# BLOOD, FAITH AND IRON

## A DYNASTY OF CATHOLIC INDUSTRIALISTS IN SIXTEENTH- AND SEVENTEENTH-CENTURY ENGLAND

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ARCHAEOPRESS PUBLISHING LTD Summertown Pavilion 18-24 Middle Way Summertown Oxford OX2 7LG

www.archaeopress.com

ISBN 978-1-78969-068-2 ISBN 978-1-78969-069-9 (e-Pdf)

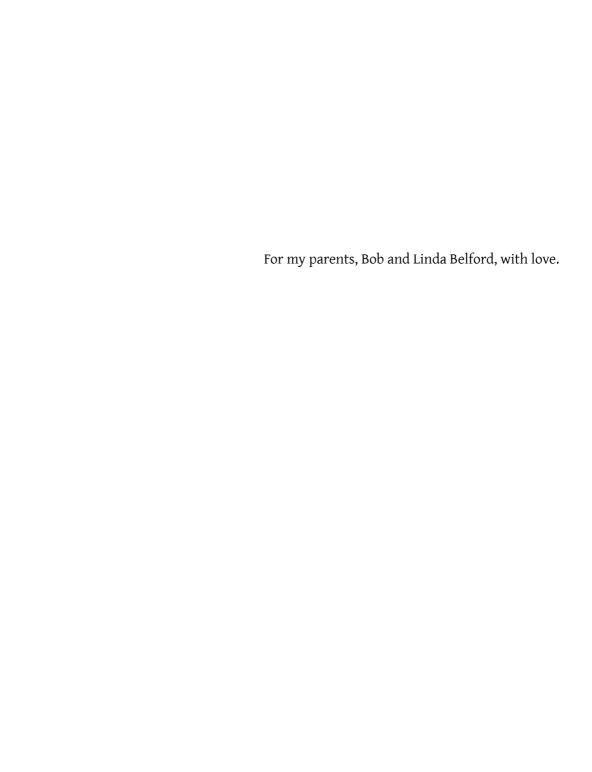
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Cover photo: Stained glass window showing blacksmiths at work, at the Cathédrale Saint-Bénigne in Dijon (Burgundy). Dijon Cathedral, like Much Wenlock Priory, was an early monastic foundation which became a Cluniac house in the eleventh century. Photograph by Paul Belford.

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Printed in England by Holywell Press, Oxford

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## Acknowledgments

The idea for this book originated about 15 years ago in a muddy hole in Shropshire. There I had encountered the material remains of the first cementation steel furnaces in Britain, and was determined to find out more about who had built them and why.

The excavations which began this long and sometimes painful process were conducted over several seasons in partnership with Roger White (University of Birmingham, UK) and Ronald A. Ross (Wilfred Laurier University, Ontario). Fieldwork participants came from all over the UK, the United States and Canada; they are too many to list here, but I would like to single out some of my long-suffering colleagues at the time for their contributions, namely: Mark Ashby, Emma Dwyer, William Mitchell, Simon Roper, Sophie Watson and Mel Weatherley.

With the help of Jonathan Finch at the University of York it was possible to turn those nascent ideas into a PhD. The thesis benefitted enormously from conversations with David Cranstone, David Crossley, Michael Darby, Harriet Devlin, Brian Dix, David Dungworth, Geoff Egan, Paul Everson, Edward Impey, Edward James, Marilyn Palmer, John Powell, Joanne Smith and Tim Young. The PhD was only completed thanks to the kind indulgence of employers, notably: Glen Lawes (Ironbridge Gorge Museum Trust), Gerry Wait (Nexus Heritage), and Frances Lynch Llewellyn (Clwyd-Powys Archaeological Trust). I was very pleased to have the support of colleagues at the Clwyd-Powys Archaeological Trust during the final stages. Any study of the midlands iron trade must rest heavily on the shoulders of Peter King's tireless forensic interrogations of legal and adminstrative documents of the period, and this book is no exception.

