THAMES VALLEY

ARCHAEOLOGICAL

SERVICES

Diamond Light Source proposed data centre, Harwell Campus, Oxfordshire

Archaeological Evaluation

by Pierre-Damien Manisse

Site Code: DLH23/202

(SU 4800 8640)

Diamond Light Source proposed data centre, Harwell Campus, Oxfordshire

An Archaeological Evaluation

for Diamond Light Source

by Pierre-Damien Manisse

Thames Valley Archaeological Services Ltd

Site Code DLH23/202

November 2023

Summary

Site name: Diamond Light Source proposed data centre, Harwell Campus, Oxfordshire

Grid reference: SU 4800 8640

Site activity: Archaeological Evaluation

Date and duration of project: 28th – 29th November 2023

Project coordinator: David Sanchez

Site supervisor: Pierre-Damien Manisse

Site code: DLH 23/202

Area of site: c. 1400 sq. m.

Summary of results: Four trenches were dug as intended and only revealed various layers of modern made ground, which are likely bank material associated with roadworks and other infrastructure works related to the research campus. No finds nor features of archaeological interest were found.

Location and reference of archive: The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited with the Archaeology Data Service in due course.

Report edited/checked by:	Steve Ford✓ 30.11.23
	Steve Preston✓ 30.11.23

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Diamond Light Source proposed data centre, Harwell Campus, Oxfordshire
An Archaeological Evaluation

by Pierre-Damien Manisse

Report 23/202

Introduction

This report documents the results of an archaeological field evaluation carried out at the Diamond Light Source complex, Harwell Campus, Oxfordshire (SU 4800 8640) (Fig. 1). The work was commissioned by Mr Toby Hill, on behalf of Diamond Light Source, Harwell Science and Innovation Campus, Didcot, Oxfordshire.

Planning permission is being sought from Vale of White Horse District Council, for the construction of a new data centre building. Due to the potential for groundworks associated with it to disturb below-ground archaeological features, an archaeological evaluation was proposed to establish the potential of the site and in order to inform the planning process.

This is in accordance with the Department for Levelling Up, Housing and Communities *National Planning Policy Framework* (NPPF 2023) and the District Council's policies on archaeology. The field investigation was carried out to a specification approved by Mr Steven Weaver, planning archaeologist for Oxfordshire County Council the adviser to the District on matters relating to archaeology. The fieldwork was undertaken by Pierre-Damien Manisse, on 28th November 2023 and the site code is DLH 23/202. The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited with the Archaeology Data Service in due course.

Location, topography and geology

The site is located on the eastern side of the Diamond Light Building in the Harwell Science and Innovation Campus, slightly less than 3km south-west of the village of Harwell and north-west of the village of Chilton (Figs 1 and 2). The site lies at a height of c.122m above Ordnance Datum. It is a flat irregular parcel of land, on the eastern edge of the Harwell Science and Innovation Campus and is bordered to the west by a car park and to the east by Road Five, a couple of metres lower. Part of it was scrubland and a smaller part at the north end had been re-landscaped with a tree and lawn. The underlying geology is mapped as Lower Chalk (BGS 1971), which was not observed in the trenches except where light orange brown clay with rare flecks of chalk was seen in a deeper test pit.

Archaeological background

The archaeological potential of the site stems from its location in an area with several sites previously recorded (McNamara 2017, fig. 1). To the south a Chilton, excavation revealed a Roman villa and associated field system along with an Iron Age roundhouse (Pine and Preston 2015). Closer to the site, an Iron Age settlement is recorded to the west (Gray-Jones 2005), with further Iron Age deposits recorded during the watching brief for the immediately adjacent Diamond Light building (Moore 2005). More recently, however, a watching brief during car park construction to the south revealed no deposits of archaeological interest (Sanchez and Beaverstock 2017), nor did evaluations just to the south-west of the current site (Taylor 2022) and immediately to the north (Attard 2023).

Objectives and methodology

The purpose of the evaluation was to determine the presence/absence, extent, condition, character, quality and date of any archaeological deposits within the area of development. More specifically, research aims of this project were:

to determine if archaeological deposits of any period are present;

to determine if there are further Iron Age or Roman deposits on the site; and

to provide information to allow the preparation of a mitigation strategy if necessary.

