



WYAS
**Archaeological
Services**

**Clayton West Sewage
Treatment Works
Huddersfield
West Yorkshire**

Archaeological Watching Brief

Report no. 4025
August 2023

Client: J.N. Bentley Limited



Clayton West Sewage Treatment Works, Huddersfield West Yorkshire

Archaeological Watching Brief

Summary

A total of ten ground investigation pits were monitored at the sewage treatment works Clayton West, Huddersfield. This was in advance of a programme of works associated with updating the existing pipework and pump station, as well as the construction of a new integrated wetland in the undeveloped fields directly to the north of the sewage treatment works. One pit exposed a stone-built culvert-type land drain, but otherwise no archaeological features or remains were identified.



Report Information

Client: J.N. Bentley Limited
Address: Snaygill Industrial Estate, Keighley Road, Skipton, North Yorkshire BD23 2QR
Report Type: Archaeological Watching Brief
Location: Wakefield Road, Clayton West, Huddersfield
County: West Yorkshire
Grid Reference: SE 26839 11811
Period(s) of activity represented: Post-medieval
Report Number: 4025
Project Number: XK36
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Authorisation for
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1 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by J.N. Bentley, on behalf of Yorkshire Water, to undertake an archaeological watching brief during ground investigation works at Clayton West Sewage Treatment Works (STW), Huddersfield, West Yorkshire. The work was undertaken between the 3rd of July and the 8th of August 2023. The work was undertaken in accordance with the National Planning Policy Framework (NPPF), a Written Scheme of Investigation (WSI) produced by ASWYAS, and a Tender Specification and Scope of Works produced by Stantec UK (Carroll 2023).

The archaeological watching brief was required to monitor ground investigations in advance of a programme of works associated with the updating of the existing pipework and pump station, as well as the construction of a new integrated wetland in the undeveloped fields directly to the north of the site. The ground investigation works included the monitoring of ten test pits. Agreement for the monitoring works was secured through consultation with the Senior Archaeologist at West Yorkshire Archaeology Advisory Service (David Hunter, pers comm. 30/05/2023 referenced in Carroll 2023).

Site location, topography and land use

The site is located approximately 1.5km to the northeast of Clayton West, Huddersfield, West Yorkshire, centred on NGR SE 26839 11811 (Fig. 1). The site lies to the south of Wakefield Road. The river Dearne runs through the centre of the site, and it is bounded on all sides by agricultural land (Fig. 2). Situated in the base of a roughly northeast to southwest orientated valley, the ground within the site is generally level at a height between 86m to 90m above Ordnance Datum. The land rises steeply to the south but more moderately to the north.

Some of the test pits were excavated within the current limits of the STW, while those to beyond the treatment works were located in a field that has been pasture for livestock for many years. The pasture is prone to flooding and maintains standing surface water throughout winter.

Soils and geology

The underlying bedrock comprises Pennine Lower Coal Measures Formation - Mudstone, siltstone and sandstone, a sedimentary bedrock formed between 319 and 318 million years ago during the Carboniferous period (BGS 2023). Superficial deposits are recorded in the north and west of the site as Alluvium - clay, silt, sand and gravel, formed during the Quaternary period. The soils recorded as slowly permeable seasonally wet acid loamy and clayey soils (CSAI 2023).

2 Archaeological and Historical Background

The following background information is sourced from an archaeological scope of works produced by Stantec (Carroll 2023).

A Historic Environment Desk-Based Assessment (HEDBA) was prepared to accompany the planning application for the Proposed Scheme (Stantec 2023). A review of the West Yorkshire Historic Environment Record (HER) database within 1km of the site identified one Registered Park and Garden (NHLE: 1001217), one Scheduled Monument (NHLE: 1005786) and five Grade II Listed Buildings, including a packhorse bridge over the Dearne to the west of the site (MWY6173). None of these are located within the site boundary and it is not anticipated that the proposed scheme will impact upon their setting or heritage significance.

A prehistoric enclosure found *c.* 925m northeast of the site is the only definitive evidence for pre-medieval settlement activity within the 1km study area.

The site falls within the ancient parish of Emley (also Amalie/Amelai/Elmeley) and the associated village was a Saxon settlement during the 9th century. The neighbouring village of Denby Dale is recorded in the Domesday Book in the hundred of Staincross and the County of Yorkshire. The remains of the medieval Emley Park boundary, represented by a hedgerow and footpath, define the western border of the site. Many of the surrounding place names have etymologies of Norse derivation with find spots of Viking age silver in Emley (MWY14972) and Denby Dale.

Extensive medieval mining activity has been identified across the study area, with a concentration of bell pits and iron stone mines found to the northeast of the site including the scheduled Iron Mining Shaft Mounds (NHLE: 1005786) located either side of Woodhouse Lane. A medieval corn mill has also been found *c.* 950m to the north.

Park Mill and its ancillary pit, Springwood, closed in 1989 with several unmarked shafts and vents known in the vicinity of the site. Interestingly a privately owned mine, located to the southwest of the village, is still in operation.

The surrounding landscape is defined by agricultural fields that have been in use since the post-medieval period, if not earlier, although 20th-century extraction has been identified from aerial photographs in the northernmost fields of the study area. One mill and ropewalk are recorded on Whinmoor Drive approximately 585m southwest of the site. This mill was accessed by the packhorse bridge.

Cartographic evidence found that the two hedgerows located within the site boundary are visible on the 1820 enclosure map of Emley, demonstrating that they are of historical importance.

3 Aims and Objectives

The aim of the archaeological watching brief was to identify and record the presence/absence, extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits which were disturbed or exposed as a result of ground investigation (GI) works in the area of interest.

The watching brief assessed the impact of the ground investigations on any archaeological remains present. The data collected added to the archaeological understanding of the site and aided determination of the need for and scope of further archaeological works that may be required during future site works.

4 Methodology

The work involved the excavation of ten ground investigation test pits. The position of the pits were determined by the scope of the ground investigation works (Fig. 2).

All work was undertaken in accordance with accepted professional standards and guidelines (Historic England 2008; CIfA 2020), in accordance with the ASWYAS site recording manual (ASWYAS 2020) and in compliance with the WSI (Appendix 1).

The pits were opened using a JCB 3CX using a toothed 0.3m wide bucket. Each pit was monitored during excavation by an experienced archaeologist. The resultant sections were inspected for the presence of archaeological remains and deposits. All test pit locations were surveyed using a Trimble VRS differential GPS accurate to +/-0.01m.

Where present archaeological features were accurately recorded in plan at a scale of 1:20. All plans and sections include spot heights that relate to Ordnance Datum in metres.

