant-in-chief, consisted of three freemen with 13½ acres of land, with one ploughteam and one acre of meadow. The second holding belonged to Saisselin as tenant-in-chief, and consisted of half a carucate of land which at the time of Edward the Confessor belonged to Goodman the Thane along with half a carucate of land with two bordars, one ploughteam in lordship, five acres of meadow, one

mill, two cattle, five pigs and thirty-three sheep. Also eight freemen under commendation, with twenty-four acres worth three shillings. The third holding was under Robert le Blund and contained two freemen only.

Sapiston Manor is thought to have been in the hands of the Crown in 1316, although by 1326 it seems to have belonged to John de Brydwelle. Before 1375 it belonged to John Holbrook, as he died in possession of it in that year and the manor passed to his son John. John Holbrook died in 1399 without heirs, and the manor passed to his sister Margery. Shortly after this the manor was in the hands of Henry Drury, as in 1432 he paid homage to the Abbot of St Edmund for it. From Drury it passed to his daughter Jane and her second husband William Carewe who died in 1501, leaving the manor to his son John. In 1553 the manor was owned by Thomas Carewe, who had a fine levied against the manor in this year.

In 1562 the manor was sold to John Aldham, and was still in the family in 1635. In 1764 the manor passed to Augustus Henry, 3rd Duke of Grafton.

The second manor in the parish was on lands of which Robert le Blund had overlordship at the Domesday Survey. The manor passed to his son Gilbert. Gilbert le Blund, or Blount, was the Baron of Ixworth and founded a house of Augustinian Canons there around the year 1100. After the Dissolution, Henry VIII granted the manor to Richard Codington in exchange for other lands. In 1565 Codington sold it to Thomas Aldham, and in 1579 the manor was granted to John Caryll, who possessed it for his lifetime. By 1582 Thomas Aldham is reported as having died in possession of the manor. From this point onwards the descent of the manor is the same as for the main manor of the parish.

Bardwell Parish

Bardwell was part of the lordship of the Abbot of St Edmund and located in the Blackbourn hundred. At the time of the Domesday Survey it consisted of eight freemen with two carucates of land and thirty acres. Within this area Bucard held four bordars, two serfs, four ploughteams, two parts of a mill, eleven acres of meadow, woodland for eight pigs, and a church with eight acres of free land. Under the freemen here were twenty socmen; the Abbot held ten with half a carucate of land and one ploughteam, valued at five shillings; Peter de Valognes also held ten men with half a carucate of land and one ploughteam, valued at ten shillings. A small holding here was owned by Richard, son of Earl Gislebert, with one freeman under commendation, with thirty acres, one bordar and half a ploughteam valued at five shillings.

The main manor of Bardwell was granted to Ralph de Berdewelle in fee at the time of the Survey, and in 1196 William de Berdewelle held it for two knight's fees. In 1440 the manor passed to Margaret Berdewelle, the wife of John Harleston, and in 1459 the manor passed to another Margaret Berdewelle, who was married to Thomas Darcy. In 1536 the manor was vested in George Brond who sold it to Sir Thomas Jermyn of Rushbrooke. A Thomas Jermyn sold the manor in 1626 to William Rushbrooke. The next lord mentioned is Sir Patrick Blake in 1784, and in 1905 a Sir Patrick Blake was still lord of the manor.

Wykes or Wicken Manor was held in the time of Edward the Confessor by Alan, who had one acre as a manor, five bordars, two serfs, one ploughteam, three acres of meadow, and woodland for eight pigs, a team of two oxen belonging to the men, three cattle, seven pigs and forty sheep. There were also two socmen with ten acres and a team of two oxen. By the time of the Domesday Survey one serf had gone, there was an extra plough in lordship, one rouncy (horse), eight more cattle, six more pigs and sixty more sheep. Peter de Valognes was the tenant-in-chief at this time, and he held commendation over eight freemen with one carucate of land, eleven bordars, two ploughteams, three acres of meadow and woodland for two pigs.

Another manor here in Saxon times was held by Aki, with one carucate of land, three bordars, three serfs, two ploughteams in lordship, three acres of meadow, woodland for ten pigs, one rouncy, one cow, twelve pigs and twenty-five sheep. At the time of Domesday this manor was under Robert le Blund, who had one extra rouncy, eleven pigs and thirteen sheep.

In 1264 Richard de Wykes had free warren here, and in around 1280 Isabel de Wykes held the manor. By the reign of Edward III (1327-1377) the manor was in hands of the Pakenham family, although they may have also had land in the area at an earlier date, as in 1259 a William de Pageham had free warren here. (Copinger 1905, 267). In 1359 Mary, the widow of Edward de Pakenham held the manor, although by 1404 Sir William de Berdewelle was in possession. The manor then passed to Margaret Harleston and from her to the Darcy family. The manor was held by Sir John Crofts in 1553 and who died in 1557. A Sir Charles Croftes died in 1660 and his widow Jane in 1672, from whom the manor passed to their daughter Bridget, who married Thomas Read. Charles Croftes Read, grandson of the previously mentioned Bridget, sold the manor to Clement Corrance, who was lord in 1723. John Corrance succeeded his father, died in 1742, and was succeeded by his nephew William. William's daughter Catherine became lady of the manor in 1788. In 1805 the manor was in the hands of the Earl of Albemarle and Copinger states 'in whose descendant it is now vested' (1905, 270).

Two much smaller manors are also listed by Copinger, that of Wyken Hall Manor, which was acquired in 1815 by Thomas Halifax of Chadacre Hall, Shimpling, '...now in the possession of A.M. Wilson of Stowlangtoft Hall' (1905, 270). The second manor is Tiptofts, held by Ixworth Priory until the Dissolution after which Henry VIII granted it to Richard Codington, and it descended through the same line as the main manor.

Ixworth Parish

The main manor in the time of the Confessor was held by Achi, who owned three carucates of land, two bordars, five serfs, three ploughteams in lordship, one mill, twenty acres of meadow, two rouncies, five cattle, forty pigs, eight sheep, eight 'arpents' of vineyard and one park, all valued at eighty shillings. This was a substantial estate, and to contain any amount of vineyard at this time is likely to have been a prosperous manor. It formed part of the Blackbourn hundred.

Many smaller estates make up the whole of Ixworth, and the Abbot of St Edmund held 'soc and sac' over the area, along with much of the hundred of Blackbourn. The tenant-in-chief at the time of the Domesday Survey was Robert le Blund. The Blund family held many parishes in Suffolk at this time and it was Robert's son Gilbert who founded the house of Augustinian Canons at Ixworth around the year 1100 (above). The original buildings were apparently destroyed by unrest or civil war, possibly during The Anarchy in King Stephen's reign. The priory was rebuilt by Gilbert le Blund's son William on a different site that occupied around thirty acres.

On the death of William le Blund's widow Alicia in 1282 the manor passed to le Blund's sisters - Agnes who was married to Sir William Criketot and Rohesia who was married to Robert de Valognes. When Agnes died her share of the manor passed to her son William Criketot and thereafter through many William Criketots. The last William Criketot died unmarried, and his part of the manor became vested in the priory. The part of the manor that descended from Rohesia passed through her son Robert de Valognes to his daughter Rohesia who married Sir Edmund Pakenham. In 1349 Rohesia Pakenham settled her 'moiety' on the priory of Ixworth.

The priory held the lands in Ixworth until the Dissolution of the Monasteries, in 1538 when Henry VIII granted the lands to Richard Codington in exchange for the manor of Nonesuch in Surrey. On Codington's death the manor passed to his wife Elizabeth who gave the manor to John Caryll, the husband of Elizabeth's daughter by her first marriage to Thomas Bokenham. The Carylls, or Carrills, were in possession of the manor for some years although at some point before 1630 it was sold to Sir Garrett Kemper and Daniel Norton and the king released his interest in the manor. The Nortons kept the manor for many years until 1792 when Isabella Norton died and it became the inheritance of John Cartwright. In 1905 Copinger wrote (p. 337) that the manor was still vested in the Cartwright family.

Pakenham Parish

All of the parishes described so far in this section have formed part of the hundred of Blackbourn, Pakenham however falls within Thedwastre hundred. All of the land here is said to have belonged to the Abbot of St Edmund at the time of the Domesday Survey, and consisted of seven carucates of land, forty-four villeins, twenty-three bordars, four ploughteams in lordship and twenty-three belonging to the men, nine thralls, twenty-six acres of meadow and woodland for one hundred pigs. Also one mill, three rouncies, forty-eight cattle, sixty-five pigs, one hundred and ninety sheep and eight hives of bees.

The manor of Pakenham Hall was given by Edward the Confessor to the abbey of St Edmunds and in 1199 Abbot Sampson gave one-third of the manor to St Saviour's Hospital in Bury, although the lordship remained with the abbey.

The Dissolution of the Monasteries in 1538, as at Ixworth, brought the only significant change to the parish for centuries. In 1545 the manor was granted to Robert and Thomas Spring, his son. The Spring family were eminent merchants in the nearby town of Lavenham. A Sir William Spring was knighted by Queen Elizabeth, and was High Sheriff of Suffolk in 1578 and 1596. The manor stayed with the Spring family for several generations until in 1735 or 1736 Sir William Spring, the 4th Baronet died without heirs and the manor passed to his two sisters – Merolina, married to Thomas Discipline and Mary, married to the Reverend John Symonds - and through the two sisters the manor passed to John Godbold. The manor was sold by Godbold in 1786 to Sir Henry Gough, who assumed the name of Calthorpe on inheriting his uncle's estates in Elvetham, Hampshire in 1783. The estate remained in the Gough-Calthorpe family until the mid 19th century.

The manor of Newhall also belonged to the Abbot of St Edmund until the Dissolution, when in 1545 the Crown granted it to John Turner. The last Turner to

hold the manor was Richard Turner who around 1598 had licence to alienate the estate to John Pretyman. Pretyman then alienated the manor to Alice Drury in 1615 and she left the estate to her brother Nicholas Bacon. Shortly after this the manor was in the hands of Paul d'Ewes. The d'Ewes family held the manor for around a century until in 1731 Sir Jermyn d'Ewes died without heirs. The manor then was owned by various incumbents.

Netherhall is a manor in the parish of Pakenham which also lies partly within Thurston and was held by the Abbot of St Edmunds at the time of Domesday. During the reign of Henry III (1216-1272) the manor was vested in John de Pakenham, steward of the Bishop of Ely in 1253 and he was granted free warren here in 1265. The Pakenhams retained the manor until the last heir died underage, and the manor thereafter reverted to the Abbot. The Dissolution brought an end to their tenure here, and the manor was granted to Thomas Bacon in 1544. In 1601 John Bacon sold the manor to Robert Bright, and the manor subsequently stayed with the Brights for some time. A Thomas Bright died with no heirs in 1736, and the manor passed to his sister Mary, who was married to Edmund Tyrell. The Reverend Charles Tyrell sold the manor to George Chinery, from whom it passed to his widow and then his nephew Reverend William Bassett. William Chinery Bassett was in residence in 1857, although in 1885 Edmund Greene was lord and in 1896 Sir Edward Walter Greene of Nether Hall was the owner.

Thurston Parish

The manor of Thurston was held by the Abbot of St Edmund in Saxon times, and consisted of 1½ carucates of land, six bordars, two ploughteams in lordship, one belonging to the men, five acres of meadow, woodland sufficient for eight pigs, five cattle, thirty-two pigs and fifty-two sheep. At the time of the Domesday Survey the manor was still in the hands of the Abbot, but with some slight increases in the inventory: that of eight bordars, one thrall and one rouncy.

Also during Saxon times there were twenty-eight freemen with 2½ carucates of land. Richard held one carucate with eight freemen, twelve bordars, eight ploughteams, five acres of meadow, woodland for three pigs, and part of a vineyard valued at 40 shillings. A church and advowson with thirty acres of free land in alms was also recorded.

The Abbot stayed in possession of the manor until the Dissolution, although the family of Drury also held land here from an early date. After the Dissolution the manor reverted to the Crown, where it stayed.

Great Barton Parish

During Saxon times the manor here was held by the Abbot of St Edmund and consisted of twenty-two villeins, five bordars, four ploughteams in lordship, and six belonging to the men, eleven thralls, three acres of meadow, woodland for four pigs, four rouncies, eighteen cattle, forty-four pigs and four hundred and two sheep.

At the time of the Domesday Survey there were three ploughs in lordship, four thralls and two beehives.

There were also seventy-two freemen with two carucates of land, with eighteen ploughs amongst them, two bordars and one acre of meadow. The Church had

fifty acres of free land as alms. The value of the manor was £16 which increased to £20 at the Survey.

The main manor of Great Barton remained with the Abbot of St Edmund until the Dissolution (as did many manors in the area), after which it reverted to the Crown. The manor stayed with the Crown until the final year of Edward VI's reign (1553). In 1554 the manor was owned by Thomas Audley, and it remained in the Audley family until 1704. Henry Audley sold the manor to Thomas Folkes, and his daughter Elizabeth married Sir Thomas Hanmer, who inherited the manor. The manor was then willed to his nephew Sir William Bunbury on his death in 1746. The manor thereafter stayed with the Bunburys.

A secondary manor, known as Necton or Conyers Hall was mentioned in 1271, when John Maunsell died 'seised' if it. The manor then passed to the Nectons and subsequently the Conyers who held the manor in 1375, and from then until the death of Edward Cotton in 1585 the manor passed in the same course as that of Finningham manor.

Rougham Parish

In Saxon times the principal manor of Rougham was given by Ulfketel (Earl of East Anglia) to the Abbot of St Edmunds, and this consisted of five carucates of land with fifteen villeins, four bordars, three ploughteams in lordship and two belonging to the men, six thralls, four acres of meadow, three rouncies, twenty-two cattle, twenty-five pigs and fifty-five sheep. At the time of the Survey there were also ninety freemen with eleven bordars, one thrall, five carucates of land, eighteen ploughteams and three acres of meadow.

Rougham Hall, the principal manor, was held by the Abbot until the Dissolution, after which it was granted to Thomas Howard, Duke of Norfolk. In the same year Howard was granted licence to alienate the property to John Drury, and in 1634 Seckford Drury died without issue and the manor passed to his three sisters: Anne, Cecily and Elizabeth. The manor thereafter passed to Edmund Burwell, and the Burwells retained ownership until 1684 when Sir Jeffrey Burwell died at which point the estate passed to Robert Walpole. Walpole sold the manor to Sir Robert Davers who sold the manor to his son-in-law, Clement Corrance sometime between 1705 and 1710. The manor then devolved in the same way that Parham manor did until 1792 when William Castle acquired it. His heir Catherine married Edward Bouverie, and they sold the manor to the Reverend Roger Kedington. His daughter Jane married Philip Bennet and the manor fell to them in 1818, after which Bennet built a new mansion house, a short distance to the north of the original Rougham Place. Later the estate was acquired by E.J. Johnstone, and was sold to G.W. Agnew in the early 1900s.

Multiple smaller manors existed within Rougham, including that of Oldhall, which had been a grange of the monastery of St Edmunds until the Dissolution when it was granted to Sir Arthur Darcy. In 1545 it was granted to Thomas Howard, who in the same year alienated it to Sir Thomas Jermyn of Rushbrooke, and the manor devolved in the same way as the manor of Rushbrooke until 1614. Lord Thomas Jermyn died in 1703 and the manor passed to his daughter, Merilina, and her husband Sir Thomas Spring. In 1736 the manor then passed to a sister, Mary, married to the Reverend John Symonds. Another John Symonds sold the manor to Thomas Cocksedge, and the last Cocksedge to own the manor died in 1846. Another of the small manors was Lawneys which formed part of a gift from Ulfketel to the Abbot of St Edmunds prior to the Domesday Survey. The manor was granted to Sir William Drury who died around 1450 and the manor then devolved in the same way as the main manor until the death of Seckford Drury in 1634. John Corrance owned the manor later, and he died in 1742, after which the manor again devolved in the same way as the main manor.

The manor of King's Hall belonged to the Abbot until the Dissolution, and at the beginning of the 18th century it was vested in Edward Crispe of Bury. He died in 1709 and his son, also Edward, died in 1746. It is reported that Arundel Coke, the brother-in-law of the younger Edward Crispe, devised a plan to murder him in order to inherit his wealth through his wife. However the plan failed, and Coke and the would-be assassin were hanged in 1722. In 1810 a Mr Cropley is listed as lord of the manor.

Chavent's manor was held by Peter de Chavent in 1271, who was granted free warren here in 1289, and who died in 1293. In 1364 Walter Beneyt was lord, and in 1394 a lease was granted by William the abbot of St Edmunds to John Bacon of Hessett. A third of the manor was vested in Sir Thomas de Naunton, whose daughter, married to Sir Roger Drury, inherited the manor. Drury died in 1418, and the manor then devolved in the same way as that of Weston Market, certainly until the time of a John Drury, who died in 1556.

The manor known as Lee Hoo belonged to James de Gedding, and passed to his son John, who gave it to Robert de Bradfield in 1293. Robert granted all of his lands to Peter Osborne in 1318, after which the manor reverted to the Abbey until the Dissolution. In 1545 the Crown granted the manor to Thomas Howard, who in turn gave it to Sir Thomas Jermyn, after which the manor descended in the same way as that of Old Hall.

Rushbrooke Parish

The main holding at Rushbrooke was held by the Abbot of St Edmunds and consisted of twenty-two freemen with two carucates of land, four bordars, four ploughteams and two acres of meadow.

