

**CLACTON RISING MAIN REPLACEMENT
CLACTON-ON-SEA
ESSEX**

ARCHAEOLOGICAL MONITORING AND TRIAL TRENCHING



Essex County Council

Field Archaeology Unit

August 2008

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**CLACTON RISING MAIN REPLACEMENT,
CLACTON-ON-SEA, ESSEX
ARCHAEOLOGICAL MONITORING AND TRIAL TRENCHING**

Client: Anglian Water Services Ltd

NGR: TM 614420 214182 to TM 616324 213932

Site code: CSRM 08

ECC FAU project number: 1899

Oasis reference number: essexcou1-46133

Date of fieldwork: 21 April to 15 June 2008

SUMMARY

Archaeological monitoring was carried out along the line of a rising main replacement, running for 2.8km from the West Road pumping station on the western outskirts of Clacton-on-Sea to the sewage treatment works to the west of Jaywick. The archaeological work mainly consisted of monitoring of topsoil stripping over a 15m-wide easement along the pipeline route before the pipe trench was cut.

The pipeline route crosses a landscape containing a high density of potential archaeological sites, recorded as cropmarks on aerial photographs and plotted onto a map base. Probable archaeological sites in the area include ring-ditches for prehistoric round-barrows, and settlement enclosures and field boundaries of possible Iron Age, Roman, Saxon and medieval date. Monitoring of the topsoil stripping found no archaeological deposits, features or finds, mainly because a subsoil layer was left in place which prevented the identification and recording of potential archaeological remains at the surface of the natural clay. Trial trenches were excavated in three locations to investigate areas where cropmarks were mapped directly on the pipeline route, but these recorded only a few undated archaeological features of low significance. With the agreement of the ECC FAU officer, further monitoring during the cutting of the pipeline trench was abandoned as impracticable.

Despite the high density of cropmarks along the pipeline route, no archaeological remains of any significance were recorded on the ground, due to the lack of visibility of archaeological remains masked by subsoil, and probably also due to plough damage where trenches were excavated over potential cropmark sites. A summary of landscape development is attempted from the evidence of the cropmarks and previous excavations in the area, especially that at Bishops Park College only 300m to the north of the pipeline.

1. INTRODUCTION

This report describes the results of archaeological monitoring and trial trenching along the line of the Rising Main Replacement, Clacton-on-Sea, Essex. The archaeological work was carried out by the Essex County Council Field Archaeology Unit (ECC FAU) for Anglian Water Services Ltd, on the recommendation of the Essex County Council Historic Environment Management team (ECC HEM). It was undertaken in accordance with an archaeological brief issued by ECC HEM (2008) and a written scheme of investigation prepared by the ECC FAU (2008). The monitoring was carried out by the ECC FAU in liaison with pipe-laying contractor, Barhale Construction plc.

Copies of this report will be supplied to Anglian Water Services Ltd, ECC HEM, the Essex Historic Environment Record and Colchester and Ipswich Museum. A digital version will be uploaded to the Online Access Index of Archaeological Investigations (OASIS) (<http://www.oasis.ac.uk/>). The project archive, including two copies of the report, will be deposited at Colchester and Ipswich Museum.

2. BACKGROUND

2.1 Location, topography and geology

The pipeline runs for 2.8km across agricultural land between the West Road pumping station on the western outskirts of Clacton-on-Sea and the sewage treatment works west of Jaywick (Fig. 1). It loops round the northern tip of Jaywick and cuts across Rush Green Road and Jaywick Lane.

The topography is predominately flat and low-lying. The surface geology ('natural') mainly comprises brownish yellow plastic clay with occasional large pockets of brownish yellow sand and gravel, and is a glacial deposit. The overlying topsoil is between 0.3m and 0.4m thick and consists of dark greyish brown friable clay silt with occasional gravel.

2.2 Archaeology

The following information has been obtained from the Essex Historic Environment Record (HER), which is held at County Hall, Chelmsford.

The area immediately to the west of Clacton contains a large number of archaeological cropmarks, which have been recorded by aerial photography, mainly between 1976 and

1980, and plotted onto an Ordnance Survey map base (Fig. 2). It is likely that the cropmarks recorded in figure 2 are only a small proportion of the archaeological remains which are actually present, since most archaeological features seldom appear as cropmarks.