A full written, drawn and photographic record was made of all archaeological work undertaken. An inventory of the primary archive is presented in Appendix 2. ASWYAS currently hold the site archive in a stable and secure location.

5 Results

The results of the test pits are provided in Table 1, including a brief description of the exposed strata.

Table 1. Test pit results

Test Pit	Dimensions (m)	Depth (m)	Description
1 (Plate 1)	0.75 x 3	3	A mid-grey-brown clayey-silt topsoil (10) measuring 0.22m in depth overlaid a mixed interface layer (11) of mid-orange-brown clayey silt measuring 0.28m in depth. Fragmented bedrock (12) of sandstone was encountered at 0.5m below ground surface.
2 (Plate 2)	0.75 x 3	3	Mid-grey-brown clayey-silt topsoil (20) measuring 0.25m in depth overlaid a mid-yellow-brown silty clay (21) measuring 0.55m in depth. This sealed a modern waste deposit of very dark and wet grey gritty clay (22) 0.5m in depth. Natural comprising light yellow and grey clay (23) was at 2.35m below ground surface. Finds of steel rope, bricks and glass were noted in context 23 but not retained.
3	0.7 x 5	3	Mid-grey-brown silty clay topsoil (30) measuring 0.22m in depth over a light yellow-brown silty clay measuring 0.18m in depth (31). Natural was encountered at 0.4m below ground and comprised a light grey-yellow clay. A stone capped culvert (33) was exposed within this pit.

Test Pit	Dimensions (m)	Depth (m)	Description
4	0.75 x 3	3	Mid-grey- brown clayey-silt topsoil (40) measuring 0.3m in depth over a dark orange-brown clay alluvial layer (41) measuring 0.25m in depth. Natural of Mid-yellow-orange clay was encountered at 0.55m below ground with mudstone at the bottom of the pit.
5	0.75 x 3	3	Mid-brown-grey clayey silt topsoil (50) measuring 0.3m in depth over mid-brown-yellow silty clay (51) measuring 0.4m in depth. Natural of light mottled yellow and grey clay (52) was encountered at 0.7m below ground.
6	0.75 x 3	3	Excavated on top of a very large made ground plateau. Made ground deposit (60) of mid-grey clayey silt with gravel, stones, concrete blocks and rubble measuring 0.4m in depth. This sealed a pungent deposit of dark brown-grey silt (61) representing the pre-existing topsoil horizon measuring 0.5m in depth. Another made ground deposit (62) comprising a dark grey-orange clay measuring 1.8m in depth and containing plastic. The base of the pit contained a dark green-grey silty clay (63) but this could not be confirmed as the natural horizon.
7 (Plates 3 and 4)	0.7 x 3	3	Excavated through a bank of made ground resulting from the construction of a site access road. Mid-orange-grey silt topsoil (70) measuring 0.2m over a mid-brown-orange clayey-silt (71) measuring 0.3m in depth. A modern made ground deposit (72) was below this measuring 1m in depth and comprising large stones and concrete within a clay matrix. A mid-yellow clay with bands of dark green-grey clay (73) at 1.5m below ground appeared similar to natural but may have been redeposit construction waste.
8	0.7 x 2	3	Mid-grey-brown clayey silt (80) topsoil measuring 0.15m in depth over light yellow-grey silty clay (81) measuring 0.25m in depth. Natural that comprised a light grey-yellow clay (82) at 0.4m below ground.
9 (Plate 5)	0.7 x 2.3	2.25	Thin topsoil deposit of mid-grey-brown clayey-silt (90) measuring 0.08m in depth. Light grey-brown silty clay (91) measuring 0.3m in depth. Natural of mid-grey-orange clay (92) was encountered at 0.38m below ground.
10	0.7 x 2.4	3	Mid-grey-brown clayey-silt topsoil (100) measuring 0.15m over a light grey-brown silty-clay (101) measuring 0.35m in depth. Natural comprising a light orange-grey clay (102) was encountered at 0.5m below ground.

Only one pit (Test Pit 3) exposed any significant remains. Test Pit 3 exposed a 1.2m length of stone-built culvert type drain (33). The drain measured 0.84m in width an internal depth of 0.4m (Plate 6; Fig. 3). Constructed from the local sandstone, rough cut slabs were placed as capping stones over a channel lined with further sandstone. The base of the culvert was not seen. This culvert appears to be a land drain in an area that regularly floods in wet periods.

The length of test pit 3 was extended to leave the culvert undamaged whilst maintaining a full record of the underlying strata.

6 Artefact and Environmental Record

No artefacts or environmental samples were collected during the investigations.

7 Discussion and Conclusions

The sequences of deposits encountered within many of the ground investigation pits attested to the area's long use as pasture. The stone-built culvert exposed in Test pit 3 was consistent with the longstanding agricultural use of the land and the known seasonal flooding of the area adjacent to the Dearne.

In addition, extensive disturbance was noted within the current limits of the STW as a result of the works' construction and during subsequent alterations to the facility.

Even though the area saw significant expansion as a result of the industrial revolution through coal mining and textile mills, their influence on this landscape was not measurable within the limited scope of the works undertaken here.