I am particularly grateful to Roger White, Malcolm Dick and Gerry Wait for their encouragement towards publication. The unwavering support of family has been gratefully received, if not always appropriately acknowledged. Finally, I owe a huge debt of gratitude to Agnes White and the 'Coalition of Chaos' for bringing strength and stability. Any errors, omissions or other faults are entirely my own.

Paul Belford Shrewsbury October 2018

### Introduction

This book overturns some traditional narratives about the process of industrialisation in England. It does so by exploring a seemingly familiar – indeed prototypical – 'industrial landscape': the Ironbridge Gorge.

In 1708 Abraham Darby – a Bristol brass-founder and Quaker – leased a run-down and unprofitable ironworks at Coalbrookdale in Shropshire and began to experiment with iron making. He was the first to be commercially-successful in smelting iron with mineral fuel (coke), and his son's similar success in enabling coke-smelted iron to be used in (coke-fuelled) forges, brought about a step-change in the quantity and quality of iron production in Britain. This was one of the key moments in the Industrial Revolution, that important piece in the complex jigsaw of the long transition from medieval to modern. The Darby family's resulting wealth enabled the construction of the first iron bridge and some of the earliest workers' housing.

This well-rehearsed origin myth is also part of a national narrative of insular Protestant individualism, from which stemmed an exceptional work ethic, an innate skill in technical innovation, and open-minded scientific inquisitiveness. Moreover as nonconformist Protestants, the Quakers were excluded from conventional paths to social and financial security. They were underdogs, and thus conformed to another popular trope in the English imagination. The Quakers developed extensive business and social networks, predominantly based around their faith. Their non-conformist entrepreneurialism characterised a brave new British post-medieval world that reached its zenith in Victorian industrial paternalism and imperial colonialism.¹ Such then is the conventional story: of the Ironbridge Gorge specifically, the iron industry more widely, and of British national progress generally.

However, the truth about Coalbrookdale is somewhat different. Darby did not acquire a *terra nullis* in backward rural Shropshire. Rather, he acquired a well-established and sophisticated ironworks, with an excellent network of raw materials and access to markets. The area had a long history of innovation and experimentation in ferrous metallurgy. It had been a leading supplier of coal along the River Severn for 300 years before Abraham Darby was aware of its existence. Since the early-sixteenth century

T.S. Ashton, Iron and Steel in the Industrial Revolution (Manchester: Manchester University Press, 1924); R.A. Mott, 'The Shropshire iron industry', Transactions of the Shropshire Archaeological Society 56 (1957-60), 68-81; R.A. Mott 1957, 'Coalbrookdale in the early years', Transactions of the Shropshire Archaeological Society 56 (1957-60), 82-93; Arthur Raistrick, Quakers in Science and Industry (London: Bannisdale Press, 1950); Arthur Raistrick, Dynasty of Iron Founders: The Darbys and Coalbrookdale (Coalbrookdale: Ironbridge Gorge Museum Trust, 1989); H.R. Schubert, History of the British Iron and Steel Industry, from c.450 BC to AD 1775 (London: Routledge and Kegan Paul, 1957); Barrie Trinder, The Most Extraordinary District in the World, Chichester: Philimore (1977); Barrie Trinder, The Industrial Revolution in Shropshire (Chichester: Philimore, 2000).

this ironworks had been turning iron ore into wrought iron; in the early-seventeenth century it had also been the first to mass-produce high-quality steel in Britain with an entirely new process. The business of which it was part was at one time one of the largest industrial enterprises in England, with a portfolio which included extractive, metallurgical and other industries in England and overseas. That portfolio had been created and managed over the course of a century by a very different dynasty: the Brooke family.