Some of the cropmarks are semi-circular or circular (ring-ditches) and are probably the remnants of ditches surrounding prehistoric round-barrows. A large number of ring-ditches are present on both sides of Alton Park Lane c. 500m south of the pipeline. The pipeline route crosses a small cluster of ring-ditches 250m east of Rush Green Road (HER 2930). It also passes near one of two ring-ditches in the area of Sackett's Grove Caravan Park (HER 2942) on the north-western outskirts of Jaywick. A group of five ring-ditches beneath the centre of Jaywick is the remains of a World War II gun emplacement (HER 16878).

The other cropmarks are linear and are the remains of ditches defining trackways, enclosures and fields. The majority of them lie parallel or perpendicular to the existing pattern of land division or are identifiable as boundaries on 19th-century maps and are probably of post-medieval or modern date. However, some of the linear cropmarks are likely to be earlier than this because they appear to be unrelated to the existing field pattern and/or appear to define small enclosures. Some of them perhaps represent prehistoric, Roman or medieval stock enclosures or farmsteads. Early enclosures and field boundaries predating the existing pattern of land division are probably indicated by cropmarks of ditches at an oblique angle near Sackett's Grove Caravan Park, and by an enclosure west of Jaywick, immediately to the north of the sewage treatment plant. Cropmarks of other potentially early enclosures are also evident near the civil amenity tip on Rush Green Road, and immediately south of Alton Park Lane.

Two large archaeological excavations have taken place immediately west of Clacton. That at Lodge Farm, St Osyth (Germany 2007) found Middle Iron Age and later enclosures, trackways and settlement areas overlying a ritual and religious landscape of prehistoric monuments. The other at Bishops Park College, only 300m north of the pipeline route (Letch 2005), recorded Roman and Middle Saxon settlements post-dated by medieval and later field boundaries.

Jaywick was created as a holiday village in the 1920s and 30s. The site of the village was formerly covered by farms and fields.

3. AIMS AND OBJECTIVES

The general aim of the archaeological work was to record any archaeological remains which would be disturbed or destroyed by the pipeline and its easement.

The research objectives for the project were derived from *Research and Archaeology: a Framework for the Eastern Counties, 2. Research Agenda and Strategy* (Brown and Glazebrook 2000).

The specific objectives were:

- To record and excavate archaeological remains along the pipeline route to attempt to reconstruct the sequence of landscape development; and
- To focus on dense areas of archaeological features that could represent areas of settlement (e.g. enclosures, structures, post-holes and pits) or funerary monuments (e.g. ring-ditches and burials).

Prehistoric, Iron Age/Roman, Saxon and medieval remains were to receive greater attention than post-medieval remains. The latter were only to be investigated if they were seen as significant.

4. METHOD

The archaeological monitoring was carried out in accordance with the Institute of Field Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* (IFA 1999a), and the Association of Local Government Officers' *Standards for Field Archaeology in the East of England* (Gurney 2003). The ECC FAU has its own archaeological recording system (ECC FAU 2006) and is a registered archaeological organisation with the Institute of Field Archaeologists.

The archaeological investigation was to consist of:

- An analysis of the area's archaeological cropmarks;
- The archaeological monitoring of the stripping of a 15m wide easement running the length of the pipeline;
- The archaeological monitoring of the cutting of the pipe trench.

The pipe-laying contractor carried out the groundworks using a tracked excavator with a broad toothless bucket for the stripping of topsoil along the easement, and a tracked excavator with a narrow toothed bucket for the cutting of the pipe trench.

The stripping of the easement required the removal of all of the topsoil, apart from the lowest 10-20mm directly overlying the top of the natural clay. This left the archaeological horizon masked by a subsoil deposit at the top of the natural clay and it was therefore impossible to carry out archaeological monitoring in full.

In an attempt to partially overcome this problem, three 30m-long trial trenches were dug after the easement had been stripped in order to investigate the archaeological cropmarks (Figs 1 and 2, trenches A to C). The trenches were measured in to field boundaries and survey points along the easement, which may result in a margin of error due to discrepancies between the designed and actual lines of the pipeline and its easement.

If there were problems in monitoring the stripping of the easement, the ECC HEM brief stipulated that further monitoring should be carried out during the cutting of the pipe trench. This had a Y-shaped profile and was c. 1.5m deep (Fig. 5). It was dug in c. 60m lengths, the pipe was fed into it as it was cut, and each length was then immediately backfilled before the next one was started. As a result there were no clear opportunities for monitoring and recording of the pipe trench, and as soon as this proved impracticable the monitoring was abandoned by agreement with the ECC HEM monitoring officer.