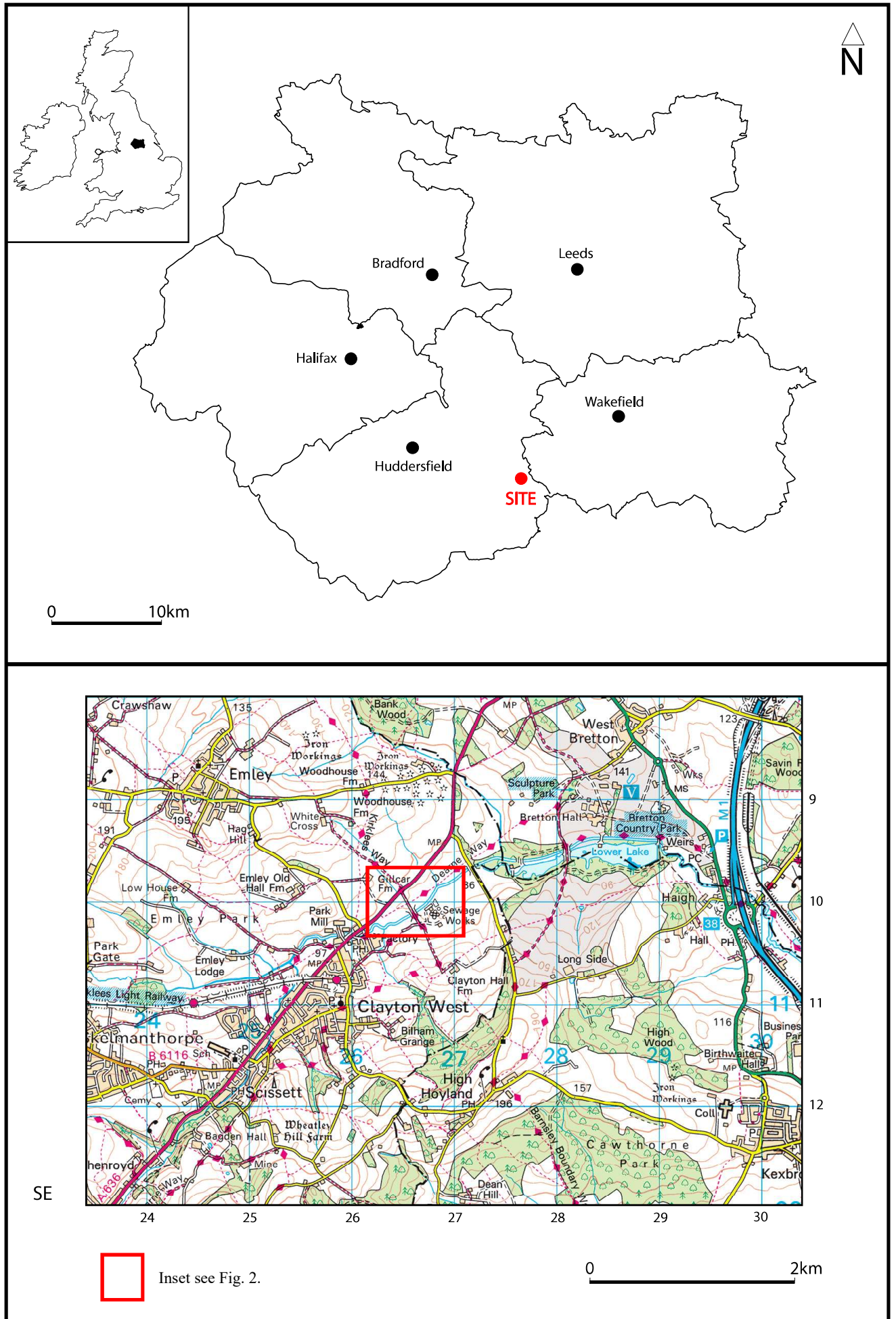
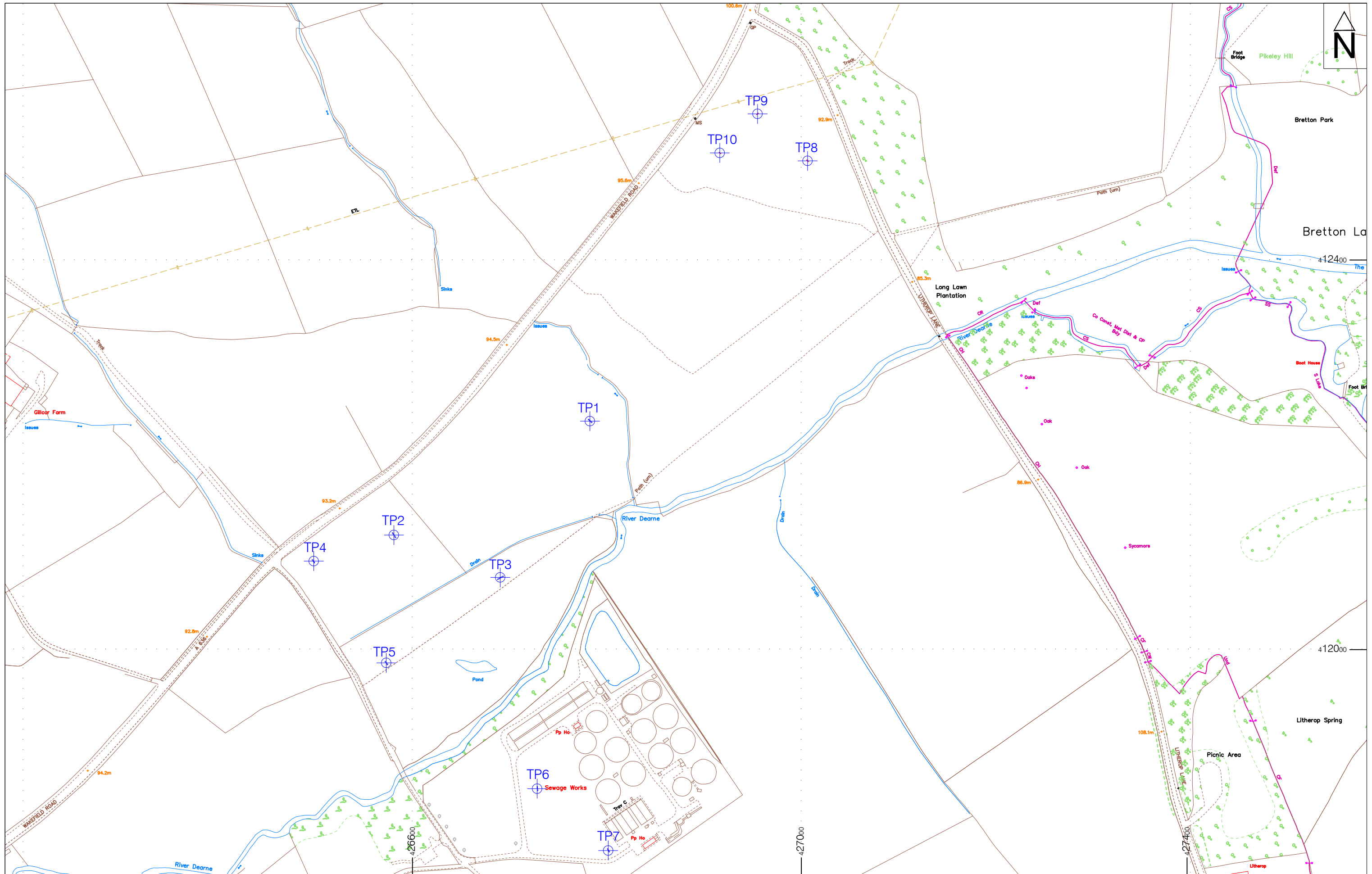



