

**M1 BROUGHTON BROOK OUTFALL
BEDFORDSHIRE**

**ARCHAEOLOGICAL OBSERVATION,
INVESTIGATION, RECORDING, ANALYSIS
AND PUBLICATION**

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Preface

Every effort has been made in the preparation of this document to provide as complete a summary as possible within the terms of the Project Design. 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.

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Structure of the Report

The project and its background are introduced in Section 1. This is followed by an outline of the methodology employed during the project in Section 2 with the results of the fieldwork presented in Section 3.

Key Terms

Throughout this report the following terms or abbreviations are used:

HER	Heritage Environment Record
HES	Bedfordshire County Council Heritage and Environment Service
IFA	Institute of Field Archaeologists

Acknowledgements

The project was commissioned by Carillion-URS and monitored on behalf of the Local Planning Authority by Martin Oake of Bedfordshire County Council Heritage and Environment Service.

This report was prepared by Ian Turner with illustrations by Joan Lightning.



Non-Technical Summary

A programme of archaeological observation, investigation and recording was undertaken by Albion Archaeology on engineering works at the M1 Broughton Brook outfall, Bedfordshire.

The site lies within an area of archaeological potential, in the vicinity of cropmarks possibly dating to the later prehistoric or Roman periods. Other significant archaeological remains are also located in the surrounding landscape.

The engineering works comprised the excavation of a foundation trench for a penstock, and the re-profiling of a length of drainage ditch.

No archaeological features, deposits or artefact were revealed during the engineering works. Deep excavations were only carried out for the penstock foundation trench where only geological deposits were encountered. Any potential remains present in the vicinity of the drainage ditch were unlikely to be revealed due to the limited nature of the works in that area.



1. INTRODUCTION

1.1 Background

Carillion-URS were commissioned by the Highways Agency to undertake engineering works on the outfalls of Broughton Brook, either side of its culvert beneath the M1 motorway.

The HES advised that these works might have an impact on archaeological remains on the Bedfordshire side of the motorway. Accordingly, the implementation of a programme of archaeological works comprising observation, investigation and recording was agreed.

Albion Archaeology was commissioned to carry out these works in accordance with a Brief (HES 2006) and corresponding Project Design (Albion Archaeology 2006).

1.2 Site Location and Description

Broughton Brook passes beneath the M1 between junctions 13 and 14 at NGR SP 9217 3930 (Figure 1). It flows westward to the M1 and the boundary between Bedfordshire and Milton Keynes from the village of Salford.

The site lies in the river valley at a height of around 65m OD with the land rising up to the north and south. The geology of the area comprises Oxford Clay overlain by deposits of alluvium and river valley gravels.

The archaeological works were to be carried out only on the northern side of the M1, adjacent to the southbound carriageway, where the outfall works lie within the county of Bedfordshire.

1.3 Archaeological Background

There is a cropmark (HER 14837) on the north bank of Broughton Brook, approximately 50m to the north-east of the proposed works. It comprises a rectangular enclosure and linear features one of which runs right up to the north bank of the brook. The cropmark is presently undated but likely to belong to the later prehistoric or Roman periods.

There are further cropmark sites to the north (HER 7721 and 16477), one of which has been identified as being part of a Roman field system (Petchey 1978).

To the north-east a substantial Iron Age settlement has been excavated (Dawson 2005). Neolithic, Bronze Age and Roman features were also found at the site.

To the east there are substantial remains of medieval settlement and field systems in and around the village of Salford, many of which survive as earthworks (e.g. HER 1655 and 5215).



1.4 Project Objectives

Although the potential archaeological impact of the proposed work was relatively small, the valley of the Broughton Brook was clearly an area of high archaeological potential. The work could have impacted on archaeological remains from the prehistoric period onwards, although remains of Iron Age or Roman date would, on balance, have been most likely. Evidence of this date could address a number of regional research priorities identified for the period (Oake, forthcoming) and complement recent discoveries along the lower reaches of the brook in Milton Keynes (Brian Giggins, pers. comm.).

Within this framework, the aims of the investigation were set out in the HES Brief (section 4), and were as follows:

- Establish the date, nature and extent of activity or occupation in the development site.
- Establish the relationship of any remains found to the surrounding contemporary landscapes.
- Recover artefacts to assist in the development of type series within the region.
- Recover palaeo-environmental remains to determine local environmental condition.

In general, the aim of the archaeological investigation was to gather information to determine and understand the nature, function and character of an archaeological site in its cultural and environmental setting.



2. METHODOLOGY

The archaeological observation was undertaken between 26th February and 7th March 2007. During this period, all groundworks which required monitoring were completed. A mechanical excavator was used for all excavations which were carried out under archaeological supervision.