It was proposed to dig 4 trenches, each 10m long and 1.8m wide, using a JCB-type of 360º machine, fitted with a toothless bucket, under constant archaeological supervision. They were located to target the footprint of the proposed new building. Any identified archaeological features or deposits were to be hand cleaned, recorded and sufficiently sampled to answer the objectives outlined above without compromising their integrity of any features that might warrant preservation *in situ* or might be better appraised under the conditions pertaining to full excavation. A contingency of 10m of trench was included to cover any necessary extension to clarify initial results, but was not required.

This evaluation project was to follow the guidelines of the CIfA (CIfA 2020). Any findings were to be assessed taking into account general research agendas (HE 2017) or more local or thematic research priorities (Hey and Hind 2014) as appropriate.

Results (Figs 3-4; Pls 1-4)

The four trenches were opened almost as intended (Fig. 3), using a JCB-type excavator, equipped with a toothless bucket 1.8m wide. Trench 1 was very slightly shifted to avoid damaging tree roots. The trenches ranged in length from 9.85m to 11.30m and in depth from 1.10m to 1.20m and 1.9-2m wide. A complete list of trenches giving lengths, breadths, depths and a description of sections and geology is given in Appendix 1. Except in Trench 1 where topsoil and subsoil were observed superficially and linked to the landscaping of this area, the rest of the trenches only showed made ground. Geology was only potentially observed in Trench 4 through a test pit, appearing at 2.10m deep and consisting of a light orange brown clay with rare flecks of chalk. This deposit is consistent with what was observed during evaluation to the south (Taylor 2022).

Trench 1 (Fig. 4; Pl. 1)

Trench 1 was aligned NE – SW and was 9.85m long and 1.15-1.20m deep. The stratigraphy consisted of 0.10m of topsoil (soft dark grey loamy silt) and 0.25m of subsoil (mid brown grey clayey silt with rare bits of chalk), overlying various made ground deposits. Those bank material were mostly a yellowish-grey silty clay with crushed chalk bits, occasional to very frequent, and contained fragments of Tarmac, concrete blocks, bricks and modern rubbish. The base of the trench was an apparently less contaminated brown clay with pockets of yellow gravel, but still identified as a made-ground deposit. No finds were recovered.

Trench 2 (Fig. 4; Pl. 2)

Trench 2 was aligned SE – NW and was 11.30m long and 1.20m deep. The stratigraphy consisted of various made ground deposits containing reinforced concrete blocks, timbers, and a large slab of Tarmac at the base, under a thin superficial 0.10m of topsoil. The natural geology was not encountered.

Trench 3 (Pl. 3)

Trench 3 was aligned SE – NW and was 10.10m long and 1.10-1.20m deep. The stratigraphy consisted of loose chalk rubble (0.20m deep) above compact light grey chalk-rubble to a depth of 1m, onto the same brown clay as in Trench 1, still with bands of chalk rubble, all interpreted as made-ground deposits. The natural geology was not encountered.

Trench 4 (Pl. 4)

Trench 4 was aligned E –W and was 10.40m long and 1.10m deep. The stratigraphy consisted only of made ground deposits identical to trench 3. A slot was made at the eastern end with a smaller toothless bucket (0.60m wide). Centred in the middle of the trench, it went down to 2.10m below ground level before reaching a possible geological horizon, a pale orange brown clay with rare chalk flecks. A modern service cable was observed at the very east end of the trench at 1m below ground level.

Finds

No finds of any archaeological interest were recovered. Modern finds were not retained.

Conclusion

This evaluation is in line with the results of the previous work immediately north and south of the site. This part of the land had been heavily remodelled with the development of the research complex and there does not seem to be any preserved archaeological horizon. The archaeological potential of the site is considered to be extremely low, despite a locally rich environment.

References

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APPENDIX 1: Trench details

0m at S or W end.

