

HERITAGE NETWORK



M/A-COM BUILDING Cambridge Road, Harlow, Essex.

HN641

Archaeological Monitoring Report



THE HERITAGE NETWORK LTD

Registered with the Institute of Field Archaeologists as an Archaeological Organisation

Archaeological Director: David Hillelson, BA MIFA

M/A-COM BUILDING
Cambridge Road, Harlow, Essex.

HN641

Archaeological Monitoring Report

Prepared on behalf of Buildbase Ltd

By

Mark Winter, BSC, PGDIP

Report no. 418

September 2007

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The cover photograph shows a view of the site looking north

Acknowledgements

The fieldwork for this project was carried out by Mark Winter, David Kaye and Geoff Saunders. The report text and illustrations were prepared by Mark Winter, and edited by Helen Ashworth.

The Heritage Network would like to express its thanks to Derek Marshall and Steve Wall at Cameron Facilities Ltd; the staff of Multi-Fab Construction Ltd; the staff of C C Contracting Ltd; and Vanessa Clarke, Historic Environment Management Team, Essex CC, for their co-operation and assistance in the execution of this project.

Summary

Site name and address:	M/A-Com Building, Cambridge Road, Harlow, Essex		
County:	Essex	District:	Harlow
Village/town:	Harlow	Parish:	Harlow
Planning reference:	HLW/0225/06	NGR:	TL 4711 1245
Client name and address:	Buildbase Ltd c/o Cameron Facilities Ltd, 1 Wilderhaugh, Galashiels, TD1 1QJ		
Nature of work:	Steel framed building and storage yard	Former land use:	Industrial unit
Site status:	After full determination (as a condition)	Reason for investigation:	Direction of local planning authority (PPG 16)
Position in planning process:	After full determination (as a condition)	Project brief originator:	Historic Environment Management Team, Essex County Council
Size of affected area:	12300m ²	Size of area investigated:	12300m ²
Site Code:	HAMC'07	Other reference:	HN641
Organisation:	Heritage Network	Site Director:	David Hillelson
Project type, methods etc.:	Monitoring	Archive recipient:	Harlow Museum
Start of work	23/02/07	Finish of work	19/06/07
Related SMR Nos:	n/a	Periods represented:	Post medieval and modern
Oasis UID	heritage1-29439	Significant finds:	N/A
Monument types:	Quarrying, brick floor		
Physical archive:	None		
Previous summaries/reports:	None		

Synopsis:

In response to a condition on the planning permission for the construction of a steel framed building and storage yard on the former M/A-COM site, Cambridge Road, Harlow, Essex, the Heritage Network was commissioned by the developers to undertake the archaeological monitoring of the development groundworks, which comprised ground reduction and the excavation of drainage trenches and foundation pads.

The evidence indicates that the site has been heavily disturbed, probably as a result of post-medieval quarrying and the subsequent levelling of the area for construction purposes. During the groundworks programme a series of levelling deposits of post-medieval and modern date were uncovered. No evidence for activity pre-dating the 19th century was recorded during the present project.

1. Introduction

1.1 This report has been prepared on behalf of Buildbase Ltd, as part of the archaeological monitoring and recording of groundworks for a development site located on the site of the former M/A-COM Building, Cambridge Road, Harlow, Essex. The planning permission for the development (ref. HLW/0225/06), granted by Harlow District Council (HDC), was subject to a standard archaeological condition, in accordance with the provisions of the Department of the Environment's *Planning Policy Guidance Note 16* (PPG16). The scope of the required work was defined following consultation with the Historic Environment Management Team (HEMT) of Essex County Council acting as archaeological advisers to the planning authority. As a result of this, it was agreed that the work would follow the provisions set out in the HEMT's standard model *Brief for Archaeological Monitoring and Excavation*. A full specification of the work was contained in the Heritage Network's approved *Project Design*, dated February 2007.

1.2 The present site is located on the western side of Cambridge Road (Figure 1). It lies at the north-eastern edge of Harlow New Town, to the south of the River Stort, at grid reference TL 4711 1245. Harlow Mill Station is located just south of the site. The development involved the demolition of the existing building and construction of a new building with storage yard.