The archaeological works adhered to the following standards and requirement set out in Section 5 of the HES Brief:

- Any stripping of overburden or excavation of service trenches to be monitored to try to identify *in situ* archaeological deposits.
- All disturbed soil to be scanned for artefacts.
- Any excavated deposits to be recorded in accordance with Albion Archaeology's *Procedures Manual* and the detailed requirements in Section 5 of the Brief.
- All archaeological observations are to be recorded at a suitable scale on base plans that are tied in to the OS national grid.
- A photographic record to be made of all significant deposits.

Throughout the project, the standards set out in the IFA Codes of Conduct and Standards and Guidance documents (specifically *Standard and Guidance for an Archaeological Watching Brief*, September 1999), and English Heritage's *Management of Archaeological Projects* (1991), and in Albion Archaeology's *Procedures Manual* were adhered to.

The project archive will be accessioned with Bedford Museum under accession number BEDFM 2007.432.



3. RESULTS

3.1 *Extent and Nature of Groundworks*

The groundworks comprised the excavation of a foundation trench, 4.25m long, 2m wide and 1.57m deep, for a penstock (stop cock) and headwall, and the re-grading and re-profiling of a *c.*125m length of the motorway drainage ditch to the south-east of the penstock (Figure 2).

The re-grading and re-profiling of the drainage ditch consisted of a light scrape of its sides to a depth of 20mm, and some pressing back with a machine bucket, thus leaving the topsoil covering the drainage ditch largely intact.

3.2 *Results*

Overburden was fully removed during the excavation of the penstock only and comprised topsoil, 0.15m thick, overlaying a mid white/yellow silty clay subsoil, 0.22m thick.

Geological strata were observed beneath the overburden and comprised a light grey/brown clay layer, 0.60m thick, that overlay a mid orange brown clay layer, 0.40m thick. Beneath the clay a soft light grey clay silt of at least 0.20m thickness was revealed at the bottom of the trench.

3.3 *Conclusion*

No archaeological features, deposits or artefacts were revealed by the works associated with the penstock construction or ditch re-profiling.

Excavation of the penstock foundation trench revealed undisturbed geological deposits.

Any remains present in the vicinity of the drainage ditch were unlikely to be revealed due to the limited nature of the works in that area.



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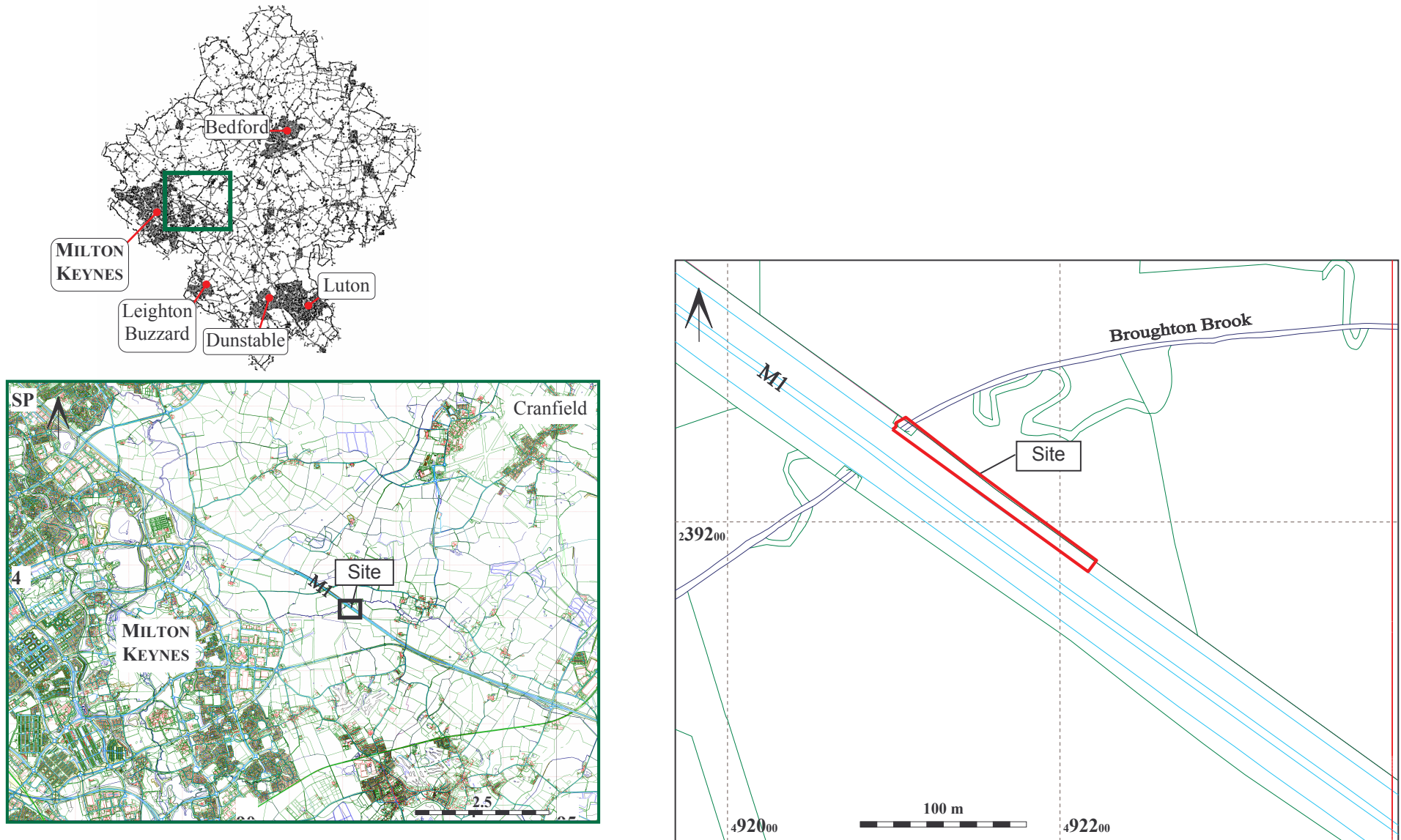


