



Finely worked upper Medway Valley Kentish ragstone blocks in the land wall of Roman London (this location near Tower Hill), late 1st century AD. Hall and Merrifield (1986, 28) said over one million squared and dressed ragstone blocks, from the five quarries identified for the first time in this research, would have been used for the inner and outer facing alone. Simon Elliott.

Introduction

Developments in the exploitation of natural resources such as iron and stone by human society can be a key indicator of change and continuity in societal priorities and practice. In so doing they provide a forensic level of insight into the changing daily lives of communities who lived in the past. A particular case in point is Britain during the Roman occupation when, for the first time in the long narrative of human occupation of the islands, such exploitation began to occur on what we might recognise today as an industrial scale. The degree of human and environmental impact this created far exceeded anything that had gone before, or indeed afterwards until the advent of the Industrial Revolution in the 18th and 19th Centuries AD (Laurence, 2013, 43, and S. Elliott, 2014b, 49). Crucially, in the South East (defined here as Kent, East Sussex and Surrey given their importance to the occupation period regional extractive industries) we can detect this development through many diverse datasets (many newly available through this research), and also appreciate it through the use of anecdote where academically appropriate. To that end, the core aim of this book is to use this data to understand and interpret iron manufacturing in the Weald and ragstone quarrying in the upper Medway Valley during the Roman occupation, and then to consider the commonality or uniqueness of this experience when compared to elsewhere in occupied Britain and indeed the wider Empire. This includes a detailed evaluation of whether these were industrial Imperial Estates owned by the Emperor, and the level to which the military managed and operated them.

This book is based on the key data set out in my PhD thesis at the University of Kent (Elliott, 2017), and my earlier MA Dissertation at UCL's Institute of Archaeology (Elliott, 2011). The latter, which set me on the path to the PhD research, revealed the intense level of industrialisation that occurred in the region during the occupation and how this changed over time. Hitherto, this evidence had not been collated and examined synthetically. A particular focus of the MA research was ragstone quarrying in the upper Medway Valley, both at the tidal reach around Allington on the River Medway and also, in an even more intensive way, above the tidal reach. The MA hypothesis also discussed whether hydraulic riverine infrastructure would have been needed to make the river usefully navigable above the tidal reach to enable the ragstone quarries there to be exploited to their full economic potential through easier transportation (see Figure 1 for evidence of this maritime transport network, and Figure 2 for detail on the likely Roman transport vessel types used). I also discussed the potential for an association between the various known villa estates on the river and the elites who ran the quarries,

using available datasets to show these connections where they could be shown to exist. Dubbing the work the 'Medway Formula', I concluded by arguing that a reasonable case could be made that the natural resource exploitation through to the middle of the 3rd century AD in the upper Medway Valley¹ was facilitated by the *Classis*



Figure 1: The 'Medway Stones' – millstone or column base blank, one of four which the author helped recover from likely Roman wreck site in the River Medway, possibly Greensand from East Cliff, Folkestone. Simon Elliott.



Figure 2: Mosaic image of Roman merchant vessel, Ostia Antica, Italy. Transport vessels of all sizes played a vital role supporting the *metalla* of the south east of Britain during the Roman occupation. Simon Elliott.

¹ The River Medway and its valley feature heavily in Chapter 4 and were earlier the specific focus of my MA research as detailed above. A number of definitions are available for the various sections of its length. For example the Environment Agency (EA) divides the river into four sections for its flood warning system. However, for the purposes of this research I believe that a simpler system will be more useful. To that end I will use the definition utilised by the Victoria County History's 'England's Past for Everyone' Lower Medway Project (carried out in association with English Heritage, Hann, 2008). This defines anything below the tidal reach at Allington as the lower Medway, and anything above it as the upper Medway.

Britannica regional navy on behalf of the state (at least in terms of transport), after which it became much more localised in management if, nonetheless, still being largely geared to the demands of Imperial projects.

The PhD research built on the MA work with a view to determining if the ‘Medway Formula’ findings of intense resource exploitation could be replicated across Kent and the South East, and more broadly across occupied Britain. The interpretative path along which this research ran has now provided the template for this book. To make it as accessible as possible it is broken down into six chapters. This first is this Introduction which also features background on the specific research questions to be asked and the key research parameters. The second chapter is a general background section designed to be of common use to all of the following specific areas of the research, and to allow a view to be taken regarding systems of authority, exploitation, power and agency in occupied Kent and the south east of occupied Britain. In so doing, it covers the current debate on the nature of Roman imperialism and its likely manifestations in the region in terms of social structure and systems of control. Specifically, this background material will feature:

- A review of the geology of the South East and its impact on the economy and settlement in the region during the Roman occupation, important given the focus of this research on change and continuity in the exploitation of natural resources.
- An overview of the latest thinking regarding the workings of the Roman economy to provide context for the later regional analyses (this including a general background sub-section which considers the extent of market integration across the Empire, a forensic examination of the nature of the Imperial economy, a similar examination of the nature of the provincial and market economy, and finally a detailed analysis of Imperial Estates given their importance to many aspects this research).
- A broad review of the Kentish experience of the Roman occupation, given the county’s importance to the research.
- An analysis of Roman industrial practices to provide a backdrop for the focus on the occupation-period extractive industries that were exploiting the natural resources.
- A discussion on occupation-period maritime transport in the South East to again provide context for the regional analyses.
- An examination of the military presence in Britain during the occupation with an eye to their relevance in the wider research.