Trench	*Length (m)*	*Breadth (m)*	*Depth (m)*	*Comment*
1	9.85	1.90-2.00	1.15-1.20	0–0.10m topsoil (dark grey loamy silt); 0.10-0.35m subsoil (mid grey brown clayey silt, very rare chalk flecks), 0.35m+ made ground deposits. **[Pl. 1]**
2	11.30	1.90-2.00	1.20	0–0.10m topsoil; 0.10m+ made ground deposits. **[Pl. 2]**
3	10.1	1.90-2.00	1.10-1.20	0-1.20m+ made ground deposits. **[Pl. 3]**
4	10.40	1.90-2.00	1.10 Test pit	0-2.10m made ground deposits; 2.10m+ natural geology (light orange brown clay with rare chalk flecks). **[Pl. 4]**

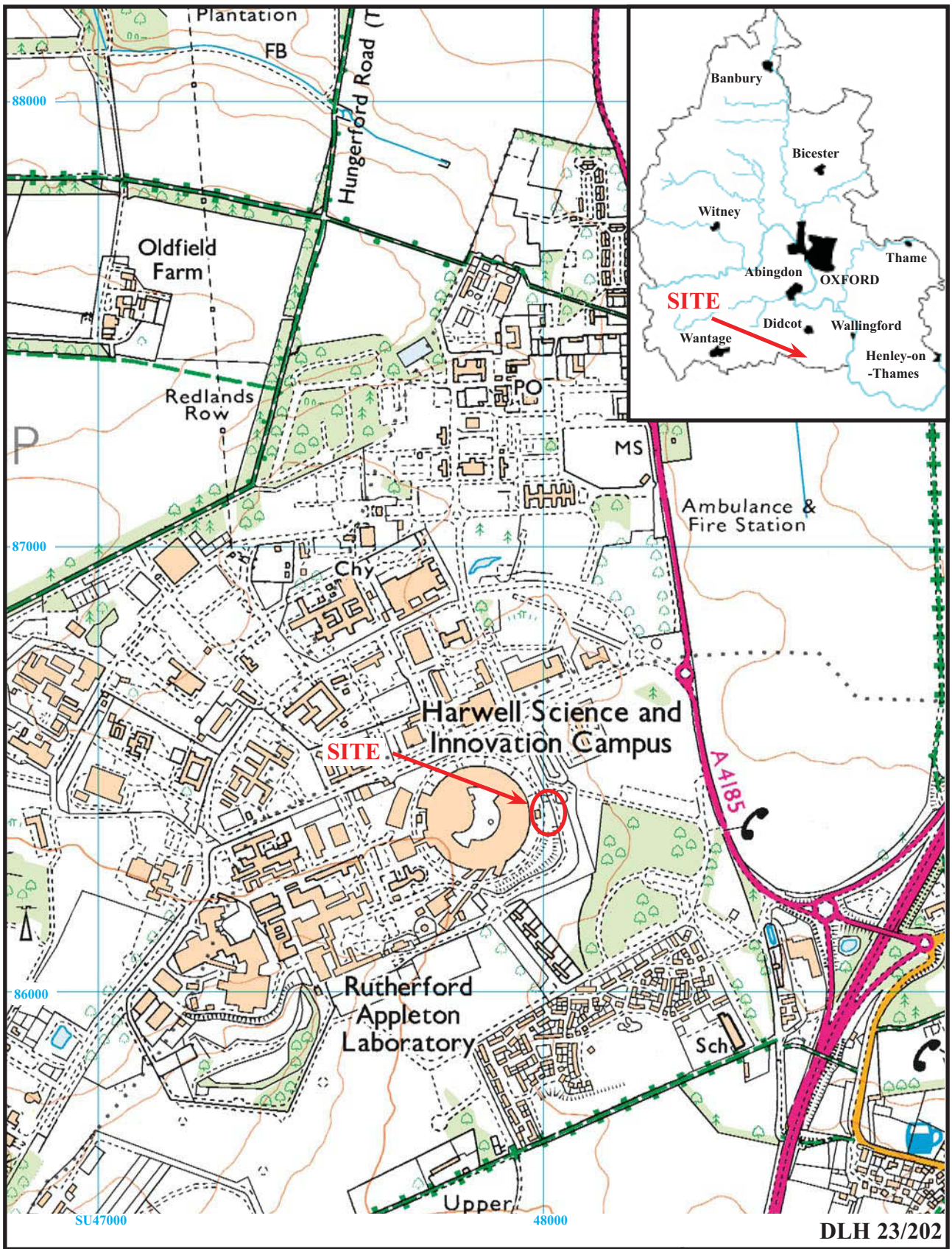

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Figure 1. Location of site within Harwell and Oxfordshire.