Fig. 1. Site location

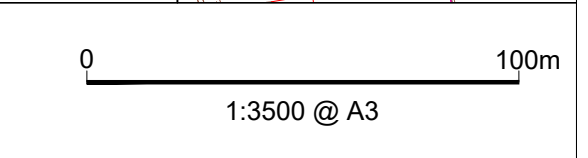
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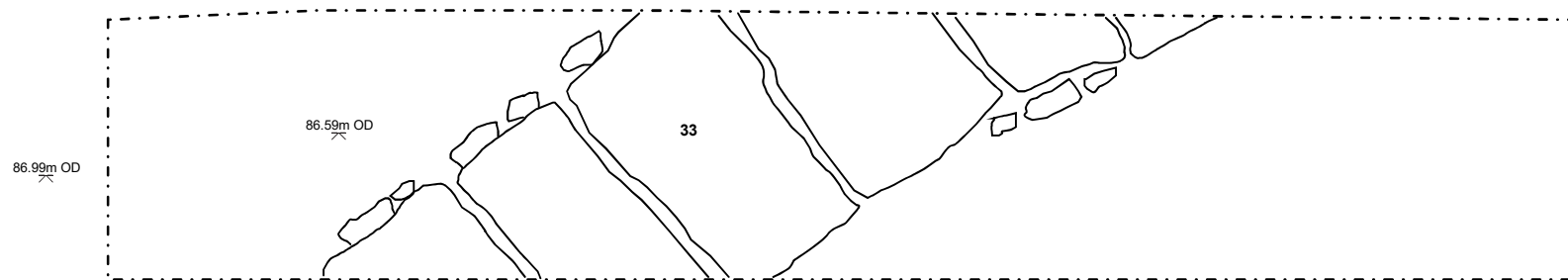

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Project No. XK36
 Fig. 2.
 Site plan showing test pit locations

TP1	TEST PIT LOCATION								
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Project No. XK36

Project Code: CLW23

Fig. 3

Plan of stone-built culvert, Test Pit 3

0  1m (1:20)



Plate 1. General view of Test Pit 1, looking southeast



Plate 2. General view of Test Pit 2, looking southwest



Plate 3. Bank location of Test Pit 7 looking north



Plate 4. General view of Test Pit 7, looking north



Plate 5. General view of Test Pit 9, looking northwest



Plate 6. Stone-built culvert in Test Pit 3, looking southwest

Appendix 1: Written Scheme of Investigation

Clayton West Sewage Treatment Works, Huddersfield West Yorkshire

Written Scheme of Investigation for an Archaeological Watching Brief

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June 2023

Written Scheme of Investigation for an Archaeological Watching Brief at Clayton West Sewage Treatment Works, Huddersfield, West Yorkshire

1. Introduction

- 1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeological Services WYAS (ASWYAS) for Mott MacDonald Bentley on behalf of Yorkshire Water. It details an archaeological watching brief at the site of the Clayton West Sewage Treatment Works (STW), Huddersfield, West Yorkshire to be undertaken prior to the main works programme. This WSI has been produced in response to the Tender Specification and Scope of Works produced by Stantec UK (Carroll 2023), who are providing technical advice and support for the works and are the point of contact for any archaeological related issues.
- 1.2 An archaeological watching brief is required to monitor Ground Investigations in advance of the main works programme. The Proposed Scheme involves updating the existing pipework and pump station, as well as the construction of a new integrated wetland in the undeveloped fields directly to the north of the Site. The watching brief is required to monitor the ground investigation works being conducted at the site, which include seven test pits and five boreholes; the boreholes will not be monitored as part of the watching brief because they do not have archaeological visibility. Agreement for the monitoring works was secured through consultation with the Senior Archaeologist at West Yorkshire Archaeology Advisory Service (David Hunter, pers comm. 30/05/2023 Referenced in Carroll 2023).
- 1.3 This document details a programme of archaeological watching brief and has been produced to the standards laid down in Historic England's guideline publication *Management of Research Projects in the Historic Environment (MoRPHE): Project Managers Guide* (2006a) and the *MoRPHE Project Planning Note 3: Archaeological Excavation (PPN3)* (2008), and in accordance with the Scope of Works produced by Stantec (Carroll 2023).

2. Site Location, Description and Topography

- 2.1 The site located approximately 1.5km to the northeast of Clayton West, Huddersfield, West Yorkshire, centred on NGR SE 26839 11811 (Fig. 1). The site lies to the south of Wakefield Road and the river Dearne runs through the centre of the site, and it is bounded on all sides by agricultural land (Fig. 2).

3. Geology and Soils

- 3.1 The underlying bedrock comprises Pennine Lower Coal Measures Formation - Mudstone, siltstone and sandstone. Sedimentary bedrock formed between 319 and 318 million years ago during the Carboniferous period (BGS 2023). Superficial deposits are recorded in the north and west of the site as Alluvium -

Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period. The soils recorded as slowly permeable seasonally wet acid loamy and clayey soils (CSAI 2023).

4. Archaeological and Historic Background

- 4.1 The following background information is sourced from an archaeological scope of works produced by Stantec (Carroll 2023).
- 4.2 A Historic Environment Desk-Based Assessment (HEDBA) was prepared to accompany the planning application for the Proposed Scheme (Stantec, 2023). A review of the West Yorkshire Historic Environment Record (HER) database within 1 km of the Site identified one Registered Park and Garden (NHLE: 1001217), one Scheduled Monument (NHLE: 1005786) and five Grade II Listed Buildings. None of these are located within the Site boundary and it is not anticipated that the Proposed Scheme will impact upon their setting or heritage significance.
- 4.3 A prehistoric enclosure found c925m north-east of the Site is the only definitive evidence for pre-medieval settlement activity within the 1km study area.
- 4.4 The Site falls within the ancient parish of Emley (also Amalie/Amelai/Elmeley) and the associated village was a Saxon settlement during the 9th century. The neighbouring village of Denby Dale is recorded in the Domesday Book in the hundred of Staincross and the County of Yorkshire. The remains of the medieval Emley Park boundary, represented by a hedgerow and footpath, define the western border of the Site.
- 4.5 Extensive medieval mining activity has been identified across the study area, with a concentration of bell pits and iron stone mines found to the north-east of the Site including the Scheduled Iron Mining Shaft Mounds (NHLE: 1005786) located either side of Woodhouse Lane. A medieval corn mill has also been found c950m to the north.
- 4.6 The surrounding landscape is defined by agricultural fields that have been in use since the post-medieval period, if not earlier, although 20th century extraction has been identified from aerial photographs in the northernmost fields of the study area. Despite the industrial success of the West Yorkshire textile industry, only one mill and ropewalk are recorded on Whirmoor Drive approximately 585m south-west of the Site.
- 4.7 Cartographic evidence found that the two hedgerows located within the Site boundary are visible on the 1820 enclosure map of Emley, demonstrating that they are of historical importance.