The story of the Brooke dynasty does not conform to conventional narratives of national industrial progress. For the Brookes were Catholics, and at times very active in resistance to the post-Reformation Protestant hegemony. Their technologically advanced, economically significant and philosophically well-informed social and economic complex provided the springboard from which the later and much better-known story of eighteenth century industrialisation in Shropshire took off. Two key questions therefore arise. First is the extent to which this was typical of post-Dissolution industrialisation. In other words, how exceptional was the Brooke industrial dynasty in entrepreneurial and technological terms, and what was its impact and legacy? Second is the role played by the Brookes' Catholicism in the development of the industries, landscapes and buildings which they created and inhabited. How important was their Catholicism to their own identity - as gentry, as industrialists, as courtiers - and how were these identities expressed? To what extent are those expressions detectable archaeologically?

This book answers these questions. It also suggests alternative approaches for future research into early post-medieval industrialisation, arguing that the intersections between contemporary religious, political, social and economic identities may be subjected to more nuanced analysis through interdisciplinary approaches.

#### Previous historical research

Awareness of the significance of the Coalbrookdale landscape to the history of English industrialisation began in the nineteenth century. The conventional narrative of events has been shaped both by the nature of the evidence and the development of the disciplines which have studied it. Consequently several different lines of enquiry have emerged, each with their strengths and weaknesses.

There are a number of secondary sources dealing with the history of the study area. Shropshire was somewhat behind the curve of the development of antiquarian enquiry, with the earliest coherent history of the town and environs of Shrewsbury being produced in 1779.<sup>2</sup> This was followed by various plagiarisations and revisions during the first part of the nineteenth century.<sup>3</sup> There was no genuinely fresh attempt

<sup>&</sup>lt;sup>2</sup> Thomas Phillips, *The History and Antiquities of Shrewsbury etc.* (Shrewsbury: Privately Published, 1779).

<sup>&</sup>lt;sup>3</sup> Hugh Owen, Some Account of the Ancient and Present State of Shrewsbury (Shrewsbury: Privately Published, 1808); Hugh

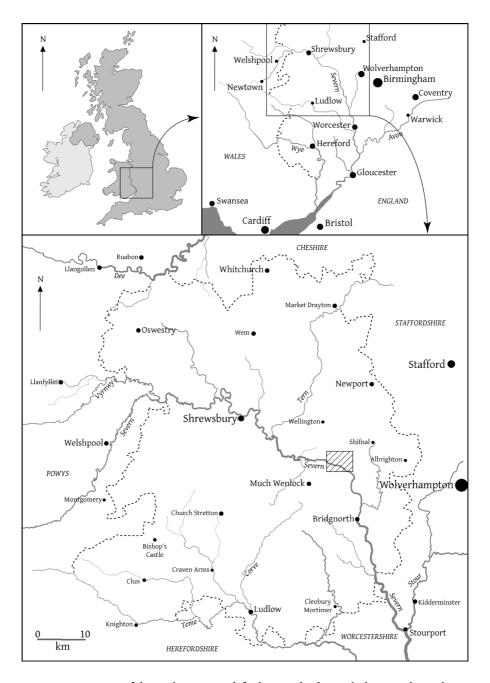


Figure 1. Location of the study area. Top left: the British Isles, with the United Kingdom shaded. Top right: the English West Midlands and Welsh border area showing the River Severn and its principal tributaries. The England-Wales border is shown as a dashed line. Bottom: the historical county of Shropshire (county border as a dashed line) showing the principal settlements and watercourses in the sixteenth and seventeenth centuries. The study area is shaded. Drawing by Paul Belford.

at a local history for over sixty years; when it did emerge this consisted of an eclectic mixture of observations derived from 'personal survey into the druidical, military, and other early remains in Shropshire and the north Welsh borders'. In the 1850s Robert Eyton compiled a monumental 12-volume parish-based history of notable families, including the Brooke family and their relatives and associates, some aspects of which can be corroborated with documentary sources.