1.3 The site lies in an area of known archaeology, dating from at least the Bronze Age. It sits within the boundaries of the former Roman town, approximately 240 metres to the north-east of the site of a Romano-Celtic temple (EHER 17). The most significant finds from the area were recovered during development of the Holbrooks factory c. 200m to the north-west (EHER 3602) and include four Roman buildings, one with a tessellated pavement, a hypocaust and remains of a fragmentary road, as well as evidence for bronze and iron smelting. Harlow Mill Goods Yard lies c. 250m to the south and has yielded six wooden coffins (EHER 3602), while the projected route of a Roman road may run through the development area.

1.4 On this basis it was considered by HEMT that there was a risk that features and deposits, dating from the Bronze Age onwards, would be encountered during the developer's groundworks and that these had the potential to contribute to an understanding of the origins and development of Harlow, particularly during the Roman period.

1.5 Late 19th century Ordnance Survey maps show that the line of Cambridge Road, immediately east of the present site, was located in a deep cutting. By 1921, the western side of the cutting, and the adjacent land, had been reduced to the level of the road. The spoil from the cutting is likely to have been used partly to backfill the gravel pits shown on the eastern side of the present site on OS maps of late 19th and early 20th century date and partly to build up the western end of the site. Geotechnical investigation in 2006 showed over 4m of made ground at the western side and less than 2m of overburden at the eastern side (Crossfield Consulting Ltd 2006).

1.6 A number of small structures had been constructed in the western half of the present site, close to the gravel pits, between 1921 and 1938. These had been demolished and replaced by the former M/A-COM Building by 1960.

1.7 The aim of the present project has been to identify and record any archaeological features and deposits which might have been uncovered; and to retrieve artefactual and ecofactual elements which would allow the date, character, and significance of the site to be assessed in accordance with current regional research agenda (Brown and Glazebrook, 2000), and subject to the limitations of reasonable safety and practicality.

1.8 The present report describes the findings of the monitoring programme and is intended, together with the deposition of the site archive with Harlow Museum, to complete the requirements of the planning condition.

2. Fieldwork

SITE TOPOGRAPHY AND GEOLOGY

2.1 The ground across the study area is relatively level at approximately 50m AOD. The site was formerly occupied by the M/A-Com Building.

2.2 The solid geology of the Harlow area consists of Upper Chalk, overlain by London Clay. Glacial drift deposits of boulder clay cover the London Clay in some areas. The soils in the Stort Valley belong either to the Thames Association (814a), comprising *stoneless mainly calcareous clayey soils affected by groundwater*, or to the Melford Association (571o), comprising *deep well drained fine loamy over clayey, coarse loamy over clayey and fine loamy soils, some with calcareous clayey subsoils* (SSEW 1983).

2.3 Geotechnical investigation of the site was undertaken prior to development (Crossfield Consulting 2006). Five window sample test pits (WS) were excavated at various points. They revealed a significant depth of made ground above the natural glacial sand and gravel along the northern edge (2.50m) and at the western end (4.10m) of the site. The depth of overburden was reduced towards the eastern side, where depths of 1.90m and 1.50m were recorded.

METHODOLOGY

2.4 The timetable for the fieldwork followed the client's groundwork schedule. A number of site visits were made to supervise all intrusive excavations.

2.5 The machining was undertaken using a JCB fitted with a toothless ditching bucket or toothed bucket, as required.

2.6 The project has been carried out in accordance with the requirements of the model Brief, and with the Heritage Network's approved Project Design.

MONITORING AND RECORDING

Demolition

2.7 The former M/A-COM building had been demolished to ground level prior to the start of the archaeological monitoring. It had been aligned north-east to south-west and had occupied most of the present site, measuring approximately 120m in length and 70m in width (Figure 2). Much of the building was sited across former gravel quarries, shown on late 19th century OS maps.

2.8 Archaeological monitoring of the demolition phase of the groundworks consisted of watching the removal both of an extensive tarmac layer which had covered most of the site and the southern wall of the earlier building (Figure 3).

2.9 Removal of the tarmac reduced the ground level by approximately 0.20m, revealing a modern make up layer, containing hardcore, which varied between 0.20m and 0.35m in depth (Plate 1).

