ARCHAEOLOGICAL SOLUTIONS LTD

ST JOSEPH'S PRIMARY SCHOOL, THE BROADWAY, BARKING, GREATER LONDON

AN ARCHAEOLOGICAL EXCAVATION

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NGR: TQ 4413 8375	Report No: 4080
London Borough of Barking & Dagenham	Site Code: SJO 11
Approved: Claire Halpin MIfA	Project No: 4411
Signed:	Date: June 2012

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OASIS SUMMARY SHEET

Project details			
Project name	*St Joseph's Primary School, The Broadway, Barking, Greater London*		

In May 2012 Archaeological Solutions (AS) carried an archaeological excavation at the site of St Joseph's Primary School, The Broadway, Barking, Greater London (NGR TQ 4413 8375). The excavation was commissioned by Living Architects on behalf of the Diocese of Brentwood and was undertaken in compliance with a planning condition attached to planning permission for the construction of a new four classroom unit (London Borough of Barking & Dagenham Planning Ref. 11/01014/FUL).

The site had a high potential for archaeological remains, in particular for the Anglo-Saxon, medieval and post-medieval archaeology. Such remains may relate to Barking Abbey, as well as the medieval and later development of the town. The evaluation did not reveal Anglo-Saxon or early medieval remains, and the medieval and post-medieval remains are likely associated with 'backyard' activity. The aims of the excavation were to preserve by record the archaeological evidence contained within the site prior to ground disturbance associated with the development.

Like the evaluation the excavation revealed medieval (11th-13th century), post-medieval (late 16th – 18th century) and modern features. Of particular interest are the four medieval (11th – 13th century) pits (F1010, F2012, F2029 and F2043), and the World War II air raid shelter.

Project dates (fieldwork)	*May 2012*		
Previous work (Y/N/?)	*Y*	Future work (Y/N/?)	*N*
P. number	*4411*	Site code	*SJO 11*
Type of project	*An Archaeological Evaluation*		
Site status	*Within Archaeological Priority Zone and Abbey and Barking Town Centre Conservation Area*		
Current land use	*School grounds*		
Planned development	*4 classroom units*		
Main features (+dates)	*Pits, World War II air raid shelter*		
Significant finds (+dates)	*11th – 13th century pottery*		
Project location			
County/ District/ Parish	*Greater London*	*London Borough of Barking & Dagenham*	*Barking*
HER/ SMR for area	*Greater London HER*		
Post code (if known)	*IG11 7AR*		
Area of site	*1.29ha*		
NGR	*TQ 4413 8375*		
Height AOD (min/max)	*6.50/8.00m AOD*		
Project creators			
Brief issued by	*Advice from EH GLAAS*		
Project supervisor/s (PO)	*Zbigniew Pozorski*		
Funded by	*Diocese of Brentwood*		
Full title	*St Joseph's Primary School, The Broadway, Barking, Greater London. An Archaeological Excavation*		
Authors	*Pozorski, Z.*		
Report no.	*4080*		
Date (of report)	*June 2012*		

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AN ARCHAEOLOGICAL EXCAVATION

SUMMARY

In May 2012 Archaeological Solutions (AS) carried an archaeological excavation at the site of St Joseph's Primary School, The Broadway, Barking, Greater London (NGR TQ 4413 8375). The excavation was commissioned by Living Architects on behalf of the Diocese of Brentwood and was undertaken in compliance with a planning condition attached to planning permission for the construction of a new four classroom unit (London Borough of Barking & Dagenham Planning Ref. 11/01014/FUL).

An earlier evaluation revealed many features, particularly in Trenches 1 and 2, and evidence of extensive occupation from the medieval period onwards. The earliest features were recorded in Trench 1 and were medieval: Pit F1019 (14th – mid 16th C), Pit 1021 (12th – mid 14th C) Pit F1026 (12th – mid 14th C) and Ditch F1036 (13th – 15th C). Undated features were also most common in Trench 1 (Pits 1011, 1017, ?1019 & 1028, and Post Holes 1013, 1015 & F1038)

The site had a high potential for archaeological remains, in particular for the Anglo-Saxon, medieval and post-medieval archaeology. Such remains may relate to Barking Abbey, as well as the medieval and later development of the town. The evaluation did not reveal Anglo-Saxon or early medieval remains, and the medieval and post-medieval remains are likely associated with 'backyard' activity. The aims of the excavation were to preserve by record the archaeological evidence contained within the site prior to ground disturbance associated with the development.

Like the evaluation the excavation revealed medieval (11th-13th century), post-medieval (late 16th – 18th century) and modern features. Of particular interest are the four medieval pits (F1010, F2012, F2029 and F2043), and the World War II air raid shelter.

1 INTRODUCTION

1.1 In May 2012 Archaeological Solutions (AS) carried an archaeological excavation at the site of St Joseph's Primary School, The Broadway, Barking, Greater London (NGR TQ 4413 8375; Figs. 1 & 2). The excavation was commissioned by Living Architects on behalf of the Diocese of Brentwood and was undertaken in compliance with a planning condition attached to planning permission for the construction of a new four classroom unit (London Borough of Barking & Dagenham Planning Ref. 11/01014/FUL).

1.2 The excavation was undertaken in accordance with a requirement of LB Barking & Dagenham, as advised by English Heritage Greater London Archaeological Advisory Service (EH GLAAS; Archaeological Advisors to LB Barking & Dagenham) and a written scheme of investigation (specification) prepared by AS (dated 21/03/2012) and approved by EH GLAAS. The project adhered to EH GLAAS *Archaeological Guidance Papers* (AGPs, revised 1998), in particular *AGP No 3; Standards and Practices in Archaeological Fieldwork in London*. The project also conformed to the Institute for Archaeologists (IfA) *Code of Conduct* and *Standard and Guidance for Archaeological Field Evaluations* (revised 2008).

1.3 An archaeological desk-based assessment (Higgs 2011) and trial trench evaluation have been completed (Pozorski 2011).

1.4 The primary objective was to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history and use of the site. It was particularly important to identify any evidence of activity associated with the Saxon, medieval and post-medieval development of this part of Barking.

