
ARCHAEOLOGICAL SOLUTIONS LTD

**A12/ A143 LINK ROAD, BRADWELL, GREAT YARMOUTH,
NORFOLK**

ARCHAEOLOGICAL MONITORING AND RECORDING

NHER: ENF134628

Authors:	Antony R.R. Mustchin (fieldwork and report) Matthew Baker (fieldwork) Gareth Barlow (fieldwork) Vincent Monahan (fieldwork) Thomas Muir (fieldwork)	
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NGR: TG 4996 0305 – TG 5139 0234	Report No: 4969	
District: Great Yarmouth	Site Code: ENF134628	
Approved: Claire Halpin MCIfA	Project No: 5505	
Signed:	Date: 26 October 2015	

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OASIS SUMMARY SHEET

Project details			
Project name	<i>A12/ A143 Link Road, Bradwell, Great Yarmouth, Norfolk</i>		
<i>Between January and July 2015 Archaeological Solutions Ltd (AS) carried out a programme of archaeological monitoring and recording along the route of a proposed new link road, joining the A12 and A143 in the area of Bradwell, near Great Yarmouth, Norfolk. The monitoring was required by Norfolk County Council as a condition of planning approval for the construction of the link road. The monitoring and recording was preceded by a geophysical survey of the site (Smalley 2013), a desk-based assessment, field walking and two phases of archaeological trial trench evaluation (Egan 2012; Fairclough 2014; Lichtenstein 2014; Thompson 2013).</i>			
<i>A review of previously recorded sites and finds from the area, in addition to the results of the earlier phases of the project indicated that the site had an archaeological potential, particularly for remains of prehistoric, Romano-British, medieval and post-medieval date. Of particular note was the site of a possible post-medieval post-mill at the south-eastern end of the road corridor.</i>			
<i>In the event the archaeological monitoring and recording encountered part of a single, post-medieval or modern ditch.</i>			
Project dates (fieldwork)	<i>16/01/2015; 19/01/2015; 11/02/2015; 12/02/2015; 23/02/2015; 11/03/2015; 08/07/2015</i>		
Previous work (Y/N/?)	<i>Y</i>	Future work (Y/N/?)	<i>N</i>
P. number	<i>5814</i>	Site code	<i>ENF134628</i>
Type of project	<i>Archaeological Monitoring and Recording</i>		
Site status	<i>None</i>		
Current land use	<i>Agricultural land</i>		
Planned development	<i>New link road</i>		
Main features (+dates)	<i>Ditch (post-medieval/ modern)</i>		
Significant finds (+dates)	<i>CBM (post-medieval/ modern)</i>		
Project location			
County/ District/ Parish	<i>Norfolk</i>	<i>Great Yarmouth</i>	<i>Bradwell</i>
HER/ SMR for area	<i>Norfolk Historic Environment Record</i>		
Post code (if known)	<i>-</i>		
Area of site	<i>-</i>		
NGR	<i>TG 4996 0305 - TG 5139 0234</i>		
Height AOD (min/max)	<i>c. 8.00 to 12.00m</i>		
Project creators			
Brief issued by	<i>Norfolk County Council Historic Environment Service</i>		
Project supervisor/s (PO)	<i>Baker, M., Barlow, G., Monahan, V., Muir, T. and Mustchin, A.R.R.</i>		
Funded by	<i>Great Yarmouth Borough Council</i>		
Full title	<i>A12/ A143 Link Road, Bradwell, Great Yarmouth, Norfolk. Archaeological Monitoring and Recording</i>		
Authors	<i>Mustchin, A.R.R.</i>		
Report no.	<i>4969</i>		
Date (of report)	<i>October 2015</i>		

A12/ A143 LINK ROAD, BRADWELL, GREAT YARMOUTH, NORFOLK

ARCHAEOLOGICAL MONITORING AND RECORDING

SUMMARY

Between January and July 2015 Archaeological Solutions Ltd (AS) carried out a programme of archaeological monitoring and recording along the route of a proposed new link road, joining the A12 and A143 in the area of Bradwell, near Great Yarmouth, Norfolk. The monitoring was required by Norfolk County Council as a condition of planning approval for the construction of the link road. The monitoring and recording was preceded by a geophysical survey of the site (Smalley 2013), a desk-based assessment, field walking and two phases of archaeological trial trench evaluation (Egan 2012; Fairclough 2014; Lichtenstein 2014; Thompson 2013).

A review of previously recorded sites and finds from the area, in addition to the results of the earlier phases of the project indicated that the site had an archaeological potential, particularly for remains of prehistoric, Romano-British, medieval and post-medieval date. Of particular note was the site of a possible post-medieval post-mill at the south-eastern end of the road corridor.

In the event the archaeological monitoring and recording encountered part of a single, post-medieval or modern ditch.

1 INTRODUCTION

1.1 Between January and July 2015 Archaeological Solutions Ltd (AS) carried out a programme of archaeological monitoring and recording along the route of a proposed new link road, joining the A12 and A143 in the area of Bradwell, near Great Yarmouth, Norfolk (NGR TG 4996 0305 to TG 5139 0234; Figs. 1-2). The monitoring was required by Norfolk County Council as a condition of planning approval for the development of the link road. The monitoring and recording was preceded by a geophysical survey of the site (Smalley 2013), a desk-based assessment, field walking and two phases of archaeological trial trench evaluation (Egan 2012; Fairclough 2014; Lichtenstein 2014; Thompson 2013).

