



Lound to Gorleston Pipeline Archaeological Monitoring Off Hall Road, Lound, Suffolk

Client:

Essex & Suffolk Water

Date:

February 2018

LUD 085

Archaeological Monitoring Report

SACIC Report No. 2018/006

Author: Catherine Douglas

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Lound to Gorleston Pipeline, Lound LUD 085

Archaeological Evaluation Report

SACIC Report No. 2018/006

Author: Catherine Douglas

Illustrator: Ryan Wilson

Editor: Richenda Goffin

Report Date: February/2018

HER Information

Site Code: LUD 085
Site Name: Lound to Gorleston Pipeline
Report Number: 2018/006
Date of Fieldwork: 26th January 2018
Grid Reference: 650372 300489
Oasis Reference: suffolka1-307246
Curatorial Officer: Abby Antrobus
Project Officer: Catherine Douglas
Client/Funding Body: Essex and Suffolk Water

Digital report submitted to Archaeological Data Service:

<http://ads.ahds.ac.uk/catalogue/library/greylit>

Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of Suffolk Archaeology CIC. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk Archaeology CIC cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By: Catherine Douglas

Date: February 2018

Approved By: Rhodri Gardner

Position: Director

Date: March 2018

Signed:



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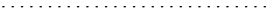





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Summary











Archaeological monitoring of a topsoil and subsoil strip was carried out at land northwest of Hall Road in Lound. A single trench measuring 60m by 1.6m was machine excavated down to the level of the geological horizon. No archaeological finds or features were identified. Only naturally occurring deposits were encountered, along with modern truncations and disturbance relating to the Lound Water Treatment Works.

Drawing Conventions

Plans

- Limit of Excavation 
- Features 
- Break of Slope 
- Features - Conjectured 
- Natural Features 
- Sondages/Machine Strip 
- Intrusion/Truncation 
- Illustrated Section  S.14
- Cut Number **0008**
- Archaeological Feature 

Sections

- Limit of Excavation 
- Cut 
- Modern Cut 
- Cut - Conjectured 
- Deposit Horizon 
- Deposit Horizon - Conjectured 
- Intrusion/Truncation 
- Break in Section 
- Cut Number 0089
- Deposit Number **0088**
- Ordnance Datum S N
55.27
 

1. Introduction

An archaeological monitoring was carried out on land northwest of Hall Road in Lound, Suffolk (Fig. 1) with work carried out on the 26th January 2018. The monitoring was required along the route of a new pipeline installed by Essex and Suffolk Water that runs between Lound and Gorleston.

A topsoil and subsoil strip of a section of the pipeline measuring approximately 60m in length was monitored to the level of the natural geological surface, situated at NGR 650372 300489. This was carried out in advance of the full excavation of the pipeline, in order to inspect the area for archaeological finds or features, as the pipeline excavation has the potential to damage or destroy any archaeological deposits that may exist if the eventual depths of disturbance interfere with the archaeological horizon.

The aim of the monitoring was to record any archaeological deposits affected by the site investigation works. The monitoring work required was detailed in a Risk Assessment and Method Statement (RAMS), prepared by Rhodri Gardner of Suffolk Archaeology (Appendix 1).

2. Geology and topography

The site lies 0.5km north of the village of Lound, in a wooded area immediately north of Mill Water reservoir, to the east of Fritton Decoy. It is bounded by farmland to the north, Hall Road to the east and the reservoir to the south and west. The site is situated on a south facing slope, at approximately 7m AOD in the northeast part of the site, sloping down to 1m AOD by the reservoir to the southwest.

The site geology consists of superficial deposits of Happisburgh Glacigenic Formation Sand, which overlie Crag Group Sand and Gravels (British Geological Survey, 2018).