5. Aims

- 5.1 The aim of the archaeological watching brief is to identify and record the presence/absence, extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits which are disturbed or exposed as a result of GI works in the area of interest.
- 5.2 The watching brief will assess the impact of the ground investigations on any archaeological remains present. The data collected will add to the archaeological understanding of the site and aid in determining the need for and scope of further archaeological works that may be required during future site works.

6. Methodology

- 6.1 The works will comprise the monitoring of seven mechanically excavated test pits (Fig. 2) that are expected to be around 2m in length and 0.60m wide. Boreholes will be excavated as part of the client works but are not subject to the watching brief. The watching brief will be conducted by an appropriately qualified and experienced archaeologist who will be present during all the excavations. All work will be undertaken in accordance with the relevant standards (CIfA 2014; Historic England 2006a, 2008) and the Stantec Scope of Works (Carroll 2023).
- 6.2 The excavation of the test pits will be undertaken by a Principal Contractor and will be under archaeological supervision at all times. The excavations will be opened in shallow spits to the Principal Contractor's required depth, but should archaeological remains be identified, the Principal Contractor will be prepared to pause the excavation to allow archaeological hand excavation and recording.
- 6.3 The depths of deposits above the natural geological layers should be recorded and the finds including timber, other building materials, pottery or any other sort of artefact retained.
- 6.4 Any archaeological features/deposits will be manually excavated in an archaeologically controlled and stratigraphic manner, in order to meet the aims outlined above.
- 6.5 No archaeological deposits will be entirely removed unless this is unavoidable in achieving the aims of this evaluation, although all features identified are expected to be half-sectioned and the full depth of archaeological deposits assessed.
- 6.6 Features will be sample excavated employing the following strategy where possible:
 - Linear features: sufficient excavation will be carried out to investigate the depth, profile and fills of a ditch or gully and to recover dating and

environmental evidence from its fills. Normally this will involve a minimum of 10% sample dispersed along the length of the feature (each sample section to be not less than 1m), with respect to test pits, one section will be located and recorded adjacent to the trench edge. Feature intersections will always be excavated in such a way to determine a stratigraphic relationship.

- Discrete features: pits, post-holes and other discrete features will normally be half-sectioned to determine and record their form with a minimum sample of 50% of discrete features in each area. The complete excavation of such features may be appropriate, but only following consultation with WYAAS.
- 6.7 A full written, drawn and photographic record of all material revealed during the course of the work shall be made. The excavation limits will be surveyed using electronic survey equipment with larger scale hand drawn plans of features, at 1:20 or 1:50, being created as appropriate. Sections of linear and discrete features will be drawn at 1:10 or 1:20. All sections, plans and elevations will include spot-heights related to Ordnance Datum in metres as correct to two decimal places. Tie-in information will be undertaken during the course of the evaluation and will be fixed in relation to nearby permanent structures and roads and to the National Grid. The photographic record must consist of high-quality digital un-interpolated images of at least 10 megapixels taken using a camera with an APS-C or larger sensor. Graduated metric scales of appropriate lengths should be used, ensuring the use of vertical scales used against deep sections in combination with horizontal scales. Digital photographs intended for archive purposes must comply with best practice available at the current time – i.e. high quality non-proprietary raw files (DNG) or TIFF images. The incorporation of clear digital images within ensuing reports, to augment the drawn record, is expected.
- 6.8 All excavated archaeological contexts shall be fully recorded by written records, giving details of location, composition, shape, dimensions, relationships, finds, samples, and cross-references to other elements of the record and other relevant contexts, in accordance with best practice. All contexts, and any small finds and samples from them will be given unique numbers. Bulk finds will be collected by context.
- 6.9 All artefacts will be removed from the site for assessment and analysis, and where it is appropriate, their find spots shall, if appropriate, be recorded three dimensionally. Non-modern artefacts from the excavated topsoil and subsoil will be collected. Finds material will be stored in controlled environments, where appropriate. All artefacts recovered will be retained, cleaned, labelled and stored as detailed in the guidelines laid out in the ClfA (2020). Any necessary conservation work will be undertaken by approved conservators working to UKIC guidelines.
- 6.10 A soil-sampling programme shall be undertaken during the course of the investigation for the identification and recovery of carbonised and waterlogged

remains, vertebrate remains, molluscs and small artefactual material. This will comprise the removal of a bulk sample from every securely sealed and hand-excavated context, excepting those with excessive levels of residuality or those with minimal 'soil' content. Bulk samples will comprise representative 40 litre samples. Where a context does not yield 40 litres of material, smaller samples will be taken. The post-excavation processing of all palaeoenvironmental samples will be undertaken in line with Historic England's Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation (2011).

- 6.11 In the event of human remains being discovered they will, in the first instance, be left *in situ*, covered and protected. The removal of human remains will only take place in compliance with the Burial Act 1857. An exhumation licence must be obtained from the Ministry of Justice prior to the removal of the remains.
- 6.12 All finds defined as 'treasure' under the Treasure Act 1996 shall be reported to HM Coroner according to the procedures relating to the Treasure Act 1996.
- 6.13 Provision will be made to recover material suitable for scientific dating. Contingency sums will be made available to undertake such dating.
- 6.14 Further contingency provision will be made for additional specialist advice, e.g. for finds analysis and conservation.

7. Analysis and Reporting

- 7.1 Following the conclusion of the fieldwork, a report shall be produced. For all categories of material recovered, including finds, palaeo-environmental, industrial and other specialist samples, an assessment by an appropriately experienced specialist will be undertaken. Samples must be processed and sorted, and any artefacts recovered provided to the appropriate specialist(s) to be considered alongside the hand-recovered material. Basic stratigraphic information will be supplied to the project specialists. All finds are to be treated in accordance with current best practice guidance. Finds are to be cleaned and marked, according to accepted principles and in line with appropriate period/material guidelines. For ceramic assemblages, recording shall be carried out in a manner compatible with existing typological series in local pottery reference collections. All ferrous objects and a selection of non-ferrous objects (including all coins), will be x-radiographed. Where material suitable for scientific dating was recovered, sufficient dating will be undertaken to meet the aims of the evaluation. Where further fieldwork is not to be undertaken and assessment has identified the need for further analysis, this will be completed drawing upon the contingency allowed (see 7.13).
- 7.2 The site archive will be assembled in line with the recommended composition provided in Historic England's PPN3 (2008) and UKIC's *Guidelines for the Preparation of Excavation Archives for Long-term Storage* (1990) and ClfA's

Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives (2020).