1.2 The archaeological monitoring and recording adhered to a brief issued by Norfolk County Council Historic Environment Service (NCC HES; dated 27/09/2013) and a written scheme of investigation prepared by AS (dated 25/11/2014) and approved by NCC HES. The project conformed to the Chartered Institute for Archaeologists' (2014) *Standard and Guidance for an Archaeological Watching Brief* and relevant sections of Gurney's (2003) *Standards for Field Archaeology in the East of England*.

1.3 The project aims as set out in the written scheme of investigation (Section 4) were:

- to monitor the deeper roadside service trenches to identify any further evidence of the linear cropmark features and discrete features, and record any features associated with the parish boundary in the area of Trenches 19 and 20;
- to monitor and record sections across Gorleston Lane and Clay Lane where the new road corridor crosses these routes, in order to potentially suggest a date for these [routes] which do not appear to date to 18th and 19th century enclosure; and
- to identify any evidence of the post-mill base believed to lie between Evaluation Trenches 25 and 26.

Planning Policy Context

1.4 The National Planning Policy Framework (NPPF 2012) states that those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are heritage assets. The NPPF aims to deliver sustainable development by ensuring that policies and decisions that concern the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation, and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. The NPPF requires applications to describe the significance of any heritage asset, including its setting that may be affected in proportion to the asset's importance and the potential impact of the proposal.

1.5 The NPPF aims to conserve England's heritage assets in a manner appropriate to their significance, with substantial harm to designated heritage assets (i.e. listed buildings, scheduled monuments) only permitted in exceptional circumstances when the public benefit of a proposal outweighs the conservation of the asset. The effect of proposals on non-designated heritage assets must be balanced against the scale of loss and significance of the asset, but non-designated heritage assets of demonstrably equivalent significance may be considered subject to the same policies as those that are designated. The NPPF states that opportunities to capture evidence from the historic environment, to record and advance the understanding of heritage assets and to make this publicly available is a requirement of development management. This opportunity should be taken in a manner proportionate to the significance of a heritage asset and to impact of the proposal, particularly where a heritage asset is to be lost.

2 DESCRIPTION OF THE SITE

2.1 The village and civil parish of Bradwell is located immediately west of Great Yarmouth on the east coast of Norfolk, approximately 2.75km inland. Norwich lies some 27km to the west-north-west. The development site comprises the loosely S-shaped corridor of a proposed new link road, joining the A12 and A143 on the south-western edge of Bradwell (NGR TG 4996 0305 to TG 5139 0234; Figs. 1-2). The

corridor is approximately 2km in length and some 32m wide (overall) along most of its route. The corridor passes through open agricultural land (DP1).

Topography, Geology and Soils

2.2 The site occupies the gently undulating Norfolk coastal plain, some 2km inland and c. 5km east of the confluence of the Rivers Yare and Waveney. The site sits above the solid geology of the Norwich Crag Formation, predominantly composed of fine-grained marine sands with some gravels and clays (British Geological Survey 1978). The site's soils are those of the Wick 3 Association, comprising 'deep well drained coarse loamy often stoneless. Some similar sandy soils. Complex pattern locally. Risk of water erosion' (Soil Survey of England and Wales 1983, 9). These soils are suitable for cereal cultivation (*ibid.*).

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 The archaeological potential of the site, as presented in the project brief (NCC HES) is as follows:

Prehistoric

3.2 High potential. The cropmarks of a probable Bronze Age ring-ditch are located to the south (NHER 12779). Geophysical survey identified a second possible ring-ditch to the north-west of this. Field walking of the Bradwell Strategic Allocation area recovered a total of 113 pieces of prehistoric struck flint (Egan 2012). Cropmarks thought to represent Iron Age activity may extend over the east side of the Bradwell Strategic Allocation area (NHER 45055), and possible pits identified from geophysical survey may be prehistoric.

Romano-British

3.3 Moderate potential. Cropmarks of a possible Roman road or boundary run east to west across the Bradwell Strategic Allocation area (NHERs 43593 and 43591). Other cropmarks of possible Romano-British enclosures, fields or tracks extend onto the Bradwell Strategic Allocation area (NHERs 11584, 43476 and 43467). The highest density of cropmarks appears on the southernmost part of the Bradwell Strategic Allocation area and may be part of the multi-period group (NHER 45057). Geophysical survey identified a group of possible intercutting archaeological features within the north-western part of the Bradwell Strategic Allocation area which may be later prehistoric or Romano-British.

Anglo-Saxon

3.4 Low potential. Stray Anglo-Saxon finds have been found in the surrounding area during metal detecting, the closest approximately 125m from the Bradwell Strategic Allocation area (NHERs 18004 and 39556).

