

Digging London:
**A Reflexive Look at Archaeology in
the Western Part of the City**

**A thesis submitted to
University of Wales Trinity St David
in fulfilment of the requirements of
the degree of Doctor of Philosophy**

2016

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Abstract

London remains the most thoroughly excavated city in Britain, with a significant corpus of data recovered from many hundreds of excavations. The vast majority of this work has been carried out under the auspices of development control and planning guidance, although the situation has developed from one of rescue excavations carried out by volunteers to the position we see today of large professional teams working on multi-disciplinary projects. It is entirely within this milieu that my own career has progressed.

The portfolio presented within this thesis presents the stages of analysis and publication in use at MOLA, my employer. I have published the results of many excavations, a selection of which I have chosen to illustrate the issues which I consider to be pertinent within the development-led commercial sector.

Chapter 1 provides a background to the legislative and professional situation within which I operate, as well as relevant discussion of the current research agendas and frameworks which should be considered by archaeologists working in the City.

Chapter 2 contains the portfolio material.

The concluding Chapter 3 provides a detailed introduction to the portfolio sites and the contribution to knowledge provided by the archaeology excavated. This chapter also presents the critique of the portfolio sites and all aspects of the projects, from fieldwork to publication. I observe difficulties with the current structure of the commercial sector and in the following recommendations and conclusion suggest ways in which these can be alleviated.

Acknowledgements

I would not have embarked upon this course of study without support from the Museum of London's career development scheme, which part-funded the first two years' fees and for which I am extremely grateful. I am also fortunate to work within a supportive environment and my MOLA colleagues have provided materials, advice and moral support throughout. I would particularly like to thank Andrew Westman, who kindly donated his archive of the development of MOLA to me.

My supervisors Dr Martin Bates and Professor Barry Burnham have also been a constant source of advice and guidance and I freely acknowledge that this thesis bears the marks of their experience and critical thinking. Barry has also very kindly ferried me across west Wales on several occasions and I am grateful to both him and his wife Helen for all the tea and cake. I would also like to thank my examiners Professor Nigel Nayling and Tim Williams for their helpful and constructive input, following a positive viva discussion.

The opinions presented within this thesis are the result of two decades spent in commercial archaeology and many conversations with colleagues, which have constantly proved thought-provoking. In archaeology we are often lucky enough to consider our colleagues also to be our friends and I acknowledge the input of Nick Bateman, David Bowsher, Julian Bowsher, Nathalie Cohen, Chiz Harward, Julian Hill and Sophie Jackson in particular.

My family have been consistently supportive throughout my entire career (and before) and I would like to thank them all for accompanying me on the long drive to Lampeter, providing me with quiet places to work during busy times, ensuring that I maintained my momentum and keeping faith that I would eventually finish. Any errors or omissions here are entirely my responsibility, as was the extended timescale along the road to completion.

London
November 2016

List of Abbreviations

CDP04	120 Cheapside, site code for portfolio project
CIfA	Chartered Institute for Archaeologists
CoL	Corporation of London, local authority for City
DGLA	Department of Greater London Archaeology
DoE	Department of Environment
DUA	Department of Urban Archaeology
EH	English Heritage, since 2015 renamed HE (Historic England)
GHB06	Princes and Bartlett Houses, site code for portfolio project
GHM05	14-18 Gresham Street, site code for portfolio project
GLAAS	Greater London Archaeological Advisory Service
LAARC	London Archaeological Archive and Research Centre
LAMAS	London and Middlesex Archaeological Society
MAP2	Management of Archaeological Projects (2 nd Edition)
MSC	Manpower Services Commission
MoL	Museum of London
MOLA	Museum of London Archaeology
MoLAS	Museum of London Archaeology Service
MORPHE	Management of Research Projects in the Historic Environment
ORA	Original Research Aim (in WSI for portfolio projects)
RMLEC	Roman and Medieval London Excavation Committee
RRA	Revised Research Aim (in post-excavation assessments for portfolio projects)
UDP	Unitary Development Plan (in e.g. the City of London, a planning framework document)
WSI	Written Scheme of Investigation

1 Introduction

1.1 Introduction

As a professional archaeologist working within development-control archaeology in London my career has been rigidly framed by the PPG16 and post-PPG16 structure for both fieldwork and post-excavation (DoE 1990; English Heritage 1991). This thesis analyses the fieldwork and post-excavation methodologies used within this framework and their contribution to knowledge and, more specifically, their utility for research. It will also examine the degree to which the planning framework facilitates or hinders this contribution. Since the late 1970s the development of urban archaeological techniques has resulted in idiosyncratic methodologies for fieldwork, analysis and publication and the degree to which these methods can be adapted to increase their contribution to knowledge will be assessed. There is a perceived split between commercial and academic archaeologists which will be discussed; although research excavations are not undertaken in central London, academic input remains strong but must rely upon data collected by commercial companies.

The main area of my work presented in the portfolio (Chapter 2) has been within the City of London and more specifically the western part of the City, centred on Cheapside (Figures 5 and 6). The chronological scope ranged from the early Roman to the modern period (AD 43 – 1940) with a focus on the Roman (AD 43 – 410) and medieval (AD 970 – 1500).

1.2 Objectives

The principal objectives of the introductory section of this study are as follows:

- To provide background to the portfolio projects
- To provide the contextual framework within which my career has developed
- To outline the specific methods utilised at MOLA for urban fieldwork and analysis

The principal objectives of the critique section of this study are as follows:

- To outline and assess the contribution to knowledge provided by the portfolio projects
- To critique London-specific fieldwork and post-excavation methodologies used during the production of the portfolio material
- To assess whether developer-funded archaeology contributes to research in its current structure
- To discuss whether these methods could be adapted (if necessary) to increase their potential contribution to knowledge
- To make recommendations contributing towards an increased research focus for commercial work at MOLA and within London more generally

1.3 Planning and legislative context

The published works within this portfolio were produced with PPG16 (DoE 1990), IfA (1995) and MAP2 (English Heritage 1991) providing the primary framework for project design, fieldwork and project management respectively, supplemented within Greater London by GLAAS guidance papers (GLAAS 1998; 1999). The City of London Corporation's Assistant Director (Historic Environment) acts as the curator for all archaeological work within the City, with GLAAS monitoring work elsewhere in London. In common with other commercial companies, MOLA produce Written Schemes of Investigation (WSIs) for all field projects and the Original Research Aims for the portfolio projects (ORA) (see Appendices 1, 2 and 3) are included within these documents in Section 2.2 (Bateman 2005; Brigham 2006; Nielsen 2007). An archaeologist running a project will adhere to the WSI while on site and answer the ORAs in the post-excavation assessment (Portfolio Items 3, 4, and 6, Section 6.1). A further set of Revised Research Aims (RRAs) are then specified within the updated project design (Portfolio Items 5 and 6), within which the methodology for further analysis and dissemination is established; usually for sites of this nature this is formal publication.

All three projects were instigated by a planning application submitted to the City of London Corporation and approved subject to completion of archaeological planning

conditions; this advice is given prior to submission of planning applications to encourage designers to account for archaeological remains from the outset (Stubbs 2015: 21). The City is covered by a Unitary Development Plan (UDP) (Wynne-Rees 2002), which outlines the expectations for archaeological work on development. Publication is generally required, occasionally supplemented by public display and/or interpretation. The fieldwork, post-excavation assessment and publication proposals are monitored by the City of London's curator, although they do not receive a draft publication text. The requirement to publish results is not common elsewhere across the UK; the City represents an exceptional example of curatorial control.

1.4 Professional context

1.4.1 The development of professional archaeology in London

The development of field archaeology in the UK has been covered in detail elsewhere (e.g. Everill 2009: 21-39). There have also been thorough accounts of the development of excavation techniques, both from the practical (Barker 1977: 13-26; Roskams 2001) and the theoretical points of view (Carver 2009: 25-38). Certain aspects of early rescue archaeology identified by colleagues past and present (Noel Hume in prep., Sheldon and Haynes 2000) are still relevant to modern practice so a brief discussion will be useful.

There is a significant corpus of antiquarian records for the City (and elsewhere within London), reported in recent Gazetteers (Schofield and Maloney 1998; Thompson *et al.* 1998) and collated into new collections (Hicks and Stevenson 2013). The London and Middlesex Archaeological Society (LAMAS) was formed in 1855 (LAMAS 2015), with the inaugural speech proving to be a polemic against development ('wanton destruction; vandal brutality; utilitarian ignorance' [Sheldon and Haynes 2000: 3]); the parallel many modern archaeologists would draw is clear. Rescue archaeology took place across London and the records made at the time are constantly reassessed and added to new synthetic studies (e.g. Willmott 1991; Shepherd 1988; Bryan *et al.* in prep.). A recent publication I co-authored (Harward *et al.* 2015) incorporated several unpublished sites into the analysis enabling a wider landscape to be studied.

The first excavations occurred in the early decades of the 20th century with Frank Lambert, Philip Norman and Francis Reader (among others) visiting sites and recording exposed archaeology (Lyon 2007: 4), even though they were not often welcome (Lambert 1921). The unstructured period during which this patchy salvage occurred excuses the imprecise information gathered, for while Mortimer Wheeler was propounding stratigraphic excavation and rapid publication (Sharples 2011: 59), this was on research projects rather than what we would call 'rescue excavations' today.

The next significant advance took place immediately after World War II when the RSA established the Roman and Medieval London Excavation Council (RMLEC) led by Professor W. F. Grimes. The medieval period was added only after pressure (Noel Hume 2010: 145), indicating the restrictive collection strategies used. The RMLEC worked in parallel with staff and volunteers from the Guildhall Museum under Ivor Noel Hume. Both men have written evocatively and passionately about their work on bomb sites (Grimes 1968; Noel Hume 1978; 2010; in prep.). There was very little funding and no time for analysis or publication.

The RMLEC excavated bomb sites until 1961. Funding continued to be a problem without any legislative support and volunteers continued to be the primary source of staff. Amateur groups such as the Southwark and Lambeth Archaeological Society were set up to provide help. The Rescue Trust pressurised the City of London Corporation throughout the early 1970s (Biddle *et al.* 1973) resulting in the eventual creation of the Department of Urban Archaeology (DUA). The Guildhall Museum merged with the London Museum to form the Museum of London in 1976. The DUA excavated many large open areas across the City; the methodology enabled the removal of all archaeology prior to development. The deregulation of the Stock Exchange in 1986 led to a boom in London's economy with a concordant boom in the amount of archaeological work the DUA was commissioned to undertake (Westman and Shepherd 1992: 435). With this came the contracted digger: paid rather than volunteering, often staying with a company for many years and viewing what had been seen as a vocation as a job (Roskams 2001: 27). At this time funding depended on a combination of developer contribution and public funds. Although there was no guarantee the development programme would allow extensive excavation, often the archaeologists would have sole access to the site prior to construction, a situation that differs greatly today. In 1991 the DUA and the Department

of Greater London Archaeology (DGLA: which had operated in the outer boroughs) merged to form the Museum of London Archaeology Service (MoLAS, now MOLA).

Planning and Policy Guidance 16 (PPG16) (DoE 1990) marked a sea change in legislative and financial arrangements for archaeology, with developers required to fund excavation and, crucially, dissemination. The primary impact was a reduction in the amount of archaeology undertaken; as PPG16 explicitly clarified that ‘nationally important archaeological remains should be preserved *in situ* if possible’ but if that was not possible, then ‘preservation by record’, i.e. excavation, should be ‘the second best option’ (ibid.: Section 12). The guidance also acknowledges that ‘excavation is time consuming and expensive’ and ‘discoveries may need to be evaluated in a hurry against an inadequate research framework’ (ibid.: Section 13). It is this last problem which has exercised archaeologists since, and which will be discussed further later (section 3.4).

The impact of PPG16 and competitive tendering on the profession has been covered in depth (e.g. Sperry 1993; Swain 1991; Everill 2009; Nixon 2004; Powesland 2015; Thorpe 2015b). The period between 1991 and 2009 saw the economy dictate the fortunes of archaeology across Europe and in the UK in particular, where the link between the competitive market and archaeology had been strongest (Aitchison 2010: 28). Volunteers could no longer work on developer-funded excavations and a schism grew between the amateur and professional spheres (Chadwick 2000) to the detriment of both groups since the most effective way of appreciating archaeology is to experience the process. Since 2012 there has been an upturn in construction and a period of growth for commercial archaeology, although profits have remained low (Landward Research Ltd 2015: 1). There have been several major infrastructure projects employing large numbers of archaeologists. London has seen a great deal of work and the current situation at MoLA is a field team of experienced staff (*c.* 70) with more short-term contract staff brought in when needed. The political climate of austerity has left the discipline ‘in tatters’ (Everill 2015a: xi), with reduced curatorial protection a primary concern. The question of how we cope with these challenges while maintaining standards of excavation, recording and dissemination will be discussed later.

1.4.2 My own career within this professional framework

My own career has been typical of my colleagues in the commercial sector since the 1990s (e.g. Everill 2009: 14-15; Clarke 2015). I studied at Bournemouth University, then Bournemouth Polytechnic, where the department still has a reputation for training field archaeologists (Clarke 2015: 84), unlike many others (Powlesland 2015: 116). My student dig was six weeks with Bill Putnam excavating Dorchester's Roman aqueduct, followed by two months with the Auvergne Archaeological Society, co-directed by Professor John Collis of Sheffield University, who is an inspirational character and a key proponent of training for archaeologists. Unusually, he employed several experienced diggers who were not students at Sheffield but local people who taught several generations of students.

My first experience of the commercial sector was in 1995 when I worked for AC Archaeology, on a month's contract for my first road scheme. My first long-term contract was with the Oxford Archaeological Unit (now Oxford Archaeology) on the Swindon to Gloucester road scheme, where up to 150 archaeologists dug several sites concurrently. The primary benefit was the variety of sites I dug and my mentors, who were predominantly ex-Manpower Service Commission scheme diggers employed since the 1980s. The archaeological market relied heavily upon the MSC in the late 1970s and early 1980s, which provided subsidised labour from Job Creation Schemes, although this was only directed to fieldwork and post-excavation remained underfunded (Cooper and Ralston 2015: 6). The selection process for the MSC positions became steadily more onerous (Jones 1984: 29) and the high standards expected may be one of the reasons for their long-term durability, which is evident in surveys (e.g. Everill 2007: 172).

I left Oxford to move to MOLA in 1998 as I saw a lack of opportunity for undertaking supervision and report production. A small team dedicated purely to the task of writing worked in the office, while colleagues excavated sites and handed their records over at the end of their project. This was seen to be more efficient, with an assumption that it would create a better product for the client, but has not become common in most contractors. I wonder if this system developed from the divide between those with a university education and those from the MSC scheme.

My current position at MOLA is Permanent Project Officer, responsible for the supervision and on-site direction of large urban excavations, for which I also undertake the post-excavation analysis and publication. There have been no particular barriers to my progression at MOLA; I have spent almost 18 months of the last 18 years on two periods of maternity leave and on both occasions returned to my fieldwork duties on a part-time basis. A recent study has shown that my case is an exception (Edwards 2015) as pressure groups suggest that a field archaeology career as a woman is challenging (British Women Archaeologists 2014). The often peripatetic nature of fieldwork does not lend itself easily to a stable lifestyle and terms and conditions are still often inflexible (Everill 2007; Hamilton 2014a: 4; Clarke 2015: 86), 15 years after Chadwick (2000) noted this as a problem. On a personal level, the fact that I am both female and a mother seems to be of no relevance to my archaeological colleagues, but does tend to raise issues on construction sites where the environment remains overwhelmingly male and traditional in its outlook. Needless to say, the situation in central London remains different from elsewhere (Cobb 2015: 233), a benefit I see due to shorter travel times and being based at home.

1.5 Research context

There are several research agendas currently to be considered when working in London. Research strategies and the definition of priorities have tended to be period-specific (e.g. Haslegrove *et al.* 2001; James and Millett 2001) although English Heritage have organised on a national level, and set recommendations for regional (Olivier 1996) and chronological strategies (English Heritage 2012). In London the result was a wide consultation across the sector and the production of a research framework (MoL 2002); the coverage of the rest of England was patchy and unsatisfactory (Jennings 2015). An earlier GLAAS document (1998) was created solely by GLAAS staff and outlines key areas for study, including specific scientific guidance notes. A new research strategy for London has recently been published (Rowsome and Baker 2015) and this goes some way to addressing the manner in which the framework document (MoL 2002) could actually be implemented. A review of recent research is clearly signposted back to the themes set out in the MoL (2002) document (Rowsome and Baker 2015, 14-21); these examples are

helpful in identifying how research can be related to the over-arching structure. Perhaps most usefully, the strategy provides a clear action plan (ibid. 22-23) and outlines specific strategic actions that should be undertaken to ensure that the research culture is encouraged and facilitated (ibid. 24-30). While it is too soon after its publication to assess its success this strategy will be discussed further later and its recommendations drawn upon in the conclusions to this thesis (section 3.4.1).

In contrast, James and Millett's document does not establish a firm agenda, an aspect of this significant piece of work which Chadwick (2004) considers to have been a failing. He does acknowledge however (ibid.), that Burnham *et al.* (2001) go further. The MORPHE document produced by English Heritage (2008) was intended to provide guidance for research projects, specifically those funded by English Heritage. It does offer guidance for commercial projects, but it has been predominantly adopted in relation to various project stages or 'milestones', specified in much the same way as MAP2. A later English Heritage document (2012) sets out research priorities but as it is largely aimed at projects funded by English Heritage; it is not followed within commercial archaeology. There are however some clear indications of how the strategy could be applied within the commercial sector, with suggestions that English Heritage could influence approaches (ibid. 16) and encourage innovation (ibid. 24). In my experience this predominantly occurs during input from the Regional Science Advisor and Inspector of Ancient Monuments, although the latter would only generally be on a project with archaeology of regional or national significance. The English Heritage strategy does acknowledge that 'almost' every investigation of the Roman period either 'challenges preconceptions or adds new understanding' (ibid. 9) and although this statement is within the body of the text and perhaps therefore a bit 'lost' in the whole, it seems to me that this is enormously significant and goes to the heart of the problem, that of how to direct efforts without losing some of the potential (section 3.4.1).

The City of London Corporation does not specify a local research agenda, nor is there an over-arching national research framework specifically aimed at urban archaeology, although Perring (2002b) provides frameworks for studying towns and London features heavily (e.g. ibid.: 19-20). This was not used during the project design or analysis stages of any of the portfolio projects.

All MOLA templates include reference to the MoL (2002) document (Section 3, Appendices 1-3), and the guidance for authors producing post-excavation assessments reminds us to consider both this and the English Heritage ‘Capital Archaeology’ (1998) document when establishing the potential and significance of a project (Portfolio Items 3, 4 and 6, Sections 6 and 7). This document (*ibid.*) is explicitly referenced in the assessments for sites A and B (Portfolio Items 3 and 4, Section 7), but is not referenced within site C’s assessment (Portfolio Item 6, Section 7). The original research aims (Appendices 1-3) were largely based upon previous knowledge of the area. They all have a regional focus but lack national or international themes, such as the wider Roman Empire. Overriding all the research agendas and, indeed, mentioned in them specifically (MoL 2002: 100; Perring 2002b: 65; Rowsome *et al.* 2011: 9) is the need for synthesis and sharing of data collected by the various contracting organisations working in London. This is arguably where developer-funded archaeology has failed most spectacularly and is a theme we return to in sections 3.5.2 and 3.8.2.