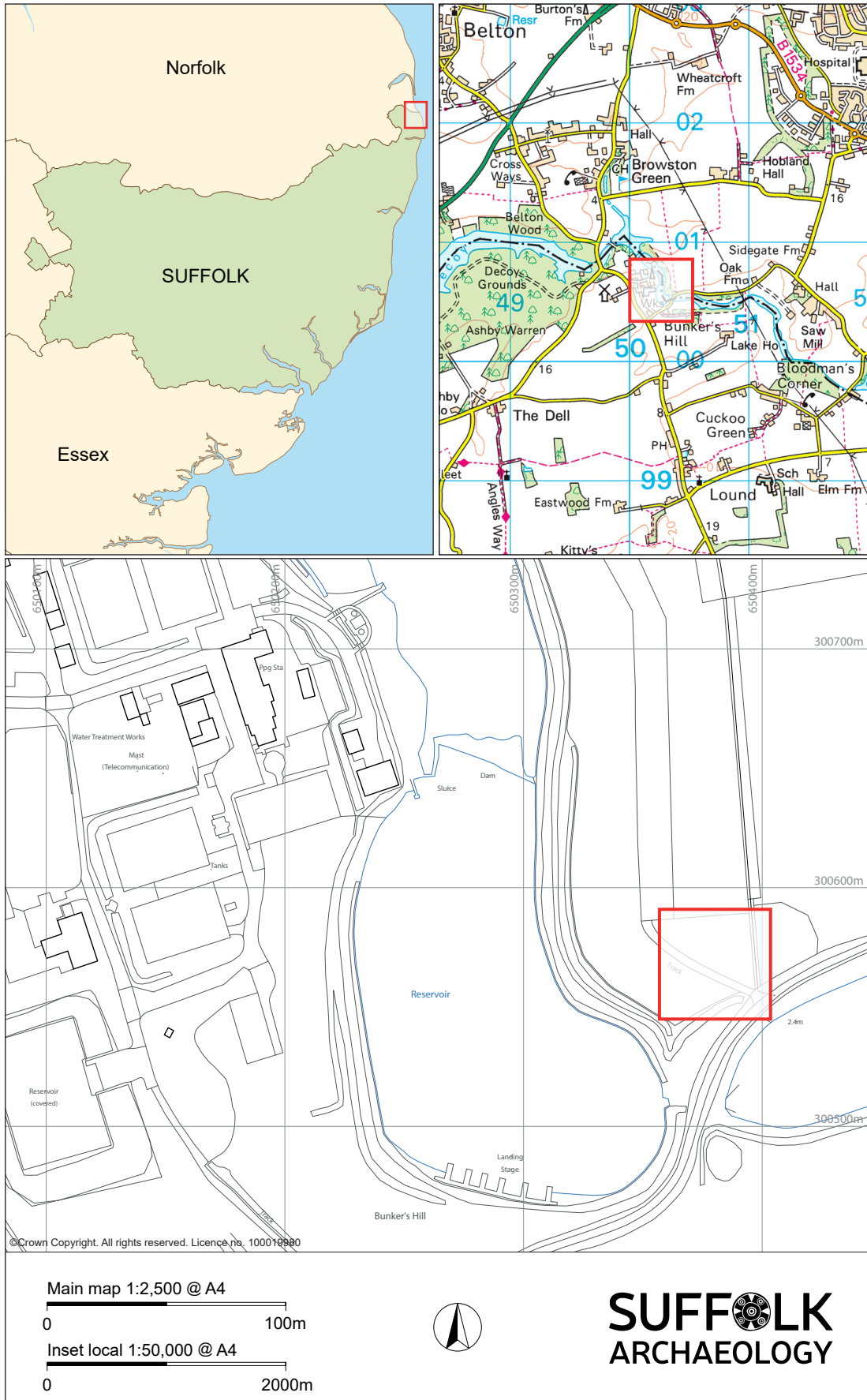


Figure 1. Location of site showing development area (red)

