



**An Archaeological Watching Brief
during the Geotechnical Ground Investigation
in the area of M1 Junction 11a
July 2014**

Report No. 14/182

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Illustrator: Amir Bassir



An Archaeological Watching Brief during the Geotechnical Ground Investigation in the area of M1 Junction 11a Central Bedfordshire July 2014

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OASIS REPORT FORM

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|--|---|---|----------------|
| PROJECT DETAILS | | OASIS no. molanort1 - 191417 | |
| Project name | An Archaeological Watching Brief during the Geotechnical Ground Investigation in the area of M1 Junction 11a, July 2014 | | |
| <p>A series of geotechnical investigations were conducted that included cable percussion boreholes, windowless sampling, disturbed sampling and groundwater monitoring, to include five trial pits designated for archaeological monitoring out of a total of thirteen because they were located in archaeologically sensitive areas. Archaeological attendance was carried out, and the geotechnical team on the ground chose to conduct all of their work using boreholes. No trial pits were excavated by machine, and subsequently no deposits were visible for archaeological inspection.</p> | | | |
| Project type | archaeological watching brief | | |
| Site status | none | | |
| Previous work | trial trench evaluation (Burrow 2008) | | |
| Current Land use | agricultural, arable | | |
| Future work | further trial trench excavation and watching brief | | |
| Monument type/period | none | | |
| Significant finds | none | | |
| PROJECT LOCATION | | | |
| County | Central Bedfordshire | | |
| Site address | Chalton | | |
| Study area | test pits only | | |
| OS Easting and Northing | TL 0366 2572 and vicinity | | |
| Height OD | c130m above Ordnance Datum | | |
| PROJECT CREATORS | | | |
| Organisation | MOLA Northampton | | |
| Project brief originators | Martin Oake, Central Bedfordshire Council | | |
| Project Design originator | Andrew Copp, URS Infrastructure & Environment UK Ltd | | |
| Director/Supervisor | Jason Clarke, MOLA | | |
| Project Manager | Jim Brown, MOLA | | |
| Sponsor or funding body | Costain Carillion Joint Venture (CCJV) | | |
| PROJECT DATE | | | |
| Start date | July 2014 | | |
| End date | July 2014 | | |
| ARCHIVES | | Location | Content |
| Physical | Luton Culture LTNMG 1093 | none | |
| Paper | | Background documentation and report | |
| Digital | | Client report PDF, digital photographs | |
| BIBLIOGRAPHY | | Journal/monograph, published or forthcoming, or unpublished client report (MOLA grey literature report) | |
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An Archaeological Watching Brief during the Geotechnical Ground Investigation in the area of M1 Junction 11a Central Bedfordshire July 2014

Abstract

A series of geotechnical investigations were conducted that included cable percussion boreholes, windowless sampling, disturbed sampling and groundwater monitoring, to include five trial pits designated for archaeological monitoring out of a total of thirteen because they were located in archaeologically sensitive areas. Archaeological attendance was carried out, and the geotechnical team on the ground chose to conduct all of their work using boreholes. No trial pits were excavated by machine, and subsequently no deposits were visible for archaeological inspection.

1 INTRODUCTION

MOLA was commissioned by Costain Carillion Joint Venture (CCJV), on behalf of the Highways Agency, to conduct a series of archaeological works during development of the dual carriageway link from the A5 near the existing A5/A505 roundabout (north of Dunstable) to the M1 south-west of Chalton, which will be approximately 4.5km long (Fig 1; roughly between NGR SP 9959 2435 and TL 0383 2587). The A5-M1 Link will join the M1 motorway at a new junction (Junction 11a) located between the existing Junction 11 at Luton and the Toddington Motorway Service Area.

