RIVER GADE RESTORATION WORKS
GADEBRIGE PARK (NORTH)
HEMEL HEMPSTEAD
HERTFORDSHIRE

ARCHAEOLOGICAL WATCHING BRIEF

Albion
archaeology

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Preface

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Acknowledgements

The project was commissioned by Affinity Water Ltd and carried out in consultation with Alison Tinniswood (Hertfordshire County Council Historic Environment Advisor).

The fieldwork and reporting were undertaken by Benjamin Carroll (Supervisor), with finds input from Jackie Wells (Artefacts Officer) and illustrations by Joan Lighting (CAD Technician). All Albion projects are under the overall management of Drew Shotliff (Operations Manager).

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Version	*Issue date*	*Reason for re-issue*
1.0	*12/10/2018*	*n/a*

Key Terms

The following abbreviations are used throughout this report:

CBM	Ceramic building material
CI*f*A	Chartered Institute *for* Archaeologists
EAA	East Anglian Archaeology
HEA	Hertfordshire County Council Historic Environment Advisor
HER	Hertfordshire Historic Environment Record
WSI	Written Scheme of Investigation

Non-Technical Summary

Restoration works carried out on the River Gade in the northern half of Gadebridge Park, Hemel Hempstead, comprised tree thinning, the re-meandering of the river course, removal of weirs and creation of a wetland and footpath.

As the works had the potential to impact on archaeological remains, Hertfordshire County Council's Historic Environment Advisor recommended that the works should be subject to archaeological monitoring, which took place on 26th and 27th March 2018.

The investigations revealed that the river channel had been narrowed most likely during the transition from agricultural land to parkland in the 19th century when a terrace was formed along its western edge.

Where undisturbed natural geology survived, there was no evidence of archaeological features or deposits predating the 19th century.

1. INTRODUCTION

1.1 Introduction

Restoration works carried out on the River Gade in the northern half of Gadebridge Park, Hemel Hempstead, comprised tree thinning, the re-meandering of the river course, removal of weirs and creation of a wetland and footpath.

The archaeological potential of the site was described in a heritage impact assessment (Young Heritage 2017). As the works had the potential to impact on archaeological remains, Hertfordshire County Council's Historic Environment Advisor recommended that the works should be subject to archaeological monitoring.

1.2 Site Location and Description

Hemel Hempstead is in west Hertfordshire, within Dacorum Borough Council authority. The historic centre of the town lies *c.*9km west of central St Albans, *c.*12km north of Watford and *c.*4km west of the M1.

Gadebridge Park lies to the west of Hemel Hempstead historic centre (Figure 1). It is a public park with children's play area, bowling green and parking facilities. The River Gade runs down the western boundary of the park, crossed part way down by the Grade II listed 'White Bridge'.

The site of the restoration works was centred on grid reference TL 05077 08399, in the northern half of the park, at an elevation of *c.*90m OD.

1.3 Archaeological and Historical Background

The site's archaeological and historical background, specifically the area within a 500m-radius study area around the development area, was discussed in the heritage impact assessment (Young Heritage 2017).

The heritage assessment highlighted evidence of Roman remains 100m to the north-west of the site. These include Gadebridge Roman Villa (SM1015577 / HER 0077).

Cartographic evidence shows the river as a natural channel with open agricultural land either side from the mid-18th century until the late 19th century when it was converted to parkland. The river was shown with two waterfalls and a footbridge, which no longer survive.

1.4 Project Objectives

The primary function of the archaeological monitoring was to determine and understand the nature, function and character of any archaeological remains revealed by the development works and to produce an archive report that fully described the project.

To achieve the above, the data collected during the fieldwork aimed to determine the following:

1. the date, nature and extent of any activity or occupation within the development site;
2. the relationship of any remains found to the surrounding contemporary landscapes.

2. METHODOLOGY

2.1 Introduction

The archaeological monitoring of the river enhancement works was undertaken on 26th and 27th March 2018.

