

# Arup Building, New Museum Site, Cambridge

## An Archaeological Watching Brief



Richard Newman

# **Arup Building, New Museum's Site, Cambridge**

## **An Archaeological Watching Brief**

**Richard Newman**

With graphics by Bryan Crossan

© **Cambridge Archaeological Unit**  
University of Cambridge  
Division of Archaeology  
August 2016

**Report No. 1343**  
**ECB 4774**

## **Summary**

*During a watching brief conducted at the Arup Building, New Museums site, Cambridge, two former planting beds were investigated. A small number of features were identified, the most significant of which comprised a northeast-southwest oriented ditch. Although undated, this feature appears most likely to have been associated with the establishment of extensive open fields during the early medieval period.*

## **Introduction**

This report presents the results of a watching brief that was conducted by the Cambridge Archaeological Unit (CAU) at the Arup Building, New Museums site, Cambridge (Figure 1) – grid reference TL 4502 5821 – between the 17th of April and the 2nd of June 2014. In particular, this watching brief focused upon the excavation and reinforcement of two substantial planting beds situated in a courtyard immediately to the south of the Arup building's principal façade (Figure 2). This work, which took place as part of an extensive programme of refurbishment, covered a combined total of 113.6 square metres.

Geologically, the site is situated upon second terrace river gravels overlying Gault clay (British Geological Survey, sheet 188). Within the courtyard itself the present surface height lay at 9.80m OD, while natural gravels were encountered at 8.44m OD. Methodologically, the planting beds were excavated by the principal contractor using a tracked mechanical excavator with a 1.0m wide toothless bucket. All stratified features were then cleaned by hand and recorded using the CAU-modified version of the MoLAS system (Spence 1994). Base plans were drawn at a scale of 1:50, whilst sections were drawn at a scale of 1:10. A digital photographic archive was also compiled. All work was carried out with strict adherence to Health and Safety legislation and within the recommendations of FAME (Allen & Holt 2010). The sitecode for the project was ARP14 and the event number was ECB 4774.

### *Historical and archaeological background*

The historical and archaeological background of the New Museums site has been discussed in detail in a previous desk-based assessment (Appleby & Dickens 2013). Consequently, only a brief summary is presented here.

One of the earliest events recorded at the New Museums site is the establishment of an Augustinian Friary in the late 13th century (Duckworth & Innes Pocock 1910; Cranage & Stokes 1921). This was located to the north of the present area of investigation, on the opposite (townward) side of the medieval boundary known as the King's Ditch (Figure 2). A portion of this ditch has recently been investigated at the nearby Grand Arcade site, where it was found to measure around 9.0m wide and at least 3.2m (Cessford & Dickens in prep.). Material evidence allied with radiocarbon dates suggest that it was most probably constructed during the Anarchy of the mid-12th century, when it encircled and defended the southern portion of the town. Aside from limited evidence of Late Prehistoric and Roman agricultural

activity, this same excavation also established that the earliest occupation in the area commenced during the 11th century (Cessford & Dickens in prep.).

Initially lying on the outer fringe of the expanding urban settlement at Cambridge, these properties were subsequently separated from the town core by the establishment of the King's Ditch, leading to the creation of a distinct extramural suburb. This suburb coalesced along present-day St Andrew's Street, but occupation does not appear to have extended as far west as the present site. The Augustinian Friary was dissolved in the mid-16th century and the area was then divided into a number of smaller plots until, in 1762, a portion of the area was donated to the university. A Botanic Garden was then established, which remained extant until the 1860s. At this time, the university having purchased the remainder of the site, construction work began on a series of new teaching, research and museum buildings. The Arup building itself was completed in 1971. It is a notable example of the Brutalist school of architecture, which, amongst other things, houses the university's Museum of Zoology.