Planning policy context

1.5 The National Planning Policy Framework (NPPF 2012) states that those parts of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are heritage assets. The NPPF aims to deliver sustainable development by ensuring that policies and decisions that concern the historic environment recognise that heritage assets are a non-renewable resource, take account of the wider social, cultural, economic and environmental benefits of heritage conservation, and recognise that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. The NPPF requires applications to describe the significance of any heritage asset, including its setting that may be affected in proportion to the asset's importance and the potential impact of the proposal.

1.6 The NPPF aims to conserve England's heritage assets in a manner appropriate to their significance, with substantial harm to designated heritage assets (i.e. listed buildings, scheduled monuments) only permitted in exceptional circumstances when the public benefit of a proposal outweighs the conservation of the asset. The effect of proposals on non-designated heritage assets must be balanced against the scale of loss and significance of the asset, but non-designated heritage assets of demonstrably equivalent significance may be considered subject to the same policies as those that are designated. The NPPF states that opportunities to capture evidence from the historic environment, to record and advance the understanding of heritage assets and to make this publicly available is a requirement of development management. This opportunity should be taken in a manner proportionate to the significance of a heritage asset and to impact of the proposal, particularly where a heritage asset is to be lost.

2 DESCRIPTION OF THE SITE

2.1 The site of St Joseph's Primary School is situated within Barking (London Borough of Barking and Dagenham) and formerly lay within the county of Essex. Dagenham lies *c.* 6km to the east, East Ham 2.5km to the south-west and Creekmouth 2.5km to the south-south-east (Fig. 1). The site lies 200m to the south-south-west of Barking's modern town centre. The A13 trunk-road that traverses the southern extent of Barking lies 800m to the south of the site, with the A406 trunk-road situated 250m to the west of the site. The site lies within the Archaeological Priority Zone (APZ) associated with Barking Abbey, the remains of which lie 200m to the north of the site. It also lies within the Abbey and Barking Town Centre Conservation Area (CA), and lies to the immediate south of the designated Central Area Open Space associated with the Abbey. Barking Abbey is also a scheduled ancient monument (SAM), the extent of which reaches to the northern boundary of the site.

2.2 The St Joseph's Primary School site comprises an irregular plot of land covering an area of approximately 1.29 hectares (Fig. 2). It is bounded to the north by the scheduled ancient monument of Barking Abbey, which is a designated open space containing the Grade II listed remains of the Abbey, the Grade II* listed Barking Fire Bell Gate, Grade I listed St Margaret's parish church and its associated graveyard. The eastern boundary of the site is demarcated by the Broadway. To the west and south of the site lies St Paul's Road, which forms a roundabout with the Broadway beyond the south-eastern corner of the site. The site is occupied by a range of modern structures forming St Joseph's Primary School and its associated nursery. The majority of the site comprises grass playing fields and gardens, with the school buildings and playground (hard standing) situated at the centre of the site.

3 TOPOGRAPHY, GEOLOGY AND SOILS

3.1 The topography of the St Joseph's Primary School site is dominated by its urban location. The site lies 2.5km to the north-north-west of the River Thames, and only 70m to the east of the valley of the Barking Creek, which is the southern extent of the River Roding before it flows into the River Thames (Fig. 1). The area of the site thus has a gently undulating relief at approximately 10m AOD and slopes very slightly down towards the west and the Barking Creek. The solid geology of the site comprises Eocene London Clay and forms part of the Lambeth Group close to its lower boundary with the Woolwich and Reading Beds (British Geological Survey 1978). It is overlain by alluvium and drift deposits of river terrace sands and gravels above the Thames floodplain, and which are associated with the post-glacial course of the River Thames and past changes in sea-level.

3.2 Information regarding the soil types likely to be encountered at the site was not readily available, as the site lies within a built-up area unclassified by the Soil Survey of England and Wales (Soil Survey of England and Wales 1983). However, extensive previous archaeological investigations have been

undertaken within the immediate area of the site, particularly within the area of Barking Abbey to the north and at the Abbey Retail Park, which lies to the north-west. The majority of previous groundwork has revealed substantial truncation in the vicinity of the site and extensive 19th and 20th century activity such as the riverside and wharves identified during an evaluation at Hewett's Quay and only 90m to the south-west of the site (Hounsell, Grant & Murray 2002). Although the Hewett's Quay site exhibited widespread levelling deposits and recent demolition layers, alluvial clays were present to the west and included evidence of truncated late medieval activity adjacent to the Abbey Road frontage.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 An archaeological desk-based assessment of the area has been prepared by AS (Higgs 2011), and also a trial trench evaluation report (Pozorski). In summary:

The site had a high potential for archaeological remains, in particular for the Anglo-Saxon, medieval and post-medieval archaeology. Such remains may relate to Barking Abbey, as well as the medieval and later development of the town. In the event the evaluation revealed many features, particularly in Trenches 1 and 2, and evidence of extensive occupation from the medieval period onwards.

The earliest features were recorded in Trench 1 and were medieval: Pit F1019 (14th – mid 16th C), Pit 1021 (12th – mid 14th C) Pit F1026 (12th – mid 14th C) and Ditch F1036 (13th – 15th C). These features also contained CBM but no other finds. The undated features were also most common in Trench 1 (Pits 1011, 1017, ?1019 & 1028, and Post Holes 1013, 1015 & F1038)

The remaining features were post-medieval and mostly modern. There is no evidence of any standing structures on the earliest known map of the area (dated 1653). Modern masonry remains include those of two buildings (M1050 and M1060; Trench 2) and three walls (M1062, M1069, and M1090). The buildings were likely those fronting Biffron Place, later Biffron Square and were erected somewhere between 1840 and 1877, when they appear on (the latter) OS map. Wall M1062 (Tr. 1) and M1069 (Tr. 2) were likely constructed in late 19th – early 20th century, and M1090 (Tr. 3) was 20th century.

The evaluation did not reveal Anglo-Saxon or early medieval remains, and the medieval and post-medieval remains are likely associated with 'backyard' activity. The site retains potential for further archaeological remains, in particular medieval and post-medieval archaeology, and still retains a potential for Anglo-Saxon and earlier medieval remains.

The recognition of archaeological features or finds was inhibited within the south-eastern end of Trench 2 where a modern basement/pit filled with large amounts of rubbish and building materials was present.