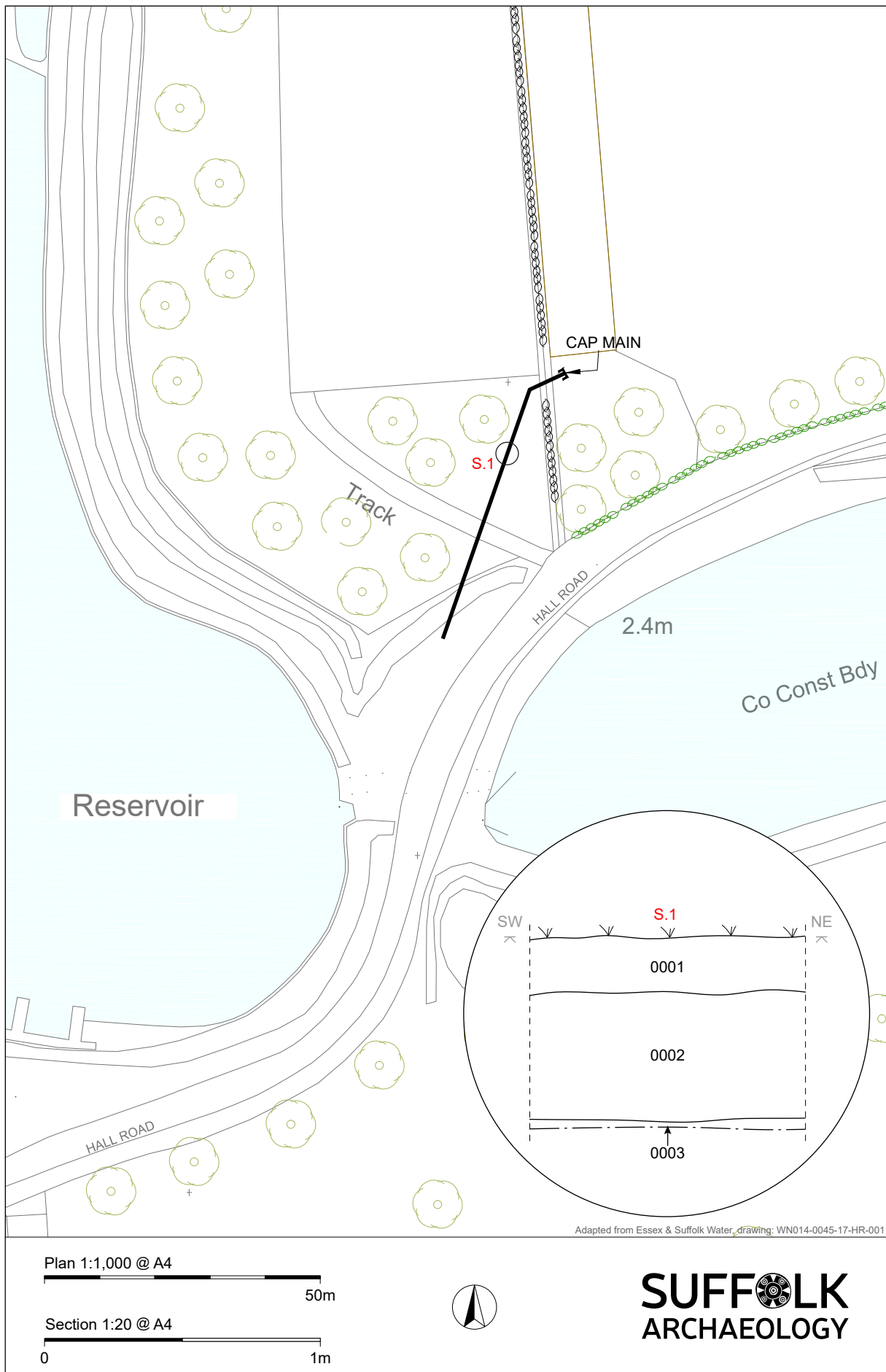


Figure 2. Location of monitored area (black); inset, a sample cross-section

3. Archaeology and historical background

The following section provides a summary of the readily available archaeological and historical background to the development site and its environs. Part of the information is taken from the archaeological evaluation report 'No. 2 Paddock, The Street, Lound, Suffolk' (Douglas 2017) with due acknowledgement.

Prehistoric

Several prehistoric find spots have been recorded within 1km of the site. A Neolithic flaked axe, was recorded at Eastwood Farm, 0.93km southwest of the site (LUD 025). A scraper, two blade like flakes and a small flake were found whilst metal detecting 0.59km to the west (LUD 034). A small prehistoric sandstone saddle quern was identified 0.7km southwest of the site (LUD 028).

A trial trench evaluation at Lound water treatment works revealed single prehistoric pit in the southwest corner of site (LUD 033).

Roman

An extensive area of coaxial and rectilinear field systems, trackways and enclosures of unknown, but feasibly Roman and/or medieval to post medieval in date are recorded 0.57km southeast of the site (LUD 016), across a large area (approximately 4km by 1.5km) of the Lound and Somerleyton, Ashby and Herringfleet parishes, from aerial photographs. Some of these cropmarks were previously recorded under ASY 003, ASY 016 and LUD 023. It is not possible within the current project scope to attempt to refine the phasing of this large field system. It is likely that it represents more than one phase of features that follow a similar alignment or re-use and incorporate earlier boundaries. There is also some clear crossover and joining of seemingly separate phases of fields in place, in particular west of Manor Farm at Lound (formerly recorded as LUD 023), where elements of another co-axial system (SOL 010), assumed by be earlier, are incorporated.

Post-medieval

The Lound waterworks engine house is a listed building, located 0.2km northwest of the site (LUD 011). Water is purified from huge storage lakes dug out around 1900 and the water is supplied to Lowestoft and the surrounding area. The land around the lakes is of great natural beauty and a haven for wildlife.

4. Methodology

A linear trench was excavated, measuring a length of approximately 60m by a width of 1.6m. The location is shown on Figure 2.

The trench was scanned prior to excavation using a Cable Avoidance Tool (CAT). It was opened using a 360° tracked mechanical excavator equipped with a 1.6m wide bladed ditching bucket in order to provide a good clean cut.

Excavation was carried out under the continuous supervision of an archaeologist. Mechanical excavation, in spits of no more than 0.25m, of undifferentiated topsoil and subsoil was carried out down to the top of the underlying geology, which was inspected for archaeological features. Spoil heaps were checked for artefacts.

Contextual information was recorded in a unique continuous numbering system on SCCAS Field Team pro-forma context sheets under the relevant HER code, LUD 085.

A photographic record comprising high resolution digital shots was maintained throughout the monitoring.

Site data has been input onto an MS Access database and recorded using the County HER code LUD 085. An OASIS form has been completed for the project (reference no. suffolka1-307246, Appendix 2) and a digital copy of the report submitted for inclusion on the Archaeology Data Service database (<http://ads.ahds.ac.uk/catalogue/library/greylit>). The site archive will be kept at the SACIC office in Needham Market until it is deposited with the Suffolk County Council Archaeological Service under HER code LUD 085.

5. Results

5.1 Introduction

The trench was excavated to 0.67m below ground surface level at the bottom of the slope in the southwest end of the site, and a deeper level of 1.20m at the top of the hill in the northeast. No archaeological finds or features were identified.

5.2 Geology and overburden

The natural geological surface, 0003, generally consisted of pale whitish yellow sand. In many parts of the trench, the natural was truncated and disturbed. The southwest end of the trench was particularly heavily truncated, and filled with large pieces of concrete and backfilled netlon fencing. In the centre of the trench there was an area of crushed bricks and tar. However, in many parts of the trench the natural sand remained intact. At the top of the hill the sand was redder and contained patches of gravels.

The natural was immediately overlain by a layer of subsoil, 0002, consisting of pale-mid greyish brown fine sandy silt containing occasional pebbles. The thickness ranged from 0.47m at the southwest end of the trench to 1.00m in the northeast end. This was overlain by 0.20m of topsoil, 0001, consisting of mid-dark greyish brown loose/friable silt, containing occasional small stones.