It was not until the late nineteenth century that local historians moved beyond druidical barrows, Roman walls and late-medieval gentry and turned their attention to the industrial history of the area. John Randall was an extraordinary pioneer in this regard. Born in 1810, he worked for most of his life as china painter at the Coalport porcelain factory. In the 1840s he became interested in geology, and began collecting specimens locally; he was awarded a bronze medal for his collection at the 1851 Great Exhibition. He began writing articles on local history, geology and other matters in the late 1850s, and published a series of local history books from the 1870s onwards. His 1880 History of Madeley is a rambling, disjointed and entirely unreferenced work, with considerable freedom being taken in filling the spaces between known facts. Nevertheless it is important as the first serious attempt to describe early industrialisation in the area. Parts of it were used as the basis for sections of the first volume of the Victoria County History, which suffers from many of the same idiosyncrasies.

The earliest modern academic approaches to the history of the study area were rooted in the twin strands of economic and technological history. Economic historians began to look at industrial history from an early stage. In 1904 Max Weber published *Die Protestante Ethick*, in which he argued that post-medieval developments in trade and industry were a direct consequence of the Reformation and its impact on moral and political thought.<sup>8</sup> In the same year George Unwin published an economic study of industrial organisation in the sixteenth and seventeenth centuries.<sup>9</sup> In 1924 T. S. Ashton published his influential study of *Iron and Steel in the Industrial Revolution*, a pioneering work of metallurgical industrial economic history.

Meanwhile, as scientific approaches to industrial production became prominent in the latter part of the nineteenth century there was concern among some practitioners (still at this time industrialists rather than professional historians) to make an account of earlier techniques which were no longer in use or had died out altogether. In 1920

Owen and John Blakeway, A History of Shrewsbury (London: Harding, Lepard and Co., 1825); Charles Hulbert, The History and Antiquities of Shrewsbury etc. (Shrewsbury: Privately Published, 1837), v-vi.

- <sup>4</sup> Charles Hartshorne, Salopia Antiqua (London: J. W. Parker, 1841).
- <sup>5</sup> Robert Eyton, Antiquities of Shropshire (London: John Russell Smith, 1854-1860).
- <sup>6</sup> John Randall, A History of Madeley, (1880) (Shrewsbury: Salop County Library, 1975).
- W. Page (ed.) The Victoria County History of Shropshire, Volume 1 (London: Constable, 1908).
- <sup>8</sup> Max Weber, *The Protestant Ethic and the spirit of capitalism* (1904), trans. T. Parsons (London and New York: Routledge, 1992).
- <sup>9</sup> G. Unwin, Industrial Organisation in the 16th and 17th Centuries (1904) (London: Cass, 1957).

a group of engineers in industry, together with curators from the Science Museum, formed the Newcomen Society for the study of the history of engineering, industry, and technology. One of their early visits was to the Coalbrookdale ironworks. The immediate post-war period saw further interest in industrialisation as an historical phenomenon, again largely motivated by the final disappearance of technologies and methods which were already on the fringes of living memory.<sup>10</sup>

Such studies continued to be framed by a very Victorian focus on 'great men' and 'great works'. This approach had been developed by Samuel Smiles – an author of improving self-help books – who used the great industrialists of the eighteenth and nineteenth centuries as inspiration for his readers. His enthusiasm for heroic individualism coloured subsequent interpretations. Almost a hundred years later, Schubert's monumental study of the history of the British iron industry continued the heroic narrative of 'invincible perseverance which never shrank from unfavourable conditions nor was defeated by initial failure'. It was in this context that the first historical investigation of the Coalbrookdale iron industry was undertaken by Arthur Raistrick, and funded by the Coalbrookdale Company part of their 250th anniversary commemorations. Its primary focus was on the Darby family and their achievements after 1708; almost in passing Raistrick referred to the character of pre-Darby industrial activity as 'domestic' in scale and importance. Raistrick was also influenced by his own Quaker origins in choosing to emphasise the Darby family narrative.

