

The Impact of the Decline of the Cleveland Ironstone Industry

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History

December 2021

Abstract

This thesis addresses shortcomings in the existing body of work covering the Cleveland ironstone industry. Operating in the Cleveland area of the pre 1974 North Riding of Yorkshire between 1836 and 1964, the ironstone mines were instrumental in the transformation of Middlesbrough into a world leading iron and steel centre. Despite this, the Cleveland ironstone industry, and the impact of its growth and decline has attracted little interest outside the area. Whilst histories of many ironstone mines have been written, little attention has been paid to the associated settlements. It is argued that these settlements are an important element of industrial heritage. Studying how they have been represented and perceived over time enables conclusions to be drawn regarding the impact of industrial history has had, and continues to have on industrial settlements. An unexpectedly high level of errors and inconsistencies was encountered when establishing a list of mines and a consolidated basis for both this work and future study had first to be established. In order to draw conclusions representative of the wide range of settlement histories, five case studies were selected based on their origin, associated mine ranking and post mining history. Grosmont, Kildale and Rosedale all sit within the North York Moors National Park and are well regarded, relatively prosperous, rural places that have moved on from their industrial past. In all three cases when mining ceased the population returned to pre-industrial levels. In contrast Eston and Liverton Mines, which sit within East Cleveland, have not been able to make the same transition. Their populations have grown without the employment to sustain prosperity and they are regarded as relatively deprived, urban areas requiring repeated regeneration schemes in order to address their perceived issues.

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Acknowledgements

Completing this research has been a long journey, complicated by external circumstances. I have been fortunate enough to receive the support and assistance of many people over the years. Thanks are due to the following named individuals and apologies to anyone who I have inadvertently omitted.

Robin Daniels, Archaeology Officer, Tees Archaeology, who suggested the research topic.

Graham Lee, Archaeological Officer (Retired), North York Moors National Park Authority and Dr. Tony Nicholson, Author, for their input to the development of the research proposal.

Prof. Lawrence Black, Department of History, University of York, for his patience and guidance towards completion of the original submission.

Dr. James Symonds, formerly University of York, for standing in as my initial Supervisor.

Dr. David Clayton, Department of History, University of York, for stepping in at short notice to act as Supervisor for the resubmission.

Prof. Simon Ditchfield, Department of History, University of York and Prof. Colin Divall, Professor Emeritus, Department of History, University of York, for their input at TAP meetings.

Caroline Mead and Carole Nicholson, Postgraduate and IPUP Administrators, Department of History, University of York, for their assistance in guiding me through the university's procedures.

Dr. Geoff Cubitt, Reader, and Harriet Beadnell, PhD Candidate, Department of History, University of York, for taking the time to discuss historiography with me.

My fellow Cleveland Industrial Archaeology Society committee members, in particular Charles Morris and Alan Bettaney for their encouragement and willingness to share their knowledge of the Cleveland ironstone industry.

Mrs. Tammy Naylor, Esk Valley, for discussing the history of mining at Grosmont and access to her collection of ironstone mining documents and artefacts.

Ms. Christiane Kroebel, Whitby Literary and Philosophy Society, for access to maps within the collection.

Ian Woodcock, my husband, for his patience, moral support and proof reading.

Finally, to my friends, neighbours and family members who have endured with patience my seemingly endless research journey.

Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

Chapter 1

Introduction

1 Introduction

An ironstone industry operated in the Cleveland area of the North Riding of Yorkshire between 1836 and 1964. The industry was based on the extraction, via drifts or shaft mines, of ironstone that was used in blast furnaces for the production of pig iron and, later steel. The ironstone is present as six separate seams within the sedimentary rocks of the Jurassic period.¹ The peak years of Cleveland ironstone production occurred between 1874 and 1914, when it contributed a mean of 38.8% of the UK production of iron ores.² This material was primarily used in the North-East and, when Teesside led the world in pig iron production in the 1870s, Cleveland ironstone was the main iron ore source for 14 – 15% of world's total output of pig iron.³ A nationally and internationally important industry, this was achieved with a maximum workforce of 9,815 in 1876.⁴

For her MA dissertation the author applied the English Heritage (EH) process for assessing heritage significance to the iron industry remains within the North York Moors National Park (NYMNP).⁵ The proposal for this research was developed to address a gap in the body of work on the Cleveland

¹J.S. Owen, "The Cleveland Ironstone Mining Industry," in *Cleveland Iron and Steel: Background and Nineteenth Century History*, ed. C.A. Hempstead (London: The British Steel Corporation, 1979), 12.

²T.H. Whitehead et al., *Memoirs of the Geological Survey of Great Britain: The Mesozoic Ironstones of England: The Liassic Ironstones* (London: Her Majesty's Stationary Office, 1952), 52. Calculated mean percentage contribution of North Riding ores to the total UK iron ore production for the years 1874 to 1914. The production figures were taken from M.C. Gill and R. Burt, *British Mining No. 72: The Mines of Yorkshire: Metalliferous and Associated Minerals* (Sheffield: The Northern Mine Research Society, 2003): 17 – 18 supplemented by G.A. North, *Teesside's Economic Heritage* (Middlesbrough: County of Cleveland Council, 1975), 204.

³Data taken from Table 2.2 in Minoru Yasumoto, *The Rise of a Victorian Ironopolis: Middlesbrough and Regional Industrialization* (Woodbridge: The Boydell Press, 2011), 30.

⁴Right Honourable R.A. Cross, *Reports of the Inspectors of Mines to Her Majesty's Secretary of State, For the Year 1876* (London: Her Majesty's Stationery Office, 1877), viii.

⁵English Heritage, *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment* (London: English Heritage, 2008); Elizabeth Caroline Marsh, "19th Century Ironworks of the North York Moors," (MA dissertation, University of York, 2008). The first three steps of the process were completed for Grosmont and Rosedale. Step 1, understanding the fabric and evolution of the place, involved establishing the history of the places and surveying the remains. Step 2, identify who values the place, and why they do so, consisted of individual interviews and the circulation of questionnaires to stakeholders. Step 3, relate identified heritage values to the fabric of the place, combined the outputs of steps 1 and 2 to conclude that the sites do attract sufficient heritage value to be considered for conservation and interpretation but that a regional approach was required to complete Step 4 and onwards.

ironstone industry, outwith the remit of the MA, that was highlighted to the author by contacts with a range of expertise on the subject.⁶ The focus was to be on establishing the impact the decline and loss of the Cleveland ironstone industry had on the communities that served it. Two aspects of impact were to be considered: physical evidence of the industry and social conditions in the settlements. The scope was expanded to include the history of the whole period of mining activities to capture the complex impacts on communities and as a result it was not possible to complete all the anticipated investigations into social conditions.⁷ Photographic surveys of the settlements were undertaken as planned, to capture remaining ironstone mining era fabric and later memorials to the industry. Work with residents to establish their views on the mining heritage was omitted and social conditions judged with reference to both the comments of outside observers and government statistics.

Hitherto, our understanding of Cleveland ironstone industry settlements has emerged ad hoc. Histories of individual mines, primarily produced by industrial archaeologists, restrict mention of the living environment of the workers to matters impacting on operation, such as an inability to attract workers or strikes. Settlement histories are the preserve of local historians who cover single locations across a broad sweep of time. After discussing the validity of using communities as evidence of industrial activities, the thesis examines the relationship between the Cleveland ironstone mines and settlements. Those settlements associated with the Cleveland ironstone industry were identified by comparing maps of the pre-mining and mining eras. Some short-lived settlements were not well represented on maps and their existence was verified by fieldwork.

To explore the relationship between mines and settlements five case studies: Leven Vale Cottages, Grosmont, Liverton Mines, Rosedale and Eston, were selected. They are examples across the range of mine histories and post mining settlement experiences. Leven Vale Cottages were built for a short-lived mine and demolished post closure in 1875.⁸ Grosmont was built in stages to serve a number of mines and remains essentially the same as when mining ceased in 1891.⁹ Liverton Mines was built for the workers at a single mine that was mothballed for periods during its life. The village

⁶ Conversations held during 2011 between Elizabeth Marsh and Malcolm Bisby (Local Historian), Robin Daniels (Tees Archaeology), Graham Lee (NYMNP Archaeologist) and Tony Nicholson (University of Teesside Historian).

⁷ The author utilised her knowledge of archive holdings, museum collections and published material on the Cleveland ironstone industry gained during her MA research to produce this thesis but the two works are separate entities utilising different study approaches. Time limitation for this thesis prevented the views of residents being sought via questionnaires and face-to-face interviews as they were in the dissertation.

⁸ "Sales by Auction," *Leeds Mercury*, July 16, 1875, 4.

⁹ "Trade at Middlesbrough," *Yorkshire Herald*, July 22, 1891, 3.

has continued to grow since mining ceased in the area in 1963.¹⁰ Rosedale Abbey existed as a village pre mining and was expanded to accommodate workers in mines dispersed across the dale, with additional accommodation built near the outlying mines. Other than the loss of some of the peripheral housing the settlement remains essentially the same as when the last mine closed in 1926.¹¹ The ancient village of Eston was swamped by the settlement that developed for miners at the most successful of all of the Cleveland ironstone mines. It has continued to expand since the mine closed in 1949 and is now a suburb of Middlesbrough.¹² Local authority planning records were assessed to assist in confirming demolitions, changes of use and new buildings.

With 81 separate entities involved with running the 83 Cleveland ironstone mines it was not feasible to attempt to locate and use primary sources for all the information utilised in Chapter 3. As Stephen James has shown the multiple firms involved in the Cleveland iron and steel industry offer ample opportunities for study by business historians, but this thesis is not a business history.¹³ In order to be confident in the mine list and the ranking of the mines the reliability of four sets of information had to be assured: Location, Name, Years of Operation / Standing and Owner(s). Most mine locations were taken from the Ordnance Survey (OS) County Series of maps, verified by site visits where access was possible. A few early, short-lived mines in the Grosmont area are not captured on these maps and the locations of these were established with reference to maps in the Whitby Museum Collection. The names of these mines were clarified during discussions with a local mine historian.¹⁴ Other mine names were taken from official records, either the OS maps or the Mine Inspectors' Reports held at Kew, so avoiding nick-names. Data on the years' operating and standing were taken from a comparison between the two most comprehensive mine gazetteers, Tuffs and Gill and Burt.¹⁵ Where discrepancies occurred, they were resolved with reference to Imperial Mineral Resources Bureau reports, the Geological Survey Memoirs and the Mines Inspectors' Reports.¹⁶ The same approach was adopted to establishing who ran the mines.

¹⁰ S.K. Chapman, *Gazetteer of Cleveland Ironstone Mines: Research Series No. 1* (Guisborough: Langbaugh Museum Service, 1976), 16.

¹¹ R.H. Hayes and J.G. Rutter, "The Rosedale Ironstone Industry and Railway," *The Transactions of the Scarborough and District Archaeological Society* 2, no. 11 (1968): 28.

¹² Richard Pepper, "An Introduction," in *Eston Ironstone Mines: An Introduction*, ed. Cleveland Industrial Archaeology Society and Cleveland County Council (Middlesbrough: Cleveland County Council, 1989), 1.

¹³ Stephen James, "Growth and Transition in the Cleveland Iron and Steel Industry, 1850 to 1914," (DPhil thesis, University of Durham 2013)

¹⁴ Tammy Naylor, Esk Valley, interview by E.C. Marsh, March 26, 2013.

¹⁵ Peter Tuffs, *Catalogue of Cleveland Ironstone Mines* (Guisborough: Peter Tuffs, 2003); Gill and Burt, *British Mining No. 72*.

¹⁶ Imperial Mineral Resources Bureau, *Iron Ore. (Summary of information as to the Present and Prospective iron-ore supplies of the World.): Part 1.- United Kingdom* (London: His Majesty's Stationary Office, 1922); Whitehead et.al, *Liassic Ironstones*

For each case study there is at least one published source claiming to cover either mining or settlement history. With a few exceptions, such as the work of John Owen on Kildale, these secondary texts are not referenced to academic standards, obscuring the sources used.¹⁷ These secondary sources were used in writing mine and settlement histories, with key dates, names and events cross checked with contemporary published accounts of the Cleveland ironstone industry, newspaper reports, the Cleveland Industrial Archaeology Society (CIAS) archive and the author's collection of material.

Understanding how local and national government treated the case study settlements required establishing to which administrative areas they belonged. When the North Riding of Yorkshire County Council (NRYCC) was established in 1889 all of the case study settlements were within it.¹⁸ This remained the position until 1968 when the formation of the County Borough of Teesside (CBT) saw the North Riding become "an entirely rural county".¹⁹ Eston fell within Teesside.²⁰ Liverton Mines also left Yorkshire in 1974 when the NRYCC was replaced by the North Yorkshire County Council and CBT by Cleveland County Council (CCC), that covered a larger area.²¹ CCC was split up in 1996, with Eston and Liverton Mines transferring to Redcar and Cleveland Borough Council (R&CBC). Grosmont, Kildale and Rosedale have remained in North Yorkshire, with their rural nature reinforced when the NYMNP was formed in 1952 to preserve an area of "natural beauty" for the enjoyment those from urban, industrial Teesside, including Eston and Liverton Mines.²² Simmons highlighted a conflict at the heart of running National Parks; How to balance protection of the environment against promoting the rural economy and recreational visits.²³ Ecologically moorland can be described as a depleted "wet desert", but their form is valued as a leisure resource.²⁴ How governmental attitudes and interventions have been shaped by this rural / urban split is discussed and the 2015 Index of Multiple Deprivation (IMD) data used as a measure of how successful

¹⁷ J.S. Owen, "Mining Failure in Cleveland No. 3: The Kildale Mines," *Bulletin of the Cleveland & Teesside Local History Society* no. 14 (1971): 18-26 continued in no. 17 (1972): 12-17, no. 18 (1972): 15-21 and no. 19 (1972/3): 10-14.

¹⁸ M.Y. Ashcroft, *A History of the North Riding of Yorkshire County Council 1889 – 1974* (Northallerton: North Riding of Yorkshire Council, 1974), 1.

¹⁹ Ashcroft, *North Riding*, 28.

²⁰ Ashcroft, *North Riding*, 31.

²¹ Ashcroft, *North Riding*, Preface; Minnie C. Horton, *The Story of Cleveland: History, Anecdote and Legend* (Middlesbrough: Cleveland County Libraries, 1979), xv.

²² M.G. Foster, "Preface," in *North York Moors: National Park Guide No. 4*, ed. Arthur Raistrick (London: Her Majesty's Stationary Office, 1979), v.

²³ I.G. Simmons, *An Environmental History of Great Britain: From 10,000 Years Ago to the Present* (Edinburgh: Edinburgh University Press, 2001), 287.

²⁴ Simmons, *An Environmental History*, 9.

initiatives have been. This measure was selected as it breaks England down into small enough sub-areas to allow the relative deprivation of the case study settlements to be extracted.

The remainder of this chapter places this research within the body of academic work and indicates how it enhances it. Firstly approaches to the study of industrial settlements are discussed. Secondly Cleveland ironstone industry specific body of work is reviewed. Thirdly the academic discipline within which this thesis sits is considered. The chapter concludes with a statement of the research question and the methodology used to answer it.

2 Approaches to Studying Industrial Settlements

The body of work concerned with the study of industrial settlements is substantial and diverse. This section uses a selection of examples to discuss six possible approaches. Firstly local, rural and urban histories that focus on the study of a tightly defined geographic area. Secondly industrial histories written about a particular industry or industrial site. Thirdly social studies that collect and analyse data on how people lived their lives. Fourthly works that consider the role of religion and / or paternalism in shaping communities. Fifthly explorations of the roles undertaken by urban elites and their impact on communities. Finally studies of the reactions of individuals, communities and governmental bodies to a decline in industrial employment.

Many of the examples used relate to studies of Middlesbrough, a settlement that saw spectacular nineteenth century growth, the product of a fortuitous and timely juxtaposition of coal, railways, port facilities, ironstone and appropriate technology. It was nicknamed 'Ironopolis'. The growth and scale of the subsequent decline in the industrial employment base has attracted the attention of many researchers.

2.1 Local, Rural and Urban Histories

Local history societies predate WWII but there was a "remarkable" growth in interest in its study in the decades post 1945.²⁵ Pre-war recording efforts under the auspices of the National Council for Social Service were revived in 1948 under the Standing Conference for Local History (SCLH), the "national co-ordinating body for local history".²⁶ Officially sanctioned and financially supported local history was sufficiently established as an academic discipline to weather turbulent times in the 1980s. The SCLH was disbanded in 1981 and replaced with the British Association for Local History,

²⁵ Robert Blake et al., "Committee to review local history," *The Local Historian* 13, no. 3 (1979): 451.

²⁶ Michael Cowan, "The British Association for Local History 1982 – 2007," *The Local Historian* 34, no. 1 (2007): 2.

which was required to be self-funding.²⁷ A decline in Association membership during the 1980s indicated a loss of popular interest in local history, but has subsequently been reversed.

Asa Briggs selected Middlesbrough as his case study of the growth of a new community during the reign of Queen Victoria.²⁸ No other English town exceeded the pace of growth or size achieved. Briggs provided an urban history of the town that outlines events in its growth, challenges encountered, the people involved, the evolution of business life and the establishment of civic life. Extensive use was made of quotations from nineteenth century accounts of the town. He pointed out that the coastal coal trade declined as the railway network grew and that but for the Eston Hills ironstone find in 1850 the town may have gone into a decline.²⁹ Briggs considered that he had written an urban history in the days when “serious urban studies were still in their infancy”.³⁰

Changes in the local government structure in Cleveland have prompted the production of a number of local histories, each presented to support the political objectives of the publishing body. Just before Middlesbrough County Borough was abolished in 1968 William Lillie, Borough Librarian, was tasked with producing a “record of Middlesbrough’s history”.³¹ He produced a “factual history” designed to illustrate how “local government has evolved in this country”.³² It is a celebration of the evident determination of the people of Middlesbrough to be self-governing since the Municipal Borough was formed in 1853.³³ The North Riding of Yorkshire County Council elected to mark their abolition in 1974 with a history of “the achievements of the administration” over 85 years.³⁴ It is a history of the council, not the county. In 1974 CCC was faced with having to try and create a coherent local authority from parts of the North Riding of Yorkshire, County Durham and the County Boroughs of Hartlepool and Teesside.³⁵ Two published histories supported this endeavour. G.A. North produced an ostensibly data driven economic history of Teesside but his objectivity is called into question by his hope that he had identified “the characteristics, the common associations that bind the separate parts into an identifiable whole”.³⁶ Minnie Horton had approached the fledgling CCC with the intention of publishing separate histories of Stockton, Middlesbrough, Langbaugh and

²⁷ Cowan, “British Association for Local History,” 4.

²⁸ Asa Briggs, *Victorian Cities* (London: Penguin Books, 1990), 241 -276.

²⁹ Briggs, *Victorian Cities*, 247.

³⁰ Asa Briggs, “Foreword,” in *Middlesbrough: Town and Community 1830 – 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), ix.

³¹ William Lillie, *The History of Middlesbrough: An Illustration of the Evolution of English Industry* (Middlesbrough: The Mayor, Aldermen and Burgesses of the County Borough of Middlesbrough, 1968), xi.

³² Lillie, *History of Middlesbrough*, 1.

³³ Richard Lewis, “The Evolution of a Political Culture: Middlesbrough, 1850 - 1950,” in *Middlesbrough: Town and Community 1830 – 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), 104.

³⁴ Ashcroft, *North Riding*, v.

³⁵ Horton, *The Story of Cleveland*, xv.

³⁶ North, *Teesside's Economic Heritage*, xi.

Hartlepool but the decision had been taken to include all her research in a single volume “to emphasise the unity of the new County”.³⁷ Other than a short Introduction no attempt was made to unify the text, each of the four constituent parts having a separate chapter.

James Leonard felt that the early history of Middlesbrough deserved an in-depth study by a ‘serious’ historian and aimed to rectify this omission.³⁸ He accepted the work of Briggs but is critical of the work of “local enthusiasts”, placing Lillie and North amongst their number.³⁹ In the days before the world wide web and the personal computer Leonard had to devote a great deal of effort to locating and transcribing sources such as census returns and newspapers that are now readily available on-line. With a focus on urban development and demographic analysis Leonard contended that the original Pease grid plan for the town was flawed from the start rather than failing as the population grew. Leonard was one of the contributors to a book published in 1996 to mark the re-emergence of Middlesbrough as a local government authority.⁴⁰ The first chapter was a reprint of Brigg’s essay on the town from ‘Victorian Cities’ and the rest are all by people associated with the University of Teesside’s MA in Local History that had run since 1979, resulting in a scholarly tone.

Minoru Yasumoto, a Professor of Economics in Japan, adopted a data driven approach to study the impact of the rapid industrialisation of Middlesbrough on both the town and the region.⁴¹ The work exhibited an admiration for how the nineteenth century residents forged infrastructure, institutions and a society from scratch in such a short time but agreed with Briggs that this made it atypical.⁴² Yasumoto shared Lloyds concern about the future of the town and regional economy but hoped it would endure “as a lasting reminder of Victorian industrialization and astonishing urban growth”.⁴³ He analysed business and population data to conclude that Middlesbrough was already in decline by the time it celebrated its Golden Jubilee in 1881. Despite the success of the Thomas Gilchrist steel process Yasumoto stated town had lost its economic advantage and fallen behind foreign competitors in adopting technology during the steel age.⁴⁴ Three reasons behind this are identified; an over reliance on the iron and steel trade, deficient urban infrastructure and imbalances in the profile of the population. Compared to the diverse economy of the more established town of

³⁷ Horton, *The Story of Cleveland*, xi.

³⁸ James William Leonard, “Urban Development and Population Growth in Middlesbrough 1831 -71,” (DPhil thesis, University of York, 1975)

³⁹ Leonard, “Urban Development,” 1.

⁴⁰ A.J. Pollard, “Preface,” in *Middlesbrough: Town and Community 1830 – 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), xi.

⁴¹ Yasumoto, *Victorian Ironopolis*

⁴² Yasumoto, *Victorian Ironopolis*, 199.

⁴³ Ibid.

⁴⁴ Yasumoto, *Victorian Ironopolis*, 191 – 192.

Darlington, Middlesbrough had little “relationship with the surrounding rural areas” other than to take in unskilled, male labour.⁴⁵ A predominantly working class population, with few opportunities for women, lived in an urban environment with somewhat poor health outcomes. Yasumoto did not appear to find the lack of social unrest at the living and working conditions as perplexing as S. Cornish and Nicholson. His analysis of business data ascribed it to the formation of the Board of Arbitration and Conciliation for the North of England Manufactured Iron Trade post the labour unrest of 1865 and 1866.⁴⁶

At least one local history has been written about each of the case study settlements considered by this thesis. These works, by amateur historians, contain material that informs Chapter 5 of this thesis.

2.2 Industrial Histories

In the absence of an accepted definition of industrial archaeology, discussed in Section 4, this thesis does not use this as a subject descriptor. All works that predominately concern the history of an industry or industrial site are termed industrial histories.

The first book introducing industrial archaeology to the general public was produced in 1963 by Kenneth Hudson, a journalist.⁴⁷ This resulted from a private publisher taking over work to produce an handbook that Council for British Archaeology (CBA) had to abandon due to a lack of resources.⁴⁸ CBA did not manage to publish a handbook until 2012.⁴⁹ Hudson’s book sold well and was followed by a number of others. The key texts, in chronological order of their first publication dates are: The David & Charles series ‘The Industrial Archaeology of the British Isles’ (1965 - 1975); Buchanan 1972; Raistrick 1972; Cossons 1975 and Falconer 1980.⁵⁰ How the authors chose to present industrial archaeology reflected their position with respect to the struggle to define the subject. Hudson choose to use the now largely discredited start date of the Industrial Revolution of 1750 and arranged the material thematically, by industry. This was in keeping with the drive to record sites prior to their loss that was ongoing at the time of writing. The focus on physical remains was

⁴⁵ Yasumoto, *Victorian Ironopolis*, 194.

⁴⁶ Yasumoto, *Victorian Ironopolis*, 188.

⁴⁷ Kenneth Hudson, *Industrial Archaeology: An Introduction* (London: John Baker, 1963)

⁴⁸ Kenneth Hudson, “Has Industrial Archaeology lost its way?,” *Industrial Archaeology Review* 23, no. 1 (2001): 7.

⁴⁹ Marilyn Palmer, Michael Nevell and Mark Sissions, *Industrial Archaeology: A Handbook, CBA Practical Handbook No. 21* (York: Council for British Archaeology, 2012)

⁵⁰ R.A. Buchanan, *Industrial Archaeology in Britain* (London: Allen Lane, 1980); A. Raistrick, *Industrial Archaeology: An Historical Survey* (London: Eyere Methuen, 1972); Neil Cossons, *The BP Book of Industrial Archaeology* (Newton Abbot: David & Charles, 1993); Keith Falconer, *Guide to England’s Industrial Heritage* (London: B.T.Batsford Ltd., 1980)

challenged by Buchanan who said that the “real significance of industrial monuments” could only be seen from “a (sic) historical perspective of economic growth and social transformation”.⁵¹ However, to maximise their appeal many authors found it necessary to focus their attention on sites with substantial above ground remains that people could visit. With comparatively few standing remains the Cleveland ironstone industry was not well represented in books covering the whole of England. Even Frank Atkinson, a key figure in promoting the industrial heritage of the North-East of England, in his regional industrial archaeology guide considered that there are “few remains of interest to the industrial archaeologist” in the area.⁵²

As Middlesbrough was ‘Ironopolis’, so Swansea earned the nickname ‘Copperopolis’. Coal from the south Wales coalfield and copper ore imported by sea from Devon and Cornwall saw a concentration of copper smelters develop during the eighteenth century.⁵³ At the peak of the industry in the late eighteenth and early nineteenth centuries about 90% of UK Copper was smelted within 20 miles of Swansea.⁵⁴ Stephen Hughes considered that previous studies of the industrial history of Swansea had relied too heavily on documentary evidence and overlooked archaeological resources as an historical source.⁵⁵ He had been involved in studying the industrial archaeology of the Swansea Valley since the 1980s, resulting in a focus on standing remains.⁵⁶ Initially the industrialisation was viewed as picturesque, attracting tourists, but pollution soon reduced the appeal and closed works became a problem to be removed.⁵⁷ Hughes analysed how the works, transport systems and workers’ settlements worked together in the landscape and emphasised the value of the substantial remains of “workers’ houses, settlements and former mansions” as an historical information source.⁵⁸ He produced a comprehensive, and well illustrated, review of the development of five copper workers’ villages, but can be criticised for failing to incorporate coverage of what it was like to live and work in the area.

⁵¹ Buchanan, *Industrial Archaeology in Britain*, 22.

⁵² Frank Atkinson, *The Industrial Archaeology of North-East England (The Counties of Northumberland and Durham and the Cleveland District of Yorkshire) Volume 1* (Newton Abbot: David & Charles, 1974), 87. Other texts comments on the industry are as follows. Neither Raistrick nor Palmer et. al. make any mention of the Cleveland ironstone industry. Buchanan simply states that the Jurassic ironstone in the district was of low grade. Cossons also points this out, but include a short paragraph on the history of mining in the area. Falconer acknowledges the importance of the Cleveland ironstone industry in the development of the area.

⁵³ Stephen Hughes, *Copperopolis: Landscapes of the Early Industrial Period in Swansea* (Aberystwyth: Royal Commission on the Ancient and Historical Monuments of Wales, 2008), 3.

⁵⁴ Hughes, *Copperopolis*, 15.

⁵⁵ Hughes, *Copperopolis*, viii.

⁵⁶ S.R. Hughes, “The Industrial Archaeology of Water and of Associated Rail Transport in the Swansea Valley Area,” (MPhil thesis, University of Birmingham, 1984)

⁵⁷ Hughes, *Copperopolis*, 323 – 329.

⁵⁸ Hughes, *Copperopolis*, 155.

This thesis agrees with Hughes, that workers' settlements are key sources of evidence about the industrial past, but explores how they have been shaped by it.

2.3 Social Studies

Not always works of history, social studies concern themselves with collecting information on multiple aspects of people's lives in order to draw conclusions about those lives.

The Victorians considered that the provision of housing was the "responsibility of capitalist enterprise" and no employers in nineteenth century Middlesbrough built houses for their workers.⁵⁹ What little control there was over what was built during the nineteenth century was concentrated on sanitary conditions. Building regulations improved in the Edwardian era but access to the better quality housing was restricted to the better off.⁶⁰ Lady Bell, the wife of a Cleveland Ironmaster, spent 30 years gathering data on those who had been left behind in poor quality housing.⁶¹ She recruited an army of data gatherers, predominantly middle class, to delve into all aspects of people's lives. What those interrogated in their houses felt about this was not recorded, but access to those who must have been seen as representatives of their employers would have been difficult to refuse. The data analysis presented in the book is rather rudimentary but presents a picture of lives that were far from secure. The loss of work, illness, injury and death were ever present risks that could spell disaster for a family. Lady Bell was from a liberal family and her work is in the tradition of "social investigation pioneered by Charles Booth".⁶² She was the first person to put a substantial focus on the lives of the women in the town. Despite her social conscious she felt sufficiently comfortable with her moral superiority to pass judgement on those she considered to have transgressed. Drinking and gambling particularly displeased her and she devoted the final chapter of her book to the evils of drinking and betting.

Kathryn Nichols took a similar approach to Lady Bell in considering how the lives of people were impacted by their economic position. Covering the inter war years, 1919 to 1939, Nichols looked at the impact of unemployment on the residents of three Teesside towns: Middlesbrough, Stockton-on-Tees and Darlington.⁶³ Other than G.M.C. M'Gonigle's study of Stockton Nichols claimed that Teesside was an area of "very heavy unemployment in the inter war years" that had not been

⁵⁹ Linda Polley. "Housing the Community, 1830 – 1914," in *Middlesbrough: Town and Community 1830 – 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), 153 – 159.

⁶⁰ Polley, "Housing the Community," 169.

⁶¹ Lady Florence Bell, *At the Works: A Study of a Manufacturing Town* (London: Virago, 1985)

⁶² Angela V. John, "Introduction," in *At the Works: A Study of a Manufacturing Town*, ed. Lady Florence Bell (London: Virago, 1985), ix – x.

⁶³ Katherine Nichols, *The Social Effects of Unemployment in Teesside, 1919 – 1939* (Manchester: Manchester University Press, 1986)

researched previously.⁶⁴ She was primarily focused on how the lack of work impacted on the people's existence: how they lived, their health and behaviour. Also considered was the effectiveness of responses to unemployment. Nichols did conduct interviews with those who had lived through the period studied but her quantitative analysis, more detailed than that of Bell, was largely of data compiled from secondary sources. She detected a different experience for the unemployed on Teesside than in other places.⁶⁵ In the 1920s the unemployed here suffered great deprivation and were on the verge of starvation, but in the 1930s the unemployed and their families could enjoy a standard of living equivalent to the employed as long as they were frugal.

To avoid bias when gathering data from a population a robust sampling plan has to be designed and implemented. This is a time consuming process and, as discussed in Section 1, there was insufficient research time to complete face-to-face discussions on social conditions with residents in the case study settlements.

2.4 Religion and Paternalism

Persecuted for their faith and excluded from public office by their refusal to take oaths members of the Society of Friends, commonly referred to as the Quakers, became predominant in eighteenth and nineteenth century business.⁶⁶ Their roles have been the subject of much research. Arthur Raistrick, who was a Quaker himself, began studying the London Lead Company, a Quaker firm with lead mines in the Yorkshire Dales, in the 1930s.⁶⁷ He considered that the technical innovations could not be separated from the "social conditions, organisation and training of the miners".⁶⁸ Raistrick viewed the treatment of their workers by the London Lead Company as benign paternalism with three factors driving social policy.⁶⁹ Firstly the lead deposits were located away from large population centres making it necessary to invest in infrastructure. Secondly the company quickly realised that a "healthy and content" workforce was less likely to revolt. Thirdly the Quaker sensitivity towards the condition and needs of others made the company receptive to improvement ideas. In 1950 Raistrick published 'Quakers in Science and Industry' a study of the roles that Friends

⁶⁴ G.M.C. M'Gonigle, "Poverty, Nutrition and the Public Health (An investigation into some of the results of moving a slum population to modern dwellings)," *Proceedings of the Royal Society: Section of Epidemiology and State Medicine* (1933): 677-687; Nichols, *Social Effects*, 5.

⁶⁵ Nichols, *Social Effects*, 213 – 214.

⁶⁶ Arthur Raistrick, *Quakers in Science and Industry: Being an Account of the Quaker contributions to Science and Industry during the 17th and 18th Centuries* (Newton Abbot: David & Charles (Holdings) Limited, 1968), 17 – 18. First published in 1950. Reprinted with a new introduction, by the author, in 1968

⁶⁷ Arthur Raistrick, *Two Centuries of Industrial Welfare: The London (Quaker) Lead Company, 1692 – 1905* (Buxton: Moorland Publishing Company, 1977). First edition 1938. Revised second edition 1977.

⁶⁸ Raistrick *Two Centuries of Industrial Welfare*: 145.

⁶⁹ Raistrick *Two Centuries of Industrial Welfare*: 94 – 95.

had played between 1652 and 1800.⁷⁰ This includes a chart of the family and business connections of the Pease family, involved in the founding of Middlesbrough. Research into Quaker firms led Raistrick to become involved at Ironbridge. He published a history of the Darbys in 1953 and wrote a guide for the Ironbridge Gorge Museum Trust in 1965.⁷¹ A supporter of the National Park movement Raistrick edited a guide to the NYMNP that contained a concise but accurate description of the industrial history.⁷²

In Cleveland it was the extension of the Stockton and Darlington Railway (S&DR) to coal staithes near the mouth of the River Tees that led to the foundation of Middlesbrough.⁷³ Both the S&DR and the Owners of the Middlesbrough Estate were Quaker concerns. James researched the “origins and connections” of the firms who grew the iron and steel trade in Middlesbrough from 1850 onwards.⁷⁴ He found that a disproportionate number of the firms involved were connected to a “Quaker family and business network centred on the Darlington-based Pease and Backhouse interests”.⁷⁵ This extended the family network noted earlier by Raistrick. Rather than attributing this to any business practises derived from their faith James identified two reasons for this dominance. Firstly the presence of an extremely large and close family network and secondly the drive to ensure that their investment in setting up the town was successful.