5. FIELDWORK RESULTS

5.1 Monitoring of the Pipeline Easement

The monitoring of stripping of topsoil along the 15m wide pipeline easement recorded no archaeological deposits, features or finds, despite near-continuous attendance. The lowest 20mm of the topsoil was left in place, where a thin subsoil layer had formed by mixing of topsoil and the underlying natural clay. This could not be removed because of strict requirements to re-instate the easement with uncontaminated topsoil. As a result potential archaeological features would have been masked beneath the subsoil. No soil marks from underlying features, or residual finds, were visible in the subsoil.

5.2 Trial Trenches

Within the pipeline easement, three 30m long trenches were excavated through the subsoil layer down to the natural clay in locations where potentially significant cropmark features had been mapped. The locations shown on Figs 1 and 2 are a best fit, with possible errors from discrepancies in surveying the line of the pipeline and easement, and in rectification during mapping of the cropmarks. However, despite possible survey errors 30m trenches were considered to be sufficiently long to straddle the target cropmarks. Further information about each of the archaeological features located by the trenches can be found in Appendix 2.

5.2.1 Trench A

Trench A was excavated along the east side of a cropmark complex west of Jaywick that probably represents a settlement enclosure. The trench was positioned to locate the twin ditches along the east side of the enclosure and a ditch extending eastwards from them. No features were present within the trench, even though the cropmark for the ditch extending east from the enclosure crosses the north of the trench.

5.2.2 Trench B

Trench B was excavated across the cropmarks of parallel ditches aligned north-west to south-east to the west of Sackett's Grove Caravan Park. The cropmarks were not located, although their line crosses the north end of the trench.

A shallow gully aligned nearly east-west (1) and a small pit or post-hole (3) were recorded at the south end of trench B (Fig. 3). Neither contained finds and they are undated. The gully may be a recent drain.

5.2.3 Trench C

Trench C was excavated across the southernmost of a set of cropmarks 250m east of Rush Green Road, representing a cluster of ring-ditches. The ring-ditch cropmark was not located, although only a small error in mapping would have placed the cropmark either to the north or south of the trench.

A ditch aligned north-south (5) was recorded towards the east end of trench C (Fig. 4). This contained no finds and is undated. However, its alignment suggests it is part of the rectilinear medieval and post-medieval field system surviving north-east of Jaywick, evident both as existing boundaries and as cropmarks of disused boundaries. The ditch may have been a sub-division of a field whose eastern boundary and related trackway are recorded as cropmarks only 30m to the east of trench C.

6. CONCLUSIONS

The archaeological monitoring has not located any significant archaeological remains along the pipeline route, including the three locations where trenches were excavated to investigate cropmarks mapped from aerial photographs.

Monitoring of topsoil stripping within the pipeline easement was unproductive because any potential archaeological remains at the surface of the natural clay would have been masked by a thin layer of subsoil that was left in place. No archaeological features or finds were visible in the top of the subsoil. Monitoring of the cutting of the pipe trench was abandoned as impracticable, as the working method was not compatible with archaeological recording.

The trenching did not locate any of the cropmarks that were mapped along the pipeline route. It recorded a small number of archaeological features which contained no finds and are undated, although ditch 5 in trench C was probably a medieval or post-medieval field boundary.

7. ASSESSMENT

7.1 Archaeological survival

The rising main replacement has resulted in a small amount of damage to any buried archaeological remains along the pipeline route. The cutting of the pipe trench has been the main cause of damage, with a smaller amount of disturbance also occurring through vehicles forming ruts in the stripped surface of the easement whilst driving along it in wet conditions. The pipe-trench has disturbed a narrow linear strip with a total area of c. 0.5ha.

The three trenches that were excavated failed to locate cropmarks mapped directly on the line of the pipeline. The trenching recorded few archaeological features and these were undated and of low significance. They also appear to have been truncated, as the largest feature, a 1m wide field boundary ditch in trench C, was only 0.2m deep. For comparison, an area excavation at Bishops Park College, Jaywick Lane, only 300m north of the pipeline, recorded surviving ditches, pits and post-holes, but with variable truncation by ploughing, and total truncation of features in some areas. This variable survival of features may also be characteristic of the pipeline route.