Medieval

3.5 Low to moderate potential. Some of the cropmarks recorded within the Bradwell Strategic Allocation area could be indicative of medieval field boundaries or systems, and sixteen abraded medieval pottery sherds, probably derived from manuring, were found during field walking. Stray metalwork finds have been found in the vicinity during metal detecting

Post-Medieval

3.6 High potential. Geophysical survey and historic maps indicate the presence of post-medieval field boundaries within the Bradwell Strategic Allocation area. A WWII high frequency direction finding station was located on the Bradwell Strategic Allocation area astride Clay Lane (NHER 42232).

4 METHODOLOGY

4.1 The areas/ groundworks monitored (by date; Figs. 4-6) were:

- 16/01/2015: Removal of a tree stump and redundant telecommunications cable on the western edge of Clay Lane (area = c. 20m²) (DPs 2-3).
- 19/01/2015: Stripping of metalled surface and topsoil across Clay Lane (area = c. 120m²) (DP4).
- 11/02/2015-12/02/15: Cutting, laying and backfilling of service trenches across the width of the road corridor in the area of Clay Lane, Gorleston Lane and Roundabout B (Trenches = c. 10-20 x 1.90m (0.80m wide at base) (DPs 5-7).
- 23/02/2015: Cutting of a soakaway trench along the northern edge of the road corridor in the area between Clay Lane and Roundabout B (Trench = 40.00 x 1.90m (0.80m wide at base)) (DPs 8-9).
- 11/03/2015: Cutting of a soakaway trench along the northern edge of the road corridor, across the route of Clay Lane (trench = 40.00 x 1.90m (0.80m wide at base)) (DPs 10-12).
- 08/07/2015: Subsoil strip at the south-eastern end of the road corridor (south-west site of corridor only) between Roundabout D and Excalibur Road (area = c. 4630m²) (DPs 13-14; Fig. 4). Subsoil on the north-eastern side of the road was to be spread across the width of the corridor without exposing the underlying strata.

5 DESCRIPTION OF RESULTS

5.1 A summary of the encountered strata is presented below:

Clay Lane Area Figs.5 & 7

<i>Sample Section 1 (DP 4)</i> 0.00 = 11.44m AOD		
0.00-0.09m	L2000	Surface of Clay Lane. Firm, mid brown silty clay
0.01-0.21m	L2001	Hardcore/ metallated surface of Clay Lane. Friable/ loose, black clinker/ coke and modern CBM with occasional large rounded flint nodules
0.00-0.22m	L2002	Topsoil (sealed by L2001 and extending beyond Clay Lane to the east and west. Firm, mid grey brown silty/ sandy clay
0.22-.039m+	L2003	Natural. Friable, mid orange brown silty sand

<i>Sample Section 2 (Fig. 3; DP 11)</i> 0.00 = 11.58m AOD		
0.00-0.06m (post-strip)	L2004	Subsoil. Firm, pale to mid brown grey silty sand with moderate medium sub-rounded to rounded flint
0.06-1.30m+	L2003	Natural. See Sample Section 1 (Table 1)

Description: Clay Lane comprised a thin surface of clay (L2000) above a modern hardcore/ metallated surface (L2001), largely comprising crushed modern red brick. L2001 sealed Topsoil L2002. Subsoil L2004 was observed underlying the topsoil during the cutting of a soakaway trench across the line of Clay Lane. This shallow material sealed Natural L2003. The monitored area contained no archaeological features or finds.

Area between Roundabout D and Excalibur Road Figs.6 & 7

<i>(DP 13)</i> 0.00 = 10.50m AOD		
0.00-?0.70m	L2000	Topsoil. Already removed (area already stripped to a depth of c. 0.70m)
0.70-1.00m	L2004	Subsoil. Firm, pale to mid brown grey silty sand with moderate medium sub-rounded to rounded flint
1.00m+	L2003	Natural. See above

Description: A post-medieval or modern ditch (F2005) was observed.

5.2 Ditch F2005 was encountered in the area between Roundabout D and Excalibur Road, some 140m north-west of the latter. This feature, possibly representing a former boundary ditch, was linear in plan (aligned E/W), with moderately sloping sides and a concave base (DP14). Only a c. 8.5m section of this feature was exposed. The fill of F2005 (L2006) comprised firm, mottled mid grey brown silty sand (c. 60%)/ pale yellow grey silty sand (c. 20%)/ pale brown yellow

silty sand (c. 20%) with occasional small to medium angular flint. It contained post-medieval or modern CBM. Ditch F2005 cut Natural L2003.

Gorleston Lane Area

5.3 Ground reduction across Gorleston Lane was not monitored. However, the site manager described the strata in this area as comprising the concrete surface of Gorleston Lane overlying the fill and cut of a substantial modern service trench – following the line of the lane – containing several high voltage electrical cables.

6 CONFIDENCE RATING

6.1 In those areas observed it is not felt that any factors inhibited the recognition or recording of archaeological features or finds.