Figure 1: Site location map

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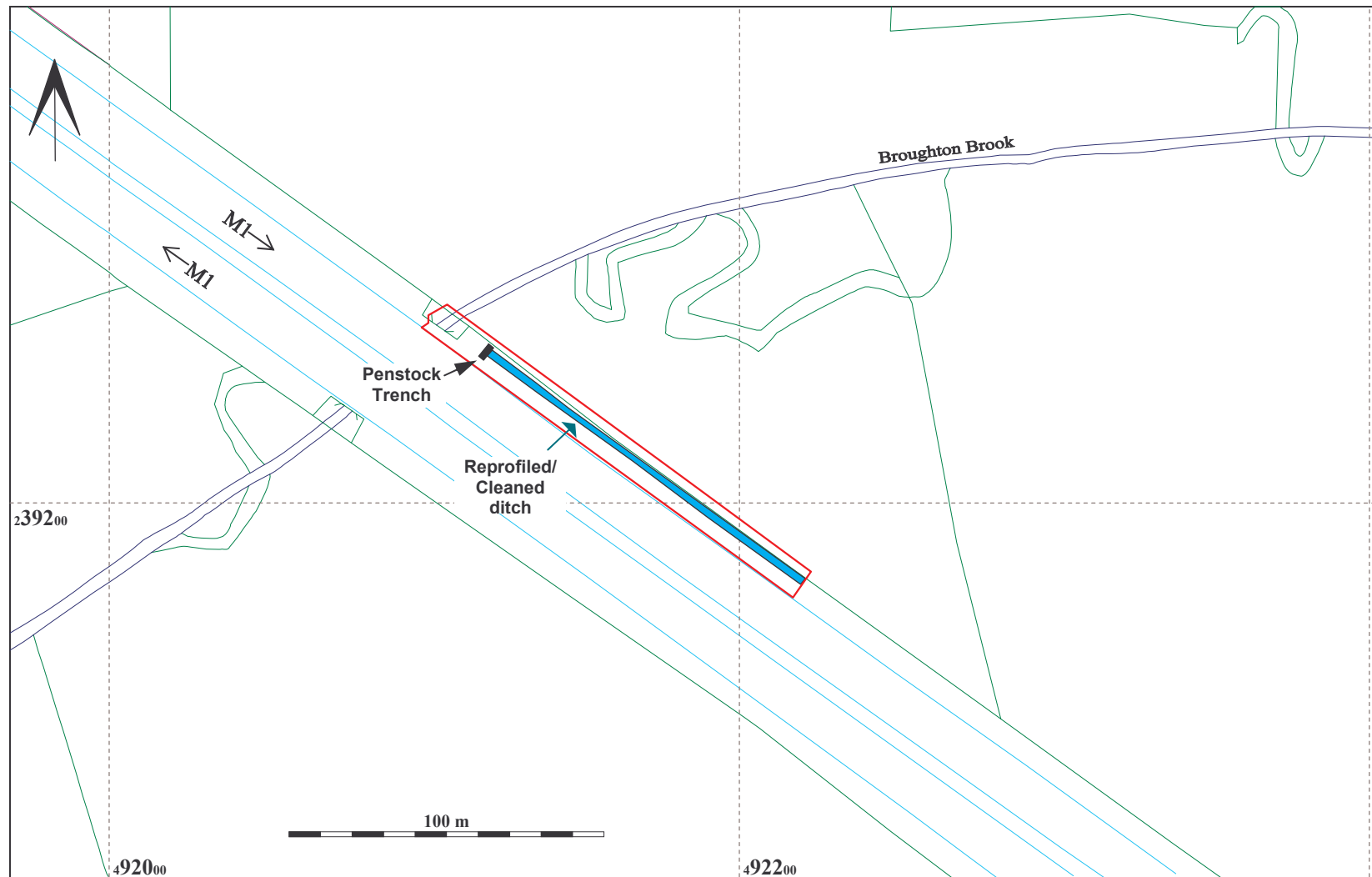


Figure 2: Location of groundworks

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