

**BEDFORD WATER MAIN
BIDDENHAM LOOP
PHASE 1**

RESULTS OF ARCHAEOLOGICAL INVESTIGATION

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Contents

Preface..... 3

Key organisations/people 3

Acknowledgments 3

Structure of this report 3

Version history 3

Non-technical summary 4

1. INTRODUCTION 5

 1.1 Project background..... 5

 1.2 Status and purpose of this document..... 5

 1.3 Site location and pipeline route 5

 1.4 Topography and geology 5

 1.5 Archaeological background 7

 1.6 Method Statement 8

2. RESULTS..... 9

 2.1 Introduction 9

 2.2 Discussion by chronological period..... 10

 2.3 Artefact assemblage 11

 2.4 Data summary 11

3. SUMMARY 12

4. BIBLIOGRAPHY 13

List of figures

- Figure 1: Route of water main with previous/on-going archaeological investigations
 Figure 2: Area of investigation showing features in adjacent sites
 Figure 3: All features plan



Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the specification. All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

Key organisations/people

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<i>Simon Mortimer</i>	<i>CgMs Consulting (Acting on behalf of The Client)</i>

Acknowledgments

This report has been prepared by Ben Barker (Project Officer), Mike Luke (Project Manager) and Jackie Wells (Finds Officer).

Fieldwork was directed by Mike Luke and Ben Barker with investigations supervised by Joanne Archer (Site Supervisor) or her deputy Adam Howard (Assistant Supervisor). Additional investigation was undertaken by Wiebke Starke (Assistant Supervisor), Annette Hughes and Gyorgy Nemes (Archaeological Technicians). Finds were examined by Holly Duncan (Artefacts Manager) and Jackie Wells (Finds Officer).

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Structure of this report

After the introductory Section 1, this report presents the results of the investigation (Section 2) and a summary (Section 3).

Version history

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<i>1.0</i>	<i>13/10/08</i>	<i>n/a</i>
<i>1.1</i>	<i>20/10/08</i>	<i>Inclusion of comments from consultant</i>



Non-technical summary

Anglian Water is intending to construct a water main through the Biddenham Loop and land to the west of Bedford. The route passes through, or is adjacent to, a number of areas of archaeological significance.

Albion Archaeology was instructed by Anglian Water in April 2008 to produce a Written Scheme of Investigation for the Biddenham Loop part of the scheme (Albion 2008a). This was approved by the County Archaeological Officer in August 2008. In order to avoid a clash between laying of the pipe and house building, it was decided that the initial c. 500m of the pipe would be constructed in the north-east part of the Biddenham Loop.

This report presents the results of the archaeological investigations associated with this first phase of the water main, which were undertaken in September 2008.

The Biddenham Loop is an area known to contain evidence for past land use from the late Neolithic through the Bronze Age, Iron Age and Romano-British period to the Saxon period. The investigations within the pipeline corridor located:

- *A possible late Neolithic/early Bronze Age pit*
- *A middle Bronze Age ditch*
- *Romano-British ditches*
- *Post-medieval quarry pits and ditches*
- *Undated alignments of postholes*

The dating and interpretation of these features is heavily dependant on the results of previous investigations on adjacent land, especially those undertaken on behalf of David Wilson Homes to the south (Albion 2008b). It is, therefore, intended that the results of the work within the pipeline corridor will be fully integrated into the analysis and publication of those investigations.



1. INTRODUCTION

1.1 *Project background*

Anglian Water intends to construct a water main through an area of known archaeological potential on David Wilson Homes (DWH) land on the Biddenham Loop to the west of Bedford. It will cross some land allocated for housing, but the majority of the route lies within land assigned for the Country Park.

The archaeological investigations were undertaken in accordance with the Written Scheme of Archaeological Investigation (Albion 2008a). This approach is compatible with that taken on the adjacent David Wilson Homes land (CgMs 2007; Albion 2007).