7 DEPOSIT MODEL

7.1 The site was commonly overlain by Topsoil L2002, comprising firm, mid grey brown silty/ sandy clay (up to c. 0.70m thick). In the majority of areas monitored, the topsoil overlay Natural L2003, comprising friable, mid orange brown silty sand. L2003 was encountered at a depth of between 0.22m and c. 1.00m below the modern ground surface. At the south-eastern end of the road corridor, in the area between Roundabout D and Excalibur Road, the natural was sealed by Subsoil L2004. L2004 survived to a thickness of up to 0.30m in this area, although was probably originally more substantial; ground reduction had occurred in this part of the site prior to archaeological monitoring.

8 DISCUSSION

8.1 The site occupies a multi-period settlement landscape and had an archaeological potential, particularly for remains of prehistoric, Romano-British, medieval and post-medieval date. Of particular note was the site of a possible post-medieval post-mill at the south-eastern end of the road corridor.

8.2 In the event the archaeological monitoring and recording only encountered part of a post-medieval or modern ditch containing fragments of CBM. This may have represented a former boundary feature. No evidence of the possible post-mill was encountered at the south-eastern end of the road corridor. However, only the south-western side of the corridor was excavated at this point.

8.3 Both Clay Lane and Gorleston Lane – at least those parts crossing the road corridor – appeared modern in origin. Clay lane comprised a rough trackway overlying a modern hardcore/ metalled surface, while the concrete surface of Gorleston Lane overlay a substantial, modern (20th century) service trench containing several high voltage cables. If Gorleston Lane predates the modern era,

it is likely that any earlier evidence had been lost to the laying of services and the extant concrete surface.

9 DEPOSITION OF THE ARCHIVE

9.1 Archive records, with an inventory, will be deposited at Norwich Castle Museum. The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency.

ACKNOWLEDGEMENTS

Archaeological Solutions Ltd (AS) wishes to thank the client, Great Yarmouth Borough Council, for commissioning and funding the project and for their assistance.

AS would also like to acknowledge the input and advice of Mr James Albone (Norfolk County Council Historic Environment Service)

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Thompson 2013. *South Bradwell, Great Yarmouth, Norfolk. An Archaeological Desk-Based Assessment*, Archaeological Solutions Ltd Report (Bury St Edmunds)

PHOTOGRAPHIC INDEX



1: General shot of surrounding land and Clay Lane, looking NW



2: View along Clay Lane (pre-excitation), looking N



3: Removal of telecommunications cable (Clay Lane), looking S



4: Sample Section 1, looking S



5: Observed strata in service trench to the west of Roundabout C, looking W



6: Observed strata in service trench to the west of Clay Lane, looking E



7: Observed strata in service trench to the east of Roundabout B, looking E



8: Observed strata in soakaway trench between Roundabouts A and B, looking S



9: Backfilling of soakaway trench between Roundabouts A and B, looking W



10: Cutting of soakaway trench across Clay Lane, looking E



11: Sample Section 2, looking N



12: Backfilling of soakaway trench across Clay Lane, looking NW



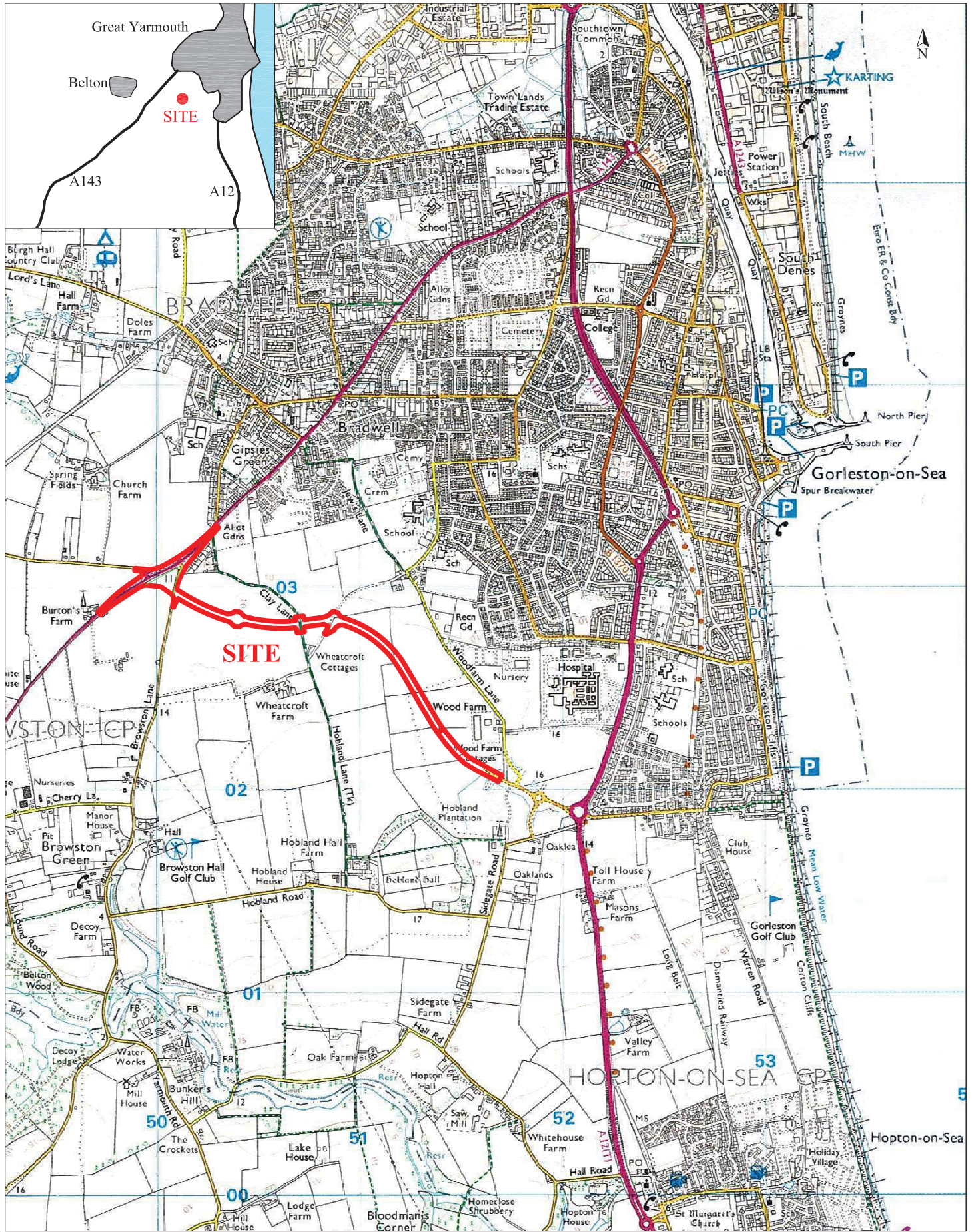
13: Subsoil strip between Roundabout D and Excalibur Road, looking SE