Throughout the project the standards and requirements set out in the following documents were adhered to:

Albion Archaeology	*Procedures Manual: Volume 1 Fieldwork* (3rd edn, 2017)
ALGAO (East)	*Standards for Field Archaeology in the East of England*. EAA Occasional Paper No. 14 (Gurney 2003)
CI*f*A	*Charter and by-law*; *Code of conduct* (2014)
	Standard and guidance for an archaeological watching brief (2014)
	Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2014)
Historic England	*Management of Research Projects in the Historic Environment PPN3: Archaeological Excavation* (2015)
	Archaeology Guidelines and Standards[1];
	The MoRPHE Project Managers Guide (2015)

2.2 Watching Brief

The river enhancement works comprised tree thinning, the re-meandering of the river course, removal of weirs and creation of a wetland and footpath.

Upon arrival, some tree thinning and removal of the two weirs had already been undertaken. Initially, the overburden was reduced from above two outlet drains and the uprooting and clearance of a small tree was monitored in the wetland area. Monitoring of the excavation of a test trench to find an electrical service was then observed. This was followed by ground reduction for the main wetland area.

[1] Historic England guidelines on many specialist fields and materials, including environmental archaeology, are available at: https://historicengland.org.uk/images-books/advice-and-guidance/

3. WATCHING BRIEF RESULTS

3.1 Tree Thinning and Weir Removal

The tree thinning and weir removal were not monitored, although the remains of the weirs were still on site awaiting removal. They comprised 20th-century reinforced concrete blocks, most likely cast on site and when in situ measured approximately 2m wide by 5m long. Material observed from under the weir comprised ceramic building material (CBM), glass, aluminium drinks cans and small pieces of corroded metal (likely to be from the construction of the weirs) (Figure 3).

3.2 Service Test Trench

A small trench 2m wide by 4m long and up to 1.2m deep was excavated by machine with a flat edged ditching bucket to try to identify a possible electrical service close to the proposed wetland area. The soil horizons consisted of dark grey-black turf (1), 0.15m thick, overlying a 0.2m-thick make-up layer (2), used to create a terrace alongside the western edge of the river. The latter comprised mid-brown-grey chalk and silt with frequent small to medium stones. Below it was layer (15) — a dark grey-brown buried topsoil, was 0.1m thick and in turn sealed a 0.15m-thick mid-yellow-brown subsoil (16). The natural geology (14) comprised loose, light yellow-grey, gravel and sand (representing river deposits, up to 0.45m thick), overlying light blue-yellow clay and gravel (17) (Figure 4).

There was no evidence that the archaeological horizon had been truncated and it was largely undisturbed. The only feature identified was a large sub-circular post-medieval pit [5], at least 1.2m wide by 1.5m long and up to 0.7m deep, extending beyond the trench boundaries to the north and east (Figure 2, Section 1; Figure 4). The basal fill (6) contained animal bone, probably representing the disposal of an individual cow. Moderate small to medium fragments of post-medieval CBM were recovered from fills (6), (7) and (9).

3.3 Wetland Area

The wetland area measured approximately 12m by 12m and was excavated up to 2m below ground level, although it was only observed down to the top of the natural geology, a maximum of 1.25m deep.

Soil horizons comprised (Figure 2, Sections 2 and 3):

- dark grey-black turf (1), 0.15m thick, overlying various post-medieval make-up layers that levelled the area and created a terrace alongside the western edge of the river;
- make-up layer (2), mid-brown-grey chalk and silt with frequent small to medium stones, 0.2m thick;
- make-up layer (3), mid-yellow-brown clay silt, with moderate small to medium stones, 0.2m thick;
- make-up layer (4), mid-brown-yellow clay gravel, 0.1m thick;
- make-up layer (10), mid-white-grey, clay silt, with frequent small-medium chalk pieces, 0.1m thick;
- make-up layer (11), dark grey-black flint and silt, 0.18m thick;

- make-up layer (12) light grey-white stone and chalk, 0.1m thick;
- make-up layer (13), dark grey-black, flint and silt, 0.17m thick.

The natural geology (14) comprised river gravels that sloped down towards the river; they increased in thickness to the east (0.8–1.25m).