The scale of the coal mining industry and its ubiquitous role in nineteenth century industrialisation has excited much commentary. Even before the 1984/85 Miners’ Strike the decline of the industry resulted in a body of work examining the factors impacting on social life within mining communities. The role of religion and employer paternalism were two factors commonly considered. In a detailed local study Robert Moore, a sociologist, considered the impact of Methodism on life in the coal mining settlements in the Deerness Valley, County Durham. He attempted to determine if the religion had inhibited the “development of class consciousness and reduced class conflict” in his case study settlements.⁷⁶ Moore produced a strangely disappointing book that was so focused on the theoretical basis of his topic that he failed to adequately establish an historical backstory. Like S. Cornish and Nicholson in the Cleveland ironstone area Moore was searching for a reason why there

⁷⁰ Raistrick, *Quakers in Science and Industry*, 10.

⁷¹ Arthur Raistrick, *Dynasty of Iron Founders: The Darbys and Coalbrookdale* (Newton Abbot: David & Charles, 1970). First published 1953; Arthur Raistrick, *The Coalbrookdale Company, 1709 – 1959* (Telford: Ironbridge Gorge Museum Trust, 1965)

⁷² Arthur Raistrick, “Industrial History,” in *North York Moors: National Park Guide No. 4*, ed. Arthur Raistrick (London: Her Majesty’s Stationary Office, 1979), 56 – 62.

⁷³ Lillie, *History of Middlesbrough*, 47 – 48.

⁷⁴ James, “Growth and Transition,” 268.

⁷⁵ Ibid.

⁷⁶ Robert Moore, *Pitmen, Preachers & Politics: The effects of Methodism in a County Durham mining community* (Cambridge: Cambridge University Press, 1974), 26.

was not more labour unrest or political activism. His contention that Methodism was a factor is unconvincing as he undertook a single factor analysis. Moore was writing just after the last mine in the Deerness valley closed in 1969 so, like Bainbridge, was studying communities adjusting to the loss of the dominant employer.⁷⁷ Deep coal mining in County Durham finally ended in 1993 with the closure of Wearmouth colliery.⁷⁸ Moore's case study villages have had a variety of post mining histories. Quebec, Hamsteels Colliery and Waterhouses were declared Category D by the 1951 County Development Plan, meaning that they were considered unlikely to have a viable future post mine closure.⁷⁹ Nothing of Hamsteels Colliery remains, with the last houses being demolished in the early 1970s. Both Quebec and Waterhouses remain, but in much reduced forms. Esh Winning and Ushaw Moor were placed in Category A, settlements seen as most likely to thrive post mining.⁸⁰ Both have survived and expanded. Moore considered that the Methodist ethics of hard work and co-operation between parties made them complicit with the mine owner's exercising of control via paternalism.⁸¹ The Pease family firms ran three of the coal mines in the Deerness Valley and Moore judged the paternalism of family members less harshly than that of other owners.⁸² Led by J.W. Pease the family exhibited social concerns typical of reforming Quaker Liberalism, even contributing to relief for their own workers when they were on strike.⁸³ Once the firms became limited companies Moore stated that paternalism ceased.⁸⁴

Norman Emery studied the three settlements associated with the Pease and Partners (P&P) Deerness Valley mines, Waterhouses, Esh Winning and Ushaw Moor, which had been case studies for Moore. He considered the impact of the Pease family's Quaker faith on "life and work" in them.⁸⁵ An economic historian Emery presented a multi factor analysis that robustly supports the conclusions drawn. P&P had been obliged to build settlements to attract workers to the Deerness Valley in the nineteenth century. They provided good quality housing but did not go beyond

⁷⁷ Moore, *Pitmen, Preachers & Politics*, 68.

⁷⁸ Durham Mining Museum, "Wearmouth Colliery," *Index*, 2021, accessed October 18, 2021, <http://www.dmm.org.uk/colliery/w001.htm#creditpic>.

⁷⁹ For Quebec and Hamsteels Colliery: "Durham Memories: The tiny colliery village that disappeared without a trace," *The Northern Echo*, 2004, accessed Dec 19, 2020, <https://www.thenorthernecho.co.uk/news/6995696.durham-memories-tiny-colliery-village-disappeared-without-trace/>. For Waterhouses: Norman Emery, "Pease and Partners and the Deerness Valley: Aspects of the Social and Economic History of Waterhouses, Esh Winning and Ushaw Moor," (MA thesis, University of Durham 1984), 2.

⁸⁰ Emery, "Pease and Partners," 2.

⁸¹ Moore, *Pitmen, Preachers & Politics*, 150.

⁸² Moore, *Pitmen, Preachers & Politics*, 78.

⁸³ Moore, *Pitmen, Preachers & Politics*, 87.

⁸⁴ Moore, *Pitmen, Preachers & Politics*, 78.

⁸⁵ Emery, "Pease and Partners," 1.

providing the basics.⁸⁶ Initiatives started by residents to provide other amenities were supported by the family if they were in line with their social and moral mores. Emery concluded that the paternalism in the settlements was focused on establishing and maintaining a “peaceful, healthy, hard-working, sober workforce”.⁸⁷ Whilst the pits were still profitable the paternalistic model worked well and resulted in good industrial relations. Emery identified a different reason for the decline of paternalism to Moore. He stated that as the pits became less profitable in the early twentieth century the company lost interest in both the mines and the settlements.⁸⁸ They also had less need to provide housing post WWI when local authorities became significant providers. Emery saw economic factors behind the deterioration in twentieth century industrial relations not a link to religious observance.

Whilst Moore and Emery undertook detailed local research Martin Bulmer presented the results of sociological investigations into life in the mining settlements across County Durham.⁸⁹ Bulmer considered that community characteristics were a neglected field of study and that outside observers had failed to appreciate the complexities of the social structures that were present. He sought to increase awareness of, and debate about the “social history and sociology” of the coal-field villages and towns.⁹⁰ By the time Bulmer was writing employment in coal-mining had been in decline for over 50 years, but the National Coal Board was still a large employer in the region.⁹¹ The mining communities had already had to adjust to much change and more was to follow. Bulmer found them to be adaptable and resilient, with residents wishing to remain where they felt their roots were rather than move into new towns.⁹² The first new towns, in County Durham, Newton Aycliffe and Peterlee, were designated in the 1940s as part of the government’s response to the Great Depression.⁹³ Bulmer identifies the 1949 report by planning consultants Pepler and MacFarlane as an example of the dismissive attitude of outside observers to the social life of mining communities.⁹⁴ The report influenced the 1951 Durham County Development Plan that introduced, the subsequently discredited, categorisation of mining settlements based on value judgements of

⁸⁶ Emery, “Pease and Partners,” 157.

⁸⁷ Emery, “Pease and Partners,” 159.

⁸⁸ Emery, “Pease and Partners,” 162.

⁸⁹ Martin Bulmer, “Introduction,” in *Mining and Social Change: Durham County in the Twentieth Century*, ed. Martin Bulmer (London: Croom Helm, 1978), 11 – 13.

⁹⁰ Ibid.

⁹¹ Martin Bulmer, “Employment and Unemployment in Mining 1920 – 70,” in *Mining and Social Change: Durham County in the Twentieth Century*, ed. Martin Bulmer (London: Croom Helm, 1978), 151.

⁹² Martin Bulmer, “Social Structure and Social Change in the Twentieth-century,” in *Mining and Social Change: Durham County in the Twentieth Century*, ed. Martin Bulmer (London: Croom Helm, 1978), 36.

⁹³ Martin Bulmer, “Change, Policy and Planning since 1918,” in *Mining and Social Change: Durham County in the Twentieth Century*, ed. Martin Bulmer (London: Croom Helm, 1978), 173.

⁹⁴ Bulmer, “Change, Policy and Planning,” 179.

their possible futures. Like Bulmer, Robert Waller was concerned with life in twentieth century mining communities, but focused on the development of new villages.⁹⁵ Given this it is surprising that Waller thought it valid criticism of Bulmer's sociological model of communities in decline to observe that it did not accurately reflect a number of attributes unique to developing communities.⁹⁶ Waller addressed the thesis that opening up a new coalfield caused a "very high degree of social and political dislocation".⁹⁷ The Dukeries extension of the Nottinghamshire coalfield was developed in the inter-war years and the private companies sinking the new pits invested significant capital in building company settlements.⁹⁸ When Waller was writing the Dukeries coalfield was still a mainstay of the UK coal industry and the expectation was that it would "continue to produce profitable coal for another century at the minimum".⁹⁹ Thoresby Colliery, a Dukeries pit that closed in 2015, was the last Nottinghamshire coal mine. Waller contended that the fear of unemployment during the economic depression of the 1920s and 1930s put the companies in a powerful position, which they sort to enhance by controlling life within the villages.¹⁰⁰ Uniformed company policemen patrolled to keep order and dismissal could follow any transgression.¹⁰¹ The settlements were considered model villages, with good quality housing, but the rate of turnover of population indicated that they were not communities that people wanted to live in.¹⁰² Waller was not able to satisfactorily account for the population churn but considered that company control, a negative expression of paternalism, was a factor.¹⁰³ The Dukeries villages had not had sufficient time to develop into settled communities before the power of the companies was first curtailed by WWII and then extinguished by nationalisation.¹⁰⁴ Waller considered that the National Coal Board took far less interest in village life but this view is being challenged by ongoing research.¹⁰⁵ Waller made an interesting contribution to the study of the formation of communities, but his use of oral history work was unconvincing and he failed to develop his arguments sufficiently to support his rather sweeping conclusions.

⁹⁵ Robert J. Waller, *The Dukeries Transformed: The Social and Political Development of a Twentieth Century Coalfield* (Oxford: Clarendon Press, 1983), 1.

⁹⁶ Waller, *The Dukeries Transformed*: 6, 224 and 237.

⁹⁷ Waller, *The Dukeries Transformed*: 1.

⁹⁸ Waller, *The Dukeries Transformed*: 76

⁹⁹ Waller, *The Dukeries Transformed*: 23.

¹⁰⁰ Waller, *The Dukeries Transformed*: 290.

¹⁰¹ Waller, *The Dukeries Transformed*: 259.

¹⁰² Waller, *The Dukeries Transformed*: 41.

¹⁰³ Waller, *The Dukeries Transformed*: 49.

¹⁰⁴ Waller, *The Dukeries Transformed*: 152 – 153.

¹⁰⁵ "On Behalf of the People: Work, Community and Class in the British Coal Industry 1947 – 1994", *Coal and Community*, accessed January 24, 2022, <https://www.coalandcommunity.org.uk/>

A more detailed critique of paternalism was provided by Diane Drummond, who aimed to enhance earlier urban histories of Crewe by examining the work, social and political lives of the town in order to determine “how employer paternalism and its product, employer or ‘influence politics’, actually functioned”.¹⁰⁶ Based on her PhD thesis Drummond, who grew up in Crewe with a father who was employed at the railway works, produced a rather repetitive book with the similar sections of text appearing in a number of places.¹⁰⁷ The period studied was from the foundation of the town as a railway colony for the Grand Junction Railway Company in 1843 to WWI.¹⁰⁸ Over this period, prior to general enfranchisement, the company was the dominant employer on a scale not seen in the Cleveland ironstone area. Drummond tested how various theories of paternalism and deference fitted the situation in Crewe and attempted to define a more appropriate model.¹⁰⁹ She concluded that whilst the company tried to use paternalism as a lever to ensure loyalty to the Anglican Church and the Conservative Party they were not as successful as other theorists had assumed.¹¹⁰ Company paternalism did not “produce outright deference” and by the 1880s there was no longer even a pretence that they were in control of the political scene.¹¹¹ To Drummond the models of paternalism and deference did not contain sufficient complexity to account for the motives and actions of either the employers or employees.¹¹² Rather than being cowed the townspeople exhibited an independent spirit founded on the strong Liberal, non-conformist and radical tendencies that immigrants had brought to the town.

The Quaker Pease family were involved in the Cleveland ironstone industry as mine owners and the settlements that they built contained better quality housing than that provided by other owners or speculative buildings. Methodism was brought into the Cleveland area by immigrant workers and many chapels were built. Each of the case study settlements was home to at least one Methodist denomination, but none of the nineteenth century chapels remain in use for worship. This thesis does not explore the role of religion or paternalism in the Cleveland ironstone field, this would be a useful topic for further research.

¹⁰⁶ Diane K. Drummond, *Crewe: Railway Town, Company and People – 1840 – 1914* (Abingdon: Routledge, 2017), 2. First published 1995.

¹⁰⁷ Drummond, *Crewe*, xii.

¹⁰⁸ *Ibid.*

¹⁰⁹ Drummond, *Crewe*, 4.

¹¹⁰ Drummond, *Crewe*, 131.

¹¹¹ Drummond, *Crewe*, 210.

¹¹² Drummond, *Crewe*, 212.

2.5 Urban Elites

Social historians of nineteenth century Britain have been accused of neglecting the middling sorts, including industrialists, in their attempts to understand social stability.¹¹³ Richard Trainor intended to counter this with a study of the urban elites in the Black Country towns of West Bromwich, Dudley and Bilston between 1830 and 1900.¹¹⁴ In a dense and well argued, if a little repetitive, account Trainor concluded that “elite flexibility helped to tame early unrest in the district” and that “increasingly energetic and conciliatory social leadership” was instrumental in “improving conditions and in promoting social harmony”.¹¹⁵ Trainor contended that the middle class in the towns were both more numerous and prosperous than previously stated.¹¹⁶ A weakness of his case was that he was unable to unambiguously define who was middle class and how many of them there were, instead splitting the group into three, upper, middle and lower, and identifying the boundary between lower middle class and the working class as being particularly blurred.¹¹⁷ The range of roles identified as being carried out by the elites is impressive, expanding as civic society become more established as the century progressed.¹¹⁸ Initially the pool from which the elites were taken was small, consisting mainly of the upper middle classes supplemented by a few aristocrats.¹¹⁹ The elites gradually became more representative of the population, with the working class starting to make inroads towards the end of the century.¹²⁰ Overall, despite the inclusion of sections of case studies, the book tended towards a regional history of the Black Country. Trainor identified the Bagnall family as one of the large employers in the area who took elite roles.¹²¹ Two of the Bagnalls moved from the Black Country to Grosmont, a case study settlement in this thesis, becoming ironmasters there. Trainor identifies the Bagnalls as paternalistic employers who enjoyed better working relations with their employees as a result, but courted controversy by stating that the workers seem to have genuinely appreciated paternalistic efforts.

Tosh Warwick followed Trainor’s definition of the roles of urban elites, but disagreed with Briggs’ contention that the Middlesbrough industrialists withdrew undertaking them once they moved from

¹¹³ Richard H Trainor, *Black Country Elites: The Exercise of Authority in an Industrial Area- 1830 - 1900* (Oxford: Clarendon Press, 1993), vii.

¹¹⁴ Trainor, *Black Country Elites*, 4.

¹¹⁵ Trainor, *Black Country Elites*, 375.

¹¹⁶ Trainor, *Black Country Elites*, 62.

¹¹⁷ Trainor, *Black Country Elites*, 68.

¹¹⁸ Trainor, *Black Country Elites*, 93 – 94.

¹¹⁹ Trainor, *Black Country Elites*, 95 – 96.

¹²⁰ Trainor, *Black Country Elites*, 102 – 103.

¹²¹ Trainor, *Black Country Elites*, 148 – 150.

the crowded, polluted town to the country.¹²² He selected Sir Arthur Dorman and Sir Hugh Bell as case study steel era magnates and compared the roles that they and their families played in urban governance to those undertaken by the early iron era industrialists.¹²³ Warwick was able to utilise the company records of the local iron and steel companies held in the British Steel Archive, that had only a short time earlier become accessible to researchers, as a prime source. He contended that rather than disengaging from the urban sphere the steel era elites adjusted the focus of their efforts. Political activities moved away from seeking elected office to roles in national party mechanisms.¹²⁴ Engagement with the cultural life of the town endured along with significant charitable and philanthropic gestures, such as the donation of the Dorman Museum to the town.

This thesis does not examine the social structure of the Cleveland ironstone settlements, neither during the mining era nor subsequently. Existing literature is overly focused on the top and bottom sections of society and research across the whole structure would be a welcome addition to the cannon.

2.6 Reactions to the Decline of Industry

Middlesbrough was economically and psychologically depressed by the time of its Golden Jubilee in 1881.¹²⁵ It never again achieved the economic prosperity of its iron industry dominance and is a case study for the management of decline for 140 years. Responding to the Town Planning Act of 1909 Middlesbrough County Borough developed an ambitious redevelopment scheme using the principles of the Garden City movement.¹²⁶ Two world wars and the economic depression between them prevented these plans being realised. Alternative redevelopment plans were presented by Max Lock in 1946.¹²⁷ Middlesbrough Town Council took the decision in 1943 to commission a survey of the town that addressed the “physical reconstruction of our town” that was accepted in principle.¹²⁸ Lock had led a young team of architects, planners and social scientists, with a strong Quaker ethos, to produce a blue print for the future of the town.¹²⁹ The human cost of the rapid nineteenth century development of the town was seen as too high, particularly for those left in the deprived

¹²² Thomas (Tosh) Warwick, “Middlesbrough’s Steel Magnates: Business, Culture and Participation - 1880-1934,” (DPhil thesis, University of Huddersfield 2014)

¹²³ Warwick, “Steel Magnets,” 19.

¹²⁴ Warwick, “Steel Magnets,” 246 – 247.

¹²⁵ Tony Nicholson, “‘Jacky’ and the Jubilee: Middlesbrough’s Creation Myth,” in *Middlesbrough: Town and Community 1830 – 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), 32.

¹²⁶ Polley, “Housing the Community,” 171.

¹²⁷ J.W. Leonard, “‘City Beautiful’: Planning in Mid-Twentieth-Century Middlesbrough,” in *Middlesbrough: Town and Community 1830 – 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), 173.

¹²⁸ L.G. Allen, “The Mayor’s Foreword,” in *The County Borough of Middlesbrough Survey and Plan*, ed. Max Lock (Middlesbrough: The Middlesbrough Corporation, 1946), 1.

¹²⁹ Leonard, “City Beautiful,” 173 – 174.

northern wards.¹³⁰ Lock's solution lay in zoning Middlesbrough, with transport links between the zones. It was not fully implemented but "soon modified and considerably watered down".¹³¹

Although no study of the health of the residents of Middlesbrough during its industrial heyday was completed, Bell does reference poor sanitation and health outcomes for the working classes in the town. Briggs observed that Victorian "Middlesbrough, new though it was, was distinctly unhealthy".¹³² Taylor concluded that Middlesbrough in the 1850s was "one of the most unhealthy towns in the country".¹³³ Despite numerous interventions aimed at rectifying health inequalities the town remains relatively unhealthy. The 2015 IMD data ranks Middlesbrough as the fifth most deprived local authority area in England against the Health and Disability metric, which measures the risk of premature death and the impairment of quality of life through poor physical or mental health.

The fault in the original siting and layout of Middlesbrough identified by Leonard resulted in the derogatory 'over the border' moniker being attached to the area to the north of the extension to the S&DR, which ended at the coal staithes.¹³⁴ The reclaimed marshland between the railway line and the River Tees was occupied by the Ironmasters' District, site of ironworks, factories and docks as well as the first centre of the town. By the early 1970s it was largely derelict, and the CBT bought 98 acres to redevelop for light industry, with a riverside walk.¹³⁵ Although successfully completed this regeneration phase left a considerable area still requiring attention. Hannah Holmes considered how a Middlesbrough Borough Council led regeneration project of the eastern segment of the area, Middlehaven, was both informed by and sought to address the 'over the border stigma'.¹³⁶ The poor reputation was used to justify the demolition of the mid twentieth century houses that had replaced the nineteenth century originals.¹³⁷ The first Middlesbrough Town Hall now stands neglected and decaying at the centre of a layout of streets with no buildings. Holmes considered that Middlesbrough Borough Council had been innovative in their approach to regeneration, designed to overcome the stigma by creating a hub for the creative and digital industry. Only time will tell if it creates a lasting economic legacy.

¹³⁰ Leonard, "City Beautiful," 183.

¹³¹ Leonard, "City Beautiful," 184.

¹³² Briggs, *Victorian Cities*, 269.

¹³³ David Taylor, "The Infant Hercules and the Augean Stables: A Century of Economic and Social Development in Middlesbrough, c. 1840 - 1939," in *Middlesbrough: Town and Community 1830 - 1950*, ed. A.J. Pollard (Stroud: Sutton Publishing Ltd., 1996), 60.

¹³⁴ Leonard, "Urban Development," 518.

¹³⁵ Horton, *The Story of Cleveland*, 269.

¹³⁶ Hannah Briony Holmes, "Spaces of demarginalization: Processes, policy and politics in addressing territorial stigma in Middlehaven, Middlesbrough," (DPhil thesis, University of Durham 2020)

¹³⁷ Holmes, "Middlehaven," 2.

The Middlesbrough local authority area ranked as the most deprived in the country with respect to the IMD Income metric and second against the Employment measure. The regeneration efforts discussed by Holmes are part of a long history of initiatives aimed at developing a new economic base to replace that lost with the decline of the iron, steel and allied industries. Anthony Lloyd spent six months working in a Middlesbrough call centre as his fieldwork for exploring the realities of the type of work available in a post-industrial service economy.¹³⁸ He observed the pressure put on staff by intrusive management practises and the lack of career opportunities for most. Lloyd interviewed other workers regarding their attitude to the working conditions and how they felt their roles fitted within society. He concluded that working class identity and solidarity had been eroded and was pessimistic of a better future for the young people than “jumping from one poorly paid service sector job to another”.¹³⁹ In a thesis submitted a year after Lloyd, Jonathan Warren also used call centres as case studies in an exploration of theories of globalization and “its impact upon localities and the lives of individuals”.¹⁴⁰ Warren considered that the workers had more agency over their working lives than Lloyd and was more positive about the lived experience.

Tim Strangleman had the opportunity to explore the feelings of industrial workers in the run up to the closure of their workplace during his study of the Guinness Park Royal Brewery.¹⁴¹ Interviews were conducted with those who had worked at the brewery, opened in 1936, from 1960 up until closure in 2005.¹⁴² Despite talking to managers as well as shop floor workers, Strangleman focused on the latter’s experiences and reactions to the loss of their jobs and workplace. There was not time to establish a work culture before WWII commenced and Guinness dedicated considerable effort to developing the workplace community they wished to see post 1945.¹⁴³ Strangleman highlighted the role of imagery in achieving this and it is a pity that the book does not contain more illustrations with clear links to the text. Guinness wanted their workers to feel part of the Park Royal ‘family’ and in the post war boom years they gave them a “tremendous sense of security and confidence”.¹⁴⁴ Interviewees had fond memories of working at Park Royal into the 1980s and Strangleman argues that it was not ‘smokestack nostalgia’ to miss an era of “sustained rising living standards” when

¹³⁸ Anthony Lloyd, “Life in a Northern Town: Call Centres, Labour Markets & Identity in Post-industrial Middlesbrough,” (DPhil thesis, University of York, 2010)

¹³⁹ Lloyd, “Life in a Northern Town,” 247.

¹⁴⁰ Jonathan Warren, “Living the Call Centre – Global, Local, Work, Life, Interfaces,” (DPhil thesis, Durham University 2011), 293.

¹⁴¹ Tim Strangleman, *Voices of Guinness: An Oral History of the Park Royal Brewery*, (Oxford: Oxford University Press, 2019), 1.

¹⁴² Strangleman, *Voices of Guinness*, 79.

¹⁴³ Strangleman, *Voices of Guinness*, 37.

¹⁴⁴ Strangleman, *Voices of Guinness*, 79.

“working people enjoyed a sense of stability and a degree of security as never before”.¹⁴⁵ There was a realisation amongst the employees that change was needed, but that did not make adjusting to the changes in management style, restructuring and redundancies any easier.¹⁴⁶ Workers felt the loss of community as much as the loss of a job and were concerned that their children faced an uncertain job market.¹⁴⁷

Warren also had the opportunity to establish the reactions of workers and those in the wider community to the loss of a workplace when the Redcar Steelworks was first threatened with closure and then closed as he researched the “social and cultural transformation” wrought by industrial decline.¹⁴⁸ He conducted interviews and held focus groups to address two questions: “What is the legacy of Teesside’s industrial past?” and “How do the legacies of the industrial past influence the area today and shape its possible futures?”.¹⁴⁹ Warren concluded that the area’s industrial history is “highly important” to both the place and the people. As Strangleman observed at Park Royal, people missed the quality and security of jobs with large, successful British companies and were concerned that the younger generation were facing a life time of job uncertainty.¹⁵⁰ Warren observed that employment on Teesside retained a relatively high level of manufacturing roles, and concluded that the region was facing an industrial decline rather than de-industrialisation.¹⁵¹ Contributors felt that the Heseltine Report, commissioned to consider the future of the Redcar Steelworks site, did not constitute an adequate plan to address issues in the region.¹⁵² Whilst the legacy of the industrial past has shaped the current situation and informed the imagined possible futures Warren cautioned there was a risk the region was too focused on seeking solutions in attracting large employers.¹⁵³ Overall he was not confident that the neither the “political and economic climate” nor “national and local policy” would support Teesside in succeeding to move beyond its existing industrial base and build a future based on its heritage.¹⁵⁴

¹⁴⁵ Strangleman, *Voices of Guinness*, 171.

¹⁴⁶ Strangleman, *Voices of Guinness*, 121.

¹⁴⁷ Strangleman, *Voices of Guinness*, 141.

¹⁴⁸ Jonathan Warren, *Industrial Teesside, Lives and Legacies: A Post-industrial Geography* (Cham: Palgrave Macmillan, 2018), 7.

¹⁴⁹ Warren, *Industrial Teesside*, 244.

¹⁵⁰ Warren, *Industrial Teesside*, 5 - 6.

¹⁵¹ Warren, *Industrial Teesside*, 4.

¹⁵² The Rt Hon the Lord Heseltine of Thenford CH, *Tees Valley: Opportunity Unlimited: An Independent Report* (London: Department for Communities and Local Government, 2016)

¹⁵³ Warren, *Industrial Teesside*, 231.

¹⁵⁴ Warren, *Industrial Teesside*, 247.

Simon Beer, a geographer, overlaps with Warren both in the subject matter and time period of his study but there is little commonality in the approach taken.¹⁵⁵ Beer studied the reactions of four groups to the mothballing of the Redcar Blast Furnace in February 2010.¹⁵⁶ He selected the steelworkers, management of the works, the local authority, R&CBC, and the local enterprise body, Tees Valley Unlimited, as the basis for his analysis.¹⁵⁷ Rooted in debates concerning theoretical geography Beer produced a work that is not easy for an outsider to fully comprehend. He termed different approaches to ideas of what the future held “trajectories”.¹⁵⁸ The restarting of the blast furnace by SSI on April 1 2012 complicated Beers’ analysis.¹⁵⁹ Redcar Steelworks closed for good at the end of 2015 and responsibility for economic regeneration has passed to the Tees Valley Combined Authority, with an elected mayor and close collaboration with the Tees Valley Local Enterprise Partnership.

On Teesside there is an ongoing need for government intervention to attract new jobs and achieve economic regeneration. A case study of where the state did intervene to bring employment to a region was given by Andrew Perchard, who examined the history of aluminium smelting in the Highlands of Scotland.¹⁶⁰ Detailed archival research supports an exploration of the relationship between company and state. Portrayed by supporters as a means of halting the depopulation of the Highlands, objectors to the construction of the smelters and associated hydro-electric schemes were concerned about their environmental and landscape impact.¹⁶¹ Intangible aesthetic values were unable to prevail against tangible economic impacts. The government was additionally motivated to support the development of a domestic aluminium industry by the strategic importance of the metal, particularly in war time.¹⁶² Managers of the British Aluminium Company failed to anticipate or react when the strength of their ties to government decreased and mishandled the 1958 hostile, but successful takeover bid.¹⁶³ Perchard established a comprehensive business history for the operators of the smelters but also considered the environmental impact of operating the smelters and the social structures promoted in the villages built for their workers. Neither of the case study settlements, Kinlochleven and Inverloch, was particularly large and this allowed British Aluminium

¹⁵⁵ Simon Hanlon Beer, “The Trajectories of Industrial Change: Disrupting, Managing and Assembling Futures in Teesside,” (DPhil thesis, University of Durham 2016)

¹⁵⁶ Beer, “Trajectories,” 1.

¹⁵⁷ Beer, “Trajectories,” 7.

¹⁵⁸ Beer, “Trajectories,” 5.

¹⁵⁹ Beer, “Trajectories,” 13.

¹⁶⁰ Andrew Perchard, *Aluminiumville: Government, Global Business and the Scottish Highlands* (Lancaster: Crucible Books, 2012)

¹⁶¹ Perchard, *Aluminiumville*, 195 – 196.

¹⁶² Perchard, *Aluminiumville*, 46.

¹⁶³ Perchard, *Aluminiumville*, 59 – 62.

to attempt to engineer the communities in line with the image they wished to project of themselves.¹⁶⁴ Older residents interviewed by Perchard expressed an attachment to British Aluminium and nostalgia for the family environment in the communities they felt existed when they were in charge.¹⁶⁵ Any bitterness regarding the loss of jobs when the Kinlochleven smelter closed in 2000 was directed at British Aluminium's successor, Alcan.¹⁶⁶ The Lochaber smelter is the only remaining operating UK aluminium smelter in 2021, a remarkable survivor of an industry that has always been on the margins of economic viability in this country.

The Cleveland ironstone industry was established without government assistance and, as Bainbridge noted, slipped into history with remarkable little fuss. The only official support given to the mines was a subsidy from the British Iron and Steel Federation that started in 1941.¹⁶⁷ For mines that closed before the 1940s, if there was no alternative employment locally emigration occurred until the local economy could support the remaining population.

In summary this thesis builds on local history work but puts them into the context of regional industrial history. It does not attempt to add to the comprehensive work on social structures within settlements.

3 Studies of the History of the Cleveland Ironstone Industry

When the last Cleveland ironstone mine, North Skelton, closed in 1964 the industry passed into history. This section reviews the body of material on the industry that has subsequently been published and identifies how this thesis enhances this cannon. The geology of the ironstone formations is a specialist field so is not included in this review as it is not directly relevant.

3.1 The 1960s and 1970s

Concern over the scale of loss of heritage sites came to the fore from the late 1950s, as the pace of urban and rural re-development accelerated. The Victorian Society, founded in 1958, for example, waged a high profile but ultimately unsuccessful campaign to save the Euston Arch, demolished in 1962.¹⁶⁸ To try to stem the losses the Town and Country Planning Act of 1968 tightened legal protections and in the same year the Government initiated a survey to update the original 1940s

¹⁶⁴ Perchard, *Aluminiumville*, 253 – 254.

¹⁶⁵ Perchard, *Aluminiumville*, 313.

¹⁶⁶ Perchard, *Aluminiumville*, 315.

¹⁶⁷ North, *Teesside's Economic Heritage*, 87.

¹⁶⁸ Nikolaus Boulting, "The law's delays: conservationist legislation in the British Isles," in *The Future of the Past: Attitudes to Conservation 1174 – 1974*, ed. Jane Fawcett (London: Thames and Hudson, 1976), 26 – 27.

list.¹⁶⁹ These statutory shifts further embedded a culture fixated on recording and producing lists of things worthy of preservation. Without governmental support the CBA attempt to record industrial sites, discussed below, was insufficiently resourced to succeed.

Working during this period of legislative and cultural change, J.W. Bainbridge was researching a comparative study of the Cleveland and West Cumberland ironstone mining industries when the last Cleveland ironstone mine closed in 1964.¹⁷⁰ He contributed a paper to the *Times Review of Industry and Technology* in March 1964 to mark the end of an era of industrial history.¹⁷¹ In this he observed that the closure of the North Skelton mine had not been widely reported and “that an industry can pass from the industrial scene with so little fuss seems unusual”.¹⁷² Bainbridge structured his introduction to the Cleveland ironstone industry in a similar way to that adopted within this thesis, starting with geology of the area and composition of the stone.¹⁷³ He produced a work focused on economic rather than industrial history, and explored the financial factors that impacted on the development and decline of the ironstone mines and the railways that served them.¹⁷⁴ Bainbridge relayed the enduring (but erroneous) view of the moors as “unaltered and rural” to be contrasted with “the ‘other’ Cleveland, which had an industrial character”.¹⁷⁵ Overall he was disparaging about both the mining era housing and the redundant mine sites. For example at Boosbeck and Lingdale Bainbridge referred to “squalid rows of cottages” and thought that Margrove Park had been improved by the removal of the spoil heap to form the foundations of ICI Wilton.¹⁷⁶ Overall Bainbridge felt unable to predict the future of Cleveland ironstone settlements such as Margrove Park, but was largely correct in stating “after having undergone the readjustments that followed in the wake of mining there is nothing to suggest they will not survive in their present form for a considerable period”.¹⁷⁷ A small hamlet in a relatively rural location, the 2015 IMD ranking places

¹⁶⁹ Boulting, “The law’s delay,” 29 -30.

¹⁷⁰ J.W. Bainbridge, “A Comparative Study in the Growth and Decline of Two Iron Ore Mining Districts: Cleveland and West Cumberland,” (MSc thesis, University of Durham 1964). Unfortunately after the author consulted the Bainbridge thesis in Teesside University Library it went missing and no copy has been located.

