

# St. Matthew's Primary School, Norfolk Street, Cambridge



## Archaeological Evaluation Report



December 2008

Client: Mouchel

OA East Report No: 1070

OASIS No: 51312

NGR: TL 4594 5841

**St. Matthew's Primary School, Norfolk Street, Cambridge.**

*Archaeological Evaluation*

*By Thomas Lyons BA*

*Editor: Richard Mortimer MIFA*

*Illustrator: Gillian Greer Bsc Hons MA AIS*

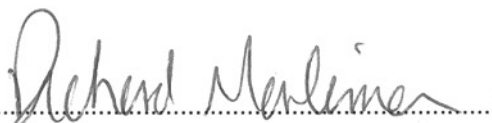
*Report Date: December 2008*

**Report Number:** 1070  
**Site Name:** St. Matthew's School, Cambridge  
**HER Event No:** ECB 3067  
**Date of Works:** October 2008  
**Client Name:** Mouchel  
**Client Ref:** AUG 171/ 08  
**Planning Ref:** n/a  
**Grid Ref:** TL 4594 5841  
**Site Code:** CAM SMS 08  
**Finance Code:** CAM SMS 08  
**Receiving Body:** CCC Stores, Landbeach

**Accession No:**

**Prepared by:** Thomas Lyons  
**Position:** Project Supervisor  
**Date:** December 2008

**Checked by:** Richard Mortimer  
**Position:** Project Manager  
**Date:** December 2008  
**Signed:** .....



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**Oxford Archaeology East,**

15 Trafalgar Way,  
Bar Hill,  
Cambridge,  
CB23 8SQ

t: 01223 850500  
f: 01223 850599  
e: oaeast@thehumanjourney.net  
w: <http://thehumanjourney.net/oaeast>

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## Summary

*On the 28th and 29th of October 2008, Oxford Archaeology East carried out an archaeological evaluation on the site of St. Matthew's Primary School, Cambridge. 31.50m of trenching was opened at the south end of the site on the only piece of ground not occupied by buildings or tarmac. The site was found to have been heavily disturbed by probable 19th Century 'coprolite mining' which was a practice of comprehensively digging over fields to quarry phosphates. Large, parallel straight edged features were visible across the whole excavated area, having removed or 'up-ended' the natural geological sands and gravels. The remainder of the soil sequence above the quarry strips consisted entirely of made ground. Archaeological features which truncated the quarries were encountered and contained diagnostic 19th Century pottery. A half-metre thick 19th Century deposit sealed the quarrying activity, on top of which was a further layer of hard make-up material associated with the building of the school in the latter half of the 20th Century. Above this was a reinstated subsoil and topsoil.*

## 1 INTRODUCTION

### 1.1 Location and scope of work

- 1.1.1 An archaeological evaluation was conducted at St. Matthew's Primary School, Norfolk Street, Cambridge.
- 1.1.2 This archaeological evaluation was undertaken in accordance with a Brief issued by Andy Thomas of Cambridgeshire County Council, supplemented by a Specification prepared by OA East (formerly Cambridgeshire County Council's CAM ARC).
- 1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *Planning and Policy Guidance 16 - Archaeology and Planning* (Department of the Environment 1990). The results will enable decisions to be made by CCC, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.
- 1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

### 1.2 Geology and topography

- 1.2.1 The site lies on 3rd terrace quaternary deposits just over 1 mile to the south of the river Cam (British Geological Survey 1981).

### 1.3 Archaeological and historical background

- 1.3.1 The site sits on the eastern edge of the historic city of Cambridge in an area developed in the Victorian period. It lies just west of the 19th century Mill Road cemetery where there are records of Early Saxon burials having been found (Historic Environment No. 04622).

### 1.4 Acknowledgements

- 1.4.1 The project was funded by Cambridgeshire County Council Schools through Slavica Mirovic of Mouchel. The fieldwork was carried out by Tom Lyons and Steve Graham. Taleyna Fletcher conducted the survey and the project was managed by Richard Mortimer. Andy Thomas from Cambridgeshire County Council visited the site and monitored the evaluation.

## 2 AIMS AND METHODOLOGY

### 2.1 Aims

- 2.1.1 The objective of this evaluation was to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

### 2.2 Methodology

- 2.2.1 Machine excavation was carried out under constant archaeological supervision with a wheeled JCB-type excavator using a toothless ditching bucket.
- 2.2.2 The site survey was carried out using a Leica GPS which was located on the Ordnance Survey Grid. Drawn plans were incorporated within the survey data to accurately plot the position of the trenches.
- 2.2.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.
- 2.2.4 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.
- 2.2.5 No environmental samples were taken
- 2.2.6 Site conditions were very good.