14: Ditch F2005 (post-excavation), looking W

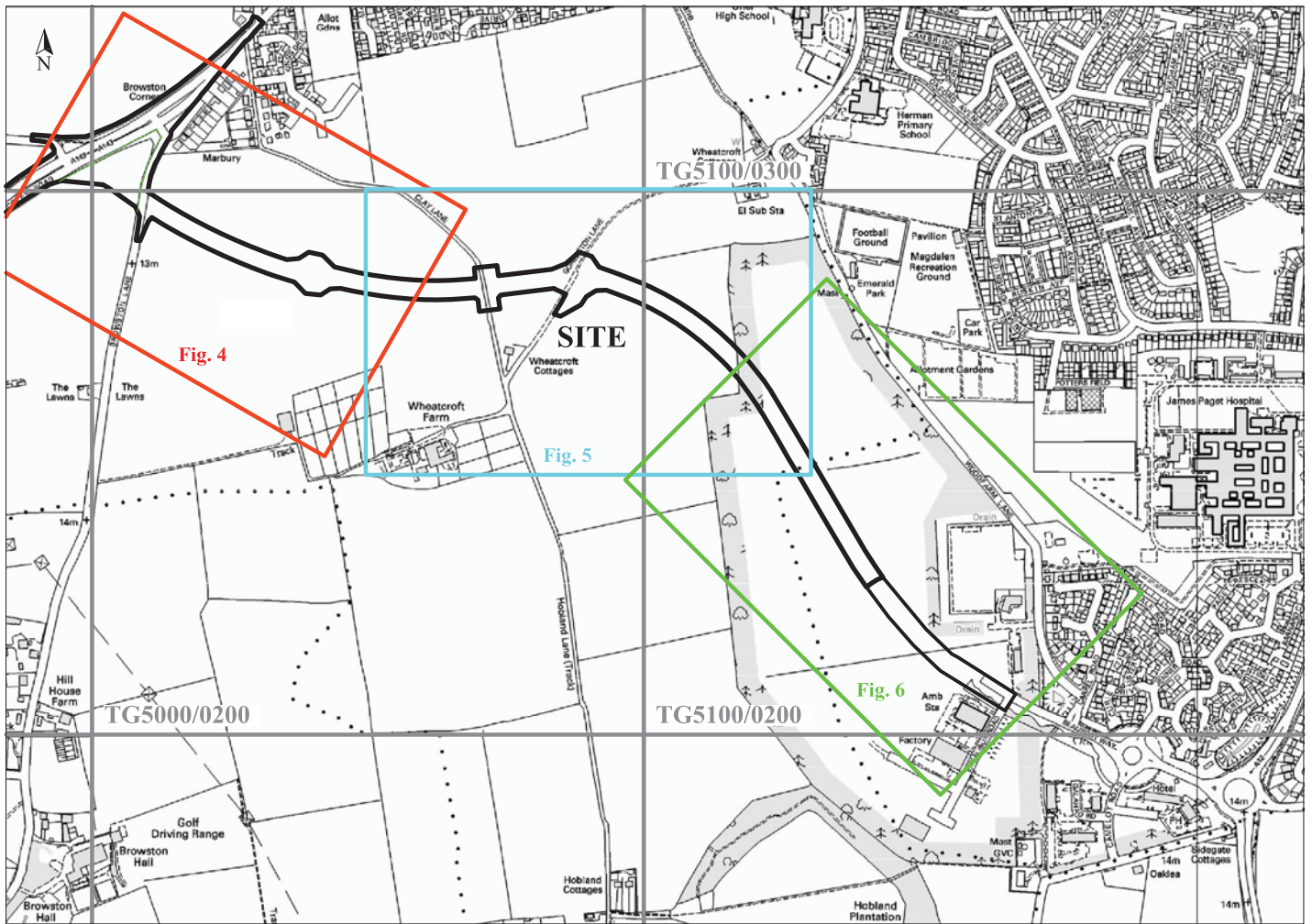


15: Lagoon to south-west of road corridor (south-east end), looking N

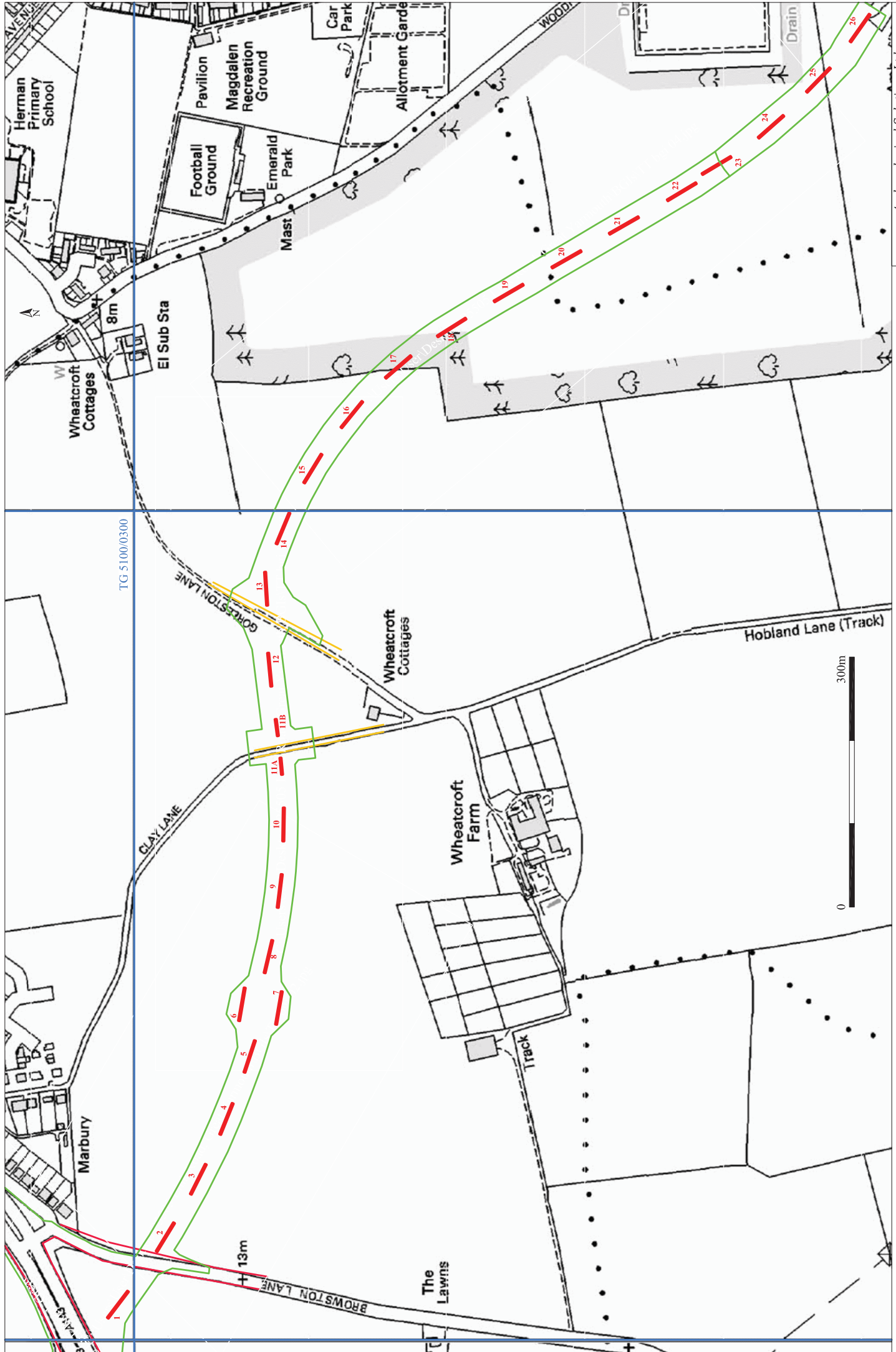


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Fig. 1 Site Location Plan
 Scale 1:25000 at A4
 A143 Link Road, Great Yarmouth, Norfolk (P5505)



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Fig. 2 Detailed site location plan
 Scale 1:12500 at A4
 A143 Link Road, Great Yarmouth, Norfolk (P5505)



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Fig. 3 Trench location plan
 Scale 1:4000 at A3
 A143 Link Road, Great Yarmouth, Norfolk (PS505)

All works are to be carried out by a contractor competent to undertake the type of construction works indicated on this drawing. This drawing is to be read in conjunction with the risk assessment and the hazardous materials schedule. In addition to the hazardous materials normally associated with the type of work detailed on this drawing, note the following:

Construction: C1 - Re-located plant height also to overhead HV cables. Risk of failure on live cable excavation on buried HV Electricity main during construction.
 C2 - Shiba on buried utility during excavation.
 C3 - Shiba on buried utility during excavation.
 C4 - Shiba on energized MV Gas main during excavation.
 C5 - Construction of paved areas/drainage infrastructure next to existing ditch infrastructure being struck by vehicles during construction.