5.3 Archaeological results

No archaeological finds or features were identified. The spoil heap was inspected for finds, but none were recovered. A drawing of the trench section is shown on Figure 2 and plates 1-4 show photographs of the monitored area.

The reservoirs are first shown on the 1906 county series OS map. Prior to this, the water treatment works is shown on the 1884 Ordnance Survey map, with small buildings on the location of the current site and the words 'liable to floods' on the area that is now a reservoir. There was a Methodist chapel opposite the current site, on the east of Hall Road. It is possible that some of the spoil (redeposited sand) from the excavation of the reservoirs around 1900 was deposited on the current site, as the trees growing on the site are relatively young. The ground disturbance is likely to be from modern activities related to the water treatment works.



Plate 1. Monitored area facing southwest



Plate 2. East facing section of monitored area



Plate 3. Southwest end of monitored area (facing southwest)



Plate 4. Location of monitored area shown in the distance, on the bank beyond the reservoir (facing northeast)

6. Conclusions

A single trench measuring 60m by 1.6m was machine excavated. No archaeological finds or features were identified. Only naturally occurring deposits were encountered, along with modern truncations and disturbance relating to the water treatment works.

7. Archive deposition

The site archive will be kept at the SACIC office in Needham Market until it is deposited in the SCCAS Archive store at Bury St. Edmunds, Suffolk.

8. Acknowledgements

The fieldwork was carried out by Catherine Douglas.

Project management was undertaken by Rhodri Gardner and Stuart Boulter.

Post-excavation management was provided by Richenda Goffin.

The report illustrations were created by Ryan Wilson and the report was edited by Richenda Goffin.

9. Bibliography

Gardner, R., 2018, *Lound to Gorleston Pipeline, Essex and Suffolk Water: Risk Assessment and Method Statement (RAMS) for Archaeological Watching Brief*, SACIC

Douglas, C., 2017, *Number 2 Paddock, The Street, Lound, Suffolk: Archaeological Evaluation Report*, SACIC Report number 2017/091

Website

British Geological Survey
mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed on 30/01/18)

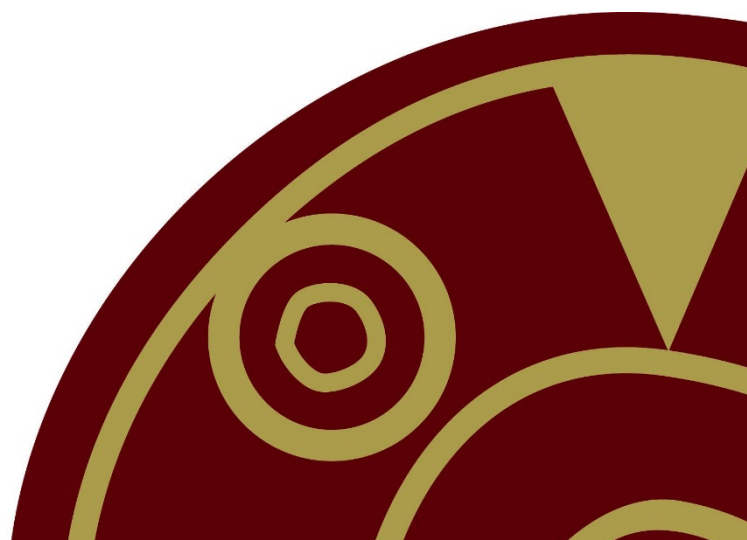
Appendix 1. Risk assessment and method statement



Lound to Gorleston Pipeline, Essex & Suffolk Water

Risk Assessment and Method Statement (RAMS)
for
Archaeological Watching Brief

Project Type: watching Brief
Date: January 2018
Prepared by: Rhodri Gardner
Issued to: Nick Finch, AECOM
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Summary Project Details

Site Name	Lound to Gorleston Pipeline Archaeological Monitoring
Site Location/Parish	Lound
Grid Reference	NGR TM 5037 0049
Access	Off Hall Road
Planning Application No	TBC
HER code	TBC
Type:	Watching Brief
Area	Small c. 60m long pipeline strip
Project start date	26 th January 2018
Fieldwork duration	c. 1 day
Number of personnel on site	Up to 2

Personnel and contact numbers

SACIC Project Manager	Rhodri Gardner	01449 900120
Project Officer (first point of on-site contact)	TBC	
Curatorial Officer	Abby Antrobus	01284 741231
Consultant	Nick Finch (AECOM)	

Emergency contacts

Local Police	Suffolk Constabulary, Lowestoft Police Station, Old Nelson Street, Lowestoft NR32 1EQ	01473 613500
Location of nearest A&E	James Paget Hospital, Lowestoft Road, Gorleston-on-Sea, Great Yarmouth, NR31 6LA	01493 452452

Hire details

Plant:	N/A	
Accommodation Hire	N/A	
Tool hire:	N/A	

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2. Method Statement
3. Risk Assessment

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1. Health and Safety Policy
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3. Accident Log Sheet
4. Near Miss Log Sheet
5. Site Induction Sign Off Sheet