The vast amount of evidence recovered from London’s professional archaeological projects indicates that it is very much a unique case. Across most of Britain’s towns, development occurs within particular locations; along main roads, on the edges of towns, or along the routes of ring roads for example. This is certainly true of towns such as Winchester, Colchester, Chester and Lincoln (Fulford 2015b: 80; Bidwell 2015: 117), where areas extra-mural to the Roman foci have seen developer-funded work. London remains an oddity in that the constant turnover of development has enabled archaeologists to study vast swathes of the Roman and medieval city, both within and without the original historic cores, unlike towns such as York where there has been little excavation due to the lower value of development (Jennings 2015). Archaeological work takes place on the same sites on many occasions, which should in theory increase the possibility of thematic studies and re-assessments but this is rarely the case (see section 3.5.2.)

The area covered by the portfolio projects has been subject to many large-scale excavations and there is a vast corpus of data available for comparative study and background research, many published by MOLA, either as large monographs (Casson *et al.* 2015; Watson 2006; Lyon 2007; Bateman *et al.* 2008; Bowsher *et al.* 2007; Hill and Rowsome 2011) or as smaller study series volumes (e.g. Elsdon 2002; Pitt 2006; Howell *et al.* 2013). Not produced by MOLA’s publication department (although with significant

MOLA contributions) are several synthetic journal articles (Shepherd 1987; 1988; Schofield *et al.* 1990) and papers within thematic volumes (Bird *et al.* 1996; Clark *et al.* 2008). Despite the number of projects and publications there has not been a single-volume, synthetic study of the archaeology of Roman or Saxon London since 1990 and 1991 (Vince 1990 and Perring 1991 respectively) although the medieval period fares slightly better (Thomas 2002). There have been detailed studies of the locality during both the Roman and medieval periods (Perring and Roskams 1991; Schofield *et al.* 1990) but a significant amount of time has lapsed since their publication. Wide-ranging thematic studies are generally included within larger monographs, for example the detailed discussion of the Roman topography and development in Bateman *et al.* (2008) and Hill and Rowsome (2011) and the Saxon and medieval sequences within Bowsher *et al.* (2007), but these would not necessarily be the first resource selected by students of the archaeology of London.

1.6 MOLA methodologies

1.6.1 MOLA excavation methodologies

Skills specific to urban archaeology in Britain originated during the redevelopment of Winchester, managed by Martin Biddle, whose intention to consider the entire settlement as an archaeological site required detailed and systematic recording methods (Jones 1984: 20). The use of ‘layer numbers’ was a predecessor of single-context planning, allowing each layer to be planned as a separate entity and the relationship between layers to be recorded in detail (Collis 2011: 76). The methods were utilised by all members of the team and context sheets developed into rigid prompt-driven systems incorporating both descriptive information and interpretive free text. As a consequence archaeologists became responsible for their own area of an excavation. The most enduring legacy of the Winchester project was contributed by Edward Harris, who developed the site matrix in order to make sense of the vast amount of data recovered (Harris 1989), defining for the first time the laws of archaeological (as opposed to geological) stratigraphy (Chadwick 1997). He is also the forefather of the pro-forma recording sheet, now in use across Europe as a standard method (Collis 2011: 84) and the basis for London’s single-context recording system.

Harris’s matrix was first used in London on the General Post Office excavation, a complex multi-period project where the strict discipline of the matrix suited the archaeology and archaeologists well (Harris 2013: 1). This innovation dovetailed with the first use of the single-context planning system and the utilisation of Harris’s theoretical ‘cut’, the recording of a negative feature which enables physical relationships to be removed from the sequence, initiated in London by Steve Roskams (Hammer 2002: 6). An additional level of interpretation intended to account for post-depositional activities (‘interfaces’) was introduced for a time in Scotland but this didn’t survive, perhaps because it was too complex for fieldwork (Clark 1993: 2). Alternative recording systems proliferated, with the feature system used by the Department of Environment’s Central Excavation Unit (later English Heritage’s Central Archaeology Service) also seen as too formalised and definitive on site to enable the post-excavation re-interpretation offered by the single-context system (Thorpe 2012b: 36).

The MOLA context sheet was finalised in its current form in 1988 and it has been adapted and used elsewhere, specifically within the urban environment (Pearson and Williams 1993: 94). It separates factual description and subjective interpretation, encouraging archaeologists to consider their interpretations having recorded the data which led them to the decision.

The development of DUA methods was intended to enable the site-wide reconstruction of archaeological deposits and features after the excavation was complete. Westman and Shepherd (1992: 435-6) provide a full explanation of the reasoning behind the method, but briefly: the recording (and planning) of contexts individually and the determination of the stratigraphy of each individual context while on site allows for this decision to be reversed in post-excavation, a situation arguably not readily provided by Carver's feature system, for example (2009: 375), although Carver himself (2011: 136) does support the view that the single-context method enables complex data to be interpreted, as 'complexity need not equal confusion'.

The persistence of DUA methods is partly due to the changes wrought by PPG16 (section 3.5.1) and the commercialisation of archaeology (Westman and Shepherd 1992, although not acknowledged explicitly). There has been little development in recording systems since 1991, with a much more standardised system in use across the UK than had previously been the case (Chadwick 1997).

1.6.2 MOLA post-excavation and publication methodologies

MOLA post-excavation methods and procedures have steadily evolved over the last three decades (MoLAS 2004; MOLA 2013), in response to both the typically large and complex projects and guidance from external bodies (e.g. Frere 1975; Grinsell *et al.* 1974; Cunliffe 1983). Initially the archive reports produced followed the Frere (1975) system of differing levels of analysis determined by the scope of the site archive. This evolved into the DUA archive report centred on a framework within which site supervisors could develop their interpretation, combining the rigid single-context recording superstructure with an inbuilt flexibility allowing personal input. The DUA/MoLAS/MOLA system has been further adapted to reflect increased (or reduced) complexity (Shepherd 1993, 8).

Established national or local journals remained the preferred publication output for all archaeological work until commercial units launched their own publication programme; MoLAS developed their own in 1998. Later the guidance was updated, adopting the tenets of MAP2 (Hammer 2002: 4), which established the necessary phases of an archaeological project to ensure the potential of the site was realised, although notably, MAP2 does not provide advice on analysis methodology.

The post-excavation assessment document (Portfolio Items 3, 4 and 6) is a formal stage through which developer-funded excavations must pass prior to analysis and publication (evaluations and other smaller projects such as watching briefs will not be assessed). Its purpose is to ‘sum up what is already known and what further work will be required to reach the goal of a well-argued presentation of the results of recording and analysis’ (GLAAS 1999).

The site phasing structure is created using a hierarchical method, starting with assigning groups of related contexts to subgroups. Subgroups should not include both a Construction and a Disuse process, given that the dating for these events may be significantly different. Accepted rules such as this should ensure that subgrouping is standardised although from personal experience there remain opportunities for individuality throughout the entire process. Subgroup matrices are then created (Portfolio Item 7), allowing the data to be reduced in size to more manageable datasets and these are used by the specialists to provide spot dating and basic interpretative information for the post-excavation assessment. This method simplifies the sequence while maintaining its inherent complexity.

At MOLA all site records are transferred to an Oracle database (Figure 1) and all plans digitised using CAD. Context matrices are often (although not always) inputted on the Bonn matrix programme (Portfolio Items 1 and 2). The Oracle database links artefactual and environmental information with the planned contexts, so ArcGIS users (the principal author is generally the project officer or senior archaeologist) can accurately plot contexts of particular dates and function. The primary level of Oracle entry requires the user to input context number, subgroup number and a basic interpretation: a two-letter code attributed to the function of the context. The current list of codes was adopted in January

1997 (Appendix 4). The parent context represents the plan on which the context is shown, either the context itself or the cut it originated from. There is also space for some free text to contribute further details about the context. For the portfolio projects I used this space to identify which intervention the context came from, as there were so many on each of the projects some way of defining their location was helpful.

Of prime importance is the processual interpretation field, which requires the user to allocate the context to one of three categories according to its formation process: Construction, Use or Disuse. This choice between one of only three processual interpretations can be criticised as simplistic (e.g. Lahotta and Schiffer 2001: 41), since unavoidably more complex reasons behind discard and abandonment must be rejected, but as previously stated simple systems of data recording are most efficient when considering large assemblages (Rauxloh: nd). Complex formulae to consider formation processes and subsets such as breakage and loss of function have been designed in theoretical publications (Schiffer 1996: 51-8) but these have not been adopted in professional archaeology.

Oracle Fusion Middleware Forms Services

Field interpretations: Context to subgroup mapping - one row per context

Sitecode	Context	Sub-Group	Basic Interpretation	Parent Context	Basic Process	Context description	Entity No	Sections on which context appears
CDP04	101	80	MU	101	UD	T4 LEVELLING OVER STAIRS		
CDP04	102	79	CE	139	UD	T4 FILL OVER STEPS		
CDP04	103	102	WA	170	UD	T5 FILL OVER WALL		
CDP04	104	99	DB	104	D	T5		
CDP04	105	100	OC	105	U	T5		
CDP04	106	98	W	107	UD	T5		
CDP04	107	98	W	107	C	T5		
CDP04	108	100	OC	108	U	T5 TRAMPLE		
CDP04	109	79	CE	139	C	T4 STAIRS AND S WALL		
CDP04	110	79	CE	139	C	T4 STAIRS AND S WALL		
CDP04	111	79	CE	139	C	T4 STAIRS AND S WALL		
CDP04	112	79	CE	139	C	T4		
CDP04	113	100	MU	113	C	T5		
CDP04	114	141	WA	114	C	T7 CHALK WALL		
CDP04	115	8	WA	116	C	T1 WALL		
CDP04	116	8	WA	116	C	T1 CUT FOR WALL 115		
CDP04	117	8	ED	117	C	T1 DUMP OVER WALL 115		
CDP04	118	101	SP	118	C	T5		
CDP04	119	101	SP	119	C	T5		
CDP04	120	101	SP	120	C	T5		
CDP04	121	101	SP	121	C	T5		
CDP04	122	101	SP	123	UD	T5		
CDP04	123	101	SP	123	C	T5		

Enter value for : SITECODE

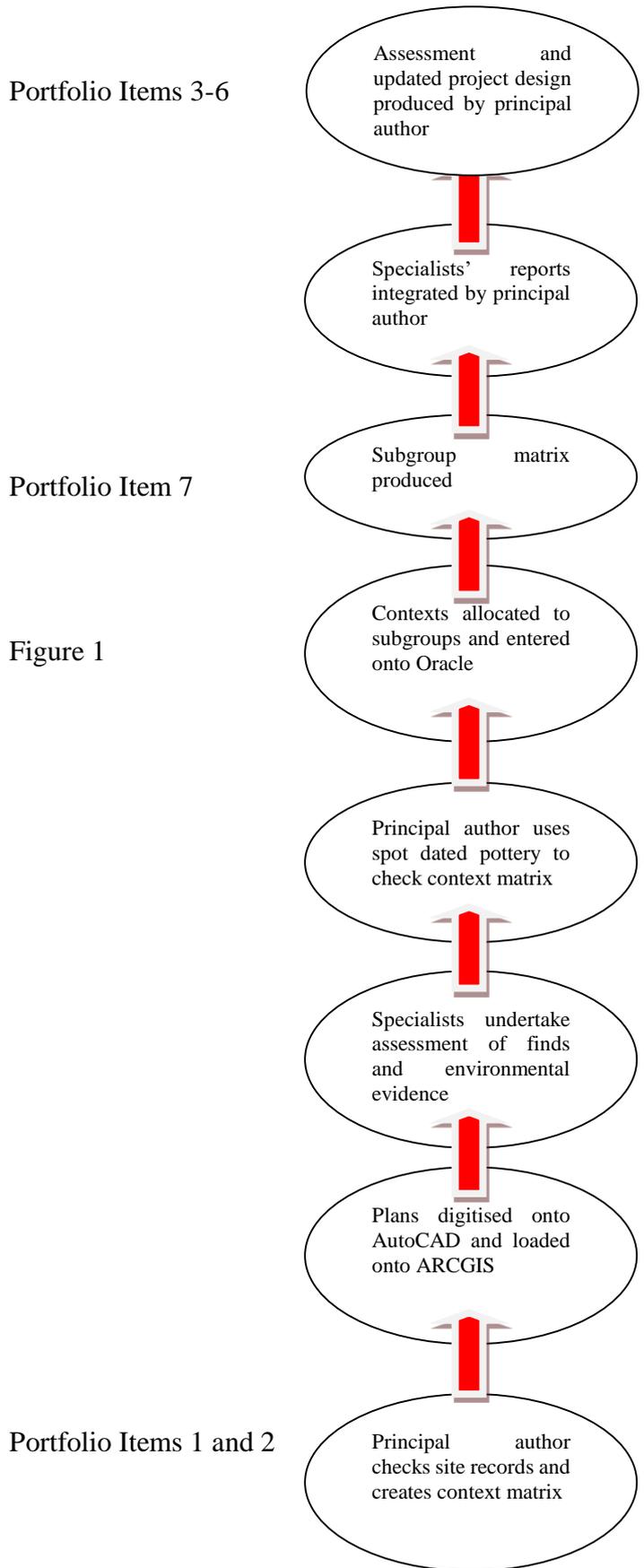
Record: 1/2

Start | Archaeological datab... | Oracle Fusion Midd...

13:17 21/05/2014

Figure 1 Oracle Basic Interpretation form for inputting of contexts and identifying subgroups, showing data from site A

Figure 2 Flow chart showing MOLA post-excavation assessment procedure



The analysis phase (Figure 3) shows subgroups further refined into groups (Portfolio Item 7): associated by stratigraphic, spatial and/or chronological relationships. A document outlining group descriptions is written by the principal author, outlining their thought processes and rationale behind the allocation of groups (Portfolio Item 8). These groups are then allocated into land-use entities, the highest degree of structural definition and the backbone to the publication text (Portfolio Item 9). Small or less-complex excavations may combine the grouping and land-use phases. At MOLA land-use nomenclature is restricted to Building, Structure, Open Area, Waterfront and Road and these options have not been expanded upon for decades. It may be preferable to have more possibilities if the archaeology is to be more truly represented in publication. The few terms used at MOLA may be too restrictive: Open Area, for example, which can mean a field, a cemetery or a midden, amongst many others. That said, the text provided in MOLA publications seeks to describe the land-uses sufficiently to identify their function or purpose (Watson 2015a: chs 2-8).

Each stage of the post-excavation process has an Oracle entry form, to which the previous form contributes (Figure 4 shows the final form in this process). Land-use diagrams are sometimes produced to enable the specialist team working on the assemblages to visualise how each land-use fits into the structure, both chronologically and physically (Portfolio Item 10). The limited land-use entities (see above) simplify these diagrams, presenting the site chronology as instances of building, land management and natural processes. Finally, prior to the submission of the stratigraphic information to specialists, the land-uses are allocated to Periods.

Figure 3 Flow chart showing MOLA post-excavation publication and analysis procedure

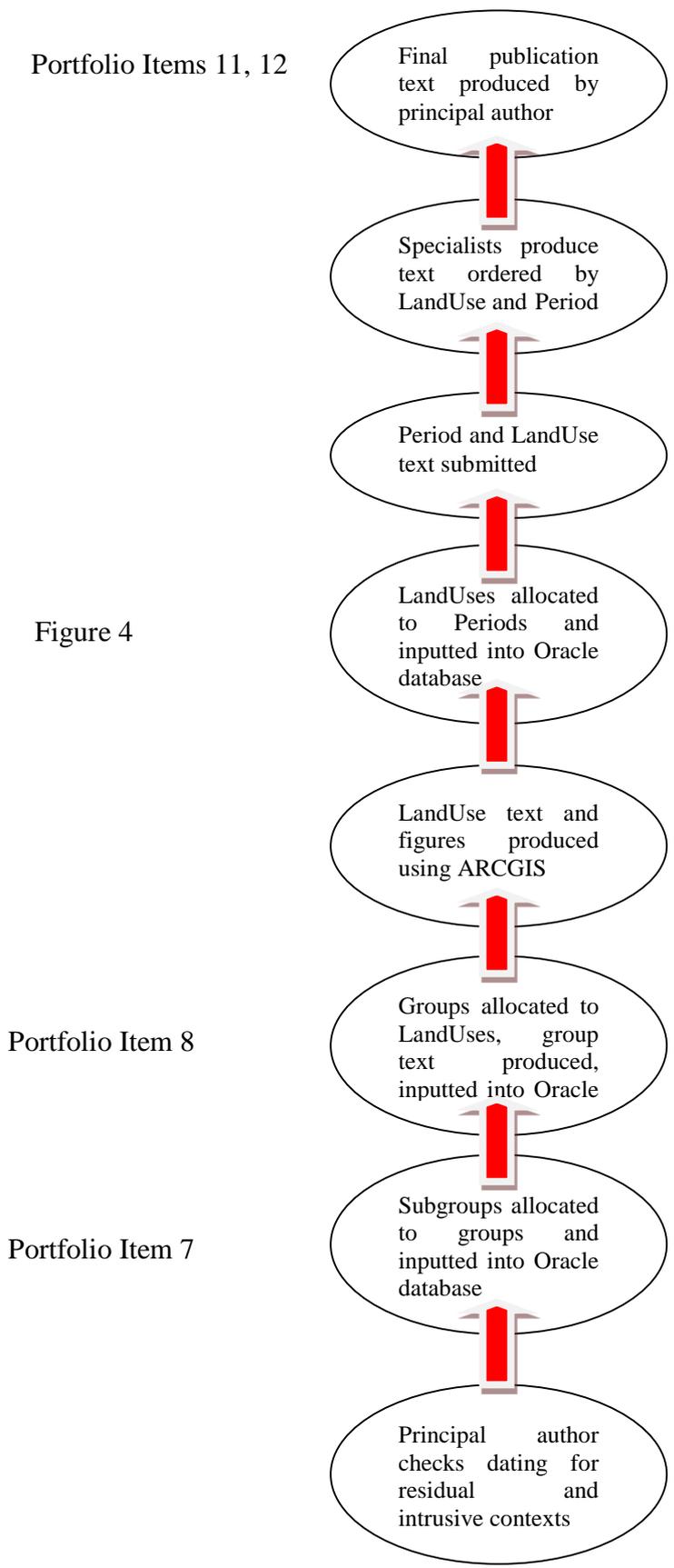


Figure 4 Oracle group to land-use form for mapping groups to land-uses during analysis, showing data from site A

Developer/2000 Forms Runtime for Windows 95 / NT - [Oracle 7]

File Edit View Options Database Help

Field interpretations: Group to landuse mapping - one row per group

Query Save < > Exit Oracle

Landuse details

Periods! You must define these for your site BEFORE they may be referenced here

Group description: (Note just supply text no formatting, tabs or carriage returns)

Sitecode	Group	Interpretation	Process	Implied process	Period	Group description
CDP04	38	B1	C		4	
CDP04	39	B1	C		4	
CDP04	40	B1	C		4	
CDP04	41	B1	C		4	
CDP04	42	B1	C		4	
CDP04	230	B10	C		4	
CDP04	231	B10	C		4	
CDP04	234	B11	C		4	
CDP04	235	B11	C		4	
CDP04	174	B12	C		3	

Subgroups in current group

Subgroup	Subgroup description
49	
50	
51	

1.7 The portfolio projects

1.7.1 The portfolio fieldwork

The portfolio projects were located within the western part of City of London (Figures 1 and 2). I supervised them between 2005 and 2008 and was responsible for the post-excavation assessments (Watson 2008a; 2008b; 2009a; Portfolio Items 3, 4 and 6) analysis (Items 1, 2, 7-10) and publication (Items 11 and 12). All were typical sites within the western City, where the findings tend to be archaeologically distinct from elsewhere (Wallace 2014: 143-4), for example the eastern hill with its very early dates and large public buildings or the deep waterlogged Walbrook valley (Roman period), the early burgh and market places of Guildhall Yard (Saxon period) and the religious buildings or burial grounds to the north-east and north-west (medieval period). Due to their locations within the historic core of London (Figures 7 and 8), the archaeology excavated was of local or regional significance (Portfolio Items 3, 4 and 6, Section 7).