The wetland area was disturbed by two east-west, 20th-century concrete drains, 0.15m below the ground surface and measuring 1.7m x 0.5m wide. The southern drain was constructed of reinforced concrete slabs like that of the weirs and was most likely constructed at the same time. It was at least 1.3m deep. The smaller drain to the north was made of poured concrete with no sign of any reinforcement; it was up to 0.7m deep (Figures 2 and 3).

Within the wetland area a small tree was uprooted, disturbing an area approximately 2m by 4m. This revealed the top of the natural geology in places at a depth of *c*.0.5m. No archaeological features were identified within the disturbed ground (Figure 3).

The wetland area was reduced by mechanical excavation, using a flat-edged ditching bucket. This revealed the terrace make-up layers and a post-medieval, brick-built drain (0.65m below ground level) on a NW-SE alignment. No other archaeological features or deposits of archaeological interest were revealed (Figures 2–4).

3.4 Unmonitored Groundworks

Based on the findings of the initial investigation, it was considered likely that the footpath and any additional river enhancement to change the flow would either be confined to areas already disturbed by the previous landscaping or not be deep enough to impact upon any possible archaeological remains. Accordingly, these works were not subject to archaeological monitoring.

4. CONCLUSIONS

The investigations revealed that the river channel had been narrowed, most likely during the transition from agricultural land to parkland in the 19th century when a terrace was formed along its western edge, extending *c*.11m away from the river.

Where undisturbed natural geology survived, there was no evidence of archaeological features or deposits predating the 19th century.

5. BIBLIOGRAPHY

Albion Archaeology, 2017 *Procedures Manual Volume 1 Fieldwork.*

Brown, N. and Glazebrook J., (eds), 2000 *Research and Archaeology: a Framework for the Eastern Counties, 2. research agenda and strategy,* East Anglian Archaeology Occasional Paper 8

Historic England, 2011 *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (second edition)*

Medlycott, M., (ed.), 2011 *Research and Archaeology Revisited: a Revised Framework for the Eastern Counties,* East Anglian Archaeology Occasional Paper 24

Young Heritage, 2017 *Assessment of the impact of the proposed River Gade improvements, Hemel Hempstead, Hertfordshire*, September 2017

6. APPENDIX 1: HER SUMMARY SHEET

Site name and address: River Gade Restoration Works, Gadebridge Park (North), Hemel Hempstead		
County: Hertfordshire	District: Dacorum	
Village/Town: Hemel Hempstead	Parish: N/A	
Planning application reference: N/A		
HER Enquiry reference: N/A		
Client name, address, and tel. no.: Affinity Water Ltd, Tamblin Way, Hatfield, Hertfordshire AL10 9EZ. 01707 250 465		
Nature of application: River restoration works		
Present land use: Public park		
Size of application area: N/A	Size of area investigated: N/A	
NGR (to 8 figures): TL 0507 0839		
Site code (if applicable): GP3334		
Site director/Organization: Drew Shotliff / Albion Archaeology		
Type of work: Archaeological watching brief		
Date of work:	Start: 26/03/18	Finish: 27/03/18
Location of finds and site archive/Curating museum: Dacorum Heritage Trust Museum, Berkhamsted.		
Related HER Nos: N/A	Periods represented: 19th century/modern.	
Relevant previous summaries/reports: Young Heritage, 2017, *Assessment of the impact of the proposed River Gade improvements, Hemel Hempstead, Hertfordshire*, September 2017		
Summary of fieldwork results: *Restoration works carried out on the River Gade in the northern half of Gadebridge Park, Hemel Hempstead, comprised tree thinning, the re-meandering of the river course, removal of weirs and creation of a wetland and footpath.* *As the works had the potential to impact on archaeological remains, Hertfordshire County Council's Historic Environment Advisor recommended that the works should be subject to archaeological monitoring, which took place on 26th and 27th March 2018.* *The investigations revealed that the river channel had been narrowed, most likely during the transition from agricultural land to parkland in the 19th century when a terrace was formed along its western edge.* *Where undisturbed natural geology survived, there was no evidence of archaeological features or deposits predating the 19th century.*		
Author of summary: Ben Carroll	Date of summary: 09/10/2018	