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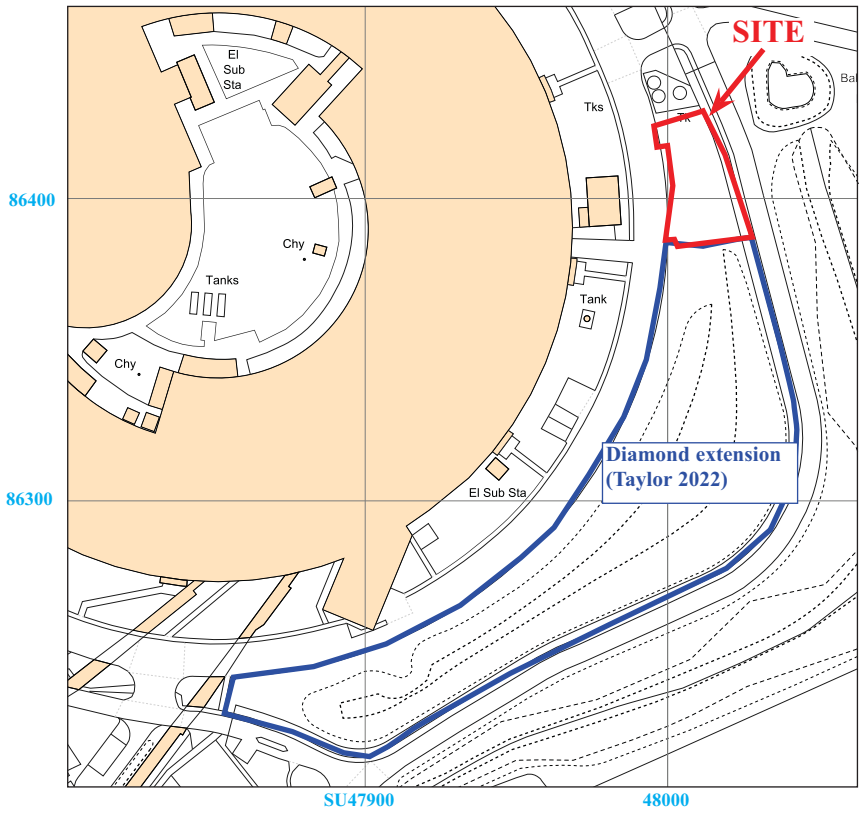

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Figure 2. Detailed location of site.