The site-specific methodologies adopted for each of the projects varied according to the development proposals. The same project manager was responsible for sites A and B, with a different project manager designing the site C project (see Section 1.4.1). There was an external archaeological consultant on site B; on the other two MoLA worked directly with the client. All were carried out following desk-based assessment and field evaluation (Hill 1999; Bowsher 2000; Casson 2004; Bowsher 2004; Aitken 2005; Blair 2005; Pennington 2006; Mills Whipp Partnership 2005). A combination of evaluation results and development impacts formulated the excavation WSIs. Sites A and B would have been ideal candidates for the application of Carver's synthetic methodologies (2011: 115), given that they were adjacent and contained similar archaeology. In fact they were treated very much as separate projects until publication.

All three involved complex logistics with MOLA working closely with other sub-contractors both during and after demolition, as well as during phases of reconstruction. The planning conditions placed on site C required the façade of the building to be retained and consequently there were delays to the archaeological programme due to the installation of steelwork propping and other engineering issues. On all three sites the archaeological works involved some level of watching brief as well as initial stages of evaluation leading on to excavation. I had not carried out any of the evaluations so was unfamiliar with the site conditions prior to the excavations though this is common practice; I was, however, able to discuss the sites' archaeology with colleagues who had evaluated them. The teams on all projects were broadly similar in terms of skill levels and experience of urban archaeology; there were several members of each team who had not previously worked in London. In addition, sites A and B required different teams to return to excavate areas post-demolition. This demanded a significant degree of training to be undertaken by myself and more experienced team members. This was not formalised, but involved on-site mentoring and vigilant checking of records, when time allowed.



Figure 5 The sites within the central London area. Scale 1:24,000



Figure 6 The sites within the City of London. Scale 1: 7,500

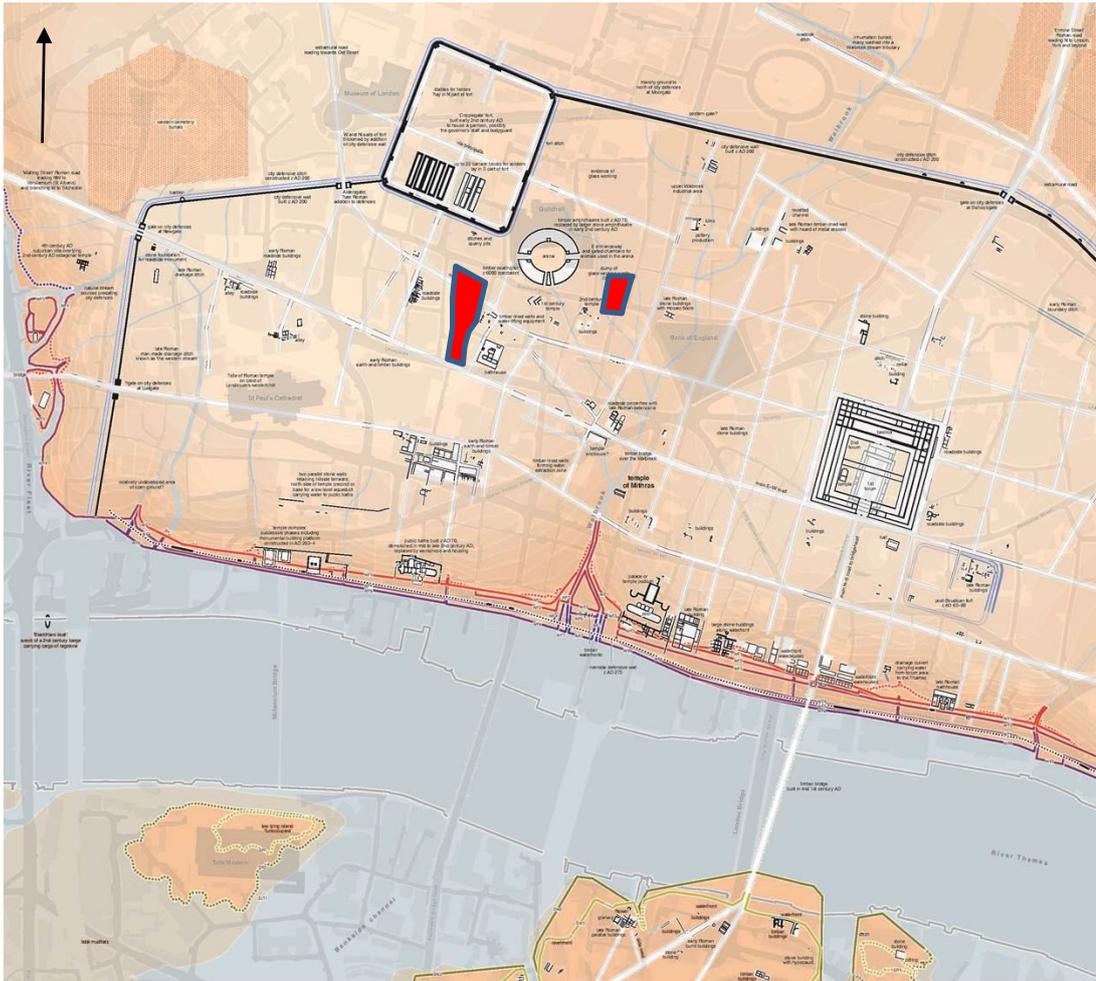


Figure 7 The portfolio sites located within the Roman London Map, with the modern City shown beneath (Copyright MOLA)



Figure 8 The portfolio sites located within the medieval City of London

Archaeologists would rather excavate open areas, to enable investigation of land-use and development more effectively. On site A the excavation was piecemeal, incorporating 22 pile caps and drainage sumps (Figure 9). A further five pile caps in areas deemed to have a lower degree of archaeological survival were monitored under watching-brief conditions. In the event the expected survival was better than anticipated and a rapid 'watching-and-stopping' brief method was used, recording the deposits in section rather than in plan, with a corresponding reduction in archaeological integrity to the recording. On site B (Figure 9) a total of 42 separate interventions were excavated: a large open area, a smaller open area, a series of smaller pile caps, drainage trenches, crane bases and other small interventions. Smaller areas were monitored under watching-brief conditions.

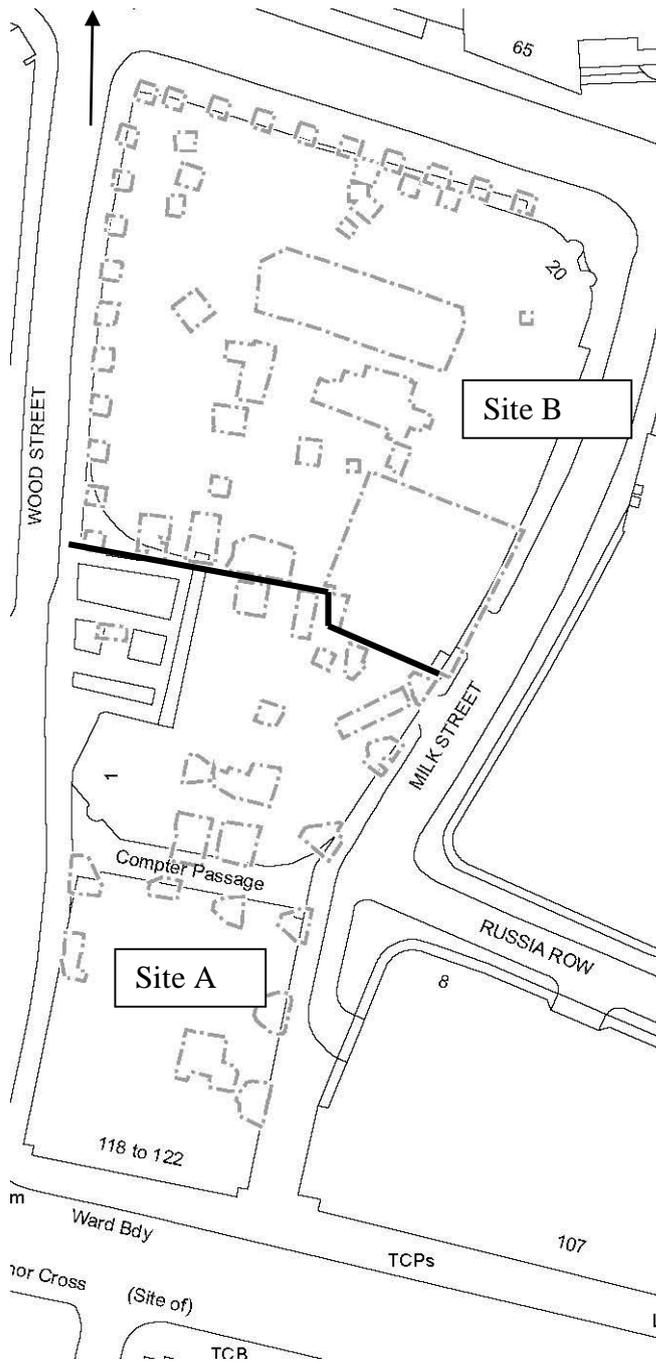


Figure 9 Trench locations and excavation areas on sites A (CDP04) and B (GHM05) (Copyright MOLA) Scale 1:1000

Site C (Figure 10) had complete truncation at the south and varying depths of truncation elsewhere, which had removed most of the horizontal stratigraphy. Two open areas were excavated down to natural gravels, whereas groundworks to the south were subject to watching-brief conditions.

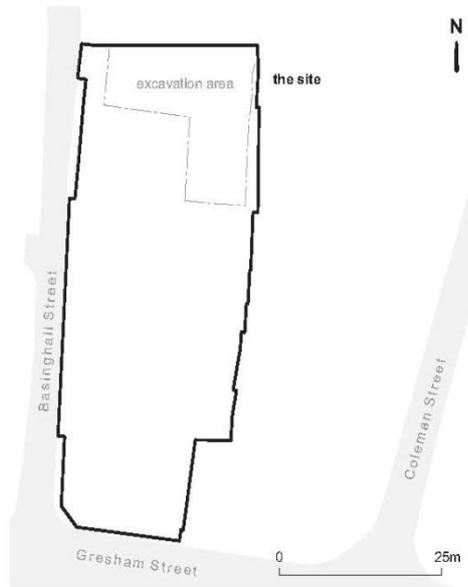


Figure 10 The excavation areas on site C (GHB06) (Copyright MOLA) Scale 1:1000

1.7.2 Publication proposals and process

Site B was excavated immediately after site A and the sites share a party wall (Figure 9), so the integration of the results to produce a cohesive text enabling interpretation and discussion of a wider geographical area was proposed to site B's consultant. The curator was happy with the proposal and an updated project design was produced outlining the publication proposal (Watson 2008c). Due to the amount of data recovered from the sites period-based publications were proposed, with the Roman sequence presented within a MoLAS Study Series (short monographs of c. 35,000 words) and two post-Roman articles for the Saxon/early medieval (25,000 words) and later medieval/ post-medieval (5,000 words), with publication sought in either a local journal (e.g. *Transactions of the London and Middlesex Archaeology Society*) or a national period-based journal (e.g. *Medieval Archaeology*). This was settled upon to enable detailed study of each period and to target specifically interested audiences.

The UPD was submitted to clients on both projects during 2008 but at a subsequent meeting the publication proposal was rejected by the consultant in favour of a single multi-phase report. Any archaeological rationale for this appeared to be thin and the decision was made purely on the basis of cost and programme: it was considered that a single volume would be completed sooner than several smaller ones. In the event this did not turn out to be an accurate assessment of the extended timescales in operation in commercial archaeology. I did not attend this meeting so was unable to put forward the case for period-based publication, nor did the curator raise an argument so the plans were changed. The UPD was rewritten and the funds integrated into a single costing, which was approved (Watson 2009b). Analysis commenced, following standard internal MoLA procedures (see Section 1.5.4). The publication is Portfolio Item 11 (Watson 2015a).

The publication project for the third site (site C) had an easier journey, with the area-specific archaeological research journal *Transactions of the London and Middlesex Archaeological Society* proposed as the most appropriate vehicle. The journal article would total approximately 8,000 words, supported by c. 25 illustrations, and would be

a typically synthetic, chronological text with the bulk of the specialist information integrated within it. The publication is Portfolio Item 12 (Watson 2015b).

1.8 Conclusion

This chapter was intended to provide the reader with a contextual framework to the portfolio projects: legislative, professional and methodological. A brief summary of the legislative background within which the portfolio was produced had been provided, along with an outline of the development of the profession of archaeology itself. The research structure has been outlined and a description of the methods currently in use at MOLA for fieldwork, analysis and publication have been explained.

The three fieldwork projects forming the portfolio have been introduced and the site-specific methods of excavation and publication summarised.

The critique chapter will seek to expand upon these themes, with an eventual assessment of the contribution of developer-funded archaeology to research, as opposed to merely its contribution to knowledge. MOLA's internal fieldwork and post-excavation methods will be critically assessed to establish their research value and ways of expanding upon this value within the strict planning framework will be discussed.

2 Portfolio Contents

- 2.1 Hand drawn matrix of trench 3, site A**
- 2.2 Matrix produced using Bonn Matrix software of trench 3, Site A**
- 2.3 Post-Excavation Assessment for site A**
- 2.4 Post-Excavation Assessment for site B**
- 2.5 Updated Project Design for sites A and B**
- 2.6 Post-Excavation Assessment and Updated Project Design for site C**
- 2.7 Extract from subgroup matrix for site A showing grouping methodology**
- 2.8 Group text for site A B**
- 2.9 Landuse text for sites A and B**
- 2.10 Landuse diagram of trench 3, site A**
- 2.11 Publication: Study Series for sites A and B (Watson 2015a)**
- 2.12 Publication: LAMAS article for site C (Watson 2015b)**

3 Critique

3.1 Introduction

This chapter assesses the contribution to knowledge of the portfolio publications and critiques the items themselves, along with the processes utilised to produce them. The discussion is framed within the structural constraints of modern commercial archaeology and centres upon whether the current situation can be improved upon to increase the research potential of the data collected, with recommendations established in Section 3.6. The critique refers to MOLA methods, although these are commonplace across London and have been adopted by most contractors working within the city.

3.2 Summary of contribution to knowledge by portfolio projects

In order to assess the contribution made to knowledge by the portfolio output, the findings from the sites are outlined here. The issues raised within the archaeological sequences are discussed in relation to other research in the area and London more widely.

3.2.1 Roman

The earliest date from Roman London (AD 47/8) comes from a dendrochronology sample from a drain alongside the main east-west road (Hill and Rowsome 2011: 24), so it can be assumed that the road was in operation as a major thoroughfare by AD 60 (Perring and Roskams 1991: 108; Watson 2006: 18). Activity on site A (Watson 2015a: fig 7) reflects this date, with pre-Flavian (pre-AD 70) pottery within open dumps and pitting. Two buildings were roadside properties of typical clay and timber construction, their artefactual assemblages suggesting a domestic function (ibid.:13). To the rear the land was largely open, although drainage features indicate there was land management at this time. This fits with the general activity further east towards the Walbrook, where the areas adjacent to the road were open and used for rubbish disposal at least until the mid-50s AD (Hill and Rowsome 2011, 439). There has been much discussion over the origins of London, and the relative influence on the Roman military (ibid., Perring

2011; Wallace 2013, 2014) but the archaeology from the sites along the western road (A and B) does not elucidate this further. The assemblages from the pre-Boudican period are domestic in character although the quarrying from Site A may have been to provide materials for the road (Watson 2015a, 62). The construction of the road is thought by Hill and Rowsome (2011, 439) to have been undertaken as part of a planned civilian settlement. Wallace (2014, 153) concludes that due to lack of visible major 'Roman' monuments and the lack of homogeneity in building forms the early town was a civilian foundation, particularly to the west of the Walbrook. Nevertheless the assemblages dating from the first decade of Roman occupation from Sites A and B represent Romanised culture, with high percentages of imported pottery (from Gaul in particular) bearing a close similarity to that seen elsewhere along this part of the road (Watson 2015a, 62). There is no obvious indication of particular wares and forms having been used in this area, although Wallace's work (2014, 155) concludes there were specific communities living in the area in the pre-Boudican period. There is evidence of peripheral, temporary settlement on this western fringe (Hill and Rowsome 2011, 440). The lack of pre-Flavian samian from Sites A and B, even from residual contexts, indicates there was very little occupation at this time (Bird 2015, 70), the area falling outside even the earliest occupied areas, slightly to the east.

To the east, site C does not contain extensive evidence of early Roman occupation, but a preoccupation with drainage is evident, with a natural tributary of the Walbrook stream converted into a ditch, later recut after collapse with a timber box drain inserted into its base (Watson 2015b: 187). This probably formed part of organised management associated with the first timber amphitheatre built in *c.* AD 75 (Bateman *et al.* 2008: 19); sherd links with Samian vessels from the amphitheatre excavations indicate there was open access across the area (Watson 2015b: fig 14).

The Boudican Fire of AD 60/1 wrought destruction along the main east-west road and evidence from site A supports this, with Building 9 destroyed by a fire considered to be the Boudican event (Watson 2015a: 14). However, there was evidence from site A that after the fire buildings along the main road were not immediately reconstructed, with Building 9 not rebuilt (as Building 11) until the 2nd century (*ibid.*: 30), although there was extensive Flavian expansion to the north on site B, suggesting that at this stage there was no pressure to re-use the destroyed building plots, as these other Flavian

buildings were built on previously open areas (ibid.: 16). The expansion of the road network with Road 1 laid out across site B seems to have specifically enabled this development. To the south and east of Road 1 there is evidence from adjacent sites of large areas left open throughout the end of the 1st century (B. Watson in prep.) and this is reflected on site A. There is little evidence of immediate post-Boudican reconstruction on One Poultry beyond repairs to the road itself (Hill and Rowsome 2011, 441), and on Bloomberg London the activity appears to have been largely preparatory (Bryan *et al.* in prep), although this may be due to the fact that the Walbrook valley was deemed unsuitable for rapid building, as the wet ground necessitated major land-raising (ibid.). This is not in keeping with activity further east where rebuilding after the fire was rapid and perhaps here there was more military involvement (Dunwoodie *et al.* 167) and it is known that there were supplies coming to the town as early as AD 62 (Tomlin 2016, 55). Recent work has indicated that the military took over the management of the reconstruction to a greater degree than seen previously during the initial development of London (Hill and Rowsome 2011, 440) although they were not actually occupying these sites to the west.

During the late 1st century AD in the area of sites A and B a military link of a slightly different flavour is suggested, both by the infrastructure improvements (Perring 2011: 256) and by the presence of a possible military housing suburb in the area around Watling Court and nearby (Millett 1994: 434; Perring 2002a: 62). Road 1 may have been laid out to enable access to a timber predecessor of the fort to the north-west, although some roads in the area will have been intended to enable development in more remote areas (Perring and Roskams 1991).

By the end of the 1st century the area to the north of Cheapside had been subsumed within the Roman town. Open areas to the rear of typical clay and timber street-front buildings contained pits for refuse disposal and animal pens. This picture is largely a domestic one, there is evidence of higher-status buildings from site A (Watson 2015a: 14), perhaps associated with the Cheapside bathhouse, immediately to the east.