In 1180 Scotland de Rushbrook held lands of the Abbot. Thomas de Rushbrook, grandson of the aforementioned Scotland, passed the manor to his sisters Agnes and Isabella. Agnes was married to Thomas Jermyn, and Isabella was married to William le Large; both men were tenants in 1286. In 1532 Thomas Jermyn is the lord of the manor and he gained more lands here after the Dissolution in 1540. A Thomas, Lord Jermyn who died in 1703, left the manor to his four daughters, one of which, Mary, was married to Sir Robert Davers. Davers bought out all of the other co-heirs in the same year, and the manor stayed with the Davers family for some years. At the death of Sir Charles Davers in 1806 the manor passes through his sister Elizabeth, to Frederick, 4th Earl of Bristol. The manor then passed to the Rushbrooke family when Robert Rushbrooke married Frances Davers, and an arrangement was made between Lord Bristol and the Rushbrookes.

The manor stayed in the Rushbrooke family. Rushbrooke Hall was a fine Tudor mansion, which was used during the Second World War, after which a 'mysterious' fire ruined the place, and it was demolished without permission in 1961.

Little Whelnetham Parish

Whelnetham was divided into four manors, including that of Whelnetham Magna (Great Whelnetham) and Whelnetham Parva (Little Whelnetham), and it is with the latter that we are concerned here.

Thomas de Weyland was granted free-warren here in 1280, and as his name implies he was based in Norfolk, with Wayland giving its name to a hundred in the county. Thomas was Chief Justice to Edward I, and was eventually exiled to his lands in Ireland after possible illegal acts during the absence of the king. He was clearly a clever man as he protected his Suffolk property by enfeoffing it to his wife Margaret and his son John. John de Weyland inherited the Little Whelnetham lands, and is granted free-warren here in 1301. He died in 1312, and his brother, Sir Richard inherits the manor. In 1319 Richard died and his daughter, Cecily, married to Sir Bartholomew Burghersh inherits. Burghersh died in 1369 and the manor again passed to a daughter, married to Edward le Despencer who died in 1375. Subsequently the manor descended in the same way as Great Whelnetham, and is vested in Sir John Raynsford. Later a Sir Thomas Jermyn was in possession, and he died in 1552, after which the manor devolves in the same way as Rushbrooke, and is in the possession of Frederick, the Marguis of Bristol in 1827. In 1855 the manor belonged to the Reverend James Wenn and in 1885 to Henry J. Oakes. In 1910 the manor belonged to Lieutenant-Colonel Orbell Henry Oakes.

Appendix 5a: New Sites from Aerial Photographs

Only previously unrecorded sites are discussed here, and have been viewed from originals at the National Monuments Record at Swindon, and copies taken thereof.

Euston Parish

A possible cropmark was seen in an aerial photograph in the area of avenue known as Duke's Ride in Euston (Figure 61). The cropmark was seen on an aerial photograph taken on 25 April 1973 (Ref. OS/73094/333) and lies on the northern side of Duke's Ride, part of the pleasure grounds associated with nearby Euston Hall. The cropmark is roughly horseshoe-shaped, and although it is faint, it seems unlikely to be the result of the underlying geology or agricultural practices. The mark may be an old pond or stand of trees, a mill mound or even a barrow. It seems possible that it may represent an old stand of trees, with at least two within the field already. However, the two already seen within the field are mapped as early as the Tithe Map in 1840 (Figure 26), and there is no trace of a 3rd at this point. It seems unlikely that another stand of trees would have been present in the field at the same time as the other two, and so implies that this new feature is of an earlier date.

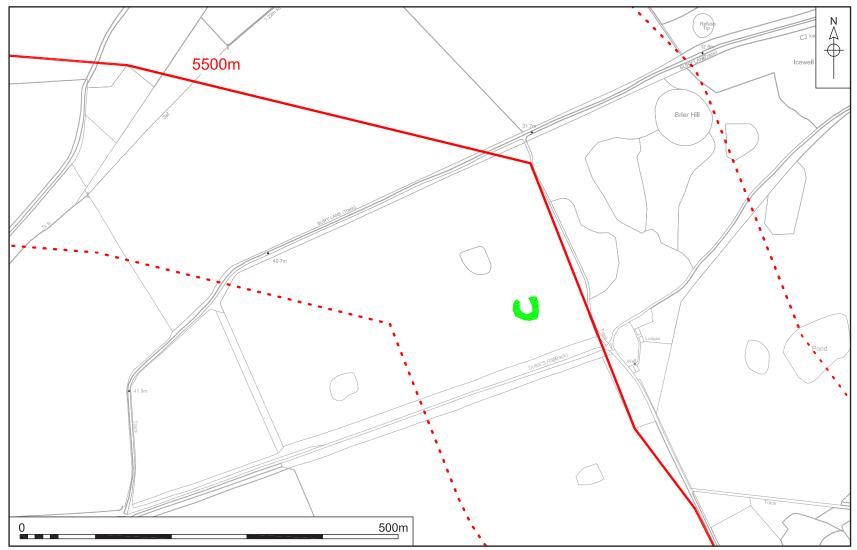
Fakenham Magna Parish

Cropmarks were recorded on an aerial photograph of the 1970s of a series of possible trackways or field boundaries, and two semi-circular enclosures close to Fakenham Magna village (Figure 62). These cropmarks were seen on a photograph taken on 2 July 1976 (Ref. OS/76131/313) and lie to the north of the Bardwell Road leading out of the village. Some of the possible trackways may be modern access routes for agricultural purposes, but others lie at an angle to the post-medieval field layout, and could be earlier. The two possible circular enclosures, of which only semi-circles are visible, could be barrows or even hut circles. To the north of these cropmarks is a mill mound recorded on the HER (FKM 019) and to the south is the medieval ringwork known as Burnthall Plantation (FKM 005), a Scheduled Monument. The site is also only 120m from the Black Bourn River.

Rushbrooke Parish

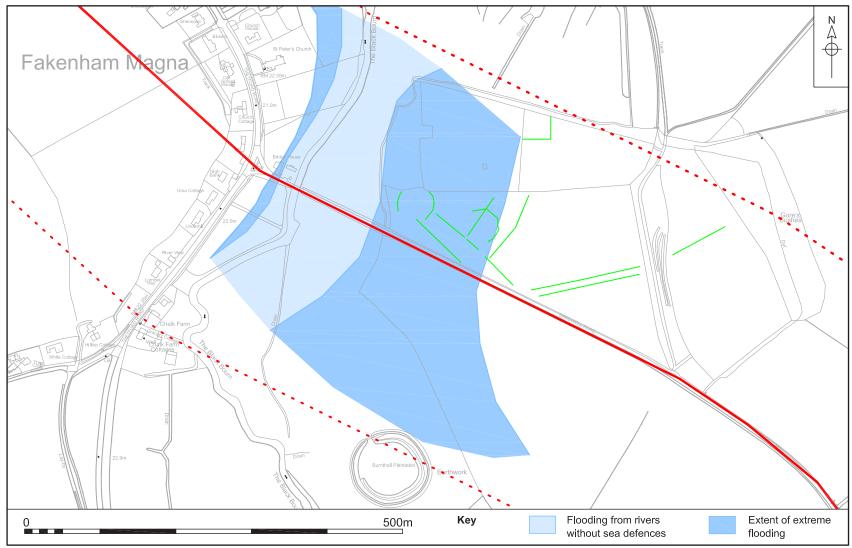
The cropmarks of possible trackways or field boundaries (Figure 62) close to Rushbrooke Woods were recorded, from an aerial photograph taken on 23 March 1971 (Ref. OS/71024/001). The most southerly of the trackways lies diagonal to the road layout here, and possibly leads to Rushbrooke Hall itself. This trackway is parallel to one to the north, which leads off into Rushbrooke Woods.

The northernmost of the cropmarks are on a different alignment to the current field systems, and are bisected by the avenue leading from Rushbrooke Hall which implies that they are of earlier date and probably field systems or enclosures, possibly Roman or prehistoric.



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Figure 61. Euston Parish new cropmark. Scale 1:5000



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Figure 62. Fakenham Magna Parish cropmarks. Scale 1:5000



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Figure 63. Rushbrooke Parish cropmarks. Scale 1:5000

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
RAF/2H/BR166	6293	VA	2	Р	TL 903 624	1	24 DEC 1941	А	12500	5	Black and White 5 x 5	FDM
RAF/2H/BR166	6293	VA	3	Р	TL 898 623	1	24 DEC 1941	А	12500	5	Black and White 5 x 5	FDM
RAF/2H/BR166	6293	VB	2	Р	TL 899 638	2	24 DEC 1941	А	12500	5	Black and White 5 x 5	FDM
RAF/2H/BR166	6293	VC	2	Р	TL 899 646	5	24 DEC 1941	А	12500	5	Black and White 5 x 5	FDM
RAF/2H/BR166	6293	VD	1	Р	TL 904 656	3	24 DEC 1941	А	12500	5	Black and White 5 x 5	FDM
RAF/3G/TUD/UK/60	184	V	5028	Р	TL 923 679	1	05 FEB 1946	А	10150	12	Black and White 8.25 x 7.5	NMR
RAF/3G/TUD/UK/60	184	V	5078	Ρ	TL 931 698	3	05 FEB 1946	А	10150	12	Black and White 8.25 x 7.5	NMR
RAF/3G/TUD/UK/60	184	V	5079	Р	TL 940 697	3	05 FEB 1946	А	10150	12	Black and White 8.25 x 7.5	NMR
RAF/3G/TUD/UK/60	184	V	5114	Р	TL 938 707	4	05 FEB 1946	А	10150	12	Black and White 8.25 x 7.5	NMR
RAF/3G/TUD/UK/60	184	V	5115	Р	TL 947 706	4	05 FEB 1946	А	10150	12	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3069	Р	TL 944 718	6	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3070	Р	TL 951 715	6	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3072	Р	TL 947 736	7	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3093	Р	TL 929 748	8	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3094	Р	TL 935 748	8	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3095	Р	TL 941 748	8	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3124	Р	TL 904 770	9	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3163	Р	TL 863 794	10	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3164	Р	TL 868 794	10	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RP	3166	Р	TL 879 794	10	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4070	Р	TL 940 700	16	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4072	Р	TL 944 717	17	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4073	Р	TL 953 717	17	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4097	Р	TL 948 730	18	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4129	Р	TL 927 753	19	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR

Appendix 5b: Aerial Photographs Consulted at the NMR

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
RAF/CPE/UK/1921	545	RS	4130	Р	TL 932 752	19	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4132	Р	TL 942 751	19	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4170	Р	TL 897 775	20	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1921	545	RS	4171	Р	TL 903 774	20	16 JAN 1947	А	9840	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	FP	1059	Р	TL 928 696	1	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	FS	2062	Р	TL 935 754	7	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	FS	2064	Р	TL 924 757	7	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	FS	2065	Р	TL 918 759	7	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	FS	2066	Р	TL 913 761	7	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	FS	2067	Р	TL 908 764	7	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	RP	3058	Р	TL 946 713	13	18 JAN 1947	А	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	RS	4076	Р	TL 868 804	19	18 JAN 1947	A	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1937	566	V	5058	Р	TL 949 733	25	18 JAN 1947	A	10000	36	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1972	577	RP	3021	Р	TL 901 653	2	11 APR 1947	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1972	577	RS	4021	Р	TL 897 638	11	11 APR 1947	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1972	577	RS	4131	Р	TL 883 787	20	11 APR 1947	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/CPE/UK/1972	577	RS	4132	Р	TL 890 786	20	11 APR 1947	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/189	976	V	5094	Р	TL 900 659	5	18 FEB 1949	А	5000	14	Black and White 8.25 x 7.5	NMR
RAF/540/495	1183	RP	3009	Р	TL 865 792	1	12 MAY 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/540/495	1183	RP	3010	Р	TL 872 792	1	12 MAY 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/540/495	1183	RP	3011	Р	TL 878 791	1	12 MAY 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/540/495	1183	RP	3012	Р	TL 885 790	1	12 MAY 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/540/495	1183	RP	3013	Р	TL 891 790	1	12 MAY 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/540/495	1183	RS	4015	Ρ	TL 904 770	16	12 MAY 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/649	1171	RP	3113	Р	TL 896 616	8	23 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/649	1171	RP	3119	Р	TL 898 604	9	23 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/649	1171	RP	3121	Ρ	TL 887 603	9	23 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
RAF/58/649	1171	RS	4110	Р	TL 898 626	22	23 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RP	3140	Р	TL 900 611	10	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RP	3141	Р	TL 894 611	10	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RP	3161	Р	TL 914 764	12	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RP	3260	Р	TL 864 798	13	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RS	4140	Р	TL 899 628	27	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RS	4161	Р	TL 910 746	29	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RS	4166	Р	TL 943 740	29	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/58/651	1160	RS	4259	Р	TL 869 817	30	24 APR 1951	А	10000	20	Black and White 8.25 x 7.5	NMR
MAL/55162	21586	V	22966	Р	TL 896 621	11	01 JUN 1955	А	12000	6	Black and White 9 x 9	NMR
RAF/540/1733	2778	V	112	Р	TL 867 793	5	01 NOV 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/540/1733	2778	V	113	Р	TL 867 801	5	01 NOV 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/540/1733	2778	V	114	Р	TL 867 810	5	01 NOV 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/540/1733	2778	V	115	Р	TL 867 818	5	01 NOV 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/82/1077	3940	F22	29	Р	TL 902 615	6	11 FEB 1955	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/82/1077	3940	F22	30	Р	TL 896 614	6	11 FEB 1955	А	10000	20	Black and White 8.25 x 7.5	NMR
RAF/82/1279	5006	V	142	Р	TL 860 820	5	23 AUG 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/82/1279	5006	V	143	Р	TL 860 812	5	23 AUG 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/82/1279	5006	V	144	Р	TL 856 802	6	23 AUG 1955	А	10000	6	Black and White 9 x 9	NMR
RAF/58/4686	2039	F22	36	Р	TL 871 816	11	18 SEP 1961	А	10000	24	Black and White 9 x 9	MOD
RAF/58/4686	2039	F22	37	Р	TL 861 816	11	18 SEP 1961	А	10000	24	Black and White 9 x 9	MOD
MAL/62558	21145	V	106120	Р	TL 898 628	8	02 DEC 1962	А	12000	6	Black and White 9 x 9	NMR
OS/70070	10580	V	23	Р	TL 927 700	1	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	24	Р	TL 933 700	1	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	25	Р	TL 939 700	1	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	26	Р	TL 945 700	1	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
OS/70070	10580	V	27	Р	TL 951 701	1	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	50	Р	TL 931 688	2	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	51	Р	TL 925 688	2	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	94	Р	TL 919 677	3	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70070	10580	V	95	Р	TL 925 677	3	02 MAY 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	125	Р	TL 915 663	1	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	141	Р	TL 919 666	2	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	142	Р	TL 913 666	2	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	143	Р	TL 906 666	2	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	181	Р	TL 904 654	3	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	182	Р	TL 898 654	3	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	221	Р	TL 899 643	4	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	259	Р	TL 896 632	5	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	260	Р	TL 902 632	5	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	298	Р	TL 901 621	6	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	299	Р	TL 895 621	6	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	337	Р	TL 892 609	7	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	338	Р	TL 898 609	7	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/70171	10581	V	378	Р	TL 896 600	8	03 JUN 1970	А	7000	12	Black and White 9 x 9	NMR
OS/71024	11810	V	1	Р	TL 900 608	1	23 MAR 1971	А	7000	12	Black and White 9 x 9	NMR
OS/71024	11810	V	2	Р	TL 900 602	1	23 MAR 1971	А	7000	12	Black and White 9 x 9	NMR
OS/73093	11938	V	39	Р	TL 948 697	1	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	40	Р	TL 941 697	1	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	42	Р	TL 928 697	1	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	55	Ρ	TL 939 711	2	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
OS/73093	11938	V	56	Р	TL 946 710	2	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	57	Р	TL 953 710	2	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	134	Р	TL 954 724	3	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	135	Р	TL 948 724	3	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	151	Р	TL 942 737	4	25 APR 1973	A	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	152	Р	TL 949 736	4	25 APR 1973	A	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	229	Р	TL 943 750	5	25 APR 1973	A	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	230	Р	TL 936 750	5	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73093	11938	V	231	Р	TL 929 749	5	25 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73094	11939	V	241	Р	TL 918 762	1	22 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73094	11939	V	242	Ρ	TL 924 762	1	22 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73094	11939	V	330	Р	TL 905 773	3	22 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73094	11939	V	331	Р	TL 898 773	3	22 APR 1973	А	7500	12	Black and White 9 x 9	NMR
OS/73094	11939	V	333	Р	TL 891 788	4	22 APR 1973	А	7500	12	Black and White 9 x 9	NMR
MAL/76042	8170	V	74	Р	TL 863 793	2	10 JUN 1976	A	10000	6	Black and White 9 x 9	NMR
MAL/76042	8170	V	75	Р	TL 870 796	2	10 JUN 1976	А	10000	6	Black and White 9 x 9	NMR
OS/76129	12213	V	352	Р	TL 861 791	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76129	12213	V	353	Р	TL 868 792	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76129	12213	V	354	Р	TL 874 792	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76129	12213	V	356	Р	TL 888 793	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76130	12214	V	268	Р	TL 897 782	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76130	12214	V	269	Р	TL 890 782	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76130	12214	V	271	Р	TL 876 782	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76131	12215	V	312	Р	TL 900 770	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR
OS/76131	12215	V	313	Ρ	TL 908 768	1	02 JUL 1976	А	7500	12	Black and White 9 x 9	NMR