1.2 *Status and purpose of this document*

This document presents the results of the archaeological investigations on the first phase of pipeline construction in the north-east part of the Biddenham Loop (see below). Details of the archaeological background, investigation strategy and methodology are fully described in the Written Scheme of Investigation (Albion 2008a) and are therefore not repeated in detail here.

1.3 *Site location and pipeline route*

The pipeline crosses the Biddenham Loop, an area of land that lies within a large meander of the River Great Ouse to the south of the village of Biddenham and to the south-west of Bedford. It is centred on TL 210/484.

The route extends from the Queens Park allotments to the north-east of the Loop to the River Great Ouse to the south-west. The land is owned by David Wilson Homes. To the south-west the route crosses into the Bedford Western Bypass corridor.

To avoid a clash between laying of the pipe and house building it was agreed that a short length of the pipe would be constructed in the north-east part of the Loop — *c.* 500m between TL 02789 24929 and TL 02545 49004 (Fig. 1).

1.4 *Topography and geology*

The topography of the Biddenham Loop is generally flat, although it slopes down towards the floodplain. The majority of the Loop lies at approximately 30-33m OD with its highest point being at 41m OD in the north-east. The majority of the pipeline route is within the floodplain of the River Great Ouse which lies at approximately 28m OD.

The underlying solid geology of the area is limestone, but this is overlain by river gravels (within most of the route) and alluvium (closer to the present-day river). Occasional outcrops of Oolitic Limestone and Cornbrash Limestone, separated in places by Blisworth Clay, are known. Above the Cornbrash are the clays and sands of the Kellaway Beds, sealed by a layer of dark grey Oxford Clay.

