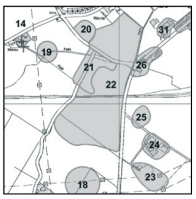
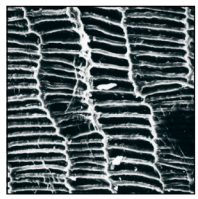
BUNS/01










SEWAGE PUMPING STATION, BARTON-UNDER-NEEDWOOD, STAFFORDSHIRE

WATCHING BRIEF

commissioned by Amey plc
on behalf of Severn Trent Water plc

February 2016

HEADLAND ARCHAEOLOGY

REGISTERED · CIfA · ORGANISATION

SEWAGE PUMPING STATION, BARTON-UNDER-NEEDWOOD, STAFFORDSHIRE

WATCHING BRIEF

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February 2016

project info

HA JOB NO.	BUNS/01
HAS NO.	1161
NGR	SK 20051 18238
PARISH	Barton-under-Needwood
LOCAL AUTHORITY	Staffordshire County Council
OASIS REF.	headland3-239156

project team

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AUTHOR	Robyn Pelling
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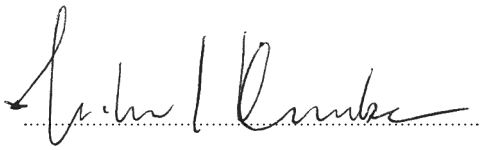
GRAPHICS	Beata Wiezcorek-Oleksy, Caroline Norrman
APPROVED BY	Mike Kimber – Project Manager



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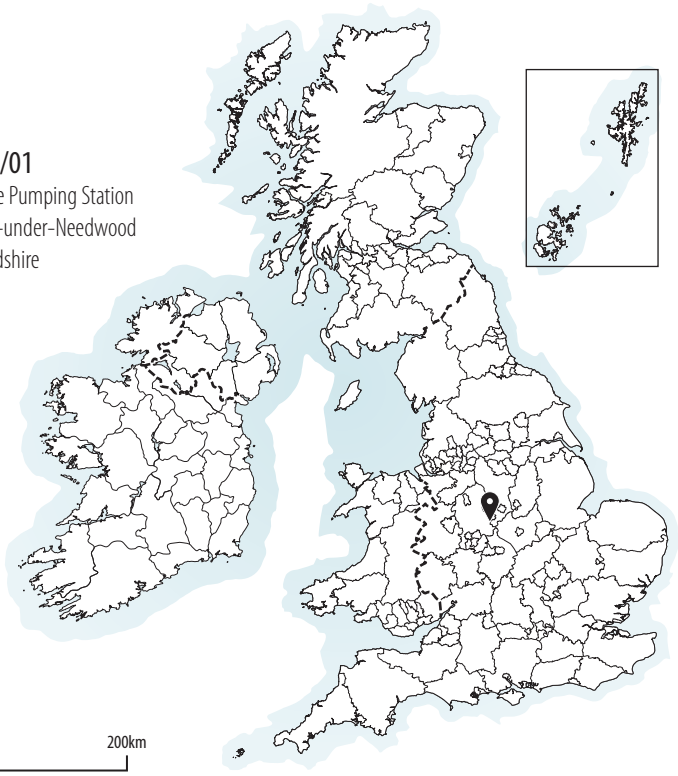
PROJECT SUMMARY

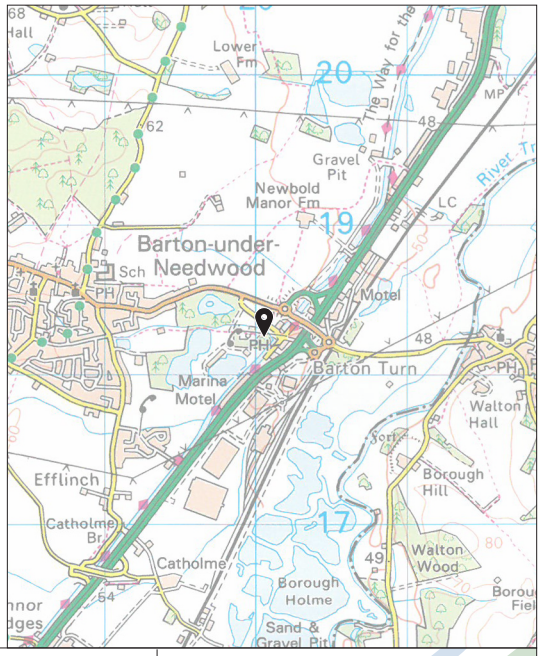
Headland Archaeology (UK) Ltd undertook an archaeological watching brief on the initial topsoil strip at the Sewage Pumping Station at Barton Turn, Barton-under-Needwood. This was for the construction of a new sewage connection to the station. The connecting trench was located in an area of cleared woodland and substantial humic layers were uncovered, with no evidence of archaeological remains.