### 3 RESULTS

#### Trench results

- 3.1.1 A single trench was excavated in the south west corner of the proposed development area. It was aligned northwest to southeast and was 25m long, with a 7m extension to the north east close to its eastern end. The trench reached a maximum depth of 1.5m and was initially excavated to what was presumed to be the level of natural geological sand, subsequently seen to consist of redeposited sand and subsoil. Large straight edged cuts were visible along the trench which had heavily disturbed the natural geology.
- 3.1.2 Several later features were cut through this redeposited material and were clearly visible in plan from their relatively dark fills (105 & 107). Two were partially excavated, features **106** and **108**. Feature **106** was 3m long and at least 1.5m wide and had almost vertical sides. It was not fully excavated. It appeared to have been cut into, and subsequently truncated by, separate episodes of strip quarrying. Feature **108** was at least 2m long and 1m wide. It was located against the west facing baulk of the north-south part of the trench and was not fully excavated to the base.

These features, and the strip quarries beneath them, were sealed by a thick layer, presumably deposited to level the disturbed ground (104, Section 2). This was a very compact dark grey silty clay with frequent pieces of brick, tile, pottery and other post-medieval to modern materials. Above this was layer 103. This was a slightly paler grey and contained plastic bags, sacks and other patently modern material.

#### 3.2 Finds Summary

- 3.2.1 16 sherds of 19<sup>th</sup> Century pottery, weighing a total of 1.136kg, were recovered from features **106** and **108**. These were dated to between 1820 and 1860 AD (Alasdair Brooks Pers comm).

## 4 DISCUSSION AND CONCLUSIONS

### 4.1 Discussion

- 4.1.1 This evaluation has revealed the presence of large-scale quarrying activity on the site of the proposed development. It is likely that this quarrying was part of the 19th Century trend of what was known as 'coprolite mining'. This was the search for phosphates which were used as fertilisers and subsequently in the manufacture of gunpowder. The name derives from their appearance which was likened to dinosaur coprolites. The practice involved the comprehensive digging over of entire fields, in regular and straight patterns, and to a substantial depth. Such activity would have resulted in the destruction of any original soil sequences and certainly would have disturbed, if not totally removed, any archaeological deposits. It appears that this may not have all been done at one time as Feature **106** was cut into redeposited natural on its north side and then was truncated on its south side, presumably when the strip quarrying resumed (see Plate 2). Features 106 and 108 could have been associated with settlement along East Road, perhaps refuse pits dug at the rear of properties. The date of the pottery within these features (1820-1860) is consistent with expansion of settlement on the south side of East Road, which is present by the time of the Old Series OS map of 1836.
- 4.1.2 Recent evaluation work on the gravels some 3km to the northwest, between Huntingdon Rd and Madingley Rd, have recorded very similar strip-mining evidence. (Mackay et al 2002).
- 4.1.3 The site of this quarrying appears to have been deliberately levelled, or raised by the deposition of a thick layer of made ground (104). The ground was further built up during preparatory ground work for the building of St Matthew's Primary School which currently occupies the site. Layer 103 represents 20th Century deposition of made ground above which was a reinstated subsoil and topsoil, presumably part of the same ground works.

### 4.2 Significance

- 4.2.1 Although it is now unlikely that any archaeology survives beneath the site of St Matthew's school, the discovery of what is probably coprolite mining in this part of Cambridge is of local significance. This archaeologically damaging practice was hitherto unknown in this part of the city; it could have extend beyond the boundaries of the current development area along the length of East Road, prior to the later 19<sup>th</sup> Century development of the area around the Railway Station and Mill Road. The Old Series OS map for Cambridge (1836) shows occupation and settlement along the south east side of East Road (Margary 1987) perhaps giving an end date for the strip quarrying, although it is also possible that the quarrying, or at least some of it, could be contemporary with this settlement.

### 4.3 Recommendations

- 4.3.1 Recommendations for any future work based upon this report will be made by the County Archaeology Office.

## APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
<b>General description</b>				<b>Orientation</b>	E-W & N-S	
Trench devoid of natural geology having been heavily disturbed by quarrying. Original soil sequence removed and replaced by more than 1m of made ground.				<b>Avg. depth (m)</b>	1.4	
				<b>Width (m)</b>	1.6	
				<b>Length (m)</b>	31.5	
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
101	Layer	-	0.28	Topsoil	-	Modern
102	Layer	-	0.22	Subsoil	-	Modern
103	Layer			Made Ground		Modern
104	Layer			Made Ground		Modern
105	Fill			Fill of [106]	Y	Modern
106	Cut			Cut of Feature		Modern
107	Fill			Fill of [108]	Y	Modern
108	Cut			Cut of Feature		Modern

## APPENDIX B. BIBLIOGRAPHY

Mackay, D., Mortimer R., & C. Evans, 2002 Gravel Hill Farm, North-west Cambridge. An Archaeological Evaluation, Cambridge Archaeological Unit Report No.513

Margary, H. 1987 The old Series Ordnance Survey Maps of England and Wales. Volume V Lincolnshire, Rutland and East Anglia.

## APPENDIX C. OASIS REPORT FORM

All fields are required unless they are not applicable.

### Project Details

OASIS Number	oxfordar3-51312		
Project Name	St Matthew's School, Norfolk St, Cambridge: An Archaeological Evaluation		
Project Dates (fieldwork) Start	28-10-2008	Finish	29-10-2008
Previous Work (by OA East)	No	Future Work	Yes

### Project Reference Codes

Site Code	CAM SMS 08	Planning App. No.	n/a
HER No.	ECB 3067	Related HER/OASIS No.	ECB3067

### Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPG16
Development Type	Public Building

### Please select all techniques used:

<input type="checkbox"/> Aerial Photography - interpretation	<input type="checkbox"/> Grab-Sampling	<input type="checkbox"/> Remote Operated Vehicle Survey
<input type="checkbox"/> Aerial Photography - new	<input type="checkbox"/> Gravity-Core	<input checked="" type="checkbox"/> Sample Trenches
<input type="checkbox"/> Annotated Sketch	<input type="checkbox"/> Laser Scanning	<input type="checkbox"/> Survey/Recording Of Fabric/Structure
<input type="checkbox"/> Augering	<input type="checkbox"/> Measured Survey	<input type="checkbox"/> Targeted Trenches
<input type="checkbox"/> Dendrochronological Survey	<input type="checkbox"/> Metal Detectors	<input type="checkbox"/> Test Pits
<input type="checkbox"/> Documentary Search	<input type="checkbox"/> Phosphate Survey	<input type="checkbox"/> Topographic Survey
<input type="checkbox"/> Environmental Sampling	<input type="checkbox"/> Photogrammetric Survey	<input type="checkbox"/> Vibro-core
<input type="checkbox"/> Fieldwalking	<input type="checkbox"/> Photographic Survey	<input type="checkbox"/> Visual Inspection (Initial Site Visit)
<input type="checkbox"/> Geophysical Survey	<input type="checkbox"/> Rectified Photography	

### Monument Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Pits	Post Medieval 1540 to 1901	pottery	Post Medieval 1540 to 1901
	Select period...		Select period...
	Select period...		Select period...

### Project Location

County	Cambridgeshire	Site Address (including postcode if possible)
District	SCDC	St Matthew's Primary School, Norfolk St, Cambridge
Parish	Cambridge	
HER	Cambridgeshire	
Study Area		National Grid Reference
		TL 4594 5841

### Project Originators

Organisation	OA EAST
Project Brief Originator	Andy Thomas
Project Design Originator	Richard Mortimer
Project Manager	Richard Mortimer
Supervisor	Thomas Lyons

### Project Archives

Physical Archive	Digital Archive	Paper Archive
OA East	OA East	Camb's County Store
Accession ID ...	Accession ID ...	Accession ID ...

### Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<input type="checkbox"/>	<input type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Digital Media	Paper Media
<input type="checkbox"/> Database	<input type="checkbox"/> Aerial Photos
<input type="checkbox"/> GIS	<input type="checkbox"/> Context Sheet
<input type="checkbox"/> Geophysics	<input type="checkbox"/> Correspondence
<input checked="" type="checkbox"/> Images	<input type="checkbox"/> Diary
<input checked="" type="checkbox"/> Illustrations	<input checked="" type="checkbox"/> Drawing
<input type="checkbox"/> Moving Image	<input type="checkbox"/> Manuscript
<input type="checkbox"/> Spreadsheets	<input type="checkbox"/> Map
<input type="checkbox"/> Survey	<input type="checkbox"/> Matrices
<input type="checkbox"/> Text	<input type="checkbox"/> Microfilm
<input type="checkbox"/> Virtual Reality	<input type="checkbox"/> Misc.
	<input type="checkbox"/> Research/Notes
	<input type="checkbox"/> Photos
	<input type="checkbox"/> Plans
	<input checked="" type="checkbox"/> Report
	<input checked="" type="checkbox"/> Sections
	<input type="checkbox"/> Survey