The third and fourth chapters are the central part of the research and comprise two specific regional analytic studies, their order deliberately based on the maturity of their respectively available datasets, with the best-known first. To that end I begin with the Weald and its comparatively well-documented occupation-period iron and tile/ brick

industries. These have been examined and interpreted over a lengthy period of time (for example by Ernest Straker, Gerald Brodrigg and Henry Cleere, the pioneers of Wealden archaeology in the 20th century) though in practice the evidence and synthesis has been patchy and there is now much new evidence which is presented here. In Chapter 4 I then revisit the ‘Medway Formula’ where newly available data from my PhD research has allowed a much more detailed picture of the occupation-period Kentish ragstone quarrying industry to emerge, together with associated settlement (for example the villa at Teston illustrated by Figure 3 and the regional Roman road network referenced in Figure 4). Both regional studies begin with a review of the details of all of the relevant key primary evidence sites, providing analysis set against the dating of the location, nature of occupation and the type of site as presented by the available evidence, all threaded through with the available bibliographic detail recording the history of the site. Given the focus on the exploitation of natural resources and the associated extractive industries in this book, specific comment is also made on the scale of the industrial sites in both regions, both in the site summaries and main body of the research. Where appropriate analogous modelling is used here, for example Peacock’s hierarchy of modes of production regarding the Roman pottery industry (1982, 8), where the linkage between capital and labour at the larger sites he modelled is particularly useful when reviewing Kent and the South East’s extractive industries during the occupation (see Section 2.4).



Figure 3: Villa excavation at Teston, 2014 season. South wall of main range at top, later buttress centre, apsidal with plunge pool foreground. Simon Elliott (Site Co-Director).



Figure 4: Roman road running from Dean Street Roman quarry to Roman ford at Barming/ East Farleigh villa. Two burial groups and milestone/ burial marker along its length. Located and examined by author. Simon Elliott.

Next, the fifth chapter features a detailed discussion reviewing the data and evidence presented in the two regionally focused chapters. It is here that the provenance of the two considered *metalla* as Imperial Estates, and the role of the military therein, is considered. The sixth chapter is a short conclusion which synthesises all the preceding data and interpretations to present an overall picture of the *metalla* of Kent and the south east of Britain during the Roman occupation.

Three appendices follow which provide a reference resource to the preceding chapters. These include a summary of all of the regional natural resources exploited for use in building and other activities in occupation-period Kent and the South East, a discussion on the sources of data used when referencing the *Classis Britannica* which is so important to this work, and finally an analysis of Roman riverine maritime technology given its importance to the transportation of extracted natural resources in the county and South East during the occupation. The book closes with a list of abbreviations and a bibliography.

1.1 Research Questions

For my PhD research a number of related subsidiary themes and hypotheses were tested given their value to the wider research, and these are rehearsed in this book given their value to the wider work. These include:

- An examination of the hypothesis that towards the end of the occupation settlement in Kent and the south east of Britain deteriorated significantly, leaving two ‘islands of activity’ in north west Kent (centred on the Darent and Medway Valleys, still economically orientated towards London even at this late stage) and eastern Kent (centred on Canterbury, Roman *Durovernom Cantiacorum*, and the Channel coast). This utilises research new to this work, and also an examination of existing published research.
- Whether the experience of Rome in the province² would have been at its most undiluted in Kent and the South East, especially early in the occupation, given the region’s proximity to the Continent. Blanning’s (2014, 484) assertion that Roman Kent had more in common with northern Gaul than elsewhere in occupied Britain will be considered in this regard.
- The conception that agriculture increased even further in importance in relation to the local economy later in the occupation in the region, in the context of a discussion regarding the decline of state-run extractive industrial enterprises (if that is so determined) and increased demand from the Continent for food and provisions.

Finally in this sub-section, note that any discussion regarding theoretical approaches to the study of the Roman Empire and its economy (for example the debate regarding levels of Imperial exploitation in occupied Britain, and the concept of Romanization and its more recent counter-arguments), can be found in Chapter 2, and particularly Section 2.2.1.

1.2 Research Parameters

Next I make the following general points regarding the research parameters used in the book.