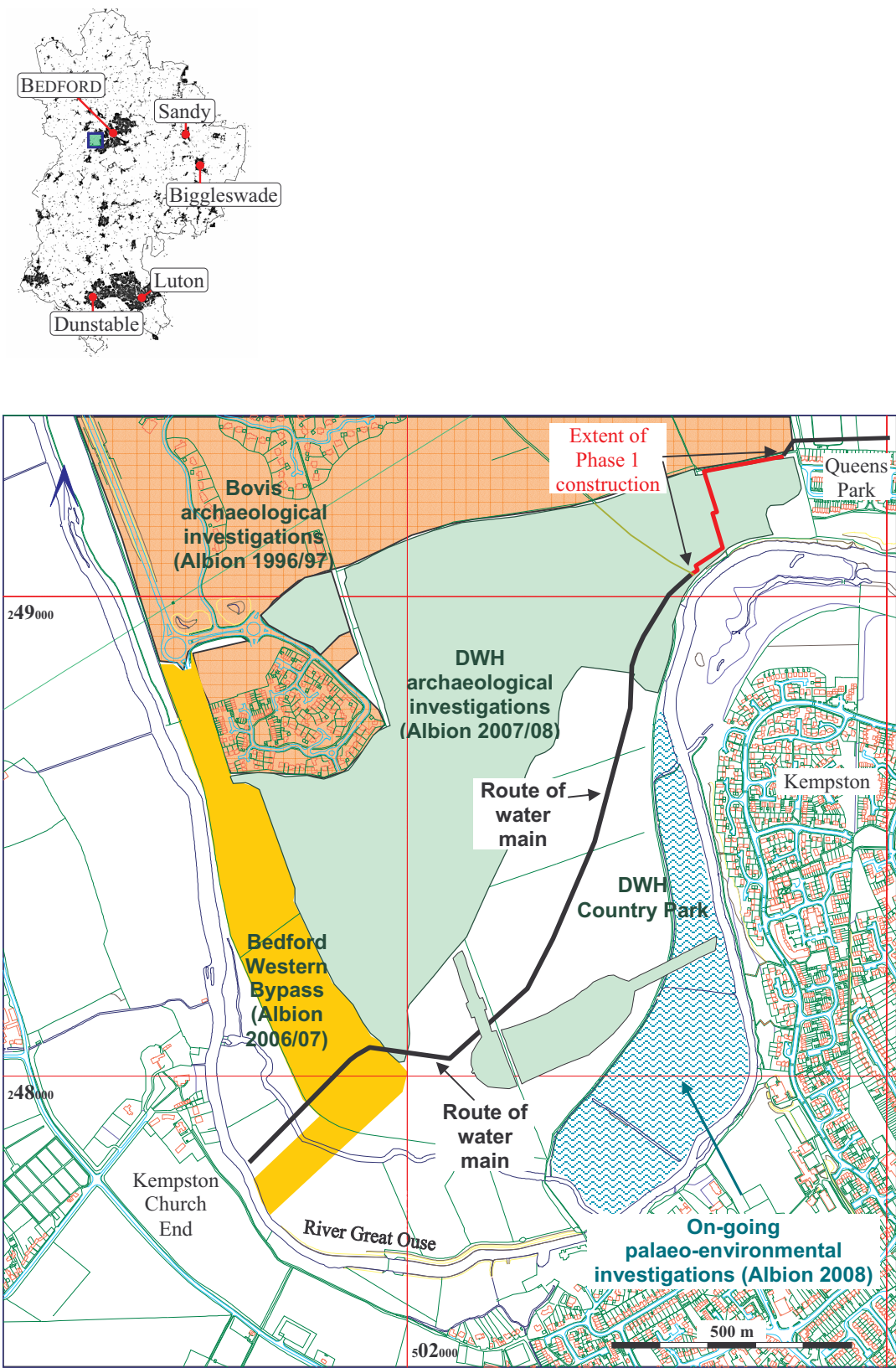


Figure 1: Route of water main with previous/on-going archaeological investigations

Base map reproduced from the OS Map with the permission of the Controller of Her Majesty's Stationery Office, by Beds CC OS Licence No. 100017358. © Crown



1.5 Archaeological background

The Biddenham Loop represents an area of intense past human activity from the late Neolithic/early Bronze Age, through the middle Bronze Age, late Bronze Age/early Iron Age, middle Iron Age, and late Iron Age/Romano-British to the early-middle Saxon period.

The Phase 1 route is located adjacent to areas of archaeological investigation undertaken by Albion Archaeology for Bovis Homes (Luke 2008) and David Wilson Homes (Albion 2008b). These contained evidence for:

- Late Neolithic/early Bronze Age funerary monuments and burials
- Middle Bronze Age field ditches
- Late Bronze Age/early Iron Age pit alignment
- Romano-British farmstead
- Early-middle Saxon settlement