1 Task Description

- 1.1 Suffolk Archaeology have been contracted to carry out a programme of archaeological work (monitoring/watching brief) at a location along part of the route of a new pipeline installed by Essex and Suffolk Water that runs between Lound and Gorleston. This RAMS covers this phase of work only.
- 1.2 Before commencing work all Suffolk Archaeology staff (and subcontractors if relevant) will read this document and sign the induction sheet to acknowledge their understanding of its contents.
- 1.3 The site area is an approximately 60m long section of pipeline, which lies at NGR TM 5037 0049.
- 1.4 The location of this area is shown in Figure 1.
- 1.5 This site area is to be stripped of topsoil under archaeological supervision. Once the archaeological level is reached mechanised excavation will cease. Any exposed features are then to be recorded in plan and excavated as necessary to fulfil the requirements of the LPA's brief.
- 1.6 Until archaeological features are excavated and cleared no heavy plant movements across unexcavated features can take place. As soon as features are adequately recorded the area can be handed over to the Principal Contractor to enable free movement/construction activity.
- 1.7 As part of this work it may be necessary to recover artefacts or take soil samples which then require removal from site.



Contains Ordnance Survey data © Crown copyright and database right 2018

Figure 1. General site location

2 Method statement

- 2.1 The first action upon arriving on site for the first time will be attendance at the main contractor's site induction.
- 2.2 If necessary, before any plant or vehicles under the control of Suffolk Archaeology enter the site the supervising Project Officer will conduct a walkover to assess immediate conditions and ensure that there is adequate space for deployment of the required resources.
- 2.3 If Suffolk Archaeology staff have been delegated responsibility for locking/unlocking access by specific agreement with the client, then on completion they will ensure that all access is returned to the condition in which it was found at the commencement of the works.
- 2.4 All archaeological fieldwork will be carried out by full-time professional employees of Suffolk Archaeology. The project team will be led in the field by an experienced member of staff of Project Officer Grade.
- 2.5 Plant operations will be undertaken by Jackson Civil Engineering, and all plant operators will be holders of the appropriate CPCS card for the plant under their control.
- 2.6 The project will be carried out in accordance with the Suffolk Archaeology Health and Safety Policy at all times. This Policy is shown in Appendix 1.
- 2.7 Particular hazards to staff and subcontractors identified with this project are as follows:
- Working with plant** – risk of being accidentally struck by machinery while it is excavating or moving on site.
- Outdoor working** – hazards to staff from severe weather and uneven ground.
- Deep excavations** – hazards represented by deep trenches or excavation edges, and the associated risk of injury from collapse.
- Use of hand tools** – hazards include injuries from being accidentally struck, injured by poorly maintained equipment or tripping because of incorrectly stowed tools.
- Damage to services** – principal risks are of serious injury resulting from the striking of live services. Also serious risks of contamination, wastage and inconvenience if services are disrupted.
- 2.8 All staff will be issued with a copy of the project's risk assessment and will receive a safety induction from the Project Officer. All permanent Suffolk Archaeology excavation staff are holders of CSCS cards.
- 2.9 It may be necessary for site visits by external specialists, Local Planning Authority Curators and client representatives. All visitors will be expected to wear appropriate PPE and will undergo inductions as required. PPE is not restricted to the list below – additional items may be provided if circumstances require it.
- 2.10 **PPE required** in this case includes:
- Hard Hat (to EN397)

- High Visibility Clothing – **including trousers** (EN471 Class 2 or greater)
- Eye Protection (safety glasses to at least EN 166 1F)
- Safety Footwear (EN345/EN ISO 20346 or greater – to include additional penetration-resistant midsole)

Other PPE that may be deployed as necessary includes:

- Gloves (to EN388)

- 2.9 Site staff, official visitors and volunteers are all covered by Suffolk County Council insurance policies, details of which are shown in Appendix 2.
- 2.10 A qualified first aider will be on site at all times. The location of the first aid kit will be made known to all staff and kept accessible at all times.
- 2.11 Any injury will be reported and the Accident Report form completed and returned to the appropriate Suffolk Archaeology responsible person (Rhodri Gardner). An accident log sheet is provided in Appendix 3 if required. Any such accidents or incidents will also be reported to the main contractor.
- 2.12 No previously known buried services are known in the identified excavation areas. If previously unknown services or similar restrictions are encountered during work on site then they will be respected in all circumstances. Work will cease entirely in the locations where they are identified. All mechanical excavation will be carried out under the control of Jackson Civil Engineering.
- 2.13 All archaeological supervision of machine excavation will be carried out by suitably experienced staff. At no time will any staff approach the machine closer than its working radius. If close inspection of stripped surfaces is required the machine will be asked to move out of range. If such movement is not practicable due to the close confines of the site then the machine will cease working completely.
- 2.14 Archaeological finds will be brought back to the Suffolk Archaeology premises for processing, preliminary conservation and packing. Appropriate methods of packing for removal from site and suitable manual handling assessments and techniques will be used should heavy items require removal.
- 2.15 Bulk environmental soil samples (40 litres each) may also be removed from site. These samples are kept in proprietary containers. Suitable arrangements for their removal will again be put in place if large numbers of samples need to be removed.
- 2.16 If human remains are encountered on the site, guidelines from the Ministry of Justice will be followed. During the evaluation any exposed human remains will be securely covered and hidden from the public view at all times when they are not attended by staff. At the conclusion of the work backfilling will be carried out in a manner sensitive to the preservation of such remains. If circumstances dictate that the lifting of human remains is unavoidable then a Ministry of Justice Licence for their removal will be obtained prior to their removal from site.