Demolition/Modification: NO significant unusual residual hazards identified at this stage.
Maintenance/Cleaning/Replacement: No significant/ unusual residual hazards identified at this stage.
Environmental: E1 - Works undertaken in vicinity of tree hall.

Key - Existing Utilities and Plant

- Highway/ Freeway Application Boundary
- BT - Overhead
- BT - Jointbox
- Unearthed LV Cable
- Unearthed LV Cable
- Water Line
- LP Gas Mains
- MF Gas Mains
- IP Gas Main
- Virgin Media Line
- Fast Street
- Burton Sewer

Key - New Utilities and Plant

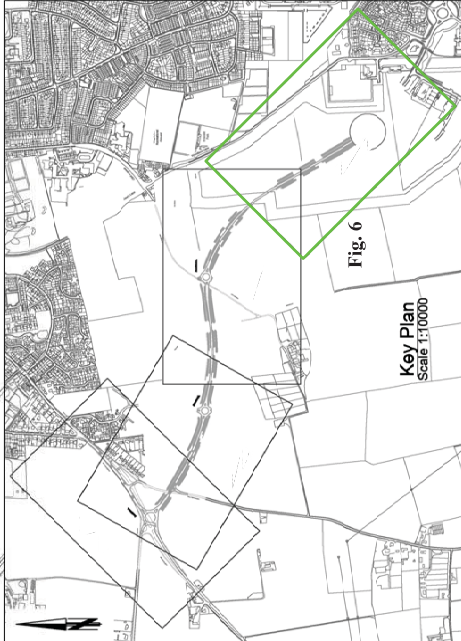
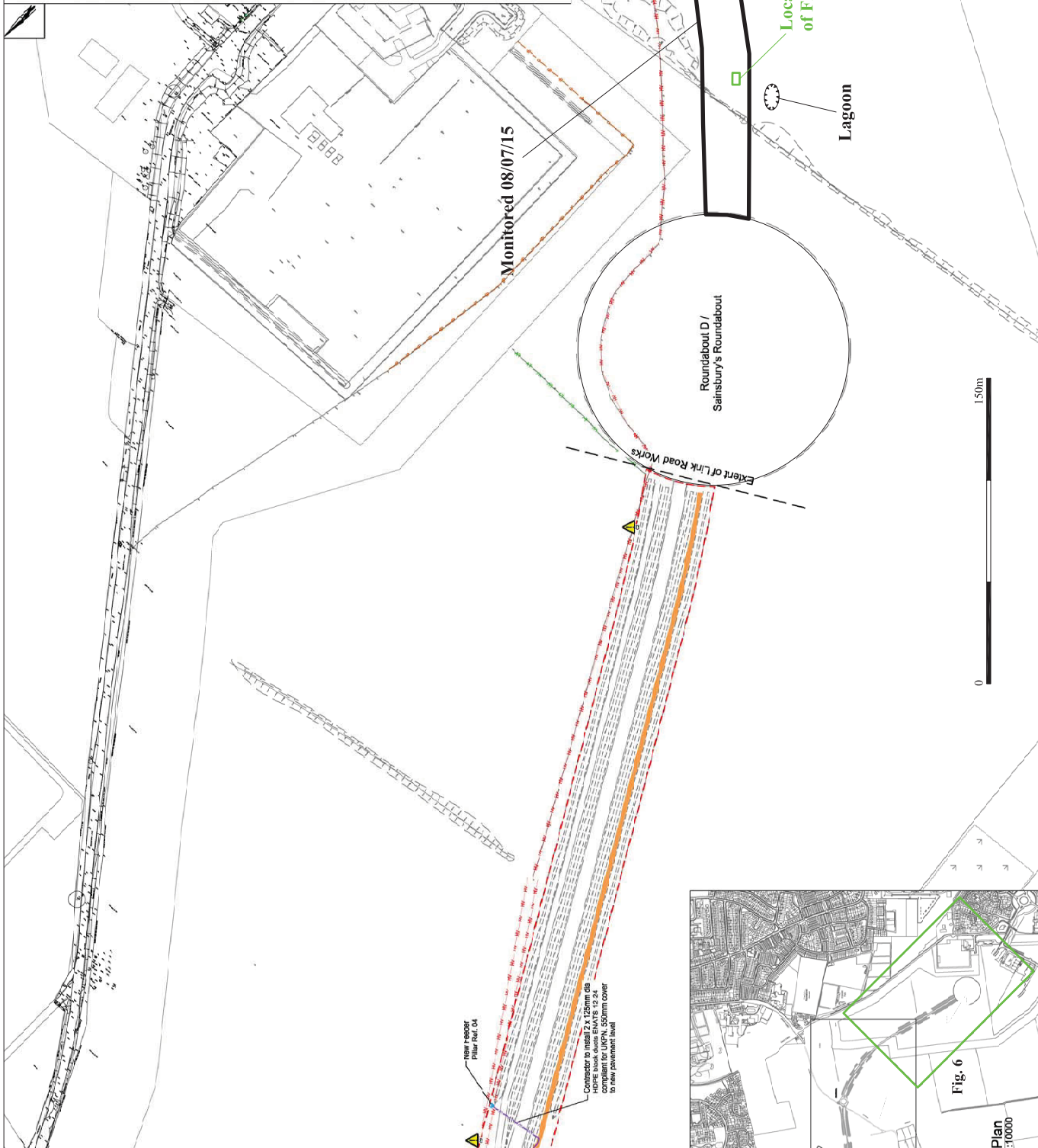
Utilities, Context - Specific layout & details in accordance with the statutory undertaker's design. Refer to drawing for details. All works to be carried out by contractor in this context as part works in a.o.