These biographical histories did lead to the recognition of the importance of some of the material remains at Coalbrookdale. However they had two profound long-term effects. The first was to ensure that the post-1708 Quaker Darby period was the primary focus of subsequent research and interpretation; the second was to highlight the dominance of the documentary record as the primary resource for investigating the past. Raistrick's baton was taken up during the 1970s by Barrie Trinder. Trinder was an economic historian, whose work on Coalbrookdale began while teaching adult education classes for Shropshire County Council. With his students Trinder examined wills and probate inventories of the late seventeenth, eighteenth and nineteenth centuries, and explored facets of industrialisation in Shropshire. Trinder's numerous books on Coalbrookdale and the East Shropshire Coalfield remain core texts for the study of this period and locale.<sup>14</sup>

<sup>&</sup>lt;sup>10</sup> L.T.C. Rolt, *Narrow Boat* (London: Eyre and Spottiswoode, 1944); C. Hadfield, *British Canals: an illustrated history* (Newton Abbot: David and Charles, 1950); C. Singer, E.J. Holmyard, A.R. Hall and T.I. Williams (eds.) *A History of Technology* (Oxford: Clarendon Press, 1954-59).

Samuel Smiles, Lives of the Engineers, with an account of their principal works (London: John Murray, 1861); Samuel Smiles, Industrial Biography: iron workers and tool makers (London: John Murray, 1863).

<sup>&</sup>lt;sup>12</sup> Schubert, British Iron and Steel Industry, 2.

<sup>&</sup>lt;sup>13</sup> Raistrick, Dynasty of Ironfounders, 1.

<sup>&</sup>lt;sup>14</sup> B. Trinder and N. Cox, *Yeomen and Colliers in Telford* (Chichester: Philimore, 1980); B. Trinder and N. Cox, *Mines and Mariners of the Severn Gorge* (Chichester: Philimore, 2000).

These studies led to more ambitious works. *The Industrial Revolution in Shropshire*, in which Trinder set out the overall economic and social history of the area; later *The Making of the Industrial Landscape* – a title which paid deliberate homage to W. G. Hoskins – made more general remarks but included material on Coalbrookdale and the East Shropshire Coalfield. As honorary historian to the Ironbridge Gorge Museum, Trinder produced a series of pamphlets and books, including an anthology of eighteenth and nineteenth century sources.<sup>15</sup> Trinder was open to telling the stories of ordinary people, and to some extent also engaged with some of the theoretical approaches emerging in economic history during the 1970s and 1980s, such as proto-industrialisation.<sup>16</sup>

The frameworks established by Trinder have hitherto been followed largely uncritically. Other work has been limited, but the most useful in the context of this study has been the extensive *oevre* of the economic historian Peter King, whose work on the post-medieval iron trade nationally has focussed on the West Midlands.<sup>17</sup> This has included Coalbrookdale in the eighteenth century, and the Stour/Severn iron trade more generally during the seventeenth century, and to an extent the sixteenth century.<sup>18</sup> Otherwise, historical studies of the pre-1708 period in the study area have been limited. Malcolm Wanklyn made use of Gloucester Port Books to extract some information about the nature of trade along the River Severn, in particular focussing on the export of coal, iron and steel from Coalbrookdale.<sup>19</sup> Some attention has also been paid to the Brooke ironworks in the Forest of Dean as a tangent or footnote to other studies.<sup>20</sup> Links between the Severn trade and the wider world – in particular the import of Baltic iron to Bristol as part of the late seventeenth century steel industry – have also been examined at a macro level.<sup>21</sup>

<sup>15</sup> Trinder, Most Extraordinary District.

<sup>&</sup>lt;sup>16</sup> R.A. Butlin, 'Early Industrialization in Europe: Concepts and Problems', *The Geographical Journal* 152:1 (1986), 1-8; H. Medick, 'The proto-industrial family economy: the structural function of household and family during the transition from peasant society to industrial capitalism', *Social History* 3 (1976), 291-315; F.F. Mendels, 'Proto-industrialization: The first phase of the industrialization process', *Journal of Economic History* 32 (1972), 241-61.

Peter King, 'Sir Clement Clerke and the adoption of coal in metallurgy', *Transactions of the Newcomen Society* 73:1 (2002), 33-52; Peter King, 'The production and consumption of bar iron in early modern England and Wales', *Economic History Review* 58:1 (2005), 1-33. Peter King, 'Corrigendum to "The production and consumption of bar iron in early modern England and Wales", *Economic History Review* 59:1 (2006), 264; Peter King, 'The choice of fuel in the eighteenth century iron industry: the Coalbrookdale accounts reconsidered', *Economic History Review* 64:1 (2011), 132-56.