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
OS/78145	12338	V	43	Р	TL 898 638	1	08 SEP 1978	А	7600	12	Black and White 9 x 9	NMR
OS/78145	12338	V	44	Р	TL 904 637	1	08 SEP 1978	А	7600	12	Black and White 9 x 9	NMR
OS/84236	12663	V	6818	Р	TL 895 653	6	14 OCT 1984	А	5000	6	Black and White 9 x 9	NMR
OS/86215	12888	V	1	Р	TL 882 787	1	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	21	Р	TL 873 787	2	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	22	Р	TL 873 792	2	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	26	Р	TL 873 810	2	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	27	Р	TL 873 815	2	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	28	Р	TL 873 820	2	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	40	Р	TL 865 791	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	41	Р	TL 865 795	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	42	Р	TL 865 800	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	43	Р	TL 865 805	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	44	Р	TL 866 809	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	45	Р	TL 865 814	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86215	12888	V	46	Р	TL 865 819	3	21 SEP 1986	А	5300	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	6	Р	TL 930 700	1	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	7	Р	TL 930 693	1	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	8	Р	TL 930 685	1	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	9	Р	TL 930 678	1	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	16	Р	TL 944 699	2	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	17	Р	TL 943 707	2	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	18	Р	TL 943 714	2	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	19	Р	TL 943 721	2	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/86216	12889	V	20	Р	TL 943 728	2	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR

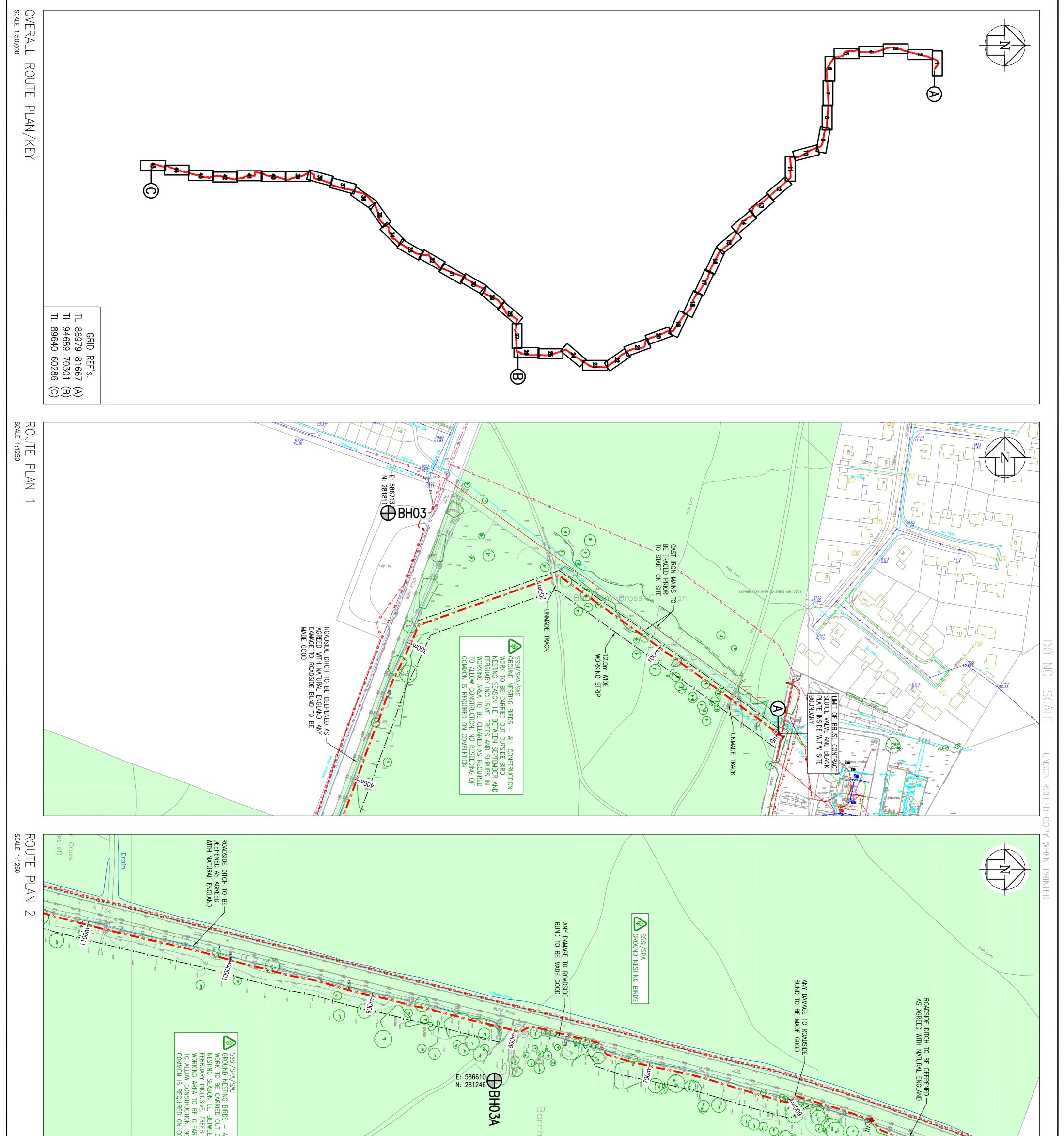
Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
OS/86216	12889	V	21	Р	TL 942 736	2	21 SEP 1986	А	7700	8.5	Black and White 9 x 9	NMR
OS/88222	13332	V	48	Р	TL 917 681	2	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	51	Р	TL 907 657	3	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	52	Р	TL 901 658	3	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	53	Р	TL 895 657	3	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	94	Р	TL 902 667	4	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	95	Р	TL 908 667	4	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	96	Р	TL 914 667	4	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88222	13332	V	97	Р	TL 920 668	4	07 AUG 1988	Α	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	101	Р	TL 901 644	1	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	102	Р	TL 894 644	1	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	140	Р	TL 895 631	2	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	141	Р	TL 901 631	2	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	142	Р	TL 907 631	2	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	148	Р	TL 904 617	3	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	149	Р	TL 898 617	3	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	150	Р	TL 892 617	3	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	186	Р	TL 889 605	4	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	187	Р	TL 895 604	4	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88223	13333	V	188	Р	TL 900 604	4	07 AUG 1988	А	7700	12	Black and White 9 x 9	NMR
OS/88224	13334	V	220	Р	TL 894 636	3	07 AUG 1988	А	5200	12	Black and White 9 x 9	NMR
OS/88225	13335	V	4	Р	TL 865 792	1	07 AUG 1988	А	10400	6	Black and White 9 x 9	NMR
OS/88225	13335	V	5	Р	TL 865 800	1	07 AUG 1988	А	10400	6	Black and White 9 x 9	NMR
OS/88225	13335	V	6	Р	TL 866 810	1	07 AUG 1988	А	10400	6	Black and White 9 x 9	NMR
OS/88225	13335	V	7	Р	TL 867 818	1	07 AUG 1988	А	10400	6	Black and White 9 x 9	NMR

Sortie number	Library number	Camera position	Frame number	Held	Centre point	Run	Date	Sortie quality	Scale	Focal length	Film details (in inches)	Film held by
OS/88225	13335	V	16	Р	TL 881 815	2	07 AUG 1988	A	10400	6	Black and White 9 x 9	NMR
OS/88225	13335	V	18	Р	TL 880 795	2	07 AUG 1988	A	10400	6	Black and White 9 x 9	NMR
OS/88225	13335	V	19	Р	TL 881 786	2	07 AUG 1988	A	10400	6	Black and White 9 x 9	NMR
OS/88225	13335	V	20	Р	TL 881 776	2	07 AUG 1988	А	10400	6	Black and White 9 x 9	NMR
OS/89407	13614	V	164	Р	TL 852 811	3	05 SEP 1989	A	10200	6	Black and White 9 x 9	NMR
OS/89407	13614	V	165	Р	TL 861 814	3	05 SEP 1989	A	10200	6	Black and White 9 x 9	NMR
OS/89407	13614	V	166	Р	TL 870 817	3	05 SEP 1989	А	10200	6	Black and White 9 x 9	NMR
OS/89407	13614	V	167	Р	TL 879 820	3	05 SEP 1989	А	10200	6	Black and White 9 x 9	NMR
OS/93556	14509	V	22	Р	TL 903 595	1	12 SEP 1993	А	8600	6	Black and White 9 x 9	NMR
OS/93556	14509	V	23	Р	TL 897 594	1	12 SEP 1993	А	8600	6	Black and White 9 x 9	NMR
OS/93556	14509	V	24	Р	TL 890 594	1	12 SEP 1993	А	8600	6	Black and White 9 x 9	NMR
OS/94162	14671	V	68	Р	TL 899 663	3	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94162	14671	V	70	Р	TL 911 660	3	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94162	14671	V	71	Р	TL 917 658	3	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	5	Р	TL 926 706	1	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	6	Р	TL 932 706	1	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	7	Р	TL 938 706	1	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	30	Р	TL 958 731	2	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	32	Р	TL 946 731	2	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	33	Р	TL 940 731	2	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	50	Р	TL 940 745	3	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR
OS/94163	14672	V	51	Р	TL 947 745	3	12 JUN 1994	А	7700	12	Black and White 9 x 9	NMR

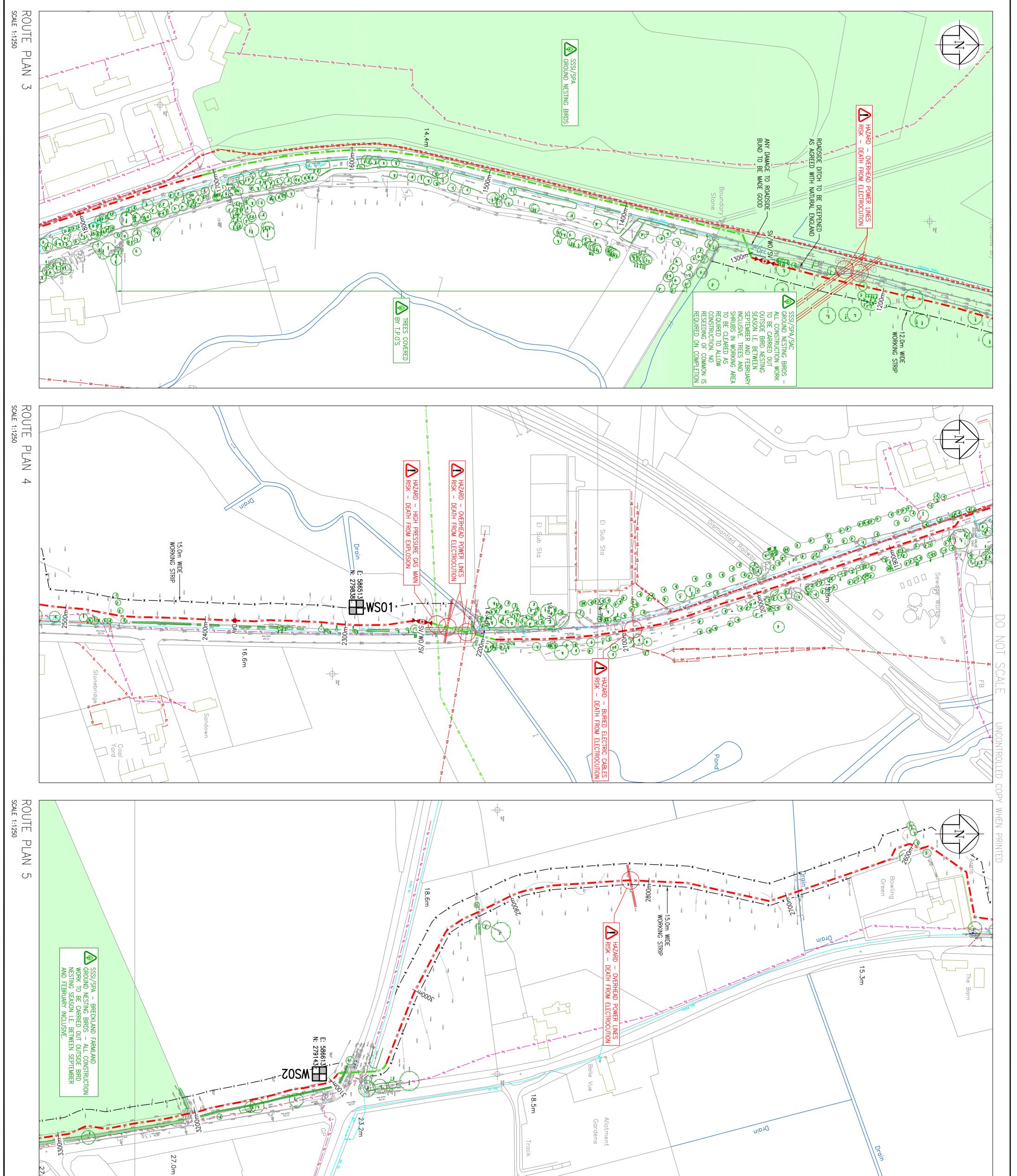
Parish	Reference No.	Year Taken	Grid Ref.	SHER
Euston	BEZ 7	21/07/1986	TL 898 786	EUN 010 – Euston Hall
Euston	BEZ 6	21/07/1986	TL 900 785	EUN 010
Fakenham Magna	NAU 13353/3	25/07/1991	TL 912 760	FKM 005 – Burnthall Plantation
Fakenham Magna	ALD 11	30/05/1980	TL 903 775	FKM 015 - Cropmarks
Fakenham Magna	ALD 12	30/05/1980	TL 902 774	FKM 001/015
Fakenham Magna	ALD 13	30/05/1980	TL 903 775	FKM 001/015 Cropmarks
Fakenham Magna	ALD 14	30/05/1980	TL 902 776	FKM 015 - Cropmarks
Fakenham Magna	ALD 15	30/05/1980	TL 901 778	FKM 015
Fakenham Magna	NAU 13352/5	25/07/1991	TL 903 776	FKM 015
Fakenham Magna	NAU 13352/8	25/07/1991	TL 903 776	FKM 015
Fakenham Magna	NAU 13352/13	25/07/1991	TL 912 766	FKM 019 – Mill mound
Fakenham Magna	NAU 13353/1	25/07/1991	TL 912 766	FKM 019 – Mill mound
Pakenham	CUC BXY 96	Not known	TL 931 698	PKM 005 – Roman fort
Pakenham	GH 13	21/07/1977	TL 932 697	PKM 005
Pakenham	LM 8	18/06/1980	TL 932 697	PKM 005 & 007
Pakenham	GH 14	21/07/1977	TL 931 698	PKM 005 & 007
Pakenham	CJM 98	14/07/1979	TL 935 696	PKM 007 – Roman settlement
Pakenham	GH 20	21/07/1977	TL 934 696	PKM 007
Pakenham	JL 13	17/07/1979	TL 933 696	PKM 005 & 007
Pakenham	GH 19	21/07/1977	TL 934 696	PKM 007
Rougham	NP 9	05/07/1983	TL 901 612	RGH 009 – Roman villa
Rougham	NAU 13354/11	25/07/1991	TL 902 613	RGH 009

Appendix 5c: Aerial Photographs Consulted at the SHER

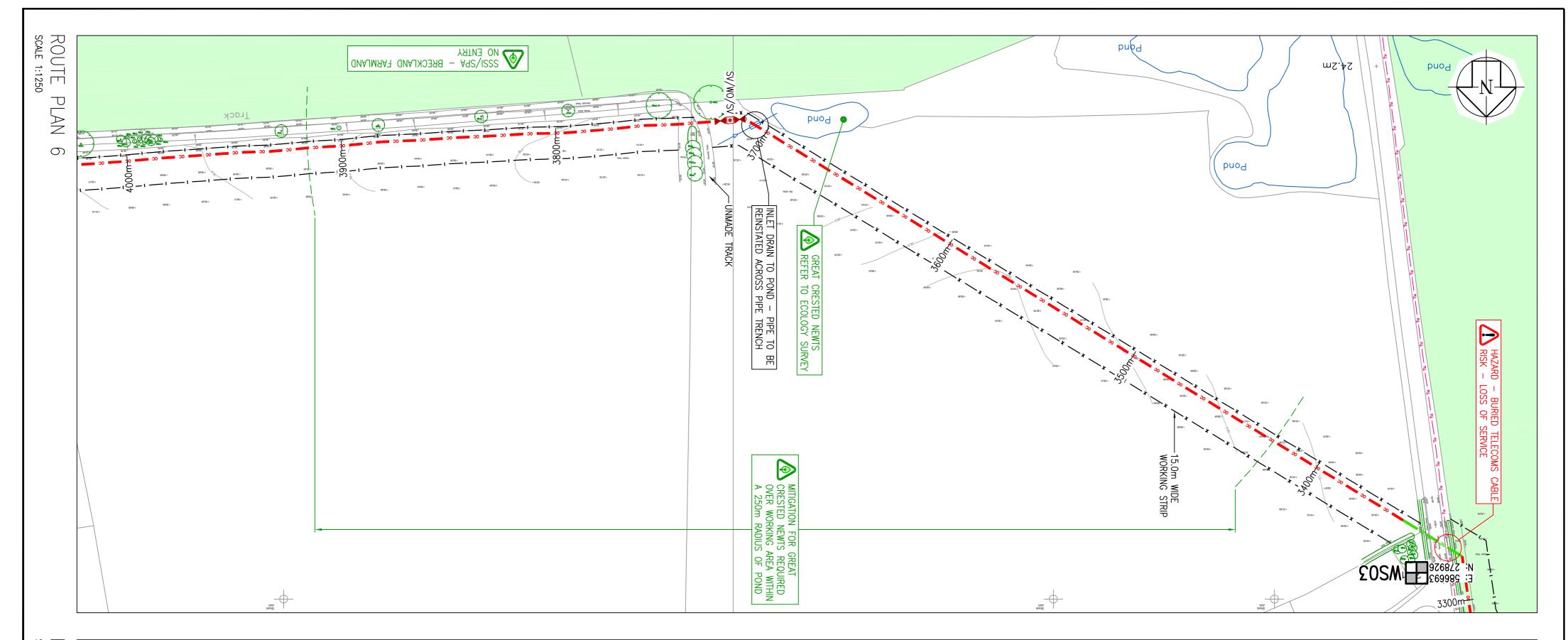
Appendix 6: Detailed Route Plans (Anglian Water)