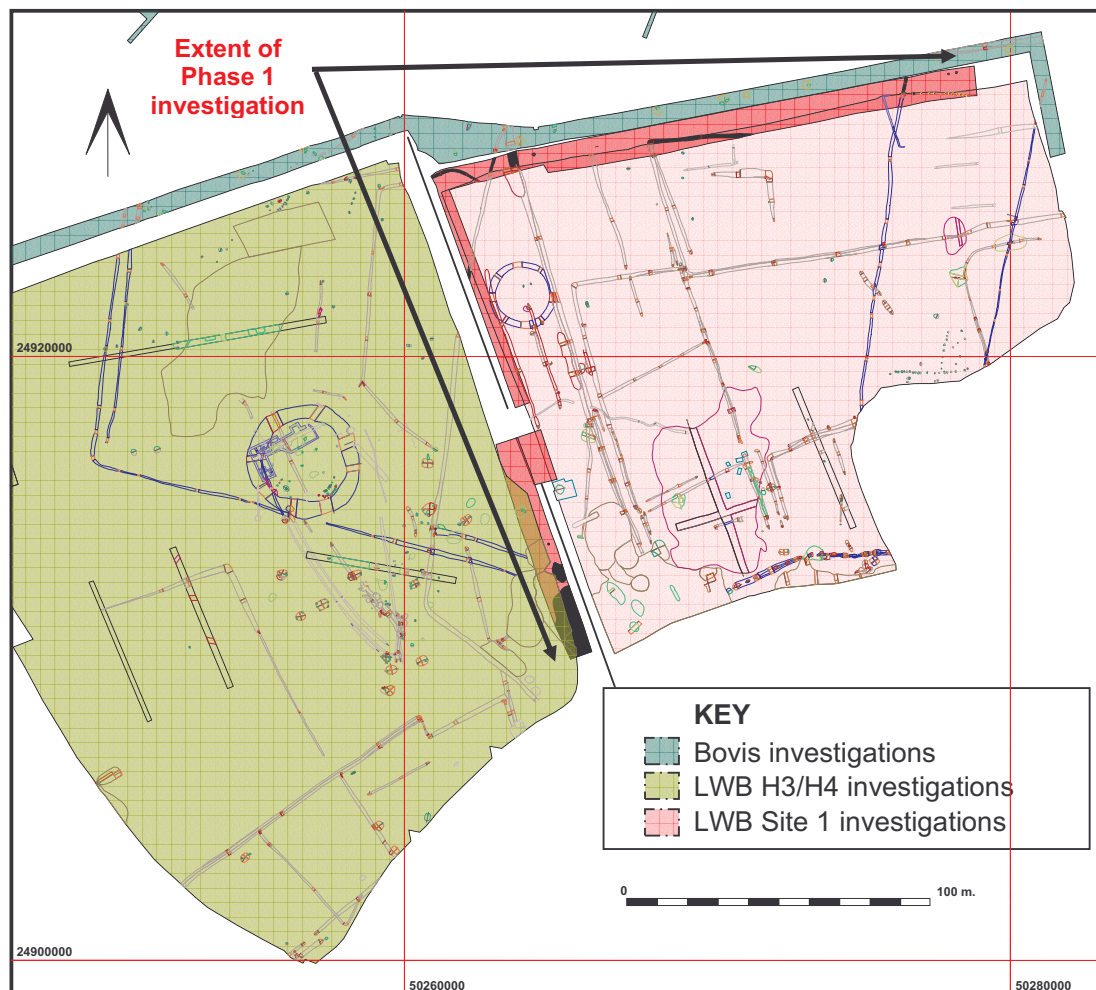


Figure 2: Area of investigation showing features in adjacent sites



1.6 **Method Statement**

The investigations were carried out during September 2008 and the fieldwork was “signed off” by County Archaeology Office. All work was undertaken in accordance with the Written Scheme of Investigation (Albion 2008a). In summary, the main points with regard to the excavation methodology were as follows:

- All machine excavation was undertaken using a 360° mechanical excavator fitted with a toothless bucket.
- In areas which had not been previously investigated, topsoil and subsoil were removed within the required working corridor under archaeological supervision. Mechanical excavation ceased when the top of archaeological deposits, clean natural gravel deposits, or backfill from the recent investigations were visible.
- The resultant trench was *c.* 500m long and 5m and 9m wide. It was narrower in areas where there was an overlap with the previous investigation areas.
- The spoil heaps and archaeological features were scanned for artefacts.
- All archaeological deposits were recorded using a unique recording number sequence commencing at 1.
- The location of the investigations was surveyed using Differential Global Positioning System (DGPS) and should be accurate to 20mm.



2. RESULTS

2.1 Introduction

A total of c. 0.27ha were investigated. The stripped area comprised two parts of roughly equal length — one aligned E-W and the other N-S. Figure 3 shows the extent of the archaeological investigation and the location of the archaeological features identified.