¹⁷¹ J.W. Bainbridge, “The End of an Era: The Cleveland Ironstone Industry,” *Times Review of Industry and Technology* Vol.2, No. 3, March 1964, 38-39.

¹⁷² Bainbridge, “End of an Era,” 38.

¹⁷³ Bainbridge, “A Comparative Study,” 7 – 28.

¹⁷⁴ The development and working of the mines were covered in Chapter 2, pages 30 to 46. Chapter 3, pages 47 to 61, discussed the peak and subsequent decline of mining. In both cases the fate of the mines was linked to events in the iron and steel industries. Railways and their relationship with mining are discussed in Chapter 6, pages 114 to 124.

¹⁷⁵ Bainbridge, “A Comparative Study,” 6

¹⁷⁶ Bainbridge, “A Comparative Study,” Page 76 for the quote on housing and 88 for the use of the spoil waste.

¹⁷⁷ Bainbridge, “A Comparative Study,” 113.

Margrove Park between the rural North Yorkshire case study settlements and the larger, urban Redcar and Cleveland ones.

After the CBA established an Industrial Archaeology Research Committee in 1959 alarm at the rate of loss of industrial sites prompted volunteers around the country to join in efforts to make a record of visible remains prior to any further destruction.¹⁷⁸ For interested parties in Cleveland the call to arms came with the closure of the North Skelton Mine, followed by the closure of the Ayresome Ironworks in July 1965.¹⁷⁹ The Ayresome blast furnaces were the last surviving examples of the Cleveland blast furnace design that had once been predominant throughout the iron industry.¹⁸⁰ The site was demolished soon after closure. To record the site in operation members of the newly formed Teesside Industrial Archaeology Group (TIAG) visited in July 1964. Figure 1 is a CBA record card covering the operation of the hoist that lifted the charge to the top of the furnaces. Figure 2 shows the image referred to as 7C on the record card.

| | | | | | | |
|--|------------------|------------|------------------|---|-----------|------------|
| NATURE OF SITE (Factory, mine, etc.) | | IRON WORKS | | COUNTY | N. YORKS. | REF. No. 7 |
| GRID REFERENCE OR LOCATION. | INDUSTRY. | DATING. | PARISH/TOWNSHIP. | DATE OF REPORT. | | |
| GJERS MILLS, AYRESOME WORKS | IRON MANUFACTURE | 1871 | MIDDLESBROUGH | AUGUST 1965 | | |
| DESCRIPTION: dimensions; present condition; architectural features etc. | | | | | | |
| PHOTOS. 7A & 7B: ENGINE FOR BLAST FURNACE PNEUMATIC HOIST (ONE OF PAIR OF SMALL SINGLE-ACTING BLOWING ENGINES). DIAMETER OF STEAM CYLINDER - 11 INS., LENGTH OF STROKE - 16 INS., DIAMETER OF AIR BUCKETS - 2½ FT. | | | | | | |
| PHOTO 7C: BARROWS ON HOIST TABLE - UP TO 6 BARROWS CAN BE CARRIED AT A TIME. | | | | | | |
| (Further remarks or photo/sketch may be recorded on the back) | | | | | | |
| MACHINERY AND FITTINGS. FOR DETAILS OF ENGINE SEE FULL SURVEY. | | | | | | |
| DANGER OF DEMOLITION OR DAMAGE. CLOSED JULY 1965 - DEMOLITION IMMINENT | | | | | | |
| PRINTED, MANUSCRIPT OR PHOTOGRAPHIC RECORDS. FULL WRITTEN SURVEY WITH ENG. DRAWINGS IN PROGRESS: PHOTOGRAPHIC RECORD (MONOCHROME, COLOUR, CINE) COMPLETE. | | | | | | |
| REPORTER'S NAME AND ADDRESS:- B.E. MACKIN, 89, STATION LANE, SEATON CAREW, CO. DURHAM | | | | Return to:- R.L. PICKLES, 15, CROMWELL TERR., THORNABY, STOCKTON-ON-TEES, CO. DURHAM. M. 3070 | | |
| INSTITUTION OR SOCIETY:- TEESSIDE INDUSTRIAL ARCHAEOLOGY GROUP | | | | | | |
| C.B.A. INDUSTRIAL ARCHAEOLOGY REPORT CARD. | | | | | | |

Figure 1: Example of the TIAG record cards for the Ayresome works (Source: CIAS Archive)

¹⁷⁸ Marilyn Palmer, "Industrial Archaeology and the Archaeological Community: Fifty Years On," *Industrial Archaeology Review* 32, 1 (2010): 6.

¹⁷⁹ J.K. Harrison, "Industrial Archaeology in Cleveland: the first 30 years," *The Cleveland Industrial Archaeologist*, no. 24 (1997): 3.

¹⁸⁰ Taylor, "The Infant Hercules," 56.



Figure 2: Charging barrows on the blast furnace pneumatic hoist table (Source: CIAS Archive)

On Teesside the initiative was taken by John Saunders, of the University of Leeds extra mural centre, and Geoffrey Watson, curator of the Teesside Museums and Galleries. Under their guidance the ‘End of an Era’ conference was held at the Dorman Museum, Middlesbrough in March 1967, to mark “the end of a great era in the industrial development of Teesside and Cleveland”.¹⁸¹ It was named after the film made in the North Skelton mine to commemorate the last shift, on January 17 1964.¹⁸² Turners of Newcastle were commissioned to produce it by the mine owners, Dorman Long & Co. Ltd. to mark the end of their many years of involvement in the industry. Attempts to put TIAG on a formal footing at this time were initially resisted by some as potentially destroying “spontaneous interest and enjoyment”, and indication of the conflict between amateurs and professionals that has been a feature in the history of industrial archaeology.¹⁸³

TIAG was one of the recording groups under the Industrial Archaeology Group for the North-East, who coordinated the CBA initiative in the region until it was wound up in 1974.¹⁸⁴ Whilst the regional group was in existence TIAG members contributed articles on the industrial history of Cleveland to its Bulletin. The only independent publications were the proceedings of ‘End of an Era’ conference, discussed above, and a first gazetteer of Cleveland ironstone mines, that resulted from

¹⁸¹ R.L. Pickles, “Introduction,” *Transactions of the Teesside Industrial Archaeology* 1, no. 1 (1967): frontispiece.

¹⁸² Turners of Newcastle, “The End of an Era (1966),” *Yorkshire Film Archive*, 1966, accessed May 2, 2018, <http://www.yorkshirefilmarchive.com/film/end-era>.

¹⁸³ Harrison, “The first 30 years,” 4.

¹⁸⁴ Michael Wheeler, “The Industrial Archaeology Group for the North-East,” *Bulletin* 1, (1966): 12.

the associated exhibition.¹⁸⁵ The latter contained simple descriptions of each mine, whilst the Industrial Archaeology Group for the North-East check list of sites in the North Riding of Yorkshire published by the in the same year gave only mine names and locations.¹⁸⁶ Whilst many of the groups formed to record industrial sites in the 1960s have not endured TIAG, renamed CIAS in 1974, continues and regularly published material on the industrial history of Cleveland.¹⁸⁷

The Yorkshire Archaeological and Historical Society (YAHS), founded in 1863, has roots in the nineteenth century antiquarian tradition. An Industrial History Section was formed in 1971 and published an index of “items relating to industrial history” in the archives of the Society in 1985.¹⁸⁸ The introduction to the index acknowledges the debate about the definition of industrial history that is developed in Section 4. It includes items “which some may say would not be historical because too recent or not industrial because too old”.¹⁸⁹

The Scarborough and District Archaeological Society was founded in 1947 by a group interested in undertaking traditional archaeological excavations. In the 1960s two members, Raymond Hayes and James Rutter, wrote an article on the Rosedale mines and railway that has become one of the standard references on these mines.¹⁹⁰ In keeping with the preoccupations of industrial archaeology at the time Rutter produced a list of industrial archaeology sites, published in three parts between 1969 and 1971.¹⁹¹ The area covered specifically excludes Teesside, going as far north as the boundary of the NYMNP.¹⁹² Rutter concentrated on sites with visible remains but placed no chronological limits on those included. He stated that he was unable to define the scope of industrial archaeology as this was still being debated.¹⁹³ An expanded and illustrated version of the Hayes and Rutter article was issued as Research Report 9 in 1974.¹⁹⁴ The flourish of interest in industrial archaeology was not sustained, but an article on the Monument ironstone mine at Great

¹⁸⁵ S.K. Chapman, *Dorman Museum Research Report No. 1: Gazetteer of Cleveland Ironstone Mines* (Middlesbrough: Dorman Museum, 1967).

¹⁸⁶ Industrial Archaeology Group for the North-East, “Yorkshire (NR): A checklist of sites,” *Bulletin 4*, (1967): 1 – 11.

¹⁸⁷ Harrison, “The first 30 years,” 5.

¹⁸⁸ Margaret Smith, “An Industrial History Index,” *The Yorkshire Archaeological Journal*, 57 (1985): 45.

¹⁸⁹ *Ibid.*

¹⁹⁰ Hayes and Rutter, “The Rosedale Ironstone Industry and Railway,” 6-28.

¹⁹¹ J.G. Rutter, “Industrial Archaeology in North-East Yorkshire: List of Sites: Area I Scarborough,” *The Transactions of The Scarborough and District Archaeological Society*, 2, no. 12 (1969): 17 – 33; J.G. Rutter, “Industrial Archaeology in North-East Yorkshire: List of Sites: Area II Ryedale & The Hambletons,” *The Transactions of The Scarborough and District Archaeological Society*, 2, no. 13 (1970): 23 - 51; J.G. Rutter, “Industrial Archaeology in North-East Yorkshire: List of Sites: Area III Whitby and Eskdale,” *The Transactions of The Scarborough and District Archaeological Society*, 2, no. 14 (1971): 17 – 49.

¹⁹² Rutter, “Area I,” 17.

¹⁹³ *Ibid.*

¹⁹⁴ R.H. Hayes and J.G. Rutter, *Research Report No.9: Rosedale Mines and Railway*. (Scarborough: Scarborough and District Archaeological Society, 1974)

Ayton, did appear in 1998.¹⁹⁵ Hayes was also an active member of the Helmsley Archaeological and Historical Society, formed in 1950 as an area group of the YAHS.¹⁹⁶ He did not publish any of his ironstone research in their journal, *The Ryedale Historian*.

The Cleveland and Teesside Local History Society was formed in 1968, part of a national wave of such organisations emerging at the time. Their journal published the research of members, and the contents were dictated by their interests. Coverage of the Cleveland ironstone industry peaked in the early 1970s when John S. Owen published a number of articles based on documentary research. Later he became more interested in excavations and published this material via CIAS. Owen had begun his career in various ironworks and became interested in Cleveland ironstone post 1955 when he worked with former miners at the ICI Wilton power plant.¹⁹⁷ Owen witnessed the underground operations of a Cleveland ironstone mine during a visit to the North Skelton mine four days before it closed in 1964, one of only a handful of authors who had seen the mines they wrote about in operation. An anthology of his work related to the Cleveland ironstone industry was published after his death.¹⁹⁸

As noted above some of those involved in the early days of TIAG feared putting it on a formal footing would destroy their enjoyment of their hobby. When the CBA proposed that an “over-arching national society” be formed many members of similar societies around the country felt it was not necessary.¹⁹⁹ Based on a fellowship built up amongst attendees at a series of conferences held between 1964 and 1972 it was decided to ignore these concerns and the Association for Industrial Archaeology was formed in 1973. As of 2021 CIAS is not an affiliated society within the Association. The schism between amateurs, who wished to research topics that interest them, and academics, who wished to construct frameworks linked to debates in socio-economic history and beyond was evident in this development and continued to be a feature of industrial archaeology thereafter.

3.2 The 1980s

After industrial unrest during the 1970s and the election of a Conservative government under Margaret Thatcher in 1979, the UK entered the 1980s a conflicted country faced with adjusting to a

¹⁹⁵ Christopher Hall, “Some Notes on the History of Great Ayton [Monument] Ironstone Mine,” *Transactions of the Scarborough Archaeological and Historical Society*, no. 34 (1998): 3-12.

¹⁹⁶ Raymond Hayes, “Reminiscences of the early days of the Society,” *Helmsley Archaeological and Historical Society*, 2010, accessed Oct 12, 2021, <http://www.helmsleyarchaeologicalandhistoricalsociety.org.uk/history.htm>.

¹⁹⁷ J.K. Harrison, “John Sinclair Owen 1918-1996,” in *Cleveland Ironstone*, ed. CIAS Editorial Board (Helmsley: CIAS and NYMNP, 1998): 9-10.

¹⁹⁸ CIAS Editorial Board, *Cleveland Ironstone*, (Helmsley: CIAS and NYMNP, 1998)

¹⁹⁹ Angus Buchanan, “The origins and early days of the AIA,” *Industrial Archaeology News*, 169 (Summer 2014): 3.

decline in employment in manufacturing. Bitter political divisions found a focus in attitudes to the 1984 – 85 Miners' Strike. In this climate a number of investigations into the social conditions and industrial relations in Cleveland ironstone settlements were carried out.

Martha Cornish focused on the East Cleveland ironstone mining settlements in the Skelton and Brotton areas and used a number of sociological techniques to explore why the residents felt sufficiently alienated to refrain from engaging in the strategic planning process that would impact on their communities.²⁰⁰ At the time of writing, 1982, the regional economy was in a downturn, with limited local employment opportunities and the settlements were seen by the local authority in a negative light, as a problem to be solved rather than a vibrant, living community. M. Cornish was living in the East Cleveland village of Lingdale whilst carrying out her research and Steven Cornish, her husband, used this settlement as the case study for his 1984 thesis.²⁰¹ S. Cornish considered the impact of the decline of the industry on the associated communities. As was typical for the time, he used sociological theories to explain the lack of class consciousness and militancy compared to other industrial communities in decline. He considered it to be the product of the influence of the petite-bourgeoisie, acting as agents for the elites; and he argued that their influence was inadequately countered by union or political organisations. Tony Nicholson was also interested in the impact of trade unionism on the Cleveland ironstone area.²⁰² A booklet based on Nicholson's MA dissertation was published in the mid 1980s by Middlesbrough Borough Council as part of a Manpower Services Commission funded project exploring the history of the town's trade union and co-operative movements.²⁰³ Nicholson subsequently expanded his research to explore the same issue as S. Cornish, but he reached a different conclusion.²⁰⁴ Nicholson sought an explanation of the "extraordinary social calm" that pervaded the Cleveland ironstone mining area during his study period, 1850 - 1914.²⁰⁵ The most satisfactory one he was able to put forward was mutuality, a high level of cooperation between employers and employees. Nicholson retained an interest in the social structure of Cleveland ironstone mining communities during his career as an academic historian at the University of Teesside. Scant records relating to the Cleveland ironstone miners' union activities

²⁰⁰ M.S. Cornish, "Social Networks in East Cleveland: A Study of Powerlessness and Non-participation," (DPhil thesis, University of Durham, 1982)

²⁰¹ S.R. Cornish, "The Social Consequences of Industrial Decline: A Case Study of an East Cleveland Mining Community," (DPhil thesis, University of Hull, 1984)

²⁰² T. Nicholson, "The Growth of Trade Unionism amongst the Cleveland Ironstone Miners 1850 – 1876," (MA dissertation, Teesside Polytechnic 1982)

²⁰³ Middlesbrough Borough Council, *The Cleveland Ironstone Miners: Early Attempts at Combination and the Formation of the "Cleveland Miners Association"* (Middlesbrough: Middlesbrough Borough Council, circa 1984)

²⁰⁴ T. Nicholson, "Common Ground: The Dynamics of Mutuality in the Cleveland Ironstone Mining District 1850-1914," (DPhil thesis, Teesside Polytechnic 1988)

²⁰⁵ Nicholson, "Common Ground," 279.

have survived, however Nicholson arguably placed too much reliance on this information to draw his conclusions regarding the status of union officials in the late 1870s and early 1880s.²⁰⁶ This mars an otherwise important paper exploring the evolution of working-class culture within the Cleveland ironstone settlements. He notes, for example, how newly established settlements were unruly places where an influx of young, single males ran wild in the absence of many of the usual societal control mechanisms.²⁰⁷ Respectability gradually arrived, centred around the powerful presence of the adult male breadwinner. This culture developed out of a masculine working environment that excluded women and valued skilled manual labour above all else.

During a period of political division the 1979 – 1997 Conservative governments “achieved a virtually unchallenged consensus” regarding the conservation of the historic environment for the first time.²⁰⁸ The catalyst for this was the loss of the Firestone Factory, demolished over the August Bank Holiday weekend, 1980 to avoid listing that would have legally protected it.²⁰⁹ As in the 1960s fear of losses prompted a resurvey of listed buildings, completed in 1989 this saw “significant numbers of industrial buildings” being given statutory protection.²¹⁰ Also EH, operational from 1984, was created as a “clear and visible voice for conservation”.²¹¹ One of the actions they were tasked with was to make the list of scheduled monuments more representative and the Monuments Protection Programme (MPP) was launched in 1986 to achieve this. Unlike the resurvey of listed buildings this was not fully resourced and was never completed. These actions further embed a culture fixated on recording and producing lists of things worthy of preservation. EH upset mining historians by bypassing established societies and “utilising private consultants” to prepare MPP reports.²¹² A conference was held at Loughborough University in June 1989 to mend bridges. Local authorities were prompted by the MPP to pay closer attention to classes of monuments beyond the traditional categories of ancient remains such as Bronze Age barrows and Roman forts. Concerned about the condition of the surviving remains of the Cleveland ironstone industry at Rosedale the NYMNP

²⁰⁶ Tony Nicholson, “Masculine Status and Working-class Culture in the Cleveland Ironstone Mining Communities, 1850-1881,” in *Social Conditions, Status and Community 1860 – c. 1920*, ed. Keith Laybourn (Stroud: Sutton Publishing, 1997), 156 – 158.

²⁰⁷ Nicholson, “Masculine Status,” 144 – 145.

²⁰⁸ John Pendlebury, “Conservation, Conservatives and Consensus: The Success of Conservation under the Thatcher and Major Governments, 1979 – 1997,” *Planning Theory & Practice*, 1, no. 1 (2000): 31.

²⁰⁹ Pendlebury, “Conservation, Conservatives and Consensus,” 34.

²¹⁰ *Ibid.*

²¹¹ Pendlebury, “Conservation, Conservatives and Consensus,” 40.

²¹² Peter Neaverson and Marilyn Palmer, “Editorial,” *Industrial Archaeology Review* 12, no.12 (1989): 5

commissioned a survey in 1989 to assess their condition and provide the evidence required by EH for consolidation work.²¹³ This study informed physical interventions carried out in the 1990s.

The industrial history of Cleveland continued to be researched in the 1980s. A group from the Department of Economic History, University of Exeter, led by Dr. Roger Burt began analysing the annual volumes of the Mineral Statistics of the United Kingdom, for mine-by-mine data in the mid 1970s.²¹⁴ Their results for Yorkshire were published in 1982, one of the gazetteers used in Chapter 3.²¹⁵ Group member Michael Atkinson recognised that the supply of iron ores to the iron and steel industry was a “seriously under-researched” topic and sought to rectify this.²¹⁶ Lacking an existing research base forced him to be descriptive and his thesis is largely one of industrial rather than economic history.²¹⁷ One of Atkinson’s study areas was Cleveland and he wrote a good, but now dated synoptic history of the Cleveland ironstone industry that drew heavily on Bainbridge’s ‘pioneering’ work as a key source. With the benefit of access to 30 years of additional research and a much tighter case study focus some errors in Atkinson’s work stand out. For example, at Rosedale he fell into the common trap of assuming all the ironstone mined was of the high metallic content magnetic type.²¹⁸ Atkinson does add an economic historian’s perspective to the study of the Cleveland ironstone industry by exploring cost factors that determined the success of mines in the area. He concluded that the simultaneous occurrence of favourable geographic factors led to Teesside becoming an iron and steel centre in the nineteenth century.²¹⁹ The raw materials suitable for the available smelting technology could be assembled, processed and the products dispatched at competitive costs. Atkinson also identified the factors that helped determine the prospects of firms entering the Cleveland ironstone industry.²²⁰ Early adopters who worked thick seams of easily accessible ironstone and were able to negotiate favourable lease terms with landowners had the greatest chance of success. As Atkinson stopped his analysis at 1914 he did not cover the decline of Cleveland ironstone mining, simply saying that mines closed when the reserves were worked out or

²¹³ Dr Paul J. Lane, “The Archaeology of the Ironstone Industry of Rosedale, North Yorkshire: Volume One: The Report,” (Unpublished Report, North Yorkshire Moors National Park Authority 1989). 1.

²¹⁴ R. Burt et al., *The Yorkshire Mineral Statistics: Metalliferous and Associated Minerals 1845 – 1913* (Exeter: The Department of Economic History, University of Exeter, 1982), v.

²¹⁵ Burt et al., *Yorkshire Mineral Statistics*; Gill and Burt, *British Mining No. 72*

²¹⁶ Michael Atkinson, “Iron Ore Mining in Mainland Britain in the Nineteenth and Early Twentieth Centuries and its Links with the Iron and Steel Industry, with Particular Reference to Cleveland, Cumbria and the South Western Counties of England,” (DPhil thesis, University of Exeter 1981), 1.

²¹⁷ Atkinson, “Iron Ore Mining,” 238.

²¹⁸ Atkinson, “Iron Ore Mining,” 203.

²¹⁹ Atkinson, “Iron Ore Mining,” 245.

²²⁰ Atkinson, “Iron Ore Mining,” 193.

if their output was no longer economically competitive.²²¹ Atkinson represented a progression from the work of amateurs such as Owen and Rutter but was far from comprehensive or error free.

3.3 The 1990s and onwards

Constrained by a lack of resources the MPP continued to make slow progress through the 1990s and into the 2000s, until it ceased when funding was withdrawn in 2005.²²² It remains the case that there has never been a comprehensive survey of the industrial heritage of England. Three reports on the iron and steel industry, including a national assessment of iron mining, were completed under the MPP, but not made generally available.²²³ The requirement for an adequate knowledge base to support the listing of buildings and the scheduling of monuments remained after the MPP ceased and EH elected to move to a model of sponsoring specialist interest groups to undertake the necessary research. In 2016 the National Association of Mining History Organisations produced the first part of a research framework which they claimed to be the first “comprehensive assessment of the history of extractive industries” in England.²²⁴ In his assessment of the state of knowledge of iron mining Peter Cloughton made the same observation as Atkinson had in 1981, that research had concentrated on downstream processing rather than mining.²²⁵ This shows a worrying lack of progress in addressing a known issue. Cloughton felt that although the Cleveland ironstone industry had been better documented than that in other regions it had been “largely ignored by both archaeologists and mining historians”.²²⁶ The work of amateur mine historians such as Chapman and excavators such as the Cleveland Mining Heritage Society has not been developed to a professional level.

This protracted analysis aimed at defining remains of nationally significance coincided with practical conservation work. EH funded, for example, a programme of works on the Rosedale East Mines

²²¹ Atkinson, “Iron Ore Mining,” 251.

²²² Marilyn Palmer and Hilary Orange, “The Archaeology of Industry: People and Places,” *Post-Medieval Archaeology* 50, 1 (2016): 87.

²²³ Eric Instone, “Monuments Protection Programme: The Iron Mining Industry, Introduction to Step 3 Assessments,” (Unpublished report for English Heritage, 1995): Appendix 1. David Cranstone, “Monument Protection Plan: Iron and Steel Industries – Report on Step 3 Consultation,” (Unpublished report for English Heritage, 2001); David Cranstone, “Monument Protection Plan: Iron and Steel Industries – Introduction to Additional Step 3 Assessments,” (Unpublished report for English Heritage, 2002).

²²⁴ Peter Cloughton, “Foreword,” in *The Archaeology of Mining and Quarrying in England: A research Framework for the Archaeology of the Extractive Industries in England – Resource Assessment and research Agenda*, ed. Phil Newman (Matlock Bath: The National Association of Mining History Organisations, 2016): xvi.

²²⁵ Peter Cloughton, “Iron and Ironstone,” in *The Archaeology of Mining and Quarrying in England: A Research Framework for the Archaeology of the Extractive Industries in England – Resource Assessment and Research Agenda*, ed. Phil Newman (Matlock Bath: The National Association of Mining History Organisations, 2016): 115.

²²⁶ Cloughton, “Iron and Ironstone,” 124.

between 1993 and 1996.²²⁷ The mine remains were, however, substantial and funding only allowed a representative range of structures to be conserved. Those selected included the elements of the two sets of calcining kilns and the mine ventilation chimney. Not long after this work was completed the industrial remains at Rosedale suffered a significant loss when stone foundations of the West Mines winding engine house, pre-notified for scheduling, mysteriously disappeared over the autumn / winter of 1999.²²⁸ Funding for the NYMNP industrial heritage priorities identified in 2006 was secured via a National Lottery Heritage Fund Landscape Partnership scheme that ran from 2016 to 2021.²²⁹ The majority of the physical conservation work was carried out on the Rosedale calcining kilns and railway line, but work also took place at the Warren Moor Mine, Kildale and Grosmont. In keeping with the requirements of the National Lottery Heritage Fund the project encouraged visitors to access and understand the sites via walking guides and interpretation panels. It was disappointing that such a high-profile project served to reinforce a prior culture of industrial heritage being overly focused on the preservation and presentation of standing remains rather than telling the whole story of industrial society.

Whilst nationally interest in decline of manufacturing employment accelerated in the 1990s little focus fell on Cleveland until the following decade, when the future of the Redcar steelworks began to be debated. A thesis, by David Byrne, used the CCC area as one of his three case study localities in North-East England whilst exploring factors impacting on the social structure of places that have suffered large scale industrial job losses.²³⁰ Observing an increase in social divisions from the late 1980s he was pessimistic that any government interventions would address the societal problems of the area. The incoming Labour government in 1997 signalled a shift in attitude to heritage by renaming the Department of National Heritage as the Department of Culture, Media and Sport.²³¹ This was seen as modernizing the cultural agenda, moving away from “the overtly backward looking associations of ‘heritage’”.²³² The conservation lobby were concerned that governmental rhetoric, particularly regarding urban regeneration, showed a return to the post war attitude that historic buildings acted as a “restraint” on developments.²³³ A robust response to counter this was

²²⁷ Graham Lee, “Rosedale Ironstone Industry East Mines: Conservation Project 1993 - 96,” *The Ryedale Historian*, 16 (2000/01): 14 – 18.

²²⁸ Graham Lee, “Industrial Archaeology in the North York Moors National Park: Recent Work and Research,” *Industrial Archaeology Review* 28, 2 (2006): 81.

²²⁹ North York Moors National Park, “Land of Iron,” *Looking After*, 2021, accessed Oct 14, 2021, <https://www.northyorkmoors.org.uk/looking-after/landofiron>.

²³⁰ David Byrne, “Deindustrialization, planning and class structure: A study of the effects of social policy on social structure,” (DPhil thesis, University of Durham 1993)

²³¹ Pendlebury, “Conservation, Conservatives and Consensus,” 49.

²³² *Ibid.*

²³³ Pendlebury, “Conservation, Conservatives and Consensus,” 50.

organised. These changes coincided with declining academic interest in the industrial history of Cleveland. Since 2000 only one relevant thesis has been produced. Stephen James explored the role of business networks in the growth of the Cleveland ironstone industry, post 1850, and how businesses responded to changes in technology and competition from elsewhere.²³⁴ He concluded that business networks were key in the growth phase and firms were sufficiently adaptable to survive changes in both business practises and technology. His commentary on the part played by Quakers is discussed in Section 2.

As professional interest in the industrial history of Cleveland waned a private publisher, Peter Tuffs, began to accumulate a large catalogue of titles, written by amateur historians. The best known of which is the gazetteer of mines that Tuffs himself compiled.²³⁵ He also published the Cleveland Industrial Heritage Magazine, a title claiming to provide those researching the area's industrial archaeology with "an outlet for their notes, reports, pictures, letters and the like".²³⁶ Tuffs and many of his authors have an association with CIAS but by choosing to publish commercially have the opportunity to profit from their research. Tuffs published works designed to appeal to a lay audience, which are micro-studies of industrial locations. The Spring 2020 catalogue of titles includes 71 related to aspects of the Cleveland iron and steel industry.²³⁷ This includes reprints, walking guides, pictorial histories and anthologies of newspaper cuttings but also original titles on the Cleveland ironstone industry. Histories of single mines or groups of mines form the bulk of this cannon, with Simon Chapman being the most prolific author. Tuffs has, however, only published one title that is primarily a history of a Cleveland ironstone settlement, concerning New Marske which was built by the Pease family for miners at the Upleatham pit.²³⁸ Tuffs' titles have helped document the Cleveland ironstone industry but have not engaged with the wider debates in history. The rate of publication peaked in the 2000s and Tuffs has not published any new titles since 2012.

It was a symptom of the failure to complete a survey of England's industrial heritage that members of the YAHS Industrial History Section felt it necessary to commence a project to create a database of Yorkshire industrial sites in 2013.²³⁹ They chose to work with partners, including CIAS, to populate the database rather than building work captured in the large number of pre-existing gazetteers

²³⁴ James, "Growth and Transition," 2013.

²³⁵ Tuffs, *Catalogue of Cleveland Ironstone Mines*.

²³⁶ Peter Tuffs, "Editorial," *Cleveland Industrial Heritage Magazine*, no. 35 (2014): 1.

²³⁷ Peter Tuffs, *Catalogue of Publications No. 62* (Guisborough: Peter Tuffs, Spring 2020)

²³⁸ Terry Fulton, *Up the Black Lonnen: Up the Black Lane, Aspects of iron mining at Upleatham (1851 to 1875)* (Guisborough: Peter Tuffs, 2009)

²³⁹ Robert Vickers, "Creating an Industrial History Database for Yorkshire," *Yorkshire Archaeological Journal*, 85 (2013): 213-214.

covering various areas of the county.²⁴⁰ By October 2021 there were 8,610 records and 3,448 images included.²⁴¹ Entries, by a large number of people, are of variable quality and of insufficient length to contain anything beyond basic descriptions. The website has the potential to make the industrial heritage of Yorkshire more widely known but does not advance the study of this heritage.

In summary, historical research into the Cleveland ironstone industry has largely been carried out by a small number of amateurs, motivated to record the remains and history of an industry that they felt an affinity towards. Interest peaked in the 1970s and 1980s, when the large-scale loss of manufacturing jobs motivated researchers to try to understand why industrial relations in the area had not been more fractious. This work drew on advances in social history dating back to the 1960s, with a central concern being the formation of class consciousness. Piecemeal work on mine history has continued to date, but in the last generation most work has been undertaken by amateurs collecting facts on the mines and their settlements. Overall, ironstone mining has been less professionally researched than other comparable fields.

This thesis focuses on the relationship between the Cleveland ironstone mines and the settlements that housed its workers, a previously neglected topic. Specifically, it explores if the relative success of mining in a vicinity of a settlement has had any impact on its the post mining experiences.

4 Industrial Archaeology, Local History or Industrial History?

As Claughton observed ironstone mining in Cleveland has been “well documented” but not well studied.²⁴² This observation echoes W.G. Hoskins’ criticism of local historians who assemble “the materials for a history” but do not develop the facts into a history.²⁴³ Leonard certainly felt that Lillie had made this mistake in writing a factual history of Middlesbrough and that this made him less than a ‘serious’ historian.²⁴⁴ The bulk of the work on the Cleveland ironstone industry and the settlements has been done by amateurs who view themselves as either industrial archaeologists or local historians. They have searched archives, investigated physical remains and collated the facts discovered to document the mines and villages. This thesis is indebted to this groundwork but seeks

²⁴⁰ J. Suter and R. Vickers, “Recording and Communicating Yorkshire’s Industrial Heritage,” *Yorkshire Archaeological Journal* 87 (2015): 198-199.

²⁴¹ Yorkshire Archaeological and Historical Society, “Industrial History Online,” *IHO 2.5.7*, 2021, accessed Oct 14, 2021, <https://www.industrialhistoryonline.co.uk/yiho/index.php>.

²⁴² Claughton, “Iron and Ironstone,” 124.

²⁴³ W.G. Hoskins, *Local History in England* (London: Longman, 1984): 25.

²⁴⁴ Leonard, “Urban Development,” 1.

to analyse the impact of mines on settlements. It is neither conventional industrial archaeology nor a mere local history: but an integrated industrial history.

It is commonly held that the term ‘industrial archaeology’ was first used in an English print medium in 1955 by Michael Rix, an adult education lecturer who had become interested in the remains that could be seen in the Ironbridge Gorge.²⁴⁵ The CBA initiated drive to record industrial sites resulted in mass participation in industrial archaeology from the mid 1960s. Interest in studying and preserving industrial heritage already had a long history by this time, for example the Newcomen Society was founded in 1920 to study the history of engineering and technology.²⁴⁶ The resentment that those involved towards what they saw as CBA trying to take over ‘their’ subject is concisely captured by Arthur Raistrick.²⁴⁷ Raistrick had published his first paper on industrial history in 1935 and his first book on the topic in 1938.²⁴⁸ He disliked the term ‘industrial archaeology’ and felt that it was up to those promoting it as a new discipline to define what it was and demonstrate what it offered that was novel.²⁴⁹ The CBA was portrayed as trying to appropriate industrial archaeology as an additional time division of archaeology without being clear how it differed from post-medieval archaeology.²⁵⁰ Raistrick wanted all reference to the ‘industrial revolution’ to be removed from the definition of industrial archaeology, considering that it covered the “whole history of industry through the ages”.²⁵¹ The CBA commitment to the Ministry of Public Buildings to assist in preparing a list of industrial monuments for scheduling was seen as constraining industrial archaeology, which Raistrick considered should not be all mere listing of remains.²⁵² He argued that industrial archaeology could not be restricted to recording industry but had to place it in the context of human endeavour.²⁵³ Debates over the name, time period covered, fixation on machines over people, focus on preserving ‘things’ and many other aspects of industrial archaeology have continued over the years and have never been resolved. Repeated attempts to develop industrial archaeology into a defined, distinctive field of study supported by its own research and theoretical frameworks have been unsuccessful, leading some to question if it a special interest topic rather than a separate

²⁴⁵ M. Rix, “Industrial Archaeology,” *The Amateur Historian* 2, no. 8 (1955): 225-229; Harrison, “The first 30 years,” 3.