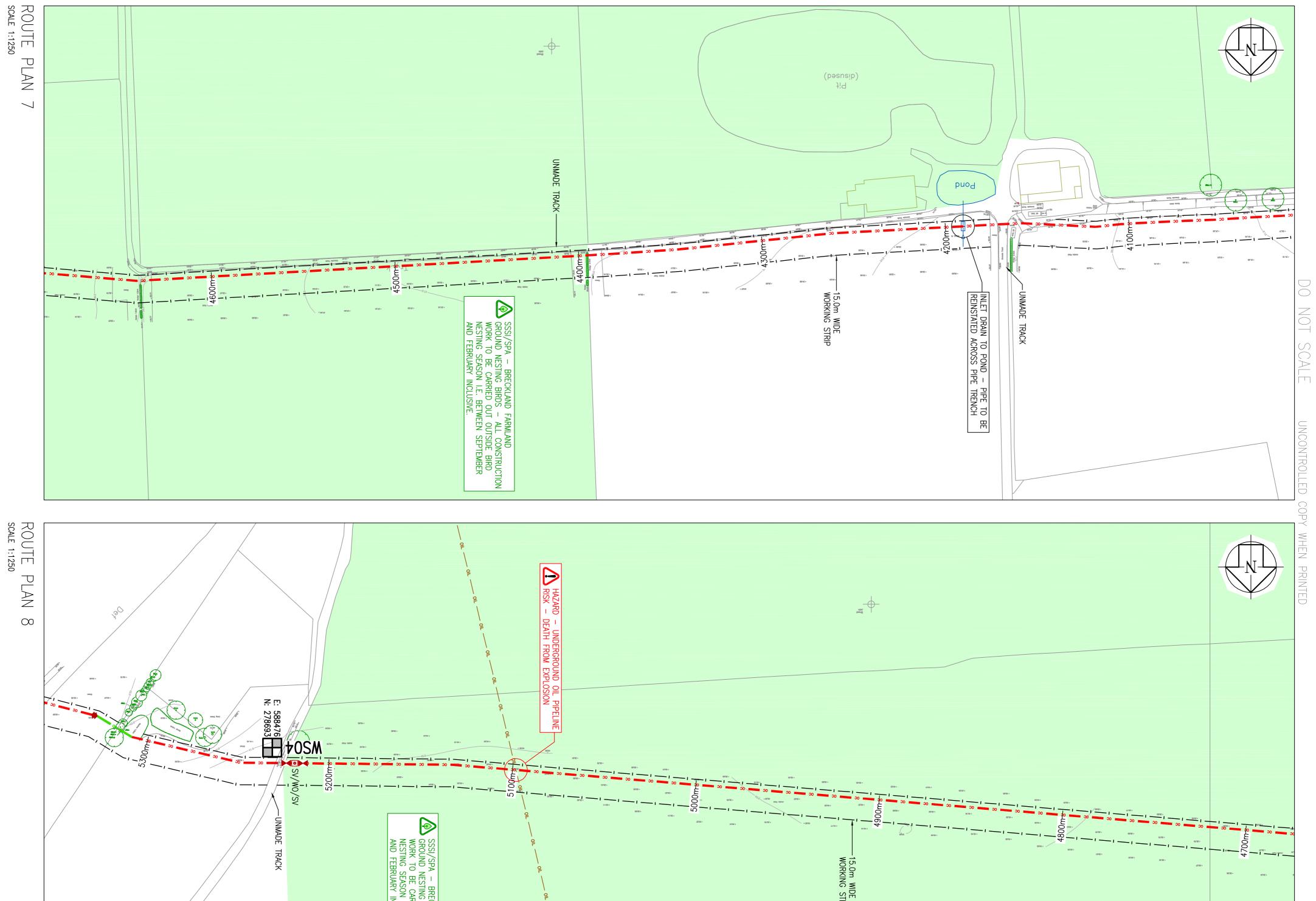


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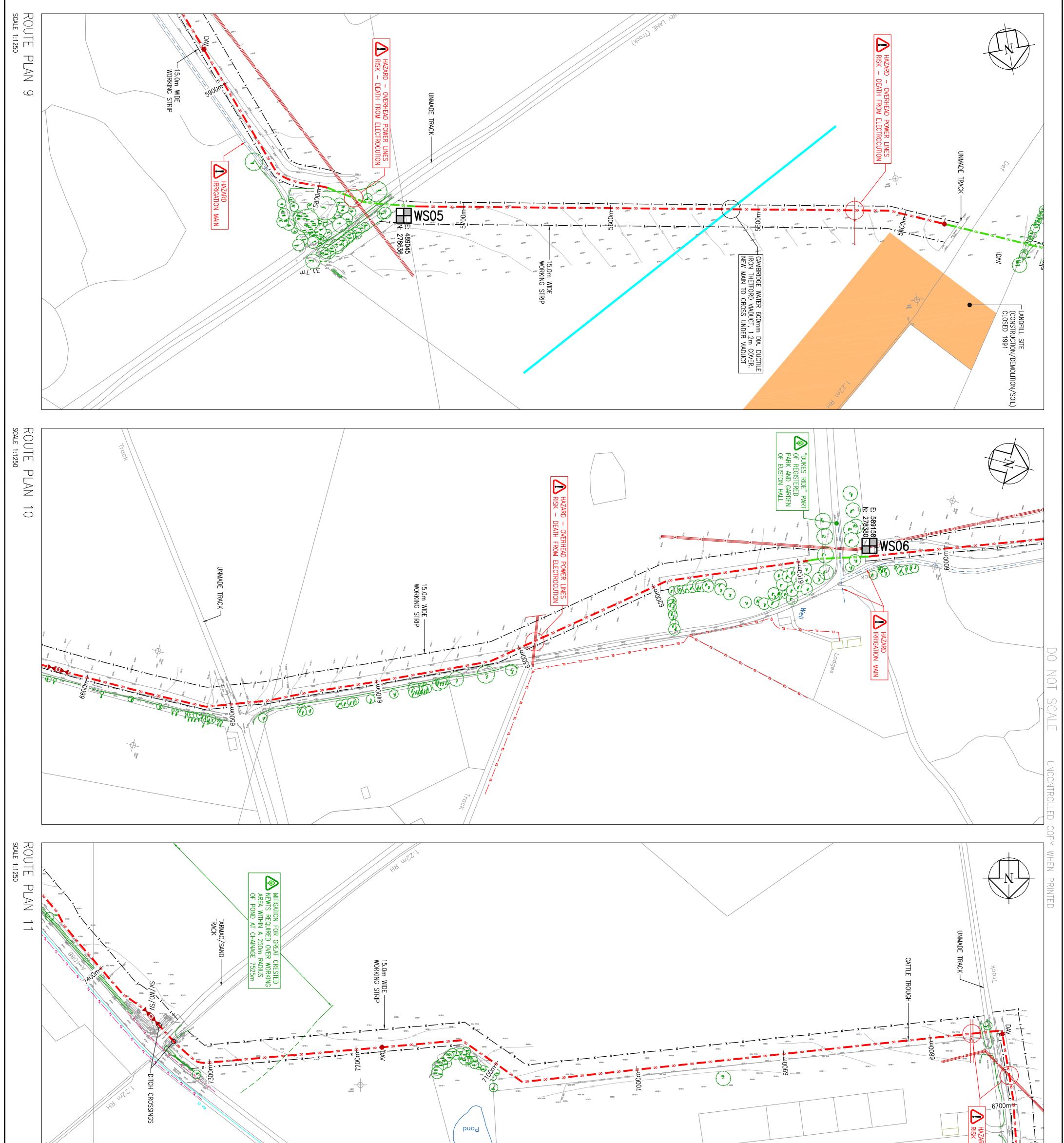


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A 1 1:1250 U.N.O. DRAWING NO. WAT-05367-BURYPZ-SS-LAY-151 P2 FI	D: JMC DATE: 18.11.11	BARNHAM CROSS TO LITTLE WELNETHAM DETAILED ROUTE PLANS SHEET 2 OF 16	PROJECT TITLE BURY PZ	anglianwater aoone Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 GWT Tel: 01733 414100 Fax: 01733 414111	P2 20.12.11 ROUTE REVISED FI P1 18.11.11 FOR INFORMATION FI FI REV DATE DETAILS STAT CHK APP This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on this plan is based on data currently recorded but the position must be regarded as approximate. Service pipes, private severs and drains are generally not shown. Users of this map are strongly advised to commission, including the isomation on the plan before currying out any works. The actual position of all apparatus MUST be established by trial holes. No liability whotsever, including liability for negligence, is accepted by Anglian Water for any error or inaccuracy or anission, including the location of any worter main, discharge pipe, severe or disposal main or any item of apparatus. This information is valid for the date printed. The plan is produced by Anglian Water Services Limited, from Ordnance Survey Crown Copyright, 100018507. This map is to be used for the purposes of viewing the location of Anglian Water plant only. Any other use of the map data or further copies are not permitted. This notice is not intended to exclude or restrict liability for death or personal injury resulting from negligence.	AIR DOUBLE REDUCING NON RETURN METER FIRE SLUICE WASHOUT HYDRANT VALVE VALVE VALVE VALVE VALVE WASHOUT VALVE VALVE VALVE VALVE WASHOUT NOTES 1. ALL WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND LEGISLATION. 2. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE INFORMATION BUT THE POSITION MUST BE RECARDED AS APPROXIMATE. 3. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY MECHANICAL PLANT IS USED. 4. NO LLABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. 5. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. 6. SLUICE VALVES AS PER DRAWING NO. 1M – INF – FH602 – DRG. 8. AIR VALVES AS PER DRAWING NO. 1M – INF – FH602 – DRG. 9. NON-RETURN VALVE AS PER DRAWING NO. 9D 55 0001. 10. ALL NEW SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER POST AS DETAIL IM – INF – AN006 – DRG, IM – INF – AN004 – DRG, SD – W – 40. 11. ALL REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVED.	Image: Supervised of the supervised	UNDERGROUND SERVICES - TRACED UNDERGROUND SERVICES - NOT TRACED CATV CATV ELECTRIC CATV WATER ELECTRIC WATER MATER TELEMETRY TELEMETRY CAS CAS	Image: Construction GAS HIGH PRESSURE Image: Construction GAS MEDIUM PRESSURE Image: Construction GAS MEDIUM PRESSURE Image: Construction GAS LOW PRESS LIST MAN BY DRECTIONAL DRILL Image: Construction GAS LOCATION OF BOREHOLE Image: Construction GAPROX. LOCATION OF BOREHOLE Image: Construction GAPROX. LOCATION OF BOREHOLE