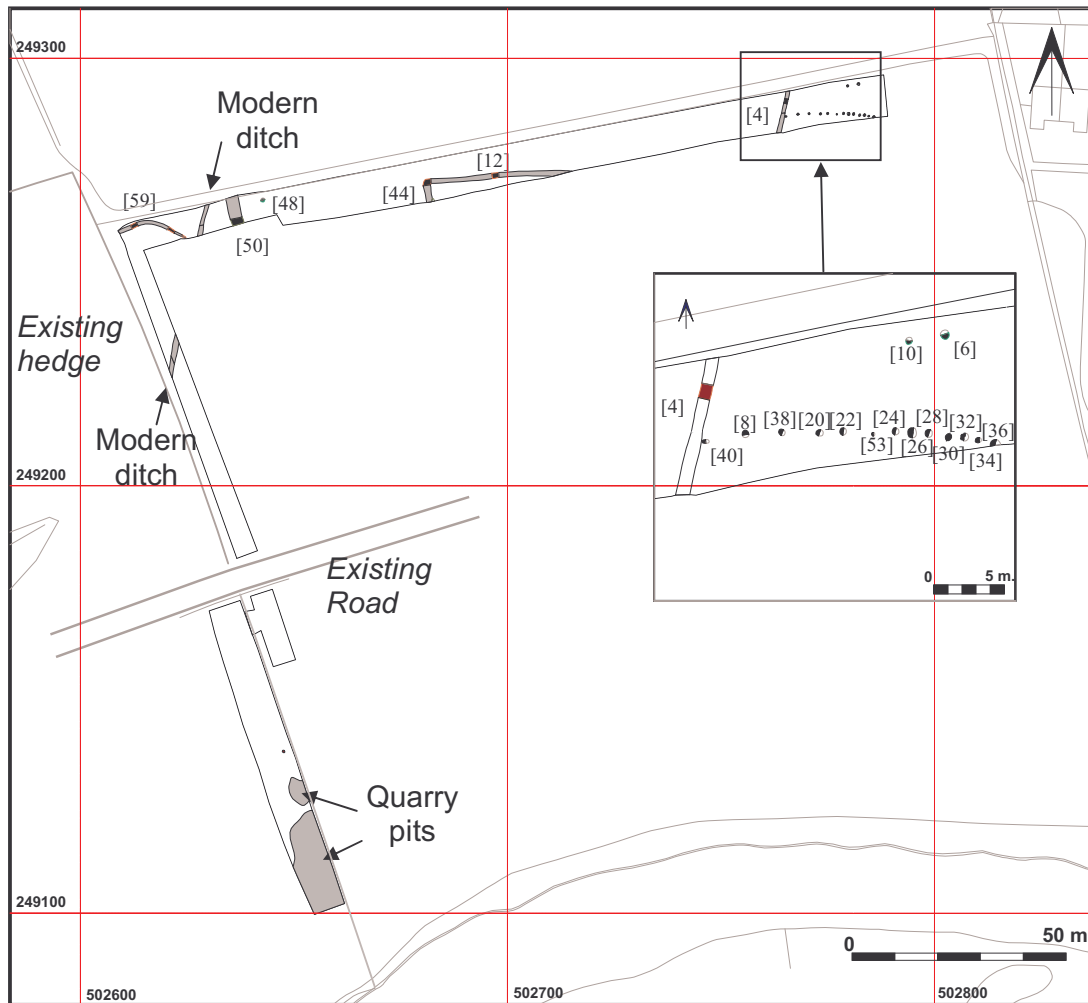


Figure 3: All features plan



2.2 Discussion by chronological period

The archaeological features are discussed below by chronological period. However, much of the dating evidence for the assignment of features to different periods is based on the results of the adjacent investigations.

2.2.1 Late Neolithic/early Bronze Age

A small pit [48] was located towards the western end of the E-W strip. It was circular, *c.* 1m in diameter and *c.* 0.35m deep. As such, it was similar to other isolated pits found within the DWH investigations dated to the Bronze Age but despite being fully excavated by hand it contained no artefacts.

2.2.2 Middle Bronze Age

The E-W strip contained a NNE - SSW ditch [4] which was the continuation of one located within the DWH investigations to the south. There, it was dated to the middle Bronze Age mainly on the basis of its stratigraphic relationship with Roman ditches and a small artefact assemblage. The ditch was *c.* 0.8m wide and 0.4m deep, with a V-shaped profile and a flat base.