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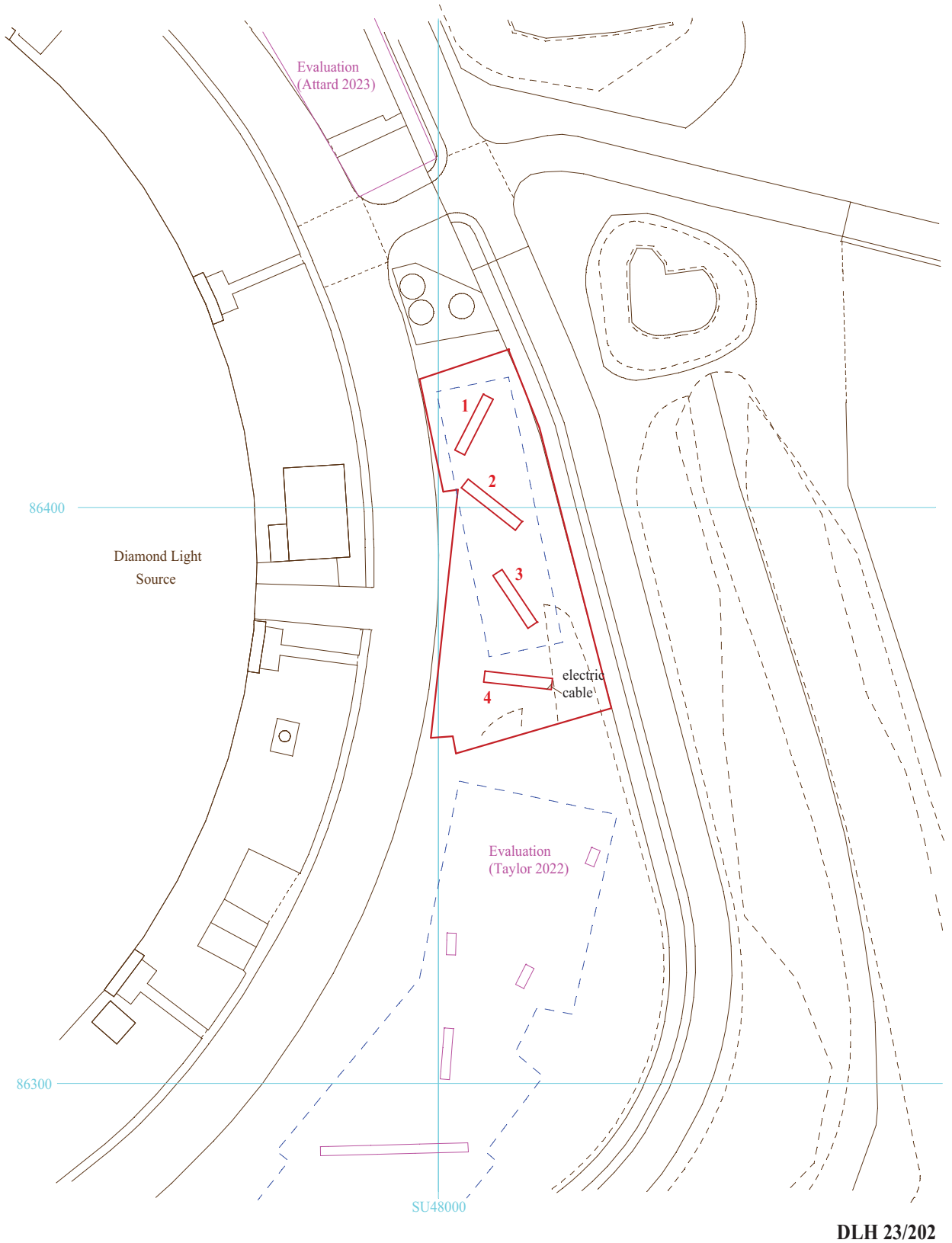

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Figure 3. Site plan, adjacent to archaeological evaluation in 2022.