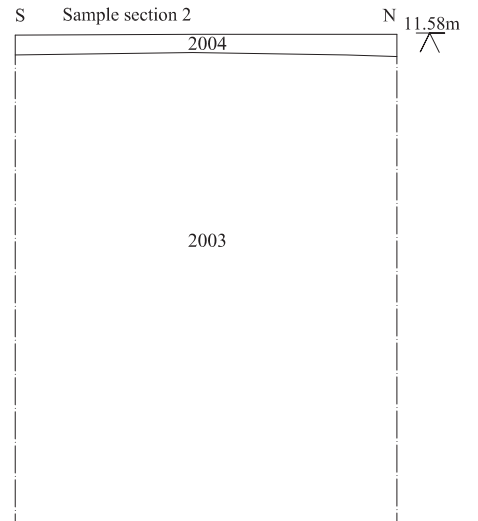
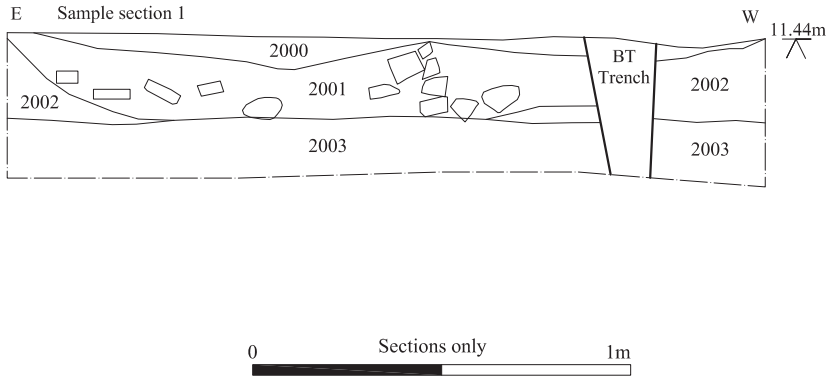
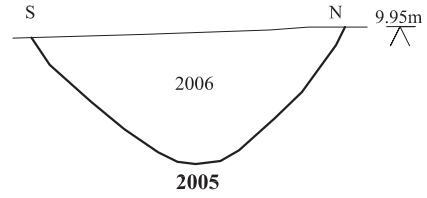
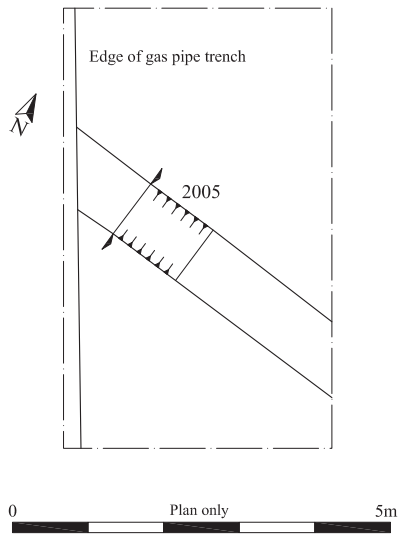
600mm Essex and Suffolk Water Main. Confirmation required on alignment and extent.

450x450mm Twin Wall PVC traffic signal inspection chamber with 200mm dia. manhole and 200mm dia. cover as noted. Installation by contractor.

Revised existing utility profile including the following:

- 200mm dia Gas duct, 250mm cover
- 200mm dia Water duct, 200mm cover
- 2 x 125mm dia Electricity ducts, 600mm cover
- Provide markers at ends of duct. Installation by contractor.
- Medium Pressure (MP) Gas Main installed by National Grid. Excavation and backfilling by contractor.
- Water Main - Refer to Penetration/SD documentation for details.
- RT - Underground duct (to be installed by RT)
- BT - Jointbox (to be installed by BT)
- UNPN (Main, as per UNPN drawing EDS 07 0102.10 Sheet UNPN 1. LV cable in utility corridor. Cable installation by contractor. Cable and cable tray and cable tray to be installed by contractor. 500mm cover over new cable.
- Cable Tray/Tray for strengthening to be installed by contractor.





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Fig. 7 Plan & sections

Scale Plan 1:100, sections 1:20 at A4

A143 Link Road, Great Yarmouth, Norfolk (P5505)