2.10 The demolition of the wall was abandoned due to the depth of its footings, which exceeded 2.50m below the present ground level (Plate 2). They were, however, successfully removed to a depth of 0.82m below the ground surface, revealing a series of deposits on the southern, exterior, side of the wall.

2.11 The southern section of the demolition trench revealed a layer of brown (7.5 YR 4/3) silty clay, 0.45m deep, probably the same as that seen in the northern section. This overlay a firm brownish yellow (10YR 6/6) silty clay, 0.45m deep, which in turn overlay a very loose, dark grey (10YR 3/1) silty clay, over 0.28m deep. No finds were recovered from any of these deposits.

2.12 The northern section revealed a layer of very loose very dark grey (2.5Y 3/1) silty clay topsoil, 0.35m deep, which overlay a malleable olive brown (2.5Y 4/4) silty clay subsoil, 0.47m deep, containing frequent small stones. Beneath this and behind the wall was a soft, brown (7.5YR 4/3) silty clay with frequent stones, over 0.30m deep. No finds were recovered from any of these deposits, which appear to be modern made ground.

Foundation Pads

2.13 A series of thirty foundation pads were excavated for the new building, which measures approximately 75m in length and 30m in width (Figure 4). The individual pads were at 3m intervals and measured approximately 3m square. They were excavated to depths of between 1.9m and 2.9m. Pads 2 – 11 formed the southern side of the new building; Pads 12 – 13 and 28 – 30, formed the eastern side; Pads 1 and 14 – 17 formed the western side; and Pads 18 – 27 formed the northern side.

2.14 Excavation of the pads revealed that the ground across the site had been highly disturbed. This was partly the result of gravel quarrying and the subsequent backfilling of the pits, and partly the result of the later building up of the western end of the site.

2.15 The deep footings for the southern wall of the M/A-COM Building were encountered in Pads 1 – 11. A different stratigraphy was visible on either side of the wall at its western end (Pads 1 – 7), reflecting the different deposits on the interior and exterior of the building. The general stratigraphy observed in the southern, exterior, sections consisted of a dark yellowish brown (10YR 4/4) silty clay topsoil, between 0.30 and 0.50m in depth, overlying a very dark grey (10YR 3/1) subsoil, approximately 0.20m in depth. Other localised layers were also observed in individual foundation pads, but these are likely to represent lenses of dumped levelling material or general build-up against the wall.

2.16 Below the wall a layer of (10YR 5/8) sandy gravel, 0.80m deep, was observed above the natural sandy clay, which appeared at approximately 2.50m below the present ground level.

2.17 The northern interior sections revealed a yellowish brown (10YR 5/8) sandy gravel layer, which varied between 0.50 and 0.80m in depth. This has been interpreted as a levelling layer for the former M/A-COM building. It overlay a black (10YR 2/1) silty clay soil layer, approximately 0.20m in depth, which was observed at the same level as the base of the brick wall. Below this was a yellowish brown (10YR 5/8) sandy gravel, over 0.90m in depth and which may represent re-deposited natural. No finds were recovered from any of these deposits.

2.18 The general stratigraphy observed in the foundation pad sections at the eastern end of the southern wall (Pads 8-11) consisted of a brownish yellow (10YR 6/8) sandy gravel, approximately 1m in depth, on both sides of the wall. This overlay a very dark grey (10YR 3/1) sandy gravel, over 0.80m in depth.

2.19 The cut for the wall foundation trench was observed in the east and west sections of Pads 1 and 8 (Plate 3). The cut measured approximately 1m wide and 1.20m deep, with straight sides and a flat base. It contained a very dark grey (10YR 3/1) silty clay with frequent small stones. The wall was two bricks wide, approximately 0.21m, and was bedded into a concrete foundation measuring 0.50m wide and approximately 0.50m deep.

2.20 The general stratigraphy recorded in the foundation pad sections along the eastern side of the new building consisted of a dark yellowish brown (10YR 4/4) silty clay, over 2.50m in depth. The edge of a brownish yellow (10YR 6/8) sand layer, possibly re-deposited natural sand 1.20m in depth, was observed in the bottom corner of the eastern section of Pad 12 (Plate 4).