7.2 Landscape development

The few archaeological features discovered by the trenching are unlikely to be a true reflection of the range and density of the archaeological remains that are actually present to the west of Clacton, as suggested by the extensive cropmarks in the area, and large-scale excavations at Lodge Farm, St Osyth (Germany 2007) and Bishops Park College, Jaywick Lane, only 300m north of the pipeline (Letch 2005). These excavations give an indication of the intensity and types of activity which are likely to have taken place west of Clacton. Their combined evidence suggests that the area began to be opened up for farming c. 3500 BC, was characterised by concentrations of ritual and funerary monuments throughout most of the Neolithic and Bronze Age, and became increasingly enclosed and populated by farmsteads from the Iron Age onwards.

Although no remains were recorded on the pipeline route, the cropmarks in the area confirm the sequence of landscape development recorded at St Osyth and Bishops Park College. The large number of ring-ditches suggests the presence of groups of round-barrows in the Neolithic and Bronze Age (Fig. 2, yellow cropmarks), although the excavation at Bishops Park College suggests that trackways and fields were being laid out by the Bronze Age (Letch 2005, 55-8). Evidence of Roman and Middle Saxon settlement has also been recorded at Bishops Park College (Letch 2005, 58-9).

The form of the present-day landscape is likely to stem from the medieval period, with field systems becoming more developed in the post-medieval period as a result of enclosure. Most of the cropmarks in the area of the pipeline represent field boundary ditches aligned with existing field boundaries, and date from at least the post-medieval period (Fig. 2, green cropmarks). The main boundaries in the rectilinear field system to the north of the pipeline are most likely to be of medieval origin, as a group of field ditches and a trackway recorded on the same alignment at Bishops Park College are dated to the 13th-14th centuries (Letch 2005, 60-1). However, the rectangular enclosures west of Jaywick, and to its east, near Rush Green Road and Alton Park Lane are laid out on different alignments and could represent earlier farmsteads dating from any of the Iron Age, Roman, Saxon or medieval periods (Fig. 2, purple cropmarks).

In the 19th and 20th centuries the field systems have been extensively rationalised, with merging of smaller fields into larger ones. The biggest transformation of the area took place in the late 19th and 20th centuries, with the development and expansion of Clacton as a seaside resort, and the foundation of Jaywick as a seaside village.

ACKNOWLEDGEMENTS

The Essex CC Field Archaeology Unit thanks Anglian Water Services Ltd for commissioning and funding the archaeological monitoring and trenching, especially Dan Finbow for his help during set-up. Thanks are also due to Terry Warrie of Barhale Construction plc, the pipe-laying contractor, for his help and co-operation during the monitoring work.

The archaeological fieldwork was carried out by Andrew Robertson and Mark Germany of the Essex CC Field Archaeology Unit. The illustrations in this report were drawn by Andrew Lewsey. The project was managed by Patrick Allen of the ECC FAU and was monitored by Adrian Gascoyne of the Essex County Council Historic Environment Management team.

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APPENDIX 1: TRENCH DATA

All dimensions (length x width x depth) are in metres

Trench	Dimensions	Co-ordinates
A	29 x 2.3 x 0.1	TM 614488 214324 (north); TM 614475 214298 (south)
B	32 x 2.3 x 0.1	TM 614624 214610 (north); TM 614610 214582 (south)
C	31.75 x 2.3 x 0.1	TM 615810 214649 (north-west); TM 615839 214636 (south-east)

APPENDIX 2: CONTEXT DATA

All dimensions (length x width x depth) are in metres

No.	Trench	Category	Description	Date
1	B	Gully	(3+ x 0.54 x 0.18). Linear, straight edged, moderately-sloping sides, flat base. Filled by 2	Undated
2	B	Deposit	Single fill of 1. Not recorded. No finds	Undated
3	B	Post-hole	(0.50 x 0.47 x 0.16). Circular, moderate to steeply-sloping sides, slightly concave base. Filled by 4	Undated
4	B	Deposit	Single fill of 3. Not recorded. No finds	Undated
5	C	Ditch	(2.5 + x 1 x 0.22). Linear, straight edged, moderately-sloping sides, slightly uneven base. Filled by 6	Undated
6	C	Deposit	Single fill of 5. Not recorded. No finds	Undated