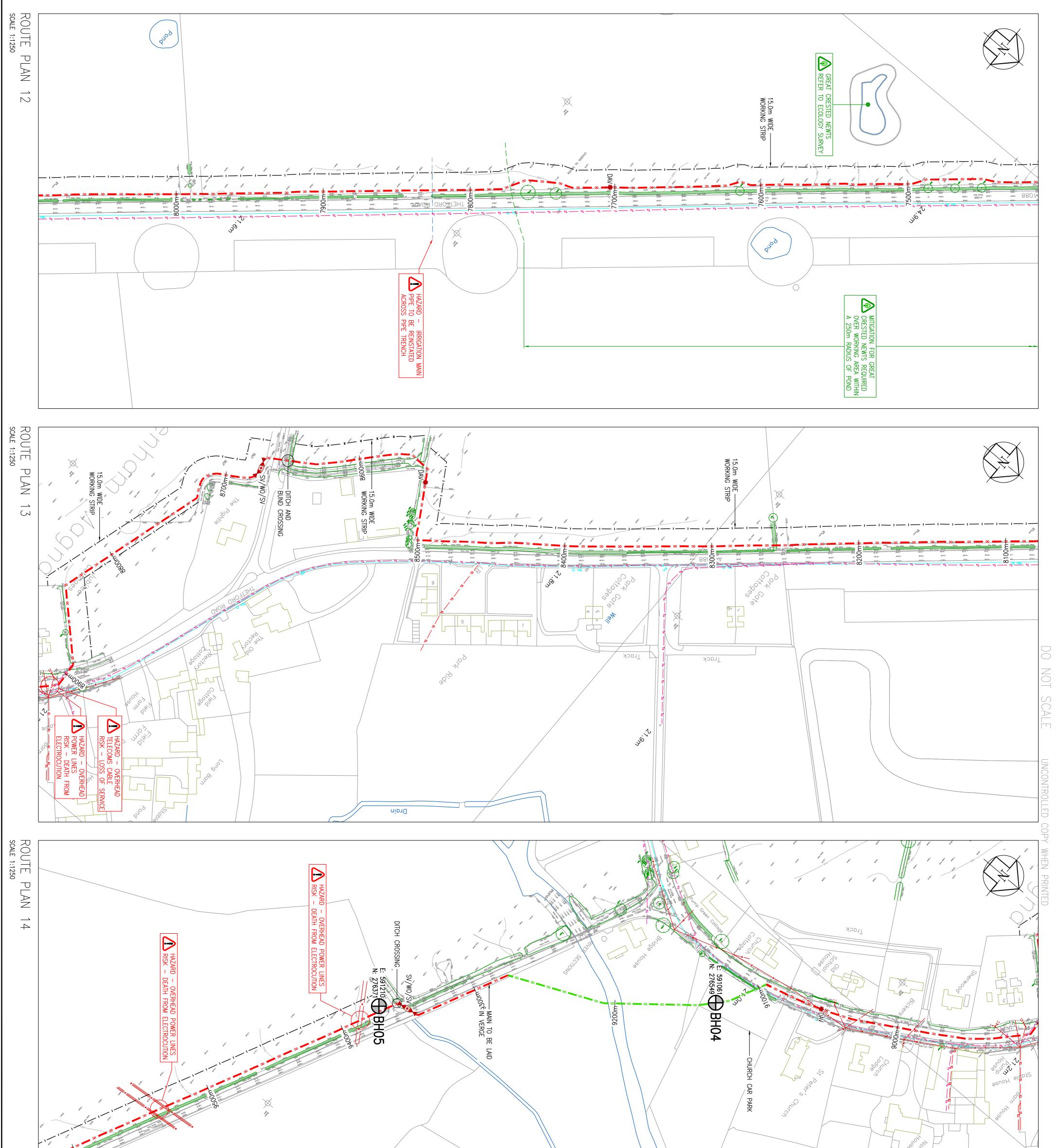


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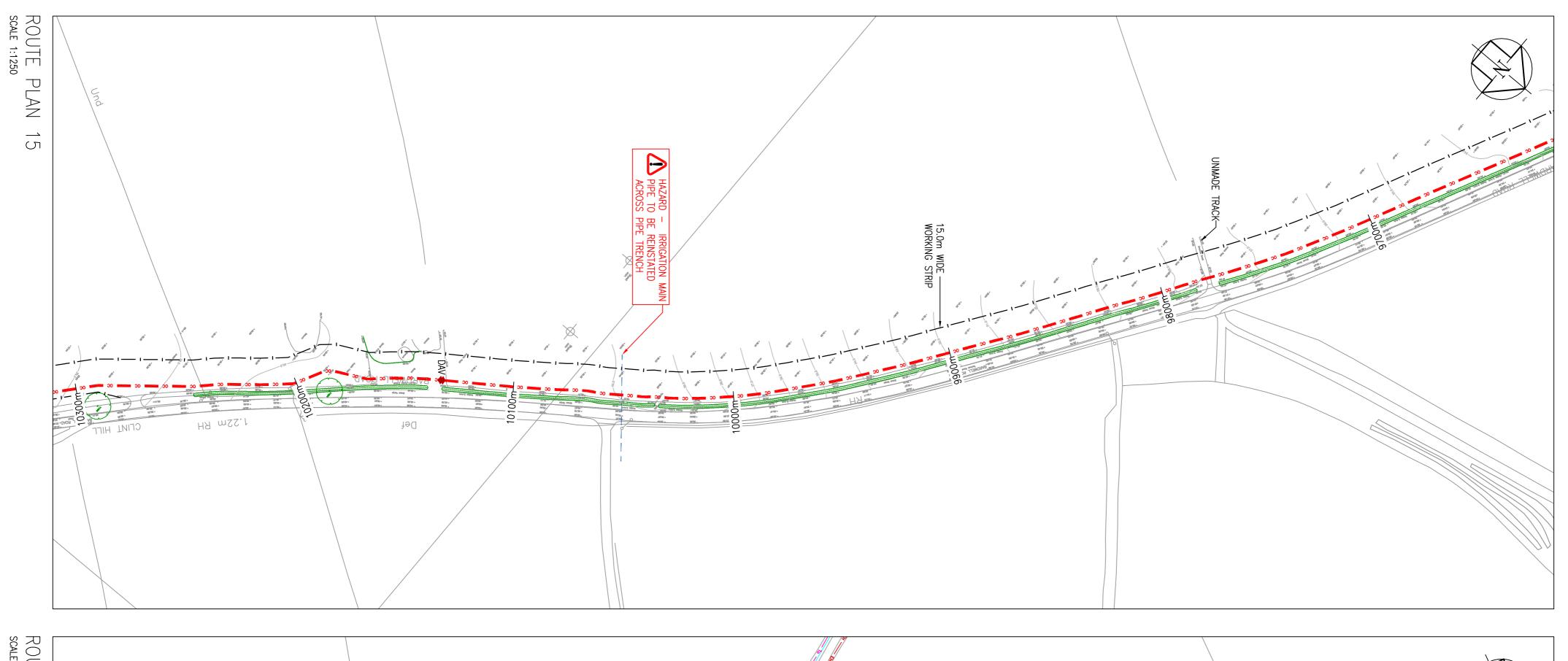
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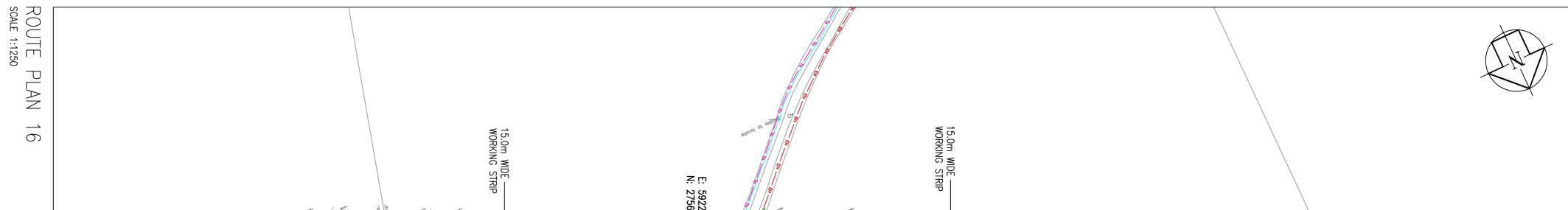
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DES'D: JMC DATE: 18.11.11 DRAWN: BB DATE: 18.11.11 OHK'D: DATE: 0.11.11 DRAWN: BB DATE: 0.11.11
CROSS TO LITTLE WELNETHAN TAILED ROUTE PLANS SHEET 4 OF 16
PROJECT TITLE BURY PZ
Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 GWT Tel: 01733 414100 Fax: 01733 414111
anglianwater
This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on this plan is based on data currently recorded but the position must be regarded as approximate. Service pipes, private severs and drains are generally not shown. Users of this map are strongly advised to commission their own survey of the area shown on the plan before carrying out any works. The actual position of all appartus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water for any error or inaccuracy or omission, including the failure to accurately record, or record at all, the location of any water main, discharge pipe, sever or drain or disposel main or any item of appartus. This information is valid for the date printed. The plan is produced by Anglian Water Services Limited, from Ordnance Survey Crown Copyright, 100018507. This map is to be used for the purposes of viewing the location of Anglian Water plant only. Any other use of the map data or further copies are not permitted. This notice is not intended to exclude or restrict liability for death or personal injury resulting from negligence.
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U330/-BURTPZ-33-LAT-134 PZ	D: DATE:	DES'D: JMC DATE: 18.11.11 DRAWN: BB DATE: 18.11.11	BARNHAM CROSS TO LITTLE WELNETHAM DETAILED ROUTE PLANS SHEET 5 OF 16	PROJECT TITLE BURY PZ	Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 6WT Tel: 01733 414100 Fax: 01733 414111	anglianwater	P1 18.11.11 FOR INFORMATION FI REV DATE DETAILS STAT CHK APP This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on the plan before carrying out any works. The actual position of all opparatus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water Service pipes, private severs and drains are generally not shown. Users of this map are strongy advised to commission their own survey of the area shown on the plan before carrying out any works. The actual position of all opparatus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water for any error or indicurrency or omission, including the failure to accurately record, or record at all, the location of any water main, discharge pipe, sever or drain or disposal main or any item of apparatus. This information is valid for the date printed. The plan is produced by Anglian Water Services Limited, from Ordnance Survey Crown Copyright, 100018507. This map is to be used for the pupposes of viewing the location of Anglian Water plant only. Any other use of the map data or further copies are not permitted. This notice is not intended to exclude or restrict liability for death or personal injury resulting from negligence.	P2 11.01.12 ROUTE REVISED, CHAINAGES UPDATED FI	 ALL WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND LEGISLATION. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE INFORMATION BUT THE POSITION MUST BE REGARDED AS APPROXIMATE. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY MECHANICAL PLANT IS USED. NO LIABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. SLUICE VALVES AS PER DRAWING No. 1M-INF-FH602-DRG. AIR VALVES AS PER DRAWING NO. PD 53 0001. AIR VALVES AS PER DRAWING NO. PD 55 0001. AIR VALVES AS PER DRAWING NO. SD-W-63. ALL NEW SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER POST AS DETAIL IM-INF-AN006-DRG, IM-INF-AN004-DRG, SD-W-41 AND SD-W-40. ALL REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVED. 	AIR DOUBLE REDUCING NON RETURN METER FIRE SLUICE WASHOUT HYDRANT VALVE VALVE VALVE VALVE HYDRANT VALVE WASHOUT MOTES	UNDERGROUND SERVICES - TRACED UNDERGROUND SERVICES - NOT TRACED ONT ELECTRIC WATER ELECTRIC WATER TELEMETRY ONTHERS BRITISH TELECOM GRUND RADAR PROBE TRACE WATER FWH GRUND RADAR PROBE TRACE GRUND RADAR PROBE TRACE WATER GRUND RADAR PROBE TRACE GRUND RADAR PROBE TRACE GRUND RADAR PROBE TRACE GRUND	Image:	LEGEND

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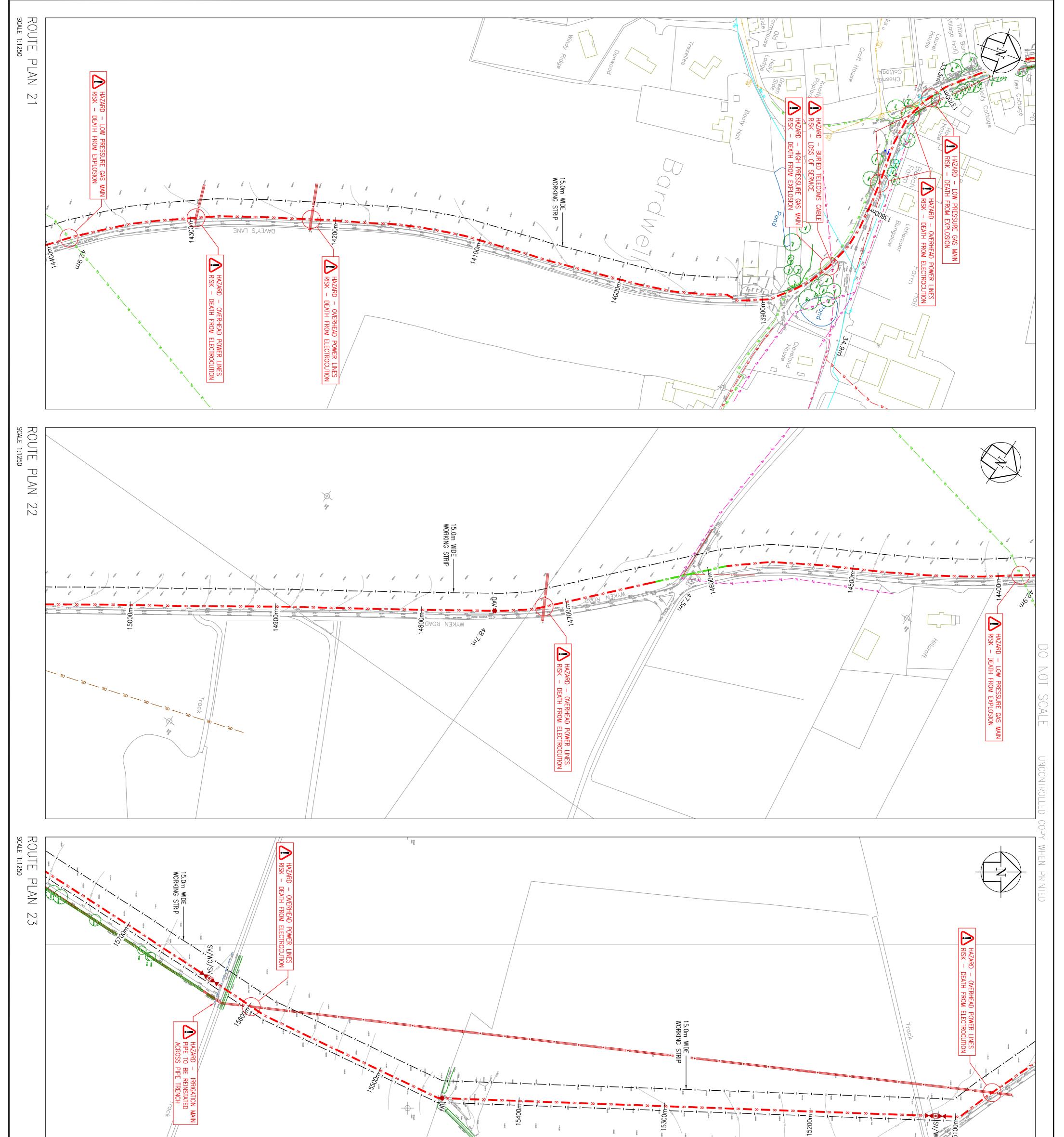


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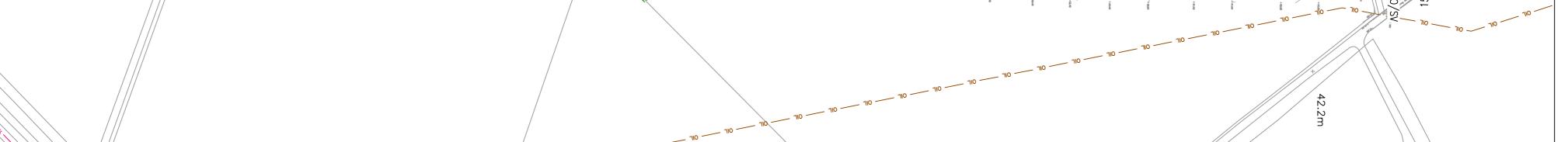


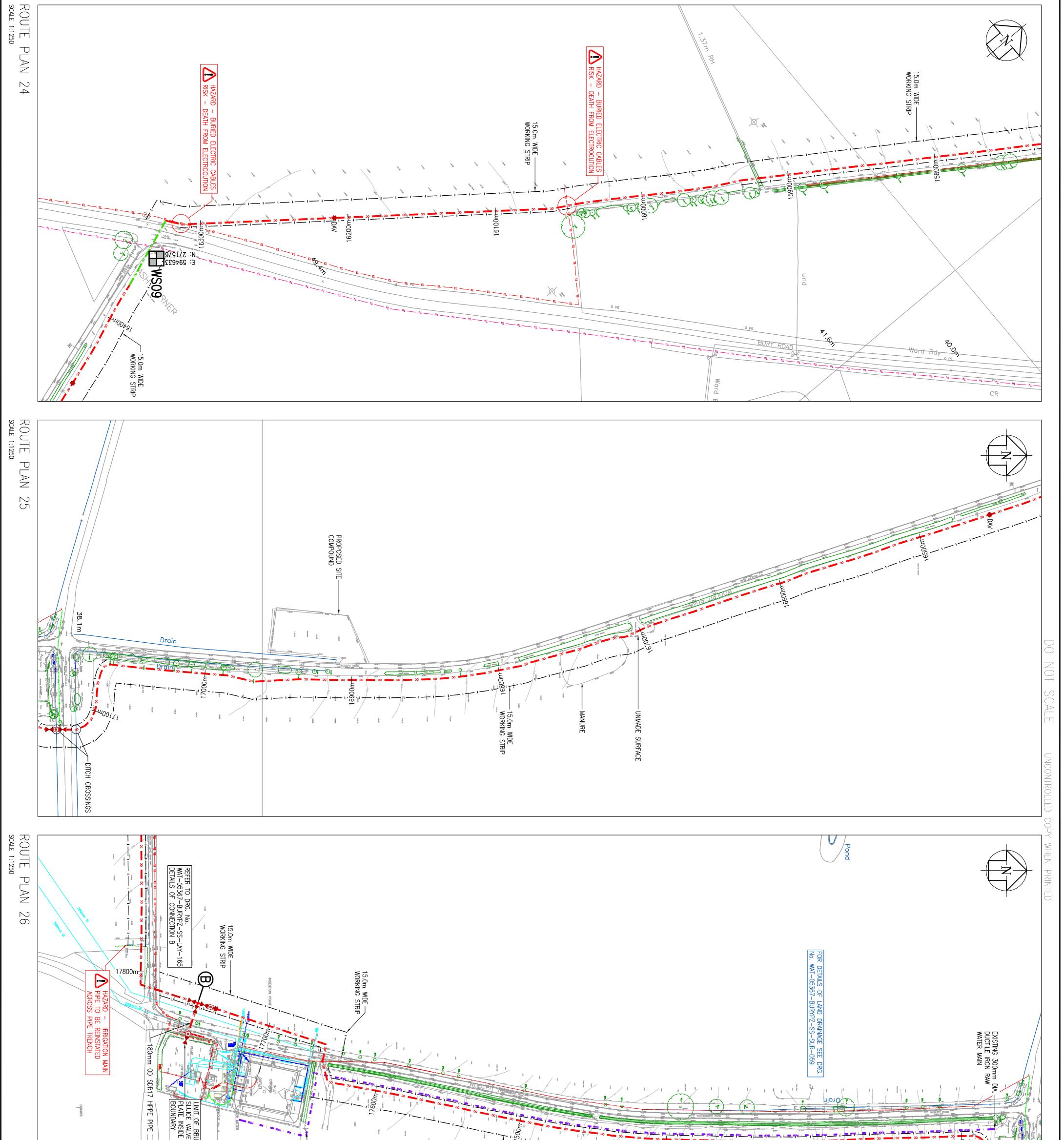
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	U.N.O. REF DWGS:	DATE: 18.11.11 DRAWN: BB DATE: 18.11.11 DATE: APP'D: DATE:	IAM CROSS TO LITTLE WELNETHAM DETAILED ROUTE PLANS SHEET 7 OF 16	TLE BURY PZ	anglianwatter aone Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 6WT Tel: 01733 414100 Fax: 01733 414111	1 by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be with any search results attached. The information on this plan is based on data currently recorded but the carded as approximate. Service pipes, private severs and drains are generally not shown. Users of this map are commission their own survey of the area shown on the plan before carrying out any works. The actual position or inaccurracy or omission, including the failure to accurately record, or record at all, the location of any water , sever or drain or disposal main or any item of apparatus. This information is valid for the date printed. The Anglian Water Services Limited, from Ordnance Survey Crown Copyright, 100018507. This map is to be used for ring the location of Anglian Water plant only. Any other use of the map data or further copies are not permitted. tended to exclude or restrict liability for death or personal injury resulting from negligence.	P. ROUTE REVISED, CHAINAGES UPDATED FOR INFORMATION DETAILS STAT CHK APP	AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF FRACTICE AND A. MATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE IN BUT THE POSITION MUST BE REGARDED AS APPROXIMATE. L POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY L PLANT IS USED. Y WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. VES AS PER DRAWING No. PD 53 0001. ANTS AS PER DRAWING NO. 1M-INF-FH602-DRG. S AS PER DRAWING NO. SD-W-63. RIN VALVE AS PER DRG. NO. SD-W-63. IJUNCE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER OLANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVED.	REDUCING NON RETURN METER FIRE SLUICE WASHOUT HYDI VALVE VALVE HYDRANT VALVE WASH WASH	