The north-eastern part of the site (Trenches 1 and 2) was commonly overlain by Topsoil L1000, a dark greyish brown, friable, sandy silt (0.08 – 0.30m thick). The area of Trench 3 was overlain by modern pavement (M1042). The evaluation revealed numerous deposits of made ground above the natural geology. These deposits were substantial, particularly within Trenches 1 and 2. The natural geology was present at 1.20 – 1.60m below ground level (Trenches 1 and 2) and at 0.70 – 0.80m within Trench 3. It comprised mid to dark yellow, loose, sandy gravel (Trenches 1 and 2) and mid yellow, compact, clay and gravel (Trench 3).

5 METHODOLOGY

5.1 The proposed development comprises an extension constructed on pad foundations, each *c*.750mm x 750mm x 1.8m deep.

5.2 As advised by EH GLAAS, a stepped mitigation trench of a total 50m^2 (at base) was required to provide for the maximum possible impact of the proposed groundworks. Given that the two previous evaluation trenches had examined a large part of the proposed new L-shaped classroom block, it was agreed that an excavation area of *c*.7m x 7m was located within the footprint of the proposed block, between the two trial trenches and in the lower area below the artificially raised green area in which the two trial trenches were located (Fig. 2).

5.3 Topsoil and undifferentiated overburden were mechanically excavated under close archaeological supervision. Exposed surfaces were cleaned by hand and examined for archaeological features. Deposits were recorded using *pro forma* recording sheets, drawn to scale, and photographed as appropriate. Excavated spoil was searched for finds and the trenches were scanned by a metal detector.

6 DESCRIPTION OF RESULTS (Figs. 2 - 4)

Sample Section 1: W End, E Facing *0.00m = 7.30m AOD*		
0.00 – 0.05m	L2000	Modern paving stones.
0.05 – 0.11m	L2001	Levelling layer for paving. Mid yellow, loose, sand.
0.11 – 0.37m	L2003	Made Ground. Mid – dark grey, friable, silty sand with frequent CBM
0.37 – 0.58m	L2004	Made Ground. Light yellowish grey, friable, silty sand with frequent gravel.
0.58 – 0.77m	L2005	Made Ground. Mid brownish grey, compact, silty sandy with moderate gravel and occasional CBM.
0.77m+	L2006	Natural. Yellow, loose, gravel with areas of sand.

Sample Section 2: E End, W Facing *0.00m = 7.94m AOD*		
0.00 – 0.15m	L2014	Topsoil. Dark greyish brown, soft, sandy silt.
0.15 – 0.27m	L2015	?Suface. Dark bluish grey, compact, gravel
0.27 - 1.04m	L2019	Made Ground. Mid – dark greyish brown, compact, sandy silt with frequent CBM
1.04 – 1.20m	L2021	Mid yellow, loose, sand
1.20 - 1.30m	L2022	Mid brown, compact, sandy silt with frequent gravel
1.30m+	L2006	Natural. As Above.

Description: Medieval (11th – 13th century), post medieval (late 16th – 18th century) and modern features were recorded.

Medieval

Four pits containing medieval (11th- 13th century) pottery were recorded (F2010, F2012, F2029 and F2043).

Pit F2010 was rectangular in plan (1.10+ x 0.50+ x 0.85m). It had steep sides and a flattish base. Its fill, L2011, was a dark greyish brown, firm, sandy silt with small stones. It contained medieval (11th – 13th century) pottery (108g). F2010 was cut by M2007, an air raid shelter.

Pit F2012 was rectangular in plan (1.40+ x 0.73 x 0.38m). It had steep sides and an uneven base. Its fill, L2013, was a dark greyish brown, firm, sandy silt clay with occasional small stones. It contained medieval (11th – 13th century) pottery (227g), CBM (355g) and animal bone (69g). F2012 was cut by Ditch F2032.

Pit F2029 was oval in plan (1.70 x 1.40 x 0.55m). It had steep sides and a flattish base. It contained two fills. The basal fill, L2030, was a mid yellow grey, friable, silty clay with moderate gravel. It contained no finds. The upper fill, L2031, was a mid grey, friable, silty sand with occasional medium-sized flints. It contained medieval (11th -13th century) pottery (3g) and CBM (5g). F2029 was cut by Ditch F2032 and Pit F2035.

Pit F2043 was oval in plan (0.71 x 0.92 x 0.72m). It had steep sides and a flattish base. Its fill, L2044, was a mid greyish brown, friable, sandy silt with occasional small stones. It contained medieval (11th – 13th century) pottery (29g), CBM (132g) and animal bone (52g). F2043 was cut by Ditch F2032 and Hollow F2027.

Post Medieval

Ditch F2032 was linear in plan (3.45 x 0.92 x 0.45m), orientated N/S. It had steep sides and a flattish base. It contained two fills. The basal fill, L2033, was a mid yellow grey, friable, silty clay with occasional gravel. It contained no finds. The upper fill, L2034, was a mid grey brown, friable, silty sand with occasional flint. It contained post-medieval (late 16th – 18th century) pottery

(63g), CBM (90g) and animal bone (15g). F2032 was cut by Modern Drain F2009.

Pit F2035 was oval in plan (0.62 x 0.48 x 0.27m). It had steep iregular sides and a flattish base. Its fill, L2036, was a mid yellow grey, friable, silty sand with occasional gravel. It contained no finds. F2035 cut Pit F2029 and was cut by Modern Ditch F2025. Though it contained no finds, its fill and form was similar to the post-medieval features.

Stakehole F2037 was oval in plan (0.15 x 0.14 x 0.19m). It had steep sides and a concave base. Its fill, L2038, was a mid greyish brown, firm, silty sand. It contained no finds and therefore its phasing is tentative. Stakehole F2037 was cut by Post Hole F2039.

Post Hole F2039 was oval in plan (0.32 x 0.34 x 0.30m). It had steep sides and a flattish base. Its fill, L2040, was a mid grey brown, friable, silty sand. F2039 cut Stakehole F2037. It contained no finds and therefore like Stakehole F2037 its phasing is tentative.

Modern

The principal modern feature was M2007, an air raid shelter partially exposed within the excavation area. It was constructed of concrete with walls (0.20 – 0.30m thick) forming an entrance way either side of four wide, shallow steps descending to a possible large subterranean structure, now backfilled. The fill, L2008, contained numerous fragments of concrete and CBM.