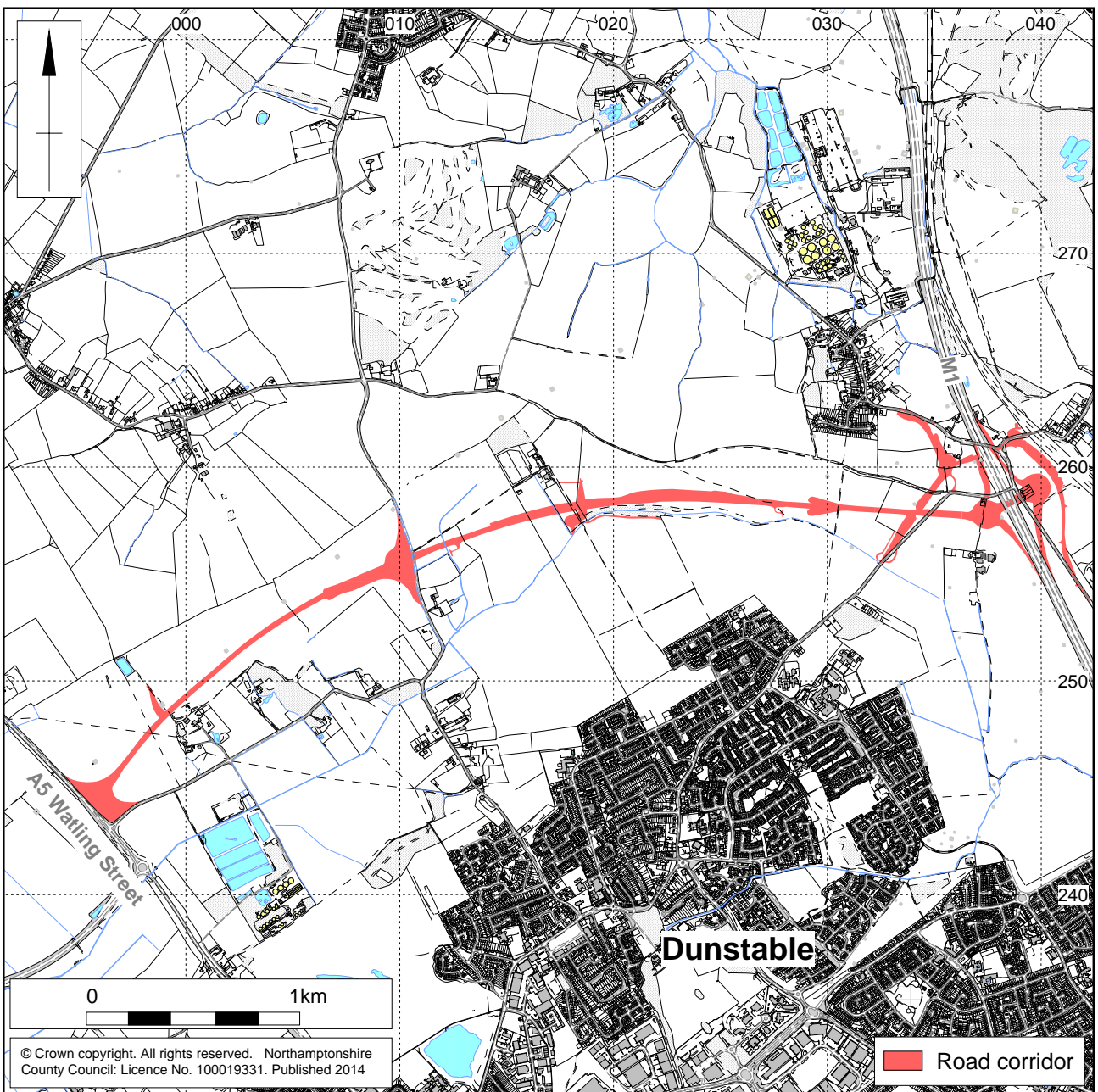
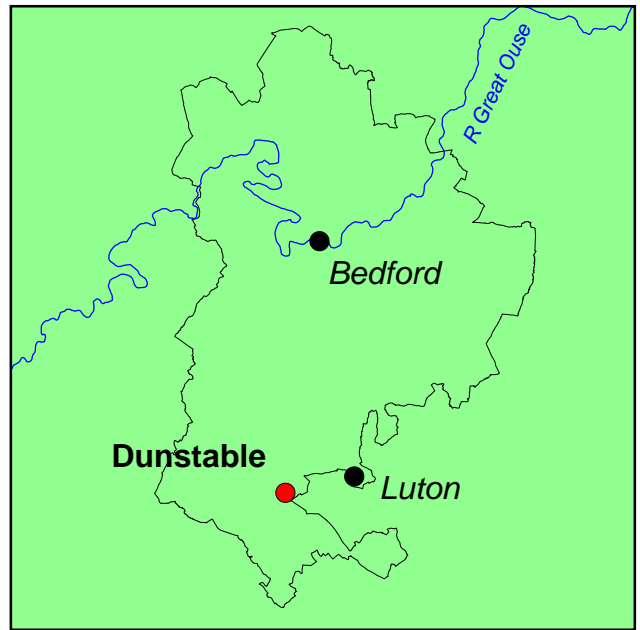
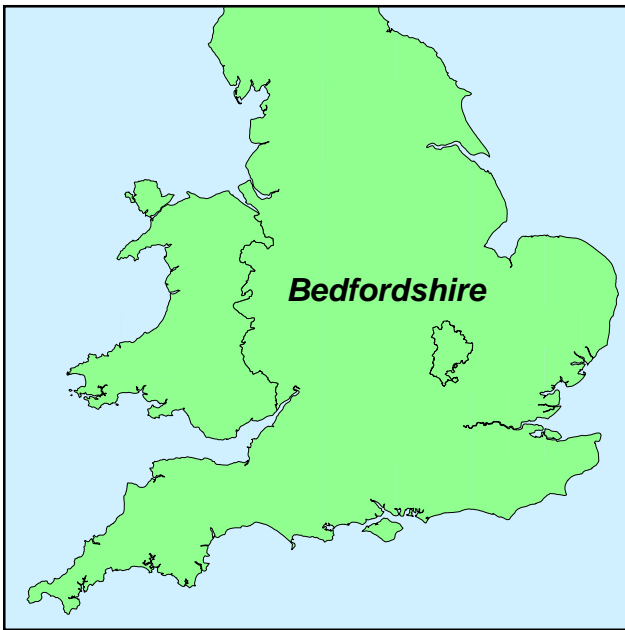
A Written Scheme of Investigation (WSI) was prepared by URS for archaeological works associated with the pre-construction geotechnical and geo-environmental ground investigation works for the A5-M1 Link scheme, in the area of the proposed Junction 11a (Copp 2014). The geotechnical investigations included cable percussion boreholes, windowless sampling, disturbed sampling and groundwater monitoring. Five machine excavated trial pits were designated for archaeological monitoring out of a total of thirteen intrusive investigations, as they were located in archaeologically sensitive areas.