7. APPENDIX 2: OASIS DATA COLLECTION FORM

8. OASIS ID: albionar1-312822

Project details

Project name	Gadebridge Park, Hemel Hempstead - Watching Brief
Short description of the project	Restoration works carried out on the River Gade in the northern half of Gadebridge Park, Hemel Hempstead, comprised tree thinning, the re-meandering of the river course, removal of weirs and creation of a wetland and footpath. As the works had the potential to impact on archaeological remains, Hertfordshire County Council's Historic Environment Advisor recommended that the works should be subject of archaeological monitoring, which took place on 26th and 27th March 2018. The investigations revealed that the river channel had been narrowed most likely during the transition from agricultural land to parkland in the 19th century when a terrace was formed along its western edge. Where undisturbed natural geology survived, there was no evidence of archaeological features or deposits that pre-dated the 19th century.
Project dates	Start: 26-03-2018 End: 27-03-2018
Previous/future work	No / No
Any associated project reference codes	GP3334 - Contracting Unit No.
Type of project	Recording project
Monument type	PIT Post Medieval
Significant Finds	ANIMAL BONE Modern
Significant Finds	CBM Post Medieval
Investigation type	"Watching Brief"

Project location

Country	England
Site location	HERTFORDSHIRE DACORUM HEMEL HEMPSTEAD Gadebridge Park, Hemel Hempstead
Study area	280 Square metres
Site coordinates	TL 0507 0839 Point

Project creators

Name of Organisation	Albion Archaeology
Project brief originator	No Brief

Project design originator	No Project Design
Project director/manager	Drew Shotliff
Project supervisor	Ben Carroll
Project archives	
Physical Archive recipient	Dacorum Heritage Trust Museum
Paper Archive notes	Dacorum Heritage Trust no longer take paper archives so a scanned version will be deposited with them
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	River Gade Restoration Works, Gadebridge Park (North), Hemel Hempstead: Archaeological Watching Brief
Author(s)/Editor(s)	'Carroll, B'
Other bibliographic details	2018/135
Date	2018
Issuer or publisher	Albion Archaeology
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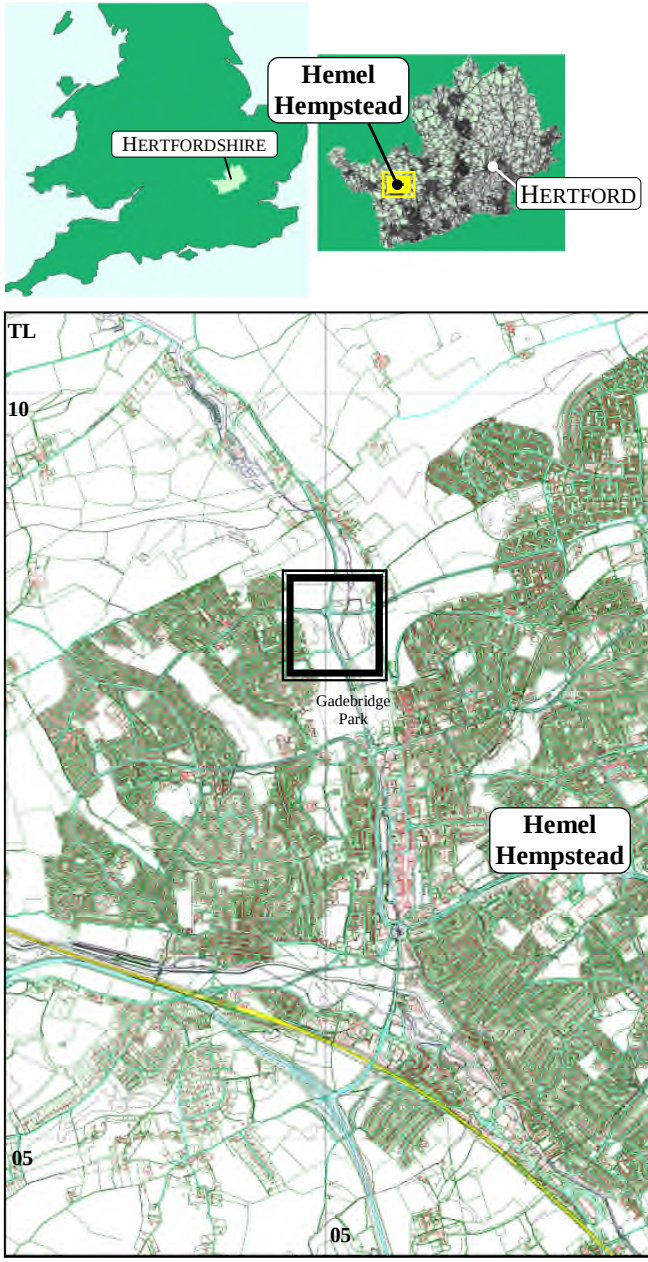