2.21 The general stratigraphy recorded in the foundation pad sections along the western side of the new building consisted of a light yellowish brown (2.5Y 6/4) silty clay, approximately 0.40m in depth, overlying a very dark greyish brown (10YR 3/2) silty clay soil, approximately 2m deep. Beneath this was the sandy gravel natural at a depth of 2.40m.

2.22 The general stratigraphy recorded in the foundation pad sections at the north-west corner of the new building (Pads 18-21) consisted of a concrete surface, 0.15m deep, over a sand and gravel levelling layer, 0.30m deep. Below this was a very dark grey (10YR 3/1) silty clay loam (probably a buried topsoil), 1.15m deep, overlying a dark greyish brown (10YR 4/2) silty clay subsoil, 0.50m deep. This covered a black (10YR 2/1) silty clay subsoil, 1.10m deep, beneath which the gravel natural was observed at a depth of 3.20m.

2.23 A brick floor was observed in the sections in Pad 22, halfway along the northern side (Plate 5). The floor lay at a depth of 0.60m, beneath the concrete surface and sand and gravel make-up layer previously recorded. It measured at least 8m wide and 0.20m deep and sat on a concrete base, 0.30m deep. Its depth below ground and its location suggest that it may have been associated with one of the structures built between 1921 and 1938.

2.24 The natural gravel was observed below the brick floor at a depth of 1.10m below the present ground surface, a much higher level than in the pads to the west. The eastern edge of the very dark grey (10YR 3/1) silty clay soil layer, observed in Pads 14 – 21, was recorded below the floor layers in the northern and southern section of Pad 22.

2.25 The possible cut for the eastern edge of a quarry pit was recorded in the southern section of Pad 27 (Plate 6). This showed as a diagonal line, sloping steeply downwards, east to west. The natural sand lay on the eastern side of the line and a greyish brown (10YR 4/4) silty clay, representing possible backfill, lay on the western side.

Drainage and Ducting

2.26 A number of ducting and drainage trenches were excavated to the north and west of the new building (Figure 4). The ducting trenches measured approximately 0.30m wide and 0.20m deep. They did not penetrate the top layer of the overburden.

2.27 The drainage trenches on the eastern side of the site were excavated to a depth of c.2.10m and on the western side to a depth of c.1.70m. The general stratigraphy observed in the eastern side consisted of a layer of concrete, c.0.15m deep, over grey (10YR 3/4) silty clay, approximately 1.50m deep (Plate 7). The sections in the drainage trenches in the north-western corner of the site revealed a layer of yellowish brown (10YR 5/8) silty clay, 0.40m deep, above a grey (10YR 3/4) silty clay soil, 0.50m deep. Below this was a layer of very dark greyish brown (10YR 3/2) silty clay soil. The natural sand and gravel was not reached in any of these trenches and no finds were recovered to date the deposits.

2.28 In the south-east corner of the site, the drainage trench sections revealed a layer of hardcore, 0.60m deep, above the natural sand and gravel (Plate 8).

3. Discussion

3.1 The present site occupies a spur of rising ground to the south of the river Stort. It lies in a well documented archaeological landscape approximately 300m north-east of the Harlow Romano-Celtic temple. Cartographic evidence shows that much of the site had been subject to sand and gravel quarrying in the late 19th and early 20th centuries, and that the quarries had subsequently been backfilled and the site levelled. Geotechnical test pitting has shown that the overburden recorded across the eastern half of the site was much shallower than that recorded on the western half, where it reached a depth of 4.10m above the natural sand and gravel.

3.2 The evidence exposed in the foundation pads and drainage trenches excavated across the site confirmed that significant ground reduction had taken place on the eastern side of the site, and significant dumping of material had taken place on the western side. Natural sand and gravel was identified at depths of less than 2m below the modern ground surface on the eastern side of the site, but was only identified in a few spots, at depths of over 2m, on the western side.