APPENDIX 3: CONTENTS OF ARCHIVE

- 1 Copy of this report
- 1 Copy of the archaeological brief
- 1 Copy of the written scheme of investigation
- 1 Context register sheet
- 6 Context sheets
- 1 Plan register sheet
- 2 Sheets of site drawings and notes
- 26 Digital photographs (CD disc)

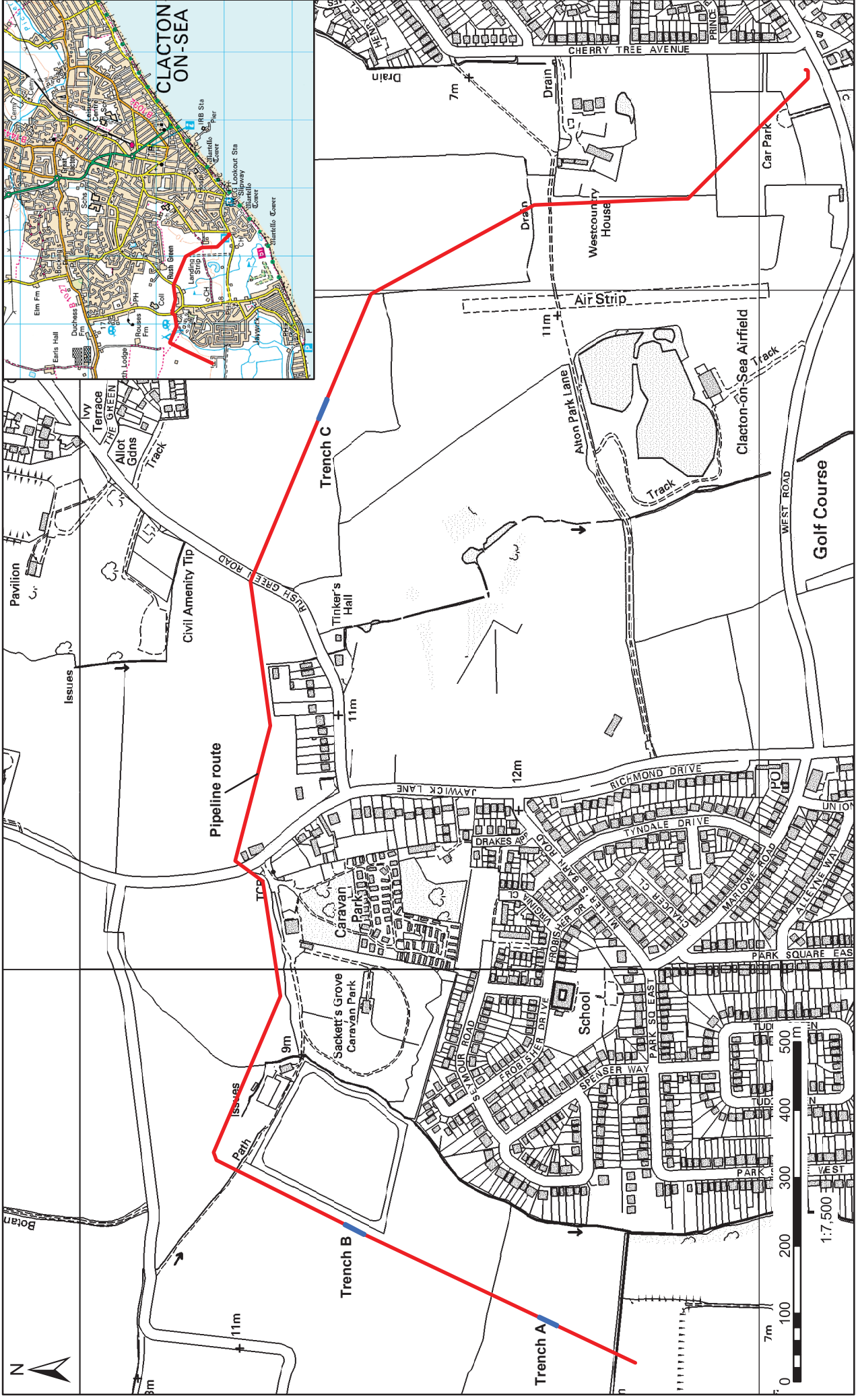
APPENDIX 4: HISTORIC ENVIRONMENT RECORD SUMMARY