²⁴⁶ “Welcome to the Newcomen website,” Newcomen, 2011, accessed September 27, 2013, <http://newcomen.com/>

²⁴⁷ Raistrick, *Industrial Archaeology: An Historical Survey*, xi.

²⁴⁸ Arthur Raistrick, “The London Lead Company, 1692 – 1905,” *Transactions of the Newcomen Society*, 14 (1935): 119 – 162; Arthur Raistrick *Two Centuries of Industrial Welfare: The London (Quaker) Lead Company, 1692 – 1905* (London: Friends Historical Society, 1938).

²⁴⁹ Raistrick, *Industrial Archaeology: An Historical Survey*, 12.

²⁵⁰ Raistrick, *Industrial Archaeology: An Historical Survey*, 13.

²⁵¹ Raistrick, *Industrial Archaeology: An Historical Survey*, 10.

²⁵² Raistrick, *Industrial Archaeology: An Historical Survey*, 5.

²⁵³ Raistrick, *Industrial Archaeology: An Historical Survey*, 12.

discipline.²⁵⁴ Despite this when reviewing 50 years of CBA involvement in industrial archaeology Palmer inexplicably claimed that it had become “an internationally recognised element of the discipline of archaeology”.²⁵⁵ Hudson, who wrote the first handbook of industrial archaeology in 1963, argued that industrial archaeology would not survive unless it changed its name and expanded the range of workplaces studied.²⁵⁶ Cranstone concluded that it should stop “seeking to survive as a separate period or disciplinary tradition” and become part of the “broader archaeology of the later 2nd millennium”, termed Post-Medieval or, in the American tradition, Historical Archaeology.²⁵⁷ This represents the views of one side of a debate where the two sides have talked ‘at’ each other a lot but not listened to the other side. In 2008 a conference was held to bring together people engaged in the study of the “archaeology of the last five hundred years or so” as the editors were concerned about fragmentation of the scholarship into niche sub-fields.²⁵⁸ No agreement could be reached but it was concluded that there was sufficient common ground to keep working together.

Hoskins did much to promote the study of local history as a discipline that could add to macro level understanding by completing micro studies but exhibited a strong prejudice against industrial history. He acknowledged that industrial archaeology was a “major omission” from his guide to local history fieldwork and was of the opinion that it was easier for an engineer to “to pick up his history to a satisfactory level” than an historian to develop the required “sound knowledge of technology”.²⁵⁹ Raistrick and Hoskins had known each other since Hoskins attended Raistrick’s archaeology classes in 1930 – 31, but had an uneasy relationship which is an illustration of the tensions between industrial archaeology, local history and industrial history.²⁶⁰ Hoskins had sufficient respect for Raistrick to acknowledge his depth of knowledge and ask him to write the West Riding of Yorkshire volume of the Making of the English Landscape series that Hoskins edited.²⁶¹ In the preface Hoskins referred to his 1955 book ‘The Making of the English Landscape’ as a pioneering study. His claim irritated Raistrick who annotated his personal copy of the volume “not quite the pioneer he claims to be”.²⁶² Hoskins wrote for people who wished to research the history of a place

²⁵⁴ David Cranstone, “After Industrial Archaeology?,” in *Industrial Archaeology: Future Directions*, ed. Eleanor Conlin Casella and James Symonds (London: English Heritage, 2005), 79.

²⁵⁵ Palmer, “Fifty Years On,” 5

²⁵⁶ Hudson, *Has Industrial Archaeology lost its way?*, 9.

²⁵⁷ Cranstone, “After Industrial Archaeology,” 89.

²⁵⁸ Audrey Horning and Marilyn Palmer, “General Introduction,” in *Crossing Paths or Sharing Tracks?: Future Directions in the Archaeological Study of Post-1550 Britain and Ireland*, ed. Audrey Horning and Marilyn Palmer (Woodbridge: Boydell & Brewer, 2009): xiii.

²⁵⁹ W.G. Hoskins, *Fieldwork in Local History* (London: Faber and Faber, 1979), 12.

²⁶⁰ Bernard Jennings, “Arthur Raistrick (1896 – 1991): The Man and the Scholar,” in *Boots and Books: The Work and Writings of Arthur Raistrick*, ed. Trevor Croucher (Otley: Smith Settle Ltd, 1995), 8.

²⁶¹ Arthur Raistrick, *The Making of the English Landscape: West Riding of Yorkshire* (London: Hodden & Stoughton, 1970)

²⁶² Jennings, “Arthur Raistrick,” 8.

over time and did not assume any prior knowledge. His books were therefore accessible, and although dated, contain much useful information for these researchers. Hoskins encouraged local historians to move beyond documentary research and to engage in fieldwork. He correctly asserts that everything presently seen can tell us “something about the past if only we can learn how to interpret it”.²⁶³ There was an obvious preference for ancient history and the south of England in Hoskins writing. Industrial sites are given only passing mention and he urges readers to seek out the remaining old buildings in villages “apparently ruined by industrialisation in the nineteenth century”.²⁶⁴ This may have been one of the reasons why Raistrick, an avowed Yorkshireman with a strong interest in industrial history, was irritated by Hoskins.

Local history has its roots in topographical studies but Hoskins considered that professional historians only became involved once the production of the Victoria County Histories began in 1899.²⁶⁵ In 1924 the National Council for Social Service commenced a county level local history recording scheme that made slow progress until it “fell into abeyance” during WWII.²⁶⁶ Efforts were revived in 1948 when the SCLH was formed, with a publications sub-committee to identify topics of interest to local historians. A journal to meet their needs, *The Amateur Historian*, was launched as a commercial venture in 1952 but was taken over and published by the SCLH in 1961.²⁶⁷ The same tensions between professionals and amateurs were present in both local history and industrial archaeology. This was clearly expressed in adverse reactions when *The Amateur Historian* was renamed *The Local Historian* in 1968. The move was interpreted as the professionals taking over. Reviewing the first 50 years of the publication of the journal Crosby observed that “mainstream historians” are reluctant to accept “much of their work is in fact local history” preferring to the framework of “case studies of local circumstances” illustrating general conclusions.²⁶⁸ In 1977 a review into the state of local history in England and Wales commenced, resulting in the 1979 Blake Report.²⁶⁹ Before the main recommendation, the formation of a national body to oversee local history, could be implemented the SCLH was abolished and replaced with the British Association for Local History. With this move local history ceased to have direct governmental input, and funding ceased in 1985.²⁷⁰ By this time the discipline had benefitted from sufficient official support to become an established discipline. This sets it apart from industrial archaeology. The British

²⁶³ Hoskins, *Fieldwork*, 183.

²⁶⁴ Hoskins, *Local History in England*, 167.

²⁶⁵ Hoskins, *Local History in England*, 4.

²⁶⁶ Cowan, *The British Association*, 2.

²⁶⁷ Cowen, *The British Association*, 3.

²⁶⁸ Alan Crosby, “The Amateur Historian and The Local Historian: Some Thoughts After Fifty Years,” *The Local Historian* 32, no. 3 (2002): 148. (146 – 155)

²⁶⁹ Cowen, *The British Association*, 4.

²⁷⁰ Cowen, *The British Association*, 7.

Association for Local History saw that interest in local history had declined by the 1980s, mirroring the same trend in industrial archaeology, and had to seek means of re-establishing membership numbers to survive as a self-funding organisation. There is an ongoing debate “about the nature of local history” but this is not as destructive as that about the scope of industrial archaeology.²⁷¹

As Hudson observed, labelling a piece of work as “archaeology, local history or industrial history” was ultimately inconsequential.²⁷² Raistrick and L.T.C. Rolt, both members of the Newcomen Society and claimed as founding fathers of industrial archaeology, considered themselves to be industrial historians.²⁷³ Rolt was an “historically minded engineer” who had the attributes Hoskins considered necessary to write about industrial archaeology but chose not to adopt this label. The background of the author places her in the same category as Rolt but research methodology used to prepare this work identifies it as an industrial history.

5 Research Question and Methodology

This survey of a diverse literature has revealed that historians have neglected to study the relationship between the Cleveland ironstone mines and the settlements that housed its workers. Seeking to address this omission, this thesis explores if the relative success of mining in a vicinity of a settlement has had any impact on its the post mining experiences. The structure adopted to address this agenda is as follows. Chapter 2 outlines the history of ironstone mining within the Cleveland District of Yorkshire and establishes its national and international importance. Chapter 3 constructs a definitive list of all the ironstone mines that went into production between 1836 and 1964. Each mine is assigned a rank based on a scoring system developed for this work. Chapter 4 is the first comprehensive study of Cleveland ironstone industry settlements that identifies those linked to the mines. Each settlement is categorised using a classification system developed for this work. The mine rank and settlement category is used to select five case study settlements that represent the full range of lived histories. Chapter 5 describes the history of each case study settlement over the period that it was home to those engaged in ironstone mining. Sources from that time are used to determine how they were portrayed by outsider observers. Chapter 6 discusses what has happened to each case study settlement and its residents since ironstone mining ceased in the area. Changes in perceptions of them are extracted from sources over time before the current condition is assessed

²⁷¹ Cowen, *The British Association*, 8.

²⁷² Hudson, *Industrial Archaeology: An Introduction*, 13.

²⁷³ Hudson, *Has Industrial Archaeology lost its way?*, 6.

by surveying and reference to government data on relative deprivation. Conclusions are drawn in Chapter 7.

Chapter 2

The Cleveland Ironstone Industry

1 Introduction

The intentions of this chapter are to establish what constituted the Cleveland ironstone industry, to summarise its history and to demonstrate its significance. To breakdown the boundaries between silos of knowledge evident in works on the industry this chapter utilises the output of, amongst others, geologists, local historians, industrial historians and economic historians. This approach broadened the perspective taken and allowed inconsistencies to be considered and reconciled, resulting in a more accurate and balanced view than presented elsewhere.

This chapter is structured to show where the Cleveland ironstone industry operated, what material it mined and the history of this exploitation. Defining Cleveland as a geographic area is complicated as the term has meant different things at different points in time, and to different people at the same point in time. Consideration of the geology within the Cleveland area establishes which deposits the industry extracted. The industrial history of the extraction of ironstone from the Cleveland ironstone deposits includes activity prior to the start of the Cleveland ironstone industry, to put the industry in context. Regional, national and international factors influencing the growth and decline of the industry are considered. The chapter concludes by evaluating the significance of the Cleveland ironstone industry.

2 The Cleveland Area

This section defines the geographic area within which the Cleveland ironstone industry operated.

Some of the highest cliffs in England lie on the North Sea coast of Yorkshire and the name 'Cleveland' is derived from the Old English description of the area as the district or land of cliffs.¹ Under the Anglo-Saxon and Medieval Archbishops of York the diocese was divided into a number of archdeaconries. That roughly equivalent to the North Riding of Yorkshire was termed Cleveland.²

¹ Minnie C. Horton, *The Story of Cleveland: History, anecdote and legend* (Middlesbrough: Cleveland and County Libraries, 1979), xv.

² David Hey, *A Regional History of England: Yorkshire from A.D. 1000* (London: Longman, 1988), 5.

The archdeaconries were subdivided into deaneries, whose boundaries became more stable during the Norman period. The deanery in the north-east of the archdeaconry was also referred to as Cleveland, which occupied approximately the same area as the Langbaugh wapentake of the North Riding. The name of Cleveland was first associated with only the most northerly section of Langbaugh after the Redistribution of Seats Act 1885 created a constituency of this name.³ In modern parlance 'Cleveland' is taken to refer to the area within the boundaries of Cleveland County Council (CCC). This council came into existence in 1974, as a result of the Local Government Act 1972, and was abolished in 1996, as a result of the Local Government Act 1993.⁴ The four non-metropolitan districts that fell under CCC became the unitary authorities of Hartlepool, Stockton-on-Tees, Middlesbrough and Redcar and Cleveland in 1996. Redcar and Cleveland had been called Langbaugh under CCC. Along with the neighbouring Darlington Borough Council, the four authorities are collectively referred to as the Tees Valley. Nearly 30 years since abolition the local police force and fire brigade continue to use the Cleveland name and operate within the CCC boundaries.

The exact boundary of what constitutes the Cleveland area has been fluid for many generations but in this work it is used in accordance with the definition used by the Geological Survey of Great Britain.⁵ They consider that any ironstone mine that operated in the northern portion of the North Riding of Yorkshire was part of the Cleveland field. The distribution of ironstone mining areas in Cleveland is shown in Figure 3, with each red square marking a segment that contained at least one mine.

³ "The Liberal Victory in Cleveland: Rejoicing at Saltburn and Marske," *North-Eastern Daily Gazette* (Middlesbrough), Dec 5, 1885, 1.

⁴ Teesside County Borough Council, *The County Borough of Teesside: Official Handbook* (Middlesbrough: Teesside County Borough Council, 1973), 19; Her Majesty's Government, *No. 187 The Cleveland (Structural Change) Order 1995* (London: Her Majesty's Government, 1995), 1.

⁵ T.H. Whitehead et al., *Memoirs of the Geological Survey of Great Britain: The Mesozoic Ironstones of England: The Liassic Ironstones* (London: Her Majesty's Stationary Office, 1952), 34.

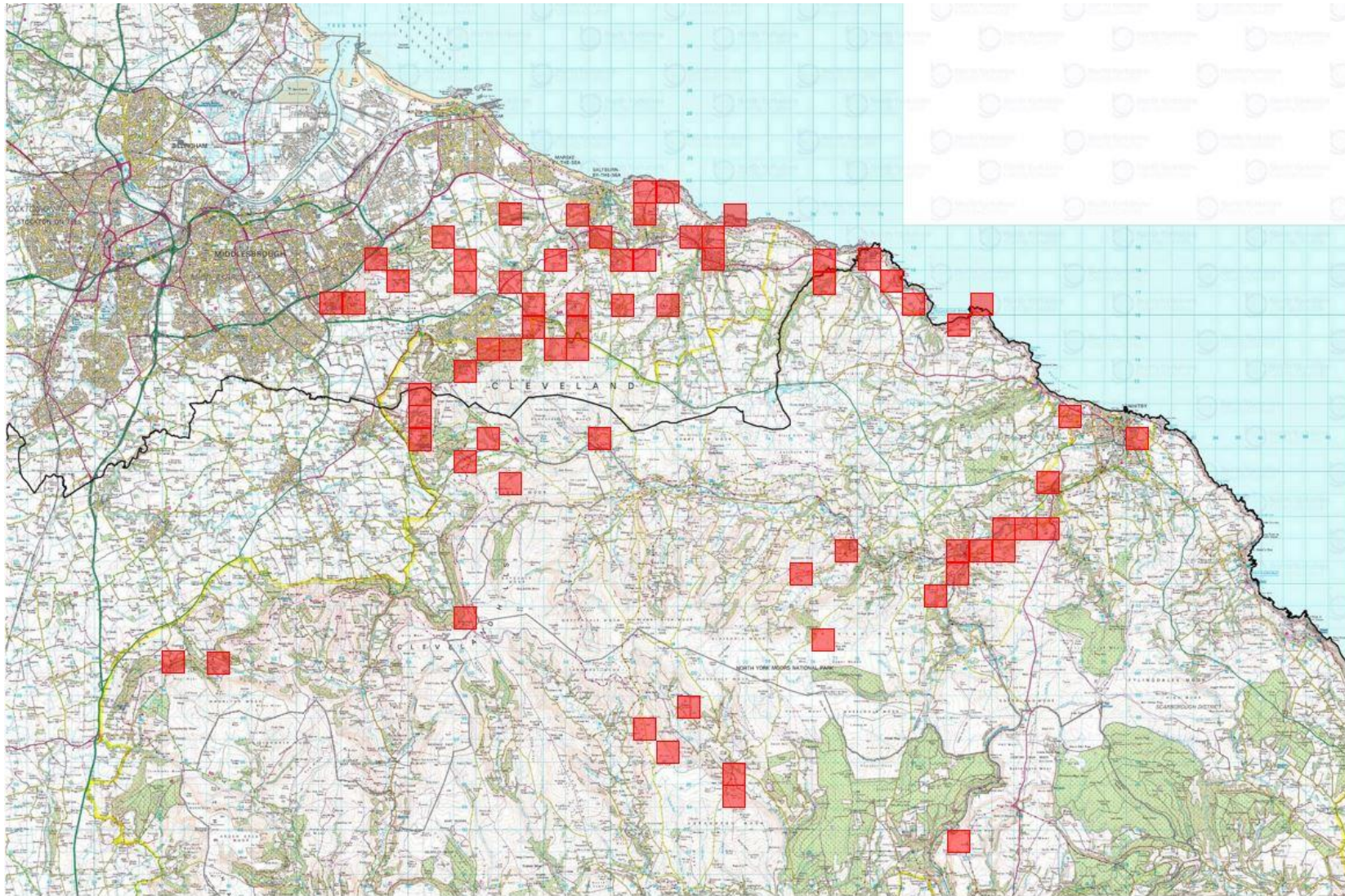


Figure 3: Distribution of ironstone mines within Cleveland (Source: Mark-up by Author of current OS map)

3 Geology

This section identifies the geological deposits exploited by the Cleveland ironstone industry.

The Geological Society of London, now commonly referred to as the Geological Society, the oldest such society in the world, was founded in 1807. Thus, the discipline was in its infancy when the economic potential of Cleveland ironstone began to be realised, driving interest in its study. Much of the early work was done by self-taught men who were either enthusiastic amateurs or involved in industrial activities such as mining and canal building.⁶ The main works on the geology of Cleveland ironstone will now be discussed in chronological order.

The Rev. George Young, of Whitby, a keen amateur, published a geological survey including the study areas in 1822.⁷ It was a substantial tome, with over 300 pages and illustrated with the engravings supplied by his collaborator, John Bird. It contained a chapter on ironstone. The harvesting of ironstone from the Yorkshire coast was underway by this time and in 1827 Joseph Bewick, a mine manager for the County Durham based Birtley Iron Company, was sent by his employers to access the potential of the ironstone seams visible in the North Yorkshire coast cliffs. They chose not to act on his recommendations.⁸ His son later became a mine manager of one of the Cleveland ironstone mines at Grosmont. In 1861 Joseph Bewick, Junior published a book on the geology of the Cleveland area.⁹ Shortly after Joseph Bewick Senior's survey John Phillips, a Fellow of the Geological Society, published a book on the geology of the Yorkshire coast. He dedicated it to William Smith, who is credited as having produced the first large scale geological map of the UK.¹⁰ He described himself as a 'pupil' of Smith and worked as the Keeper of the Museum of the Yorkshire Philosophical Society. No further works on the geology of Cleveland were published until the 1850s, although Ord, a journalist, did include a clear, if a little florid, section on the topic in his 'The History of Cleveland', published in 1846.¹¹

⁶ Simon Winchester, *The Map that Changed the World: The Tale of William Smith and the Birth of a Science* (London: Viking, 2001), 226.

⁷ Rev. George Young and John Bird, *A Geological Survey of the Yorkshire Coast: Describing the Strata and Fossils Occurring between the Humber and the Tees, from the German Ocean to the Plain of York* (Whitby: George Clark, 1822)

⁸ John S. Owen, *Cleveland Ironstone Mining* (Redcar: C Books, 1986), 7.

⁹ Joseph Bewick, *A Geological Treatise on the District of Cleveland in North Yorkshire* (Newcastle-upon-Tyne: Andrew Reid, 1861)

¹⁰ John Phillips, *Illustrations of the Geology of Yorkshire; or a Description of the Strata and Organic Remains of the Yorkshire Coast* (York: Private Publication, 1829)

¹¹ John Walker Ord, *The History and Antiquities of Cleveland comprising the Wapentake of East and West Langbaourgh, North Riding Yorkshire* (London: Simpkin and Marshall, 1846)

Professional interest in the geology of Cleveland ironstone began when the economic importance of the reserves was realised in the early 1850s. The Ordnance Geological Survey (OGS), now known as the British Geological Survey, was formed in 1835 as the world's first national geological survey organisation.¹² In 1856 the OGS published a four-part series of their memoirs covering the iron ores of Great Britain. The first part covered the North and North-Midlands of England, defined as the counties of Cumberland, Durham, Northumberland, Lancashire, Yorkshire and Derbyshire.¹³ At the time knowing the composition of the iron ores was seen as being of national importance due to the prominence of the iron industry. As a consequence, the focus of the volume is on presenting the analysis results, but it does start with a description of each of the ore fields.

The learned societies formed in the mid nineteenth century gave amateur geologists an outlet to present and publish their work. John Marley, a mining engineer for Middlesbrough based Bolckow and Vaughan (B&V), presented two papers on Cleveland ironstone to the North of England Institute of Mining and Mechanical Engineers. The first was published in 1857 and covered the history of the Cleveland ironstone industry to that point as well as aspects of the geology.¹⁴ The second was published in 1870 and concentrated on the magnetic ironstone deposits of Rosedale.¹⁵ In 1857 Henry C. Sorby, Fellow of the Geological Society, gave an address to the Geological and Polytechnic Society of the West Riding of Yorkshire on the origin of Cleveland ironstone.¹⁶ He was a gentleman geologist who had undertaken microscopic and chemical analysis of the ironstone and concluded that it was a form of Oolitic limestone not a rock simply from deposition at the sea bottom.

As geology became an established academic discipline some of those with an amateur interest made the transition to professional research. Most notably Ralph Tate and Rev. John F. Blake, a botanist and Anglican vicar respectively, became Professors of Natural Sciences. In 1876 they published 'The Yorkshire Lias', which utilised their knowledge of fossils to establish and date the zones, including the Cleveland ironstone seams, within this formation.¹⁷

¹² British Geological Survey, "Our past," *British Geological Survey*, 2017, accessed June 27, 2018, <http://www.bgs.ac.uk/about/ourPast.html>.

¹³ Geological Survey, *Memoirs of the Geological Survey of Great Britain and of the Museum of Practical Geology: The Iron Ores of Great Britain Part 1: The Iron Ores of the North and North-Midland Counties of England* (London: Longman, Brown, Green and Longmans, 1856)

¹⁴ John Marley, "Cleveland ironstone: Outline of the Main or Thick Stratified Bed, its Discovery, Application, and Results, in Connection with the Iron-works in the North of England," *Transactions of the North of England Institute of Mining Engineers* 5 (1856-7): 165-223.

¹⁵ John Marley, "On the Magnetic Ironstone of Rosedale Abbey, Cleveland," *Transactions of the North of England Institute of Mining Engineers* 19 (1869-70): 193-200.

¹⁶ H.C. Sorby, "On the Origin of the Cleveland Hill Ironstone," *Proceedings of the Geological and Polytechnic Society of the West Riding of Yorkshire* (1856): 457-461

¹⁷ Ralph Tate and J.F. Blake, *The Yorkshire Lias* (London: John Van Voorst, 1876)

Unfortunately for unwary Cleveland ironstone speculators, mapping of the seams lagged behind knowledge of their composition. The OGS geologists worked to rectify that shortcoming. In 1885 an OGS Memoir that described the geology of southern Cleveland, including Eskdale and Rosedale, was published.¹⁸ The authors were Charles Fox-Strangways, Clement Reid and George Barrow, who all rose to the rank of District Geologists within the OGS.¹⁹ A follow-up OGS Memoir published in 1888, with Barrow as the author, described the geology of northern Cleveland.²⁰ More detailed information on the formations including the Cleveland ironstone seams was published in 1892. Fox-Strangways produced a two volume Memoir publication concerned with the Jurassic rocks of Yorkshire. Volume 1 was a general monograph, summarising previous work but also containing additional new material.²¹ The geological discussions are split between the Lias and Oolitic groups. The volume concludes with descriptions of the economic impact of the geology. The second volume was a catalogue of fossils and is not relevant to this work.

Interest in investigating the geology of the Cleveland ironstones waned as the twentieth century commenced and they became less economically important. During WWI the OGS started to assess the mineral resources of Great Britain and published a series of Special Reports. That covering the Cleveland ironstone area appeared in 1920.²² By this date the “commercially viable seams” were beginning to be exhausted, and the Cleveland ironstone industry was in decline.²³

The terminology used by geologists has varied considerably over the years and is somewhat confusing to those who are not from that profession. A summary of the terminology used in this work follows. The Cleveland ironstone deposits occur within sedimentary rocks that were laid down within the Jurassic period of the Mesozoic era. They are part of the Lias group. This group is split into Upper, Middle and Lower Lias. Within the Lias group there were six seams of ironstone that were worked during the Cleveland ironstone era. Figure 4 shows their relative positions.

¹⁸ C. Fox-Strangways, C. Reid and G. Barrow, *Memoirs of the Geological Survey, England and Wales: The Geology of Eskdale, Rosedale, &c.* (London: HMSO, 1885)

¹⁹ British Geological Survey, “Pioneers of the British Geological Survey,” *British Geological Survey*, 2017, accessed June 27, 2018, <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/archives/pioneers/home.html>.

²⁰ G. Barrow, *Memoirs of the Geological Survey, England and Wales: The Geology of North Cleveland* (London: HMSO, 1888)

²¹ C. Fox-Strangways, *Memoirs of the Geological Survey of the United Kingdom: The Jurassic Rocks of Britain, Vol. 1 Yorkshire* (London: HMSO, 1892)

²² G.W. Lamplugh, C.B. Wedd and J. Pringle, *Memoirs of the Geological Survey, Special Reports on the Mineral Resources of Great Britain: Vol. XII – Iron Ores (contd.) – Bedded Ores of the Lias, Oolites and Later Formations in England* (London: HMSO, 1920)

²³ G.A. North, *Teesside’s Economic Heritage* (Middlesbrough: County Council of Cleveland, 1975), 87.

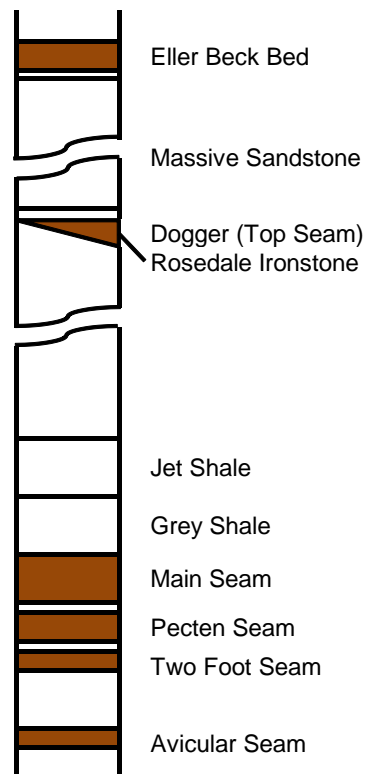


Figure 4: The relative positions of the Cleveland ironstone seams. (Based on J.S. Owen, "The Cleveland Ironstone Industry," in *Cleveland Iron and Steel, Background and Nineteenth Century History*, ed. C.A. Hempstead (Middlesbrough: The British Steel Corporation, 1979), 12.)

Whilst the relative positions remain constant across the Cleveland area the thickness and depth below ground of the seams varied. Due to subsequent erosion of the strata little remains of the Eller Beck Bed and it was not extensively exploited. The Dogger seam has variable quality and was only commercially worked in Rosedale. The Main Seam, as its name implies, was commercially the most significant of the deposits. If the Pecten and Two Foot Seams were sufficiently close they were worked along with it, but no commercially viable operations could depend on them alone. The Cleveland ironstone mining industry centred on Grosmont was unique in being based primarily on the Pecten and Avicular Seams, named after the fossil bivalves they contain.

4 History of the Cleveland Ironstone Industry

4.1 Early Iron Working

Evidence of the processing of the iron bearing rocks in the Cleveland area dates back to the Iron Age. Roxby, an Iron Age site that continued to be occupied into the Roman era, was excavated between 1973 and 1981. It is one of a number of identified Iron Age sites within the study area.²⁴ Although

²⁴ R. Inman, D.R. Brown, R.E. Goddard and D.A. Spratt, "Roxby Iron Age Settlement and the Iron Age in North East Yorkshire," *Proceedings of the Prehistoric Society* 51 (1985): 182.

the acidity of the soil had prevented the survival of any metal artefacts, small lumps of the slag produced by iron working were excavated from two of the round houses.²⁵ In the 1950s a Roman furnace was found at Levisham, located in the centre of an Iron Age round house.²⁶ In 1861 a lease was taken out to mine ironstone close to Levisham, but this did not prove to be a successful venture.²⁷ Documentary evidence of iron working in Cleveland survives from the Medieval period. At this time much of the land was in monastic hands and the religious houses granted leases for the extraction of ironstone.²⁸ An example of the bloomeries used to produce iron at this time was excavated above Glaisdale in 1963. Glaisdale was the site of an unprofitable ironworks and two associated mines in the 1860s and 1870s.²⁹ Hayes and Rutter postulate that deforestation of the moorland dales caused the Medieval furnaces, which mainly used charcoal as fuel, to be abandoned. The size of the furnaces prior to the development of blast furnace technology can be gauged by the eighteenth century bloomery pictured in Figure 5. This was found behind St. Mary's Church. Goathland and is a late example of this form of technology, indicating small scale production. Goathland sits on the moors above Beck Hole, which had an unsuccessful ironworks and associated mine between 1858 and 1864.³⁰ Ironstone was present in the vicinity of all three bloomeries, but the supply was insufficient to sustain the nineteenth century enterprises.

²⁵ Inman et. al., "Roxby Iron Age Settlement," 198 and 203.

²⁶ Henry F. Cleere, *The Iron Industry of Roman Britain* (Tonbridge: Wealden Iron Research Group, 1981), 41.

²⁷ Peter Tuffs, *Catalogue of Cleveland Ironstone Mines* (Guisborough: Peter Tuffs, 2003), 29.

²⁸ R.H. Hayes and J.G. Rutter, "The Rosedale Ironstone Industry and Railway," *The Transactions of The Scarborough and District Archaeological Society* 2, no. 11 (1968): 8.

²⁹ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 73.

³⁰ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 69.



Figure 5: Eighteenth century bloomery in the Whitby Museum collection (Source: Author)

4.2 1745 to 1829

After Abraham Darby demonstrated the use of coked coal in place of charcoal as the fuel in the production of iron, it became advantageous for blast furnaces to be located close to coal fields.³¹ Uptake of the new technology amongst the ironmasters was slow but in 1745 the first coke fired blast furnace in the North of England was erected at Whitehill, County Durham.³² The coal was mined locally and, initially, the ironstone came from thin bands exposed on a nearby fell. This supply proved to be inadequate and by 1748 ironstone was being shipped in from the beaches of Robin Hood's Bay, on the North Yorkshire coast. In 1800 an increase in the price of iron prompted the Tyne Iron Company to build two small blast furnaces at their Lemington works near Newcastle-upon-Tyne.³³ The local iron ore supplies were soon found to be insufficient and other sources were sought. These included ironstone from the beaches on the North Yorkshire coast between Saltburn and Scarborough. This material had eroded from seams outcropping in the cliffs or could be cut from the exposed seams. Problems arose with shipping the material to the furnaces as the ships had to be beached, loaded then floated off at high tide. The unpredictable weather along the coast, particularly in winter, made this a hazardous operation and resulted in the supply being unpredictable. Also, due to the lack of knowledge of those loading the ships, materials other than

³¹ Arthur Raistrick, *Dynasty of Ironfounders: The Darbys and Coalbrookdale* (Newton Abbot: David and Charles, 1979), 30.

³² S. K. Chapman, *Cleveland Ironstone* (Clapham: The Dalesman Publishing Company Limited, 1973), 4.

³³ Owen, *Cleveland Ironstone Mining*, 7.

ironstone were included, giving the ironstone a poor reputation amongst the ironmasters. As a result, they were reluctant to explore reports of ironstone finds in the Cleveland area despite a number of attempts to persuade them to do so.

4.3 1830 to 1849

The opening of the Stockton and Darlington Railway (S&DR) in 1825 and its extension to Middlesbrough in 1830 demonstrated the ability of steam engines to move substantial freight loads.³⁴ Those who backed the extension of the line wanted to overcome the disadvantages inherent in Stockton-on-Tees, 15 miles inland from the mouth of the River Tees, as a port to be used by seagoing vessels. The innovation of the S&DR resulted in many other railway projects being planned. These included the Whitby and Pickering Railway, which was initially horse drawn. In 1836 Mr. Wilson, a partner in the Tyne Iron Company of Newcastle-upon-Tyne, visited Grosmont whilst on holiday in the area and noticed the Pecten ironstone seam in the banks of the river, close to the railway bridge.³⁵ The Whitby Stone Company shipped the first load of Grosmont ironstone to the Birtley Iron Company, south of Gateshead, in May 1836.³⁶ A second shipment sent to the Tyne Iron Company at the same time was rejected as being of poor quality. This difficulty was obviously overcome as Grosmont ironstone subsequently became a major source of raw material to the Tyneside ironworks. The opening of the Grosmont mine marked the start of the Cleveland ironstone industry.