3.3 Two modern archaeological features were recorded in the pad foundations.

- In the western section of Pad 27, a steeply sloping cut line was noted, separating the natural sand and gravel on the northern side from a silty clay deposit on the southern side. This may represent the edge of one of the former quarry pits, or of a working hollow within it, dating to the early part of the 20th century.
- In Pad 22, the remains of a brick floor were recorded. Although there was no evidence for its original function the depth of brickwork and underlying concrete base suggest that it was a substantial structure, which is likely to be associated with one of the buildings erected between 1921 and 1938.

Conclusion

3.4 Despite the proximity of the Roman town and temple, no evidence for archaeological remains pre-dating the 19th century were revealed during the present project. It is likely that post-medieval quarrying has removed any remains from earlier periods, although there is a small possibility that some archaeological features and deposits may survive below the made-ground on the western side of the site. The natural horizon was not reached in this location.

Confidence Rating

3.5 During the course of the fieldwork, the conditions were generally good for the identification of potential features and deposits, and for their investigation.

3.6 There are no circumstances which would lead to a confidence rating for the work which was less than High.

4. Schedule of site visits

Date	Staff	Hours	Comments
23/02/07	MW	4	Grubbing out of foundations
05/03/07	MW	6	ditto
09/05/07	MW	3	Site meeting
10/05/07	MW	6	Pad 1
11/05/07	MW	7	Pads 2 -12
14/05/07	MW	4	Pads 14 - 17
15/05/07	MW	7	Pads 18 - 24
16/05/07	MW	4	Pads 25 - 29
23/05/07	MW	3	Ducting trenches
06/06/07	MW	3	Drainage trenches
07/06/07	MW	3	ditto
08/06/07	MW	3	Booked visit
11/06/07	MW	2	Drainage trenches
12/06/07	MW	6	ditto
18/06/07	DGK	4	ditto
19/06/07	GIS	2	ditto

5. Bibliography

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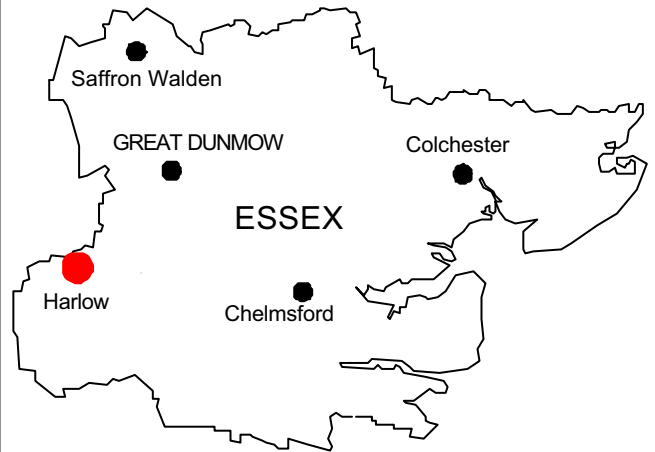
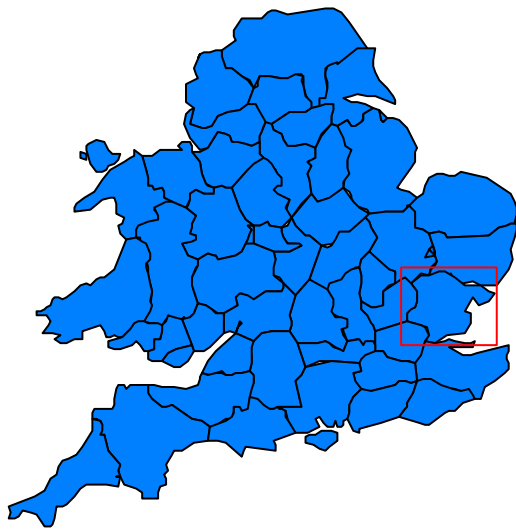
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Soil Survey of England and Wales (SSEW) 1983 Legend for the 1:250,000 Soil Map of England and Wales. Harpenden: SSEW