The reconstruction of the amphitheatre c AD 75 and other public buildings have been taken to imply that a degree of centralised planning must have instigated this urban consolidation (Rowsome 2008: 29), although the presence of native-style architecture

(Casson *et al.*: 2014) in close proximity to contemporary stone buildings of Roman style (B. Watson in prep.) may indicate less formalised planning in the western part of the town. On sites A and B the building styles are Roman, although the rare find of two pierced boar's tusks from sites A and B (Watson 2015a: 88) is considered to represent the continuation of native traditions. The third portfolio site near the amphitheatre (site C) was within an area largely left open, probably to maintain safe and easy access to the arena (Bateman *et al.* 2008: 121). There was not the same level of intensive development in this part of the western suburb, although the construction of the amphitheatre itself and associated road improvements may have been due to the central organisation by the military (Bateman *et al.* 2008, 124, Hill and Rowsome 2011, 444).

The core of Roman London saw its most intensive occupation and highest population density in the years between AD 100 and 120. Some buildings in the western part of the city were of more robust construction (Perring 1991: 69) and there is a concentration of these buildings on site B, with ragstone foundations with brickearth walls seen in Buildings 28, 29 and 36 (Watson 2015a: 16). The site to the east has a similar group of stone foundation buildings (B Watson in prep.). The presence of the military (or ex-military) in the area has been made explicitly for Building 27 (Watson 2015a: 22). The status of Building 27 and its inhabitants is discussed within Watson 2015a (22-3: 63) and although the pottery assemblage does not elucidate this further, evidence for a suburb with direct links to the fort is growing.

The commencement of the Hadrianic period (AD 120-40) is marked by a major fire (or series of broadly contemporary fires) which extended to Newgate Street and into subsidiary areas along minor roads (Watson 2006: 46). The impact of this fire on sites A and B is inconsistent. Two buildings at the south-east (Watson 2015a: 29) were probably destroyed during this event. Elsewhere on the same site buildings continued in use throughout this period, seemingly unaffected by the fire (*ibid.*: 30), whereas to the north the large suburban house was demolished and robbed, with the surrounding area remaining open (*ibid.*: 35). This uneven distribution of fire debris and subsequent rebuilding is typical of the city (Hill and Rowsome 2011: 354).

Fragmentary remains of a clay and timber building were found on site C to the east; dated to AD 120+ this went out of use within a decade or two and the area again became characterised by land clearance, levelling and dumping and was not subject to the

intensive, tightly packed development of properties seen in more central parts of the 2nd century Roman town (Watson 2015b: 192-3). The finds assemblage supports the view that closer to the amphitheatre activity became much less focused on habitation and domestic life. The amphitheatre was constructed in stone during the early post-Hadrianic period and drains re-routed (Bateman *et al.* 2008: 66); the drain on site C fell into disuse as a result. Land-use on site C consistently reflects the close proximity of the amphitheatre, adding to the picture of activity in the area.

Sites A and B confirm that the limited recovery of the western part of the town was short-lived, pointing to a decline in settlement density during the Antonine period (Watson 2006, 56; Perring 2011, 271). This is in opposition to other contemporary activity along the waterfront throughout the second half of the 2nd century AD (Perring 2011, 272) and therefore need not point to a decline in the economic fortunes of London. The construction of the city wall at the end of the 2nd century AD indicates the town remained an important settlement, continuing to operate as a centre of Romano-British life. On site B Road 1 fell into disuse sometime during the mid-2nd century, and much of sites A and B was used for dumping and pitting, largely for domestic refuse disposal, albeit with a large amount of residual material (Watson 2015a: 35). The continuation of construction and use of drainage features may have been to enable access across the area, as it does not seem to have been in preparation for construction activity. There was no evidence of larger stone buildings as seen elsewhere in the city at this time (Hill and Rowsome 2011: 187; Perring 2011, 277).

The late Roman period within the area does not bear witness to significant changes beyond this contraction and along Cheapside land was adapted to horticultural or agricultural use during the 3rd and 4th centuries (Watson 2006: 78). On sites A and B pitting and limited industrial activity remain the sole evidence; again the pits contained much residual material (Watson 2015a: 36). An extensive deposit of dark earth across much of the area clearly signals the end of the Roman occupation in this part of the town (*ibid.*: 39). To the east, the continued use of the amphitheatre did not result in further construction on site C, but rather re-cutting of drainage ditches, this time their course reflecting the curve of the amphitheatre walls (Watson 2015b: 193). This is likely to have been part of a remodelling of the eastern side of the amphitheatre

landscape, of which drainage formed a major part (Bateman *et al.* 2008: 72). By the late 4th century however, the amphitheatre itself was robbed and abandoned (*ibid.* 92). Environmental assemblages from pits of late Roman date on site C indicate the area was open, occasionally boggy and uncultivated, in common with the general area (*ibid.*). The City was largely abandoned after the end of the Roman period. The subsequent occupation of the City by Alfred in the 9th century marks the next phase of chronological development.

Thus it can be seen that the Roman archaeology on sites A, B and C does not deviate significantly from existing knowledge of the western part of the city and in fact typifies certain aspects: early development along the main east-west road and clay and timber buildings in the later 1st century for example. The discovery of B27 and its potential link with the military could reinforce theories of a small suburb of retired soldiers in the area. The archaeology on sites A and B is most similar in chronology and function to that seen on Bow Bells House, directly to the south (Howell *et al.* 2013); these three sites would have benefitted from being published together, particularly as they were excavated at the same time. In the case of site C comparisons with Roman archaeology nearby was restricted to the amphitheatre publication (Bateman *et al.* 2008), and although site C had been reduced in scope by truncation, the drainage and open areas associated with the amphitheatre add to the picture of activity in the area.

3.2.2 Late Saxon period (AD 850-1066)

We do not have the same level of knowledge about this period, with later truncation having removed a great deal of the evidence. Although sunken-floored buildings were constructed, surface-laid buildings are more common and these are more vulnerable to destruction. In addition, Saxon buildings are typically fragile and are difficult both to identify and to excavate. While Martin Biddle's claim that archaeologists tended to concentrate on the study of Roman London (cited in Merrifield, 1990: 11) was rebuffed (*ibid.*: note 55), it should be acknowledged that the excavation of Saxon features can be challenging.

The character of the late Saxon occupation in the area of the portfolio sites is that of development within the newly re-occupied Roman town. The focus for occupation was

located between the Thames and Cheapside (Bowsher *et al.* 2007: 297), while the Roman road below Cheapside was retained as a major route (Schofield *et al.* 1990: 40). A single object from site A has been dated to the 9th century and, although residual, may be a rare remnant of metalworking in the area (Watson 2015a: 95-7). The amphitheatre continued to be an influence upon the topography, with late Saxon streets to the south and east curving round its banks, although on site C to the east of the amphitheatre only four pits dated securely to the pre-Conquest period, while there was no opportunity to discern any topographical alignments.

To the north of Cheapside and along Milk Street excavations have revealed occupation by the 10th century (Bowsher *et al.* 2007: 300). On the eastern side of site A a single structure and associated pitting relate to this activity, and indicate that the occupation was closely focused within a small area at this time.

The dearth of evidence from the late Saxon period from all the sites is not unusual, but it was disappointing on site A where the Milk Street activity was in such close proximity. The truncation on site C rendered any opportunity to study another area known for late Saxon archaeology and occupation within the amphitheatre banks themselves (Bowsher *et al.* 2007, 301) almost impossible.

3.2.3 Medieval period (AD 1066 - 1550)

The archaeological remains of the early medieval period remain ephemeral, with buildings made of timber, wattle and daub, sometimes sunken-floored (Thomas 2002: 20). A change occurs in the 11th and 12th centuries with development and expansion of the city shown by the increasing number of stone buildings, including parish churches (*ibid.*). To the east on site C finds assemblages from pits of this period represent a domestic area of standard status; discarded roof tiles indicate developing building techniques. The fills of these pits are similar to those from the neighbouring Guildhall site, where at this time the disposal was mixed, suggesting the pits had multiple functions (Bowsher *et al.* 2007, 323).

Sites A and B were within the central market areas along Cheapside, with surviving street names (Milk Street, Wood Street, Ironmonger Lane, Bread Street) indicating

where particular crafts or guilds held sway. There were several early medieval foundations on site A, with a possible contemporary ground surface (Watson 2015a: 46). The lack of buildings of this date on site B to the north along Gresham Street may reflect the fact that construction was still tightly focused along Cheapside and adjacent streets.

Site C was within an area known to have been occupied by Jews (Bowsher *et al.* 2007, 338), who had arrived after the Norman Conquest and remained in this part of the city until their expulsion in AD 1290. Due to truncation only deep pits survived from this period but one of these contained an assemblage dated to the late 13th century and was explicitly linked to the Jewish population. A single east-west chalk foundation may have been part of a property fronting on Basinghall Street (Watson 2015b: 209-10). Typical building techniques and materials were seen on sites A and B, with internal features such as staircases and cellars observed (Watson 2015a: 46; 48-9).

All three sites are within the thriving later medieval market and close to the centre of government. It is likely that the population was mixed in terms of wealth and occupation (Schofield *et al.* 1990: 193). The two well-preserved cellars on site B (Watson 2015a: 49-53) survived to sufficient height to display building techniques, repairs and construction surfaces. The finds and botanical assemblages within their backfills and, in particular, that of Building 48, are testament to the growing wealth of the area.

The archaeological evidence from the sites has made a contribution to knowledge of the medieval City, although much of it is typical of the area (Watson 2015a: 65-6).

3.3 Conclusion

The archaeology on the portfolio sites has been shown to be typical of sites in the immediate vicinity, although it should be remembered that the geographical area under discussion is small. However this small area has seen many excavations of similar archaeology and there have been suggestions that this reduces the contribution to knowledge (e.g. Jennings 2015), with little new evidence presented. This position assumes a low level of synthetic work however, as negative results are useful for the

curatorial sector when areas of interest are refined. It also fundamentally disagrees with the assertion of Holbrook (2015b: 75) The understanding of an area will only grow if methods are adapted to acknowledge the potential and increase it through thematic study, prioritising during the design stage and regularly reassessing agendas.

3.4 Research agendas and research designs

3.4.1 Research agendas: relevant and useful?

The usefulness of research agendas centres upon their application by both curators and commercial archaeologists; they can be a useful source of reference for particular strategies or amendments to standard practice (Chadwick 2004), or used to defend archaeological works against aggressive developers. This is particularly true of documents published by influential organisations such as English Heritage (1998). The agendas outlined in section 1.5 are predominantly aimed at commercial projects but their aims have become less relevant now that methods and programmes have altered in response to development pressures rather than due to regular revision. Particularly relevant is the concept of piecemeal study contributing to knowledge on a wider scale and the site B assessment (Portfolio Item 4) details the adjacent sites and relevant data which would be studied during analysis to enable synthesis.

Despite the assumption that development-led archaeology should have a research remit, PPG16 (and subsequently NPPF) guidance requires that excavation be kept to a minimum, with the consequence that many sites are excavated piecemeal, as was the case with sites A and B. Graves-Brown (1997) opined that archaeology was now under the developers' control, concerned that the market was less able to manage the situation than archaeologists themselves, with curatorial archaeologists coming under pressure to enable economic development (*ibid.*). Equally flimsy was the preservation *in-situ* concept, as archaeology could be damaged during a partial excavation while changes in preservation conditions (e.g. fluctuations in the water table) would further degenerate its potential (Holden *et al.* 2006: 37). I have witnessed many examples of these issues during my career and many other contracting archaeologists have tales of destruction

of archaeology or of trying to manage this destruction under impossible circumstances (e.g. Chadwick 2000). Here the points made by LAMAS in 1855 (Sheldon and Haynes 2000: 3) and Noel-Hume (in prep.) are still relevant today. The PARIS Conferences approached the problems of preservation *in situ* (e.g. Nixon 2004) and certainly archaeologists are much more knowledgeable about engineering solutions than previously. As a site supervisor I attend meetings about engineering proposals and must contribute from a position of knowledge. The success of a project can rely upon my positive working relationship with other contractors.

Complex projects require us to be multi-disciplinary and we embed ourselves within teams to ensure our views are considered. The priority for developers is time, so programmes have become more constrained with archaeologists working longer hours with more staff on site. The dichotomy between requiring time to excavate complex sites thoroughly and the requirement to rapidly excavate major cities was made by Barker as far in advance of PPG16 as 1977 (26) but it still remains. Managers preparing project designs must restrict their ambition and minimise the interventions, while many clients still see archaeological work as ‘site clearance rather than a research opportunity’ (Carver 2011: 142). To counter this, there have been attempts to raise the value of archaeology, with ‘place-setting’ and ‘impact’ seen as ways to increase its profile and research value (Southport Group 2011). Nevertheless, the concept of ‘value’ is perhaps still not fully understood (Cooper-Read 2015: 43) and the excavations carried out under current guidelines are not research-led but development-controlled, creating a tension for archaeologists. Archaeology is seen as a product rather than a process, with less onus on quality or improvements in methodologies. There are organisational issues too, with the additional responsibility now burdening archaeologists who run large companies leading to criticisms of a reduction in archaeological professionalism while we attempt to become more business-like (e.g. Albarella 2006).

Enforcing the adherence to research agendas has long been recognised as a central issue with post-PPG16 archaeology (Lambrick 1991: 21) and the role of research in commercial archaeology has been described as ‘dysfunctional (MoL 2002: 100). That this situation is perpetuated is a source of frustration for academic and commercial archaeologists alike (e.g. Millett 2013), who must maximise the potential of research

within a framework which seeks to minimise excavation. It was this stifling environment which the Framework Archaeology projects sought to escape, with a conceptual change from the production of archaeological data for recording towards considering how past peoples operated in antiquity (Andrews *et al.* 2000: 525). This was done in practice by constantly reassessing results and enabling particular aspects of the site to be subjected to further investigation (Framework Archaeology 2008: 6), at the expense of other aspects. Notably many archaeologists who worked on this project speak of it positively and enjoyed the immersive experience and the additional responsibility. However the Framework Archaeology innovations need to be acknowledged as the ultimate result of developer-funded archaeology: produced by a consultant and a contractor paid by the client to maximise efficiency, with the inclusion of an academic to contribute theoretical rigour to the method. It is the reductive aspect of the project which has been largely whitewashed in my opinion, with the persuasive rationale (Andrews *et al.* 2000) used to justify leaving large swathes of historic landscape unexcavated, not even preserved *in situ*, as would be the norm in an urban setting. The resources were directed towards areas deemed of higher research potential and although this system was adapted through the project after consultation and with an undeniable degree of academic input (*ibid.*), there is no opportunity to re-examine those areas left unexcavated, or to combine data with data from these areas with others at a later date, had they been preserved. In an urban environment the emphasis is very much on preservation *in situ*, as we have seen there are issues with this (Section 3.3.4) but nevertheless it enables the unexcavated areas to be looked at subsequently and the dataset increased at that time.

Research depends on data and its availability. In England summary details of archaeological projects are uploaded to OASIS (2015) and are, theoretically at least, publicly available. However projects such as evaluations can cover relatively large areas and often their unpublished details are missed (Chadwick 2003: 101). Policies such as uploading of data must form a central part of research agendas if they are to be sustainable (MoL 2002: 96). The incorporation of evaluation data into the three portfolio publications ensured that all available information was analysed and was made easier by MOLA undertaking all phases of work; where site archives are held in different locations and analysed using different methods this can be much more

challenging. Flatman (2013) has voiced concern that the archaeological market in London is too fragmented to enable effective sharing of data and comparative study, but I would argue that the continuity of excavation methods ensures the data, when collated, can be readily integrated. I would also add that the regional focus of the London market results in a deeper understanding of the archaeological priorities; a situation which is more tenuous within the open market elsewhere. Jennings (2015) speaks in favour of regional expertise and although he has a recent background in aggressive geographical expansion at Oxford Archaeology, generally he kept the structure of local teams working within the overarching business model.

It is worth noting that the MoL framework (2002) is referenced as having been used during the setting of the research aims for the portfolio projects. This may be due to the fact that the MoL framework is region-specific and was produced after consultation with archaeologists working within Greater London (*ibid.*: 3), perhaps making its structure easier to adopt, with its clear chronology it allows multi-phase sites to be approached with objectivity. The medieval period is not covered in as much detail as other periods, however, with medieval themes more wide ranging in their scope. The very concept of period-based research agendas may be discouraging study of transitional periods (Chadwick 2000) and it may make more sense to theme them geographically.

The portfolio sites' research aims developed through assessment and analysis, from those seen in Appendices 1-3, to those seen in Portfolio Items 5 and 6, Section 8.1. Appendix 3 shows how the MOLA project manager revised the research aims from site C's evaluation for the excavation project design, using the MoL agenda (2002). It is the very *use* of research agendas which is crucial: the MoL (2002) agenda is thorough and provides many aims and objectives, although they are only useful if maintained and updated. Perhaps the manner of urban rescue excavation restricts the research potential, given that we have to remove all later deposits to reach the earliest and there is no opportunity for selective excavation, as at Framework for example (Andrews *et al.* 2000). However we do on occasion machine away homogenous bulk deposits or digitally record post-medieval masonry, reducing the potential for reassessment as theoretically provided by the single-context system. This is not often couched in terms

of targeted research to clients, but rather to save time. This seems to me to be denying our academic credentials, which commercial archaeologists are wont to do on a regular basis. This places us in a difficult position with our academic colleagues, who are understandably concerned about rigorous standards (Millett 2013). Additionally, if we continue to work under a regime without an accepted framework of research-driven commercial work it is clear that we will find it more difficult to convince developers of the academic and community impact of archaeology. However I agree with Holbrook (2015b: 75) that the majority of projects undertaken within the commercial sector are of some research value and contribute to local or regional knowledge. This is of course enhanced in urban centres such as London where there are often adjacent (or nearby) projects running concurrently.

The MoL research agenda (2002: 98) suggests that research should be managed as firmly (by curators) as other outputs are today and although this would provide the framework it is unclear how this additional curatorial burden would be funded and managed centrally. The recognition of, and adherence to, research agendas must be accepted by the entire project team, including the curator and the consultant if relevant. The alteration of the publication proposal for sites A and B is testament to the power of the consultant which has relevance to the issue of research agendas as it is important that publications are appropriate so that they may be readily obtained and used by colleagues. It does not seem that the multi-phase publication of sites A and B fulfilled the obligation to provide synthetic analysis (MoL 2002), as the possibility to undertake synthesis was reduced as the publication was reduced in scope.

There are major challenges facing the curatorial sector which reduce their capacity to enforce agendas rigorously (Stubbs 2015: 32). Chadwick (2003: 115) suggests this would happen under a complete restructuring of commercial archaeology to enable central distribution of funds, in an echo of the current French system. While I take this point, and share Chadwick's view (*ibid.*), I am not optimistic the situation will change. The lack of statutory requirements for curatorial services has resulted in job losses under the recent austerity measures and the failure of archaeologists themselves to demand legislation in the Southport report is seen by Howe (2015b: 73) to be a serious omission that will result in reduced allowances for aspects of projects which consider

public benefit. The 2015 Strategy (Rowsome and Baker) does not overtly mention the pressures under which curatorial archaeologists are working, nor does it propose practically how its strategic aims (ibid. 24-44) will be achieved, although admittedly perhaps this would have been beyond its remit.