<sup>&</sup>lt;sup>18</sup> Peter King, 'The development of the iron industry in south Staffordshire in the seventeenth century: history and myth', *Transactions of Staffordshire Archaeological and Historical Society* 38 (1999), 59-76.

<sup>&</sup>lt;sup>19</sup> Malcolm Wanklyn, 'Iron and steel in Coalbrookdale in 1645', *Shropshire Newsletter* 44 (1973), 3-6; Malcolm Wanklyn, 'Industrial development in the Ironbridge gorge before Abraham Darby', *West Midlands Studies* 15 (1982), 3-7.

<sup>&</sup>lt;sup>20</sup> G. Hammersley, 'The Charcoal Iron Industry and its Fuel, 1540–1750', Economic History Review 26:4 (1973), 593-613; C.E. Hart, The Industrial History of the Forest of Dean (Newton Abbot: David & Charles, 1971); C.E. Hart, The Forest of Dean: New History 1550-1818 (Stroud: Alan Sutton, 1995); Schubert, British Iron and Steel Industry.

<sup>&</sup>lt;sup>21</sup> Chris Evans and Göran Rydén (eds), Baltic Iron in the Atlantic World in the Eighteenth Century (Leiden: Brill, 2007).

### Previous archaeological research

The Ironbridge Gorge can rightly claim to be one of the points of origin for industrial archaeology. The discipline emerged in the post-war period, and the term was first used in print in 1955 by Michael Rix, then teaching with the Workers Educational Association at Birmingham University. <sup>22</sup> It was characterised by one of the movement's early pioneers as 'the anxiety to preserve the baby from the discarded bath water out of which Industrial Archaeology was born'. <sup>23</sup> One of these babies was the so-called 'Darby furnace' at Coalbrookdale. First recognised in the nineteenth century, the demolition of part of the ironworks complex in the 1930s and 1950s revealed the furnace remains. As the iconic material expression of the development of mineral-fuelled (coke) smelting, it became the focus of interest. Eventually the furnace was restored – albeit at the expense of much of its surrounding context – and in 1959 a small museum was opened at the site. This later formed the genesis of the Ironbridge Gorge Museum.

The development of the Ironbridge Gorge area as a heritage attraction took place as part of the regeneration of the area during the creation of Telford New Town from 1963. This was undertaken by the Telford Development Corporation (TDC), a central government agency which had wide-ranging powers. The TDC created the Ironbridge Gorge Museum Trust (IGMT) in 1967 as a mechanism for the 'preservation, restoration, improvement [and] enhancement' of 'features and objects of historical and industrial interest' in the wider East Shropshire area.<sup>24</sup> The operation of this mechanism was strongly influenced by the regeneration and place-building agendas of the TDC. Heritage was deployed from the outset to create an identity which would assist the transformation from an 'assemblage of industrial hamlets' into a 'contiguous urban mass'.<sup>25</sup> The TDC was fully aware of the 'valued historical associations' of the Ironbridge Gorge, so incorporation of this area – helpfully located in a peripheral, difficult-to-develop, and subsidence-prone part of the New Town – provided reflected historical light in which the new town could bask.<sup>26</sup>

With the Ironbridge Gorge having been set aside for its heritage value, the rest of Telford was effectively cleared for redevelopment in a way which was not sympathetic to most of the archaeological resource. Moreover, even within the Ironbridge Gorge, approaches to conservation were mixed. Although archaeological research was part of the 'preservation' and 'restoration' elements, it was not a priority for the

<sup>&</sup>lt;sup>22</sup> Michael Rix, 'Industrial Archaeology', The Amateur Historian 2:8 (1955), 225-29.

<sup>&</sup>lt;sup>23</sup> A. Buchanan, 'Industrial Archaeology: Past, Present and Prospective', *Industrial Archaeology Review* 27:1 (2005), 19.