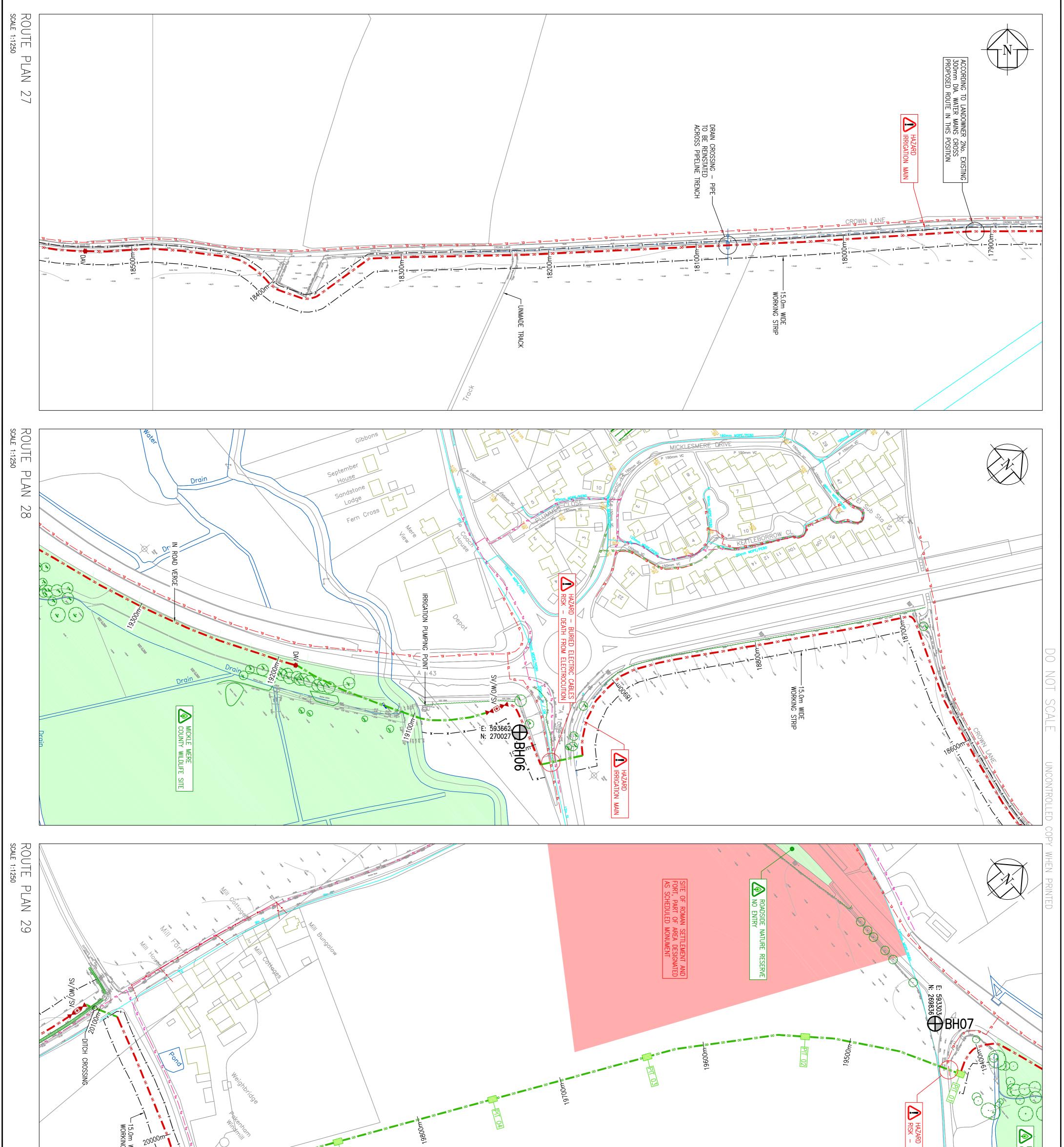


WAT-05367-BURYPZ-SS-LAY-157 P2 FI	A1 scale: 1:1250 U.N.O. REF DWGS:	DES'D: JMC DATE: 18.11.11 DRAWN: BB DATE: 18.11.11 CHK'D: DATE: APP'D: DATE:	BARNHAM CROSS TO LITTLE WELNETHAM DETAILED ROUTE PLANS SHEET 8 OF 16	PROJECT TITLE BURY PZ	Cambridgeshire, PE3 6WT Tel: 01733 414100 Fax: 01733 414111	ider the Water Industry Act 1991 sections 198 or 199. It m titon on this plan is based on data currently recorded but the severs and drains are generally not shown. Users of this m no not the plan before carrying out any works. The actual pa hatsoever, including liability for negligence, is accepted by An re to accurately record, or negligence, is accepted by the n of appartus. This information is valid for the date printer e Survey Crown Copyright, 100018507. This map is to be us Any other use of the map data or further copies are not p h or personal injury resulting from negligence.	P2 11.01.12 ROUTE REVISED, CHAINAGES UPDATED FI Image: Sector Sec	 ALL WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND LEGISLATION. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE INFORMATION BUT THE POSITION MUST BE REGARDED AS APPROXIMATE. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY MECHANICAL PLANT IS USED. NO LIABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. SLUICE VALVES AS PER DRAWING NO. PD 53 0001. RIR VALVES AS PER DRAWING NO. PD 55 0001. NON-RETURN VALVE AS PER DRAWING NO. SD-W-63. NON-RETURN VALVE AS PER DRG. NG. SD-W-63. NON-RETURN VALVE AS PER DRG. NG. SD-W-63. NON-RETURN VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER POST AS DETAIL IM-INF-AN006-DRG, IM-INF-AN004-DRG, SD-W-41 AND SD-W-40. ALL REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVED. 	NON RETURN METER FIRE SLUICE WASHOU VALVE HYDRANT VALVE	UNDERGROUND SERVICES - TRACED UNDERGROUND SERVICES - NOT TRACED CANV CANV ELECTRC WATER TELEMETRY GAS OTHERS BRITISH TELECOM GROUND RADAR PROBE TRACE MATER FWH FOUL SEWER GROUND RADAR PROBE TRACE MATER FWH FOUL SEWER GROUND NUMER SURFACE WATER SEWER GROUND SERVICES - UNDERGROUND SERVER GAS GROUND RADAR PROBE TRACE GAS GROUND RADAR PROBE TRACE GAS GROUND SERVER GAS GROUND RADAR PROBE TRACE GAS GROUND SERVER GAS GROUND SERVER	Image: Note of the state o	Image: Construction GAS HIGH PRESSURE Image: Construction GAS MEDIUM PRESSURE Image: Construction GAS LOW PRESSURE Image: Construction Image: Construction Cable Construction Image: Construction GRAVITY SURFACE GRAVITY COMBINED Image: Construction GRAVITY COMBINED POTABLE MAIN Image: Construction GRAVITY COMBINED POTABLE MAIN Image: Construction GRAVITY COMBINED MAIN Image: Construction GRAVITY CONSTRUCTION MAIN Image: Construction <

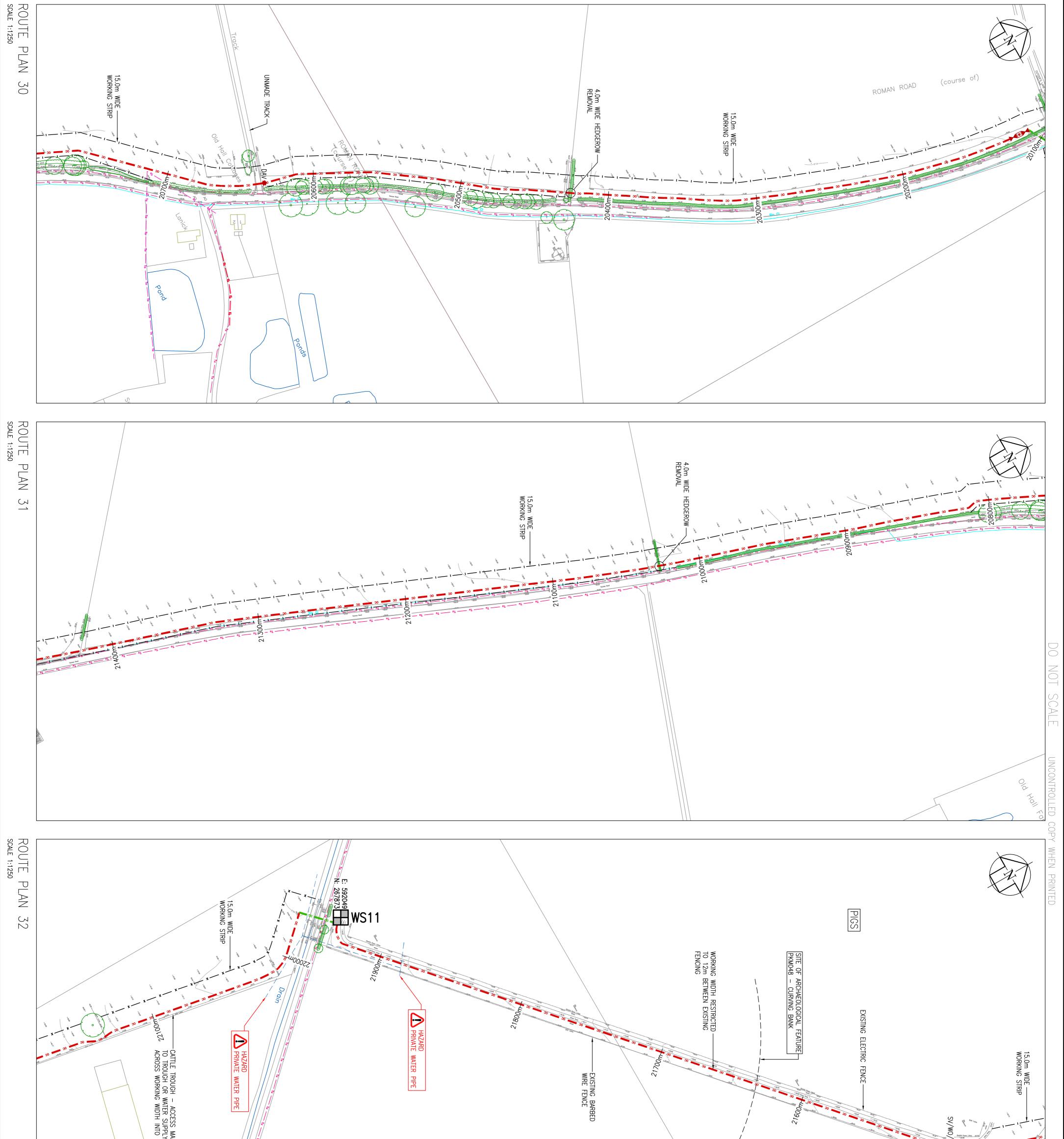




		E AND BLANK E W.T.W SITE		EXISTING 300mm DIA. RAW WATER MAIN	
CHK'D: DATE: APP'D: DATE: A 1 SCALE: REF DWGS: DRAWING No. REF DWGS: WAT-05367-BURYPZ-SS-LAY-158 REV. STAT.	ARNHAM CROSS TO LITTLE WEL DETAILED ROUTE PLANS SHEET 9 OF 16	PROJECT TITLE BURY PZ	anglianwater anglianwater aone Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 6WT Tel: 01733 414100 Fax: 01733 414111	P2 11.01.12 ROUTE REVISED, CHAINAGES UPDATED FI P1 18.11.11 FOR INFORMATION FI REV DATE DETAILS STAT CHK P1 18.11.11 FOR INFORMATION FI FI REV DATE DETAILS STAT CHK APP *This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be established by trial holes. No liability whatsever, including those on data currently recorded the the memory and carrying out any works. The actual position of all opparatus MUST be established by trial holes. No liability whatsever, including tholibility for negligence, is accepted by Anglian Water for any error or inaccuracy or omission, including the failure to accurately record, or record at all, the location of any water memory discharge pipe, sever or drain or disposel main or any item of apparatus. This information is valid for the date printed. The plan is produced by Anglian Water Services Limited, from Ordnance Survey Crown Copyright, 100018507. This map is to be used for the purposes of viewing the location of Anglian Water plant only. Any other use of the map data or further copies are not permitted.	LECEND LECEND LECENC LOW PRESSUE Lecence of the pressue lecence of t

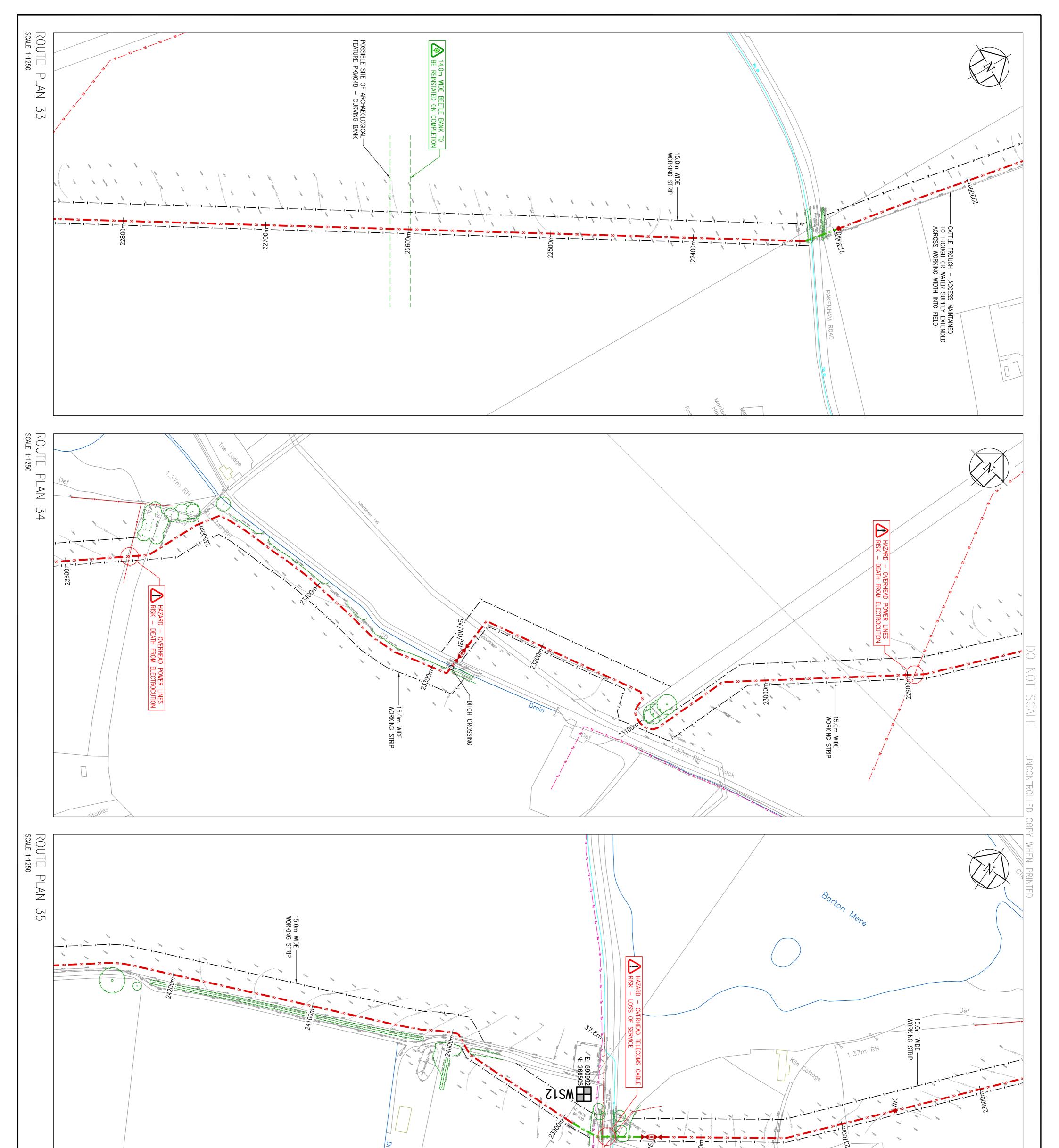


		IG STRIP			1000661					R	- BURIED ELECTRIC CABLES DEATH FROM ELECTROCUTION	MICKLE MERE COUNTY WILDLIFE SITE
WAT-05367-BURYPZ-SS-LAY-159 P2 FI	: 18.11.11 DRAWN: BB DATE: 18.1 : APP'D: DATE: D. REF DWGS:	TITLE UHAM CROSS TO LITTLE WELNETH DETAILED ROUTE PLANS SHEET 10 OF 16	PROJECT TITLE BURY PZ	Thorpe Wo	11.11 FOR INFORMATION DETAILS S DATE DETAILS S S S s provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections the regarded as approximate. Service pipes, private severs and drains are generally not show show on the plan before carrying out any w ratus MUST be established by trial holes. No liability whatsoever, including liability for negligence, including the failure to accurately record, or record at all, arge pipe, sever or drain or disposal main or any item of appartus. This information is vide 1 used by Anglian Water Services Limited, from Ordnance Survey Crown Copyright, 100018507. This is not intended to exclude or restrict liability for death or personal injury resulting from neglige is not intended to exclude or restrict liability for death or personal injury resulting from neglige	 4. NO LIABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. 5. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. 6. SLUICE VALVES AS PER DRAWING No. PD 53 0001. 7. FIRE HYDRANTS AS PER DRAWING No. 1M—INF-FH602–DRG. 8. AIR VALVES AS PER DRAWING No. PD 55 0001. 9. NON-RETURN VALVE AS PER DRAG. No. SD—W-63. 10. ALL NEW SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER POST AS DETAIL IM—INF-AN006–DRG, IM—INF-AN004–DRG, SD–W–41 AND SD–W-40. 11. ALL REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVED. P2 04.01.12 SCHEDULED ANCIENT MONUMENT ADDED, ROUTE REVISED FI 	AIR DOUBLE REDUCING NON RETURN METER FIRE SLUICE WASHOUT HYDRANT VALVE VALVE VALVE VALVE VALVE WASHOUT VALVE VALVE VALVE VALVE WASHOUT NOTES 1. ALL WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND LEGISLATION. 2. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE INFORMATION BUT THE POSITION MUST BE RECARDED AS APPROXIMATE. 3. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY MECHANICAL PLANT IS USED.	SW MH SURFACE WATER SEWER OKH COMBINED SEWER OF MH COMBINED SEWER OVERFLOW SEWER OVERFLOW SEWER UNDETERMINED SEWER UNDETERMINED SEWER UNDETERMINED SEWER OVERFLOW SEWER VIII UNDETERMINED SEWER UNDETERMINED SEWER PUMPING MAIN VIII UNDETERMINED SEWER UNDETERMINED SEWER PUMPING MAIN VIIII VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	UNDERGROUND SERVICES - TRACED UNDERGROUND SERVICES - NOT TRACED CATV CATV MITER ELECTRIC MATER MATER MATER	 PROPOSED TEMPORARY DEMARCATION FENCION PROPOSED 280mm OD HPPE SDR11 BLUE PIPE WATER MAIN BY OPEN CUT PROPOSED 280mm OD HPPE SDR11 BLUE PIPE WATER MAIN BY DIRECTIONAL DRILL PROPOSED 315mm OD HPPE SDR17 BLUE PIPE WATER MAIN BY OPEN CUT PROPOSED 315mm OD HPPE SDR17 BLUE PIPE WATER MAIN BY DIRECTIONAL DRILL CONNECTION DETAIL APPROX. LOCATION OF BOREHOLE APPROX. LOCATION OF WINDOW SAMPLE 		LEGEND



		pakennam	SS MAINTAINED SUPPLY EXTENDED INTO FIELD						
WAT-05367-BURYPZ-SS-LAY-160 P2	DES'D: JMCDATE: 18.11.11DRAWN: BBDATE:CHK'D:DATE:APP'D:DATE:A 1 1:1250U.N.O.REF DWGS:	ARNHAM CROSS TO LITTLE WEL DETAILED ROUTE PLANS SHEET 11 OF 16	BURY PZ	Thorpe Wood House, Th Cambridgest Tel: 01733 414100	INAGES UPDATED TAILS TAILS ans under the Water Industriation and shown on this plan is a shown on the plan befor a shown of apparatus. This failure to accurately rea- s failure to apparatus. This only. Any other use of the only. Any other use of the only. Any other use of the	AIR DOUBLE REDUCING NON RETURN METER FIRE SLUICE WASHOU VALVE VALVE VALVE VALVE HYDRANT VALVE NOTES 1. ALL WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PR LEGISLATION. 2. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILA INFORMATION BUT THE POSITION MUST BE REGARDED AS APPROXIMATE. 3. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEST MECHANICAL PLANT IS USED. 4. NO LLABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. 5. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. 6. SLUICE VALVES AS PER DRAWING No. PD 53 0001. 7. FIRE HYDRANTS AS PER DRAWING NO. 11M–INF–FH602–DRG. 8. AIR VALVES AS PER DRAWING NO. PD 55 0001. 9. NON-RETURN VALVE AS PER DRAWING NO. SD–W–63. 10. ALL NEW SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD POST AS DETAIL IM–INF–AN006–DRG, IM–INF–AN004–DRG, SD–W–41 AND SD- 11. ALL REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMON	Image: Selectric control of the selectric control of the selectric control of the selectric control of the selectric control selectri control selectric control selectric selectric	PROPOSED TEMPORARY STUCK PR PROPOSED TEMPORARY DEMARCATI PROPOSED 280mm OD HPPE SD BLUE PIPE WATER MAIN BY OPEN PROPOSED 315mm OD HPPE SD BLUE PIPE WATER MAIN BY DIRECTIONAL PROPOSED 315mm OD HPPE SD BLUE PIPE WATER MAIN BY DIRECTIONAL CONNECTION DETAIL APPROX. LOCATION OF BOREHOLE APPROX. LOCATION OF WINDOW S/ APPROX. LOCATION OF WINDOW S/	A PRESSURE A PRESSURE IGH VOLTAG IGH VOLTAG OW VOLTAG OW VOLTAG OW VOLTAG OUL PIPEL OIL PIPEL OIL PIPEL OIL PIPEL ATER MAIN ONED WATE