- Within the reviews of primary data in the two regional surveys, all sites (excepting a few examples such as isolated temples, cemeteries and bath houses) have been identified as one of four specific site types, namely villa settlements, non-villa settlements/ ‘native settlements’, small towns (these three based on Richard Hingley’s tripartite system, 1989, 20), and industrial sites (the latter added by me given the focus of the wider research on the extractive industries). As set out by Hingley (1989, 21) villa sites are determined in the research as domestic buildings showing evidence of the investment of considerable levels of surplus wealth

² Where the term province is mentioned, until the Severan/ Caracallan reforms of Britain in AD 211/ 212 (originally planned in AD 197) this references the original single province of Britannia. After the reforms it references either Britannia Superior or Britannia Inferior dependent on the context (for example in the case of the *Classis Britannica* the former, see Section 2.6.2, and in the case of the northern frontier the latter), or indeed where appropriate both. Following the Diocletianic reformation and the establishment of the diocese with its four and perhaps later five provinces (see Section 2.3.1 for discussion), given the complexity the full name of a given province is detailed for clarity.

in their construction, with Branigan (1982, 81) earlier saying that those building such a structure were very ostentatiously adopting a Roman lifestyle for personal betterment. Meanwhile, I define non-villa settlements/ 'native settlements' (the most common type in Britain during the occupation, Lawson and Killingray, 2004, 20) as those where the inhabitants for whatever reason chose not to display the ostensible trappings of a Roman lifestyle. Meanwhile small towns (defined as distinguishable from their larger *colonia*, *municipia* and *civitas* capital counterparts by the likes of Todd, 1970, 114) are defined in the research as a variety of more extensive, diverse settlements which existed throughout the occupation in Britain and which usually had an association with a specific activity, for example administration, industry or religion (with many also being located at key transport nodes). Finally, for industry I define such sites as those showing activity in this regard but lacking any signs of rural settlement (see discussion regarding industrial Imperial Estates in Section 2.2.4).

- In terms of the interpretative path used when considering hypotheses in the book I have followed the traditional pattern of setting out the data first (this deriving from archaeology, archival research, scientific observation and analogy), then viewing such data through the prism of appropriate modelling, before finally setting out my own views based on the evidence and subsequent analysis (and considering here anecdotal insight where deemed well-judged or prescient). I have chosen to use the widest possible variety of relevant data, ranging from that derived from the sharper end of current peer-reviewed academic research at one extreme, through data available in grey literature awaiting publication or never to be formally published (and made available through initiatives such as the National Roman Grey Literature Project which is being facilitated by English Heritage, Cotswold Archaeology and the University of Reading), all the way through to the antiquarian record at the other extreme. Where there is a potential problem with the data detailed in the sources (for example the interpretation of the military materials found in association with the water mill site at Ickham, Mould, 2010, 144, see Section 2.6.4), this has been specifically referenced and taken into account in my narrative, and as always the use of any antiquarian reference comes with a strong health warning when not associated with modern research (the miss-recording of the 1872 excavations of the Roman villa at Teston being a good example, Elliott, 2013, 40, see Section 5.1.4). In terms of material culture, where the Kent (and other) Historic Environment Record (HER) has been referenced I have provided my own commentary about the provenance of the data. The research also includes the most up to date data and interpretations from my own practical research projects.
- Finally, I take a moment here to present in advance the highlights of the research set out in the book to familiarise the reader such that they are readily

recognisable as they appear in the narrative. As will become clear, I have deliberately set out in my work not simply to reinterpret existing data but to provide my own new data through an active field work programme (involving the whole community, ranging from private citizens, local schools, local businesses and local archaeological and history societies, all the way up to regional Government and indeed Government Agencies), thus adding to the wider body of knowledge of Roman archaeology in Kent and the South East, in Britain and indeed across the whole Empire. To that end, I have helped relocate the Roman villa at Teston last recorded (or rather misrecorded) in 1872, and then helped facilitate four seasons to date of excavation. Further, I have found a potential Roman shipwreck complete with load in the River Medway together with its associated quay (a first dive on the site has already been completed by the Royal Engineers on my behalf, with professional dives now planned). Additionally, and crucially for the wider research, I make the case in Section 5.3 below that I have found the quarries from where the ragstone which built much of Roman London and the South East was extracted (fully detailed in Section 4.3.3), and found a new Roman road which linked these quarries with the villa estates where the elites who ran them lived. In association with the new Roman road I have also found a newly located Roman cemetery together with milestone, and most recently an occupation-period iron working site (the first for the Medway Valley). Lastly, a new Roman bridge across the Medway at Tovil may also have been found, again discussed in full below (in Section 4.1.4). As the reader may gather, the new data presented above is heavily focused on the Medway Valley, which has been a particular focus area of my own fieldwork activity. This is reflected in the flow of the book, which deliberately builds from an initial emphasis on background material to inform the later research, then growing to review and re-evaluate existing datasets for the Weald, before moving to the new research for the Medway Valley. This is finally followed by the discussion where the key topics for debate are discussed, thus allowing me to set out my final views and interpretations holistically in the conclusion.