Service Run F2041 was linear in plan (6+ x 0.23 x 0.15m), orientated N/S. It had steep sides and a concave base. Its fill, L2042, was a mid grey brown, friable, silty sand with occasional small angular flint. It contained a ceramic pipe with concreted joints.

Ditch F2023 was linear in plan (4.9+ x 0.55 x 0.23m), orientated N/S. It had steep sides and a concave base. Its fill, L2024, was a dark grey brown, sandy silt sand with occasional medium-sized angular flint. F2023 cut Service Run F2041

Ditch F2025 was linear in plan (4.9+ x 0.95 x 0.30m), orientated N/S. It had steep sides and a concave base. Its fill, L2026, was a dark grey brown silty sand with occasional small angular flint. It contained animal bone (1079g). It cut Ditch F2023 and was cut by modern services.

Hollow F2027 was elongated in plan (0.80+ x 1.33 x 0.15m). It had irregular sides and an irregular base. Its fill, L2028, was a light grey brown, compact, gravel. It contained animal bone (6g). F2027 cut Ditches F2023 and F2025, and Service Run F2041.

Wall M2018 was linear in plan (3+ x 0.52 x 0.46m). It was constructed using red bricks bonded with a creamy yellow sandy mortar. It construction cut,

F2016, had near vertical sides and a flattish base. Its fill, L2017, was a mid grey, friable, silty sand with frequent CBM.

Wall M2002 (0.43m x 0.23m) was constructed using dark red bricks (215mm x 110mm x 65mm) using a light grey cement mortar.

Modern Drain F2009 was constructed using predominantly mid red bricks (225mm x 230mm x 70mm)

7 CONFIDENCE RATING

7.1 It is not felt that any factors restricted the identification of archaeological features or the recovery of artefacts and/or ecofacts during the evaluation.

8 DEPOSIT MODEL

8.1 As recorded during the evaluation uppermost was Topsoil L2014, a dark greyish brown, soft, sandy silt (0.15m thick), and modern paving stones (L2000). Again deposits of made ground overlay the natural geology. The latter was present at 1.30m below ground level and comprised a yellow, loose, sandy gravel with areas of sand.

9 DISCUSSION

9.1 The recorded archaeological features are tabulated:

Phase	Feature	Description	Spot Date
Medieval	F2010	Pit	11th – 13th century
	F2012	Pit	11th – 13th century
	F2029	Pit	11th – 13th century
	F2043	Pit	11th – 13th century
Post-Medieval	F2032	Ditch	Late 16th – 18th century
	F2035	Pit	?post-medieval
	F2037	Stakehole	?post-medieval
	F2039	Post Hole	?post-medieval
Modern	2002	Wall	Modern
	2007	Air Raid Shelter	Modern
	2009	Drain	Modern
	2018	Wall	Modern
	2023	Ditch	Modern
	2025	Ditch	Modern
	2027	Hollow	Modern
	2041	Service Run	Modern

9.2 The previous evaluation revealed many features, particularly in Trenches 1 and 2, and evidence of occupation from the medieval period onwards. The earliest features were recorded in Trench 1 and were medieval:

Pit F1019 (14th – mid 16th C), Pit 1021 (12th – mid 14th C) Pit F1026 (12th – mid 14th C) and Ditch F1036 (13th – 15th C). Undated features were also most common in Trench 1 (Pits 1011, 1017, ?1019 & 1028, and Post Holes 1013, 1015 & F1038)

9.3 The remaining features recorded during the evaluation were post-medieval and mostly modern. There was no evidence of any standing structures on the earliest known map of the area (dated 1653). The recorded modern masonry remains were likely those fronting Biffron Place, later Biffron Square and were erected somewhere between 1840 and 1877, when they appear on (the latter) OS map. Other recorded modern remains were likely constructed in late 19th – 20th century.

9.4 The site had a high potential for archaeological remains, in particular for the Anglo-Saxon, medieval and post-medieval archaeology. Such remains may relate to Barking Abbey, as well as the medieval and later development of the town. The evaluation did not reveal Anglo-Saxon or early medieval remains, and the medieval and post-medieval remains are likely associated with 'backyard' activity. The aims of the excavation were to preserve by record the archaeological evidence contained within the site prior to ground disturbance associated with the development. The excavation was focussed on the area of evaluation Trenches 1 and 2, and examined a large remaining part of the proposed new classroom footprint that has not been investigated by the evaluation trenches. .

9.5 Like the evaluation the excavation revealed medieval (11th-13th century), post-medieval (late 16th – 18th century) and modern features. Of particular interest are the four medieval pits (F1010, F2012, F2029 and F2043), and the World War II air raid shelter.

9.6 The assemblage of finds comprise pottery, CBM, animal bone and charred plant remains. Medieval Pit F2012 (L2013) contained two fragments (355g) of residual Roman tegula roof tiles (CBM Report below). Medieval peg tile was also present in the CBM assemblage. The roof tile is dated to late 12th to 15th centuries (CBM Report below). Fragments of medieval peg tile were contained in low quantities in Pits F2029, F2043, Ditches F2032 and F2041. The poor preservation and limited quantities of the peg tile suggest they are not associated with a building in the immediate vicinity and were probably re-deposited. Though the animal bone assemblage was of some interest it was largely derived from modern ditch F2025 (Animal Bone Report below). The charred plant remains were of interest particularly that from medieval Pit F2010 (Environmental Samples Report below). Based on this sample, it is apparent that the local cereal economy was quite diverse, potentially incorporating the cultivation of free-threshing wheat, hulled barley, oats and rye.

10 DEPOSITION OF THE ARCHIVE

10.1 Archive records, with an inventory, will be deposited with any donated finds from the site at London Archaeological Archives and Resource Centre (LAARC). The archive will be quantified, ordered, indexed, cross-referenced and checked for internal consistency.

ACKNOWLEDGEMENTS

Archaeological Solutions would like to thank Living Architects for commissioning the project on behalf of Diocese of Brentwood, and for their assistance during the project. AS would also like to thank the school for their assistance during the execution of the works.

AS gratefully acknowledge the input and advice of Ms Jane Sidell and Mr Adam Single of English Heritage Greater London Archaeological Advisory Service (EH GLAAS).