0 50m

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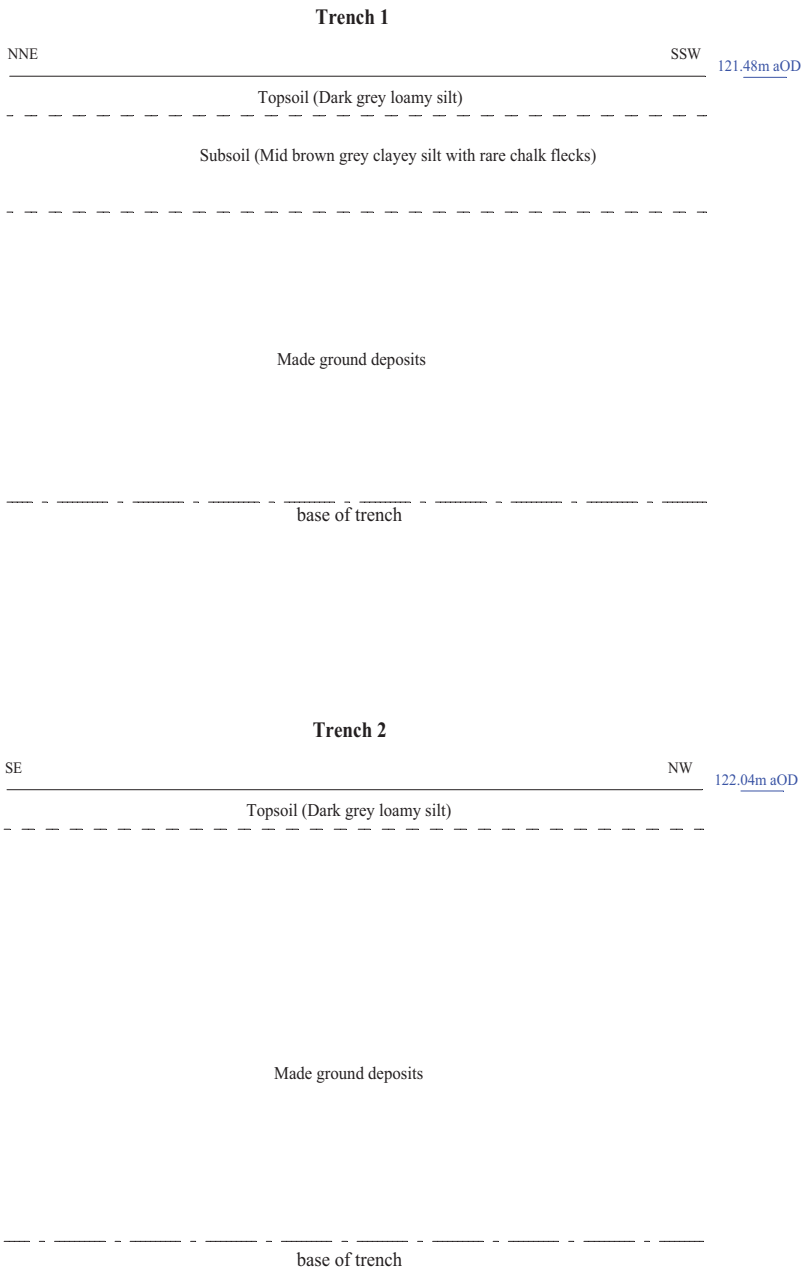

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Figure 4. Representative sections.

0 1m

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Plate 1. Trench 1, looking South West,
Scales: 2x1m and 0.5m.

Plate 2. Trench 2, looking North West,
Scales: 2x1m and 0.5m.

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Plates 1 and 2.

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Plate 3. Trench 3, looking North West,
Scales: 2x1m and 0.5m.

Plate 4. Trench 4, looking North West,
Scales: 2x1m and 0.5m.

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Plates 3 and 4.

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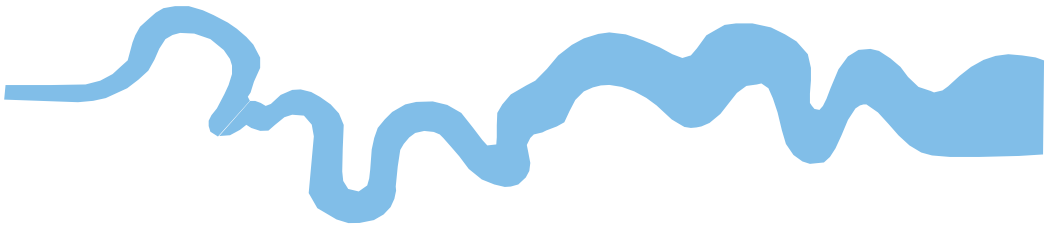
TIME CHART

	Calendar Years
Modern	AD 1901
Victorian	AD 1837
Post Medieval	AD 1500
Medieval	AD 1066
Saxon	AD 410
Roman	AD 43
	AD 0 BC
Iron Age	750 BC
Bronze Age: Late	1300 BC
Bronze Age: Middle	1700 BC
Bronze Age: Early	2100 BC
Neolithic: Late	3300 BC
Neolithic: Early	4300 BC
Mesolithic: Late	6000 BC
Mesolithic: Early	10000 BC
Palaeolithic: Upper	30000 BC
Palaeolithic: Middle	70000 BC
Palaeolithic: Lower	2,000,000 BC



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