Site name/Address: Clacton Rising Main Replacement, Clacton-on-Sea	
Parish: Clacton	District: Tendring
NGR: TM 614420 214182 to 616324 213932	Site Code: CSRM 08
Type of Work: Archaeological monitoring and trial-trenching	Site Director/Group: Andrew Robertson and Mark Germany, Essex County Council Field Archaeology Unit
Date of Work: 21/4/08 to 15/6/08	Size of Area Investigated: Pipeline easement: 4.2ha 3 trenches, totalling 213m ²
Location of Finds/Curating Museum: Colchester and Ipswich Museum	Client: Anglian Water Services Ltd
Further Seasons Anticipated?: No	Related EHR Nos.: 2930 and 2942
Final Report: Essex Archaeology and History (summary)	
Periods represented: Modern	
SUMMARY OF FIELDWORK RESULTS:	
<p>Groundworks for a rising main replacement running from the West Road pumping station on the western outskirts of Clacton-on-Sea to the sewage treatment works on the western side of Jaywick were monitored by the Essex County Council Field Archaeology Unit for archaeological deposits, features and finds. The groundworks comprised the cutting of the pipe trench and the stripping of a 15m wide easement. The archaeological work also included an assessment of the archaeological cropmarks as previously identified by aerial photography within the area to the west of Clacton. Some of the cropmarks (HER 2930 and 2942) extended into the area of the easement strip and these were investigated by the stripping of three trial-trenches. The archaeological work was commissioned by Anglian Water Services Ltd and was monitored by the Essex County Council Historic Environment Management team.</p> <p>The required method for the cutting of the pipe trench and the stripping of the easement was found to be un-complementary to the identification and recording of archaeological remains, and consequently the monitoring found no significant archaeological deposits, features or finds. The trial-trenching revealed a several linear features and a small pit or post-hole, although these turned out to be undatable.</p>	
Previous Summaries/Reports:- Germany, M. 2008 <i>Clacton Rising Main Replacement, Clacton-on-Sea, Essex. Archaeological Monitoring and Trial-trenching</i> . Essex CC Field Archaeology Unit Report 1899	
Author of Summary: Mark Germany	Date of Summary: July 2008