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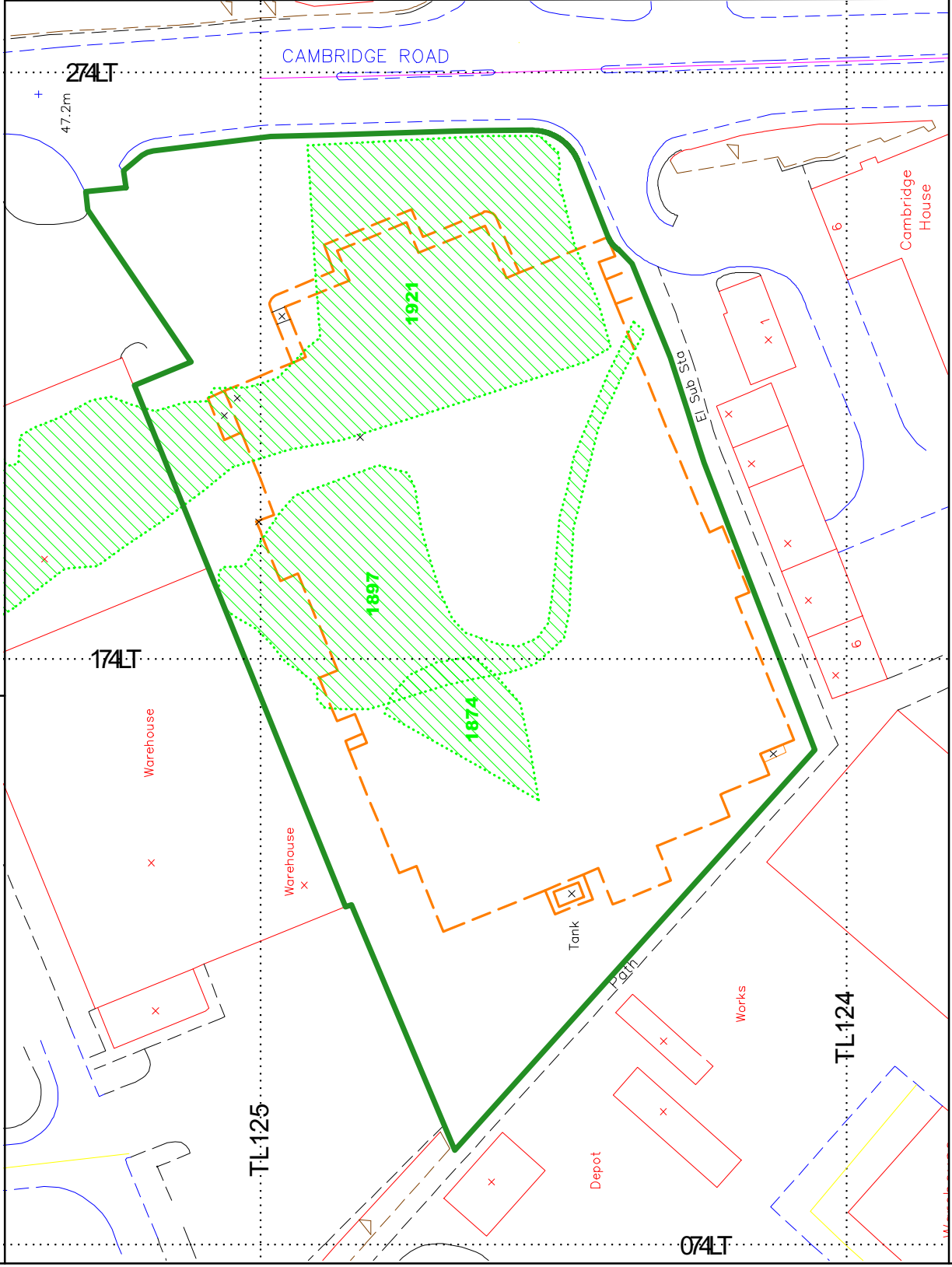