During the early years of the Cleveland ironstone industry the stone was shipped from Whitby, to supply furnaces that had been built in the Durham coalfields.³⁷ In 1839 a partnership was formed that would result in the shift of the ironworks south to the River Tees and the rapid growth of Middlesbrough.³⁸ The partners were Henry William Ferdinand Bolckow and John Vaughan. Bolckow, originally from Germany, had made a fortune as a merchant in Newcastle and provided the capital. Vaughan, the son of a Welsh ironworker, was an ironworks manager and provided the technical expertise.³⁹ The partners originally intended to locate in Stockton-on-Tees but were persuaded to buy land in Middlesbrough by Joseph Pease, who was involved in the S&DR. The B&V works at Middlesbrough commenced operation in 1841 but did not include a blast furnace. Continuing the reluctance of the North East ironmasters to move away from the inadequate Durham coalfield ores

³⁴ K. Hoole, *A Regional History of the Railways of Great Britain: Volume 4 The North East* (Newton Abbott: David St John Thomas, 1986), 13.

³⁵ David Joy, *Whitby and Pickering Railway* (Clapham: Dalesman Publishing Company Ltd., 1969), 21.

³⁶ Chapman, *Cleveland Ironstone*, 6.

³⁷ Owen, *Cleveland Ironstone Mining*, 11.

³⁸ David M. Tomlin and Mary Williams, *Who was Who in 19th Century Cleveland* (Redcar: C Books, 1987), 10.

³⁹ Tomlin and Williams, *Who was Who*, 40.

B&V built their blast furnaces at Witton Park, to the west of Bishop Auckland, and used the iron they produced to supply the Middlesbrough finishing works.⁴⁰ The Witton Park furnaces had been fed with Grosmont Ironstone from about 1846.

Vulnerable to market forces the Grosmont mines had survived, albeit at reduced output, the depression in the North East iron industry caused by the discovery of the Scottish black band ironstone in 1842. This ironstone, along with the introduction of hot-blast technology of the furnaces allowed the Scottish ironmasters to produce pig iron at about a third of the price that had previously been possible.⁴¹ Trade recovered in 1845 when the speculative bubble known as ‘railway mania’ resulted in a demand for pig iron that drove up the price. By 1847 the frantic expansion of the railway network had ceased, with many investors losing considerable sums of money, and the iron trade entered another depression. In the same year the main seam was identified in the side of the Skinningrove valley by Samuel F. Okey, who was visiting the village to pay those collecting ironstone from the beach.⁴² It was initially worked by the Messrs. Roseby to supply B&V but they had insufficient resources to fully exploit the mines and B&V took over the workings in July 1849.⁴³ When B&V developed more lucrative reserves elsewhere in Cleveland the mines passed to Losh, Wilson and Bell. Skinningrove was not connected to the railway system at this time so the problem of using beached ships to remove the ironstone remained. The railway finally reached Skinningrove in April 1865 and soon after the mines were taken over by Pease and Partners (P&P).⁴⁴ The line included an unusual zigzag that allowed trains to access the valley bottom without the use of an incline. The company, as discussed in Chapter 1, constructed what was considered to be a model village for their workers. The Loftus Iron Company constructed an ironworks, including two blast furnaces, above the town in 1874 to take advantage of the local ironstone supply.⁴⁵ After a slump in trade that caused the furnaces to be taken out of use the works were restarted by the Skinningrove Iron Company in 1880. Despite a number of changes in ownership and the demolition of the blast furnaces in 1972 the plant remains in operation producing special profiles.⁴⁶ This plant and a beam mill at Lackenby, Redcar are the last surviving major iron and steel industry plants in Cleveland.

⁴⁰ William Lillie, *The History of Middlesbrough: An Illustration of the Evolution of English Industry* (Middlesbrough: The Mayor, Aldermen and Burgesses of the County Borough of Middlesbrough, 1968), 96-97.

⁴¹ Chapman, *Cleveland Ironstone*, 6.

⁴² Chapman, *Cleveland Ironstone*, 8.

⁴³ Simon Chapman, *The Loftus Mines, Skinningrove: A History of Ironstone Mining at Loftus Mines in the Skinningrove Valley* (Guisborough: Peter Tuffs, 1998), 5.

⁴⁴ Simon Chapman, *The Loftus Mines*, 19.

⁴⁵ Langbaugh Educational Resources, *Skinningrove: An Educational Study* (Guisborough: Langbaugh District Council, n.d., ca. 1984), 8.

⁴⁶ Langbaugh Educational Resources, *Skinningrove: An Educational Study*, 14.

4.4 1850 to 1875

In the 1840s all the blast furnaces in North East England were to the north of the River Tees and the Cleveland ironstone was all exported to them via the S&DR or by sea. The most significant factor in shifting the centre of the iron and steel industry south to the River Tees was the identification on June 8 1850 of the main ironstone seam in the Eston Hills. This was made by John Vaughan and the mining engineer John Marley.⁴⁷ B&V secured the necessary permissions to commence mining and by December 1850 the first ironstone from the Eston mine was being taken down the newly built Eston Branch Railway to be transported to the Witton Park furnaces. The Main seam at Eston was thick and, together with the Pecten seam, the mine had a working section in excess of 5 metres. As the scale of production grew it was no longer feasible to transport the ironstone to Witton Park and in 1851 B&V opened the first of the blast furnaces that came to dominate the Middlesbrough area.⁴⁸

The scale of the Eston find prompted other ironmasters and speculators to search for sites where they could develop mines. The Cleveland ironstone industry expanded rapidly from this point onwards. Figure 6 shows the number of Cleveland ironstone mines opening, producing and closing in each of the years that the industry operated. Post 1850 the numbers climb to a peak of 45 operating mines in 1875 before beginning a more gradual decline. Up until 1875 the speculative nature of the industry can be seen in the number of mines opening and closing. Ventures where those involved did not have the necessary knowledge of geology and ironstone mining were frequently poorly sited and failed to produce the profits that their shareholders expected.

⁴⁷ Owen, *Cleveland Ironstone Mining*, 9.

⁴⁸ Chapman, *Cleveland Ironstone*, 10.

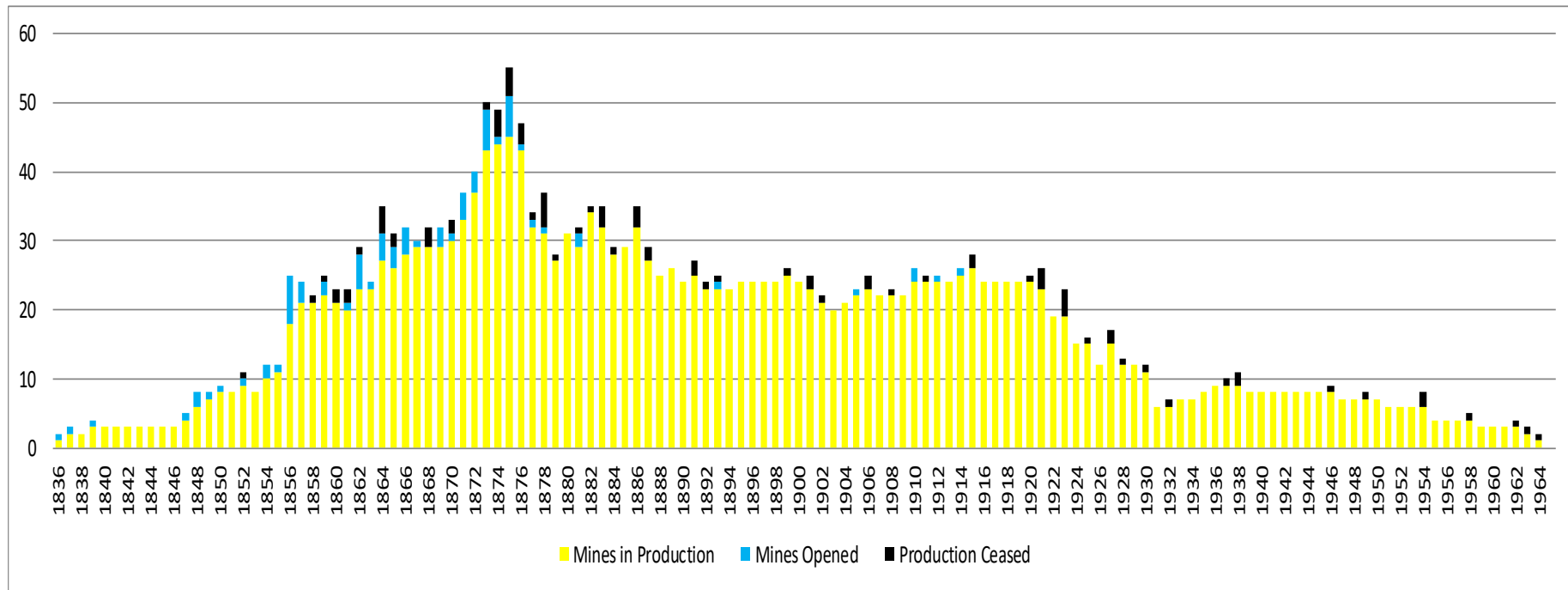


Figure 6: Number of Cleveland ironstone mines operating per year (Source: Author)

Whilst most of the post 1850 ironstone mine developments occurred in East Cleveland a unique discovery prompted the opening up of Rosedale, a remote valley to the south, to ironstone mining. In 1853 William Thompson and Matthew Snowden were exploring for minerals when they discovered two boat shaped deposits of high-quality magnetic ironstone, which had the highest percentage iron content of the Cleveland ironstones.⁴⁹ The find excited much interest and further exploration developed into an extensive mining industry in the dale, but these worked other deposits as no other magnetic ironstone was located. No definitive explanation as to how the magnetic ironstone came to be present has been agreed and it is generally referred to by the rather vague term 'outcrop'. The removal of the ironstone from the valley was initially complicated by the absence of even a decent road. Teams of horses were used to haul loads to the railway station at Pickering, approximately 10 miles distant. Transportation problems were not overcome until the North Eastern Railway completed the Rosedale Branch, a mineral line with no passenger traffic, in 1861.⁵⁰ No blast-furnaces were ever constructed in the valley and the ironstone mainly went by rail to ironworks in County Durham. To minimise transportation costs the ironstone was roasted in calcining kilns close to the mines. This reduced the weight of the loads by driving off volatile materials such as water. Other Cleveland mines were closer to the furnaces that used their output, so freight charges were less of a concern and few undertook the calcining process.

The initial Cleveland ironstone mines were developed where the reserves were visible above ground, with extraction via quarries dug down from above or drifts driven into hillsides. Eventually these easily won reserves became scarce and in 1858 Bell Brothers (BB) began to sink what is reputed to be the first shaft mine in the Cleveland area, to reach the ironstone deposits at their Skelton Shaft mine.⁵¹ Sinking a shaft was time consuming and expensive and, in some instances, such as at Comondale and Warren Moor, poor understanding of the geology led to the shaft being dug only to find insufficient ironstone to make the mine profitable. This was particularly true in the area to the south of the Eston Hills due to the existence of a, then unknown fault line that had dropped the ironstone deposits to a greater depth.

⁴⁹ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 65-68.

⁵⁰ R.H. Hayes and J.G. Rutter, *Research Report No. 9: Rosedale Mines and Railway* (Scarborough: Scarborough and District Archaeological Society: 1974), 7.

⁵¹ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 48-49.

A technological change that would pose a significant challenge to the Cleveland ironstone industry was being developed in the early 1850s. Henry Bessemer designed a simply constructed converter that enabled steel to be produced cheaply enough to be considered as a replacement for iron.⁵² The uptake was relatively slow and it was not until the mid-1870s that people became convinced that steel could replace iron for railway rails. This pace of change benefited the Cleveland ironstone industry as the local ironstone contained too much phosphorus for it to be removed in the converter. In order to produce steel by this method an alternative source of iron ore needed to be found. As early as 1861 Spanish Haematite ore, which has a low phosphorus content, was being imported into Middlesbrough. The ironmasters found the quality and price competitive compared to the local ironstone and were reluctant to return to its' use once the technology that allowed steel to be produced from phosphoric ironstone was developed. This basic steel process was patented by Sidney Gilchrist Thomas and Percy Gilchrist in 1878, but the first large scale use of it in Cleveland did not occur until two years later.⁵³ Despite this the imports of ore continued to increase from the 1890s onwards, although the amount coming from Spain peaked in 1899 due to issues in the Bilbao mining area.⁵⁴

4.5 1876 to 1964

The Cleveland ironstone industry ceased its speculative expansion in 1875. Mine closures then began to exceed openings. Large venture failures caused by an inability to locate the anticipated reserves ceased and other factors came to the fore. In a few instances, for example Rosedale West Mines, the reserves became exhausted, but the majority of closures occurred due to economic conditions. The industry endured for as long as it did as, despite the relatively low-grade of the ironstone it was favoured by blast furnace operators as an easy to utilise feedstock.⁵⁵ Ultimately the Cleveland ironstone could not compete with higher grade sources.

The importing of ore began over a decade before the Cleveland ironstone production peaked. Writing in 1875 Jeans outlines the role of local companies in the trade. He states that the Consett Iron Company had "within the last two years" entered into a partnership to acquire and develop "large hematite (sic) royalties at Bilbao".⁵⁶ They made this decision after the supplies of Cumberland and Westmorland Haematite ore they used to manufacture ship plates became scarce. B&V also had "large royalties in Spain" and used a fleet of steamers to import the Haematite ore into

⁵² Neil Cossons, *The BP Book of Industrial Archaeology* (Newton Abbott: David and Charles, 1993), 129.

⁵³ Chapman, *Cleveland Ironstone*, 25.

⁵⁴ M.W. Flinn, "British Steel and Spanish Ore:1871-1914," *The Economic History Review* 8, no. 1 (1955): 89.

⁵⁵ Northern Industrial Group, *North East Coast: A Survey of Industrial Facilities – Comprising Northumberland, Durham and the North Riding of Yorkshire* (Newcastle: Andrew Reid & Co. Ltd., 1949), 35.

⁵⁶ J.S. Jeans, *Pioneers of the Cleveland Iron Trade* (Middlesbrough: H.G. Reid, 1875), 203 – 204.

Middlesbrough.⁵⁷ The quantity of ironstone imported continued to increase whilst the amount of local stone produced remained relatively steady until WWI. The run up to this conflict sustained the Cleveland ironstone industry by increasing the demand for steel. Considering the state of the iron trade at this time Jeans identifies the exhaustion of the local supplies and the increased demand for Haematite pig iron as causes of the increased imports.⁵⁸ Domestic production was said to have peaked and imports were needed to sustain the wider industry.⁵⁹ Robert C. Allen considers the impact of international trade on the export of British iron and steel between 1850 and 1913.⁶⁰ He undertook a different analysis of the available price data than others had carried out and concluded that the price of Cleveland ironstone was not significantly different to that from other sources.⁶¹ Allen postulated that the reason for a decline in use was the reluctance of local steel companies to innovate and use the local ironstone in steel making using open hearth technology.

Post WWI Cleveland ironstone production plummeted to approximately a third of the previous levels and the number of mines in operation declined considerably. Peacetime brought a reduction in demand for steel and left Cleveland ironstone mines vulnerable to competition. The early 1920s were a time of turbulence in UK industry, there were a number of coal strikes, and the railway companies were grouped into the 'big four'. The Cleveland Iron and Steel industry saw further amalgamations as firms struggled to maintain liquidity. Another national coal strike in 1926 saw a dip in Cleveland ironstone production. It recovered only for production and the number of mines operating to be hit by the Great Depression, 1929 to 1933. Imported Haematite ore was increasingly used in the Teesside ironworks, which Appleton explained by saying that initially the low cost of bringing the blast furnace feedstocks together on Teesside had "offset the low grade of the ironstone" but as "the more accessible and higher-grade ironstone" was worked out it became economically imperative to use imported ore.⁶² Imports were assisted by good port facilities at Middlesbrough and low freight rates as returning colliers could carry a paying load rather than ballast.

Unlike the coal and steel industries, the Cleveland ironstone industry was never nationalised, but in 1931 the British Iron and Steel Federation was established to provide Government assistance to

⁵⁷ Jeans, *Pioneers*, 289.

⁵⁸ J.S. Jeans, *The Iron Trade of Great Britain* (London: Methuen & Co., 1906), 12 – 17.

⁵⁹ Jeans, *The Iron Trade of Great Britain*, 104 – 105.

⁶⁰ Robert C. Allen, "International Competition in Iron and Steel, 1850-1913," *The Journal of Economic History* 39, no. 4 (1979): 911-937.

⁶¹ Allen, "International Competition," 935 – 937.

⁶² John B. Appleton, "Iron and Steel Industry of the Cleveland District," *Economic Geography* 5, no. 3 (1929): 310 – 312.

protect British firms from being undercut by large quantities of imports from overseas.⁶³ In 1941 the Federation started to subsidise the output of the Cleveland ironstone mines.⁶⁴ By then only 10 Cleveland ironstone mines remained in operation. Subsidies stabilised the number of mine closures but did not address the decline in production. In 1949 the lease on the Eston mine expired at the end of its 99 year term and the mine closed. From this point onwards the number of operating mines continued a gradual decline until the end of the Cleveland ironstone industry. In 1958 the British Iron and Steel Federation withdrew their subsidies but by this date there were only three mines left operating, all owned by Dorman, Long and Company (DL).

Post WWII the use of foreign ores accelerated as the imports became cheaper and “they were bound to cause the extinction of the local industry”.⁶⁵ Whilst it was noted in an official report into the economic future of Teesside published only a few years before the last mine closed in 1964 that the local industries were “no longer as dependent on the locally available supplies of raw materials as at the time of the foundation of their early plants” no regret is expressed at the impact on the mining industry.⁶⁶ The last ironstone miners were offered positions in the DL iron and steel works.⁶⁷ This continuity of employment and on-going tradition of steel making on Teesside may account for the strong emotional attachment to the Redcar steelworks displayed by local people. When it was mothballed by Corus in 2010 protests were staged at the plant and appeals made to politicians to step in and save it.⁶⁸ The failure of the Labour administration to do this is credited as being the reason the party lost the Redcar seat to the Liberal Democrats in the 2010 election, when a 21.8% swing occurred.⁶⁹ The plant finally closed in 2015 after the then owners SSI went into liquidation. Steel production at the site fell just short of achieving its 100th anniversary.

A summary of the key events in the development and decline of the Cleveland ironstone industry is as follows. The presence of ironstone in the Cleveland area had been known since ancient times, but it was only worked on a small scale. When the ability to use coked coal as blast furnace fuel led to the establishment of ironworks close to the County Durham coalfields the coal seam ironstone was

⁶³ North, *Teesside's Economic Heritage*,: 62.

⁶⁴ North, *Teesside's Economic Heritage*, 87.

⁶⁵ Chapman, *Cleveland Ironstone*, 28.

⁶⁶ J.W. House and B. Fullerton, *Tees-side at Mid-century: An Industrial and Economic Survey* (London: Macmillan & Co. Ltd., 1960), 437.

⁶⁷ Simon Chapman, *Hope to Prosper: A History of Ironstone Mining at North Skelton* (Guisborough: Peter Tuffs, 1997), 43.

⁶⁸ Karl West, “After 160 years of pride, the last steel plant in the North East is shut down,” *Mail Online*, 2010, accessed March 26, 2014, <http://www.dailymail.co.uk/news/article-1252230/Partial-closure-Redcars-Corus-steelplant-threatens-strike-action.html>

⁶⁹ Catherine Stevenson, “General election 2010: Lib Dems take Redcar with shock 21.8% swing.” *politics.co.uk*, 2010, accessed March 26, 2014, <https://www.politics.co.uk/news/2010/05/07/general-election-2010-lib-dems-take-redcar-with-shock-21-8-swing/>

soon found to be insufficient. Cleveland ironstone was shipped north to the furnaces but even after mining started at Grosmont in 1836 there was not believed to be sufficient incentive to shift the focus of iron production south to the River Tees. The 1850 Eston Hills find provided the spark for both a Cleveland ironstone speculative boom and the development of Middlesbrough into a leading iron industry centre. The Cleveland ironstone boom was ended circa 1875 by the advent of steel, for which it was initially an unsuitable raw material. By the time that the Thomas Gilchrist process allowed it to be used for steel production ironwork owners had become accustomed to using Iron ores imported into Cleveland from other UK ore fields and overseas. Cleveland ironstone production levels were maintained to the outbreak of WWI but it was then a sustained decline to final closure in 1964, as economically workable seams were progressively exhausted.

5 Impact of the Cleveland Ironstone Industry

This section discusses factors that show the impact and significance of the Cleveland ironstone industry.

5.1 Ironstone Production

Figure 7 shows the output of the Cleveland ironstone mines, in tons, between 1855 and 1965. No production data was compiled for the early years of the operation of the industry.

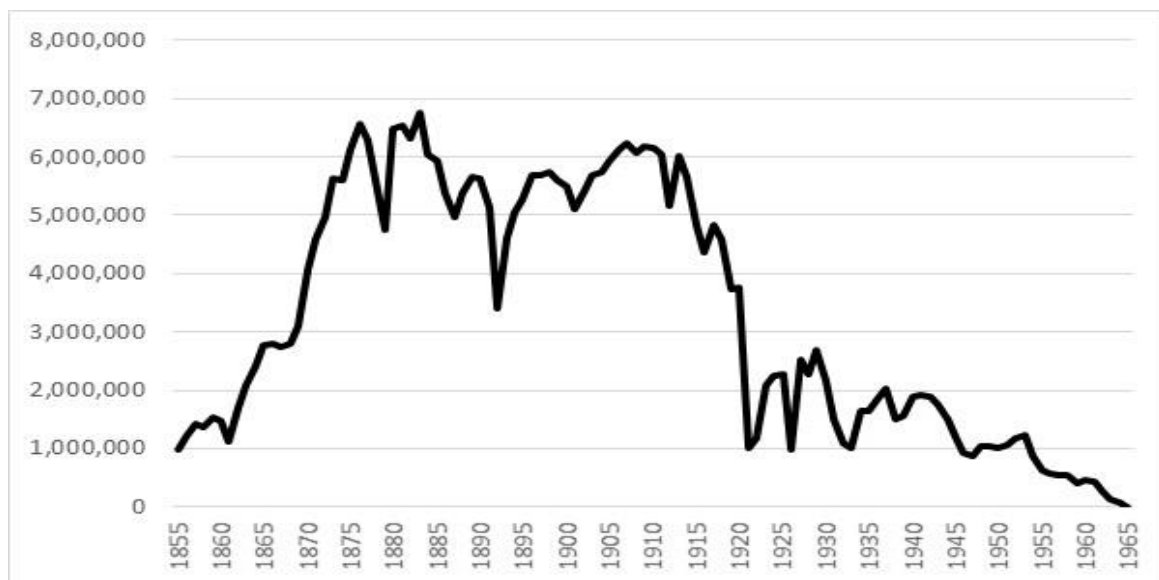


Figure 7: Tons of Cleveland ironstone produced per year between 1855 and 1965. (Data for 1855 to 1914 taken from M.C. Gill and R. Burt, *British Mining No. 72: The Mines of Yorkshire: Metalliferous and Associated Minerals* (Sheffield: The Northern Mine Research Society, 2003), 17 – 18. Data for 1915 to 1965 taken from North, *Teesside's Economic Heritage*, 204)

Peak output from the Cleveland ironstone mines was achieved in 1883 when 6,756,055 tons was extracted by an all-male workforce of approximately 8,000.⁷⁰ Figure 8 shows the contribution that Cleveland ironstone made to the overall UK production over the life of the industry.

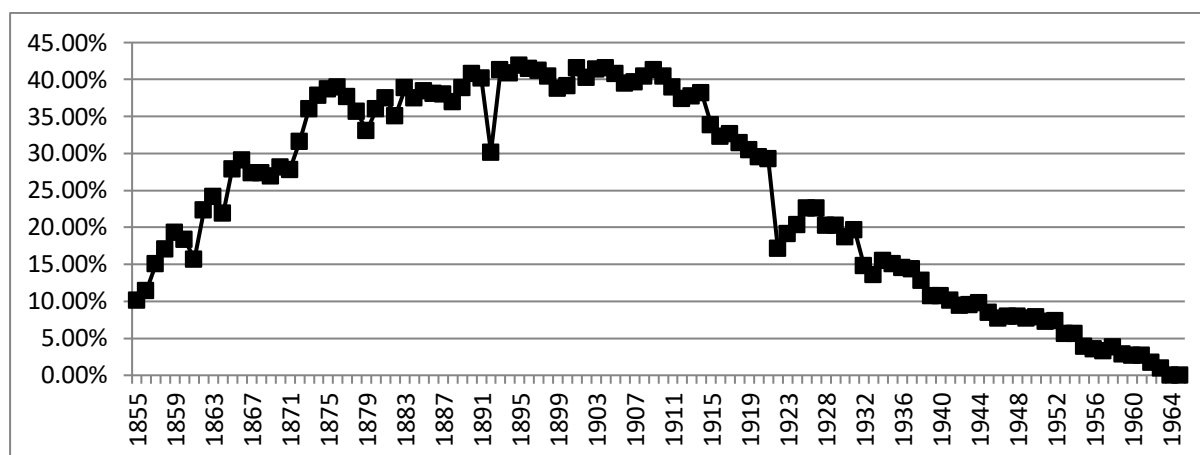


Figure 8: Percentage of the total UK output of Iron Ore supplied by the Cleveland ironstone industry between 1855 and 1965. (Data sources as for Figure 7).

Between 1874 and 1914, the peak years of output, the mean contribution from Cleveland was 38.8%.⁷¹ The decline in the industry from 1914 onwards, discussed above, can be quite clearly seen in Figures 7 and 8. By 1920 published data for UK iron ore reserves states that only 3.65% of the county's actual, probable and possible reserves were expected to come from the Cleveland area.⁷²

5.2 Contribution to UK and Global Pig Iron Production

Cleveland ironstone was almost exclusively used to produce pig iron, and later steel, in North East England. The expansion of industries such as the railways, mining and ship building drove the increase in pig iron production through the 1850s, 1860s and into the 1870s and Teesside became the "world's leading centre for pig iron production".⁷³ Figure 9 shows the contribution of North East England to the UK output of pig iron grew by approximately 20% during these three decades.

⁷⁰ Right Honourable Sir William Vernon, *Mines: Reports of the Inspectors of Mines to Her Majesty's Secretary of State, For the Year 1883* (London: Her Majesty's Stationery Office, 1884), iv.

⁷¹ Figure is the calculated mean of the percentage contributions for each of the years between 1874 and 1914.

⁷² Imperial Mineral Resources Bureau, *Iron Ore. (Summary of information as to the Present and Prospective Iron-Ore Supplies of the World) Part 1 – United Kingdom* (London: His Majesty's Stationery Office, 1922), 26 – 27.

⁷³ North, *Teesside's Economic Heritage*, 21 – 22.



Figure 9: Contribution of North-East England to UK pig iron production 1855 to 1913 (Data taken from North, *Teesside's Economic Heritage*, 206 – 207).

The rate of growth between 1880 and the outbreak of WWI slowed, being approximately 10%. The loss of production in 1891 was due to a strike in the Durham coalfields that starved the blast furnaces of fuel.⁷⁴ The impact can also be seen in Figures 7 and 8. In 1899 capacity was reduced as major ironworks refurbishments took place. Continued growth in pig iron production when the tons of local ironstone mined had plateaued is a clear indication of the growing use of imported, domestic or foreign, feedstock. In the 1870s boom years Middlesbrough and district produced approximately 30% of the UK's pig iron output, amounting to 14-15 % of global production.⁷⁵ The ironstone mined from the North Riding of Yorkshire “made a vital contribution to the industrial revolution”.⁷⁶

As the provider of a vital raw material for the production of pig iron the Cleveland ironstone industry helped establish Teesside as a nationally and internationally important iron and steel centre.

5.3 Employment

No complete set information for the total numbers employed in Cleveland ironstone mines exists as the data was not recorded. Figure 10 shows the partial data set that is available.

⁷⁴ Whitehead et. al., *The Liassic Ironstones*, 52.

⁷⁵ Minoru Yasumoto, *The Rise of a Victorian Ironopolis: Middlesbrough and Regional Industrialization* (Woodbridge: The Boydell Press, 2011), 30.

⁷⁶ Malcolm G. Barker, *Yorkshire: The North Riding* (London: B.T. Batsford Ltd., 1977), 88.

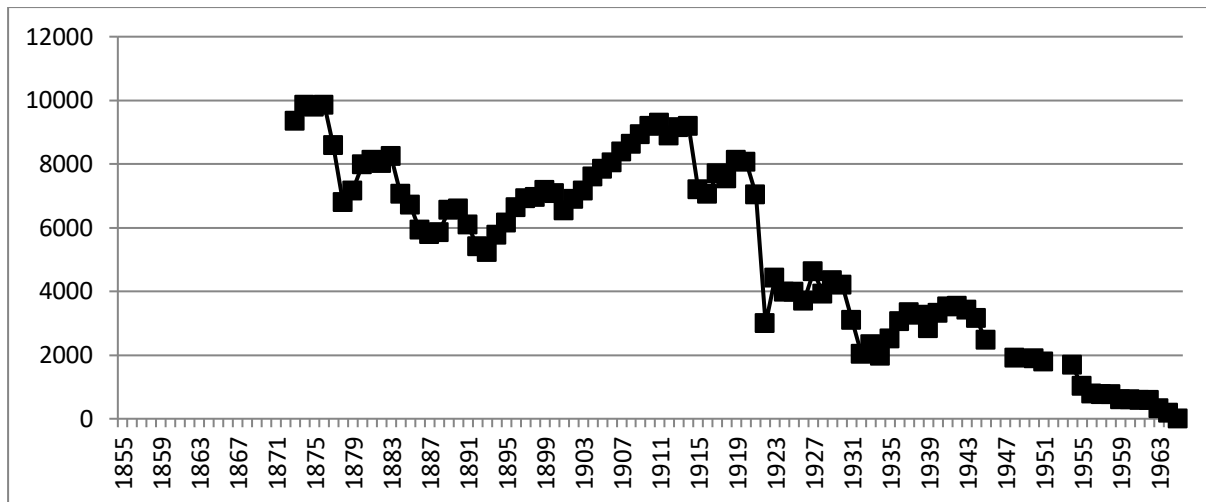


Figure 10: Employment within the Cleveland ironstone industry between 1855 and 1965 (Plotted using data extracted from the Mines Inspectors reports 1873 to 1916, cross checked and supplemented by Gill and Burt, *British Mining No. 72*, 20)

The maximum number employed recorded was 9,815 in 1876.⁷⁷ During that year the total workforce recorded in the mines covered by the Inspector’s report was 514,532, making the Cleveland ironstone industry the employers of only 1.91% of the total. Figure 11 shows the productivity of the Cleveland ironstone mines, measured as tons per person, over the period for which employment data is available.



Figure 11: Productivity of Cleveland ironstone miners between 1873 and 1964 (Source: Data in Figure 7 divided by data in Figure 10).

⁷⁷ Right Honourable R.A. Cross, *Mines: Reports of the Inspectors of Mines to Her Majesty’s Secretary of State, For the Year 1876* (London: Her Majesty’s Stationery Office, 1877), viii.

Cleveland ironstone mines were originally worked by teams of two men who each extracted material from an assigned place on the face.⁷⁸ The miner drilled charge holes, then placed and fired the charges. A less experienced man, the filler, shovelled the ironstone into tubs that were then collected and hauled out of the mine, mainly by horses. Until mechanised mining was introduced circa 1950 the only innovations introduced were to the drilling method. Powered drills, usually using compressed air, were introduced from the early 1870s but not all owners were unwilling to make the necessary investment and hand-drilling continued into the twentieth century. Figure 11 shows productivity rising as power drills were introduced but declining post 1890, when investment reduced as mine profitability declined. The introduction of mechanisation increased productivity in the 1950s.

With patchy and / or late adoption of technological advances much of the Cleveland ironstone output was won using the muscle power of a relatively small workforce.

5.4 Cleveland Ironstone Industry Companies

Four companies, B&V, BB, P&P and DL, were the most significant in the history of the Cleveland ironstone industry. Those involved in founding the first three were all known to each other and heavily involved with the establishment of the iron industry centred on Middlesbrough.

The formation of B&V in 1839 has been discussed above. The company continued to exist until it was absorbed into DL in 1929.⁷⁹ B&V was vertically integrated, operating across the whole of the iron and steel industry from ironstone mines to finished products.

Sir Isaac Lowthian Bell had worked under John Vaughan at the Walker Ironworks, Tyneside.⁸⁰ The BB firm was founded in 1844 when they began to operate blast furnaces at Wylam, to the west of Newcastle-upon-Tyne. Via Bell's connection to Vaughan he would have been aware of the Eston Hill find and in 1852 BB developed the Clarence Works on the north bank of the River Tees opposite Middlesbrough.⁸¹ At the beginning of their operations they obtained their ironstone by leasing part of the B&V Eston royalty but subsequently went on to vertically integrate by developing their own mines. When BB became a public company in the late 1890s DL took a substantial shareholding and eventually took the company over in 1903.

⁷⁸ Owen, *Cleveland Ironstone Industry*, 39 – 40.

⁷⁹ Chapman, *Cleveland Ironstone*, 28.

⁸⁰ Tomlin and Williams, *Who was Who*, 8.

⁸¹ Chapman, *Cleveland Ironstone*, 11.

P&P was founded as J.W. Pease and Partners in 1852, with the name change occurring when it became a limited liability company.⁸² The founder, Joseph Whitwell Pease, was the son of Joseph Pease, who had persuaded B&V to locate themselves at Middlesbrough. P&P owned a considerable number of County Durham coalmines and remained focused on feedstock supply rather than moving into iron production. P&P gradually closed their Cleveland ironstone mines post 1875 and concentrated on their coalmines. When the coal industry was nationalised in 1947 the company only had one remaining ironstone mine, which passed to the Skinningrove Iron Company.