**Notes:**

## Drawing Conventions

### Plans

Limit of Excavation	—————
Deposit - Conjectured	-----
Natural Features	—————
Sondages/Machine Strip	- - - - -
Intrusion/Truncation	.....
Illustrated Section	<u style="color: red;">S.14</u>
Archaeological Deposit	<span style="display: inline-block; width: 15px; height: 10px; background-color: #f4a460; border: 1px solid black;"></span>
Excavated Slot	<span style="display: inline-block; width: 15px; height: 10px; background-color: #d3d3d3; border: 1px solid black;"></span>
Drain	<span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6; border: 1px solid black;"></span>
Sand	<span style="display: inline-block; width: 15px; height: 10px; background-color: #d2b48c; border: 1px solid black;"></span>
Cut Number	<span style="border: 1px solid black; padding: 2px;">118</span>

### Sections

Limit of Excavation	- - - - -
Cut	—————
Cut-Conjectured	-----
Deposit Horizon	—————
Deposit Horizon - Conjectured	-----
Intrusion/Truncation	.....
Top Surface/Top of Natural	—————
Break in Section/ Limit of Section Drawing	- - - - -
Cut Number	<span style="border: 1px solid black; padding: 2px;">118</span>
Deposit Number	117
Ordnance Datum	$\frac{18.45m}{\times}$ OD
Inclusions	