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Fig. 1. Location plan



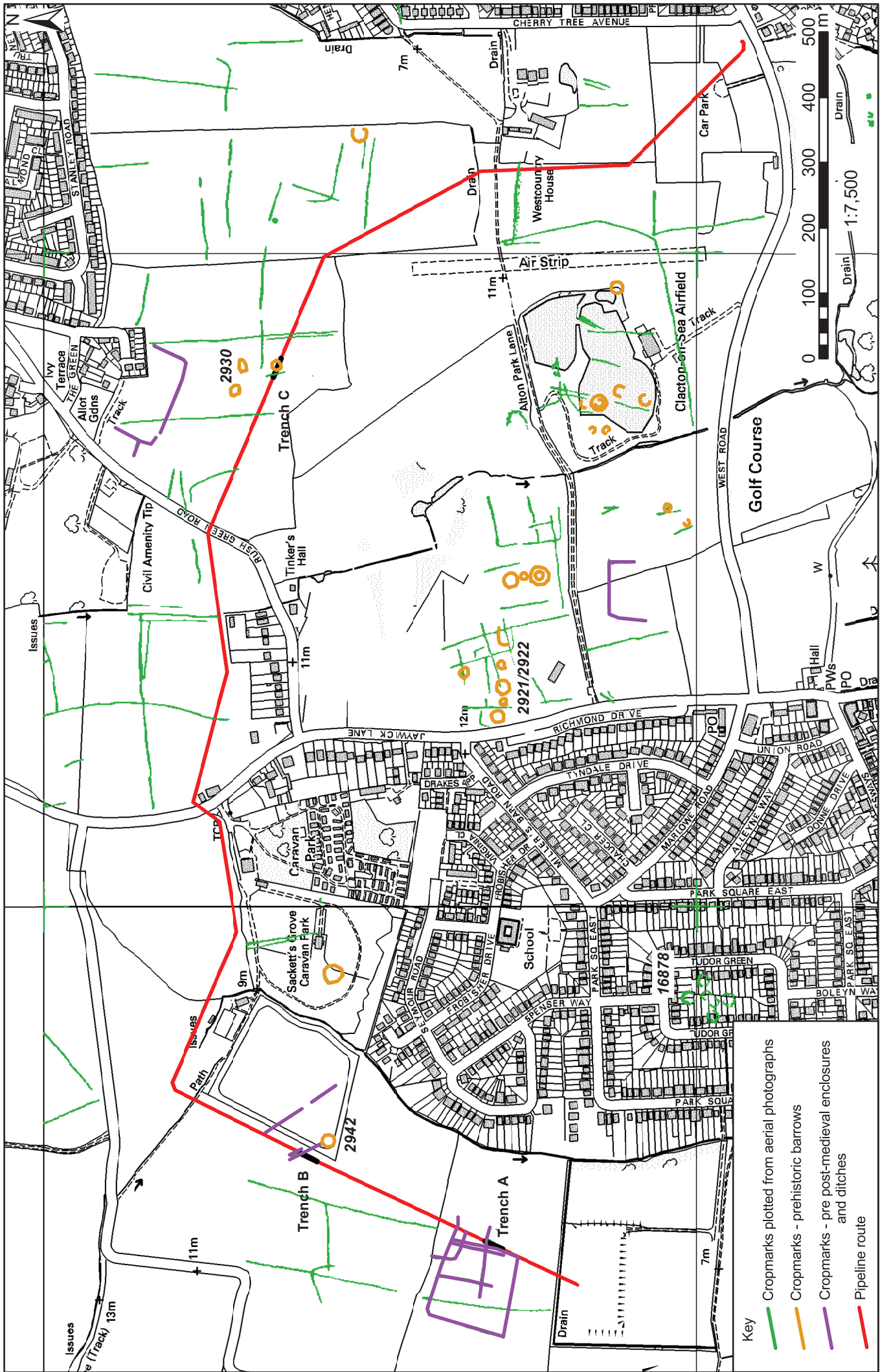


Fig.2. Pipeline route with cropmarks plotted from aerial photographs with HER references

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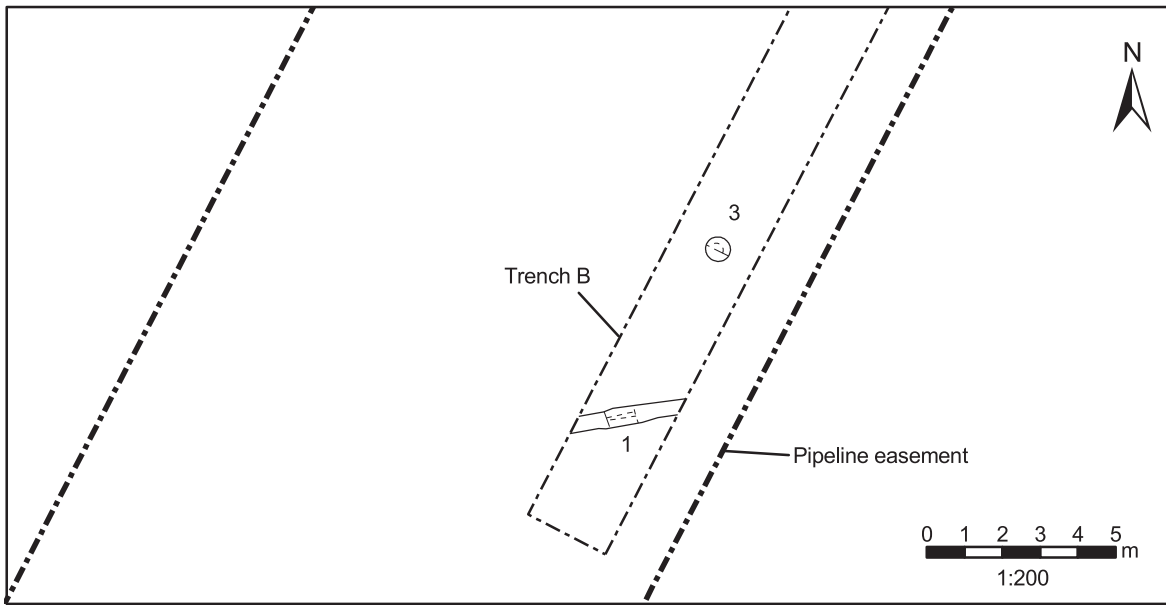