DL is in a number of ways the odd one out amongst the four largest Cleveland iron and steel firms. The last to be formed, the founders bought into the Cleveland ironstone industry from outside. Arthur John Dorman went into partnership with Albert De Lande Long in 1876.⁸³ Dorman had experience of ironworks having worked at one in Thornaby, on the south bank of the River Tees opposite Stockton-on-Tees, for the previous nine years. The partners bought an existing ironworks from Sir Bernhard Samuelson and Company and moved into steelmaking. In the early twentieth century DL grew significantly by mergers and acquisitions, including BB and B&V. In 1917 DL opened the Redcar steelworks, which was built with Government financial assistance to aid the war effort. This plant was on the site of the works that finally closed in 2015, causing much angst on Teesside. From an international perspective DL is probably most famous as the builders of the Sydney Harbour Bridge. They owned the last Cleveland ironstone mine to close, North Skelton in 1964, and in the latter decades of the industry dominated it. Their steel interests were nationalised in 1967 but the name lives on, used by an engineering consultancy and equipment manufacturer.

In summary, this chapter has defined Cleveland as a study area, described the geology of Cleveland ironstone formation, given an industrial history of the working of this formation and established the significance of the Cleveland ironstone industry to the local, regional, national and international economies. It led to the establishment of Teesside as an internationally important iron and steel centre, with some of the most noteworthy companies involved in this trade based in the region.

⁸² "Death of Sir Joseph Pease," *Sheffield Daily Telegraph*, June 24, 1903, 5.

⁸³ Tomlin and Williams, *Who was Who*, 15.

Chapter 3

Location of the Ironstone Mines

1 Introduction

This chapter describes the first step towards addressing the research question: The identification of all the ironstone mines which went into operation, their names and locations. In order to ensure that the case study settlements selected in Chapter 4 are representative of the full range of mining histories this chapter concludes with covering the development and application of an analytical tool which assigns each mine a numerical rank.

A wide range of sources contain information on the Cleveland ironstone mines but identifying anything approaching a definitive list was complicated by the level of discrepancy. There are substantial differences even in the basic data of the number, names and location of mines. Establishing a definitive list of mines was a much more complex and time consuming piece of research than had been anticipated. The most comprehensive lists appear in the post 1967 gazetteers, discussed in Section 2, and these were the initial sources consulted. A range of supplementary sources, discussed in Section 3, were then used to resolve issues that arose. Particularly problematic to identify conclusively were the mines with an operating life that ended prior to the 1860 extension of the 1850 Act for Inspection of Coal Mines in Great Britain to cover “ironstone wrought in conjunction with coal”.¹ With few official records of their existence it had to be inferred from a collection of sources including newspaper articles, maps and the memoirs of those involved in the early years of the industry. The existence of four mines that ceased production pre-1861 was determined in this manner.

2 Mine Gazetteers

The starting point for the identification of the Cleveland ironstone mines was to consult the gazetteers that have been published, in paper form and on-line, taking care to assess the reliability and interdependency of these secondary sources. Between 1967 and 2003 five paper form

¹ Catherine Mills, *Regulating Health and Safety in the British Mining Industries, 1800 – 1914* (London: Routledge, 2010), 2.

gazetteers were published and there is one website that covers the industry. Each of these sources is discussed below.

S.K. Chapman produced the first gazetteer of Cleveland ironstone mines in 1967 in response to enquiries made by visitors to an exhibition on the industry held at the Dorman Museum in the same year.² As Field Secretary of the Teesside Industrial Archaeology Group Chapman was active in the recording of the industrial sites of Cleveland.³ The survey was still on-going at the time of publication and the list does not claim to be exhaustive. No references to any of the sources used were included in the booklet.

In 1976 Chapman published an update of the 1967 gazetteer, incorporating information resulting from the research into the Cleveland ironstone industry that had been undertaken in the intervening years, mainly by members of the Cleveland Industrial Archaeology Society.⁴ As a result the gazetteer is both more comprehensive and reliable than its predecessor. Although the work does contain a bibliography this only includes material to allow the reader to obtain background information on the industry and the lack of referenced sources for the data included is a significant weakness.⁵ Despite these shortcomings this gazetteer is still quoted as a key source by many writers.

Burt et. al. covered all mines within the pre-1974 County of Yorkshire that extracted iron, lead, silver, zinc, fluorspar, copper and barytes bearing minerals.⁶ The gazetteer was based on the returns submitted to the government by mine owners and the authors adopted a policy of not attempting to make any changes, even when there appeared to be errors or contradictions.⁷ As a result it is necessary to exercise a degree of caution when using this gazetteer. Another limitation of this source is that it does not cover the whole of the Cleveland ironstone industry operating period. Data covering the production of iron bearing minerals only began to be officially recorded in 1855, 17 years after the first Grosmont mine opened.⁸ Even after this date it was stated that mine-by-mine returns were only available if the mine owners permitted them to be published.⁹ Most of the Cleveland ironstone mine owners did allow the publication of their data between 1858 and 1881.

² S.K. Chapman, *Dorman Museum Research Report No. 1: Gazetteer of Cleveland Ironstone Mines* (Middlesbrough: Dorman Museum, 1967), 1 - 11.

³ J.K. Almond, "S Keith Chapman," *Cleveland Industrial Archaeology Society Newsletter* 94 (2008): 9.

⁴ S.K. Chapman, *Gazetteer of Cleveland Ironstone Mines: Research Series No. 1* (Guisborough: Langbaugh Museum Service, 1976), 1 – 32.

⁵ Chapman, *Langbaugh Museum Service Gazetteer*, 32.

⁶ Roger Burt et al., *The Yorkshire Mineral Statistics: Metalliferous and Associated Minerals 1845 – 1913* (Exeter: The Department of Economic History, University of Exeter, 1982).

⁷ Burt et al., *Yorkshire Mineral Statistics*, v.

⁸ Ibid..

⁹ Burt et al., *Yorkshire Mineral Statistics*, ix.

Gill and Burt was published by the Northern Mine Research Society as a result of a pilot to update and expand Burt et al. and claims to contain “over four times more data” which has been subject to more extensive editing than that contained in the predecessor.¹⁰ This was done in order to extend both the time span covered and the type of information included. The stated aim of the authors was to cover “production and ownership data for metalliferous mining in Yorkshire from the earliest origins of the industry to the present day”.¹¹ In pursuit of this aim research was carried out using both archival material, which was found to be patchy but useful in extending the period covered to before the mid-nineteenth century, and official government returns. The latter continued to be produced under various titles and with altering content until the ‘List of Mines’ was discontinued in 1950. After this date the authors found it difficult to locate reliable sources of data, but for the Cleveland ironstone mines were able to utilise the annual ‘Guide to the Coalfields’ published by the ‘Colliery Guardian’ until the Mine Inspectors started to produce a list of mines post-1960. It is obvious from the description of the methodology used and the considerable bibliography that the authors took a thorough approach in trying to achieve their aim.¹²

Tuffs produced a gazetteer in the tradition of those produced by Chapman, a legacy that is acknowledged by the author, who claims that in his work “new facts have been brought together, not previously seen elsewhere”.¹³ A more substantial mining history narrative was provided for each entry than in the other gazetteers and a novel feature was the inclusion of the description, sometimes illustrated, of the remains at the sites in 1996. Although a selected bibliography was provided none of the sources used are referenced.¹⁴ The Foreword laid claim to a “diverse range of sources”, including the research material accumulated by the prolific Cleveland ironstone industry author John S. Owen, with ‘The Liassic Ironstones’ being used if “no other source could be found”.¹⁵ This permitted some cross-checking of the accuracy of the data to be carried out.

The Durham Mining Museum (DMM) is primarily focused on the history of mining in County Durham but their website also covers Northumberland, Cumberland, Westmorland and ironstone mines of North Yorkshire.¹⁶ Each mine covered has a separate webpage including information drawn in from multiple sources. Whilst much of this content repeats data from the sources discussed above, the

¹⁰ M.C. Gill and R. Burt, *British Mining No. 72: The Mines of Yorkshire: Metalliferous and Associated Minerals* (Sheffield: The Northern Mine Research Society, 2003).

¹¹ Gill and Burt, *Mines of Yorkshire*, 6 – 9.

¹² Gill and Burt, *Mines of Yorkshire*, 34 – 38.

¹³ Peter Tuffs, *Catalogue of Cleveland Ironstone Mines* (Guisborough: Peter Tuffs, 2003), 3.

¹⁴ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 78 – 80.

¹⁵ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 3.

¹⁶ “Durham Mining Museum Collieries.” *Durham Mining Museum*, 2007, accessed July 30, 2013, <http://www.dmm.org.uk/colliery/index.htm>

website contains information on fatal accidents in the mines, extracted from the Mine Inspector reports, which does not appear in the other gazetteers. This provided supporting evidence of the dates of operation of the mines.

Examination of the gazetteers revealed substantial variations in the most basic information, the actual number of Cleveland ironstone mines identified. These variations are primarily the result of the different approaches taken to the underpinning research and are particularly noticeable for early and short-lived mines. As shown in Section 5.1 approximately a third of the Cleveland ironstone mines operated for less than ten years. Ten mines began operating before the 1850 Eston Hills find, four of these were on the coast between Skinningrove and Whitby and the remainder in the Esk Valley around Grosmont. Table 1 compares the number of individual entries for each of the sources discussed above.

Table 1: The number of Cleveland ironstone mine entries in each gazetteer

| Source | Number of Entries |
|-------------------|-------------------|
| Chapman 1967 | 72 |
| Chapman 1976 | 83 |
| Burt et. al. 1982 | 81 |
| Tuffs 2003 | 90 |
| Gill & Burt 2003 | 97 |
| DMM 2007 | 57 |

(Sources: Chapman, *Dorman Museum Research Report No. 1*; Chapman, *Langbaugh Museum Service Gazetteer*; Burt et al., *Yorkshire Mineral Statistics*; Tuffs, *Catalogue of Cleveland Ironstone Mines*; Gill and Burt, *Mines of Yorkshire*; Durham Mining Museum, *Mining Museum Collieries*)

The six gazetteers include a total of 127 mine sites that had distinctive names and locations. One of these, at Kirkham near Leeds, falls outside the study area and was therefore discounted. In order to remove errors and duplications supplementary sources were utilised. These are discussed in Section 3 and Section 4 discusses the results of this work.

3 Supplementary Sources

Due to the issues and limitations of the gazetteers discussed above, reference was made to a variety of other sources in order to produce a comprehensive list of mines with supporting evidence. These sources and the use made of them are described below.

The County Series of Ordnance Survey (OS) maps were consulted to verify the location and names of mines. Both the 25-inch, approximately 1:2,500 scale, and 6-inch, approximately 1:10,000 scale, versions of the series were used with the former being preferred, when available. Due to the elapsed time between the production of editions of the Country Series there is little map evidence of

the short-lived mines. After the Second World War the County Series was replaced by the National Grid Series and editions of Yorkshire maps at both scales utilised continued to be produced, with both the gap between editions and the length of time that each ran for reducing. Editions produced after the closure of the last mine in 1964 were only referred to briefly in order to fix the location of mine sites in relation to more modern features.

The greatest degree of difficulty in naming and locating the mines occurred within the earliest mining area, around Grosmont. These mines operated prior to the introduction of requirements to make official returns and before the first OS maps were produced, resulting in little documentary evidence. This is reflected in the high level of disagreement found between the entries in the various gazetteers. To assist in resolving this problem, maps in the collection of the Whitby Literary and Philosophical Society were consulted. Those utilised were a series of nineteenth century mine plans and four OS maps from the 1980s onto which the Beck Hole, Grosmont and Glaisdale mine plans had been superimposed.

The first Mines Inspectors' Report that included the Cleveland ironstone mines covered the year 1861, but content was focused on health and safety matters.¹⁷ It was not until the Metalliferous Mines Regulation Act of 1872 that the "metalliferous sectors were finally brought under the expanding umbrella of colliery reform" and returns contained details of production and the number of people employed for all active mines.¹⁸ In 1873 Inspector Willis took the decision to report the Cleveland data separately from the rest of his district on the basis that this area produced only ironstone.¹⁹ His report gave detailed information on the Cleveland ironstone industry, including a table of all the mines operating in the district with the name of their operator and / or owner. Despite changes in presentation format the content remained essentially the same until the loss of staff numbers during WWI resulted in the removal of some of the detailed information from 1915 onwards. Although the Mines Inspectors' Reports do not cover the whole of the Cleveland ironstone era, they are a "largely untapped" source of much useful information.²⁰

A memoir of the Geological Survey covering the four ironstone fields in England (Cleveland, Frodingham, East Midland and Banbury) and incorporated work carried out by them since 1939 was

¹⁷ Dunn et al., *Reports of the Inspectors of Mines to Her Majesty's Secretary of State: For the Year 1861* (London: Her Majesty's Stationary Office, 1862), 148 – 155.

¹⁸ Mills, *Regulating Health and Safety*, 9.

¹⁹ Willis, "Mr. Willis's Report," in *Reports of the Inspectors of Mines to Her Majesty's Secretary of State: For the Year 1873*, ed. Willis et. al. (London: Her Majesty's Stationery Office, 1874), 1 – 20.

²⁰ Mills, *Regulating Health and Safety*, 9.

published in 1952.²¹ As there was a pre-existing 6-inch to 1 mile geological map of the Cleveland ironstone field it was not surveyed during this time, although two visits were made in 1939 and 1945 to update the information that the Geological Survey held and a study of the Rosedale deposits was completed in 1947. A brief history of the field is included along with overall production data from 1854 to 1945. Whilst the latter information does not cover the years at the beginning and end of the Cleveland ironstone industry and does not cover each mine separately the sources are clearly stated and it was used to cross-check data collected from elsewhere.²² A weakness in the mine data, provided for 67 Cleveland ironstone mines, was that in most cases no information was included that allowed the location of the mine to be determined.

After the formation of Cleveland County Council (CCC) in 1974 concerns were raised that the numerous underground workings, not just those of the Cleveland ironstone industry within its boundaries, could result in subsidence.²³ In order to consider the risk of future, post closure subsidence 42 ironstone mines within these boundaries, covering only part of the study area, were identified.²⁴ Morris used Mine Record Office Plans of underground workings to produce three maps showing the extent and nature of this activity. All three maps, covering the northern, eastern and western parts of the field within CCC, were used as sources to assist in identifying and locating mines. Additionally, useful information regarding the combination of mines later in their lives was extracted from this source.

The on-line archive of British newspapers hosted by the British Library was searched to find mentions of otherwise sparsely documented mine sites and their operators. For example evidence of the operation of the Raithwaite mine, close to the coast north of Whitby, was gathered in this way. Mining must have commenced in early 1854 as it was reported that the first shipment of ironstone from the “recently discovered” reserves on the Raithwaite estate of Mr. Thomas English sailed in May of that year.²⁵ A description of the operations of the Eskdale Ironstone Company at Raithwaite was included in a report on the Whitby and District iron trade in 1858.²⁶ Ironstone waggons ran down an incline from the mine onto a jetty, from which the stone was loaded onto ships. Output was limited to the capacity of the ships that could be handled at the jetty. Mining

²¹ T.H. Whitehead et al., *Memoirs of the Geological Survey of Great Britain: The Mesozoic Ironstones of England: The Liassic Ironstones* (London: Her Majesty's Stationery Office, 1952), iii – 67.

²² Whitehead et al., *The Liassic Ironstones*, 9.

²³ C.H. Morris, *Report on Abandoned Workings and Possible Surface Instability Problems* (Middlesbrough: County of Cleveland, Department of County Surveyor and Engineer, n.d., ca. 1975)

²⁴ Morris, *Abandoned Workings*, Appendix II

²⁵ “Ironstone Trade,” *York Herald*, May 6, 1854, 6.

²⁶ “The Iron Trade at Whitby and District,” *York Herald*, June 12, 1858, 11.

ceased by late 1859, when an auction of the sale of the property of the Eskdale Ironstone Company at Raithwaite was advertised.²⁷

A local industrial history researcher, Tammy Naylor, who has explored the mine sites around Grosmont and collected material related to them was interviewed.²⁸ The interview helped resolve issues with the location, naming, ownership and period of operation of the mines around the village. The use made of the information is described in Sections 4 and 5.

4 The Mines

This section describes how the list of mines necessary to identify the Cleveland ironstone industry settlements was produced using the sources discussed above.

4.1 Mine Site Identification

There were only three instances, at Skelton Park, South Skelton and Upleatham, in which all six gazetteers gave exactly the same name and location of a mine. In all other cases there was some level of disagreement that needed to be resolved. Mines with entries in four or more of the gazetteers where the difference was limited to minor spelling variances and with less than 5 in either the easting or northing readings were considered to be uncontentious and were included on the mine list after checking that they appeared on the OS maps as expected. It was necessary to carry out an investigation into each of the remaining 81 possible mines to determine if they should be included on the list. For 11 potential mines this involved resolving issues with the name, 11 the location and 6 both of these attributes. The remaining 53 potential mines appeared in 3 or fewer gazetteers so further evidence of their existence was sought.

There are a number of reasons why sources use either alternative versions of a name or completely different names for the same mine. At the simplest level there are small variations in spelling that are not uncommon in sources produced in the nineteenth century. Where such issues arose, the spelling used on the OS maps was adopted, hence Whitecliff in preference to Whitecliffe. Other mines had nicknames which some sources have chosen to assign to them. Nicknames are not used in this work, with Carlin How listed rather than Duck Hole for example. In a small number of cases sources mistakenly named a mine after an adjacent settlement. Map evidence was used to identify the correct name, for example the Stanghow Mine is listed instead of Margrove Park Mine. An example of a more complex issue with the name of a mine relates to the extraction of ironstone in

²⁷ "Raithwaite Jetty, near Newholm Beck," *Whitby Gazette*, December 31, 1859, 1.

²⁸ Tammy Naylor, Esk Valley, interview by E.C. Marsh, March 26 2013.

the hillside above Hutton Hall. Joseph Pease, a member of the family who had much to do with the development of Middlesbrough, bought the Hutton Hall estate in the mid-nineteenth century and proceeded to commence mining and re-build the Hall. He built housing for the miners, marked as Hutton Lowcross on the nineteenth century OS maps, but now referred to as Hutton Village. The workings were undertaken at a number of sites in close proximity and the gazetteers disagree on the name or names that should be applied. No definitive evidence of the terminology used during the operating period was uncovered and in this case the decision was taken to follow the approach of Morris and refer to all the workings in the location as the Hutton Mine.²⁹

The gazetteers locate most of the mines using a six-figure national grid reference. Assigning a single grid reference to mine sites is complicated by the sprawling nature of their layout, hence some variation in numbers is to be expected. The maximum differences in location were found to be the result of errors on the part of those producing the gazetteers. Burt et. al. transposed the easting and northing readings of the Levisham Mine and Tuffs mistakenly located the Kildale Group: Coate Moor Mine in County Durham. In all the other cases the differences were relatively small and related to different choices as to which part of a mine site to select. For example, at Rosedale, there was confusion over the location of the West Mine. Some gave the location of Sherriff's Pit, a separate enterprise, and others chose to list the Kitchen's and Garbutt's quarries that made up the mine separately. This work uses a single location for the West Mine between these two deposits. Similarly, at Eston, the location was fixed at the middle of the drifts, the Old Drift, rather than listing each of the entrances to the mine separately.

The quantity of documentary evidence related to the existence and operation of a mine varies considerably. Those, such as Eston, that successfully operated over decades are well recorded in both contemporary and modern sources. Short lived mines, particularly those which passed in and out of operation between OS map editions, have left much less evidence of their existence. This was a particular problem for the Grosmont mines that operated along Eskdaleside, between Grosmont and Sleights. Following the opening of the Hay's Mine in 1836 there was a flurry of speculation in the area. The gazetteers include 28 entries for mines in the Grosmont area but there is poor agreement on the names and locations of all but four of these. In the case of a mine at Iburndale only Tuffs includes this and does not give a location. Searching the newspaper archives provided the evidence that an enterprise had existed and where it had been located. In 1855 the Newton House estate was offered for sale and the particulars highlight what were considered to be great quantities

²⁹ Morris, *Abandoned Workings*, 62.

of ironstone.³⁰ Newton House still stands. In 1858 a share prospectus for the Iburndale Iron Company was advertised and mentioned that ironstone had been found in the Iburndale Valley.³¹ No evidence was uncovered of large-scale mining at the site but the 1893 OS map does label 'Old Ironstone Mines' at the location. Based on this evidence the mine was included in the list under the name of Grosmont Group: Iburndale (Trial). Any site where exploration took place to test the quantity and quality of ironstone present but no mine was established is referred to as a 'trial'.

4.2 The Mine List

After the resolution of the conflicts the consolidated list of mining sites contained 93 entries, of which 10 were identified as trials with results that were not sufficiently encouraging to justify the expense of developing a mine. These sites were removed from further consideration as no associated settlements were developed.

Figure 12 shows the distribution of the remaining 83 mines within the boundaries of the current local authorities covering the historic area of North Yorkshire. 41 (49%) of the mines fall within Redcar and Cleveland Borough, with the majority clustered in East Cleveland. The rest of the mines are within authorities that are covered by North Yorkshire County Council. 27 (33%) are within Scarborough Borough, with 15 of these clustered around Grosmont, 9 (11%) in Hambleton District and 6 (7%) in Ryedale District.

³⁰ "Newton House Estate, Near Whitby Yorkshire," *Newcastle Journal*, August 25, 1855, 4.

³¹ "The Iburndale Iron Company (Limited)," *Yorkshire Gazette*, August 7, 1858, 1.

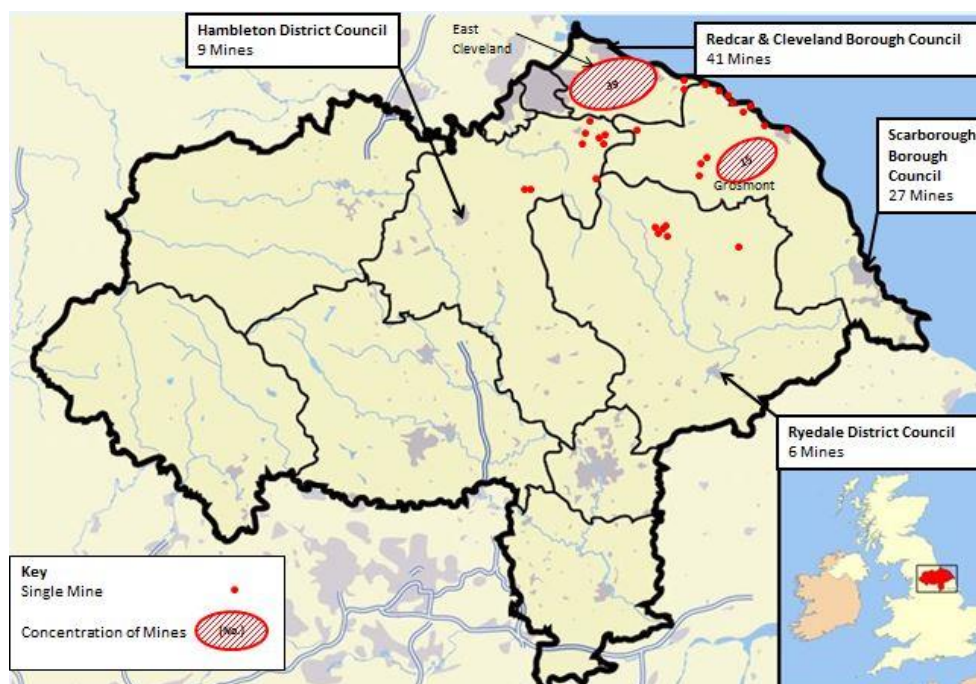


Figure 12: The distribution of Cleveland ironstone mines (Source: Wikimedia Commons with Author's mark-up)

Appendix 1 includes maps that locate the mines within the UK, the region and their local topography.

5 Mine Data

This section describes the data collected in order to rank the mines. Ranking was necessary to ensure that the case study settlements selected in Chapter 4 were associated with mines with varied histories. Failure to rank the mines would have run the risk of failing to consider the impact of some aspects of mine history. For example, studying only settlements associated with mines that operated continuously over long periods of time would have failed to capture the reality of life in a settlement that saw periods of depopulation when the associated mine had pauses in operation.

Three items of data were needed for each mine in order to complete a ranking calculation: The total elapsed time between mining starting and abandonment, the number of years between these two dates where no mining took place and the number of owners that a mine had during its life. Total elapsed time measures the time span over which a mine had the potential to exert influence over a settlement. This has to be adjusted to take into account any periods when the mine was standing idle and the workforce laid off. Unemployment impacted on workers ability to maintain an acceptable standard of living whilst staying in the same settlement. The number of mine owners is included in the ranking calculation as an indicator of how profitable a mine had been for its owners. A mine with a low number of owners that only operated for a short time would not have generated

enough income to meet the set-up costs. The longer a mine with a low number of owners operated the more likely it was that it was profitable for them. Mines that had a high number of owners, but only operated intermittently were those where successive owners could not run the operation profitably. Long running mines with a high number of owners were viewed as sufficiently worthwhile to be taken over when an owner ceased to have any involvement.

The following sections discuss how the data used in the ranking calculations was obtained.

5.1 Period of Operation and Standing

It was not uncommon for Cleveland ironstone mines to be left standing when their operation became unprofitable or the operating company failed. At Kilton, a short-lived period of operation in 1875 and 1876 was followed by a break of 19 years before the mine was restarted. It was also left standing for most of the 1930s before being worked until 1963, making it one of the last ironstone mines to close. All of the periods of operation were focused on the same deposits in the same location so this work considers them to be phases of a single mine rather than separate mines. In two instances it was determined that workings close to a location were sufficiently distinctive to merit listing as separate mines. At Skinningrove, ironstone that had fallen from the seams outcropping in the cliffs was loaded onto ships beached on the shore prior to the commencement of mining. Two entries are included in this work to cover these phases of ironstone extraction. Similarly at Grosmont what some sources describe as a single Mirkside mine was, by consultation with Tammy Naylor, a local expert, determined to have been a short lived mine and an unrelated trial drift that did not go into production.

The primary source of operating data used was Tuffs, with cross-checking against Gill and Burt, Imperial Mineral Resources Bureau reports, the Geological Survey Memoirs and the Mine Inspectors' Reports.³² To avoid giving the impression of a precision that the source data does not support the base measurement unit was a year with the aim to achieve an accuracy of +/- one year in each date.

To avoid overestimating the maximum potential operating life, the start date was taken to be the first year in which ironstone was produced rather than the year in which the royalty lease was signed. A considerable elapsed time could occur between the two dates, particularly for deep mines where sinking the shafts could take years. The end of the operating period was taken to be the year in which the abandonment plan was filed. Although mines frequently ceased production before

³² Tuffs, *Catalogue of Cleveland Ironstone Mines*; Gill and Burt, *Mines of Yorkshire*; Whitehead et. al., *The Liassic Ironstones*; Imperial Mineral Resources Bureau, *Iron Ore. (Summary of Information as to the Present and Prospective Iron-Ore Supplies of the World.) Part 1. - United Kingdom* (London: His Majesty's Stationery Office, 1922).

being formally abandoned this was not always the case and the decision was taken to make adjustments for those where there was such a gap by including the years in the amount of time standing. Also included in this measure were any stoppages, regardless of the cause, which resulted in the loss of a full year's production.

It was possible to calculate the years of operation for all but two of the identified mines. In the case of the Cragg Farm mine at Grosmont, no documentation regarding the operation of the mine was discovered. For Comondale it was discovered after the mine had been set up and the shaft sunk that the quality of the stone was insufficient to make the mine economically viable and it never went into full production.

Eleven mines were found to have had two separate phases of operation, defined as abandonment followed by a re-start some years later. The end of the first phase of operation was most frequently caused by either the operator having financial difficulties, or a lack of demand for ironstone of the quality produced. Table 2 shows the bands of years of production into which the ranked mines fall.

Table 2: Years of ironstone production

| Years Producing | Number of Mines | % of Mines |
|------------------------|------------------------|-------------------|
| 0 – 9 | 26 | 32.5 |
| 10 – 19 | 17 | 21.3 |
| 20 – 29 | 10 | 12.4 |
| 30 – 39 | 5 | 6.3 |
| 40 – 49 | 6 | 7.5 |
| 50 – 59 | 5 | 6.3 |
| 60 – 69 | 5 | 6.3 |
| 70 – 79 | 3 | 3.7 |
| 80 – 89 | 0 | 0 |
| 90 – 99 | 3 | 3.7 |

Given the costs associated with setting up a mine the 32.5% of the Cleveland ironstone mines that generated stone for less than ten years presented their owners with little opportunity to recoup their investment. The longest royalty leases given were for 99 years, and only Eston mine achieved this duration, but shorter terms were frequently awarded. Royalty owners and their agents wanted to maximise the payments they received and did not want to be tied to an unfavourable rate in a rising market. Mining enterprises valued long leases for their stability, but they were a burden if reserves proved to be uneconomic as payments had to continue to be made.

5.2 Ownership

Who owned the mines throughout their lives was established using the same sources from which the operating data was taken. Two modifications to the raw data were carried out. First, no separate periods of ownership were recorded where a firm simply changed its name. For example operation by J.W. Pease and Company then Pease and Partners (P&P) was counted as a continuous single period, as was operation by the trustees or liquidators of an owner. Second, when a mine ceased to operate independently and was absorbed into another working any subsequent changes of ownership were applied only to the resulting mine.

In the case of two identified mines, Grosmont Group: Cragg Farm and Skinningrove (Coastal), no owners could be identified, but overall 81 separate individuals and companies were identified. Table 3 shows how many mines had a certain number of owners.

Table 3: Mine ownership

| Number of Owners | Mines with that number of owners | % of Mines |
|------------------|----------------------------------|------------|
| 1 | 34 | 42.0 |
| 2 | 26 | 32.1 |
| 3 | 14 | 17.3 |
| 4 | 6 | 7.4 |
| 5 | 0 | 0 |
| 6 | 1 | 1.2 |

The highest number of owners for any mine was 6 for Roseberry, which had two distinct phases of operation, neither of which was particularly prosperous for any of the parties involved. The six mines with four owners will now be discussed. The first owners of South Skelton went bankrupt and the next two were taken over, with the last owner being Dorman Long and Company (DL). At Kilton there were two distinct phases of operation. The first phase ended not long after the original partnership was dissolved. A second phase was more successful and the mine came into the ownership of DL via a take-over. It did not close until 1963. Financial difficulties beset three of the owners of the Stanghow mine, which was worked until there was no stone left to be won. The first mine in the Main seam at Skinningrove was first worked by two separate parties who lacked the resources to establish a substantial mine, taken over by Bolckow, Vaughan and Company (B&V) they gave it up after the Eston mine came into production. It was then worked by Losh, Wilson and Bell. Two Rosedale Group mines, East Mines and Sheriff's Pit had four owners. One went bankrupt and subsequent owners struggled to work the mines economically. Just under three quarters of mines had only one or two owners. All of the mines ranked 1 to 10 fall within this group.

Table 4 shows the number of mines owned by each of the identified owners.

Table 4: Number of mines owned

| Number of Mines Owned | Number of Owners | % of Owners |
|-----------------------|------------------|-------------|
| 1 | 52 | 64.2 |
| 2 | 18 | 22.2 |
| 3 | 4 | 5.0 |
| 4 | 2 | 2.5 |
| 5 | 0 | 0 |
| 6 | 1 | 1.2 |
| 7 | 0 | 0 |
| 8 | 0 | 0 |
| 9 | 1 | 1.2 |
| 10 | 1 | 1.2 |
| 11 | 2 | 2.5 |

Nearly two-thirds of identified owners were only ever involved with one mine. This is indicative of the speculative boom that existed in the Cleveland ironstone industry between 1850 and 1874. People with no prior knowledge of ironstone mining or expertise in geology saw the commercial success of the Eston mine and were lured into taking out royalty leases by unsubstantiated claims of the extent of the Cleveland ironstone field. Most lost their investment and few prospered. The big four ironstone companies identified in Chapter 2 were involved in the most mines with DL owning eleven mines, Bell Brothers also eleven, P&P, ten and B&V, nine. DL were latecomers to the Cleveland ironstone industry and never opened a mine themselves, so avoiding the risk of failure due to unproved reserves. They took over eight of their mines from the original owner and in the other three instances they were the third owner once and the fourth, twice. DL was the exception in terms of mine owning success, with ten of the eleven mines they were involved with being in the group of 16 that operated for more than 50 years.

6 Mine Ranking

This section describes how the data discussed in Section 5 was used to rank the mines. Had this step not been completed there would have been a significant risk of the case studies being unrepresentative of the experiences across the whole of the Cleveland ironstone industry area.

6.1 Calculation Method

For three of the 83 mines identified, it was not possible to obtain sufficient information to calculate a ranking score. For Grosmont: Cragg Farm no data on ownership or years of operation was discovered. At Commondale the mine never operated for a full year, whilst no owner of the Skinningrove (Coastal) mine was identified. The method used to determine the ranking score of each of the 80 mines for which all the relevant data could be collected is illustrated below by showing the workings for the Roseberry mine. Located to the north east of the village of Great Ayton, the Roseberry mine sat on the lower slopes of Roseberry Topping, the views from which are discussed in Chapter 4. It had two distinct phases of operation, with the first lease being signed in 1870.³³ Adverse economic conditions slowed development and full production did not commence until circa 1881. Production was not sustained and the mine was standing by 1884 and abandoned by 1887.³⁴ The mine was reopened in 1906 but stood from 1924 until finally abandoned in 1929.³⁵ In the first phase of operation the mine was standing for four of the six possible operating years. The equivalent figure for phase two was six of 23 years. There were three separate operators during each phase of operation.³⁶

Number of years of potential operation $A = 6+23 = 29$

Maximum operating period for a Cleveland ironstone mine $B = 99$

To produce a relative measure of years operating for each mine the total years of potential operation is then divided by the maximum number of years a Cleveland ironstone mine operated.

The maximum score is 1, achieved only by Eston.

Ratio of A to B $x = A/B = 29/99 = 0.29$

Number of years standing $C = 4+6 = 10$

To produce a relative measure of the amount of potential operating time actually spent in production the actual time is divided by the potential time. Any mine that did not stand during its operating life would achieve the maximum score of 1.