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APPENDIX 1 CONCORDANCE OF FINDS

SJO11, St Joseph's Primary School
Concordance of finds by feature

Feature	Context	Segment	Area	Description	Spot Date	Pottery	CBM (g)	A.Bone (g)	Other
2010	2011		1A	Pit	11th-13th C	(5) 108g			
2012	2013		1A	Pit	11th-13th C	(14) 227g	355	69	
2025	2026		1B	Ditch				1079	
2027	2028		1B	Hollow				6	
2029	2031		1B	Pit	11th-13th C	(1) 3g	5		
2032	2034		1B	Ditch	Late 16th-18th C	(5) 63g	90	15	
2041	2042		1B	Modern Service Pipe	20th C	(3) 53g	1353	200	Mortar - 184g Slag (1) - 3g
2043	2044		1B	Pit	11th-13th C	(2) 29g	132	52	

APPENDIX 2 SPECIALIST REPORTS

The Pottery

by Peter Thompson

The excavation recovered 29 moderately abraded sherds weighing 426g recovered from six features. The majority of sherds (21) are early medieval shelly wares, some containing sand, with 3 early medieval sandy wares also present. Early medieval shelly wares are the most common wares found in Barking in the late 12th-13th centuries (Vince 1998). The remaining 5 sherds are early post-medieval to modern in date. The pottery has been quantified by feature below (Table 1), and the fabrics have been assigned Essex fabric codes and dates.

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KEY:

SESH: South Essex shelly ware 11th-13th

EMSSH: Early Medieval sandy ware with shell 11th- 13th

EMS: Early Medieval sandy ware 11th-mid 13th

MSO: Medieval sandy orange ware mid 13th-early 16th

PMRE: Post-medieval red earthenware late 16th-19th

PMFW: Post-medieval factory made ware late 18th+

Feature	*Context*	*Quantity*	*Code*	*Date*	*Comment*
Pit 2010	2011	1x9g EMS 4x94g SESH	13* 12*	11th-13th	SESH: bowl with flat topped everted rim & sagging base
Pit 2012	2013	8x108g SESH 6x101g EMSSH	12* 12C	11th-13th	SESH: cooking pot rim 16 cm diam; cooking pot rim & sagging base EMSSH: flat bowl? Rim 30cm diam; body sherd with wavy line deco
Pit 2029	3031	1x2g EMSSH	12C	11th- 13th	
Ditch 2032	2034	1x6g SESH 1x5g EMS 1x4g MSOW 1x24g PMRE	12* 13 21* 40	Late 16th-18th	
Ditch 2041	2042	2x47g PMRE 1x3g PMFW	40 48	20th	PMRE: small jug or mug rim and handle

Pit 2043	2044	1x15g SESH 1x8g EMS	12* 13	11th- 13th	

Table 1: Quantification of pottery by context

The Ceramic Building Materials
Andrew Peachey MIfA

The excavation recovered a total of 38 fragments (1910g) of CBM and five fragments (184g) of mortar. The bulk of the CBM is of post-medieval manufacture, probably in the mid 17th to 19th centuries AD, but the assemblage also include highly fragmented, sparse fragments of medieval peg tile and rare fragments of Roman roof tile (Table 2).

CBM type	Fragment Count	Weight (g)
Roman roof tile	2	355
Medieval peg tile	12	223
Post-medieval roof tile	10	528
Post-medieval brick	14	804
Post-medieval mortar	5	184
Total	*43*	*2094*

Table 2: Quantification of CBM

The CBM contained in Pit F2012 (L2013) is limited to two fragments (355g) of 20mm thick flat tile with slightly uneven surfaces, and the arc of a partial finger signature that indicate they would have formed part of Roman tegula roof tiles. The fabric of the tegula has oxidised orange to orange-brown surfaces, with a reduced mid grey sandwich core. Inclusions comprise common fine quartz (0.1-0.25mm) with occasional iron rich grains and flint (0.5-4mm).

The medieval peg tile in the assemblage is limited to small, abraded fragments of 12-14mm flat tile that exhibit a splashed lead glaze on their upper surface. This type of roof tile was common from the late 12th to 15th centuries in the region. The fabric of the peg tile is very similar to that of the Roman tile, albeit less well-fired. It has oxidised red-orange surfaces that fade to a thick mid-dark grey core, with inclusions of common fine quartz (0.1-0.25mm) with occasional red/black iron rich grains (0.1-0.5mm). Fragments of medieval peg tile were contained in low quantities in Pits F2029, F2043, Ditches F2032 and F2041. The poor preservation and limited quantities of the peg tile suggest they are not associated with a building in the immediate vicinity and have probably been re-deposited.

Almost all the post-medieval CBM was contained in Ditch F2041 (L2042), a modern service pipe, with a further single fragment of brick (42g) also contained in Pit F2043. The post-medieval CBM included fragments of pantile (roof tile) and 60-65mm thick brick that are typical of CBM produced from the mid 17th to 19th centuries. The post-medieval CBM is moderately fragmented

and abraded and may be regarded as rubble, possibly used as packing material rather than associated with a structure.

The Animal Bone

Dr Julia E. M. Cussans

A total of 32 bone fragments were recovered from a variety of features (Table 3) during excavations at St Joseph's school; this is in addition to 56 bones found during the earlier trial trench investigation (Cussans 2011). Preservation was rated as good; fresh breaks, abrasion and canid gnawing were present on a small number of bones. Identified taxa (Table 3) were cattle, sheep and sheep/goat; unidentified bones were classed as large (cattle or horse sized) or medium (sheep or pig sized) mammal. No bird or fish bones were recovered. Cattle bones included a variety of elements from the head, limbs, feet and vertebrae; a number of these showed signs of butchery including chop and cut marks, the majority of which came from L2026. The only identified sheep bone was a horncore, also from L2026, that had been chopped off the skull at the base and may indicate that sheep horns were being worked or used at the site. Sheep/goat bones included a variety of elements from the head, limbs and feet, some of which had been butchered. Some butchery was also noted on the large mammal bones. No pathologies were noted on any of the bones.