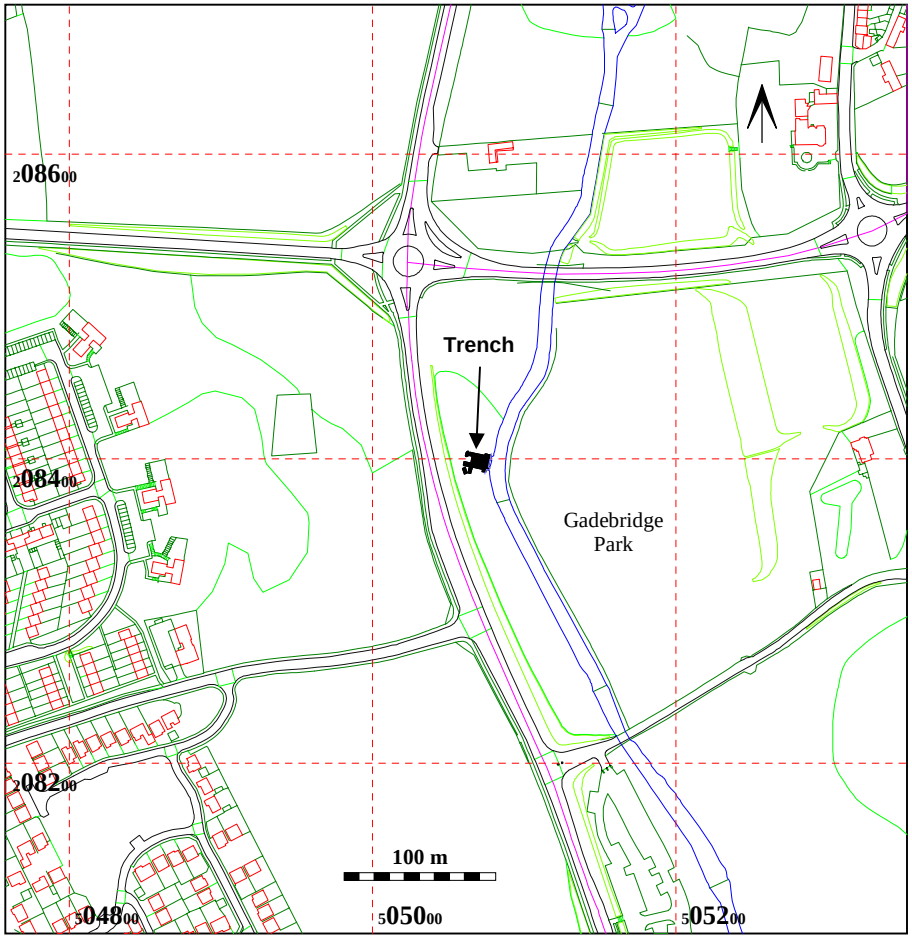

Figure 1: Site location

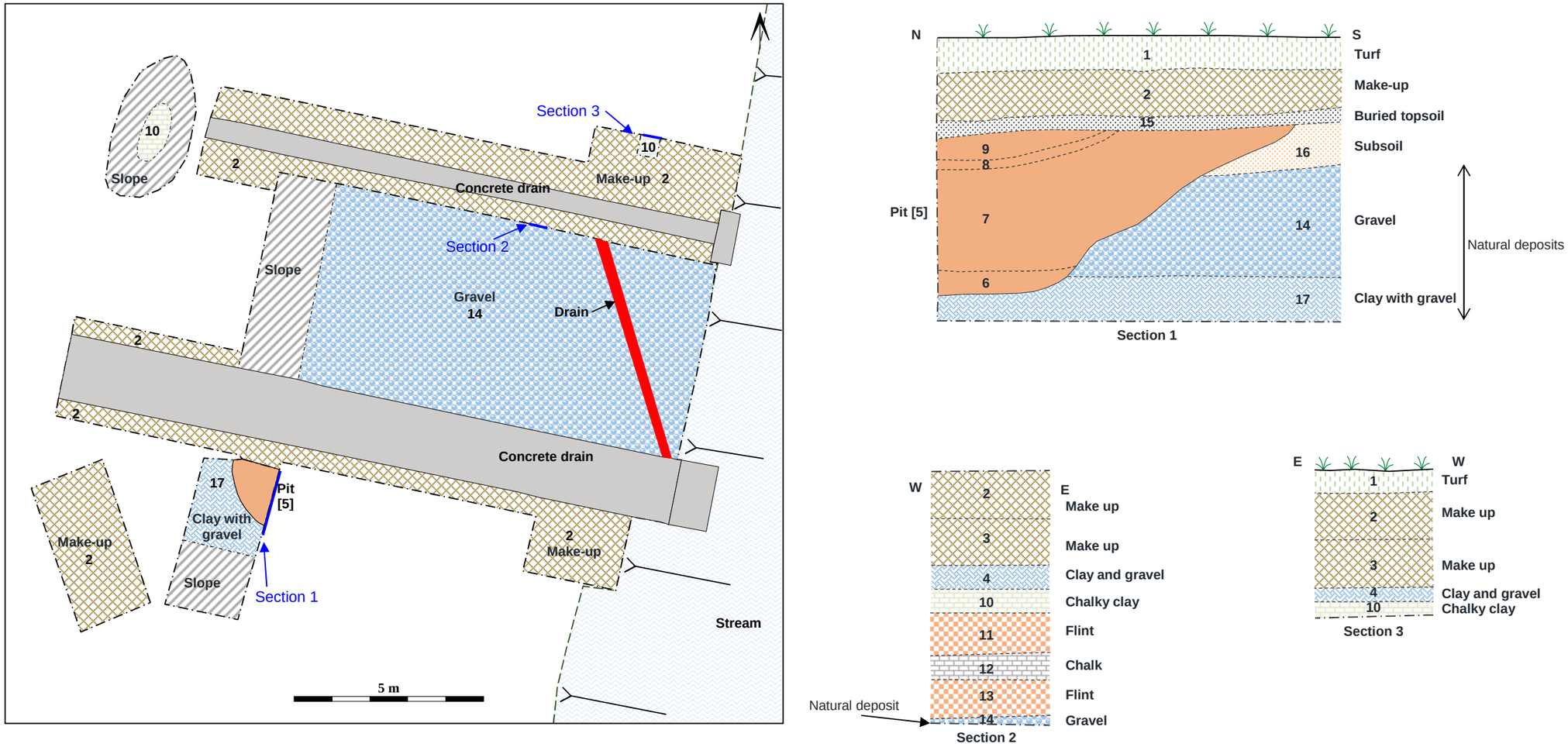

Figure 2: Plan and section drawings

River channel and terrace cleared of vegetation and weir removed (looking SE)

Wetland area, with tree removed and modern concrete drains exposed; service trench being opened (looking SE)

River channel with weir removed (looking east)

Brick drain between concrete drains in the wetland area (looking SE, 1m scale)

Figure 3: Selected photographs

Baulk section showing make-up layers (looking NE, 1m scale)

Service test trench, baulk section showing pit [5] (looking east, 1m scale)

Natural geology shown to the right of picture, make up layers to the left and a large concrete drain to the rear (looking SE)

Figure 4: Selected photographs

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