Fig.3. Trench B

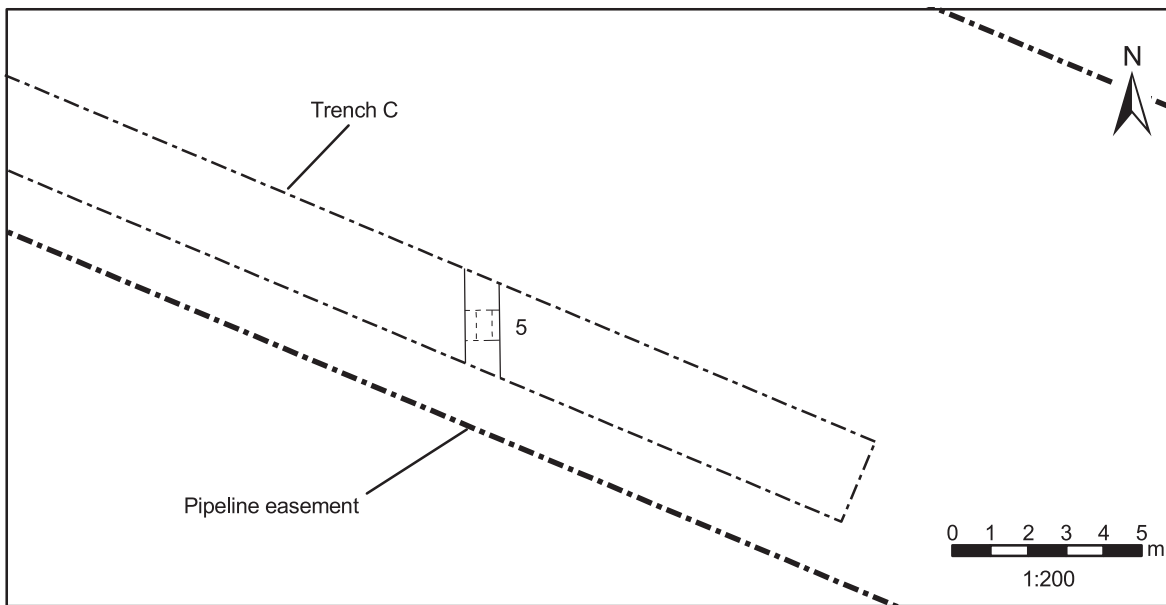


Fig.4. Trench C

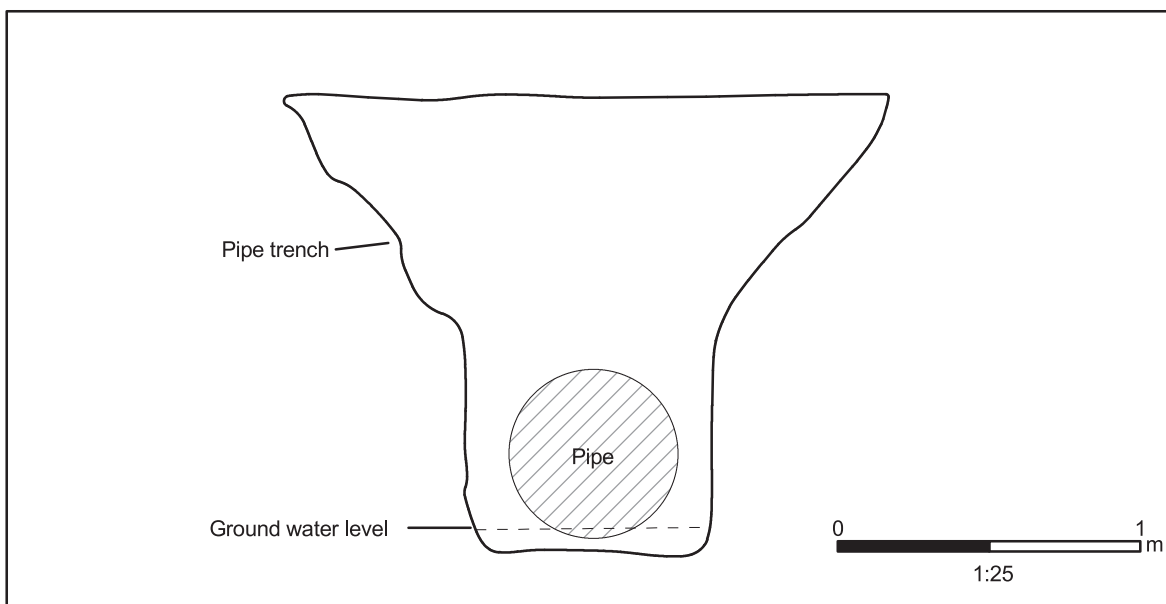


Fig.5. Representative profile through pipe trench