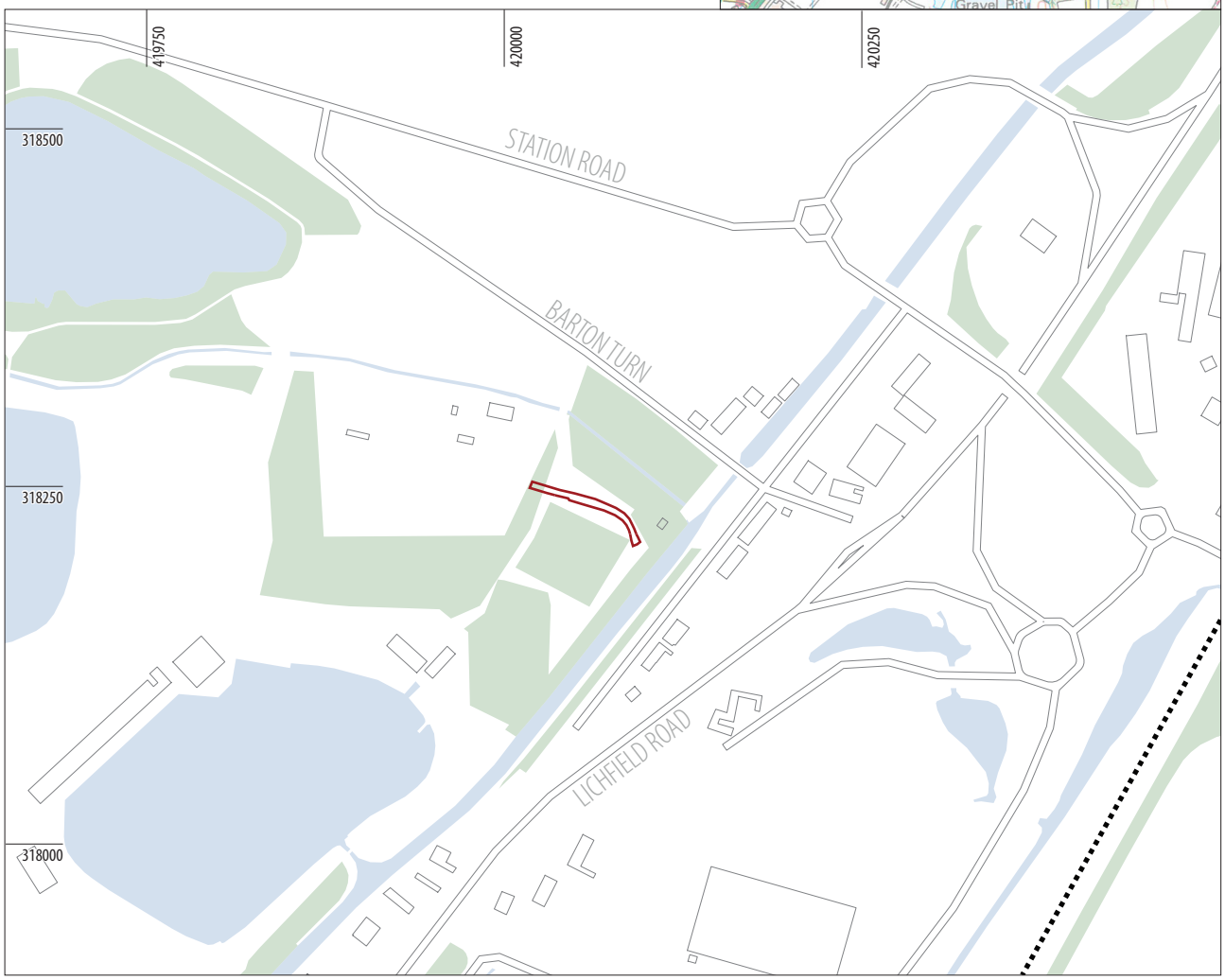
CONTENTS

LIST OF ILLUSTRATIONS

BUNS/01
Sewage Pumping Station
Barton-under-Needwood
Staffordshire







KEY
pipeline extent

N
0
250m
scale 1:5,000 @ A4

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ILLUS 1 Site location

SEWAGE PUMPING STATION, BARTON-UNDER-NEEDWOOD, STAFFORDSHIRE

WATCHING BRIEF

1 INTRODUCTION

1.1 PLANNING BACKGROUND AND OBJECTIVES

Headland Archaeology (UK) Ltd was commissioned by Amey plc, on behalf of Severn Trent Water plc, to undertake archaeological monitoring of the initial ground works for a gravity sewer pipe at Barton-under-Needwood, Staffordshire (**ILLUS 1**). A WSI defining the scope of the monitoring was produced by Amey plc and submitted to the Principal Archaeologist at Staffordshire County Council (Taylor 2016). Of the 135m of proposed sewer pipe, only 90m was within land with archaeological potential, between the plant and the Trent and Mersey Canal. The total depth of the works is to be approximately 5m below ground level, however, this depth is be attained over a series of weeks. The archaeological work was to monitor excavations for the presence of archaeological deposits to the level of the first undisturbed geological horizon.

1.2 SITE LOCATION, DESCRIPTION AND SETTING

The site, hereafter called the Development Area (DA), is located on the western side of the Trent and Mersey Canal, at Barton Turn, Barton-under-Needwood, close to the Derbyshire/Staffordshire border. The section of sewage pipe under investigation connects an existing pipe adjacent to the canal and on the same alignment, to the plant approximately 135m to the west. The new pipe will run on an approximate north-west to south-east alignment, with a sharper turn to the south for 20m to connect to the existing pipe.

This pipeline route bisects a public footpath through a clearing in the surrounding wood of the sewage plant. It is not clear when this area was cleared, or if it has always been left open. Two partially ruined structures are located roughly 20m to the north-east, and were related to an old pumping station.

1.3 GEOLOGY

The underlying bedrock geology is part of the Mercia Mudstone Group. This sedimentary bedrock was formed in an area of hot deserts approximately 200 to 251 million years ago in the Triassic period.

The superficial deposits overlying the bedrock are from Holme Pierrepont Sand and Gravel. These sand and gravels were created in an area dominated by rivers during the Quaternary period, up to 3 million years ago (BGS 2016)

1.4 ARCHAEOLOGICAL BACKGROUND