- 7.3 In addition to the site records, artefacts, ecofacts and other sample residues, the archive shall contain all the data collected during the fieldwork, including records, finds and environmental samples. It will be quantified, ordered, indexed and internally consistent. Archive consolidation will be undertaken immediately following the conclusion of fieldwork and will involve:
- the site record being checked, cross-referenced and indexed as necessary;
 - retained finds being cleaned, stabilised, marked and packaged in accordance with the requirements of the recipient museum;
 - retained finds being assessed and recorded using *pro forma* recording sheets, by suitably qualified and experienced staff. Initial artefact dating will be integrated within the site matrix; and
 - environmental samples being processed by suitably experienced and qualified staff and recorded using *pro forma* recording sheets.
- 7.4 In addition to the site records, artefacts, ecofacts and other sample residues, the archive shall contain:
- a summary report synthesising the context record;
 - a summary of the artefact record; and
 - a summary of the environment record.
- 7.5 The integrity of the primary field record will be preserved. Security copies will be maintained where appropriate.
- 7.6 On the completion of fieldwork, the relevant specialists and recipient museum (Kirklees Museums and Galleries – Tolson Memorial Museum) are to be consulted to finalise a selection strategy in accordance with best practice (see the online ClfA selection toolkit). The aim of this process is to produce a project archive that allows a full re-examination and interpretation of all the results of the project whilst avoiding replication, repetition, or the retention of materials not considered germane to future analysis.
- 7.7 Provision (including the agreement of costs) will be made for the deposition of the archive, artefacts and environmental material with the Kirklees Museum Service, subject to the permission of the landowner. The museum will be contacted prior to work commencing to discuss archiving requirements (e.g. marking and labelling requirements, accession number). The archive will be prepared following the 'Archaeological Archive Deposition Policy for Museums

in Yorkshire and the Humber”, produced by Renaissance Yorkshire. This requires the completion and submission of forms to the relevant museum service at the project initiation, mid-point review and completion stages. The archive will otherwise be prepared in accordance with the UKIC (1990), the Museums and Galleries Commission (1994) and ClfA guidelines. Provision will be made for the stable storage of paper records and their long-term storage.

- 7.8 Upon completion of the investigations, the artefacts, ecofacts and stratigraphic information shall be assessed to ascertain their potential and significance for further analysis.
- 7.9 An assessment report will be prepared within an agreed timescale following the completion of on-site archaeological investigations and include the following:
- a non-technical summary of the results of the work;
 - a summary of the project's background;
 - the dates the fieldwork took place;
 - the site location, including National Grid Reference;
 - an account of the method;
 - the results of the evaluation, including phasing and interpretation of the site sequence;
 - conservation assessment;
 - an assessment of the stratigraphic and other written, drawn and photographic records;
 - a catalogue of the archaeological material recovered during the evaluation;
 - assessment reports for each material category of finds recovered, including their types, quantities and concentrations, illustrations and/or photographs as appropriate;
 - a summary of the contents of the project archive and its location. Provision for an initial post-excavation assessment report, to be agreed with WYAAS, should be included. This would contain a summary of stratigraphy, finds and samples; a brief description of identified phases; statements of potential by appropriate specialists; and recommendations for further investigation or preservation.
- 7.10 The assessment report will be produced within an agreed time-scale. It will be supported by an overall plan of the site, accurately identifying the location of the evaluation and any findings.

- 7.11 The assessment report will outline the archaeological significance of the deposits identified, and provide an interpretation of the results in relation to other sites in the vicinity.
- 7.12 Bound copies of the report will be supplied, if required, to Stantec UK and the West Yorkshire SMR. A digital copy will also be supplied to WYAAS and to Historic England's Science Advisor if required.
- 7.13 Following the finalisation of the assessment report and depending on the results of the evaluation, and in consultation with WYAAS, a final archive report may be required. This shall contain:
- An introduction including background information (with planning application details, where appropriate);
 - The original research aims and objectives and rationale for selected area of investigation;
 - An archaeological and historical baseline;
 - A description of results;
 - The results of analysis of all find and sample categories, by appropriate specialists;
 - The results of any scientific dating;
 - A discussion of the results including a phased interpretation of the site and the extent to which the work has addressed the research aims and objectives;
 - An assessment of the effectiveness of the evaluation strategy, including earlier stages of work (including geophysical survey), and provide recommendations for where further work may be required. This will include;
 - A summary of the results in their local, regional, and national context;
 - Supporting illustrations, including as a minimum:
 - a detailed location map;
 - a detailed site plan showing all trenches, as excavated;
 - all trench plans and trench sections;
 - detailed plans of relevant features, as excavated;
 - detailed sections of all features, as excavated;

- an overall (phased) site plan showing all archaeological features recorded;
 - selection of photographs of work in progress;
 - select artefact illustrations and/or photographs.
- Supporting tables of data, including as a minimum:
 - a detailed context index;
 - an archive index.

7.14 Upon completion of the work, the archaeological contractor will make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (<http://ads.ahds.ac.uk/project/oasis/>). The OASIS summary sheet will also be included within the report.

7.15 It is possible that the watching brief findings will warrant further reporting (based on specialist recommendations) or a wider publication. The latter may be affected through publication in a suitable journal.

7.16 The assessment report will include a detailed context index and an index to the archive.

7.17 Following completion of the assessment report should archaeological remains have been identified then further fieldwork may be required or a redesign of the proposed re-wilding maybe required if there are significant remains. WYAAS will review the data and the need for and scope of any further, evaluation, mitigation or redesign will be determined by WYAAS.

8. Copyright, Confidentiality and Publicity

8.1 Copyright in the documentation prepared by ASWYAS and specialist sub-contractors should be the subject of additional licences in favour of the repository accepting the archive to use such documentation for their statutory educational and museum service functions, and to provide copies to third parties as an incidental to such functions.

8.2 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'.

8.3 Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. ASWYAS will inform the client of EIR requirements and ensure that any information disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.

- 8.4 Unless the client commissioning the project wishes to state otherwise, the copyright of any written, graphic or photographic record and reports will rest with the originating body (Archaeological Services WYAS).

9. Health and Safety

- 9.1 Archaeological Services WYAS has its own Health and Safety policy which has been compiled using national guidelines. These guidelines conform to all relevant Health and Safety legislation.
- 9.2 In addition each project undergoes a 'Risk Assessment' which sets project specific Health and Safety requirements to which all members of staff are made aware of prior to on-site work commencing. Health and Safety will take priority over archaeological matters. Necessary precautions will be taken over underground services and overhead lines at the outset of the project. Archaeological Services WYAS will ensure that Health and Safety requirements of the main contractor are adhered to.