Reference

Cussans, J. E. 2011, The Animal Bone, in Pozorski, Z. *St Joseph's Primary School, The Broadway, Barking, Greater London: An archaeological evaluation*, Archaeological Solutions Report No. 3958, 27

Feature	Context	Description	Cattle	Sheep	Sheep/goat	Large Mammal	Medium mammal	Total
2012	2013	Pit	1	-	-	-	-	1
2025	2026	Ditch	5	1	2	6	3	17
2027	2028	Spread	-	-	-	-	1	1
2032	2034	Ditch	-	-	1	1	1	3
2041	2042	modern service	2	-	3	3	1	9
2043	2044	Pit	1	-	-	-	-	1
Total			9	1	6	10	6	32

Table 3. Identified taxa by context.

The Environmental Samples

Dr John Summers

Introduction

During the excavation at St. Joseph's Primary School, Barking, two bulk soil samples of 20 litres each were taken for environmental archaeological analysis. Both were from medieval (11th-13th century) pits and have the ability to provide information about the local diet and arable economy. This report presents the results from the analysis of the two samples and discusses the findings in relation to the local medieval economy and conditions of arable cultivation.

Methods

The samples were processed by water flotation at the Archaeological Solutions Ltd facilities in Bury St. Edmunds. The light fractions were washed onto a mesh of 250µm and the heavy fractions were retained in a 500µm mesh. Once dry, the light fractions were sorted using a low power stereomicroscope (x10-x30 magnification) and any biological remains were identified and fully quantified. Where necessary, reference literature (Cappers *et al.* 2006; Jacomet 2006) and a reference collection of modern plant tissues were consulted. The heavy fractions were sorted for significant remains, such as artefacts and animal bone.

Results

Table 4 presents the results from the analysis of the two bulk sample light fractions. All of the material recovered was preserved by carbonisation.

Of the two samples, pit fill L2011 (F2010) was by far the richest and most diverse. A total of 70 specimens of grains, seeds and chaff were identified, representing 3.5 items per litre of sediment. A number of grains from a range of cereal taxa were present. These were free-threshing type wheat (*Triticum aestivum/ compactum* type), emmer/ spelt wheat (*T. dicoccum/ spelta*), hulled barley (*Hordeum vulgare*), oat (*Avena* sp.) and rye (*Secale cereale*). In addition, cereal culm nodes were represented in L2011, indicating the presence of crop processing debris. Non-cereal taxa included medium legumes (Fabaceae), eyebright/ bartsia (*Euphrasia/ Odontites* sp.), stinking chamomile (*Anthemis cotula*), sedges (*Carex* sp.), brome grass (*Bromus* sp.) and other wild grasses (Poaceae). It is possible that all of these grew as arable weeds amongst cereal crops.

A number of charcoal fragments were present in both samples, likely representing fuel residue deposited with hearth ash. An examination showed that both ring- and diffuse-porous wood types were present, some of which was in the form of small diameter roundwood (twigs and branches). The size and number of fragments was insufficient for detailed analysis but the

presence of a range of wood types and small diameter pieces may reflect a pragmatic, non-specific approach to the gathering of fuel wood.

Contaminants

A small number of modern roots and burrowing molluscs (*Cecilioides acicula*) were present in the samples. The low concentrations of these organisms is a sign that there has been little biological disturbance of the deposits.

Site Code	**SJ011**	**SJ011**
Sample number	**2**	**3**
Context number	**2013**	**2011**
Feature number	**2012**	**2010**
Feature type	**Pit**	**Pit**
Spot date	**11th-13th century**	**11th-13th century**
Volume (litres)	**20**	**20**
Cereal grains:		
Indet. cereal grain frags	X	XX
Cereal NFI	1	15
Hordeum sp. - Barley	-	4
Hordeum vulgare - Hulled barley	-	2
Triticum sp. - Wheat	1	1
Triticum dicoccum/spelta - Emmer/spelt wheat	-	1
Triticum aestivum/compactum type – Free-threshing type wheat	2	4
cf. *Avena* sp. - Oat	-	4
Avena sp. - Oat	-	5
cf. *Secale cereale* - Rye	-	1
Secale cereale - Rye	-	3
Cereal chaff:		
Cereal indet. culm nodes	-	10
Wild taxa:		
Fabaceae indet. - Pea family (medium)	-	3
Euphrasia/Odontites sp. - Eyebright/bartsia	-	1
Anthemis cotula L. - Stinking chamomile	-	3
Carex sp. L. - Sedge	-	4
Cyperaceae indet. - Sedge family	-	1
Bromus sp. L. - Brome grass	2	1
Poaceae indet. - Grass (large)	-	2
Poaceae indet. - Grass (small)	-	2
Seeds indet.	-	3
Charcoal:		
Charcoal >2mm	XX	XX
Contaminants:		
Modern roots	X	X
Modern molluscs	X	-

X = present
XX = common
XXX = abundant

Table 4: Plant remains from bulk sample light fractions. Nomenclature follows Stace (1997)

Discussion

As noted above, the main sample of value is sample 3 (Pit F2010 L2011). Based on this sample, it is apparent that the local cereal economy was quite diverse, potentially incorporating the cultivation of free-threshing wheat, hulled barley, oats and rye. This is a common range of crops which occur at other medieval sites (e.g. Ballantyne 2005; Murphy 2009; Straker *et al.* 2007). The single emmer/ spelt wheat grain could represent a weed contaminant of other cereals since it was not generally cultivated during the medieval period. It is likely that the different crops had different roles in the local economy. For example, oats or rye could have been cultivated as fodder crops, with wheat being the preferred cereal for human consumption. However, the present data are insufficient to address such issues in any detail.

The non-cereal taxa are mostly common arable weeds and probably grew amongst the cereal crops. The presence of sedges (*Carex* sp.) may indicate some wetness of cultivated soils, while stinking chamomile (*Anthemis cotula*) is often representative of heavy clay soils. Bread wheat in particular is well suited to such soils (Moffett 2006, 48) and may have been quite successful in such areas. Stinking chamomile was a troublesome weed of medieval cereal fields which could cause skin irritation and blistering, particularly through contact during harvest (Straker *et al.* 2007, 885).

The presence of cereal culm indicates that debris from the early stages of crop processing is present within the sample from L2011. This suggests that the occupants of the site were involved in the cultivation and primary processing of cereals, although the economic value of straw could mean that the remains had an alternative source (e.g. thatch or animal bedding).

The material recovered appears to represent mixed refuse material deposited in the pits. The presence of straw and arable weeds in L2011 is an indication that some of the material was derived from crop processing activities, although the assemblage is likely to have received material from a range of cereal processing and food preparation activities.