As stated in the Amey WSI, the Development Area is located within an area of high archaeological potential. Significant levels of work have taken place in the Trent Valley due to the large amount of quarrying and extraction.

Excavation works less than 2km to the south of the DA at Catholme Farm revealed an extensive Neolithic and Bronze Age ceremonial landscape, including causewayed enclosures, barrow cemeteries, cursus and hengiform monuments. Within this, a monument of national significance was uncovered, named as a 'star burst enclosure' from its shape in plan. The same body of work also located Iron Age pit alignments and an associated landscape from this area extending north to the Barton Business Park and beyond.

The Barton Turn road, adjacent to the Development Area, follows the line of the Roman Ryknild Street. This Roman Road was on an approximate north east to south west alignment and lies 45m to the east.

These two areas of concentrated activity highlight the potential for archaeological remains, with a likelihood of relating to either the later prehistoric or Roman periods.

In Historic OS maps of the area, the DA is located on a join of two divisions. This slightly obscures the area, however it appears that little development had occurred alongside the canal until the sewage farm was constructed in the early 1900, prior to the Ordnance Survey map of 1920. The wood surrounding the sewage plant is not present on the early maps and is likely to have been planted to obscure the view of the plant sometime after this.

ILLUS 2 General shot of the larger western trench end, facing NW **ILLUS 3** General shot of the east end of trench, facing SE **ILLUS 4** Section of east end of trench, facing SW **ILLUS 5** NE facing section at west end of trench

2 AIMS AND OBJECTIVES

The objectives of the watching brief were as follows:

- To ensure that archaeological monitoring is undertaken on all aspects of the ground works associated with the Scheme as identified in the scope of works;
- To secure the adequate recording of any archaeological remains encountered which may be revealed by the Scheme within the scope of works;
- To secure the analysis, conservation and long-term storage of any artefactual/ecofactual material recovered from the site;
- To integrate the results of the works into the wider historic and archaeological context of the landscape; and
- To ensure that an accurate and comprehensive record and report of any archaeological deposits found during works is produced and disseminated to the appropriate organisations, including the Staffordshire County Council Historic Environment Record.