10. Insurance

- 10.1 ASWYAS is covered by the insurance and indemnities of the West Yorkshire Joint Services Committee. Insurance has been effected with: Zurich Municipal, Zurich House, 2 Gladiator Way, Farnborough, Hampshire GU14 6GB (policy number QLA-03R896-0013). Any further enquiries should be directed to: Head of Finance, Wakefield Council, Wakefield One, PO Box 700, Wakefield, WF1 2EB

11. Monitoring

- 11.1 Access to the site will be arranged through Mott MacDonald Bentley.
- 11.2 A minimum of one week's notice of the commencement of fieldwork is required.
- 11.3 ASWYAS will ensure that any significant results are brought to the attention of the client as soon as is practically possible.

12. Resourcing

- 12.1 Key project personnel:

Project Management:	David Williams BA MCIfA
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Project Supervisors:	Steffan Golby MA
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- 12.2 Post-excavation specialists:

Prehistoric pottery:	Dr Chris Cumberpatch
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Roman pottery:	Dr Ruth Leary or Ian Rowlandson
Medieval pottery:	Dr Chris Cumberpatch
Ceramic building material	Dr Phil Mills
Flint specialist:	Dr Ian P Brooks
Environmental:	Dr Diane Alldritt
Faunal analyst:	Dr Jane Richardson
Human bone:	Malin Holst MA or Dr Alice Rose
Metalwork:	Gail Drinkall
Artefact conservation:	Ian Panter

12.3 The list of Archaeological Services WYAS project personnel may be subject to change depending on workload and availability.

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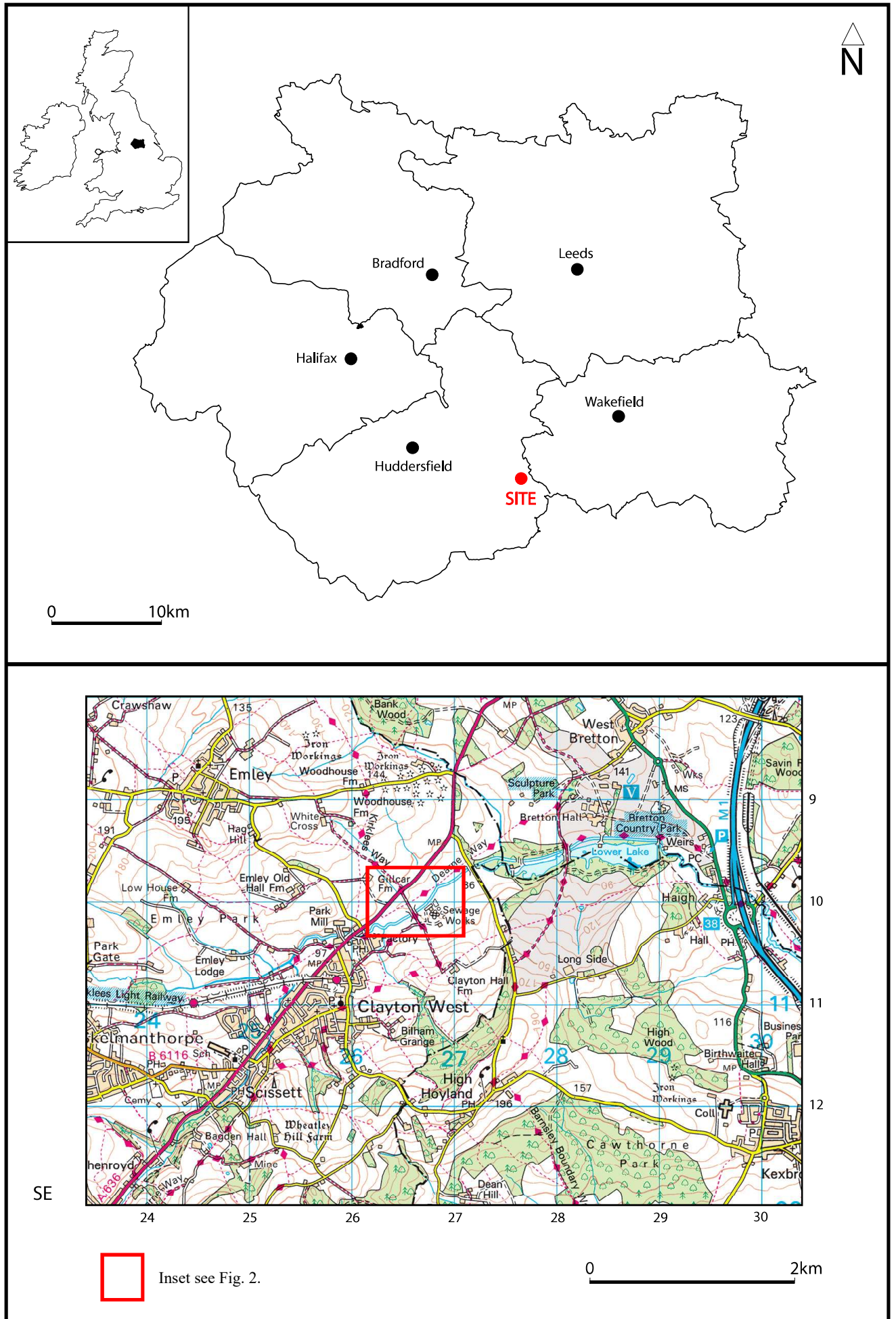
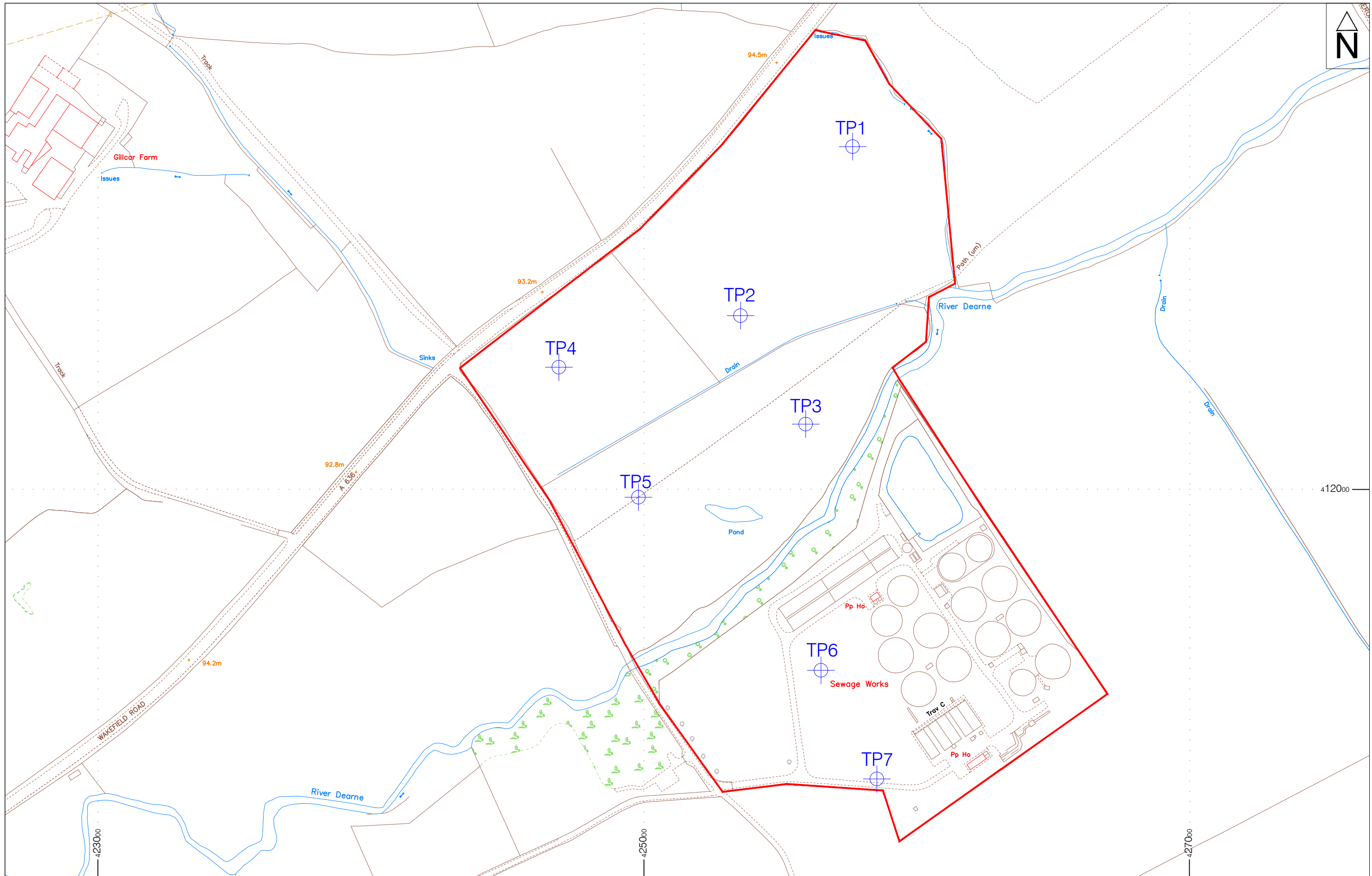