## Results

The excavation of two adjacent planting beds was monitored. Of these two, the westernmost, Planting Bed 1, contained a relatively well-stratified sequence that included three undated but well-preserved features; a ditch and two small pits. The easternmost, in contrast – Planting Bed 2 – had been heavily disturbed by the construction of adjacent buildings in the 19th and 20th centuries. Here only isolated pinnacles of *in situ* stratigraphy survived and no features were identified.

### *Planting Bed 1*

This was a rectangular trench measuring 4.5m by 11.2 metres in extent, covering an area of 50.4 square metres (Figure 2). It was excavated to a maximum depth of 7.08m OD (Figure 3). Three features were present, but no datable material culture was recovered.

At the top of the sequence, a series of banded layers – [100], [101], [102] and [103] – represent modern make-up, hardcore and a tarmac surface. Together, they measured 0.5m thick and overlay F.01, a 1.0m wide and 1.20m deep service trench. This in turn truncated [104], a 0.58m thick layer of dark brown clay silt with occasional to frequent gravel, charcoal and oyster shell inclusions. This deposit probably represents a post-medieval deposit associated with the former botanic garden. Beneath [104] lay [105], a 0.34m thick layer of mid brown sandy clay silt with infrequent gravel and charcoal inclusions. No datable material was recovered. This in turn overlay three undated cut features. The first, F.02, consisted of a northeast-southwest oriented ditch that measured in excess of 6.5m in length, 1.2m in width and 0.81m in depth. Its cut, [108], had steeply

sloping, partially undercut sides and a relatively flat base. Its fill, [107], was composed of mid orange brown sandy clay silt with occasional to frequent gravel inclusions.

Two small pits, **F.03** and **F.04**, were also present. The former measured 0.9m in diameter by 0.52m in depth and its cut, [110], had steeply sloping sides and a partially concave base. The latter measured in excess of 0.84m in diameter by 0.28m in depth and its cut, [112], had moderately sloping sides and a relatively flat base. The fills of both pits – [109] and [111] – were almost identical to that of ditch **F.02**. Each of these three features were cut into subsoil layer [106], which consisted of mid to pale orangey brown sandy silt with frequent gravel inclusions. Finally, beneath this three irregular subsoil-filled frost cracks were present.

### *Planting Bed 2*

This trench was 'L' shaped in form, measuring a maximum of 9.1 metres by 11.5 metres in extent and covering an area of 63.2 square metres (Figure 2). It was excavated to a maximum depth of 7.08m OD

Planting Bed 2 was extensively truncated by construction cuts associated with the adjacent buildings. As a result, only isolated pinnacles of in situ stratigraphy remained. These contained a near identical sequence of layers to those previously identified in Planting Bed 1. No features were identified and no datable material culture was recovered.

### **Discussion**

This watching brief was small in scale, thereby limiting the scope for analysis. Moreover, the absence of datable material culture within any of the investigated features and deposits further restricts the potential for their wider interpretation. Yet this very dearth is also in itself suggestive. Had the site fallen within an area of contemporary domestic occupation, for example, then a relatively high concentration of finds might have been anticipated. Instead, the fills of ditch **F.02** and pits **F.03** and **F.04** were particularly notable for their sterility both in terms of material remains and the absence of dark humic soil. This suggests that they were either created at a relatively early date, before intensive occupation was established in the area, or that their role was primarily agricultural as opposed to domestic in nature.

Of these two options, the latter is the most likely. This is because surrounding the Barnwell Gate suburb to the south and east were a series of open fields – the East Fields of Cambridge – that were cultivated in a pattern of selions, or strips. These fields were probably first laid out during the Late Saxon period and were certainly well-established by the late 11th century (Hesse 2007). Furthermore, previous investigations conducted at the nearby McDonald Institute site have uncovered additional archaeological evidence of this rural landscape (Gdaniec 1992). Consequently, the presence of a ditched field

boundary/drainage channel in this location would not have been at all out of context.