3 METHOD

The main contractor excavated deposits with a mechanical excavator as necessary to complete the initial topsoil strip. Once the required depth had been attained, an archaeologist recorded the stratigraphic sequence in sections along the trench.

Fieldwork was started on the 15th January 2016 and completed on the 18th January 2016.

All recording was undertaken on pre-printed pro forma record cards. 35mm black-and-white prints were taken with a graduated metric scale clearly visible, supplemented by digital photography.

Sections and plans were recorded at 1:20 and 1:50, as appropriate. An overall site plan at an appropriate scale and relative to the National Grid was recorded by digital survey using a Trimble dGPS system.

4 RESULTS

A total of 90m of a rough 4.7m wide trench was observed. Its length was approximately 70m on the main north-west to south-east aligned section (**ILLUS 2**), and then a further 20m at the south-eastern end where it turned to connect to the existing sewer (**ILLUS 3**). Due to a bend in the main section, the trench was widened along the south edge to compensate and create a straighter line. This widened the central 30m of the trench to a maximum of 5.7m in this area.

Deposits were fairly consistent throughout the trench. The only variation was confined to layer thickness, in particular the subsoil which increased in thickness towards the east.

Due to the length of the trench and the uniformity of the deposits within it, sections were recorded at regular intervals. Significant levels of rooting can be seen in all sections, whilst the more substantial layers of subsoil can be seen in the southern leg of the trench (**ILLUS 4** and **5**).

Natural geological deposits generally comprised sands and gravels of varying hues from mid-brownish orange to red, with lighter striations in some areas. In particular the redder sand deposits were concentrated around the bands of gravel. Concealing this was a disturbed subsoil layer. This was a mid-orange brown, clay sand with frequent root intrusion and rounded stone inclusions. This horizon had diffuse interfaces with both the topsoil and the underlying substrate with a large variance in thickness (between 0.10–0.30m thick).

The overlying topsoil was observed across the entire site. This thick dark brown, clay sand with humic material showed frequent large root intrusion and occasional small-medium rounded stone inclusions. This layer was relatively regular in depth of between 0.35 and 0.45m thick.

No archaeological finds, features, or deposits were located. Three service pipes were uncovered, a water pipe at the west end of the site, and electricity cable at the east end of the site, and an old iron pipe also towards the eastern end, likely providing services to the aforementioned pump house structures.

5 CONCLUSIONS

The archaeological background identified a high potential for later prehistoric and Roman activity. OS maps revealed little activity in the area, save for the building of the sewage plant which would have disturbed/destroyed any archaeology within its limits. No remains were detected, and no artefacts were found within the topsoil, suggesting an absence of features.

The high levels of rooting visible within the geology, as well as in the upper layers indicates that this area has previously had a substantial level of large plant growth. This probably relates to the band of trees in this area, which are likely to have been deliberately planted causing significant ground disturbance. The area then seems to have been cleared, as only grasses are visible now; again this clearance is likely to have caused further disturbance. This would have impacted any remains previously present.

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Taylor D 2016 ***Written Scheme of Investigation WA3000 STW AMP5 LOT2 WASTE WATER: Barton-under-Needwood*** Amey plc

7 APPENDICES

APPENDIX 1 TRENCH REGISTER

TR1	**Location**	**L (m)**	**W (m)**	**Max D (m)**
	Area 01	90	4.7–5.9	0.96

Context	**Description**	**D of deposit (mBGL)**
1001	Topsoil: Dark brown, clay sand with humic material, occasional rounded stone inclusions and frequent root intrusion.	0.00 – 0.45
1002	Subsoil: Mid-orange brown clay sand with merging horizon, frequent root intrusion, occasional to frequent rounded stone inclusions. Large variance in thickness and is a merging horizon between topsoil and natural as oppose to true subsoil.	0.35 – 0.66
1003	Natural: Mid-brown orange-red clayey sand natural with frequent bands of small to medium rounded gravels, and occasional large rounded pebbles.	0.45 +

Summary

An organic rich topsoil overlaying alluvial deposits of sand and gravel. No archaeological features or deposits identified.

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