2.17 When archaeological hand excavation works are complete any excavated features will be left in excavated condition. No backfilling (whether by hand or machine) will be undertaken, unless by specific prior agreement. The site will be handed over to the Principal Contractor in this condition which may mean the presence of a number of shallow open features.

3 Risk Assessments for Archaeological Excavation

- 1 Working with plant machinery (for archaeological operatives)
- 2 Physical work outdoors
- 3 Deep excavations
- 4 Use of hand tools
- 5 Damage to services
- 6 Unexploded Ordnance (UXO)

1-5 = Low risk

6-12 = Medium risk

20-25 = High risk

All the risk assessments presented here will be supplemented and/or updated if conditions on the ground change substantially during the course of Suffolk Archaeology's time on site.

Any breaches of Health and Safety procedures which expose anyone to any of the risks outlined below without the described control measures will be reported immediately as near misses and suitable escalation/reporting undertaken to the responsible person in Suffolk Archaeology (Rhodri Gardner).

Risk Assessment 1a: Working with plant machinery (for archaeologists)

Activity	Hazard	Risks	Persons affected	Initial risk	Control Measures	Residual risk	Assessor	Date
Direction and supervision of tracked 360 ^o excavator.	Staff in close proximity to excavation (operation of bucket & manoeuvre of boom).	Accidental contact with boom or bucket or unexpected movement of machine, including a falling or detached bucket.	Principally SPO/PO, but at times may involve others.	10	<p>Only PO to supervise machinery.</p> <p>No personnel to be within radius of boom.</p> <p>All staff to wear high visibility clothing, hard hats and safety footwear at all times.</p> <p>All plant operators to hold current CPCS cards.</p> <p>Engines to be switched off and keys removed if operator leaves the cab.</p> <p>Ensure plant is well maintained, with daily inspection sheets to be completed prior to each use.</p> <p>Semi-automatic quick hitches are banned on JBC sites. Safety pins to be in place for manual hitches. Carry out “shake test” before use of bucket.</p>	5	R Gardner	24/01/18

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk	
Residual Risk	

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 2: Physical work outdoors

Activity	Hazard	Risks	Persons affected	Initial risk	Control Measures	Residual risk	Assessor	Date
Hand excavation of archaeological features. Moving around an archaeological site.	Extremes of heat, cold and wet weather. Trip hazards. Exertion due to manual labour.	Hypothermia, heat stroke and sunburn due to weather. Minor injuries/strains from physical work.	All archaeological field staff.	9	All staff provided with/to wear appropriate clothing for weather conditions. No staff to work alone in extreme conditions. Good housekeeping. Regular sweep for trip hazards.	2	R Gardner	24/01/18

	Likelihood				
Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk	
Residual Risk	

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 3: Deep excavations

Activity	Hazard	Risks	Persons affected	Initial risk	Control Measures	Residual risk	Assessor	Date
Excavation of trial trenches. Excavation of larger discrete archaeological features.	Trench collapse, falls and work in confined spaces.	Physical injury from falls or collapsing material.	All field staff and visitors if in close proximity to deep excavation areas.	12	No excavation beyond safe depth in any circumstances. If trial trenching: no excavation of trenches beyond 1.2m, or shallower is deposits are unconsolidated and present a higher risk of collapse in the judgement of the Project Officer. Store spoil away from the top of excavation edges. Inspect deep excavations regularly. Exclusion fencing (netlon mesh-type) to be erected around deep excavations.	2	R Gardner	24/01/18

	Likelihood				
Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk	
Residual Risk	

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 4: Use of hand tools

Activity	Hazard	Risks	Persons affected	Initial risk	Control Measures	Residual risk	Assessor	Date
Excavation of archaeological features using shovels, mattocks, forks, wheelbarrows and other small tools.	Splinters from poorly maintained equipment, trip hazards from unused equipment, accidental striking of personnel in close proximity. Occasional heavy lifting.	Minor injuries from most hazards. Possibility of rarer severe injury if accidentally struck by heavier tools.	All staff.	8	<p>Ensure all tools in serviceable condition. With regular inspection of equipment on site and in stores.</p> <p>Careful policing of unused equipment (e.g. no discarded hand tools near trench edges)</p> <p>Ensure all tools carried appropriately.</p>	4	R Gardner	24/01/18

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk =	
Residual Risk =	

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 5: Damage to services

Activity	Hazard	Risks	Persons Affected	Initial risk	Control measures	Residual risk	Assessor	Date
Machine excavation of trial trenches.	Accidental damage to cables or other services (water, sewerage, communications etc.)	Electrocution, environmental damage/pollution, inconvenience to nearby residents, costs for repair reinstatement.	Machine operator and Project Officers. Sometimes others if in close proximity or crossing affected area.	20	All excavations to be controlled by JBC's permit to dig system. Use of CAT scanner and generator. Carefully observed excavation at all times. No unattended mechanical excavation (particularly in built-up areas).	5	R Gardner	24/01/18

	Likelihood				
Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk =	20
Residual Risk =	5

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Risk Assessment 6: Unexploded Ordnance (UXO)