A second issue pertains to the alignment of **F.02**. As Figure 2 shows, it ran parallel to the projected course of the King's Ditch, the medieval boundary of the town of Cambridge. But excavations at the nearby Grand Arcade site have demonstrated that the King's Ditch – at least in its final, continuous univallate form – comprised a relatively late imposition dating from around the mid-12th century (Cessford and Dickens in prep.). The fieldsystem is thus likely to have predated it by several centuries. It is of course possible that the creation of **F.02** post-dated the ditch's establishment, although the sterility of its fills argues against this hypothesis. Alternatively, it is possible that the alignment of both features respected elements of the local topography; the medieval name of present-day Downing Street – *Landgrytheslane*, meaning 'long stream' (Reaney 1943, 47) – certainly suggests the presence of a long-lived natural boundary.

In sum, it is clear that that the investigated area lay outside the principal locus of the medieval suburb, within the town's surrounding agricultural hinterland. Given the lack of available dating evidence, it is conceivable that **F.02** and/or **F.03** and **F.04** were later Prehistoric or Roman in origin – very limited traces of activity of this date having been identified at nearby Grand Arcade (Cessford with Dickens in prep.) – but they are much more likely to have been associated with the establishment of an extensive rural landscape at the beginning of the medieval period.

#### **Acknowledgements**

This project was commissioned by Kier Construction as part of an extensive program of refurbishment. It was managed for the CAU by Alison Dickens and the fieldwork was conducted by Richard Newman. The graphics for this report were prepared by Bryan Crossan. We are grateful to Paul Milliner of University Estates management, Matt McBrien of Acom and the Kier site staff for their friendly and helpful assistance.

## Bibliography

- Allen, J. L. & Holt, A. 2010. *Health and Safety in Field Archaeology*. FAME
- Appleby, G. & Dickens, A. 2013. *New Museums Site, Downing Street, Cambridge: an archaeological desk top assessment*. Cambridge Archaeological Unit Report 1185
- British Geological Survey, 1976. *Cambridge: Sheet 188*. Southampton: Ordnance Survey
- Cessford, C. & Dickens, A. in prep. *From King's Ditch to Department Store: investigations of an 11th–20th-century suburb and the town ditch of Cambridge*. McDonald Institute Monograph
- Cranage, D. H. S. & Stokes, H. P. 1921. 'The Augustinian Friary in Cambridge, and the History of its Site', in *Proceedings of the Cambridge Antiquarian Society* 22, 53-75
- Dickens, A. 1996. *A Written Scheme of Investigation for Historic Building Recording at 1-8 St Clement's Gardens, Thompson's Lane, Cambridge*. Unpublished Cambridge Archaeological Unit document
- Duckworth, W. L. H. & Innes Pocock, W. 1910. 'On the Human Bones found on the site of the Augustine Friary, Bene't Street, Cambridge', in *Proceedings of the Cambridge Antiquarian Society* 15, 7-38
- Gdaniec, K. 1992. *Archaeological Investigations at the McDonald Institute*. Cambridge Archaeological Unit Report 58
- Hesse, M. 2007. 'The East Fields of Cambridge', in *Proceedings of the Cambridge Antiquarian Society* 96, 143-60
- Reaney, P. H. 1943. *The place-names of Cambridgeshire and the Isle of Ely*. Cambridge: Cambridge University Press
- Spence, C. 1994. *Archaeological Site Manual* (third edition). London: MoLAS