Millett (2013) has voiced concern that commercial archaeologists do not keep up with current academic research, rendering their studies less relevant than they might have been. Archaeological theory as propounded within the academic sphere has had volumes written about it but ironically has been the least influential factor in the development of commercial archaeology (Powesland 2015: 116). This occurs even when academic departments encompass commercial units (e.g. Archaeology South East within the Institute of Archaeology [Hamilton 2014b; Cumberpatch 2015a: 80]). However the academic world needs to disseminate its work to the commercial audience, to prevent missed opportunities and a perpetuation of many diggers' belief that it remains largely irrelevant to their daily work (Everill 2015b: 129), despite the fact that the majority are archaeology graduates. More collaboration is needed to ensure that the two worlds can discuss advances in the study of topics which can be difficult to identify within the archaeological record using traditional methods of analysis, for example the presence of minority groups (women, children, ethnicity, the disabled) or wider concerns with human agency (deliberate deposition, material culture). Academic discussions move on rapidly, with every decade focusing on a new theoretical framework adopted by archaeologists (e.g. phenomenology, reflexivity), although as Chadwick notes (2003: 114), the academic sphere itself is divided on the relevance of some issues. There is also an additional impact upon the quality of the research (or excavation) when modern theoretical constructs are ignored, as this can restrict the potential of the data (e.g. with thoughtlessly allocating gender to spaces or tasks [Hamilton 2014a: 5]).

The engagement of the academic sector in commercial projects could help to raise the profile of (and promote adherence to) research agendas (Howe 2015a: 56), which would in turn assist the 'weakened' curatorial sector (Howe 2015b: 69), although with increased consultation research agendas may become wider in their scope and lose focus in an attempt to be comprehensive. Nor is the inclusion of the academic sector

necessarily a panacea for the issues surrounding research within the commercial sector, as cost and programme pressures continue to be an issue which widening the group of participants and consultees is unlikely to solve.

Although this thesis has not been concerned with discussion of the voluntary archaeological sector, this is a vital and knowledgeable community who should both help formulate and adhere to research agendas. Access to archaeology by local societies and voluntary groups is restricted, who are rarely engaged on commercial excavations but do undertake research excavations and contribute to monitoring of deterioration of archaeological sites. The best example of a London-based community project is the Thames Discovery Programme (Thames Discovery Programme 2016), who record, monitor, interpret and present the archaeology along the Thames foreshore with a high degree of expertise represented amongst their (volunteer) workforce. Results from their work monitoring erosion caused by passenger vessels are now being used to inform the design of jetties along the Thames in central London (PLA 2016).

3.4.2 Written Schemes of Investigation: ensuring a research focus

The inclusion of original research aims in section 3 of a WSI (see also Appendices 1-3) has been discussed (section 1.5), but it is useful to consider their formulation and whether they could have been improved. Generally, unless the project is within a geographical area (or chronological period) with a particular focus towards geoarchaeology or archaeobotany (for example), specialists will not contribute towards the methodology or research aims. Rare examples prove successful, as with the involvement of Francis Wenban-Smith with commercial excavations of Palaeolithic remains at Ebbsfleet, Kent (Wenban-Smith 2013; MOLA in prep.). The lack of engagement has been criticised (Blinkhorn and Cumberpatch 1998; Cumberpatch 2015a; 2015b) yet even in a contracting unit like MOLA with a large team of in-house specialists, their input is largely restricted to post-excavation. They may be invited to sites, but on personal experience this tends to be reactive rather than proactive, while the fact that this happens mid-project means a lack of continuity or focus. There was

minimal specialist input during the portfolio fieldwork. Sites A and B benefitted from visits from a MOLA geoarchaeologist who contributed to the publication (Watson 2015a: 6), some spot dating on medieval pottery was undertaken during one visit by a MOLA ceramicist to site B, while site C was visited by a MOLA archaeobotanist who gave advice on specific sampling strategies. These site visits were all at my instigation and with the exception of geoarchaeological input, remain uncommon. This does not reflect the intention and content of the principal London research agenda (MoL 2002), where a wide variety of consultees included specialists from all areas (*ibid.*, 2002: 104-6). This is of concern to specialists (both academics [e.g. Maltby 2015] and commercial). On site B the archaeological consultant checked the project design but did not make any specific changes to it in terms of adherence to research agendas, presumably being content to allow MOLA to lead this part of the archaeological strategy.

It has been seen that the project designs for the portfolio sites do not always explicitly reflect the agendas outlined in Section 1.5, although the MoL document (2002) is referred to throughout. That may be because many MOLA staff were involved in its production and we are most likely to consider our own ideas as valid, perhaps confirming Tilley's point that professionals decide which aspects of archaeology are studied and presented to the public (1989: 279). This is further complicated by the fact that in addition to the research agendas discussed there is also an ongoing set of informal research aims which have been established over many years. An example is the earliest known date for Roman occupation in London, which although not explicitly stated as an aim in the formal agenda documents, is a central focus for archaeological work in the City, particularly on projects with the possibility of successful dendrochronological dating. Other themes re-occur within project designs for sites within the City, relating to major changes in phase or activity, for example (for the Roman period) destruction (by fire, in AD 60/1 and 120/5), and the 5th-century end to Roman rule. As archaeologists with many years' experience working in London both the authors of the original research aims for the portfolio projects would have used their knowledge and background when formulating the aims and their own particular interests would have played a part. The author of the original research aims for sites A and B (Appendices 1 and 2) excavated extensively on the Roman amphitheatre and

environs and was the project manager for the site immediately to the east of sites A and B. This background knowledge would undoubtedly have contributed to the creation of the aims for the two projects. The author of the site C original research aims was more of a generalist and worked across the City. This is reflected in the aims which are less specific (Appendix 3). It is also representative of the inherently human nature of project design, with personal interests coming into play from the outset. Although there is scope in the argument that as professionals we are best placed to claim the decision-making role, it is important to remember the wider archaeological community, including the academic sphere. Ideally there would be wider consultation at the outset, particularly with major projects, so that the project design could take varying interests into account. This would not be easily arranged logistically however, so this would undoubtedly be better approached by establishing the bi-annual Research Strategy Advisory Board as suggested in Rowsome and Baker (2015, 24). This forum would act not only as a review mechanism but also to establish priorities for projects across London, and would allow these priorities to both general and specific. The inclusion of the commercial sector at these meetings would help to keep expectations realistic, providing a pragmatic voice in the face of over-optimism.

The excavation method in the City is generally to remove 100% of archaeological deposits which will be destroyed by the development, only varied if specified impact levels are required. Site A had impact levels in four trenches and it was not possible to alter this, largely due to the rigid enforcement by the curator of ‘preservation *in situ*’, a concept labelled ‘an illusion’ by Jennings (2015). This strict control over buried archaeology plays to Champion’s argument (1991: 143), which maintains that the separation between theory and practice in modern archaeology reflects societal power structures, with those who dominate society (in this case the planners and developers) controlling what archaeology is excavated and interpreted. This dichotomy frequently frustrates archaeologists such as myself and results in those with technical skill having to accept the views of those without. Unable to explicitly require research and excavation as an end to itself, we must deny the theoretical requirement to gain a record of a complete excavation and instead work with data from a partially excavated site. This is, of course, preferable to developers as they are better able to understand the need to excavate directly impacted archaeology, perpetuating the idea of archaeology being

a contaminant to be removed (Graves-Brown 1997) or a financial risk to be minimised (Barrett 2013: 1). The linear nature of commercial projects with targets and quantifiable outcomes was developed within the strict framework of the construction industry: an industry not willing to accept the concept of ‘unknowns’ and changes in methodology. This is in direct opposition to the way in which most research excavations are organised (Carver 2011: 121).

Certain specific aspects of the Roman research agenda propounded by Millett (2001) would have resulted in aspects of the buildings on sites A and B being excavated in greater detail to establish use and function, or the pits on site C being sampled with more focus. This type of research strategy would have implications for budget and programme on a commercial project which could only be mitigated by excavating other areas with less care. That said, there is potential within London’s deeply stratified urban deposits for methods such as these to be developed

There have been commercial projects which have adapted methodologies (Andrews *et al.* 2000), but there is a fundamental difference between being given the opportunity to select what is excavated based on research aims, and having to cease excavation at a level specified prior to the fieldwork. In reality, if there had been a startling discovery a few centimetres above the impact level on site A there would have been a consultation meeting with the curator and a compromise solution agreed, given that a degree of pragmatism is generally present at such times. However, this assumes that the archaeology encountered would be of sufficient significance to merit further excavation (with the implication that it would delay the project and increase costs), which would be a subjective qualitative judgement, further complicated by the presence (on site B) of an archaeological consultant employed by the client.

The use of small trenches as mitigation was described by Chadwick (2000) as a return to Wheeler’s box-grid technique and the similarity is clear, with little opportunity to record complete building plans or the full extent of surfaces. As Fulford noted, this method results in ‘excessive conjecture’, with buildings emerging from sketchy evidence (2015b). Although I consider this to be a tautology as sketchy evidence is often all we have, this does not entirely negate Fulford’s point; which was not

necessarily a criticism of field archaeologists, but rather of the restricted evidence they recover. The explicit use of shading to show ‘real’ and ‘conjecture’ on the figures is intended to clarify where interpretation has been extensive (for examples see Watson 2015a: figs 12, 15, 25). A focus on planned contexts relies upon the recording of level data to enable comparison of phases and in adjacent trenches with varying impact levels (such as site A) some lower levels will not be excavated. The emphasis is on reducing the costs on behalf of the developer, rather than enabling archaeologists to fully understand a site.

Both sites A and B were peppered with small trenches (Figure 9). This resulted in situations which were not archaeologically justifiable in my opinion, such as the medieval steps disappearing into a section (Watson 2015a: fig 46) and the Roman mosaic bisected by sheet piles (ibid.: fig 12). The excavation of this mosaic was further complicated by an error made by the site engineer, which resulted in the archaeological team having to re-excavate the modern crushed fill material laid to protect the remains, and further excavate a narrow section along both edges of trench 12. The mosaic had been robbed in antiquity. As there was insufficient time to relate the additional areas to the original trench during excavation, this proved challenging during post-excavation; this issue was explicitly mentioned in my text (Watson 2015a: 1), but only survived the editing process in significantly watered-down form. On site A the watching-brief methodology also resulted in an uneven dataset, with some trenches recorded fully in plan and others in section only. The ultimate result of piecemeal excavations is a reduction in the possibility of thematic study, across both the site and a wider landscape. The continuing emphasis upon preservation *in situ* means that *understanding* is compromised; an alternative to this orthodoxy would see more emphasis upon the relevance of archaeology to society with subsequent targeted research (Williams 2015, 41).

3.4.3 Conclusion

The research environment within which commercial archaeology operates is not regular in its implementation, although I believe there is support for the idea that we should aim for higher levels of integrative data and follow research themes. To increase the

visibility and usability of research agendas it is necessary to keep them both relevant and feasible, which can be achieved by holding regular (and wide) consultation as suggested in the 2015 Research Strategy (Rowsome and Baker). I would argue that this should be led by the commercial sector in co-operation with our struggling curatorial colleagues and academic interests. Funding should be sought to maintain this consultation and encourage collaborative working; this funding should come from a combination of commercial projects and research applications.

3.5 Excavation methodologies

3.5.1 Excavation methodologies: single-context and single-minded?

The MOLA method, as outlined in the Archaeological Recording Manual (Westman 1994) has been used since it was adapted from an earlier Department of Urban Archaeology manual (Spence 1990; Spence 1993). Curators now expect that excavations within the City will utilise the system, an acknowledgement that they appreciate its value. This standardisation across companies ensures that staff easily move between employers, who can assume a level of knowledge if archaeologists have come from another London-based company. It remains a highly specialised method and lack of experience with it has prevented other companies from further afield working in the City. Continuity of skills and knowledge is a vital benefit of this market (see Thorpe 2004).

The careful adherence to the single-context method means that re-ordering and re-interpretations are easily achieved (perhaps after detailed finds or environmental evidence is integrated). Crucially, the encouragement of each archaeologist to record their own work and take responsibility for the interpretation of that work should ensure their involvement in the process, a central tenet of the reflexive method. Hodder, writing in 2001 (4), claimed that single-context recording was not initially coupled to any particular theoretical construct, but in fact it was a direct result of the processual support of empiricism. This assumes that data collected through empirical means is reliable and standards can be applied consistently across many projects (Lucas 1995: 38), enabling comparative study. I agree that a more interpretive 'reflexive' way of

excavation and recording will not allow extensive re-evaluation of the data (Renfrew 2001: 123), given that a multi-variable approach is not easily manipulated by databases or other digital resources necessary to handle vast amounts of data (Rauxloh: nd). Hodder himself (2000: 93) acknowledges the intrinsic reflexivity of single-context recording, given that the recording and interpretation is conducted by the archaeologists on site and with further input by colleagues during post-excavation. This ensures a continuous process, and provides a framework within which archaeologists can question their own (and others') interpretations, all the while aware that the archive is not compromised by these re-evaluations.

The historiography of archaeology shows there has always been awareness of the subjectivity of investigations; from Pitt-Rivers to Petrie the suspicion that results would merely serve to fit preconceptions was present (Carver 2009: 27) and the importance of objectivity in data collection became a preoccupation. I would argue that it is the empirical approach which dominates commercial archaeology today, despite a notable attempt to break from this norm (Andrews *et al.* 2000). Single context recording is part of this tradition and, in association with the Harris approach to ordering stratigraphy, the method was intended to ensure that the excavator was the person most suitable for (and should be responsible for) the interpretation and recording of each stratigraphic unit (Harris 2013: 2). It also assumes implicitly that single context planning is a preferable method of recording to section or profile drawing, as only a plan can represent the boundaries and upper levels of a layer or feature in its excavated (or observed) entirety. If only parts of a site are excavated, plans allow separate parts of the same context to be accurately mapped together; with entire building plots observed on adjacent sites and linked during analysis. Digitally visualised plans have enabled Roman London to be illustrated cartographically (MOLA 2011), although there have been theoretical criticisms of GIS and its reliance on functional interpretations (Wheatley 1993, cited in Lucas 2001: 128). This criticism of course relies upon the rather rash assumption that the primary data collection (ie planning) will have been undertaken with objectivity, which is seldom the case. Nevertheless, the current reliance on GIS within MOLA inevitably encourages landscapes to be perceived as spatial entities rather than social or temporal ones and perpetuates the functional emphasis of commercial publications' outputs.

Although the Harris matrix is taught as a ‘key concept’ (Grant *et al.* 2002: 40), some commercial units persist in recording physical relationships on context sheets (e.g. Oxford Archaeology, Wessex Archaeology). While these two systems may not be entirely mutually exclusive, in urban environments the focus is on stratigraphic relationships as to record physical relationships would greatly complicate the interpretation of planned contexts and would in fact repeat the information provided by recording the stratigraphic relationships. However there can be a lack of information regarding post-depositional processes such as wear, bioturbation and taphonomy if some physical relationships are not recorded (Blinkhorn and Cumberpatch 1998).

This is not a flexible method, but one which allows for complicated sequences to be recorded systematically, with equal weight given to all contexts. This is the major way in which it differed from systems which had preceded it. Martin Biddle’s work in Winchester for example, relied upon a combination of running sections and planning (Lucas 2001: 54). Biddle remains a supporter of a combined method using sections and plans (M Biddle, pers. comm. October 2014), and the value of seeing stratigraphy in section is clear where physical relationships and post-depositional processes are important to record; a series of road surfaces for example (e.g. Watson 2006: fig 29), a river channel and, perhaps most usefully, on London’s waterfront. Biddle used running baulks to allow section recording; the baulks were moved with each major phase of archaeology (Lucas 2001: 54). This assumes that major phases can be readily identified and, indeed, that a site will exhibit major phases. It does not encourage a more fluid impression of several building phases being in existence at one time and results in phases becoming set in stone for the duration of the analysis, as once the archaeology is recorded in section in relation to a phase, it cannot be re-recorded again in relation to another, as yet unidentified phase. This re-interpretation is a central value of the single-context method. Other methods, such as the feature system espoused by Carver (2009: 375) (and see also Carver’s multi-concept system [2011: 40]), rely on much of the site sequencing being established while on site. Certain aspects of this method, in particular the use of ‘feature sequence diagrams’ (Carver 2009: 299), appear to me to be significantly more complex than MOLA’s method and I would argue that phasing during excavation is only suitable for open-area excavations with relatively shallow

stratigraphy. Complexity is hidden by this system and detailed analysis of plans is not possible unless they are treated as separate stratigraphic documents (Thorpe 2012b: 38). Single-context recording remains the closest model we have of replicating the excavation itself.

The allocation of all finds to their context of origin enables them to be studied as part of that context. Several companies use the ‘small finds’ register system, which is unnecessary at MOLA as all contexts are recorded in 3D via planning and levelling, with all finds within that context therefore subsequently also in 3D, although significantly, not individually but within the context itself. The retention of the principle of a ‘small find’ is said by Chadwick (2003: 114) to be a remnant of antiquarianism in that it perpetuates the idea of individual artefacts as being of primary importance as opposed to the more holistic concept of the context. MOLA’s single-context system enables this more inclusive and holistic approach; needless to say in the event of a significant assemblage of debitage or burial goods the artefacts would be plotted in 3D to increase the level of recording beyond the context level.

Section drawings are occasionally used at MOLA and an example can be seen in Watson 2015a (fig 41) for the backfilling sequence of a pit. Lucas (2001: 128, citing Wheatley 1993) is concerned that the reliance modern archaeologists place upon GIS for landscape studies may be overinflating its importance as a tool, as it is not ‘theoretically neutral’; I would extend this to include the loss of complex information when sections are not recorded. However combining planning and section recording is challenging (not least because they are recorded at different scales at MOLA with sections at 1:10 and plans at 1:20); contexts recorded in both ways need to be readily integrated during post-excavation, as acknowledged by Harris himself (1989: 101). However the ideal remains a combination of both section and plan records, to recover what Harris (*ibid.*: 83) identifies as the four dimensions of a site: length and width (plan), depth (section) and time (the stratigraphic sequence).

Recording post-depositional and formation processes is not readily facilitated by the single-context method (Lucas 2001: 41), as it does not easily enable the insertion into a matrix activities such as trample, bioturbation or climatic influences such as

weathering or erosion (ibid.: 154-5). If identified during excavation, these events would be allocated a context number rather than be discussed as part of the original context and therefore separation from their phase of influence is possible. The identification and interpretation of such processes are in the hands of the excavator, as it is unlikely that these events would be recognised in post-excavation unless specific sampling was undertaken. It is clear that the preferable situation is one where they are recorded appropriately during excavation, an issue in London where 'dark earth' deposits are encountered. 'Dark earth' can be up to 1.5m deep and recent work suggests it formed through ash-rich midden dumping on empty building plots and open ground, subsequently affected by bioturbation and weathering (Bateman *et al.* 2008: 95). It is also very homogenous in form and colour and contains many residual artefacts, making dating difficult. It has been successfully identified and sampled on sites with a geoarchaeological input (Watson 2015a: 39). Schiffer's (1996) mathematical formulae to enable recording of discard and breakage is relevant for the late Roman sequence on site A, which was largely refuse disposal and discard over open areas. However, the complicated formulae render them practicably unusable in the commercial environment where pottery specialists (for example) must analyse large assemblages quickly. The redirection of resources towards statistical analyses seems unlikely in the current climate. That said, detailed study of discard (including sherd links) could be a consideration of future thematic studies. The same can be said for the detailed recording of soil micro-morphology which is recorded by a geoarchaeologist on sites identified as of particular interest and by an archaeologist on the vast majority. Subjectivity of the excavator will play a part within this system, whether it is openly stated or not (it is not). Throughout the development of the MOLA system detailed analysis of soils has not been undertaken as a matter of course on every project, somewhat predicting the results.