Ditch [59] was also located at the western end of the E-W strip. It too was a continuation of one located within the DWH investigations. It was *c.* 0.9m wide and *c.* 0.3m deep, with a shallow U-shaped profile. Three hand-dug segments, [16], [18] and [42] were excavated across the ditch. They produced an iron nail, two pieces of animal bone and a piece of burnt flint but no closely datable finds. Within the DWH investigations to the west the ditch turns and is parallel to ditch [4] suggesting it may be contemporary.

2.2.3 Romano-British

An E-W aligned ditch [12] was located towards the centre of the E-W strip. It turned 90 degrees [44] within the strip and was clearly the continuation of one of the Romano-British ditches found in the DWH investigation area to the south. The ditch was *c.* 1.1m wide and 0.55m deep with a V-shaped profile. A total of 16 sherds (203g) of abraded Romano-British pottery was recovered.

2.2.4 Late Roman/early Saxon

A continuation of a possible late Romano-British/early Saxon N-S ditch [50] was located at the western end of the northern strip. This feature had been intensively excavated within both the DWH and Bovis investigations and, therefore, it was machine-excavated. The ditch was 2.8m wide and 0.9m deep with a U-shaped profile. No finds were recovered. It is likely that this ditch is related to the Saxon occupation activity located 100m to the south-west; it may well represent remodelling of earlier Romano-British boundary ditches.

2.2.5 Post-medieval

The southern end of the N-S strip was dominated by post-medieval quarry pits. Similar features were encountered in the adjacent DWH investigations where they appeared to have been dug to extract limestone.



2.2.6 Modern

A NNE-SSW aligned ditch was located at the western end of the E-W strip and at the northern end of the N-S strip. This feature is the continuation of a ditch located within the DWH investigations to the south-east and the Bovis investigations to the north. It contained barbed wire and modern china indicating that, despite being parallel to the middle Bronze Age ditches, it was part of a modern field boundary.

2.2.7 Undated

An alignment of 13 postholes was identified directly to the east of middle Bronze Age ditch [4]. They were generally 0.2m–0.6m in diameter and 0.4m deep. The alignment was approximately 21m long and was orientated E-W, curving slightly to the south at its eastern limit. No datable artefacts were recovered from the postholes. They may date to the post-medieval period because the alignment is similar to a length of limestone wall dated to this period within the DWH investigations to the south (see Figure 2). However, another area of undated postholes was also found in the vicinity of the same middle Bronze Age ditch *c.* 100m to the south, suggesting that they may be contemporary.

Two isolated postholes [6] and [10] were located 6m to the north of the posthole alignment.

2.3 *Artefact assemblage*

2.3.1 Pottery

Sixteen sherds (203g) of Romano-British pottery were recovered. All were abraded and leached. The pottery was recovered from segments [12] and [44] of ditch [59] — 15 sherds (189g) and 1 sherd (14g) respectively.

2.3.2 Animal Bone

Two fragments of abraded animal bone were recovered from segment [16] of ditch [59].

2.3.3 Metalwork

An iron nail was recovered from segment [16] of ditch [59]. It had a flat rectangular head and a thin rectangular-sectioned tapering shank. The tip was damaged. The thinness of the shank may suggest that it was a shoeing nail.

2.4 *Data summary*

Extent	2,667 m ²
Contexts	60
Features	24
Pottery	16(203g)
Animal bone	2 (76g)
Iron objects	1

Table 1: Data Summary



3. SUMMARY

The investigations have located evidence, in the form of 24 archaeological features and a small assemblage of artefacts, for Bronze Age, Romano-British/early Saxon and post-medieval activity. This is a relatively high density given that the investigation area was only between 5m and 9m wide. However, the dating and interpretation of the features are heavily dependant on the results of the adjacent investigations, especially the extensive ones undertaken on behalf of DWH.

If viewed in isolation, the results would not justify publication. However, when combined with results from investigations within adjacent areas, their significance is enhanced. It is, therefore, intended that the results will be fully integrated into the analysis and publication of the DWH investigations.



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