The archive materials, comprising the WSI background information, plans, field monitoring sheets and report will be included with the main archive for the archaeological evaluation and UKPN archaeological watching brief; to be submitted to Luton Culture under Accession number **LTNMG 1093**.

2 BACKGROUND

2.1 Archaeological background

Archaeological evaluation has previously been undertaken in the area which has assessed the potential cultural heritage impact of development (Burrow 2008). Late Iron Age and Roman remains have been identified in close proximity. The results of these investigations have been reviewed by URS in order to define the requirements for further work including this watching brief.



Scale 1:30,000

Site Location Fig 1

The WSI also covers the detail of previous archaeological work to the historical origins of the M1 widening scheme, taking in various recent satellite developments on the north side of Dunstable. In broad terms these highlight the moderately good level of survival for late Iron Age and Roman remains, including a cemetery site, in localised areas that are scattered in close proximity to the current road development.

2.2 Topography and geology

The site of Junction 11a lies upon a low natural plateau between the valley of the River Flit to the north, and the headwaters for the River Lee to the south-east and the River Ouzel to the south-west. The arable fields where geotechnical investigations have taken place are fairly level and slope very gradually towards the south from c130m above Ordnance Datum.

The geology of the plateau comprises geological units of the Upper Cretaceous (BGS 2001). The topsoil and subsoil is underlain by both the West Melbury Marly Chalk Formation (formerly the Chalk Marl) and Zig Zag Chalk Formation (formerly the Grey Chalk) of the Lower Chalk Formation, separated with a thin limestone band (the Doolittle Limestone). Glacial Till is shown to overlie the chalk in a small area near Junction 11a.

The soils of the plateau are of the Swaffham Prior association, comprising well drained calcareous coarse and fine loamy soils over chalk (LAT 1983, 511e). The southern slopes are covered by soils of the Wantage 1 association, which are similar but are siltier (LAT 1983, 342c). These soils only form over Cretaceous chalk.

3 FIELDWORK STRATEGY

3.1 Objectives

The objectives of the watching brief were to:

- provide further information on the presence/absence, depth, stratigraphy, nature, date and extent of archaeological deposits along the proposed A5-M1 Link;
- provide further information on the relative levels of undisturbed geology, modern disturbance, overburden deposits and potential archaeological horizons along the scheme route;
- and to mitigate against any adverse impacts on significant archaeological remains that may arise during the GI investigations.

The principal objectives of the recording strategy follow the guidance of national and regional research frameworks. These include the National Framework (EH 1997), the research frameworks for the Eastern Counties (Brown and Glazebrook 2000; Medlycott and Brown 2008; Medlycott 2011), and the assessment for Bedfordshire (Oake *et al* 2007).

3.2 Methodology

The geotechnical investigations were conducted concurrently with an archaeological watching brief on the UKPN utility diversion. The location of the geotechnical boreholes, which had been intended as test pits, are shown in plan (Fig 2). An archaeologist was attendant for all these investigations, but none were excavated as test pits. Topsoil was removed to provide a clear horizon for the borehole to be

located. Notes were made on the daily watching brief logs using *pro-forma* records sheets, a photographic register and a checklist for any associated finds; although none were recovered. No deposits were encountered that warranted environmental sampling.

4 THE WATCHING BRIEF

The watching brief took place on the 30-31 July 2014. The test pits were located at the following Ordnance Survey grid reference points (Table 1), before geotechnical ground staff changed their strategy to using boreholes.

Table 1: Locations of archaeological monitoring during geotechnical work

| Borehole | OS Grid Ref. | Archaeological sensitivity | Depth (m) |
|-----------------|---------------------|---|------------------|
| TN609 | TL 03661 25713 | close to an undated enclosure ditch, which may be part of a wider late Iron Age/Roman site | 2m |
| TN610 | TL 03659 25745 | as above | 2m |
| TN611 | TL 03683 25724 | as above | 2m |
| TH613 | TL 03533 25944 | within a late Iron Age/Roman site, close to a rectangular cropmark, which may be an enclosure | 4m |
| TN614 | TL 03312 25640 | within a late Iron Age/Roman site | 4m |