The challenge of recording formation processes was partly tackled by the processual Construction, Use and Disuse fields in the MOLA Oracle database (Figure 1). Recent discussions have centred upon whether these should be included on the field context sheet. Some discussants thought it would encourage excavators to think more deeply about the archaeology, while others felt that it was too complicated a concept to burden busy archaeologists with, given that they should be entering some interpretive details

on the context sheet. The definition of C, U or D relies upon the stratigraphy both within and *below* the context being recorded and excavators should be encouraged (and trained) to consider these concepts which are crucial to understanding the sequence, though this requires a level of expertise and engagement which is not always present amongst field teams. It has been decided that the concept can be better dealt with during the post-excavation process when the site-wide phasing is becoming clear and a larger area of Harris matrix is available for comparison. Likewise, residuality can be impossible to gauge during excavation but will have an impact upon interpretation (Thorpe 2012a). Here it would be very useful to have regular input from specialists who can provide chronological details, from ceramics for example. The complexity of formation processes must be considered if archaeologists are to recognise that excavation should record more nuanced information. Interestingly, the field manual at Albion Archaeology (2001) provides detailed guidance on the allocation of the C, U, and D fields during excavation (*ibid.*: 127-136), and I view this as a very useful addition to training.

Even though implicit within the system is the idea that interpretation is (or can be) delayed to post-excavation, this duality could take away the task of interpretation from the excavators, even though the intention was the very opposite. In reality, after PPG16 led to increased time pressures this allowed analysis and interpretation to occur during post-excavation (Westman and Shepherd 1992: 436), a situation not originally intended and unwelcomed by supervisors writing up sites. A new version is now being designed, largely as the depth of information required on the pro-forma sheet was never fully achieved and there are sections which have long been irrelevant. The movement from the previous emphasis on description towards more interpretation reflects the current theoretical developments in field archaeology, which require that field archaeologists should be more engaged in what they are recording and why. The primary rationale behind the redesign was not to enable more efficient data entry but to increase the level of interpretative information, given that the greatest chance to interpret a site is during the excavation (Hunt and Colls 2011). In practice (and from personal experience) this requires a high level of expertise and awareness on the part of the excavators themselves, but the necessary training and development is not a central part of most field archaeologists' career (Edwards 2015, and see 3.5.3.). Additionally, a requirement

to determine a functional interpretation during excavation may in fact decrease the possibility of re-examining interpretations later as it can be too definitive.

3.5.2 Excavation methodologies: digital upgrades.

The technological development of fieldwork methods has become a preoccupation, with contracting units undertaking digital data capture on sites. An early pioneering example was LP Archaeology's Prescott Street excavation, with site data uploaded onto the web using their ARK system (Archaeological Recording Kit) (LP Archaeology 2010). The provision of site data to the public was seen as ground-breaking (Hunt *et al.* 2008) and is not replicated often. It should be noted however, that as yet there has not been full publication of the Prescott Street archive, although there has been a journal article outlining the digital project (*ibid.*) and a self-published book of site photographs (Hunt 2009). Whether the data collected can be easily integrated with that collected on other projects seems not to be of concern, as LP Archaeology use the MOLA recording system during the fieldwork, thereby enabling comparative study.

MOLA do not record site data digitally on urban projects, largely because such systems require digital plan capture (e.g. Intrasis: [Wooldridge 2011]) which is challenging on an urban construction site. Digital planning (PenMap) has been used for certain features: medieval skeletons and post-medieval structures for example. The increased speed is justifiable when hand planning will not add to the interpretation of a feature, but digital systems have been found to be inefficient on deep or complex excavation areas where many archaeologists will be planning at any one time, or those with substantial engineering features which can interfere with the digital capture (e.g. piling, propping, metal shoring). Digital planning would have been acceptable on site C, with an open area, small team and relatively simple stratigraphy, but not on sites A and B where the site conditions were significantly different. It is still generally considered within MOLA that when the complex urban archaeological environment is considered, hand-drawn plans are created more efficiently and are more easily adapted than digitally captured data. A criticism of the 'old tech' methods can be that they are subjective, but I would argue that digital capture relies upon the operator's expertise in

recognising stratigraphy just as much as hand planning relies upon the excavator's. Significantly, both for cost and team coherence, hand recording can be undertaken by the whole team, a situation not replicated on the Framework project (see Chadwick 2010: 11). There is also increased demand for training when digital methods are introduced (Wooldridge 2011), although this should not prevent their introduction.

LP Archaeology expanded the digital recording beyond merely descriptive data and attempted to echo Hodder's reflexive methodology (1997; 1999; 2000). His introduction of reflexivity to excavation and recording was intended to encourage archaeologists to contextualise their own experience during the archaeological process, through the conscious recording of their thought processes (audio-visually and through journal entries) and close co-operation with specialists (2000: 9). Hodder's project at Catalhoyuk was far from what we would consider a commercial excavation, although there were recognisable pressures placed upon the excavation team by the funding bodies, the programme and the very reputation of the project (Farid 2000: 27). However, there is a difference between claiming originality by conducting research 'at the trowel's edge' (Hodder 1999: 92) and failing to acknowledge that generations of processual and empirical archaeologists had been doing just that, as Hodder found when his polemic was left open to critique in theory (Hassan 1997) and plagued with difficulty in practice (Farid 2000: 27-9). The MOLA single-context system has been described by Thorpe (2012b: 38) as demanding a 'great depth of interpretation and engagement on the part of the excavator', a view I would support, theoretically at least. The challenge for commercial archaeology is to introduce some semblance of reflexivity into recording and interpretation while maintaining standardised systems which allow comparison of data. A hybrid version of the Catalhoyuk methods was used on a project by Bender *et al.* (1997) and the published results incorporate alternative methods of presenting data (*ibid.*) but Lucas (2001: 15) remains unconvinced that this increased the contribution to knowledge.

Ultimately, the inclusion of opinion and objectivity increases variability within the archaeological record (Schiffer 1996: 362). There would be a need to establish some form of quality control on the data collected, otherwise the analysis programme will be unachievable. There lies at the centre of urban archaeology an assumption of skill and

expertise which may be lacking within fieldwork teams (Farid 2000: 28; Carver 2011: 117), although this should not necessarily prevent us from asking more of them and expecting that they should be capable of explaining their thought processes, however briefly. This information could then be adopted and integrated or not, as the publication authors decide. Certainly on occasion it would be helpful to have discursive text on context sheets and plans which record uncertain edges or have vague interpretations. Team members can be uneasy about admitting uncertainty, although much of archaeology involves conjecture and constant hypothesising. They should be encouraged to discuss and re-evaluate their opinions.

With online presentation of data becoming viable this may be an appropriate method of dissemination, although I would argue that a traditional publication method should nonetheless be undertaken. Nor is the internet necessarily as democratic and wide-ranging as a local library (for example) when we consider the issue of access to online data (Chadwick 2010: 11). There is also concern amongst the curatorial sector that online dissemination is less accessible (Stubbs 2015: 31). Analysis of records is a skilled process, and it may be taking the concept of reflexivity to an illogical conclusion if we anticipate understanding by non-archaeologists. My concern is perhaps a confirmation of Renfrew's cognitive-processual approach (2001: 123): which allows interpretation but within a 'scientifically justifiable background' (ibid.). But to make all the available data public empowers all interested parties and denies Tilley's accusation that we leave the public as 'helpless spectators' (1989: 279).

3.5.3 Excavation methodologies: investing in people?

Despite a grounding in research methods, theoretical frameworks and material-culture studies, an undergraduate degree in archaeology rarely provides suitable training for a career in the field and technical knowledge is developed during employment. In practical terms, the success of this can depend upon the project. The fieldwork on site C was simpler to manage than that on sites A and B: it was a smaller site with fewer interventions and a less-pressurised programme. MOLA had sole access to the main areas, whereas on sites A and B we were working in advance of the groundwork

contractors, with a piling rig on site A following as we completed excavation of each pile position. The archaeology was also less challenging on site C, largely consisting of features cut into the natural strata. The complicated stratigraphy on sites A and B added to the pressures, as deadlines were a concern due to the inexperience of some people. As supervisor I distributed the team accordingly, allocating larger trenches with waterlogged features to experienced diggers and moving people around to assist others under pressure. However, the high number of new entrants to the profession did mean that some trenches were entirely excavated and recorded by people with less knowledge of the archaeology and their skills had to be honed on the job, as is typical (Clarke 2015: 87).

The principal resource remains the field manual (Westman 1994), and each archaeologist is provided with a copy. There are plans at MOLA to update the manual although these have stalled due to funding issues. To my mind the manual should include guidance on interpretation, with prompts to structure thoughts. Urban archaeology is very different to less-complex stratified environments, where single-context recording is not always appropriate (Carver 2011: 45). The methods utilised in London were not widely adopted outside this milieu, which during the 1980s resulted in a highly specialised team of both ‘diggers’ and in-house specialists used to the methodologies. Now, however, the situation is very different and field teams also suffer from a lack of continuity. Graduates may dig for a decade before leaving, generally because they are not paid enough or are tired of the peripatetic lifestyle (Everill 2009: 189). In addition, due to the boom and bust nature of development MOLA employ almost an entirely new field team every year or so. Everill called for increases in pay and improvements in conditions of employment (*ibid.*: 207) but acknowledged that this was unlikely to occur swiftly. Currently there is a preoccupation with designing trainee schemes, or providing apprenticeships. While I see the value in these schemes, I feel that the profession is naively avoiding the issue of skills retention. Although many do not leave archaeology altogether, with a majority of ex-diggers finding work elsewhere in the sector (Landward Research Ltd 2015: 17), the loss of experienced fieldworkers remains a major challenge (Holbrook 2015b: 75), given that archaeology is more than digging or drawing, with interpretative skills depending on knowledge developed over time (Powersland 2015: 116). There is also a concern that fewer students will study

archaeology due to increased fees and low wages; this will inevitably impact upon the academic and commercial worlds. The loss of graduates will reduce the flow of ideas and new theorising, without which the subject will stagnate (Thorpe 2015a: 173).

Ultimately the dearth of experienced archaeologists is due to the economic climate within which we operate (Carver 2011: 75). Thorpe (2012b: 48) puts the blame firmly at the feet of ‘consumer capitalism’ (ibid.), and employers agree that the current system is not fit for purpose (Cooper-Read 2015: 35; Jennings 2015; Walker 2015). The pressurised conditions make us reluctant to risk introducing new techniques despite the fact that they may be more efficient (Roskams 2001: 289) and sites A and B were undeniably conducted within a pressurised atmosphere which did not encourage lengthy discussions. In many instances archaeologists have lost the impetus to develop skills iteratively as occurred in the past (Thorpe and Cumberpatch 1997) and also, I would add, to reward experience through remuneration. Recently the situation has deteriorated further, with archaeologists engaged on large infrastructure projects working split shifts, handing over records at change-over. This further reduces the possibility of informed interpretation and in my opinion we should resist such working practices in future, despite how they are sold by developers and the omnipotent consultant (Carver 2013). Curators are unwilling to lodge concerns about this recent development, as they are reluctant to interfere with development programmes or commercial contracts.

This may have given the impression that standards in commercial archaeology are low due to the turnover of staff and a general malaise. This was not the intention, as the dedication and interest shown by the teams from sites A, B and C impressed me enormously. The primary hope is that more formal training be introduced to empower the site teams and ensure that they are aware of the importance of their interpretive as well as their descriptive, or empirical, input. This is not to remove completely the informal mentoring which is highly effective and can help to foster team spirit and encourages debate, which is crucial. Much of this mentoring is due to experienced archaeologists who take on this role voluntarily, which at least ensures that the team are communicating about the archaeology and interpretation remains constant, although this inevitably increases pressure on the supervisory teams.

Preferable is that the two methods be utilised together, with formal structured training introducing topics and concepts, to be backed up and built upon during the informal mentoring on site. The idea of a ‘Training Hour’ has been referred to in other publications (eg Harward 2012) and it does seem that this is the most effective way of installing training onto field projects with the support of the project contractor. Currently training is focused upon technical skills (survey for example) and skills required legally (such as health and safety) (Edwards 2015: 103). At MOLA training for field teams follows this pattern, although I have produced short guides on period- or artefact-based topics, presented formally either by myself or a MOLA specialist at a short ‘Tool Box Talk’ seminar. This structured training only occurs on large excavations, where the client supports the concept of training and provides suitable facilities. It also relies upon supervisors engaging with the team and feeling confident enough to present guidance, a situation which does not always exist but which could be remedied by the provision of training materials. The site meetings I hold are rarely attended by other contractors and it would be relatively simple to extend these meetings by a short time each week to include an aspect of excavation or recording, supplemented by specific topics presented by specialists, such as ‘early Roman London’, ‘sampling of medieval cess pits’, or ‘excavation of clay and timber buildings’. Field teams on modern commercial projects have a high level of education compared to previously, with a significant number educated to post-graduate level. Their skill and knowledge could be called upon to present short seminars on topics known to themselves. There has been concern about the relevance of undertaking PhD study when academic positions are difficult to find (Rocks-Macqueen 2016), I would argue that the commercial sector should encourage staff to study aspects of their work, which would both serve to keep commercial excavations updated on recent theoretical developments and ensure that academia maintains its interest in development-led archaeology.

Many of these problems associated with training and professional development are due to historical factors of funding and organisation (see section 3.3.4), however there have been moves to address this. The recent Chartership of the professional body (Chartered Institute for Archaeologists [CifA 2016]) should mean that aspects such as Continuing Professional Development and structured training plans become second nature, which

is far from the case currently. The ideal situation for myself and many colleagues is that some form of barriers to entry be instigated, to ensure that all archaeological work is carried out to required standards of quality and employers are bound to invest in their staff development. The CIfA argue that they should provide the quality standard and therefore CIfA membership should be the barrier to entry, although this argument is far from being won, particularly in the site hut, where membership is traditionally very low due to considerations that the CIfA is dominated by managers. In my time as a member of the CIfA Council there was not much I saw to disabuse people of that belief, particularly as membership fees remain high and it is naturally difficult for field staff to attend meetings during the day. However, having said that, many (myself included) believe that the CIfA is the best chance our profession has of improving the current situation given that there is no funding or political will to strengthen the curatorial sector to help to raise professional standards, so it is more positive to provide support for CIfA's aspirations.

3.5.4 *Excavation methodologies: enabling reflexivity*

Relevant here is Hodder's assertion that the recording process has come to determine the digging process (1999: 31), which he made in specific reference to the single-context planning technique. The rigidity of the pro-forma sheets does not encourage the input of personal contextual influences but instead relies on a sequence of descriptive aspects (often learned by rote by experienced diggers), followed by a clearly separated section for interpretation. The amount of space offered for interpretation on the MOLA context sheet has been considered better than others (Hunt and Colls 2011) but if we accept the view that the most appropriate opportunity to interpret archaeology is during its excavation (ibid.) then the structure of many recording systems perhaps denies the excavators their chance to acknowledge their influence on the data recovered. To adopt more formal aspects of reflexivity would require increased investment in formalised training. The practice of excavation would come under examination, as would the social context of archaeologists themselves (Lucas 1995: 44). Whether the current commercial system would enable this depth of self-analysis and intensive interpretation is debatable in my opinion.

The use of site diaries has been espoused by Hodder (1999: 121), Hunt and Colls (2011) and Carver (2011: 129) but their use has been discouraged at MOLA in favour of the data-led context sheets. Hodder (1999: 121) and the leader of the Catalhoyuk project (and ex-DUA supervisor) Shahina Farid (2000: 28) have admitted that due to lack of computer terminals these diaries were not completed by the whole team. This hints at a return to the hierarchical system of field recording whereby the records were completed by supervisors (Lucas 2001: 8), although this precisely reflects the hierarchies common in the post-excavation and publication. This is certainly the case on excavations I have supervised, where the site diary is generally used for prosaic matters of programme and logistics. If archaeological matters are entered this is inevitably done by the supervisor, making a note for their own reference.

Hunt and Colls (2011) recommended that each team member should keep a diary but it is unclear how this extra recording would be allocated time on a commercial project, as acknowledged by Hamilton (1999: 4). On occasion (and in particular at the conclusion of a project), recording can become rapid and rudimentary. One could argue that it is this phase of a project which would require the most detailed 'diary-style' recording, as it is often the most challenging and pressurised but I can see the system being abandoned at such times. Nevertheless, I do agree that we should also be recording the process of excavation itself and video can be an extremely effective tool to combat this pressure.

That site diaries are used on site but rarely referenced within publication was part of Roskams' polemic against reflexivity (2011), when the invisibility of the diary entries in the eventual end product of a project was labelled as 'illusion of power' (ibid.). The Catalhoyuk team spent a great deal of time on the diaries (Catalhoyuk 2015), but to what end if they are not utilised during the analysis wherein the story of the site is presented. Neither were all the team enamoured; Chadwick felt 'uneasy' about contributing to the diaries (2010: 11). The issue of ownership over the diaries is also an interesting one, while it is not clear whether people would provide a full account if they were to contribute to the site archive rather than to their own, or whether specialists and others kept their diary contributions.

As Roskams (2011) made clear, processual methods attempted to ensure uncertainty is recorded and interpretation is encouraged, in theory removing the requirement for an additional diary entry. The MOLA context sheet provides space for this. It was deliberate that theory, method and practice should be linked as they are undertaken by the same individual (Spence 1993, contra Hodder 2001: 4). The DUA field team developed the sheets and Thorpe (2012b: 43) sees this as further vindication that reflexivity has always been a central tenet of modern field archaeology. The interpretive nature of the MOLA sheet is a result of the teams' input into its design, coming from a position of technical skill and field experience. With a standardised system, each member of the team can be engaged with the interpretation, a situation which may not occur with digital recording technologies (Roskams 2001: 79; Chadwick 2010: 3). This is an area where the level of staff engagement is often lacking due to experience, a situation which could be easily remedied by providing interpretative prompts within the site manual (Harward 2012).

The Framework Archaeology project attempted to bring a level of reflexivity into commercial archaeology, considering the agency of the excavators (Barrett 2001: 142), which involved significant investment in information technology and staff training. My own cynicism about the methodology centres upon the need to reduce the amount of archaeology excavated, justified as being part of the creation of a narrative which crucially demanded: 'identifying points of redundancy' (Andrews *et al.* 2000: 529). My opinions are largely due to my experience, with deeply stratified archaeology demanding we remove all later stratigraphy before we can excavate the earlier. One of the architects of the Framework method confirmed that their design would not work in an urban environment (John Lewis, pers. comm. December 2014), although his colleague Barrett (2013: 3) does introduce the concept of landscape studies to the urban sphere, specifically with reference to the growth of digital data capture and presentation.

Although a precedent was set by Framework Archaeology, the joint venture has ceased to operate and it was largely due to a powerful client-consultant relationship that funds were made available for its development. In addition, and of particular note, the

Framework publications do not explicitly utilise the data offered by the field teams, but rather the material is presented in a traditional way (Framework Archaeology 2008; 2010).

If a greater degree of reflexivity were introduced there would have to be an acknowledgement of the need to present a clear narrative and for that we need data in a readily interrogatable form. An effective way of combining digital and traditional formats has been used by the Silchester project, which enables the user to interrogate databases and study details of stratigraphy online (Silchester Town Life Project 2012).

3.6 Conclusion

Although the MOLA excavation methods are generally appropriate for the milieu within which they operate, there must be room to adapt them on a site-specific basis for different situations and this should include pressurised environments such as shift working on major infrastructure projects. The review of these should be rigorous and intended to allow targeted research and funding. There should also be sector-wide support of professional development, both to train and retain skills.