### Convention Key

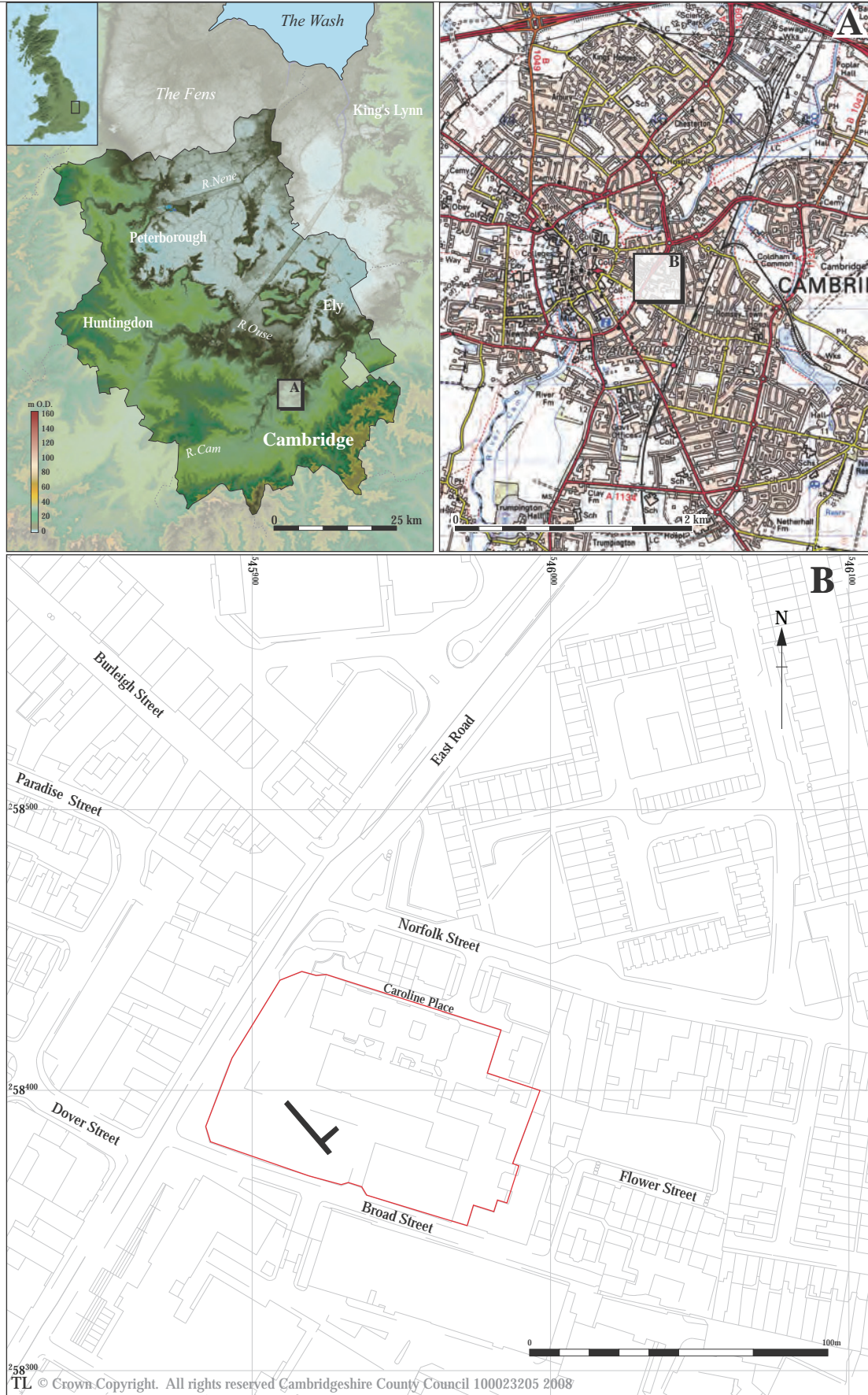


Figure 1: Location of trench (black) with the development area outlined (red)