Neil Cossons, 'Ironbridge - The First Ten Years', Industrial Archaeology Review 3:2 (1979), 184-85.

<sup>&</sup>lt;sup>25</sup> Rodney Tolley, 'Telford New Town: Conception and Reality in West Midlands Industrial Overspill', *The Town Planning Review* 43:4 (1972), 343.

Maurice de Soissons, *Telford: the making of Shropshire's New Town* (Shrewsbury: Swan Hill Press, 1991), 64-69; Angus Buchanan, 'Review [of VCH Telford]', *Economic History Review* 39:3 (1986), 474.

'improvement' and 'enhancement' parts of the programme. Thus many pre-Darby sites and monuments were cleared – including some early industrial housing – within what was later to become the World Heritage Site. It is also fair to say that the 'monumental' approach to the surviving remains did not encourage the preservation of elements of the historic environment which did not sit well with the established historical narrative. As a result the physical relationships between pre-eighteenth century sites within the Gorge, and their relationships with sites outside the Gorge, have been seriously eroded – and in most cases lost altogether.

Archaeology at Ironbridge evolved in an *ad hoc* manner during the 1970s. Its focus was mainly reactive, being concerned with recording features and structures encountered during conservation projects. There was little attempt to engage with broader theoretical developments in archaeology, a reflection of the wider position of industrial archaeology at the time. This changed for a period during the mid-1980s with the appointment of Kate Clark. A more proactive approach underpinned several important early surveys of industrial buildings and monuments. With funding from the Nuffield Foundation, she worked with Judith Alfrey on what became known as the 'Nuffield Survey' of Ironbridge.<sup>27</sup> This developed a methodology which used the plots shown on the 1901 Ordnance Survey map as the basic unit of landscape analysis. Three of the intended four volumes were completed before Clark's departure in 1993. Subsequent archaeological work at Ironbridge was directed by Wendy Horton, who returned to a more reactive approach, primarily recording conservation-driven interventions.<sup>28</sup>

The present author became the director of the archaeology unit of the Ironbridge Gorge Museum Trust in 2000, and held the post for ten years. As before the remit was principally the delivery of conservation-led archaeological recording programmes within the World Heritage Site. This work was inevitably proscribed by the framework within which it was undertaken. There were two main restrictions. The first was that most of the archaeological work was to inform conservation; however since conservation was the primary objective, archaeological investigations were inevitably constrained by prevailing legislative and ethical obstacles to the demolition of buildings and structures. Second the role of the archaeology unit within the Museum had changed: its primary focus became the provision of commercial income and delivery of conservation projects. Archaeological activity was to an extent viewed by the museum as a means of providing artefacts and images to support the known

<sup>&</sup>lt;sup>27</sup> Judith Alfrey and Kate Clark, Nuffield Survey Interim Report No.1 – Coalbrookdale (Institute of Industrial Archaeology/Ironbridge Gorge Museum Trust, 1986); Judith Alfrey and Kate Clark, Nuffield Survey Interim Report No.3 – Coalport (Institute of Industrial Archaeology/Ironbridge Gorge Museum Trust, 1987); Judith Alfrey and Kate Clark, Nuffield Survey Interim Report No.4 – Jackfield and Broseley (Institute of Industrial Archaeology/Ironbridge Gorge Museum Trust, 1989).

<sup>&</sup>lt;sup>28</sup> Richard Hayman, Wendy Horton and Shelley White, *Archaeology and Conservation in Ironbridge*, CBA Research Report 123 (York: Council for British Archaeology, 1999).

historical narrative. Archaeology was very much the 'handmaiden of history'.<sup>29</sup> Conservation projects were undertaken to a tight funding timetable, and so even when new discoveries were made, there was little opportunity to integrate them into subsequent interpretation.