3.7 MOLA post-excavation and analysis methods

3.7.1 MOLA post-excavation methodologies: standard practice?

The analysis process is standardised at MOLA (Figures 2 and 3). While this system appears rigid, it is adapted to suit individuals' preferences and experience. The production of matrices is a good example, with the use of the Bonn matrix programme recommended (and preferred) as it inherently checks stratigraphic relationships and will not allow the inputting of circular threads of numbers. On site a running context matrix is generally produced and updated by the supervisor(s) with the digital version created during assessment. I deviated from the digital system by writing my context (and subsequent) matrices on paper, a method I prefer as it allows the matrix to be 'phased' (Portfolio Item 1), as opposed to Bonn which does not present the data chronologically

(Portfolio Item 2). The way in which seemingly minor idiosyncrasies have slipped into the system will inevitably result in variable results, while it could be argued that the visual phasing of a matrix restricts my opportunity to re-evaluate the data from an objective view. Conversely, it could go some way to improving the interpretation within a Harris matrix, as espoused by Lucas (2001: 161) and Chadwick (2010: 17). The presentation of the matrix (Portfolio Item 1) would be improved with the addition of clear phasing and interpretive annotations, although in the event of another researcher using the raw data these should perhaps be removed to enable an independent approach. There are alternatives to the Bonn programme (eg ArchEd, Stratify) although these are not widely used. LP Archaeology are developing updates (Layt and Hunt 2016) to enable more integrated analysis of data beyond merely inputting from a hand-written matrix. This work is to be welcomed and as it will be open source (*ibid.*), should be adopted across the commercial sphere. Currently the Bonn programme is old fashioned in appearance (it is a BASP programme) and has not been adaptable so an update is long overdue.

The post-excavation assessment (Portfolio Items 3, 4 and 6) is another document that is due for an update in my opinion. The process of assessment is undertaken systematically and each task is completed, usually in the same order. Several sections are repetitive (eg Potential [6] and Significance [7]) and the data could perhaps be better served by revising and refining these in particular. The pro-forma aspect of the assessment document is not generally a problem with smaller projects (perhaps those of 250 contexts or fewer) but with larger projects, or projects which have had funding difficulties, the unvarying manner in which the assessment is approached can be restrictive. In addition, the financial arrangement for projects often require the archaeological contractor to specify prior to excavation the level of post-excavation and publication funding the project will merit (which I will call ‘the fixed price trap’). This was certainly the case for excavations I directed at Bloomberg London (Bryan *et al.* in prep), from where a significant assemblage was excavated. The requirement to assess quantitatively the entire assemblage to much the same degree of detail resulted in an over-spend of resources at this early stage, which in turn reduced the possibilities for analysis during the publication phase. It seems that with the current pressures on commercial projects the system outlined in MAP2 (English Heritage 1991) is now unfit for purpose.

This is just one in a suite of issues facing commercial archaeology (for a good summary of these see Cooper-Reade 2015) and to do this issue justice would require another thesis, but a reorganisation of post-excavation funding would appear to be a very positive step.

Cumberpatch (2015b: 278) contests that the sheer amount of data created on an average City project (for example) will be too complex to be analysed effectively within the timescales available. The challenges faced during such projects would appear to bear this out, and although there may seem little chance of the situation changing for the better, a review of assessment methods would contribute towards a solution.

Functional interpretations at a context level occur on the Oracle database basic interpretation field (Figure 1 and Appendix 5). This has its theoretical difficulties, as it is often challenging to judge whether a deposit is an ‘external dump’ or a ‘make-up’. This was particularly problematic on sites A and B, when small trenches were excavated with stratigraphy extending between them; there is a clear need to ensure that the basic interpretation codes for the same deposits or features are maintained beyond trench edges. Some interpretations would change under an alternative opinion, which can be an issue if several colleagues assist with the database entry; a common occurrence if analysis programmes are tight. To enable comparison requires consistency. In addition, the database is reviewed during post-excavation but after publication becomes a definitive dataset, the original interpretation (and any other subsequent interpretations) are, in effect, deleted from the digital archive. To understand the process through which the final interpretation was reached it would be necessary to study the primary archive, which would be available in the local repository (the LAARC in this case) but the study time in which researchers would have to read all the original data is likely to be too restrictive if a large project was under investigation.

The analysis process is as systematic as that undertaken for the post-excavation assessment. The portfolio items which relate to the analysis (Items 7, 8, 9) show how the structure is steadily advanced from context to land-use. The group text (Item 8) in particular illustrates the lengthy process involved with the compilation of a document

such as this. There is a great deal of cross-referencing to ceramic dates and my ideas are discussed in the text to enable re-interpretation at a later date. This discursive nature does not follow into the land-use text document (Item 9), which is far shorter and less detailed. It should be noted that this is not deliberate aspect to the MOLA method, but more as a result of time constraints: I knew that I could refer back to the group text (Item 8) to clarify aspects of the sequence during publication so did not repeat the debate here (in Item 9). Additionally this land-use text (Item 9) is distributed to specialists also working on the project and a level of certainty is helpful for their work. That said, there are always discussions about phasing and certain aspects of the grouping structure are altered after refinements to the dating. Naturally the land-use text should accompany the land-use diagram (Item 10).

The progression from context matrix to land-use diagram (Figure 3) is designed to ensure data is re-examined at each step. It is the most commonly utilised method of showing the four dimensions of an archaeological site (Harris 1989: 101) and represents a step beyond both the chronological narrative (Roskams 2011) and stratigraphic sequence (Lucas 2001: 161). When included in a report, they can help to disabuse the opinion that the report has reduced the complexity of the site (Tilley 1989: 278) as they are the closest we can get to displaying the stratigraphy itself (or at least the authors' interpretation of it). That said, they are no longer included as a matter of course in MOLA publications. This may be due to the fact that they are seen as overtly technical, although this is in fact the opposite of their original intention: to reduce the complexity of a site to a narrative presented visually. Wickstead (2008, 16) is of the opinion that they are working documents and therefore shouldn't be published but when I work with a land-use diagram it forms a central part of structuring narrative text and is used to inform colleagues who may be unfamiliar with the stratigraphy of the site sequence. The diagrams could also be used to illustrate spatial and chronological development (and stagnation) across a wider landscape (Steane, 1993), thereby enabling thematic studies.

The primary visual representation of interpretation remains the stratigraphic figures (e.g. Watson 2015a: fig 7). At MOLA the digital plan data from adjacent sites can be combined on ArcGIS to enable study across a wider area and although this was not fully

developed at the time of production of my portfolio sites, it has proved to be very helpful in projects I have worked on since (Harward *et al.* 2015; Bryan *et al.* in prep.). Conjecture extends across site boundaries where sites are published together (Watson 2015a: figs 7; 30). Fulford's concern with the level of conjecture (2015b) has been mentioned, but it is clear from Watson (2015a) that there is much less with the medieval sequences and the buildings in particular. This is the case in my portfolio projects due to my own lack of detailed knowledge of medieval building plans and structural features; an issue which remained unremarked upon during the editing process.

3.7.2 MOLA post-excavation methodologies: phasing

There are chronological phases which are used across London (see 1.4.2). These change between projects and generally a new phase (or Period in the MOLA nomenclature) will commence with a major event, a road for example. Sites A and B were ordered into one phasing structure, as the assemblages were analysed and published together. The structure for site C is different to reflect the archaeology found. Recently projects located along the Walbrook stream have adopted a phasing structure first outlined for the major excavations at One Poultry (Hill and Rowsome, 2011), in an attempt to facilitate comparative study, a concept supported by academics such as Wallace (2014). This proved challenging on my most recent project (Bryan *et al.* in prep.) as the phases did not exactly mirror those on Poultry. This system is perhaps too proscriptive and we should avoid distinguishing phases before an excavation; this is in fact reminiscent of Biddle's baulk system (Lucas 2001: 54), already discussed as restrictive. An alternative suggestion has been to have an overarching structure while retaining the flexibility for individual sites to insert specific periods. Statistical analysis, further work on the assemblages and thematic study may be greatly enhanced by the introduction of standard phases, provided these are reassessed regularly and there is an acknowledgement that there may be phases of activity which are not strictly apparent chronologically (natural processes such as erosion for example). Nor are there central guidelines on how to undertake phasing, resulting in phases produced at MOLA being different from those produced elsewhere (Thorpe 2010).

The Roman phasing on the portfolio sites does not vary from accepted chronologies, which are largely based on ceramic chronologies combined with dendrochronology sequences. The ceramic phases for London have been in use for decades and have persisted as the ceramic supply alters in relation to major changes in the town itself (Davies *et al.* 1993: 218). To have a structure upon which to hang datasets from projects across the City (or the wider hinterland) greatly increases the possibilities of synthetic and comparative study.

The ceramic phases established in Davies *et al.* (*ibid.*) are challenged on occasion. The fabric Highgate Ware C has a range of AD 70-100, although a recent project has shown stratigraphically that its introduction may be nearer AD 65 (Dunwoodie *et al.* 2015). This significant deviation brings this fabric much closer to the key date of AD 60/1: the Boudican fire. It had been assumed that the rebuilding after the fire did not occur for a decade; the implications of an earlier range will cause major re-examination of how the town recovered from almost complete destruction. Perring (2011: 255) echoes Millett's concerns (back in 1994) that this period needs to be carefully re-assessed but there was no opportunity to undertake scientific dating or analysis of fire debris (for example) on site A due to budget constraints. On a smaller scale, a medieval lamp found on site C with datable material has altered an accepted chronology which may have wider implications for dated sequences elsewhere (Watson 2015b: 210-11).

There are other issues with phasing. Lucas (2001: 140) reminds us that to use phrases such as pre- and post- a major event (such as 'the Boudican Fire') to describe the onset of a new phase may be presenting a false view of how that event was seen in antiquity, although I would argue that such a major event would have been recognised as significant at the time; despite the lack of epigraphic sources we can assess change across a wide area. In addition, the presence of a major fire horizon on site A helped to phase the site during excavation, which was useful when assessing how much archaeology remained (again, the programming pressure was central). Precise dates such as those from dendrochronology can help to refine phases. This is to be preferred, as long phases must be providing a false impression of antiquity. It is hard to see how the wide ranges for the late Roman period (for example) can be improved upon unless there is a significant funding provision for scientific dating techniques.

3.7.3 *MOLA post-excavation methodologies: principal author?*

The MOLA system results in those who produce the data interpreting it, a situation seen as preferable by Lucas (2001: 12) and Hodder (1992: 272). To carry a project through to publication relies on knowledge and capability and authors are trained by an internal post-excavation specialist and mentored by experienced colleagues. Supervision positions on projects with the potential for publication are advertised internally, so that staff can show a particular interest in certain projects and progress through the system. It is positive that authors are named on publications and careers are made on extensive (and impressive) publication records. My personal lone-authored examples range from articles (Watson 2004; 2013; 2014a; 2015b; 2015c) to larger monograph and study series volumes (Watson 2003; 2006; 2015a), with a jointly authored major monograph forthcoming (Bryan *et al.* in prep.). For grey literature reports the tradition is to reference them as MoLA (year) with the author specified in the bibliographic reference. This has been the cause of some contention, in particular within departments which do not see substantial publication (standing building and historic environment assessment reports for example), but the official opinion is that unpublished reports should be acknowledged as MOLA productions.

The portfolio projects (Portfolio Items 11, 12) are multi-phase and I had to undertake significant background reading to enable synthetic analysis, as there are major gaps in my knowledge. It is usual to undertake documentary research on specific aspects of a medieval or post-medieval sequence and site B benefitted from this (Watson 2015a: 59-60), but the majority of research will be the task of the main author, with predictably variable results. Some colleagues have specialist knowledge of certain aspects of London's archaeology, but are expected to produce publications detailing the extant sequence. They may concentrate more on certain aspects, or gloss over areas about which they know less (or are less interested in).

As previously outlined (see Section 1.3.2) the intention for sites A and B was to publish period-based monographs and articles. This would not have altered the eventual authorship, but would have resulted in longer word counts for each period, enabling

more specialist research and comparative study. Key artefacts can also become swamped in large multi-phase publications: for example the Late Saxon strap mount from site A (Watson 2015a: 96) or the rare late Roman coin from site C (Watson 2015b: 215) may have been better suited being authored by the relevant specialist in a finds- or period-specific journal, given that they were residual finds. Alterations to chronologies could also be disseminated in specific ways to ensure a wider, more relevant readership. Indeed, on a more general note the integrated approach with specialists' material subsumed into the broader narrative has been called into question (eg Williams 2008: 235-6) as it distances their contribution from their personal bibliography and specific area of expertise, ultimately failing to accurately credit the work.

The scale of the opportunity offered to publish ones (my) own interpretation of a site cannot be underestimated, seen by many as the pinnacle of a commercial career, even when the restraints set by official guidance and budget considerations are considered (Thorpe and Cumberpatch, 1997). Publication is embedded within the commercial tradition in Britain, as it has become increasingly seen as a way of preserving the past (Thorpe 2010), so the responsibility is felt keenly. Clearly I had to take decisions about stratigraphy which I did not record personally (or even remember on occasion), often taking my knowledge of the site team and their variable experience as the primary rationale as to whether I was content to change their interpretations. This is the kind of quality control expressed by Schiffer (1996: 361), but controlled only by myself with my own experience, although if I altered context sheets I would sign and date my annotations, rather than delete them entirely. Recently I have found post-excavation 'by committee' to be very challenging (e.g. Bryan *et al.* in prep.). It is easier to joint-author with a specialist, given that the stratigraphic sequence remains the sole preserve of the supervisor (e.g. Watson and Pearce 2010).

There are two occurrences within Portfolio Item 11 (Watson 2015a) where I acknowledged difficulties I had experienced during the analysis process, either with the excavation (*ibid.*: 1) or the analysis, in this instance a problematic date for linking sherds from a jug in Building 48 on site B (*ibid.*: 53). To refer to the process of excavation and therefore also of discovery is unusual in standard publications but

commentators have suggested it would be a positive addition (e.g. Hodder 1992: 272; Tilley 1989: 280; Hamilton 1999: 3; Thorpe 2010; Roskams 2011). Carver (2011: 115) suggests that we openly admit that all we can do is present our views, to encourage more discussion of process. To widen the debate beyond academia, Holtorf (2007: 45; and supported by Jennings 2015) goes so far as to say that it is the process of archaeology which interests the general public and that archaeologists should concentrate more upon this to increase interest and support for archaeology. While this is true when televised archaeology is considered, it would be a challenge to include some awareness of the process within a standard publication. Hodder's Catalhoyuk publications have been criticised for omitting exactly these issues (Chadwick 2010; Thorpe and Cumberpatch 1997) even though the reflexive methodology was intended to remedy the prior omission of process.

MOLA differs from other commercial contractors by including the field team in most of the publication photographs, employing professional photographers (e.g. Watson 2015a: figs 14; 20-2; 48-9). This allows the field team to 'claim' their part of the site in the publication and is seen as positive by diggers who otherwise would only see their names in the long list of Acknowledgements at the beginning of a volume (Watson 2015a: xiv).

3.8 MOLA publications

3.8.1 MOLA publications: integration?

MOLA publications must present archaeological interpretations in a manner which satisfies client and curator to a high academic standard. It is for this last reason that they integrate artefactual and environmental evidence into the stratigraphic sequence in both narrative and thematic sections, ideally following frequent communication between authors and specialists, although this does not always happen in reality as site supervisors are deployed to site if needed. This reduces the opportunity to undertake analysis of whole assemblages as one, as they were during excavation (Hodder 1997, Lucas 2001: 75). This integrated style results in a reduced level of inclusion of specialist data such as artefactual or environmental material, which has in the past been presented

within MOLA publications in tabulated form. The change in style is illustrated within my own publication record, with dating tables for each period in Watson 2003 (eg Table 4, 28) contrasting with all supporting dating evidence presented in the text in Watson 2015a (eg 9-10). The provision of tabulated data is crucial if specialist re-assessment is to occur and I would argue that much of the stratigraphic archive could also be presented in this way, to enable more discussion and less description (lengthy explanations of building sizes for example). The lack of data within the publications themselves could be partly ameliorated by the provision of an online archive perhaps, or by ensuring the digital dataset held by the LAARC is fully interrogatable, but this has not yet been established as common practice, either by MOLA or by the LAARC themselves, despite aspirations (Evans 2006). Williams (2008, 236), Colson (2009) and Fulford (2015a, 438) all provide this specific critique in reviews of MOLA recent publications and Fulford (*ibid*) goes further, saying MOLA should ‘urgently review their finds reporting strategy’, in order that the data can be readily used by others. In response to Colson’s concerns that the provision of a CD-ROM does not sufficiently address this lack of data due to the inherent obsolescence of the format (2009) a MOLA author (Bowsher [2009]) points out that the data is also available in the LAARC, although an online provision (hosted by MOLA) would probably be preferable for those not based in London. An example would be that hosted by LP Archaeology (2010) already discussed (section 3.5.2). Without this as a current option at MOLA I feel that we should include summarised data in the publications themselves, to include land-use diagrams to illustrate the stratigraphic sequence (section 1.6.2.) and tabulated finds and environmental data (even if heavily edited), to show the rationale behind certain phasing and interpretive decisions.

In terms of the specialist data itself, much of this is integrated into the portfolio publications with appendices providing some in-depth information and catalogued data (eg Bowsher 2015, Thorp 2015). While the integration of material culture evidence is now a central aspect to MOLA’s publications (Bowsher 2009) there are some aspects of the quantification (of ceramics in particular) that do not occur as a matter of course, largely due to funding pressures. Similarly, bulk leather is not always fully assessed and quantified, for the same reason. The omission of these tasks and the consequent incomplete dataset reduces the capacity to undertake research on topics such as trade,

movement within London or site formation processes (Orton and Tyers 1990), all of which can be done either during the project, or later, but will rely upon the quantification having been carried out at the assessment or analysis stage. The quantification of the ceramic assemblage can be selective, as in the case of Site A and B, where the 1st century D group were subjected to this level of detail in order to clarify the activity at this date but also to refine understanding of the later 2nd century AD groups, which contained a great deal of residual material (Portfolio Item 3, 116). The ceramic assemblages from one of the largest excavations held in the City of London (Bloomberg London) were also studied in this detail, as the vast volume of data was a perfect opportunity to expand knowledge of the Roman town through its material culture evidence (Thorpe in prep). Here the ceramics and other artefacts from large-scale land raising deposits have shown that the importation of material from across the City had been closely controlled and the sources of this imported material can be identified, although only in those cases where assemblages have also been quantified previously.

The style of the publications is traditional, aimed at an archaeological audience although I have written shorter ‘popular’ articles previewing aspects of projects (Watson 2000; 2014b; 2014c). The style of publication chosen by most contractors restricts the audience but we could expand our readership by altering the style (Holtorf 2007: 133). Recent changes to the planning system have led to a new approach being suggested (Southport Group 2011). The principal way in which this has been tackled at MOLA is by more public engagement during the excavation process itself; as yet there has not been a major change in publication approach, although larger clients are offered additional options such as popular books or temporary exhibitions.

The (non-photographic) portfolio illustrations are either line-drawn or digitally produced. The utilisation of reconstructions based upon accurate planned data has proved immensely valuable on previous projects; both models (e.g. Hill and Rowsome 2011: fig 285) and drawings (e.g. Bateman *et al.* 2008: figs 117; 119-120). These have a higher initial cost but have proved very useful for a wide range of presentations. Illustrations of this type are perhaps more widely used in research projects (Hamilton 1999: 7) but the commercial sphere could utilise this aspect of interpretation to great effect, as the examples referenced above show.