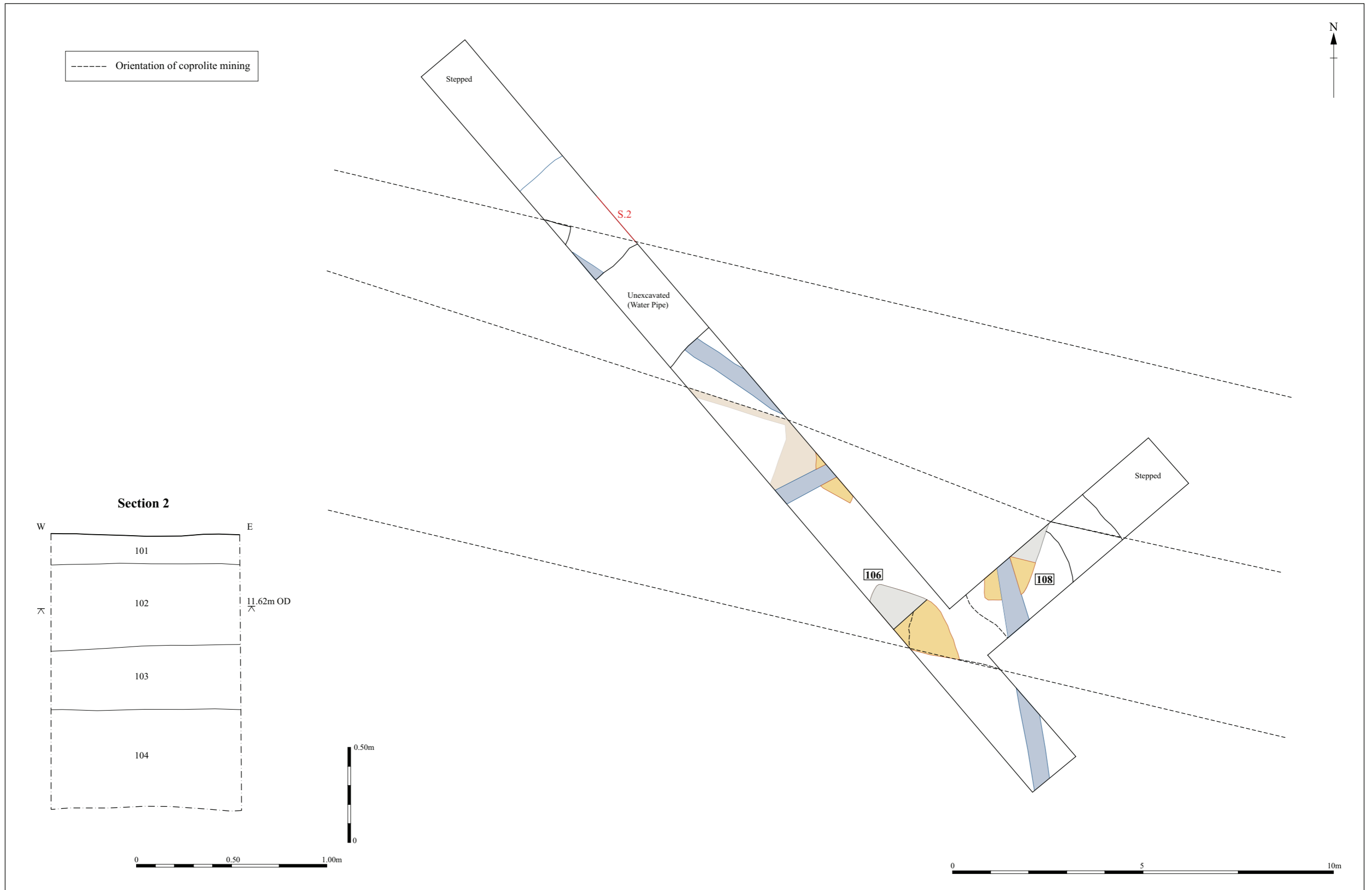


Figure 2: Trench plan (1:100) and section drawing (1:20)

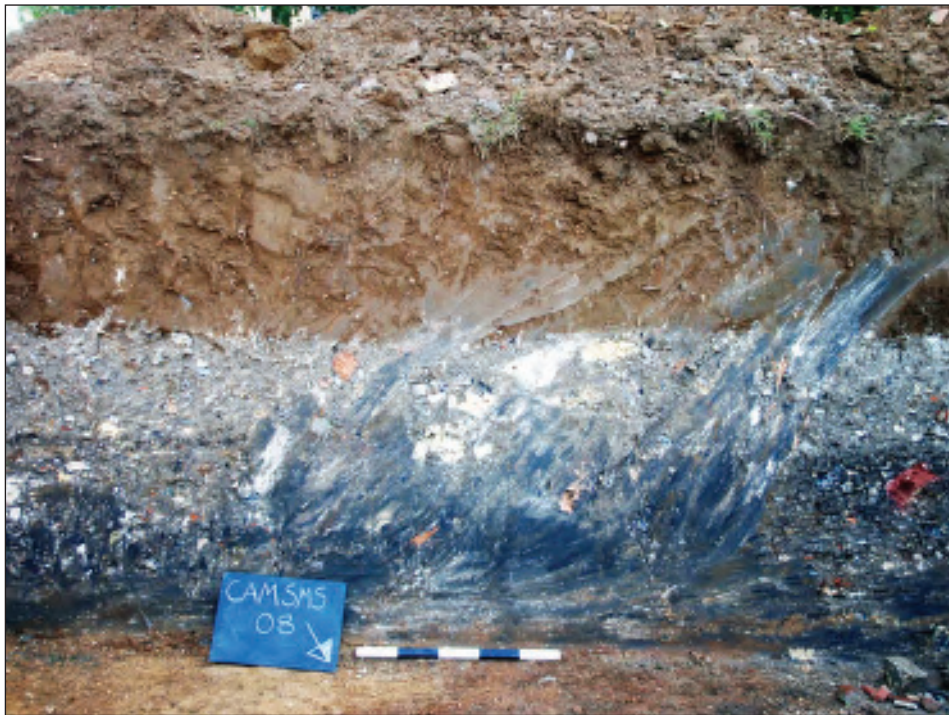


Plate 1: North East facing section of trench



Plate 2: Feature 108 with edges of strip quarrying in foreground and background



#### **Head Office/Registered Office**

Janus House  
Osney Mead  
Oxford OX2 0ES

t: +44 (0) 1865 263 800  
f: +44 (0) 1865 793 496  
e: [info@thehumanjourney.net](mailto:info@thehumanjourney.net)  
w: <http://thehumanjourney.net>

#### **OA North**

Mill 3  
Moor Lane  
Lancaster LA1 1GF

t: +44 (0) 1524 541 000  
f: +44 (0) 1524 848 606  
e: [oanorth@thehumanjourney.net](mailto: oanorth@thehumanjourney.net)  
w: <http://thehumanjourney.net>

#### **OA East**

15 Trafalgar Way  
Bar Hill  
Cambridgeshire  
CB23 8SQ

t: +44 (0) 1223 850500  
f: +44 (0) 1223 850599  
e: [oaeast@thehumanjourney.net](mailto: oaeast@thehumanjourney.net)  
w: <http://thehumanjourney.net/oaeast>

#### **OA Méditerranée**

115 Rue Merlot  
ZAC La Louvade  
34 130 Mauguio  
France

t: +33 (0) 4.67.57.86.92  
f: +33 (0) 4.67.42.65.93  
e: [oamed@oamed.fr](mailto: oamed@oamed.fr)  
w: <http://oamed.fr/>



**Director:** David Jennings, BA MIFA FSA

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