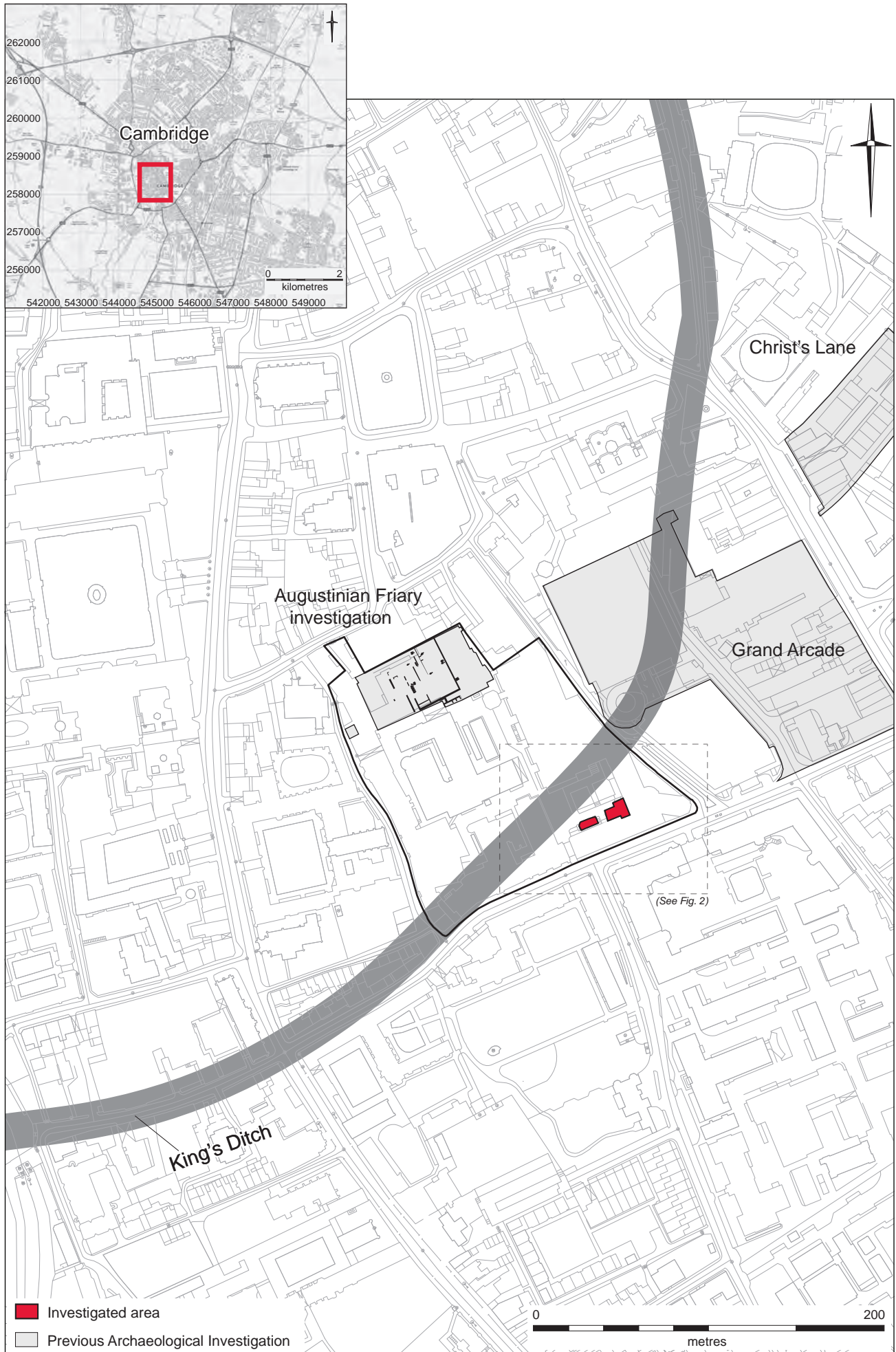


Figure 1. Location of investigation

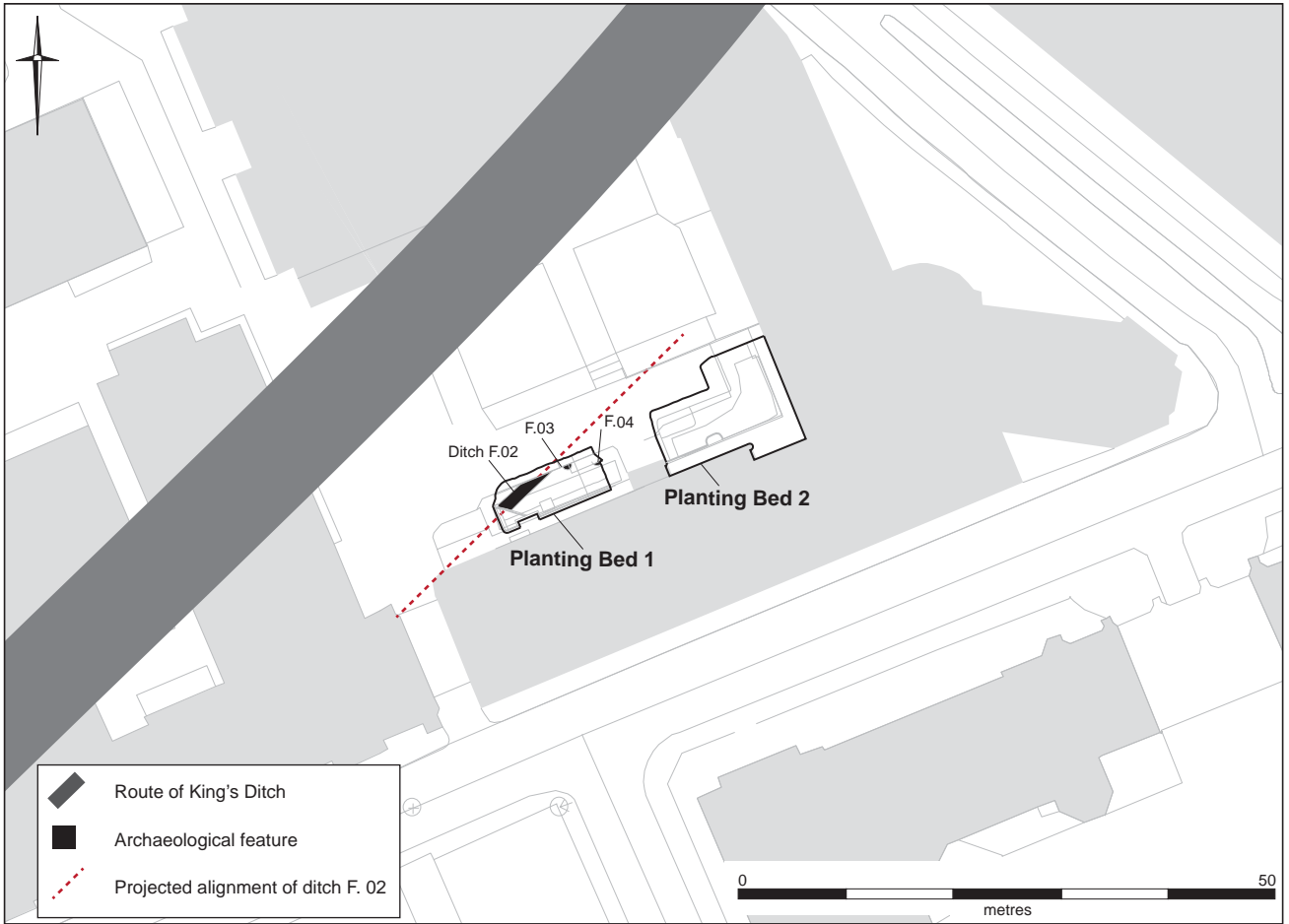


Figure 2. Planting Beds 1 and 2, showing relationship of F.02 to the King's Ditch