Site Location

Scale 1:25000

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Figure 1



Key

Demolished building

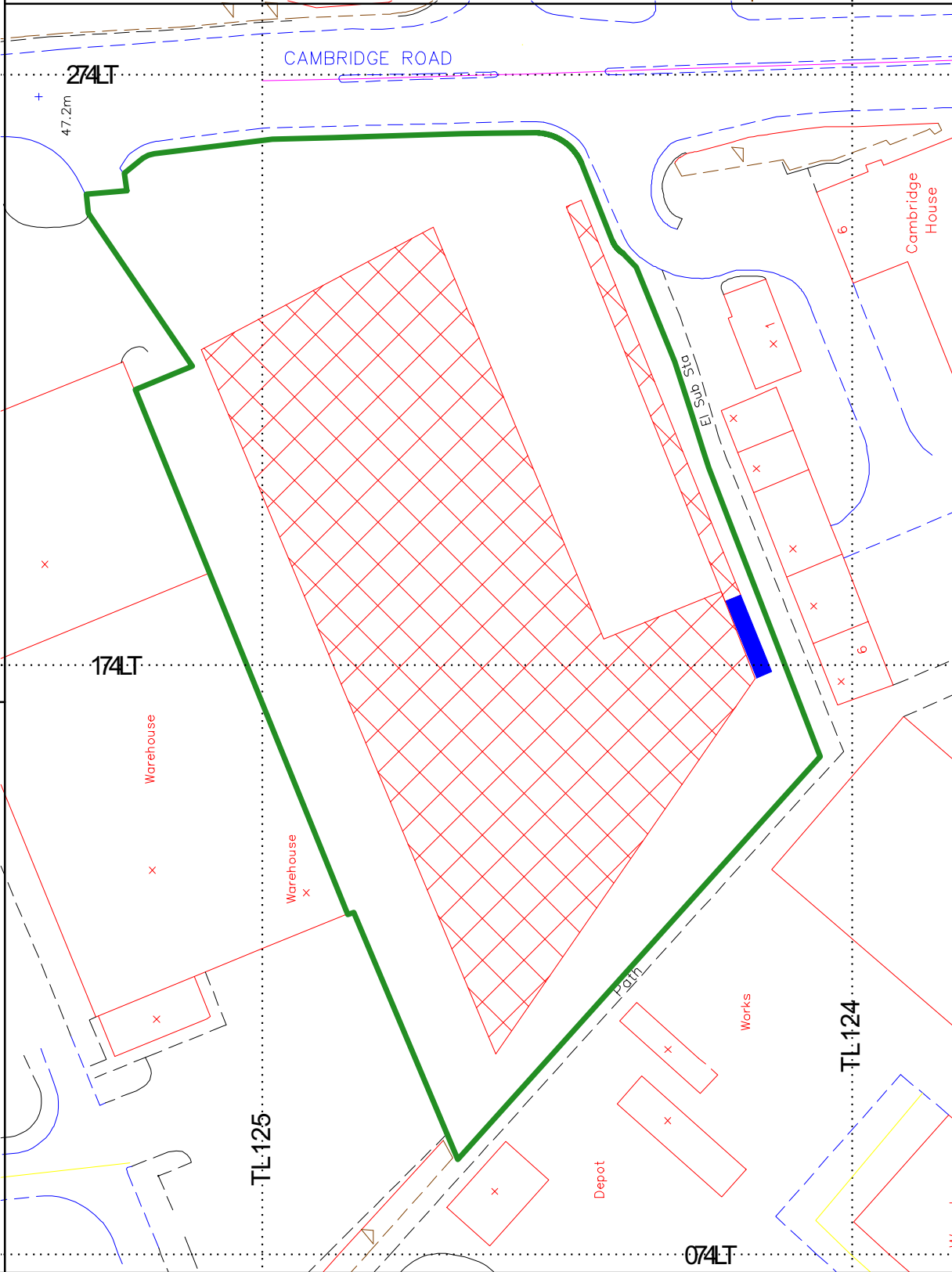
Known quarrying

Original site layout and known quarrying activity

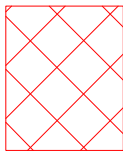
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Figure 2