3.8.2 *MOLA publications: synthesis?*

Academic archaeologists have called for an increase in thematic studies funded by commercial archaeology (Perring 2015; Millett 2013), although the same commentators have also acknowledged the high standard of publication (Perring 2014). The City of London's curator has traditionally taken a fairly conservative view of thematic study, preferring to allow planning conditions to be approved through the dissemination of a particular site's sequence on an individual site basis, rather than collating funds and enabling wider thematic study (for example), however preferable this may be (Stubbs 2015: 32). The influence of the market on curatorial archaeologists is an aspect of commercial archaeology which continually restricts research. I would also add that the programme constraints placed upon commercial archaeology results in relatively timely publication and archiving, a situation which is not always perceived to exist within academia. However, Millett (2013) and Thomas (2015) both acknowledged the difficulty of squaring the need for high academic standards with the new requirement to provide a public benefit. Our audience remains each other to a great extent and I would contend that we are obligated to present the data in a manner appropriate to archaeological colleagues, although a major change in the style of writing would satisfy alternative audiences. Non-fiction books written by non-archaeologists can be evocative and prove popular (e.g. Higgins 2013) and fictional accounts of historical events are successful when combined with archaeological information (e.g. Preston 2008; Harris 2009), though archaeologists would probably feel uneasy about conjecturing too extensively.

The role of the consultant and curator in changes to publication of sites A and B is evidence of a conservative approach. It would have been preferable (in my opinion) to have produced period-based publications for both the Roman and medieval periods, perhaps also bringing in sites very close by (Bow Bells House [published as Howell *et al.* 2013], Blossoms Inn [B Watson in prep] and 10 Gresham Street [published as Casson *et al.* 2015]). To not have considered these five neighbouring sites together is a huge missed opportunity, particularly as their analysis programmes were undertaken

within the same time period. This is difficult to reconcile in retrospect as additional funding for thematic studies of that nature is hard to come by. The City of London's curator Stubbs (2015: 32) acknowledges the need for more thematic study but does not offer proposals to increase this, due to the restrictive nature of developer funding (*ibid.*). I see this as disappointing and although I acknowledge that curators are embedded within planning departments which encourage development and therefore do not have archaeology as their prime concern. Hamilakis (2007) would argue that without strong curatorial support for a change in how funds are distributed there will be little likelihood of it happening.

An alternative model would see a levy placed on development and allocated centrally to projects deemed worthy of publication (Thorpe 2015b: 194). This scenario suggests that other projects would not receive funding and would merely be archived, inevitably resulting in accusations of subjectivity, although to acknowledge this may appease some critics (Thorpe 2010). The early Roman archaeology on sites A and B did not deviate significantly from that on other nearby sites (e.g. Howell *et al.* 2013) so the value of publishing a similar sequence could be questioned (and see above about synthetic publication); but I would argue that archaeologists must resist the temptation to reduce excavations to star finds or to present a revelation from each project (Holtorf 2007: 85), although this sensationalising may be required for public relations and is preferable to developers.

It would certainly be of benefit for commercial projects to be studied thematically, facilitated through central funding and this method could be used in relation to certain types of evidence (for example the Roman military; medieval economy). London is typical in this regard, as recent studies are proving (Perring 2002a); the need for funds to be directed towards a wider narrative should be a priority but will require curatorial support. The publication saga of sites A and B serves as an example of how tortuous such a revolution would be. Carver (2011: 143) goes further, suggesting that commercial projects should be tendered at the research design stage and chosen on the merit of that design, as occurred with the Channel Tunnel Rail Link scheme (Foreman 2004). This would depend on central funding for excavation as well as publication but may perhaps remove much of the negativity archaeologists feel about the commercial

sector, for those of us lucky enough to work in an archaeology-rich area, at least. Likewise, if a scheme which rewarded quality of output was in place, encouraging high-level research considerations this would also revive the commercial sector and raise standards (Holbrook 2015b: 77), although it would require careful design.

I would prefer that commercial projects were required to contribute a percentage of their publication budget towards synthetic studies. Archaeologists would decide what kind of synthesis to produce, whether period-, subject- or topographically-based (Millett 2013). Ideally these projects would adopt established research priorities (e.g. MoL 2002). Specialists from academia have ideas as to how this could be structured (e.g. Pearce 2015; Maltby 2015; Robinson 2015) but there are areas which could be brought in to expand the potential, in particular the international aspect. It is within the restrictive developer-funded environment that the data for synthesis is most readily available; working in a contracting unit with the unpublished material to hand should enable us to utilise vast amounts of data relatively easily, if the structural organisation were established. In the absence of this facility, publication of commercial excavations at least provides external parties with an impression of the data, as lack of publication is undoubtedly an impediment to research (Holbrook 2015a). Theoretical support for this synthetic approach would be forthcoming from the curatorial sector, which is seen as key to the success of Research Strategy which sees synthetic work on commercially excavated data as a key priority (Rowsome and Baker 2015, 34). Changing the emphasis to this new approach would be challenging but if a small number of key supporters were found within the development sector they could be used as exemplars to encourage smaller clients to buy into the concept. Prime examples would have been Bloomberg, who funded the excavation and publication of a large site in the City but may have been amenable to funding a different format of publication, or Crossrail, who also funded specific publications but may have appreciated the value of London-wide studies.

In the current absence of this centrally organised synthetic publication the responsibility has fallen onto the academic sector, with work such as Lacey Wallace's PhD on the origins of Roman London (since published as Wallace (2014) and Gwladys Monteil's work on samian (2005). There are other examples, with a current PhD candidate

working on Roman iron tools from the Walbrook valley (Humphries in prep). All of these rely heavily upon the data held by the LAARC, but Wallace in particular did not find this easy to interrogate and had to consult myself and MOLA colleagues on the primary data. This confirms the need for timely deposition of accurate data, or provision of data online (section 3.5.2).

3.8.3 Conclusion

There is no doubt that there needs to be more synthetic work carried out by the commercial sector. The provision of online digital data to supplement specific publications would greatly aid this. The ceramic phases for London should be adhered to where possible, as a London-wide phasing sequence would also facilitate comparative study.

3.9 Recommendations

3.9.1 Introduction

The preceding discussion has reflected on how knowledge is gained from developer-funded archaeological work and highlighted problems with conducting research within the current system. The following recommendations are intended to alleviate some of these problems and are a summary of the points proposed within the main text of Chapter 3.

3.9.2 Research agendas

Regular consultation be undertaken to ensure the London Research Strategy is used and kept relevant. Using this consultation, curators could be encouraged to widen the scope of developer-led investigations to allow wider distribution of funds to enable thematic analysis.

Research agendas be more clearly signposted within WSIs and post-excavation assessments to encourage archaeologists to consider themes more explicitly.

National research agendas be adopted or considered alongside local or regional agendas. There are universal themes such as urbanism, mobility and trade which extend beyond site, town or even national borders. With this in mind, the academic community be invited to contribute to commercial projects at the design stage and to join the consultation on maintaining research agendas.

3.9.3 Field techniques and methodologies

The MOLA field manual be updated to provide guidance on interpretation, combined with an update of the guidance provided with the MOLA context sheet to encourage more interpretation. Additionally, internal training be formalised to regulate knowledge and share ideas.

The ‘site tour’ be adopted on all projects to empower field teams with knowledge of how their stratigraphy fits within the site and wider landscape

3.9.4 Collaboration and professionalism

MOLA invite academic specialists to contribute towards project designs, site monitoring and analysis and hold regular thematic seminars to disseminate their results to the wider community. The commercial sector will need to inform clients of the ‘public’ nature of data, and discourage the current way of keeping things secret until published.

MOLA seek research funds to undertake collaborative thematic studies and encourage staff to study specific aspects of their work, perhaps through bursaries and the provision of study leave.

3.9.5 Analysis and publication

MOLA retain an appropriate percentage of project funds to contribute towards thematic and collaborative studies.

A more reflexive approach of archaeology within publications could be considered, to encourage discussion of site methodologies and excavation conditions where appropriate.

MOLA to investigate methods of making data available online to encourage wider participation.

3.10 Conclusions

London is the most completely and accurately explored provincial town in Roman Britain (Wallace 2014: 1) but, as this thesis has shown, there are problems with how the data is collected and analysed. Research-led archaeological work has become ever more restricted with increasing commercial pressures and we need to acknowledge this. We can approach the problem, however, and should request that methods and agendas be updated to reflect the way in which we work. We must take care to avoid dogmatism when creating project designs to enable appropriately focused study (Carver 2011: 33). However, I will not present a new structure for archaeology within this thesis, as I and many others feel that it is naïve to assume that given the current political climate there will be a move towards nationalisation or central funding (cf. Walker 2015: 208). Nor will we remove the omnipresent consultants, considered by many to have been a negative addition to the market (cf. Thorpe 2015b: 191). In France a public system was opened up to competitive commercialisation in 2003, albeit no evidence of cost savings (Demoule 2010: 13) despite hopes to the contrary. Demoule (ibid.: 13) sees this development as purely ideological: supportive of free-market principles but in clear contravention of the opinions of the entire scientific community. There are significant similarities between this and problems with the British system as identified by Thorpe

(2012b; 2015b: 190). We must work within the current system, but commit to working more effectively.

Most pressing is the need to synthesise knowledge to enable further research. The knowledge gained through developer-funded excavations is vast; the next step must be to enable research across sites and themes to interrogate the details. Only 1% of revenues across the sector in 2014 related directly to ‘research [and public] archaeology’ (Landward Research Ltd 2014: 24), a statistic which speaks volumes. Now MOLA has gained Independent Research Organisation status we are able to apply for funding streams previously unavailable and this has become a priority. To undertake large-scale research projects has the added benefit of providing continuous employment for archaeologists who are often at the mercy of the construction industry (I have been at risk of redundancy on a regular basis throughout my career).

We must also attempt to link the academic and commercial worlds while acknowledging that some aspects of reflexivity (extensive discussion, doubt) are unsuited to commercial archaeology (Hamilton 1999: 5). It is tempting for the commercial archaeologist to feel in the thrall of academia, as we are persuaded that it is only in universities that new theories and techniques originate. It is worth repeating the assertion that single-context excavation maintains an innate reflexivity, combined with usable data. That said, there are ways in which we can alter or adapt our methods to ensure a more interpretive atmosphere is encouraged. In particular, I would say that awareness of current theoretical mores cannot be restricted to post-excavation, but should be encouraged during excavations (Chadwick 2003); the best way to ensure this is through the recording system and training methods. Archaeologists must resist reducing fieldwork to a mere milestone on a development and develop ways to increase the potential for research.

Persuading clients of the public benefit gained from new knowledge can now be a priority (English Heritage 2012) but the most challenging aspect of this appears to be determining how we can identify the ‘value’ of archaeology. Cooper-Reade (2015: 36) acknowledges that while it is much more than a mere product (a leaflet or open day for example) and Jennings (2015) suggests value is best appreciated through the experience

of archaeology (i.e. excavation), but for a developer the simplest solution may be to provide financial input to achieve a satisfactory (for them) level of corporate social responsibility. It may be that to place a financial value on archaeology would enable a wider understanding (Walker 2015: 205) but this seems an over-simplification when such value evolves within communities and are undeniably human in scope. However I would argue archaeology's contribution to knowledge forms a central part of the concept of value and can add depth to both the physical and imagined place. Archaeologists in all sectors are confronted with the challenge of increasing the relevance of our work and we must be ambitious to ensure the research input is increased within the current structure.

4 Appendices

4.1 Appendix 1

4.1.1 *Original Research Aims for Site A*

Original Research Aims for 120 Cheapside excavation and watching brief from Bateman (2005) (Section 2.2)

Site specific objectives and research aims

All research is undertaken within the priorities established in the Museum of London's *A Research framework for London Archaeology*, (2002)

The following archaeological research objectives have been compiled after consultation with appropriate specialists, and in particular with consideration of the results of previous archaeological investigations both on the site and on other sites in the area.

1. Is there any evidence for pre-Roman settlement activity? In particular is there any evidence for any of the immediately pre-Roman activity as found at the 10 Gresham St site to the north?
2. What evidence is there for Roman settlement in the area? How does this differ from/compare with the activity from nearby sites, especially the 30 Gresham Street site to the north east? What kind of settlement was there? (domestic, industrial, etc);
3. Is there any evidence for a Roman bathhouse or bathhouse related structures? Is there any evidence for any other water-management features (as at e.g. 30 Gresham Street)?
4. What evidence is there for the establishment of the Late Saxon/medieval street plan (Milk St, Wood St) and the buildings fronting on to it?
5. Is there any evidence for the date of the establishment of the late Saxon *Ceap* and the market stalls which flanked it?
6. Is there any evidence for the location of the Cheapside Cross at the corner of Wood Street and Cheapside?
7. Is there any evidence for the survival of remains of the Mitre Tavern?
8. What evidence is there for the development of the area in the post-medieval period?
9. What evidence is there for the impact of modern building techniques (piling etc) on the survival of archaeological remains?

4.2 Appendix 2

4.2.1 Original Research Aims for Site B

Original Research Aims for 14-18 Gresham Street excavation, from Brigham (2006) (Section 2.2)

All research is undertaken within the priorities established in the Museum of London's *A research framework for London Archaeology*, (2002).

The following archaeological research objectives have been compiled after consultation with appropriate specialists, and in particular with consideration of the results of previous archaeological investigations both on the site and on other sites in the area.

Natural topography and the prehistoric environment

1. Does the untruncated surface of natural gravels and/or brickearth subsoil survive?
2. What is the nature of the pre-Roman environment?
3. Is there any evidence for prehistoric activity on the site?
4. Is there any evidence for paleo-channels on the site?

Roman

5. Is there any evidence for early or even pre-Roman structural activity as at nearby sites?
6. Is there any evidence for Roman water channelling or extraction or other water management features as at some adjacent site?
7. What evidence is there for early Roman roads as observed at adjacent sites? How does the evidence from this site modify our understanding of roads and their usage?
8. What information does the site provide as to the development of streets and properties over the Roman period?
9. What is the character of the Roman road? What evidence is there for change in its alignment, upkeep/maintenance, size, etc during its life?
10. What evidence is there for a planned layout to streets and properties?

11. What is nature of Roman occupation at any one period? Domestic, military, industrial, official, agricultural/pastoral, semi-urban fringe?
12. What is the nature of the surrounding environment in the Roman period?
13. What evidence is there for the influence of the nearby amphitheatre in the development of streets and buildings?
14. Is there any evidence for the Boudican or Hadrianic fire destruction horizons?
15. What evidence for 'dark earth' or similar deposits, representing the end of the Roman period of occupation, is there?

Saxon

16. Is there any evidence for mid-late Saxon development of the area?
17. If there is, what is the nature of Saxon occupation? Domestic, military, industrial, official, agricultural/pastoral, semi-urban fringe?
18. What evidence is there for changes to the local environment in the Saxon period?
19. What evidence is there for the continued existence of old Roman fort or the amphitheatre?
20. What evidence is there for a possible Saxon royal palace?
21. Is there any evidence for the earliest development of the nearby (medieval) Guildhall?

Medieval

22. What is the nature of medieval occupation? Domestic, industrial, official, semi-urban fringe?
23. What evidence is there for a planned layout to streets and properties?
24. What evidence is there for the so-called medieval Compter? Does the evidence from this site modify our understanding of this building and its usage?

Post-medieval

25. What is the nature of post-medieval occupation? Domestic, industrial, official, etc?
26. What information does the site provide as to the development of streets and properties over the period in question?
27. What evidence is there for the Compter in the later period?

4.3 Appendix 3

4.3.1 Original Research Aims for Site C

Original Research Aims for Princes and Bartlett Houses excavation, from Nielsen (2007) (Section 2.2)

All research is undertaken within the priorities established in the Museum of London's *A research framework for London Archaeology*, (2002).

This statement sets out the aims considered appropriate to the potential archaeological resource of the site. The subsequent detailed methodology is set in the context of the methods and approaches which are considered most appropriate for archaeological evaluations and excavations on sites in Greater London, in accordance with the advice contained in the City of London Department of Planning and Transportation's Planning Advice Note 3: Archaeology in the City of London, Archaeology Guidance, (2004).

On the basis of the results of the evaluation, it is considered that the majority of research aims discussed within the Method Statement for that phase of works are still valid, but these have now been added to and the sequence of questions re-ordered. The research aims stated here may be revised in the light of the results of the investigation in order to formulate final objectives for all phases of investigation on the site.

Topography

1. What is the nature and level of natural topography?

Prehistoric

2. Is there evidence for palaeochannels crossing the site in the prehistoric period? If so, what is the nature of these? What can geoarchaeological investigation tell us about their formation and the contemporary environment?
3. Is there any evidence for pre-Roman activity on the site? If so, what does it indicate about prehistoric occupation or exploitation of the area?

Roman

4. What date does the preparation of the site represented by possibly redeposited brickearth strata take place?
5. Although not suggested by evaluation, is there evidence for the management of possible Walbrook tributary channels in the Roman period?
6. Is there evidence for Roman structures or activity on the site? What is the character and date of these?
7. Are settlement patterns in the area reflected in the changing form and function of buildings during the course of the Roman period?

Saxon

8. Is there any evidence for the Saxon re-occupation of the area? What is its nature and date?
9. Does the early 10th century focus of settlement between Queenhithe and Guildhall extend as far as the site?
10. Is there any evidence for delineation of 11th century or earlier land units?
11. What can the artefactual and environmental evidence tell us about the usage of the site in the Saxon period?

Medieval

12. What is the character and date of medieval activity on the site?
13. Can the finds and environmental assemblages associated with remains of this period cast any light on the usage of the site in the medieval period?

Post-medieval

14. What information can structural and other remains on the site provide regarding the occupation and usage of the site in the post-medieval period?
15. Can the post-medieval archaeological evidence be related to cartographic and documentary evidence?

4.4 Appendix 4

MOLA Basic Interpretation Codes for post-excavation data entry and analysis

C	Coffin
CD	Construction debris
CE	Cellar, basement, undercroft, crypt, icehouse etc
CR	Cremation burial
D	Ditch, drain, gully, sewer, culvert, water supply/drain pipe
DB	Destruction debris (redeposited)
DS	Destruction debris (in situ)
EB	External bank
EC	External cultivation
ED	External dump
EM	External metalling, cobbling, road metalling
EO	External occupation
EP	Pasture, parkland
ER	External revetment
ES	External surface and cultivation
EU	External (unspecified)
F	Furnace, oven, kiln, fireplace, flue, chimney, stokehole
FL	Floor
G	Grave cut
GM	Grave (multiple occupancy)
HE	Hearth
ME	Mechanical, fixtures, fittings, machinery, wiring, gas piping
MU	Make-up, levelling
N	Natural strata (unspecified)
NA	Natural wind-blown deposit
NC	Natural alluvial channel deposit
NE	Natural erosional feature
NF	Natural foreshore deposit
NM	Natural marsh deposit
NO	Natural alluvial overbank
NS	Natural soil (unspecified)
OC	Occupation debris
P	Pit (unspecified)
PC	Pit cess
PK	Pit cooking
PO	Pit ossuary
PQ	Pit quarry
PR	Pit refuse
PS	Positive structural, (not walls), steps, post-pad, pier, column
PT	Pit storage
RO	Roof ceiling
S	Structural cut
SE	Surface erosion (interface or cut)
SK	Skeleton
SN	Non-structural cut

SO	Structural opening, door, window, arch
SP	Structural cut (post-hole)
ST	Structural timber
SU	Sump, water collection pit
TH	Tree hole/bole
TI	Timber not in situ
W	Well
WA	Wall, sill
WS	Worked stone not in situ
XX	Unknown/unspecified

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