Conclusion

Although the number of samples from excavations at St. Joseph's Primary School were limited, the information about medieval food production is still valuable. The impression from the remains is of a diverse arable economy incorporating the cultivation of periodically wet clay soils. Although the present material appears domestic in nature, it is possible that some of the population in the area were also engaged in the production of food for use in the medieval abbey 200m north of the present site.

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PHOTOGRAPHIC INDEX

DP1

F2010, facing west

DP2

F2012, facing east

DP3

F2029, facing north

DP4

F2043, facing south

DP5

M2007, facing north-east

DP6

M2007, facing east

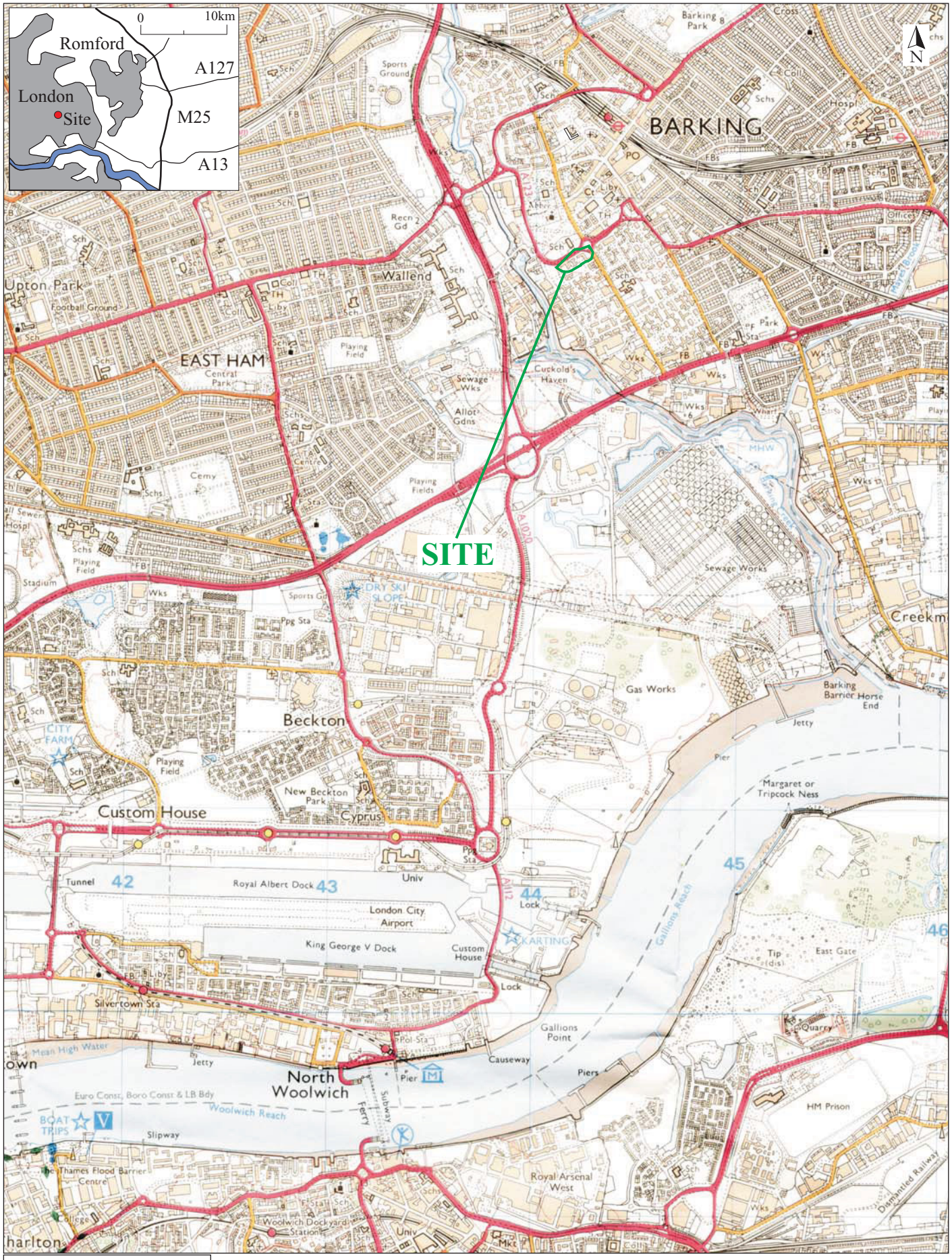

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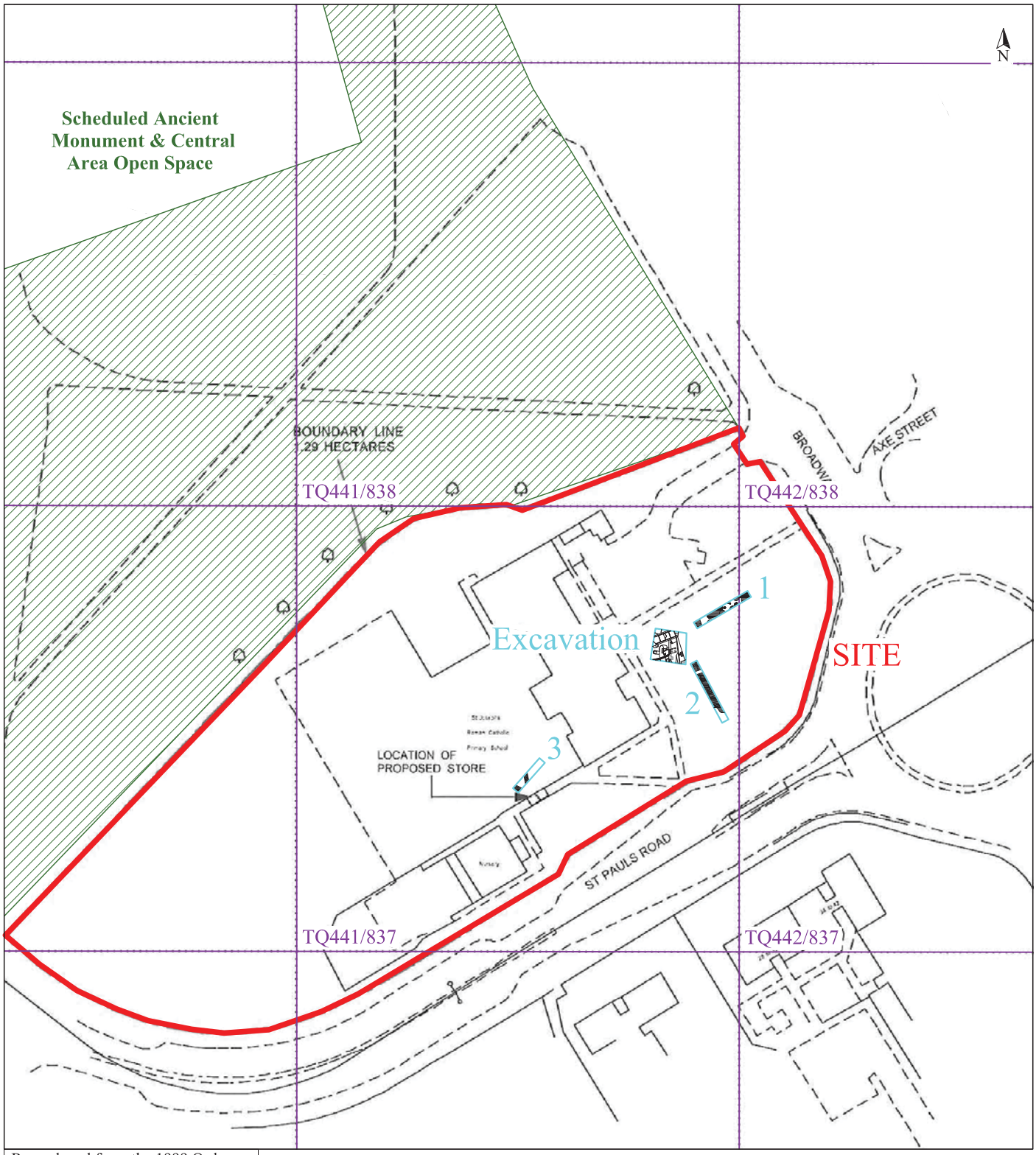
Fig. 1 Site location plan

Scale 1:25,000 at A4



0 100m

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Fig. 2 Detailed site location plan

Scale 1:1250 at A4

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Fig. 3 Site plan
Scale 1:50 at A4

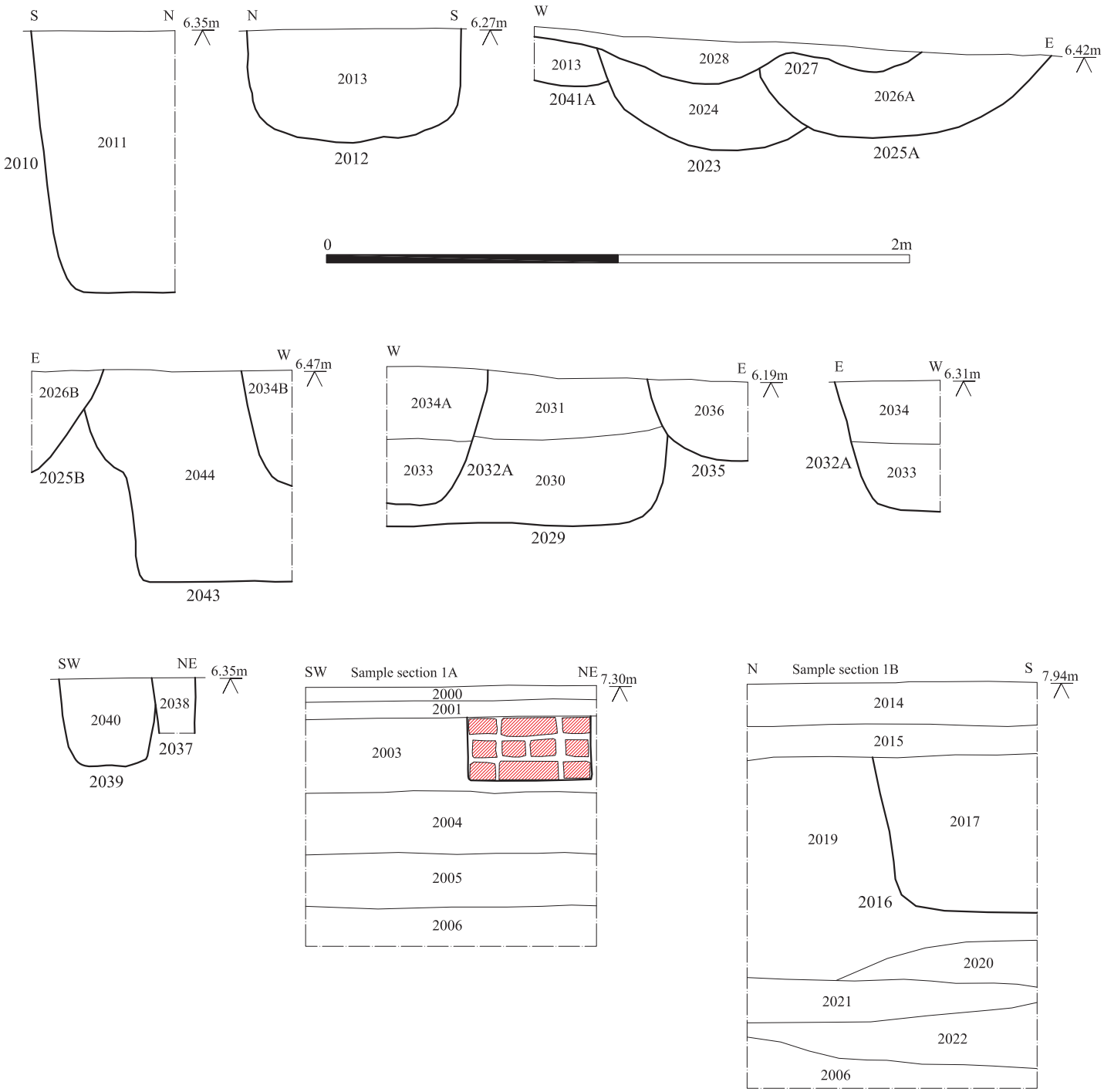

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Fig. 4 Sections

Scale 1:20 at A4