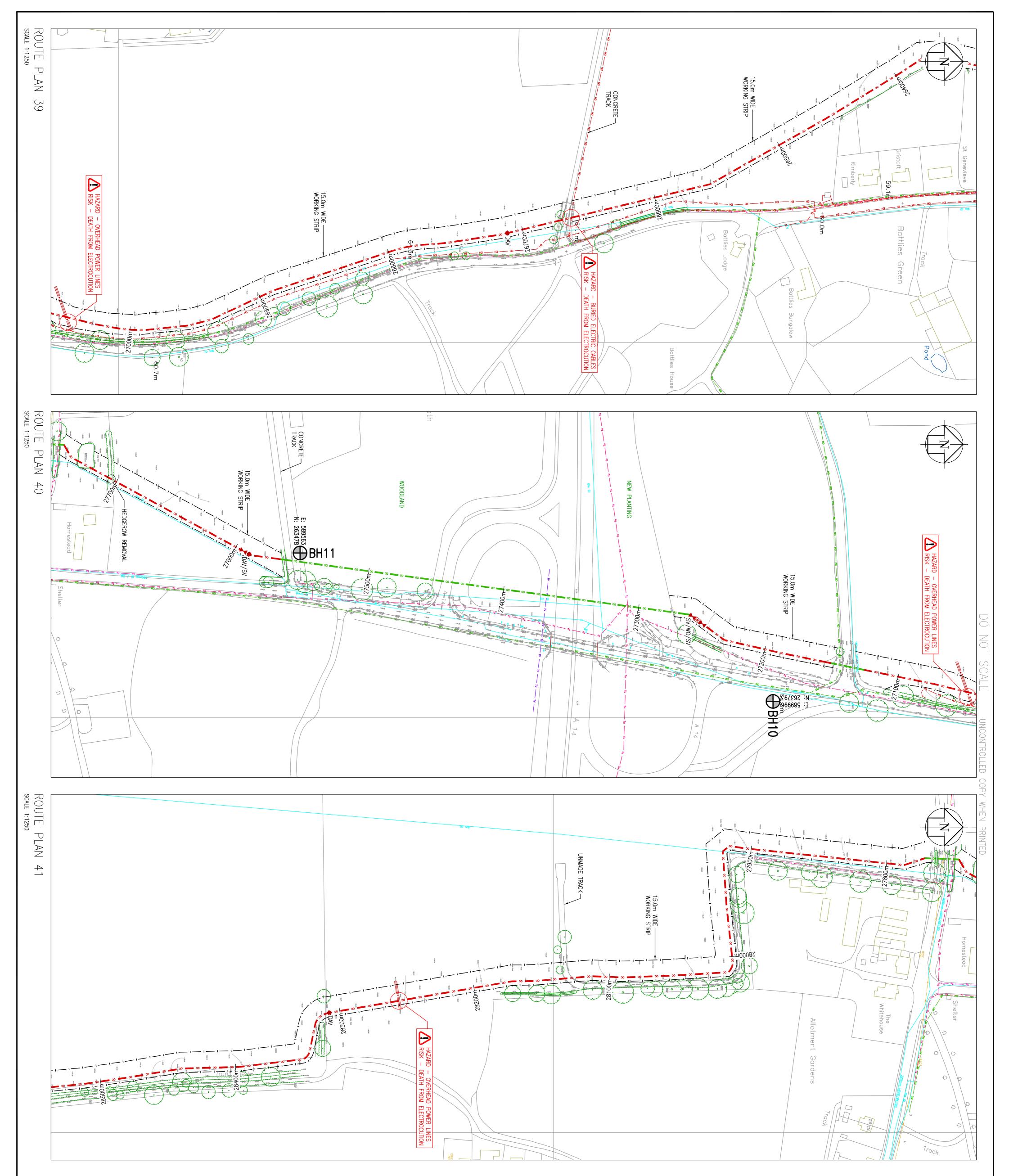
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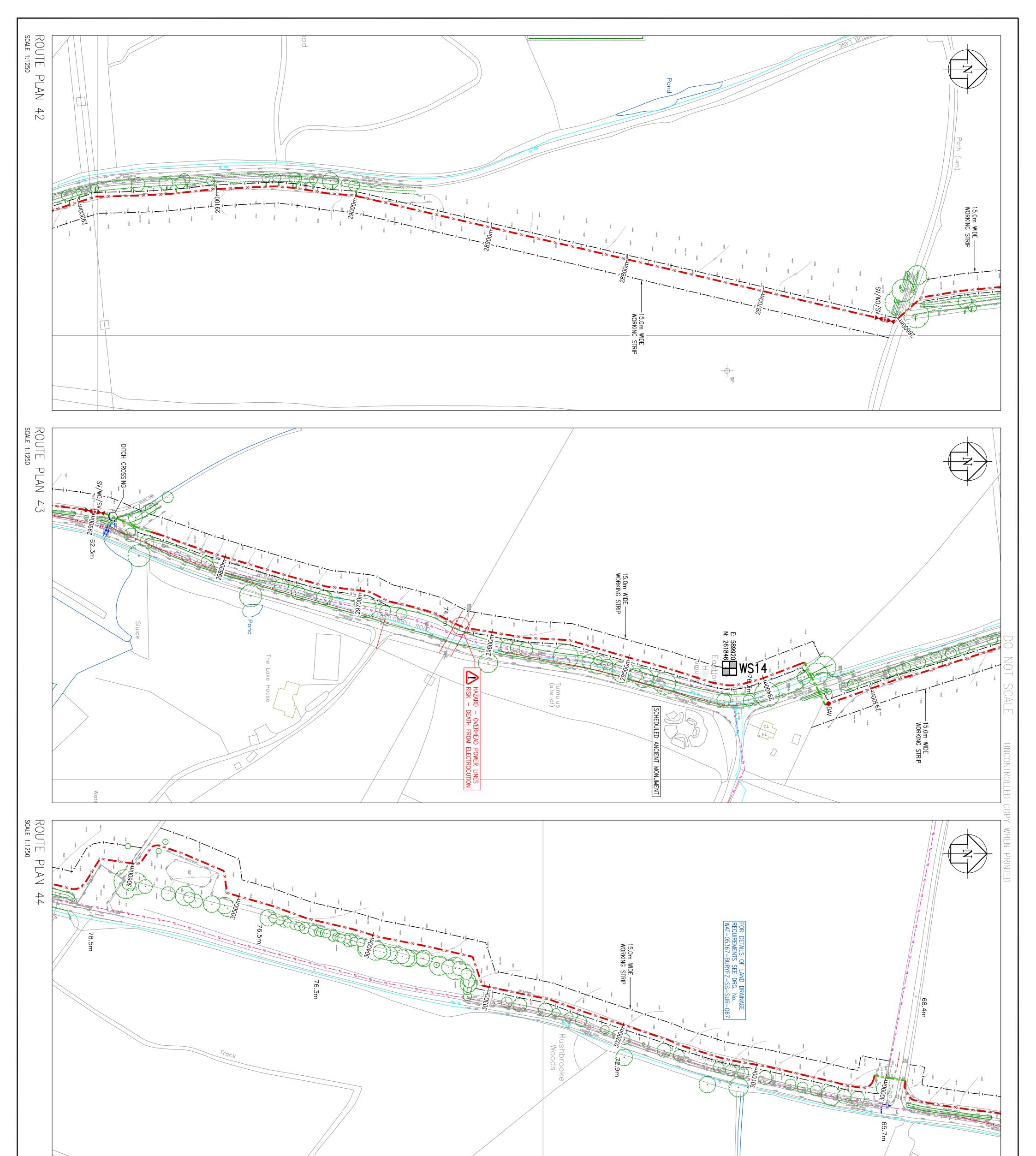


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WAT-05367-BURYPZ-SS-LAY-162 P2 FI	V.O. REF DWGS:	BARNHAM CROSS TO LITTLE WELNETHAM DETAILED ROUTE PLANS SHEET 13 OF 16	BURY PZ	Cambridgeshire, PE3 6WT Tel: 01733 414100 Fax: 01733 414111	P2 11.01.12 ROUTE REVISED, CHAINAGES UPDATED FI P1 18.11.11 FOR INFORMATION FI FI REV DATE DETAILS STAT CHK APP This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on this plan is based on data currently recorded but the position must be regarded as approximate. Service pipes, private sewers and drains are generally not stown. Users of this map are strongly advised to commission, including the occurrency record at all, the location of any works. The actual position of all opparatus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water for any error or inoccurrency or drains or disposal main or any item of apparatus. This information is valid for the location of any water plans, including the location of any water services united. The fourt only, Any other use of the map data or further copies are not permitted. The plans inder Services united, from Ordnance Survey Crown Copyright 100018507. This map is to be used for the pup so to exclude or restrict liability for death or personal injury resulting from negligence.	 ALL WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND LEGISLATION. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE INFORMATION BUT THE POSITION MUST BE REGARDED AS APPROXIMATE. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY MECHANICAL PLANT IS USED. NO LIABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. SLUICE VALVES AS PER DRAWING No. PD 53 0001. FIRE HYDRANTS AS PER DRAWING No. PD 53 0001. AIR VALVES AS PER DRAWING No. PD 53 0001. NON-RETURN VALVE AS PER DRAWING No. SD-W-63. ALL NEW SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD MARKER POST AS DETAIL IM-INF-AN006-DRG, IM-INF-AN004-DRG, SD-W-41 AND SD-W-40. ALL REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVED. 	NON RETURN METER FIRE SLUICE WASHOUT HYD VALVE HYDRANT VALVE WASHOUT HYD WAS	PUMPING MAIN WASHWATER WASHWATER WASHWATER OVERHEAD CABLES BRITISH TELECOM T BRITISH TELECOM LECTRIC LECTRIC	UNDERGROUND SERVICES - TRACEDUNDERGROUND SERVICES - NOT TRACED	RE 2002000 APPROX. LOCATION OF BOREHOLE RE 2002000000000000000000000000000000000			LEGEND





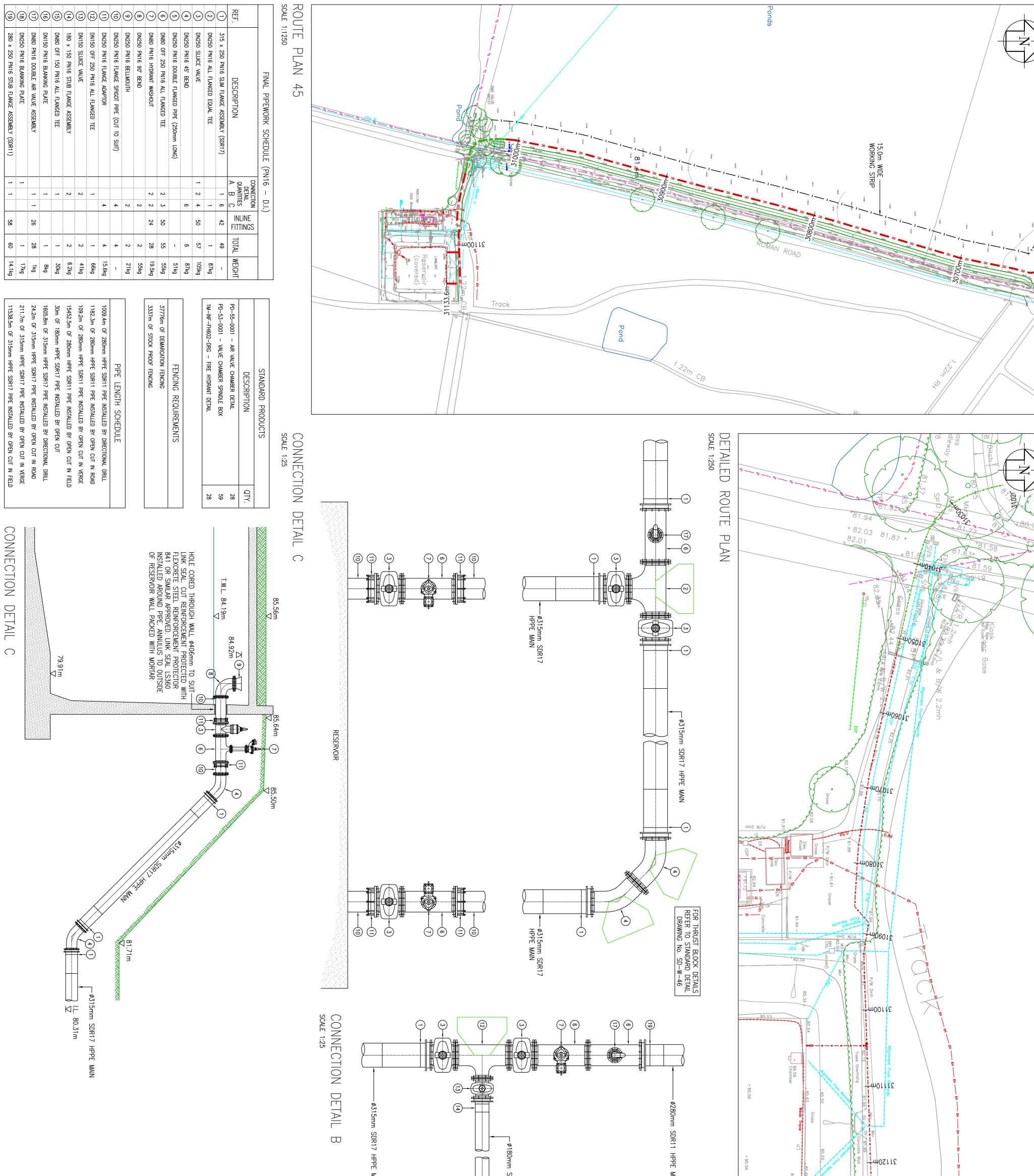
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WAT-05367-BURYPZ-SS-LAY-164 P2 FI	. REF DWGS: REV.	DES'D: JMC DATE: 18.11.11 DRAWN: BB DATE: 18.11.11 CHK'D: DATE: APP'D: DATE:	BARNHAM CROSS TO LITTLE WELNETHAM DETAILED ROUTE PLANS SHEET 15 OF 16	PROJECT TITLE BURY PZ	anglianwater anglianwater aone Thorpe Wood House, Thorpe Wood, Peterborough, Cambridgeshire, PE3 6WT Tel: 01733 414100 Fax: 01733 414111	P1 18,11.11 FOR INFORMATION FI REV DATE DETAILS STAT CHK APP This plan is provided by Anglian Water pursuant its obligations under the Water Industry Act 1991 sections 198 or 199. It must be used in conjunction with any search results attached. The information on this plan is based on data currently recorded but the position must be regarded as approximate. Service pipes, private sewers and drains are generally not shown. Users of this map are strongly advised to commission their own survey of the area shown on the plan before carrying out any works. The actual position of all apparatus MUST be established by trial holes. No liability whatsoever, including liability for negligence, is accepted by Anglian Water for any error or inaccuracy or onission, including the follure to accurately record, or record at all, the location of any water main, discharge pipe, sewer or drain or disposal main or any item of apparatus. This information is valid for the date printed. The plan burget crow Copyright, 100018507. This map is to be used for the purposes of viewing the location of Anglian Water plant only. Any other use of the map data or further copies are not permitted. This notice is not intended to exclude or restrict liability for death or personal injury resulting from negligence.	11.01.12 ROUTE REVISED, CHAINAGES UPDATED	S WORKS AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRAVI- GISLATION. IE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABI- TORMATION BUT THE POSITION MUST BE RECARDED AS APPROXIMATE. IE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFO CCHANICAL PLANT IS USED.) LABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. UICE VALVES AS PER DRAWING No. PD 53 0001. RE HYDRANTS AS PER DRAWING No. PD 55 0001. NO-RETURN VALVE AS PER DRAWING No. SD-W-63. NO-RETURN VALVE AS PER DRAWING NO. SD-W-63. L NEW SLUICE VALVES, WASHOUTS AND FIRE HYDRANTS TO HAVE STANDARD W ST AS DETAIL IM-INF-AN006-DRG, IM-INF-AN004-DRG, SD-W-41 AND SD-1 L REDUNDANT INLINE VALVES AND ASSOCIATED MARKER POSTS TO BE REMOVE	OVERFLOW SEWER OVERFLOW SEWER OVERFLOW SEWER UNDETERMINED SEWER OVERFLOW SEWER UNDETERMINED SEWER UNDETERMINED SEWER UNDETERMINED SEWER OVERHEAD CABLES BRITISH TELECOM WASHWATER WHERE UNDERGROUND SERVICES HAVE NOT BEEN TRACED ELECTRONICALLY OR BY GPR THEY HAVE EITHER BEEN ABSTRACTED FROM RECORD DRAWINGS OF ARE ASSUMPTIONS BASED ON LOCAL SITE CONDITIONS AIR DOUBLE REDUCING NON RETURN METER FIRE SLUICE WASHOUT HYDRANT	UNDERGROUND SERVICESTRACEDUNDERGROUND SERVICESNOT TRACEDCATVCATVCATVCATVELECTRICWATERCATVWATERTELEMETRYELECTRICGASOTHERSWATEROTHERSOTHERSGASOTHERSOTHERSOTHERSBRITISH TELECONGASOTHERSF MHGROUND RADAR PROBE TRACEMHSW MHSURFACE WATER SEWEROTHERSSW MHSURFACE WATER SEWEROTHERSOTHERSOTHERSSURFACE WATER SEWER	Image: Struct Proposed temporary struct proposed temporary demarcation fencing proposed temporary demarcation fencing proposed temporary demarcation fencing by proposed temporary demarcation fencing proposed temporary demarcation fencing proposed temporary demarcation fencing proposed temporary demarks main by directional drill Image: Struct Proposed temporary demarks temporary demarks demarks temporary demarks demark	LEGEND