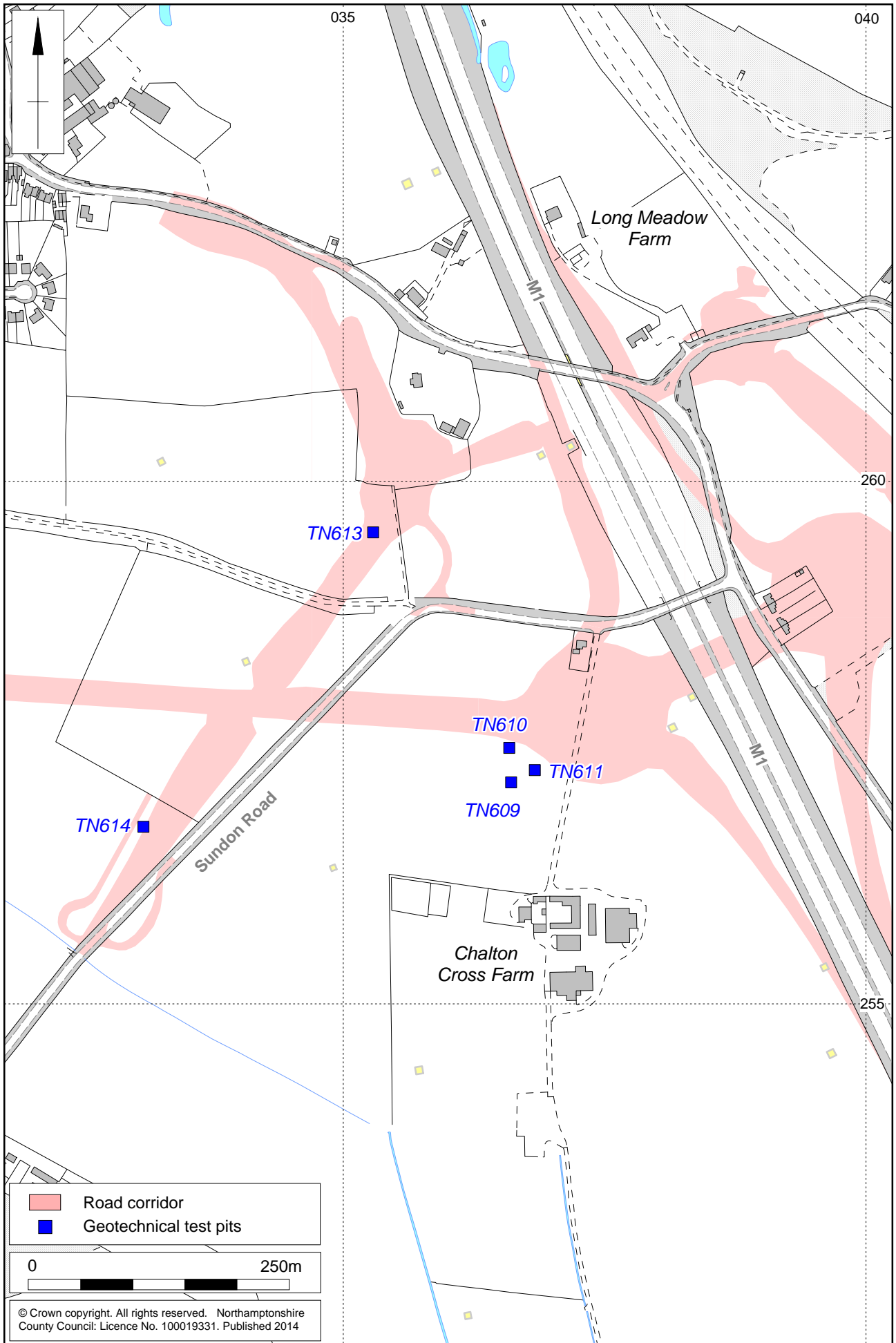
A group of three boreholes, TN609-611, were located in an area that had previously been the subject of trial trench investigation off Sundon Road in May 2014, which had not identified any archaeological features in Trenches 71 and 72. The thickness of topsoil in this area is known to be 280-330mm comprising calcareous coarse and fine silt clay loam over chalk (front cover).

Boreholes TN613-614 are located in two areas that will be the subject of further archaeological trial trench evaluation in autumn 2014. Borehole TN614 was moved towards the road, close to the field boundary, which had clearly been subject to modern disturbance within recent years.

None of the boreholes produced arisings that were of archaeological origin.

5 SUMMARY

Although provision for an archaeological watching brief had been made, and instructed, the geotechnical team chose to change their investigation strategy at the last minute in the field. Subsequently, no archaeological deposits were identified since visibility was significantly impaired.



Scale 1:5000

Location of geotechnical investigations Fig 2

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