Fig. 1. Site location

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	SITE BOUNDARY						
	PROPOSED TEST PIT LOCATION						

Appendix 2: Inventory of primary archive and context register

File No	Description	Quantity
File no.1	Watching Brief Daily Record Sheets	2
	Geotechnical Test Pit Record Sheets	10
	Digital Photograph Record Sheets	2
	Permatrace	1

Summary of contexts

Context	Test pit	Description
10	1	Mid-grey-brown clayey-silt topsoil
11	1	of mid-orange-brown clayey silt
12	1	Fragmented sandstone bedrock
20	2	Mid-grey-brown clayey-silt topsoil
21	2	Mid-yellow-brown silty clay
22	2	Modern waste deposit of very dark and wet grey gritty clay
23	2	Natural comprising light yellow and grey clay
30	3	Mid-grey-brown silty clay topsoil
31	3	Light yellow-brown silty clay
32	3	Natural, Light grey-yellow clay
33	3	Stone capped culvert
40	4	Mid-grey- brown clayey-silt topsoil
41	4	Dark orange-brown clay alluvial layer
42	4	Natural of Mid-yellow-orange clay
50	5	Mid-brown-grey clayey silt topsoil
51	5	Mid-brown-yellow silty clay
52	5	Natural of light mottled yellow and grey clay
60	6	Made ground deposit of mid-grey clayey silt with gravel, stones, concrete blocks and rubble
61	6	Deposit of dark brown-grey silt representing the pre-existing topsoil horizon
62	6	Made ground deposit comprising a dark grey-orange clay
63	6	Dark green-grey silty clay, not clear if this is natural
70	7	Mid-orange-grey silt topsoil
71	7	a mid-brown-orange clayey-silt
72	7	Modern made ground deposit comprising large stones and concrete within a clay matrix
73	7	Natural, A mid-yellow clay with bands of dark green-grey clay
80	8	Mid-grey-brown clayey silt topsoil
81	8	light yellow-grey silty clay
82	8	Natural, a light grey-yellow clay
90	9	topsoil deposit of mid-grey-brown clayey-silt
91	9	Light grey-brown silty clay
92	9	Natural of mid-grey-orange clay
100	10	Mid-grey-brown clayey-silt topsoil
101	10	A light grey-brown silty-clay
102	10	Natural comprising a light orange-grey clay

Appendix 3: OASIS summary

OASIS Summary for archaeol11-518285

OASIS ID (UID)	archaeol11-518285
Project Name	Watching Brief at Clayton West Sewage Treatment Works
Sitename	Clayton West Sewage Treatment Works
Sitecode	CLW23
Project Identifier(s)	CLW23
Activity type	Watching Brief
Planning Id	
Reason For Investigation	Planning: Pre application
Organisation Responsible for work	Archaeological Services WYAS
Project Dates	03-Jul-2023 - 08-Aug-2023
Location	Clayton West Sewage Treatment Works NGR : SE 26839 11811 LL : 53.60218152720936, -1.595895213246725 12 Fig : 426839,411811
Administrative Areas	Country : England County : West Yorkshire District : Kirklees Parish : Denby Dale
Project Methodology	A total of ten ground investigation pits were monitored in advance of a programme of works involving updating the existing pipework and pump station, as well as the construction of a new integrated wetland in the undeveloped fields directly to the north of the sewage treatment works, Clayton West, Huddersfield. One pit exposed a stone-built culvert type land drain. No other archaeological features or remains were identified within the limits of the works.
Project Results	The sequences of deposits encountered within the ten ground investigation pits attested to the areas long use as pasture. Extensive disturbance was noted within the current limits of the STW created during construction and subsequent alterations to the facility. The stone-built culvert exposed in Test pit 3 was consistent with the longstanding agricultural use of the land and the known seasonal flooding of the area adjacent to the Dearne. The lack of archaeological remains encountered within the GI works is indication of the long-standing use of the land for agriculture. Even though the area saw significant expansion as a result of the industrial revolution through coal mining and textile mills their influence on the landscape was not measurable within the scope of the works. Medieval and pre-historic remains are also known in the area but again there was no measurable indication of that activity within the works.
Keywords	
Funder	Private or public corporation N/A
HER	West Yorkshire HER - unRev - STANDARD
Person Responsible for work	David Williams
HER Identifiers	
Archives	

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