Proportion of time operating $y = (A-C)/A = (29-10)/29 = 0.66$

Number of owners $D = 6$

The average time each owner was in charge of the mine is then calculated.

³³ Richard Pepper, *Roseberry Ironstone Mine: Mining near Roseberry Topping* (Guisborough: Peter Tuffs, 1999), 5.

³⁴ Pepper, *Roseberry Ironstone Mine*, 7.

³⁵ Pepper, *Roseberry Ironstone Mine*, 9.

³⁶ Tuffs, *Catalogue of Cleveland Ironstone Mines*, 45.

Ratio of A to D

$$E = 29/6 = 4.83$$

Highest value of E

$$F = 56$$

To produce a relative measure of the impact of mine ownership the average ownership time is divided by the highest average time. The maximum score of 1 was achieved by the Brotton mine.

Ratio of E to F

$$x = E/F = 4.83/56 = 0.09$$

Ranking score

$$T = x+y+x = 0.29+0.66+0.09 = 1.04$$

6.2 Results

Table 5 gives the overall score and consequent ranking for all the mines.

Table 5: Mine rankings

| I.D. No. | Name | Total Score | Rank | Quartile | Decile |
|----------|----------------------------|-------------|------|----------|--------|
| 13 | Eston Group: Eston | 2.88 | 1 | 1st | 1st |
| 50 | Loftus | 2.75 | 2 | | |
| 55 | North Skelton | 2.71 | 3 | | |
| 7 | Brotton | 2.57 | 4 | | |
| 48 | Lingdale | 2.48 | 5 | | |
| 8 | Carlin How | 2.39 | 6 | | |
| 52 | Lumpsey | 2.36 | 7 | | |
| 80 | Upleatham | 2.32 | 8 | | |
| 66 | Skelton Park | 2.28 | 9 | | 2nd |
| 67 | Skelton Shaft | 2.21 | 10 | | |
| 45 | Kilton | 2.20 | 11 | | |
| 72 | South Skelton | 2.13 | 12 | | |
| 74 | Spawood | 2.07 | 13 | | |
| 26 | Grosmont Group: Hay's | 2.05 | 14 | | |
| 37 | Huntcliff | 1.95 | 15 | | |
| 16 | Grinkle | 1.94 | 16 | | |
| 61 | Rosedale Group: East Mines | 1.86 | 17 | 3rd | |
| 53 | Normanby | 1.81 | 18 | | |
| 54 | North Loftus | 1.79 | 19 | | |
| 4 | Belmont | 1.76 | 20= | | |
| 51 | Long Acres | 1.76 | 20= | | |
| 28 | Grosmont Group: Hollins | 1.72 | 22 | | |
| 49 | Liverton | 1.71 | 23= | | |
| 73 | Spa | 1.71 | 23= | | |
| 33 | Grosmont Group: West | 1.67 | 25= | 2nd | 4th |
| 6 | Boulby | 1.67 | 25= | | |
| 76 | Stanghow | 1.65 | 27 | | |
| 29 | Grosmont Group: Lease Rigg | 1.64 | 28 | | |
| 70 | Slapewath | 1.59 | 29 | | |
| 19 | Grosmont Group: Bird's | 1.55 | 30 | | |
| 57 | Port Mulgrave | 1.45 | 31= | | |
| 17 | Grosmont Group: Bagnall | 1.45 | 31= | | |
| 75 | Staithe | 1.44 | 33 | 5th | |

| I.D. No. | Name | Total Score | Rank | Quartile | Decile |
|----------|--------------------------------------|-------------|------|----------|--------|
| 64 | Rosedale Group: West Mines | 1.41 | 34= | | |
| 11 | Craggs Hall | 1.41 | 34= | | |
| 20 | Grosmont Group: Birtley | 1.40 | 36= | | |
| 2 | Ayton (Monument) | 1.40 | 36= | | |
| 23 | Grosmont Group: Eskdaleside | 1.39 | 38= | | |
| 5 | Boosbeck | 1.39 | 38= | | |
| 56 | Ormesby | 1.36 | 40 | | |
| 12 | Eston Group: Chaloner | 1.34 | 41 | | |
| 63 | Rosedale Group: Sherriff's Pit | 1.33 | 42 | 3rd | 6th |
| 77 | Swainby Group: Ailesbury | 1.32 | 43 | | |
| 47 | Levisham | 1.31 | 44 | | |
| 65 | Rosedale Wyke | 1.28 | 45 | | |
| 68 | Skinningrove | 1.26 | 46 | | |
| 46 | Kirkleatham | 1.24 | 47 | | |
| 81 | Waterfall | 1.22 | 48= | | |
| 36 | Hob Hill | 1.22 | 48= | | |
| 38 | Hutton | 1.21 | 50= | | |
| 9 | Cliff | 1.21 | 50= | | |
| 15 | Eston Group: Wilton Clay Drifts | 1.17 | 52 | | |
| 40 | Kettleless | 1.14 | 53= | | |
| 24 | Grosmont Group: Glaisdale End | 1.14 | 53= | | |
| 18 | Grosmont Group: Beck Hole | 1.14 | 53= | | |
| 83 | Wreckhills | 1.13 | 56= | | |
| 82 | Whitecliff | 1.13 | 56= | | |
| 78 | Swainby Group: Swainby | 1.13 | 56= | | |
| 41 | Kettleless (Coastal) | 1.13 | 56= | | |
| 71 | South Belmont | 1.11 | 60= | | |
| 58 | Raithwaite | 1.11 | 60= | | |
| 31 | Grosmont Group: Partridge Nest | 1.11 | 60= | | |
| 30 | Grosmont Group: Mirkside | 1.11 | 60= | | |
| 14 | Eston Group: Upsall Pit | 1.11 | 60= | | |
| 44 | Kildale Group: Warren Moor | 1.08 | 65= | | |
| 32 | Grosmont Group: Sleights Bridge | 1.08 | 65= | | |
| 25 | Grosmont Group: Glaisdale, Post Gate | 1.08 | 65= | | |
| 34 | Grosmont Group: Whitehall Pit | 1.06 | 68 | | |
| 59 | Roseberry | 1.04 | 69 | | |
| 43 | Kildale Group: Lonsdale | 1.03 | 70 | | |
| 39 | Ingleby | 0.97 | 71 | | |
| 22 | Grosmont Group: Esk Valley | 0.91 | 72 | | |
| 3 | Ayton Banks | 0.89 | 73 | | |
| 27 | Grosmont Group: Holey Gill | 0.82 | 74 | | |
| 42 | Kildale Group: Coate Moor | 0.73 | 75 | | |
| 60 | Rosedale Group: Blakey | 0.70 | 76 | | |
| 62 | Rosedale Group: Lane Head | 0.63 | 77 | | |
| 1 | Aysdalegate | 0.49 | 78 | | |
| 35 | Grosmont Group: Wintergill | 0.36 | 79 | | |
| 79 | Tocketts | 0.34 | 80 | | |
| | | | | 4th | 9th |
| | | | | | 10th |

The highest score achieved by a mine was 2.88 at Eston Group: Eston and the lowest was 0.34 by Tocketts. Eston fell short of the maximum score of 3 by dint of the 1929 takeover of B&V by DL. Tocketts scored lowly as it was a short-lived mine that spent most of its potential operating life standing. The Craggs Hall and Rosedale West mines both achieved the mid range score of 1.41. Both had two owners and spent part of their operating life standing. Craggs Hall stood for only 4% of its 24 year operating span, with the equivalent figures for Rosedale West being 14% and 29 years.

In summary this chapter has established a list of Cleveland ironstone mines and ranked them in order to enable the appropriate selection of case study settlements in Chapter 4. Whilst superficially this task may appear trivial, the large incidence of discrepancies and disagreements between the primary and secondary sources significantly complicated matters. A substantial amount of time was expended on the reconciliation of the data and the subsequent ranking exercise as its output has a direct bearing on the identification of the study settlements. Without this degree of diligence, the subsequent study would have been much reduced in its research value.

Chapter 4

The Ironstone Mining Settlements

1 Introduction

This chapter describes the second step towards addressing the research question: The identification of the settlements closest to each of the mines identified in Chapter 3 and the selection of case studies for detailed analysis.

Before the identification process is described and examples of its application given, the evidential value of the Cleveland ironstone settlements is established in three stages. Firstly, a discussion of the validity of using settlements as evidence of industrial activity is presented. This covers the international, national and regional perspective. Secondly the remains of the Cleveland ironstone mine sites are assessed to determine what contribution they can make to telling the story of the industry. Thirdly the type and distribution of the Cleveland ironstone settlements is assessed to determine if they made a distinctive contribution to the settlement patterns in Cleveland. A total of 56 settlements impacted by ironstone mining were identified, making it necessary to select case studies for detailed study. A robust selection process was necessary to allow exploration of the research question: If the relative success of mining in a vicinity of a settlement has had any impact on the post mining experience of the settlement. Mining success was gauged using the mine rank calculated in Chapter 3. Each of the mine settlements identified in the chapter were assigned a two level categorisation. The top level identifies if they were built or expanded for mining and the second if they have reduced in size, stayed the same or grown post mining. A combination of the mine ranks and the settlement classifications permitted a representative sample of case studies to be selected. This chapter ends with this selection.

2 Industrial Settlements as Historical Evidence

This section discusses the value of settlements as evidence of industrial activity.

As discussed in Chapter 1, traditional industrial archaeology is very much focused on the technology employed and the physical remains at sites. There is little attempt to take an holistic view of the elements of the system that allowed an industry to function. These include the society within which it operated and the lives of the operators as well as physical infrastructure such as transport systems

and utility supplies. Some within the industrial archaeology community, notably Barrie Trinder, have long argued that a more inclusive approach should be taken but this has still not been universally adopted. Trinder, an academic who was involved with the formation of the Ironbridge Gorge Museum, argued that “many industrial monuments which are now preserved can only be understood if some effort is made to recreate the settings in which they once flourished”.¹ He included all elements of the system that made it possible for the industry to operate, with the people, their living conditions, the transport systems used and the pollution produced being considered in addition to the technology. Trinder used case studies from across the UK to illustrate the approach and Cleveland ironstone was mentioned in relation to the development of Middlesbrough.² A more in depth study of interaction of elements of an industrial system was provided by Hughes in his study of the Swansea copper trade.³ As discussed in Chapter 1, in his analysis of interaction between the works, transport systems and workers’ settlements Hughes emphasised the value of housing as an historical information source.⁴ This is particularly relevant when the industrial sites themselves had been subject to extensive redevelopment. No study of the Cleveland ironstone industry using an inclusive approach has been produced, with one that purports to do so being disappointingly fixated on the physical remains of industry with no substantive discussion of settlements.⁵

The validity of considering settlements as an integral part of industrial history is reinforced by their inclusion in the criteria used to support the inscription of UK industrial sites on the World Heritage list. The criteria citing the wider industrial system as part of the demonstration of outstanding value, as applied to the six UK sites, needed to achieve listing are given in Table 6. For the Ironbridge Gorge the “workers’ quarters” are included in the system description.⁶ At Blaenavon the language used is of the “material form of the social and economic structure” of industry, without specifically mentioning housing.⁷ All three sites inscribed in 2001 include exemplar workers’ settlements. For the Derwent Valley Mills the need to attract and house workers “in a hitherto Rural settlement”

¹ Barrie Trinder, *The Making of the Industrial Landscape* (London: J.M. Dent & Sons Ltd., 1982), 3.

² Trinder, *The Making of the Industrial Landscape*, 216 – 217.

³ Stephen Hughes, *Copperopolis: Landscapes of the Early Industrial Period in Swansea* (Aberystwyth: Royal Commission on the Ancient and Historical Monuments of Wales, 2008)

⁴ Hughes, *Copperopolis*, 155.

⁵ J.K. Harrison, “Landscapes of Industry,” in *The North York Moors Landscape Heritage*, ed. D.A. Spratt and B.J.D. Harrison (Helmsley: North York Moors National Park, 1996), 175 – 183.

⁶ “Ironbridge Gorge,” *UNESCO*, UNESCO, n.d., ca. 1986, accessed September 27, 2013, <http://whc.unesco.org/en/list/371/>

⁷ “Blaenavon Industrial Landscape,” *UNESCO*, UNESCO, n.d., ca. 2000, accessed October 30, 2014, <http://whc.unesco.org/en/list/984/>

resulted in the “first modern industrial settlements”.⁸ This form of settlement was subsequently copied by many, including David Dale who began developing New Lanark in 1785.⁹ The citation for New Lanark refers not only to the housing but also to the public buildings that were designed to improve the workers “spiritual as well as their physical needs”.¹⁰ Saltaire was cited as an “outstanding and well-preserved” nineteenth century industrial town, an example of “philanthropic paternalism”.¹¹ It should be borne in mind that, as should be the case for World Heritage Sites, Derwent Valley, New Lanark and Saltaire are exceptional and do not represent the reality of the numerous other nineteenth century industrial settlements, including those in the Cleveland area. The 2006 entry for the Cornwall and West Devon Mining Landscape reflects the Nizhny Tagil Charter for the Industrial Heritage that was adopted by the International Committee for the Conservation of the Industrial Heritage (TICCIH) in 2003.¹² The definition of industrial heritage included in the charter is given below.

Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.¹³

⁸ “Derwent Valley Mills,” *UNESCO*, UNESCO, n.d., ca. 2004, accessed October 30, 2014, <http://whc.unesco.org/en/list/1030/>

⁹ The Derwent Valley Mills Partnership, *Nomination of the Derwent Valley Mills for Inscription on the World Heritage List* (Derby: The Derwent Valley Mills Partnership, 2000), 29.

¹⁰ “New Lanark,” *UNESCO*, UNESCO, n.d., ca. 2001, accessed October 30, 2014, <http://whc.unesco.org/en/list/429/>

¹¹ “Saltaire,” *UNESCO*, UNESCO, n.d., ca. 2001, accessed October 30, 2014, <http://whc.unesco.org/en/list/1028/>

¹² “Cornwell and West Devon Mining Landscape,” *UNESCO*, UNESCO, n.d., ca. 2006, accessed September 27, 2013, <http://whc.unesco.org/en/list/1215>.

¹³ TICCIH, *The Nizhny Tagil Charter for the Industrial Heritage* (Nizhny Tagil: TICCIH, 2003), 2.

Table 6: Criteria for granting UK industrial heritage World Heritage status

| Site | Listed | Criteria |
|--|--------|---|
| Ironbridge Gorge | 1986 | Criterion (iv): Ironbridge Gorge provides a fascinating summary of the development of an industrial region in modern times. Mining centers, transformation industries, manufacturing plants, workers' quarters, and transport networks are sufficiently well preserved to make up a coherent ensemble whose educational potential is considerable. |
| Blaenavon Industrial Landscape | 2000 | Criterion (iii): The Blaenavon Landscape constitutes an exceptional illustration in material form of the social and economic structure of 19th century industry. Criterion (iv): The components of the Blaenavon Industrial Landscape together make up an outstanding and remarkably complete example of a 19th century industrial landscape. |
| Derwent Valley Mills | 2001 | Criterion (iv): In the Derwent Valley for the first time there was large-scale industrial production in a hitherto rural landscape. The need to provide housing and other facilities for workers and managers resulted in the creation of the first modern industrial settlements. |
| New Lanark | 2001 | Criterion (ii): When Richard Arkwright's new factory system for textile production was brought to New Lanark the need to provide housing and other facilities for the workers and managers was recognized. It was there that David Dale and Robert Owen created a model for industrial communities that was to spread across the world in the 19th and 20th centuries. Criterion (iv): New Lanark saw the construction not only of well-designed and equipped workers' housing, but also public buildings designed to improve their spiritual as well as their physical needs. |
| Saltaire | 2001 | Criterion (ii): Saltaire is an outstanding and well-preserved example of a mid-19th century industrial town, the concept of which was to exert a major influence on the development of the "garden city" movement. Criterion (iv): The layout and architecture of Saltaire admirably reflect mid-19th century philanthropic paternalism, as well as the important role played by the textile industry in economic and social development. |
| Cornwall and West Devon Mining Landscape | 2006 | Criterion (ii): The development of industrialized mining in Cornwall and west Devon between 1700 and 1914, and particularly the innovative use of the high-pressure steam beam engine, led to the evolution of an industrialized society manifest in the transformation of the landscape through the creation of smallholdings, railways, canals, docks and ports, and the creation or remodeling of towns and villages. Together these had a profound impact on the growth of industrialization in the United Kingdom, and consequently on industrialized mining around the world. |

(Sources: "Ironbridge Gorge"; "Blaenavon Industrial Landscape"; "Derwent Valley Mills"; "New Lanark"; "Saltaire"; "Cornwall and West Devon Mining Landscape")

In the UK Neil Cossons, author of the BP Book of Industrial Archaeology, the first Director of the Ironbridge Gorge Museum and from 2000 to 2007 the Chairman of English Heritage (EH), referred to workers settlements as part of the “invisible industrial heritage”.¹⁴ He highlighted the study of this part of industrial heritage as a priority in 2011, identifying the housing as the most important element that provides “the most prolific surviving evidence of the industrial years” but being the “least understood, least researched, and most vulnerable”. A focus on statutory protection of the few remaining industrial sites whilst ignoring the threat to the “largely unprotected industrial townships that provided the supporting infrastructure” is short-sighted and runs the risk of losing important evidence of Britain’s industrial past.¹⁵

Success in recognising the heritage value of industrial settlements was achieved in saving the “terraced houses of Whitefield, Nelson, Lancashire”.¹⁶ These along with their associated amenities were championed by organisations including EH, SAVE Britain’s Heritage and the Council for British Archaeology. Whitefield fell within the Elevate East Lancashire Pathfinder scheme, part of a nationwide housing regeneration programme conceived as a means of addressing perceived issues, specifically vacancy levels and quality of accommodation, with the housing market post the 1990s boom.¹⁷ In Middlesbrough, large scale demolition planned under the local Pathfinder scheme were not abandoned until November 2013, over two years after the Government had halted the Pathfinder programme.¹⁸ This stubborn insistence that demolition was the only way forward proved the point that SAVE made when they observed that politicians had failed to learn the lessons of the mass demolitions of the 1960s.¹⁹ For SAVE the key issues were continuing to blame the housing “for the social problems it contains”, assuming that terraced housing was an outdated and undesirable form of accommodation associated with slums, and failing to have sufficient expertise to assess refurbishment as an alternative to demolition.²⁰ In a more tactful and less emotive way, but making essentially the same points, EH summarised the objections to mass demolitions as:

¹⁴ Sir Neil Cossons, “Saving the Age of Industry,” *Conservation Bulletin* 67, Autumn (2011): 6.

¹⁵ Peter Boland and Gareth Wilson, “Local Heritage Lists and the Management of Industrial Sites,” *Conservation Bulletin* 67, Autumn (2011): 21.

¹⁶ Gill Chitty, “Industrial Heritage as Contemporary Context,” *Conservation Bulletin* 67, Autumn (2011): 41.

¹⁷ Philip Leather et. al., *The Housing Market Renewal Programme in England: Development, Impact and Legacy* (Sheffield: Nevin Leather Associates, 2012), 1.

¹⁸ “Gresham Housing Demolition: The ‘Cancer’ Ray Mallon Attempted to Cut Out of Middlesbrough,” *Gazette Live*, 2013, accessed Aug 18, 2014, <http://www.gazettelive.co.uk/news/gresham-housing-demolition-cancer-ray-6330961>

¹⁹ Mark Hines Architects, *Reviving Britain’s Terraces: Life After Pathfinder* (London: SAVE Britain’s Heritage, 2010), 5.

²⁰ Adam Wilkinson, *Pathfinder*, (London: SAVE Britain’s Heritage, 2006), 54, 73-79.

English Heritage accepts the need for some demolition, but it is important that we learn from the past and do not unnecessarily sweep away places with real value that have the potential for imaginative renewal.²¹

The link between ill health and sanitary conditions for the working class was well known by the time most of the Cleveland ironstone settlements were built, with local boards covering drainage and water supplies established by the Public Health Act 1848.²² These boards did not always find it easy to exert their authority and although conditions in the Cleveland ironstone settlements were not as much of a nuisance as in the larger industrial towns and cities, including Middlesbrough, there is evidence of poor practise. In July 1875 the Skelton Local Board, in the Cleveland ironstone area, had to resort to the Nuisance Removal Act to prosecute the owners of a row of cottages in the mining settlement of North Skelton who had created “an abominable nuisance” by allowing their drain to discharge into an open channel by the side of the road rather than connecting it to the main sewer.²³ A longer running issue occurred at Lingdale, another mining community, where a satisfactory water supply to the village was not achieved until 1898, 21 years after the mine had opened.²⁴ The relatively small scale and isolation of many of the Cleveland ironstone settlements meant that they largely escaped the attention from twentieth century town planners and regeneration schemes. Some housing in the larger East Cleveland settlements, for example at Liverton Mines, was demolished after being condemned as unfit for human habitation, but away from this area housing was lost if a reduced post-industry population no longer had any need for it. With a large stock of nineteenth century workers housing the Middlesbrough Corporation commissioned Max Lock to undertake a survey of the town and produce a plan for the post-war redevelopment plan. In the Introduction L.G. Allen, Mayor, reflected the prevalent opinion by calling the housing erected for the workers when the town expanded “mean dwellings in narrow streets without any attempt to combine the practical with the beautiful”.²⁵ Figure 13 shows the town centre in 1946, with a grid system of tightly packed housing around the Town Hall, circled in red on each picture. Lock proposed a radical redesign that would sweep away most of these streets, Figure 14. This vision has largely been realised and the area around Middlesbrough Town Hall no longer contains much housing, Figure 15.

²¹ English Heritage, *Low Demand Housing and the Historic Environment* (London: English Heritage, 2005), 2.

²² Edwin Chadwick, *Report on the Sanitary Condition of the Labouring Population of Gt. Britain* (Edinburgh: University Press, 1964), 422 – 423.

²³ “Sanitary Condition of Skelton,” *Daily Gazette*, July 6, 1875, 3.

²⁴ “Skelton and Brotton Urban Council,” *North-Eastern Daily Gazette*, Oct 8, 1898, 3.

²⁵ Max Lock, *The County Borough of Middlesbrough Survey and Plan* (Middlesbrough: The Middlesbrough Corporation, 1946), 1.

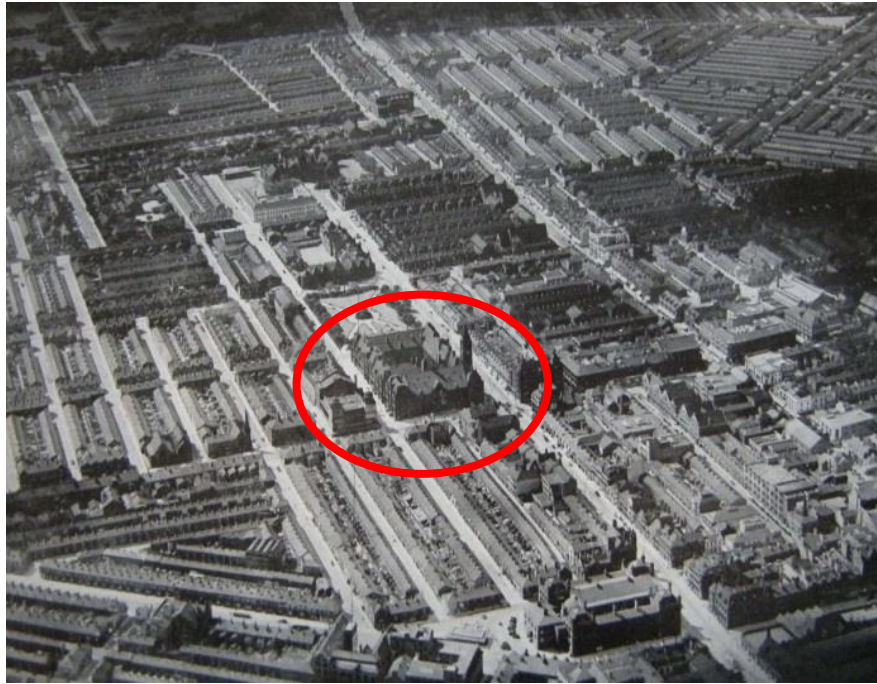


Figure 13: Middlesbrough Town Centre 1946. (Source: Lock, *Middlesbrough Survey and Plan*, 35)

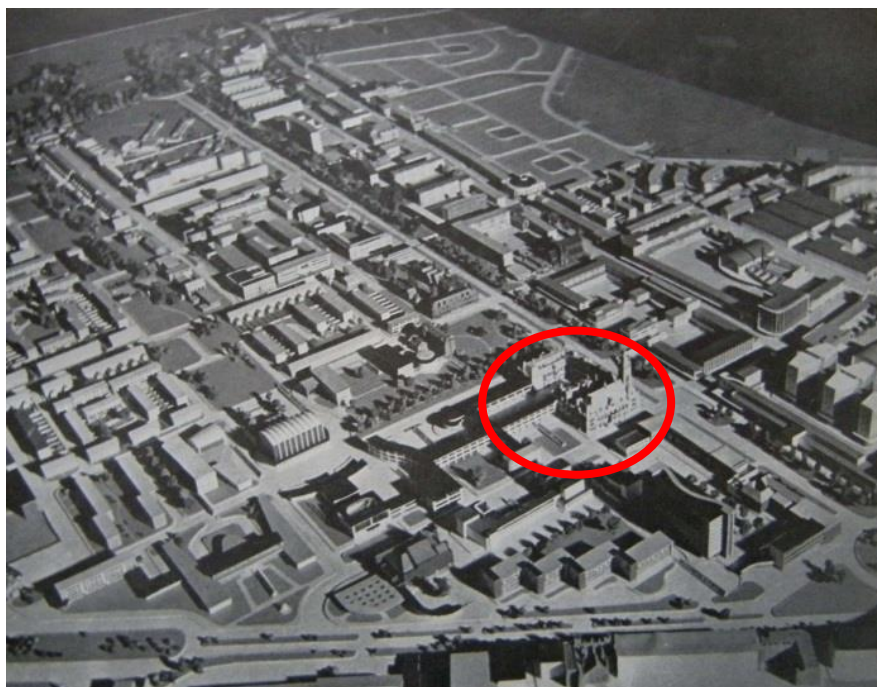


Figure 14: 1946 Middlesbrough Town Centre Plan re-development proposals. (Source: Lock, *Middlesbrough Survey and Plan*, 35)

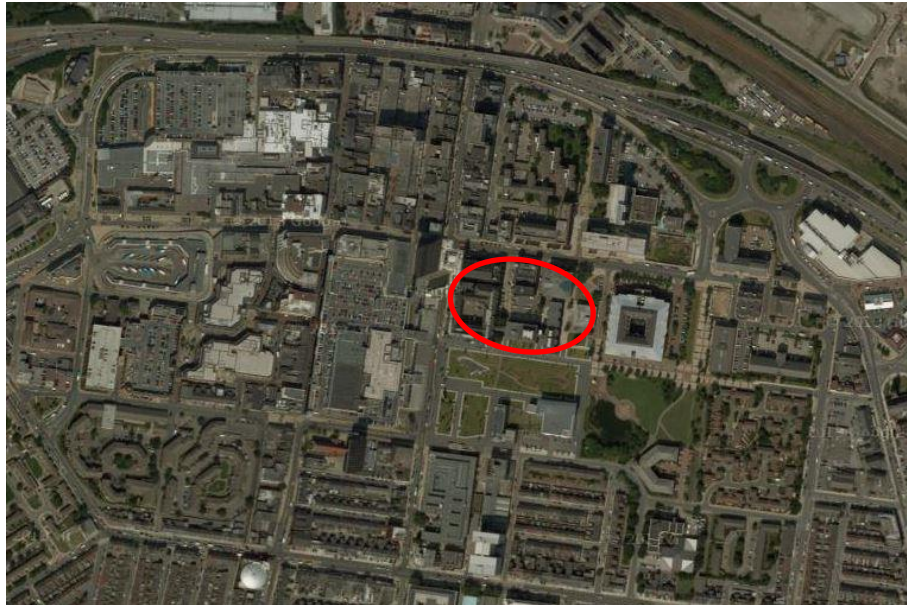


Figure 15: Middlesbrough Town Centre in the early twenty-first century (Source: “Middlesbrough Town Centre,” Goggle Maps, n.d., ca. 2015, accessed June 8 2015, <https://www.google.co.uk/maps/place/Middlesbrough+Town+Hall/>)

This section has discussed the validity of using settlements as evidence of industrial activity. As part of an holistic approach to the systems that enabled an industry to function their value is acknowledged internationally in the criteria used to select World Heritage Sites. During the twenty-first century feeling in the UK increasingly viewed industrial settlements as having heritage value and being worthy of conservation. Within Cleveland the negative opinions on industrial housing has largely been restricted to Middlesbrough.

The evidence provided by the surviving remains of the Cleveland ironstone industry sites themselves will now be considered.

3 The Remains of the Cleveland Ironstone Mines

This section reviews what remains at the Cleveland ironstone mining sites and what contribution to telling the story of the industry the remnants can make.

On Teesside it was suggested by Franklin Medhurst, a planner brought in to develop a regeneration scheme, that the remains of the Gjers, Mills and Co. Ltd. Ayresome Ironworks, Middlesbrough be retained as part of a Teesside industrial museum. The site, the recording of which is discussed in Chapter 1, represented “an era of great men and great achievements”.²⁶ The members of Middlesbrough Borough

²⁶ B.E. Mackin, “Gjers, Mills and Company Limited – A case-study of a Victorian Ironworks,” *Transactions of the Teesside Industrial Archaeology Group* 1, no. 1 (1967): 7

Council refused to permit the preservation as they “wanted no memories of what they saw as a blot on the town’s history”.²⁷ At the time of writing a similar saga played out over the fate of elements of the Redcar Steelworks after it closed in 2015. Campaigns to preserve the blast furnace and the Dorman Long Tower as part the redevelopment of the site were rebuffed as being too expensive. Redcar and Cleveland Borough Council approved the demolition of the tower on Friday September 10 2021, saying they had no reason to reject the application.²⁸ Historic England responded by protecting the structure with a grade II listing. After a national government cabinet reshuffle on September 15 an application was made to the newly appointed Secretary of State for Digital, Culture, Media and Sport to set aside the listing.²⁹ This was done and, in a move reminiscent of the Firestone Factory demolition discussed in Chapter 1, the tower demolished in the early hours of Sunday September 19.

Less orchestrated responses occurred to changes post closure at Cleveland ironstone mining sites. There are no instances of any machinery remaining in situ above ground, it was either removed for reuse elsewhere or sold for the scrap value of the metal. The most complete set of mine buildings remain at the Skelton Park mine, a site in private ownership where there has been no redevelopment pressure and some reuse as agricultural buildings. Six structures or groups of structures at the Skelton Park site appear on the listed buildings list, acknowledging their significance but making it more complex to carry out work to conserve them. Across the Cleveland ironstone area, mine buildings that have found a post mining use still stand, but often have been altered to such an extent that their original use is difficult to determine. This diminishes their evidential value. For example, after the Aysdalegate mine closed the winding engine house was converted into two houses and the workshops linking it to the manager’s house turned into further dwellings. The result has the appearance of a row of terraced houses with larger properties at either end. Structures such as chimneys for which there is no possible reuse are the least likely to survive. Fears over the danger of collapse posed by unmaintained chimneys lead to many being demolished soon after closure, with the loss of a local landmark frequently being caught on camera. The Warren Moor mine chimney is the only Cleveland ironstone mine chimney to survive, it is a listed structure and has undergone conservation work. Abandoned stone buildings without a new use represented a valuable source of building material and were demolished so that it could be recycled. For example, the stone from the railway engine shed at Bank Top, Rosedale was used to build the village hall

²⁷ Franklin Medhurst, *A Quiet Catastrophe: The Teesside Job* (Unknown: Citizens’ Papers, 2010), 30.

²⁸ “Dorman Long tower listed in emergency to stop demolition,” *BBC*, 2021, accessed Sept 20, 2021, <https://www.bbc.co.uk/news/uk-england-tees-58546361>

²⁹ “Dorman Long tower to be destroyed after listed status revoked,” *BBC*, 2021, accessed Sept 20, 2021, <https://www.bbc.co.uk/news/uk-england-tees-58593615>

at nearby Hutton-le-Hole. Brick and concrete structures were less easy to recycle in this way and were left to decay in situ unless the mine site was cleared.

The 80 Cleveland ironstone mines which were categorized and ranked in Chapter 3 have suffered a variety of fates since mining ceased. All of the sites which are accessible to the public were visited and a number of others also viewed with the permission of the owners. This fieldwork was key to determining what has happened since the mine closed. At eight mines the site has been cleared and returned to either nature or farmland to such an extent that no evidence of the existence of the mine can be seen on the ground. A further nine sites have been lost to a variety of redevelopments including housing, a golf course and a supermarket. Figure 16 shows the site of the Boosbeck mine that is now occupied by a school and a playing field. The mine is commemorated by a statue of a miner close to a shaft, capped in 1986, which is in the foreground of the picture surrounded by bedding plants. The terraced houses in the background were built for the miners.