WSW ENE

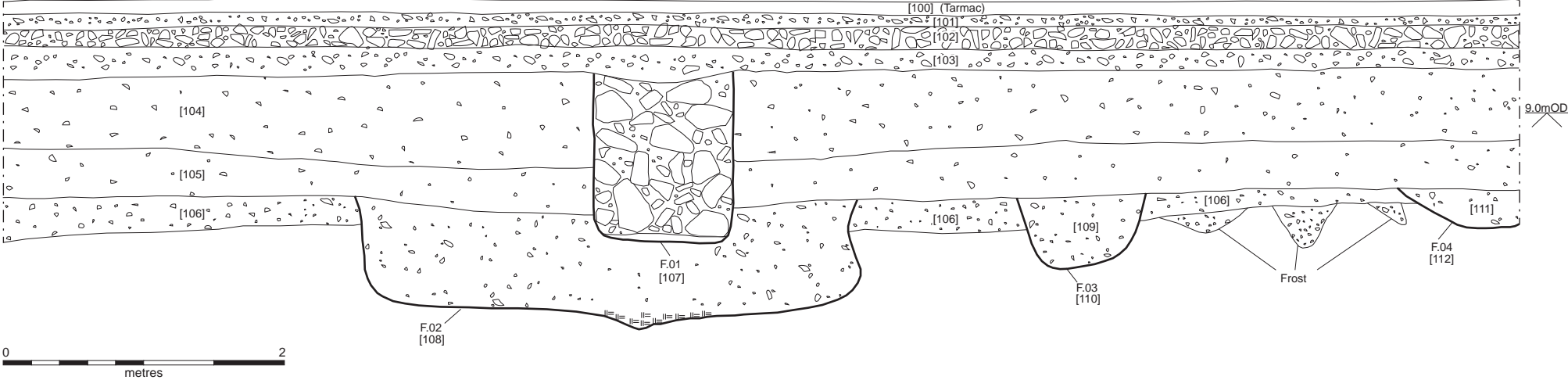


Figure 3. Southeast facing section of Planting Bed 1

## Oasis Form

<b>OASIS ID: cambridg3-257297</b>	
<b>Project details</b>	
Project name	A watching brief at the Arup Building, New Museums site, Cambridge
Short description of the project	During a watching brief conducted at the Arup Building, New Museums site, Cambridge, two former planting beds were investigated. A small number of features were identified, the most significant of which comprised a northeast-southwest oriented ditch. Although undated, this feature appears most likely to have been associated with the establishment of extensive open fields during the early medieval period.
Project dates	Start: 17-04-2014 End: 02-06-2014
Previous/future work	Yes / Not known
Any associated project reference codes	ECB4774 - HER event no.
Any associated project reference codes	ARP14 - Sitecode
Type of project	Recording project
Site status	Conservation Area
Current Land use	Other 2 - In use as a building
Monument type	DITCH Medieval
Monument type	PIT Medieval
Significant Finds	N/A None
Investigation type	"Watching Brief"
Prompt	Direction from Local Planning Authority - PPS
<b>Project location</b>	
Country	England
Site location	CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE Arup Building, New Museums site, Cambridge
Postcode	CB2 3QH
Study area	113.6 Square metres
Site coordinates	TL 4502 5821 52.202587117939 0.122356488945 52 12 09 N 000 07 20 E Point
Height OD / Depth	Min: 8.04m Max: 8.44m
<b>Project creators</b>	
Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Alison Dickens
Project	Alison Dickens

director/manager	
Project supervisor	Richard Newman
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Kier Construction
<b>Project archives</b>	
Physical Archive Exists?	No
Digital Archive recipient	Cambridgeshire County Archaeology Store
Digital Archive ID	ARP14
Digital Contents	"other"
Digital Media available	"Images raster / digital photography"
Paper Archive recipient	Cambridgeshire County Archaeology Store
Paper Archive ID	ARP14
Paper Contents	"other"
Paper Media available	"Context sheet","Photograph","Plan","Unpublished Text"
<b>Project bibliography</b>	
Publication type	Grey literature (unpublished document/manuscript)
Title	Arup Building, New Museums site, Cambridge: An Archaeological Watching Brief
Author(s)/Editor(s)	Newman, R.
Other bibliographic details	Cambridge Archaeological Unit Report Number 1343
Date	2016
Issuer or publisher	Cambridge Archaeological Unit
Place of issue or publication	Cambridge
Description	An A4 wire bound document with a plastic laminate cover. It is 13 pages long with three illustrations. Also a PDF file
Entered by	Richard Newman (rn276@cam.ac.uk)
Entered on	11 July 2016