Notwithstanding these limitations, it was possible to encourage a more proactive and theoretically-informed approach to fieldwork and research. In the relative prosperity of the early 2000s it was also possible to generate a surplus from commercial archaeological operations outside the Ironbridge Gorge, and use this to fund a series of research projects within the World Heritage site. Two projects undertaken during that period have made a particular contribution to this book. First, the Coalbrookdale Watercourses project of 2000-2001 - part of the final transfer of TDC assets to the local authority – brought a realisation that much of the infrastructure for the Darby ironworking complex had been put in place during the sixteenth and seventeenth centuries.<sup>30</sup> Second, the author's personal interest in Basil Brooke's steelmaking enterprise, resulted in the 'Coalbrookdale Historical Archaeology Research and Training' project (CHART), which ran from 2001 until 2005. The primary fieldwork project was the excavation of the steel furnaces described in chapter eight, although other work was undertaken elsewhere in the Ironbridge Gorge under the aegis of the project. 31 Results from these projects have been supplemented by information gleaned from other conservation and research projects. Additional fieldwork and desk-based research has been undertaken subsequently.

#### Frameworks

The intention of this study was to set the site-specific work of these projects in a broader temporal and geographical framework, relating them to other smaller pieces of work and to broader research in the fields which the study occupies. However an approach situated entirely within the genre of historical archaeology was constrained by two significant evidential shortcomings: the absence of a coherent landscape, and

<sup>&</sup>lt;sup>29</sup> Anders Andren, *Between artifacts and texts: historical archaeology in global perspective*, trans. A. Crozier (New York: Plenum, 1998).

The powers of the Telford Development Corporation were re-absorbed into the Commission for New Towns (established in 1961) in 1990; this body was itself abolished in 1999 and its functions were transferred to English Partnerships – an amalgam of various national and regional development authorities. English Partnerships was itself absorbed into the Homes and Communities Agency in 2008. The Commission for New Towns retains a separate legal identity as an executive agency of UK government. Paul Belford, The Coalbrookdale Watercourses Project, Ironbridge Archaeological Series 91 (Ironbridge Gorge Museum Trust, 2001); Paul Belford, 'Sublime cascades: water and power in Coalbrookdale', *Industrial Archaeology Review* 29:2 (2007), 133-48.

<sup>&</sup>lt;sup>31</sup> Paul Belford, 'Forging Ahead in Coalbrookdale: Historical Archaeology at the Upper Forge', *Industrial Archaeology Review* 25:1 (2003), 59-63; Paul Belford and Ronald A. Ross, 'Industry and domesticity: exploring historical archaeology in the Ironbridge Gorge', *Post-Medieval Archaeology* 38:2 (2004), 215-25; Paul Belford and Ronald A. Ross, 'English steelmaking in the seventeenth century: the excavation of two cementation furnaces in Coalbrookdale', *Historical Metallurgy* 41:2 (2007), 105-23.

the lack of any securely-provenanced excavated domestic material culture from the period. The historical record is also very limited. Consequently although this book has at its heart a series of archaeological excavations, surveys and observations, in many ways it goes beyond a conventional archaeological narrative. Although situated within some of the traditions of historical archaeology, it also integrates a dialogue with other fields within archaeology and beyond it. Thus it has been necessary to apply here some of the approaches more commonly found in prehistoric archaeology. The work has also mined some of the very rich veins of social, political, art and economic history which have addressed some of these issues in the study period. Reference is also made to anthropological and sociological strands of thought around agency and identity.

The next chapter discusses some of those strands of thought, and addresses their applicability to this study. This is followed by an introduction to the landscape, and a discussion of the settlement and extent of industrialisation before the Dissolution. The fourth chapter introduces the principal actors - the Brooke 'dynasty' - and the different ways in which they chose to express their identities. The next two chapters explore the 'designed landscape' and the buildings respectively. This is followed by two chapters which look in detail at the process of industrialisation: the first examines the period between the Dissolution and *c*. 1600, the second looks at seventeenth-century developments before the Civil War. Finally there is a discussion of various aspects of industrialisation and identity which this study has brought to the fore, and suggestions for developing approaches to the study of this period.