Activity	Hazard	Risks	Persons Affected	Initial risk	Control measures	Residual risk	Assessor	Date
Machin excavation of trial trenches. Or hand excavation of features.	Striking UXO causing detonation.	Death, serious injuries and burns.	Machine operator and Project Officers. Sometimes Site Assistants if caused as a result of hand excavation.	20	Client to provide survey of known services before commencement. Use of CAT scanner and metal detector. Carefully observed excavation at all times. No unattended mechanical excavation (particularly in built-up areas). Advice sought from proper authorities if evacuation and disposal required.	5	R Gardner	24/01/18

	Likelihood				
Severity	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Initial Risk =	
Residual Risk =	

Likelihood	Severity	Risk (likelihood x severity)
1. Highly unlikely	1. Slight inconvenience	1-5 Low
2. May occur but very rarely	2. Minor injury requiring first aid	
3. Does occur but only rarely	3. Medical attention required	6-12 Medium
4. Occurs from time to time	4. Major injury leading to hospitalisation	
5. Likely to occur often	5. Fatality or serious injury leading to disablement	13-25 High

Appendix 1. Suffolk Archaeology CIC Health and Safety Policy



HEALTH AND SAFETY POLICY STATEMENT

Suffolk Archaeology Community Interest Company is committed to ensuring the health, safety and welfare of its employees, and it will, so far as is reasonably practicable, establish procedures and systems necessary to implement this commitment and to comply with its statutory obligations on health and safety. Our Personnel are informed of their responsibilities to ensure they take all reasonable precautions, to ensure the safety, health and welfare of those that are likely to be affected by the acts and emissions of our organisations undertakings.

Suffolk Archaeology Community Interest Company understands our duty to identify the significant hazards that may be created by our undertakings and to risk assess these accordingly to ensure that suitable and effective controls are implemented to minimise risk to a suitable level as far as is reasonably practicable.

We also acknowledge our duty, so far as is reasonably practicable:

- To provide a safe working environment for our workforce, fulfil our statutory commitments and actively manage and supervise health and safety at work;
- To identify the risks associated with our business activities and ensure suitable and sufficient control measures are in place.
- Ensure regular consultation with our employees on matters which affect their health and Safety.
- To ensure that all plant and equipment used by our employees is fit for purpose and adequately maintained.
- To provide suitable storage and ensure safe handling of Hazardous substances.
- To ensure that all workers are competent to undertake their daily work activities by providing all relevant information and training, consideration will also be given to any employees who do not have English as a first language.
- To prevent accidents and cases of work related ill health by ensuring a robust reporting and investigation system is in place.
- To liaise and communicate effectively regarding health and safety matters when working on other persons premises.
- To ensure that there is an effective system of induction, training, communication and supervision to other persons visiting or working on our premises.
- To have access to competent advice, this will be provided by Agility UK (Training and Consultancy) Ltd. Who will assist us in the continuous improvement in our health and safety performance and management through regular review and revision of this policy; and to provide suitable resources required to make this policy and our Health and Safety arrangements effective.

To ensure that the above are met we have developed a 'Health and Safety Management Structure' identifying key personnel responsible for managing health and safety within the organisation and 'Safety Arrangements' to assist the implementation.

Signature:		Date:	01/02/2017
Name:	Rhodri Gardner	Position:	Managing Director

The policy is reviewed on a periodic basis.

Appendix 2. Suffolk Archaeology CIC Insurance Policy Details



To Whom It May Concern

Our Ref: TM/

23 January 2018

Dear Sir / Madam

Our Client: Suffolk Archaeology C I C

We act as Insurance Brokers for the above-mentioned client and confirm the following cover is in force:

Public Liability

Limit of Indemnity - £5,000,000 any one occurrence

INSURER	Aviva Insurance Limited
POLICY NUMBER	24765101CHC/JN/010136
EXPIRY DATE	01/02/2019

Employers Liability

Limit of Indemnity - £10,000,000 any one occurrence.

INSURER	Aviva Insurance Limited
POLICY NUMBER	24765101CHC/JN/010136
EXPIRY DATE	01/02/2019

Professional Indemnity

Limit of Indemnity - £5,000,000 in respect of any one claim

INSURER	Hiscox Insurance Limited
POLICY NUMBER	9446228
EXPIRY DATE	01/02/2019

The cover has been issued on the insurers standard policy form and is subject to their usual terms and conditions. A copy of the policy wording is available on request.

The Insurance evidenced by this Certificate is subject to the terms, and conditions and exclusions of the applicable policies which is paramount. This certificate is issued as a matter of information only and evidences coverage as at the date of the certificate. This certificate confers no rights to the holder and imposes no liability on the Insurer. The Insurer assumes no responsibility to the holder of the certificate to provide any notice of any material change in or cancellation of these policies.

Yours faithfully,

A handwritten signature in black ink, appearing to be "Tariq Mian".