DETAIL

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STANDARD PRODUCTS DESCRIPTION PD-55-0001 - AIR VALVE CHAMBER DETAIL PD-53-0001 - VALVE CHAMBER SPINDLE BOX 1M-INF-FH602-DRG - FIRF HYDRANT DFTAII	QTY. 28 59 28
DESCRIPTION	QTY.
PD-55-0001 - AIR VALVE CHAMBER DETAIL	28
PD-53-0001 - VALVE CHAMBER SPINDLE BOX	59
1M-INF-FH602-DRG - FIRE HYDRANT DETAIL	28



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REF.	DESCRIPTION	۶Q	QUANTITIES	C E	INLIN FITTIN	TOTAL	WEIGHT
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(2)	DN250 PN16 ALL FLANGED EQUAL TEE			-		-	87kg
(L)	DN250 SLUICE VALVE	<u> </u>	2	4	50	57	105kg
4	DN250 PN16 45 BEND			თ		6	87kg
5	DN250 PN16 DOUBLE FLANGED PIPE (250mm LONG)					I	51kg
6	DN80 OFF 250 PN16 ALL FLANGED TEE		2	ы	50	55	55kg
(-)	DN80 PN16 HYDRANT WASHOUT		2	N	24	28	19.5kg
•	DN250 PN16 90 BEND			N		2	55kg
٩	DN250 PN16 BELLMOUTH			2		2	21kg
	DN250 PN16 FLANGE SPIGOT PIPE (CUT TO SUIT)			4		4	I
3	DN250 PN16 FLANGE ADAPTOR			4		4	15.6kg
(2)	DN150 OFF 250 PN16 ALL FLANGED TEE		<u> </u>				66kg
٤٦)	DN150 SLUICE VALVE		2			2	41kg
(4	180 x 150 PN16 STUB FLANGE ASSEMBLY		2			2	6.2kg
(15)	DN80 OFF 150 PN16 ALL FLANGED TEE		-			-	30kg
	DN150 PN16 BLANKING PLATE					-	8kg
(]	DN80 PN16 DOUBLE AIR VALVE ASSEMBLY		_	-	26	28	1kg
	DN250 PN16 BLANKING PLATE	_				-	17kg
(280 x 250 PN16 STUB FLANCE ASSEMBLY (SDR11)	_			58	60	14.1kg

			MAN	SDR17 HPPE MAIN	5.53 5.29	B6.65 + Chamber P/W 2mh	모 모 모 모 모 모 모 모
-	DRAWING TITLE CROSS TO LITTLE WELNETHAM BARNHAM CROSS ROUTE PLANS DETAILED ROUTE PLANS DETAILED SHEET 16 OF 16 Instant I	anglianwater an	OUTS AND FIRE -DRG, IM-INF- AND ASSOCIATE AND ASSOCIATE 2VISED FOLLOW 2VISED FOLLOW 2VISED FOLLOW DNNECTION DI DNNECTION DI NNECTION DI ION DETAILS DETAILS IS obligations under hed. The information s. No liability whats seeve of the area shown o s. No liability whats clubility for death or its bigation or any item of ad, from ordnance su	 AIR DOUBLE REDUCING NON RETURN METER FIRE SLUICE WASHOUT HYDRANT VALVE AS PER THE LATEST RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND LEGISLATION. 2. THE INFORMATION SHOWN ON THIS DRAWING IS BASED UPON THE BEST AVAILABLE INFORMATION BUT THE POSITION MUST BE REGARDED AS APPROXIMATE. 3. THE ACTUAL POSITION OF ALL APPARATUS MUST BE ESTABLISHED ON SITE BEFORE ANY MECHANICAL PLANT IS USED. 4. NO LIABILITY WHATSOEVER IS ACCEPTED FOR ANY ERROR OR OMISSION. 5. A DESIGN RISK ASSESSMENT HAS BEEN COMPLETED FOR THIS SCHEME. 6. SLUICE VALVES AS PER DRAWING No. 1M-INF-FH602-DRG. 8. AIR VALVES AS PER DRAWING NO. 1M-INF-FH602-DRG. 9. NON-RETURN VALVE AS PER DRG ORG. NO. SD-W-63. 	UNDERGROUND SERVICES - TRACED UNDERGROUND SERVICES - NOT TRACED CAIV CAIV ELECTRIC WATER WATER TELEMETRY GAS OTHERS OTHERS BRITISH TELECON GROUND RADAR PROBE TRACE F.M. F.M. GROUND RADAR PROBE TRACE G.M.H GROUND RADAR PROBE TRACE G.M.H COMBINED SEWER G.M.H COMERCES HAVE NOT BEEN G.M.H<	Image: Note that it is the	LEGEND

Appendix 7: OASIS Record

OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

Printable version

OASIS ID: norfolka1-113337

Project details

Project name

Barnham to Little Wheltenham DBA

This desk-based assessment considers the archaeological potential of the Barnham cross Water Treatment works to Little Welnetham Reservoir Treated Water Main. The pipeline starts in Thetford at Barnham Cross Water Treatment Works (NGR TL 87008 81645) within the southern part of Norfolk. It then runs through Suffolk terminating south-east of Bury St Edmunds at Little Welnetham Reservoir at NGR TL 89618 60287. This assessment only considers the 29km of this 31km scheme that lies in Suffolk The route runs, through the parishes of Barnham, Euston, Fakenham Magna, Sapiston, Bardwell, Ixworth, Pakenham, Great Barton, Thurston, Rougham, Rushbrooke, Bradfield St George to its destination close to the village of Little Whelnetham, Suffolk. The route runs across a rural landscape close to areas of high archaeological potential, notably the scheduled Roman villa and triple-ditched fort at Ixworth, the Roman barrow cemetery (part of which is scheduled) at Rougham and the adjacent Roman road which the route follows at the southern end of the scheme. There are remains of a number of archaeological remains from a range or periods recorded near to the site - prehistoric at Barnham, Euston, Fakenham Magna, Ixworth, and Pakenham; Roman at Fakenham Magna, Ixworth, Pakenham and Rougham; Saxon at Fakenham Magna and Ixworth; medieval at Fakenham Magna and Bardwell and post-medieval Fakenham Magna, Bardwell and Rougham.
Start: 01-10-2011 End: 10-02-2012
No / Not known
BAU2831 - Contracting Unit No.
Desk based assessment
None
Cultivated Land 4 - Character Undetermined
Other 11 - Thoroughfare
NONE None
NONE None
'Documentary Search', 'Visual Inspection'
Pipelines/cables (e.g. gas, electric, telephone, TV cable, water, sewage, drainage etc.)

OASIS FORM - Print view

Prompt

Water Act 1989 and subsequent code of practice

Project location

Country	England
Site location	SUFFOLK ST EDMUNDSBURY BARNHAM Barnham to Little Wheltenham DBA
Study area	145.00 Hectares
Site coordinates	TL 8643 8077 52.3927077715 0.740211082850 52 23 33 N 000 44 24 E Line
Site coordinates	TL 8963 6027 52.2075014280 0.775642420141 52 12 27 N 000 46 32 E Line

Project creators

Name of Organisation	NPS Archaeology
Project brief originator	Suffolk County Council Archaeological Services
Project design originator	David Whitmore
Project director/manager	David Whitmore
Project supervisor	Rebecca Sillwood
Type of sponsor/funding body	Utility
Name of sponsor/funding body	Anglian Water Services Ltd

Project archives

Physical Archive Exists?	No
Digital Archive recipient	NPS Archaeology
Digital Contents	'other'
Digital Media available	'Images raster / digital photography','Images vector','Text'
Paper Archive Exists?	No

Project bibliography 1

bioliography i	
Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Desk-Based Assessment of the Suffolk Section of Bury PZ - Barnham Cross Water Treatment Works to Little Whelnetham Reservoir Treated Water Main
Author(s)/Editor (s)	Sillwood, R.
Other bibliographic details	Report 2831

OASIS FORM - Print view

Page	3	of 3	

Date	2012
lssuer or publisher	NPS Archaeology
Place of issue or publication	Norwich
Description	A4 paper, colour printed, double-sided, spiral bound; PDF
Entered by	Jayne Bown (jayne.bown@nps.co.uk)
Entered on	10 February 2012

OASIS:

Please e-mail English Heritage for OASIS help and advice © ADS 1996-2006 Created by Jo Gilham and Jen Mitcham, email Last modified Friday 3 February 2006 Cite only: /dl/export/home/web/oasis/form/print.cfm for this page Appendix 8: Archaeological Specification



9-10 The Churchyard, Shire Hall Bury St Edmunds Suffolk IP33 2AR

Brief and Specification for Desk-Based Assessment

ANGLIAN WATER BURY DZ – BARNHAM CROSS TO STANTON (1–6) SCHEME AND STANTON TO LT WELNETHAM RES SCHEME

1. Background

- 1.1 A new pipeline has been proposed by Anglian Water between TL 8963 6027 (Little Welnetham) and TL 8643 8077 (Barnham), *c*.29.00km long. (**Please contact the applicant for an accurate plan of the site.**
- 1.2 The proposed development involves the installation of a new water pipeline. Works will take place within a 15m wide stripped easement (with also open-cut sections in the verge) and the 350mm pipe itself will be laid in a narrow trench within it.
- 1.3 Anglian Water has been advised by Suffolk County Council Archaeological Service/Conservation Team (SCCAS/CT) in March 2011 that this project will require a scheme of archaeological investigation before the groundworks begin in line with PPS 5 *Planning for the Historic Environment.*
- 1.4 The proposed route lies in an area of archaeological interest, recorded in the County Historic Environment Record. The route follows, and crosses, the line of a Roman road and passes through one site of national importance (HER no. PKM 005, SAM no. SF116) and very close to another (HER no. RGH 001, SAM no. SF212), as well as many sites of local and/or regional importance. There is high potential for archaeological deposits to be disturbed by development, and aspects of the proposed works would cause significant ground disturbance with the potential to damage any archaeological deposit that exists.
- 1.5 A detailed desk-based assessment of the known and potential archaeology for the proposed route is required as the first part of a programme of archaeological work. Further information concerning the location, extent, survival and significance of the known archaeological remains, as well as the potential for further archaeological remains to survive, is required. This document sets out the requirement for an initial stage of work comprising an archaeological desk-based assessment and walk-over survey.
- 1.6 This initial stage of assessment will to lead to a programme of evaluation (field survey, palaeo-environmental assessment, geophysical survey and trial-trenching). A further archaeological specification will be required for any subsequent stage of work from the desk-based assessment.

2. Objectives

2.1 To collate and assess the existing information regarding archaeological and historical remains within and adjacent to the site. It is important that a sufficiently large area around the target area is studied in order to give adequate context; in this instance a corridor with boundaries 250m either side of the proposed route will be the minimum appropriate.

- 2.2 To identify any known archaeological sites which are of sufficient potential importance to require an outright constraint on development (i.e. those that will need preservation *in situ*).
- 2.3 To assess the potential for unrecorded archaeological sites within the application area.
- 2.4 To assess the likely impact of past land uses (specifically, areas of quarrying) and the potential quality of preservation of below ground deposits, and where possible to model those deposits.
- 2.5 To assess the potential for the use of particular investigative techniques in order to aid the formulation of any mitigation strategy.
- 2.6 An outline specification, which defines certain minimum criteria, is set out below. In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Written Scheme of Investigation (WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to the Conservation Team of the Archaeological Service of Suffolk County Council (9-10 The Churchyard, Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 741225) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the WSI as satisfactory. The WSI will provide the basis for measurable standards.

3. Specification

- 3.1 The assessment shall be undertaken by a professional team of field archaeologists. The archaeological contractor is expected to follow the Code of Conduct of the Institute of Field Archaeologists.
- 3.2 Collation and assessment of the County Historic Environment Record to identify known sites and to assess the potential of the application area.
- 3.2 Collation and assessment of all cartographic sources relevant to the site to identify historic landuse, the siting of old boundaries and any earlier buildings. Where possible copies should be included in the report. *Please remember that copyright permissions should be sought from the relevant bodies for anything included in the report.*
- 3.3 Assess the potential for historic documentation that would contribute to the archaeological investigation of the site.
- 3.4 Re-assessment of aerial photographic evidence and, where relevant, a replotting of archaeological and topographic information by a suitably qualified specialist with relevant experience at a scale of 1:2500. It should be possible to obtain residual errors of less than ± 2m. Rectification of extant mapped features such as field boundaries and buildings shall be undertaken in order to give additional indication of accuracy of the transcription.
- 3.5 Examination of available geotechnical information to assess the condition and status of buried deposits and to identify local geological conditions. Relevant geotechnical data should be included as appendices to the report.
- 3.6 Ascertain whether there are other constraints on the site (e.g. SSSI, County Wildlife Site, AONB, etc).
- 3.7 A site visit to determine any constraints to archaeological survival.

4. Report Requirements

- 4.1 The report shall be submitted within a length of time (but not exceeding 1 month) from the end of fieldwork, to be agreed between the developer and archaeological contractor, with a copy supplied to the County Historic Environment Record. A full digital copy of the report will be supplied to Suffolk County Council Archaeological Service Conservation Team (SCCAS/CT).
- 4.2 Assemble, summarise and order the available evidence.
- 4.3 Synthesise the evidence and place it in its local and/or regional context.
- 4.4 The Report must include a discussion and an assessment of the archaeological evidence within the regional context. The conclusions must include a clear statement of the archaeological potential of the site, highlighting any research priorities, and the significance of that potential in the context of the Regional Research Framework (*East Anglian Archaeology*, Occasional Papers 3 & 8, 1997 and 2000).
- 4.5 Comment on the reliability of the evidence and give an opinion on the necessity and scope for further assessment including field evaluation.
- 4.6 A comprehensive list of all sources consulted (with specific references) should be included.
- 4.7 An unbound hardcopy of the evaluation report, clearly marked DRAFT, must be presented to SCCAS/CT for approval within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and SCCAS/CT.

Following acceptance, two hard copies of the report should be submitted to SCCAS/CT together with a digital .pdf version.

- 4.8 At the start of work (immediately before fieldwork commences) an OASIS online record <u>http://ads.ahds.ac.uk/project/oasis/</u> must be initiated and key fields completed on Details, Location and Creators forms.
- 4.9 All parts of the OASIS online form must be completed for submission to the County Historic Environment Record. This should include an uploaded .pdf version of the entire report (a paper copy should also be included with the archive).
- 4.10 A digital copy of the air photographic evidence should be supplied with the report for inclusion in the County Historic Environment Record; AutoCAD files should be exported and saved into a format that can be can be imported into MapInfo (for example, as a Drawing Interchange File or .dxf) or already transferred to .TAB files and ArcView.
- 4.11 The IFA *Standard and Guidance for Archaeological Desk-Based Assessments* (1999) should be used for additional guidance in the execution of the project and in drawing up the report.
- 4.12 Publication of the results, at least to a summary level (i.e. round up of archaeology in the annual 'Archaeology in Suffolk' section of the *Proceedings of the Suffolk Institute for Archaeology*), shall be undertaken in the year following the archaeological field work. An allowance shall be made within the costs for full publication in an appropriate journal.
- 4.13 The involvement of SCCAS/CT shall be acknowledged in any report or publication generated by this project.

5. Monitoring

5.1 SCCAS/CT will be responsible for monitoring progress and standards throughout the project. This will include the fieldwork, post-excavation and publication stages.

- 5.2 Notification of the start of work shall be given to SCCAS/CT one week in advance of its commencement.
- 5.3 Any variations to the written scheme of investigation shall be agreed with SCCAS/CT prior to them being carried out.

References

Brown, N. and Glazebrook, J.	2000	Research and Archaeology: A Framework for the Eastern Counties 2: research agenda and strategy E. Anglian Archaeol. Occ. Pap. 8
Glazebrook, J.	1997	Research and Archaeology: A Framework for the Eastern Counties 1: a resource assessment. E. Anglian Archaeol. Occ. Pap. 3

Specification by: Dr Jess Tipper

Suffolk County Council Archaeological Service Conservation Team 9–10 The Churchyard, Shire Hall Bury St Edmunds Suffolk IP33 2AR Tel: 01284 741225 Email: jess.tipper@suffolk.gov.uk

Date: 9 June 2011

This brief and specification remains valid for six months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.