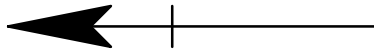
Key



Area of tarmac removal



Area of wall removal

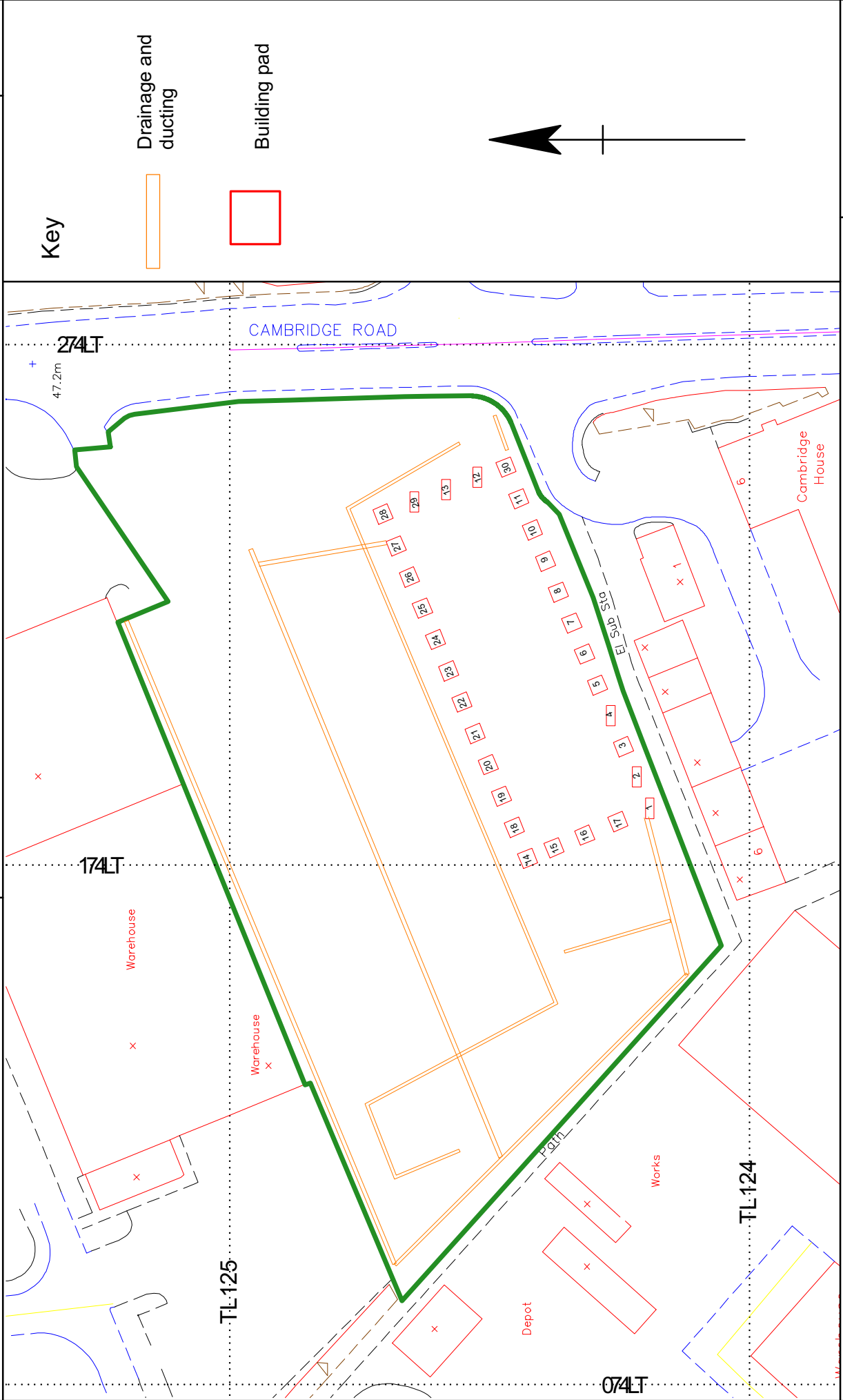


Demolition layout

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Scale 1:1000

Figure 3



New site layout

Scale 1:1000

Figure 4



Plate 1: Area of tarmac removal



Plate 2: South wall, former M/A-Com building, under demolition



Plate 3: East facing section, Pad 8, showing wall foundation trench



Plate 4: North facing section, Pad 12



Plate 5: North facing section, Pad 22, showing brick floor



Plate 6: East facing section, Pad 27, showing cut for gravel pit



Plate 7: Stratigraphy in drainage trench at west end of site



Plate 8: Stratigraphy in drainage trench in south-east corner