Tariq Mian Cert CII
Senior Account Executive
Towergate Insurance

Towergate Insurance

Jellicoe House, Grange Drive, Hedge End, Southampton SO30 2AF
Tel: **0344 892 1656** Fax: **0344 892 1657** Email: southampton@towergate.co.uk
www.towergateinsurance.co.uk

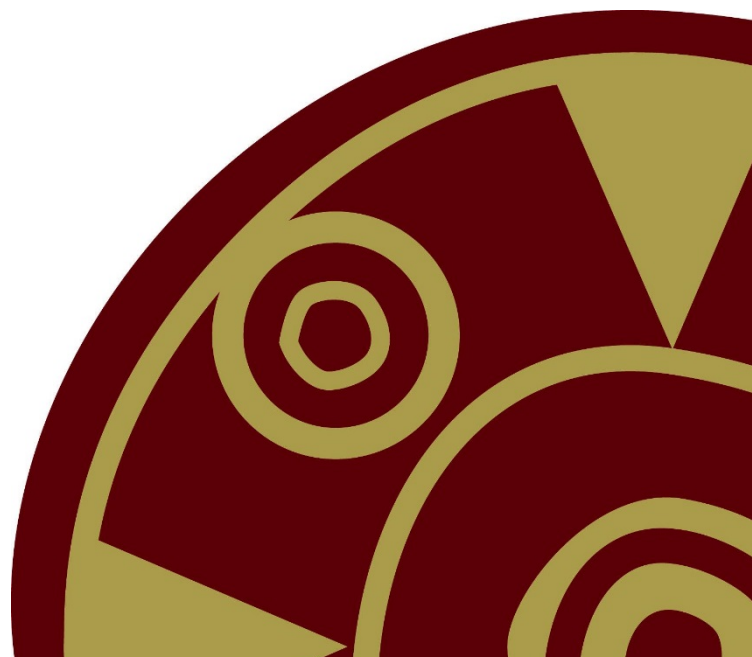
Towergate Insurance is a trading name of Towergate Underwriting Group Limited, Registered in England No. 4043759
Registered address: Towergate House, Eclipse Park, Sittingbourne Road, Maidstone, Kent ME14 3EN. Authorised and regulated by the Financial Conduct Authority



Suffolk Archaeology CIC

Unit 5 | Plot 11 | Maitland Road | Lion Barn Industrial Estate Needham Market | Suffolk | IP6 8NZ

01449 900120



Appendix 2. Oasis form

OASIS ID: suffolka1-307246

Project details

Project name	Lound to Gorleston Pipeline, Sessex and Suffolk Water
Short description of the project	Archaeological monitoring of a topsoil and subsoil strip was carried out at land northwest of Hall Road in Lound. A single trench measuring 60m by 1.6m was machine excavated down to the level of the geological horizon. No archaeological finds or features were identified. Only naturally occurring deposits were encountered, along with modern truncations and disturbance relating to the Lound Water Treatment Works.
Project dates	Start: 26-01-2018 End: 26-01-2018
Previous/future work	No / Yes
Any associated project reference codes	LUD 085 - Sitecode
Type of project	Research project
Site status	None
Current Land use	Woodland 7 - Scrub
Investigation type	"Watching Brief"

Project location

Country	England
Site location	SUFFOLK WAVENEY LOUND Lound to Gorleston Pipeline, Essex and Suffolk Water
Postcode	NR32 5NA
Study area	60 Square metres
Site coordinates	TM 5037 0049 51.646686117342 1.619523444972 51 38 48 N 001 37 10 E Point
Height OD / Depth	Min: 1m Max: 7m

Project creators

Name of Organisation	Suffolk Archaeology CIC
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project director/manager	Rhodri Gardner
Project supervisor	Catherine Douglas

Type of sponsor/funding body Water Authority/Company

Name of sponsor/funding body Essex and Suffolk Water

Project archives

Physical Archive Exists? No

Digital Archive recipient Suffolk HER

Digital Media available "Database","Images raster / digital photography","Images vector"

Paper Archive recipient Suffolk HER

Paper Media available "Context sheet","Report","Section"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title Lound to Gorleston Pipeline Monitoring

Author(s)/Editor(s) Douglas, C.

Other bibliographic details 2018/006

Date 2018

Issuer or publisher Suffolk Archaeology CIC

Place of issue or publication Needham Market, Suffolk

Description One A4 paperbound report

Entered by Catherine Douglas
(catherine.douglas@suffolkarchaeology.co.uk)

Entered on 31 January 2018

Appendix 3. Context list

Context Number	Feature Number	Area	Feature Type	Category	Description	Interpretation	Length	Width	Depth	Over	Under
0001	0001	Topsoil strip for pipeline	Topsoil	Layer	Mid-dark greyish brown loose/friable silt containing occasional small stones	Topsoil. Fairly consistent across the site	>60.00	>1.60	0.20	0002	
0002	0002	Topsoil strip for pipeline	Subsoil	Layer	Pale-mid greyish brown fine sandy silt containing occasional pebbles	Subsoil. Seen throughout all of the 60m strip.	>60	>1.6	0.47-1.00	0003	0001
0003	0003	Topsoil strip for pipeline	Natural	Layer	<p>Bottom of slope - Southwest end of trench: Pale whitish yellow grey silty sand containing occasional patches of gravels. Quite truncated in places by modern cuts containing concrete, pipes, netlon fencing.</p> <p>Top of slope - northeast end of trench: Yellow fine powdery sand containing very rare stone inclusions</p>	<p>Possibly redeposited sand from when the reservoirs were excavated in the late 1800s? (Between 1880-1912?) Seems unusual for such a fine sand to be at the top of a hill? And quite disturbed. Although alternatively it could be real natural!</p>					0002

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