Figure 16: The site of Boosbeck Mine (Source: Author)

The largest number of former mining sites, 27, were, in 2014, distinguishable only by earthworks of various types, including the routes of railways and tramways, quarries, drifts and spoil heaps. Of these the remnants of the transport systems occur most frequently, evidence of the extensive network of lines that served the Cleveland ironstone industry. Spoil heaps, which were of a considerable size at some mines, have largely been eradicated, landscaped by flattening and covering with topsoil or harvested as material for road building. Part of the embankment that carried the railway between the Hutton Mine and the Guisborough Branch Line is shown in Figure 17. The site is heavily wooded and difficult to

interpret for the general public who use the footpaths in the area. It is the type of site that Hoskins was encouraging people to be cautious about and explore the history.³⁰

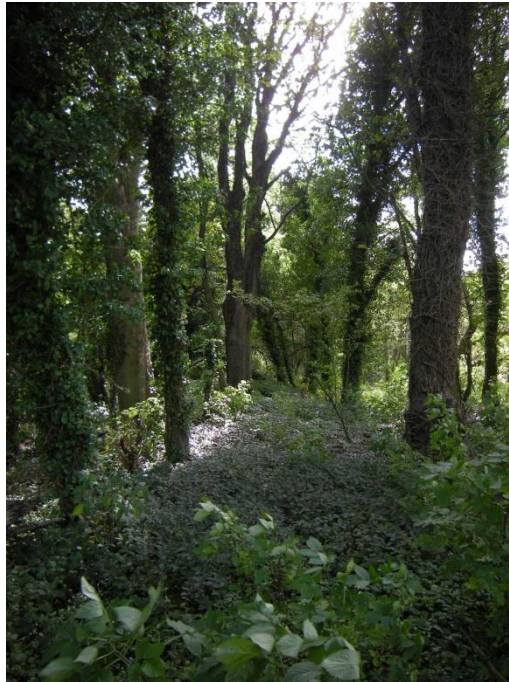


Figure 17: Hutton Mine railway embankment (Source: Author)

At a further six sites the evidence provided by earthworks is reinforced by the presence of foundations. Some of these foundations have been visible since the mine closed, whilst others have been exposed during excavations carried out by industrial archaeologists. Buried foundations will undoubtedly be present at other mine sites. Figure 18 shows an example of the latter class, where a dig has exposed the base of the Grinkle Mine engine house which had previously been covered by material dumped during the digging of the Boulby Potash Mine shaft. This site is on private land without public access.³¹

³⁰ W.G. Hoskins, *Fieldwork in Local History* (London: Faber and Faber Limited, 1967), 32.

³¹ The author had accessed to the Grinkle Mine site with the landowners permission.



Figure 18: The Grinkle Mine engine house foundations (Source: Author)

The remaining 30 mine sites are split equally between those where the ruin of at least one structure is present and those where at least one structure has been re-used. In both cases earthworks are also present. Powder houses, with strong walls built to contain an explosion of the blasting charges stored within them, occur most frequently as ruins and Figure 19 shows that which served the Esk Valley Mine. This sits by the side of the branch line to the mine, isolated, as powder houses always were, from other mine structures to minimise injuries and damage in case of an accident. To the casual observer walking along the popular Rail Trail, running next to the North York Moors Railway, this could be interpreted as simply an abandoned farm building.



Figure 19: The ruins of the Esk Valley Mine powder house (Source: Author)

Of the 15 mines where structures have been reused the most substantive remains exist at four sites that are privately owned, relatively inaccessible and in use as agricultural premises. Even though a number of elements at each site are ruined or in poor condition these four mines, Kilton, Belmont, Skelton Park and

South Skelton, would be the easiest for anyone without a specialist knowledge of the industrial archaeology of ironstone mining to understand, should access and appropriate presentation of the site be made possible. Figure 20 shows the mine buildings at the Belmont Mine, with the track way leading to them following the route of the mineral railway that served the mine. The structure partially visible on the right is the end of the ropeway from the drift, where the ironstone was loaded onto trains.



Figure 20: The Belmont Mine buildings in agricultural use (Source: Author)

The four mines identified above constitute 5% of the Cleveland ironstone mines and have the greatest potential to tell the story of Cleveland ironstone mining. This list does not include the Loftus Mine, part of which is now the Cleveland Ironstone Mining Museum, as the loss of structures and setting post closure combined with the fragmentation of current ownership and use have resulted in a site that, notwithstanding the ability to offer a visit down a drift and storytelling by volunteer guides, is not able to show the visitor many of the elements that made up the surface structures of a Cleveland ironstone mine.

As discussed above the physical changes to the Cleveland ironstone mines sites since closure restricts their ability to serve as witnesses to the lost industry. The mine sites have been subject to much study as have some of the associated ironstone workers settlements. However, no research has previously examined the relationship between the mines and the settlements or the evidential value of the settlements. As a first step to determining evidential value the next section considers if the ironstone housing had a discernible and unique impact on the type and layout of settlements in the Cleveland area.

4 The Nature of Cleveland Ironstone Industry Housing

This section considers the relative impact of the factors that have shaped the settlement pattern in Cleveland in order to establish if the ironstone industry made a distinctive contribution. Firstly, it is argued that, whilst doing this involves using some of the techniques of landscape history, this thesis is not

landscape history per se. Landscape history, a contentious term, needs exploring to differentiate this thesis from this scholarly tradition.

Maurice Beresford, a landscape historian specialising in the medieval period, termed W.G. Hoskins the “Great Observer”.³² Through his written work Hoskins did much to encourage people to take an enquiring look at their surroundings and cautioned that “Everything is older than we think”.³³ Raistrick, discussed in Chapter 4, was not the only person to point out that Hoskins’ 1955 book ‘The Making of the English Landscape’ was not as unique as he claimed it to be, with Matless seeing the roots in the “work of geographers and associated planners before and after the war”.³⁴ Matless argues that Hoskins created a “very powerful imagery of England”.³⁵ The contented peasant living in peace with his fellow humans whilst happily tilling open fields and serving his benevolent overlords never existed, but is an appealing image of a simpler time for those who find modern life troubling. For Hoskins “twentieth-century industrial society was certainly not to his liking”, although he was happy to utilise the motor car or television programmes to assist in his work and reach a wider audience.³⁶ He was resolutely “anti-modern and anti-planning” in outlook, eschewing modernity and viewing virtually everything post 1840 as ugly.³⁷ Hoskins distain for the period during which the Cleveland ironstone industry operated was quite clearly expressed in Chapter 7 of ‘The Making of the English Landscape’, which discusses the impact of the ‘Industrial Revolution’.³⁸ In a relatively short chapter the widescale adoption of the use of steam power, with coal as the fuel, is presented as defiling landscapes and turning them into “their final horrific form”. The book was based on Hoskins’ research, which focused on Devon, the county of his birth, and Leicestershire, his adopted county.³⁹ This bias is obvious in the limited, and occasionally erroneous, coverage of northern England, including the Cleveland area. As Hoskins himself admitted in the new introduction he wrote in 1976, the original text underestimates the impact of the pre-Roman population.⁴⁰ The felling of trees on the North York Moors had begun long before Norman Conquest, as people repopulated the ice-free uplands before moving down into the valleys as the melt progressed. As Smout noted climate change and felling by humans had put the forests of northern Europe in retreat

³² Maurice Beresford, “Professor W.G. Hoskins – A Memoir,” *The Agricultural History Review* 40, no. 2 (1992): 167.

³³ W.G. Hoskins, *The Making of the English Landscape* (London: Hodder & Stoughton, 2005), xxiv. Reprint of the 1955 original with new introductory section.

³⁴ David Matless, “One Man’s England: W.G. Hoskins and the English Culture of Landscape,” *Rural History* 4, no. 2 (1993): 188.

³⁵ Matless, “One Man’s England,” 204.

³⁶ Beresford, “Professor W.G. Hoskins,” 166.

³⁷ Matless, “One Man’s England,” 189.

³⁸ Hoskins, *The Making of the English Landscape*, 172 – 192.

³⁹ Beresford, “Professor W.G. Hoskins,” 164 – 165.

⁴⁰ Hoskins, *The Making of the English Landscape*, xxiv.

thousands of years before the Romans arrived.⁴¹ Cultivation began during the Neolithic and by the Iron Age population levels were already the same as those present in the medieval era.⁴² All this is counter to Hoskins claims that when he was writing the English moorlands could still be seen “precisely as the first men saw it”.⁴³ In fact the least natural of the UK moorland habitats are those in the study area, an acidic and overgrazed area maintained in this unnatural state to permit the shooting estates to continue to function.⁴⁴ The age of Hoskins’ book is clearly seen in the image of Middlesbrough included as part of a discussion of planned towns.⁴⁵ Essentially the same as Figure 12, this shows the ordered grid pattern of housing, so disliked by Hoskins, which has subsequently largely been removed. The enduring legacy of Hoskins can be gauged by the fact that this author only became aware of his work after completing the research work that follows the basic tenets of the methodology he and others that followed him promoted. They identified themselves as landscape historians, but this work is not a landscape history. It does share some common ground when determining the unique impact that the Cleveland ironstone industry had on settlement patterns. With his preference of the pre-steam era industries that were undertaken by the “craftsman-farmer” it is probably safe to assume that Hoskins would have approved of the Alum industry settlements but not the Cleveland ironstone industry ones.⁴⁶ The impact of these two industries are discussed below.

4.1 Pre-industry

The landscape of Cleveland has been shaped by human action ever since the area was settled after the end of the last ice age, approximately 11,000 years ago, and what is currently seen is the result of manipulation by humankind of the underlying geology, fauna and flora. Deforestation and grazing practised by farmers from circa 8,000 B.C. produced both the moors and the enclosed field systems on the lower ground.⁴⁷ The type and pattern of settlements within this created landscape has been influenced by how the ownership and administration of the land has altered over time. Although the “villages and farmland which we now see were largely set out after 1066” many of the parish and other administrative boundaries into which they fit pre-date the Norman Conquest.⁴⁸

⁴¹ T.C. Smout, *Nature Contested: Environmental History in Scotland and Northern England since 1600* (Edinburgh: Edinburgh University Press, 2000), 38.

⁴² Smout, *Nature Contested*, 42.

⁴³ Hoskins, *The Making of the English Landscape*, 2.

⁴⁴ Smout, *Nature Contested*, 116.

⁴⁵ Hoskins, *The Making of the English Landscape*, 231.

⁴⁶ Hoskins, *The Making of the English Landscape*, 173.

⁴⁷ M.A. Atherden and I.G. Simmons, “The Landscape,” in *The North York Moors Landscape Heritage*, ed. D.A. Spratt and B.J.D. Harrison (Helmsley: North York Moors National Park, 1996), 14 – 24.

⁴⁸ B.J.D. Harrison and B.K. Roberts, “The Medieval Landscape,” in *The North York Moors Landscape Heritage*, ed. D.A. Spratt and B.J.D. Harrison (Helmsley: North York Moors National Park, 1996), 72.

To consolidate his hold on the rebellious North William the Conqueror awarded large estates to those he considered loyal and the attitudes of these men towards their holdings re-shaped a landscape that had been devastated during the 'harrying of the North'.⁴⁹ In Cleveland the largest grants were made to Robert, Count of Mortain, William's half-brother, and Robert de Brus. The Count lost his lands in 1090 after he rebelled against his brother and his tenant-in chief, Nigel Fossard, took over his local estate, which then passed through the female line to the de Mauleys.⁵⁰ Both the de Brus and de Mauley families worked the land via dispersed farmstead rather than allowing many villages to be established.⁵¹

The growth of a monastic culture after the Conquest resulted in a significant portion of Cleveland falling under monastic control. Founded on the basis of a strict observance of the rule of St. Benedict the Cistercians were particularly successful in the area, acquiring acres of land from wealth benefactors and using lay brothers to staff granges, farms that generated wealth from wool. The combined efforts of the landowners and the monks to build on the foundations laid by previous generations had by 1300 created many of the landscape features that remain to the present time.⁵²

The dissolution of the monasteries returned the land to secular ownership but did not immediately make any significant changes to the way in which people lived in or used the land in Cleveland. Enclosure and other changes to agricultural practises over the centuries had more impact on field boundaries than settlement patterns and it was not until the mid-nineteenth century that another industry, ironstone mining, introduced new settlement centres and a new form of accommodation, the terraced cottage, into the landscape.⁵³ Why this industry, compared to all the others that had supplemented farming and, on the coast, fishing had such an impact will now be explored.

The only local industry that compared to ironstone mining in terms of scale, national impact, longevity, capitalisation and method of operation was the manufacture of alum. This commenced with the discovery of alum shale in the Cleveland Hills in around 1600 and continued until the last works closed in 1871, thus overlapping the ironstone industry at the end of its life.⁵⁴ Given the similarities between the

⁴⁹ Harrison and Roberts, "The Medieval Landscape," 81 - 82.

⁵⁰ Hugh P. Kendall, *History of the Old Castle of Mulgrave in Yorkshire* (Whitby: The Kendall Memorial Fund Committee, 1948), 6.

⁵¹ Harrison and Roberts, "The Medieval Landscape," 104 – 105.

⁵² David Hey, *A Regional History of England: Yorkshire from AD 1000* (London: Longman, 1988), 60 – 61; Harrison and Roberts, "The Medieval Landscape," 112.

⁵³ J. McDonnell, "After the Middle Ages: Agriculture and Settlement," in *The North York Moors Landscape Heritage*, ed. D.A. Spratt and B.J.D. Harrison (Helmsley: North York Moors National Park, 1996), 136.

⁵⁴ Roger L. Pickles, "A Brief History of the Alum Industry in North Yorkshire 1600 – 1875," *The Cleveland Industrial Archaeologist*, no. 2 (1975): 2-9.

two industries it could be expected that they would have had a comparable impact on the landscape. The reasons why this was not the case will now be explored.

4.2 Alum and Cleveland Ironstone Industry Settlements

Over the 271 years that the alum industry operated there were approximately 30 alum works, less than half the number of ironstone mines, which covered almost the same geographic area as the Cleveland ironstone industry, with the exception of Rosedale. Figure 21 shows the spread of the main North Yorkshire alum works.

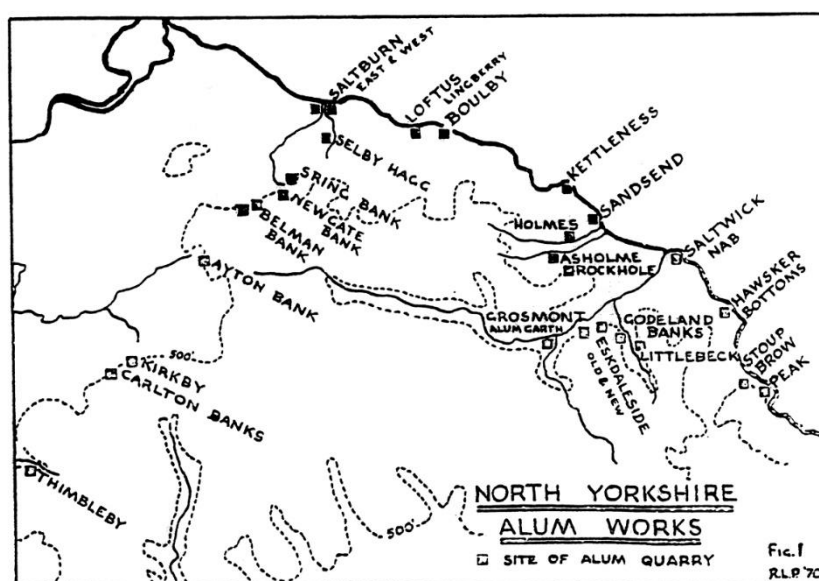


Figure 21: The North Yorkshire Alum Works. (Source: Pickles, *A Brief History of the Alum Industry*, 5)

On a superficial analysis both the ironstone and alum industries had many similarities, with both short lived and more successful enterprises. The way the mineral rights owners elected to exploit the reserves differed and influenced how the workers both lived and worked. Whilst exploring these factors for the alum workers Harrison highlights a number of attributes that assist in explaining why the spread and form of the associated settlements varied so greatly between the two industries.⁵⁵ This is particularly the case on the coastal plain of East Cleveland, where both industries operated for the longest time.

Despite the major landowners being the same for the two industries, these families chose to treat alum shale and ironstone extraction differently. The alum works generally remained owned by the landowners and the workers were employees of the estate, in the same way that their agricultural labourers were. Both types of employee were treated in a similar way and housed in dispersed hamlets, which resulted in a relatively stable, local work force. Large scale housing developments where workers were granted the

⁵⁵ B.J.D. Harrison, "The Alum Workers," *The Cleveland Industrial Archaeologist*, no. 2 (1975): 22-24.

right to 1.5 acres of land to keep livestock, such as the Dundas family permitted, would have been both impractical and potentially wasteful of good farmland.

When it came to the ironstone industry, which required greater capital investment, the landowners took a different approach, leasing the right to mine under their land, termed a royalty, to companies who employed the miners. At Eston, the first Main Seam mine to be developed, Bolckow and Vaughan (B&V) had to deal with a number of landowners and it took them approximately 3 years after their initial find on June 8 1850 to sign the 6 leases needed for the initial phase of the workings.⁵⁶ They did not always wait for formal permission to start work and a lease signed on December 23 1852 was backdated to run for up to 99 years from January 1 1851.

Ironstone mining required a skilled workforce that the local communities were unable to provide and as the number of mines increased the mining companies frequently had to provide housing to attract the necessary staff. They were forced to build where they could obtain permission to use the land for this purpose and some landowners were reluctant to give this if it inconvenienced them in anyway. In 1866 J.T. Wharton of Skelton Castle refused to allow B&V to build cottages near their North Skelton mine.⁵⁷ When a neighbouring landowner did give permission Wharton's agent made a fuss about the damage being done to the land during construction. Needing to fit as many houses as possible onto the land they could obtain the companies, and speculative builders, built rows of terraced cottages. The resulting settlements are very different to the hamlets that the alum workers occupied. Ranks of closely spaced, uniform brick or stone houses replaced clusters of stone cottages.

Figures 22 and 23 are examples of how East Cleveland alum workers settlements appeared in 2014.

⁵⁶ Richard Pepper, *Eston and Normanby Ironstone Mines* (Guisborough: Peter Tuffs, 1996), 6.

⁵⁷ Simon Chapman, *Hope to Prosper: A History of Ironstone Mining at North Skelton* (Guisborough: Peter Tuffs, 1997), 3-4.



Figure 22: Boulby Barns (Source: Author)



Figure 23: Street Houses and Upton (Source: Author)

The Boulby Barns hamlet was built close to the Boulby Alum Works. The group of buildings has the appearance of a typical North Yorkshire farmstead, with one and two storey buildings around a courtyard. In 2014 it was in mixed use as a farm and dwellings. Street Houses and Upton are two adjacent, separated by only a short distance, hamlets built less than a mile down the lane from Boulby Barns for the Loftus Alum Works. Upton, in the background behind the grain silo, is now a farm with four stone cottages in residential use. Street Houses was the largest alum workers settlement in the area but after it became a farm some buildings were lost and most of the others, including the Primitive Methodist Chapel, became derelict. The current appearance is the result of a project to bring the remaining buildings back into mixed use as workshop units and housing carried out circa 2008.⁵⁸ Despite the modern additions, such as the roof lights, Street Houses can still be seen to be a cluster of one and two story stone buildings.

Figures 24 to 27 show four examples of how Cleveland ironstone workers settlements appeared in 2014.

⁵⁸ David Stovell & Millwater, *Planning, Design & Access Statement* (Middlesbrough: David Stovell & Millwater, 2006), 1.



Figure 24: Charltons (Source: Author)



Figure 25: Guisborough (Source: Author)



Figure 26: Boosbeck (Source: Author)



Figure 27: Glaisdale (Source: Author)

Charltons was erected for the miners of the Slapewath Mine in an area that had previously been farmland. Three closely spaced ranks of terraces were built in alignment with the pre-existing Guisborough to Whitby road, but only two remain. Figure 24 shows one of these terraces and the grassed area where the third stood, this was demolished in 1953 due to mining subsidence.⁵⁹ The houses are small and over the years modifications made by their owners have resulted in a much less uniform appearance than when first built. To indicate how the terraces would have looked prior to these modifications Figure 25 shows part of Bolckow Street in Guisborough which includes some houses that are still close to their original form. This street, named after one of the Middlesbrough Ironmasters, was added to the market town during the Cleveland ironstone mining era when there were a number of mines surrounding it. The close separation of the terraces in the ironstone settlements is illustrated by Figure 26, which shows the back alley between Oxford and Queen Streets, Boosbeck. Boosbeck is a village, one of a number of settlements built in the previously rural Margrove Valley that provided

⁵⁹ John Dobson and Philip Battersby *“Charltonian”: A Family Bus Business in the Cleveland Ironstone District of Yorkshire*, (Glossop: Venture Publications, 2005), 4.

accommodation for miners in adjacent mines, but the image could be of a back alley in many large industrial towns in England. Figure 27 shows one of the stone terraces built at Glaisdale to house those working at the Glaisdale End mine, which sat in the field in the foreground of the picture. Due to the slope of the land this terrace is stepped. Glaisdale, located in the Esk Valley at the foot of a dale leading up to the North York Moors, was a farming community prior to the arrival of mining and despite its expansion being caused by the industry, casual observers would not detect this.

4.3 Comparison of the Impact of the Alum and Cleveland Ironstone Industries

By focusing on descriptions of the same area over time it is possible to determine the changes that have occurred and how these have been perceived. Within the study area the East Cleveland plain, bordering the south bank of the River Tees, has been most consistently portrayed, particularly with reference to the view from Roseberry Topping which has been described by many generations. The four sections below cover how the occupation of this plain was depicted pre-industry, during the industrial phases and post-industry. Comparing the descriptions shows that the ironstone industry had a more significant impact on the settlement pattern than the alum industry.

William Camden, an antiquarian, published a number of editions of his topographical survey of Britain, commonly referred to as 'Britannia', between the first in 1586 and the last in 1607.⁶⁰ The alum industry was established towards the end of this period and the landscape Camden describes is one prior to the development of any settlements associated with it. An English translation of the final edition was made in 1610 and contains observations on the Cleveland district when covering the North Riding of Yorkshire. Camden uses the name Cliveland and describes a coastal plain full of fertile fields, separated by hills from moorland.

Camden mentions that Gisburgh (Guisborough) had been diminished by the loss of its Priory, which would have been within living memory when he first wrote, and that Sir Thomas Chaloner had recently discovered alum in the area and was beginning to exploit the reserves. He makes no comment on any impact of this on the area. Roseberry Topping is mentioned as the high point in the area that was used by sailors as a navigation aid. The view from the top is described thus:

Neere unto the top of it out of a huge rocke there floweth a spring of water medicinable for diseased eies, and from hence there is a most goodly and pleasant prospect downe into the vallies below lying a great way about, to the hils full of grasse, greene meddows, delightsome pastures, fruitful corne

⁶⁰"William Camden, Britain, or, a Chorographical Description of the most Flourishing Kingdomes, England, Scotland, and Ireland," University of Portsmouth and Others, 2009, accessed Sept 16, 2014, <http://www.visionofbritain.org.uk/travellers/Camden>

fields, riverets stored with fish, the river Tees mouth full of rodes and harbours, the ground plaine and open without danger of inundation, and into the sea with ships therein under saile.

The Rev. John Graves published 'The History of Cleveland' in 1808, when the alum industry had reached maturity but prior to the commencement of the Cleveland ironstone industry. Before describing each parish Graves provides an introduction to the area in which he states:

Cleveland being chiefly an agricultural district, and as little connected perhaps with manufactures, as any part of the kingdom, of equal extent, its population, as might be expected, is by no means large.⁶¹

He goes on to describe the inhabitants as living in a well-ordered society with an established hierarchy headed by resident landowners presiding over respectable farmers and a "generally sober and orderly" labouring class.⁶²

Although Graves does mention a number of alum works, including giving a lengthy technical description of the process being undertaken at Boulby and a summary of how Sir Thomas Chaloner introduced the industry to England via his Belman Banks works, he makes no mention of the workers or any impact of the industry on the landscape.⁶³ Indeed the description of the view from Roseberry Topping that he chose to include, given below, is very close to that given by Camden.

After a tedious labour of near an hour up the steep ascent, we reached the rocky summit, from whence the most enchanting prospect opened to our view. Before us lay the beautiful vale of Cleveland, with the county of Durham, woods, meadows, and corn fields, interspersed with views of rural villages, farms, and gentlemen's seats, some of which, by their whiteness, gave an animating gaiety to the scene. The river Tees is seen winding through the valley, with stately vessels gliding on its bosom, which give additional beauty and variety to the prospect.

Graves used a version of Thomas Jefferys 1771 map of the County of York to illustrate his work. Figure 28 is a portion of this map that shows East Cleveland. Alum works and rocks are marked but the coastal plain is largely empty except for a few scattered buildings. What was to become the town of Middlesbrough is marked as '*Middlesbrough: Formerly a Church*'.

⁶¹ Rev. John Graves, *The History of Cleveland in the North Riding of the County of York*, (Carlisle: F. Jollie and Sons, 1808), 38.

⁶² Graves, *History of Cleveland*, 39.

⁶³ Graves, *History of Cleveland*, 335-337 and 427-428



Figure 28: East Cleveland on Thomas Jefferys' map. (Source: Thomas Jefferys, *The County of York, Survey'd in MDCCLXVII, VIII, IX and MDCCLXX* (London: Thomas Jefferys, 1771)

The Wapentake of Langbaugh, within which East Cleveland sits, is covered by Volume 2 of the Victoria History of the County (VCH) of York: North Riding, which was completed in 1914 but not published until 1923.⁶⁴ By this date all the settlements associated with Cleveland ironstone had been established and the industry was in decline. Whilst the work is primarily concerned with antiquity it does record where the mines were and what their impact had been in each parish, particularly on population levels. For the parish of Skelton the following is said:

The whole of the parish is given up to iron-stone mining, to which the neighbourhood owes its importance, the opening of various mines having caused a large increase in the population since 1871. The mining villages of Boosbeck and North Skelton, to the south and south-east of Skelton village, have stations on the North Eastern railway; Lingdale, further south, is connected by a special line with the Kilton Thorpe branch railway, and Charlton Terrace or Slapewath (Slapwath) has a tramway running from the mines to the North Eastern railway line which passes it to the north.⁶⁵

A further five parishes in the East Cleveland portion of the Langbaugh Wapentake are identified as having been significantly impacted by the Cleveland ironstone industry. Of Ormesby it is said that “the

⁶⁴ William Page, *The Victoria History of the County of York: North Riding Volume 2* (London: The St. Catherine Press, 1923), frontispiece.

⁶⁵ Margaret L. Mackay, “Skelton,” in *The Victoria History of the County of York: North Riding Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 405.

principle industry of the parish is ironstone mining”.⁶⁶ The importance of the parish of Brotton in the latter half of the nineteenth century is said to have been “greatly increased by the development of the mining industry”.⁶⁷ After the decline of the alum industry Guisborough “owes the prosperity it has enjoyed for the last fifty years to the iron mines”.⁶⁸ Loftus was also impacted by the loss of the alum industry but “the population is said to have more than doubled in 1861-71 owing to the commencement of the iron industry”.⁶⁹ In the parish of Marske the settlement of New Marske was built to house the Upleatham miners and “the working of iron-stone has brought a largely increased population since 1851”.⁷⁰ Other parishes were also impacted, but seemingly to a lesser extent. An extensive railway system installed to serve the mines was also described along with a substantial number of public buildings, including churches, chapels, schools, institutes and hospitals, for the use of the miners. The sum of all the changes included in the VCH amount to a substantial transformation of the area.

Figure 29 shows approximately the same area as shown in Figure 28 and is contemporary with the VCH. The changes between the two maps are considerable. The town of Middlesbrough has been established and become the largest settlement in the area. A network of railways and branch lines, which enabled the development, has appeared. Some settlements, such as Redcar, have grown whilst others, including the ironstone mining settlements of New Marske, Skelton Green, Boosbeck and Lingdale, are shown for the first time. The settlement pattern on the coastal plain has been significantly altered.

⁶⁶Margaret L. Mackay, “Ormesby,” in *The Victoria History of the County of York: North Riding Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 277.

⁶⁷ Margaret L. Mackay and A.W. Clapham, “Brotton,” in *The Victoria History of the County of York: North Riding Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 326-327.

⁶⁸ Minnie Reddan and A.W. Clapham, “Guisborough,” in *The Victoria History of the County of York: North Riding Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 355.

⁶⁹ Ada Russell, “Loftus,” in *The Victoria History of the County of York: North Riding Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 385.

⁷⁰ Minnie Reddan, “Marske,” in *The Victoria History of the County of York: North Riding Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 399-400.

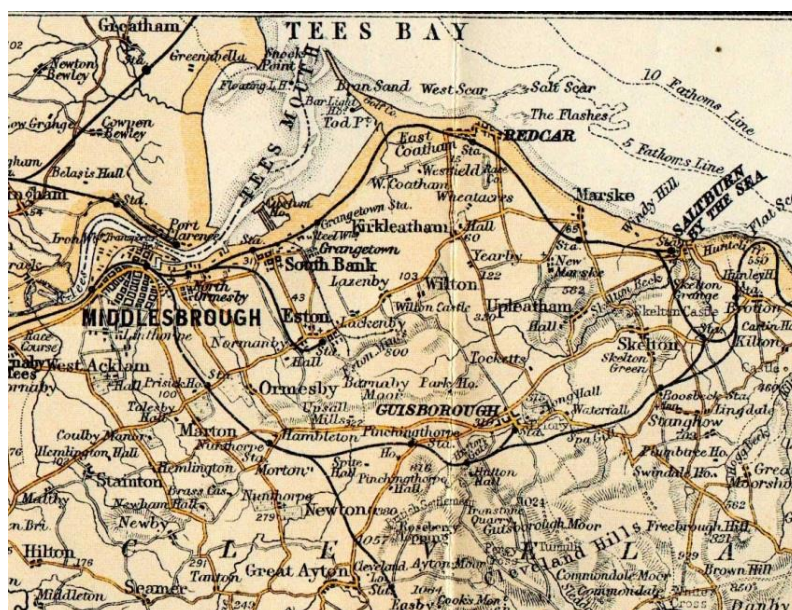


Figure 29: East Cleveland on Handy Guide Series map. (Source: Bartholomew, “Map of the North-East Yorkshire Moors & Coast,” in *Handy Guide Series 3: Yorkshire Moors & Sea*. 4th Edition, ed. Ernest E. Taylor (London: British Periodicals Limited, 1920), inside back cover.)

Harry Mead, a local journalist, published his guide to the North York Moors in 1978, 14 years after the last ironstone mine closed and shortly after East Cleveland was split from Yorkshire by the formation of the Country of Cleveland. Mead’s description of the view from Roseberry Topping was an emotional one, coloured by his dislike of the 1974 local government reorganisation. The impact of this on the perceptions of the case study settlements is discussed in Chapter 6.

Unfortunately, the view from far famed Roseberry is not what it used to be. The moorland panorama to the south, with Cook’s monument prominent, is still superb. But the destruction of trees and hedgerows, coupled with the intrusion of large farm buildings and the advance of the Teesside suburbs, is making the plain of Cleveland very dog-eared. In April 1974 the Topping was partially severed from Great Ayton – an act as unpardonable as divorcing Coniston from its Old Man. While Ayton remains proudly in North Yorkshire, half of the Topping is now within the new County of Cleveland, which bears only a token resemblance to the historic region of the same name. And even though the old boundaries hold good for all sentimental and some practical purposes, the glum truth is that Roseberry Topping has become part of a ‘borough’ that also contains several of Teesside’s most heavily populated towns, and a large slice of the regions’ vast steel, oil, and chemical industries.⁷¹

Such negative views of the impact of industry on East Cleveland have been commonly expressed from the mid-twentieth century onwards. They form part of a building narrative that rural areas are more

⁷¹ Harry Mead, *Inside the North York Moors* (Newton Abbot: David & Charles, 1978), 209.

desirable and acceptable than urban, industrial ones. A guide to the Stokesley Rural District, which included the Great Ayton side of Roseberry Topping, published circa 1950 describes it as having “all the charm of a predominantly agricultural area, untouched by the invasion of heavy industry”.⁷² Both Mead and this publication ignore the long history of quarrying and mining activities on Roseberry Topping as this is incompatible with their wish to make a strong contrast between rural landscapes, seen as desirable, and industrial landscapes, viewed as somehow reprehensible.

It might be expected that those with a vested interest in local industry would have taken a more positive view of such industry, but this was not the case. In 1949 the Teesside Chamber of Commerce and the Teesside Industrial Development Board, seeking to replace the employment lost due to the decline of local industries, issued a publication to promote the area as a place for new employers.⁷³ Published in the year that the Parliament passed the Act leading to the formation of the National Parks the writers pointed out that as well as being a “great industrial area” it had the added advantage of having an easily assessable “heritage of natural beauty”. Also, keen to promote alternative employment opportunities, such as those on the then recently opened Skelton Trading Estate, to replace the ironstone mining jobs that had been a main stay of their district for years, were the Skelton and Brotton Urban District Council. In a guide published circa 1950 the authority was keen to point out that their area had “none of the concentrated industrialisation so characteristic of Middlesbrough” and that “the southern part of the urban district is completely free of the iron industry”, being predominantly used for agriculture.⁷⁴ This seeming wish to distance themselves from an industry that had developed a significant number of settlements in their district suggests that the authority was of essentially the same view as Mead and Stokesley Rural District Council.

Problems with unemployment in Cleveland persisted and in the early 1970s the North Riding County Council, covering the whole of the area, was concerned about the drop in agricultural employment that had resulted from changes in farming practises and the lack of ability of industry to absorb the excess workforce.⁷⁵ To address these concerns industry relocating to the area was eligible for “several grants and incentives offered by the Board of Trade”. Whilst wishing to attract employers the council was also keen to point out that other than a “few rare sites in East Cleveland”, the North Riding had largely been untouched by industrialisation.

⁷² Stokesley Rural District Council, *Stokesley Rural District, Yorkshire: The Official Guide* (Croydon: The Home Publishing Co., n.d., circa 1950), 2.

⁷³ J.H. Thompson, *Tees-side Enterprise* (Derby: Bemrose Publicity Company Limited, 1949), 71-74.

⁷⁴ Skelton and Brotton Urban District Council, *Skelton and Brotton and District, North Riding, Yorkshire: Official Guide* (London: The Homeland Association Ltd., circa 1950), 5-10.

⁷⁵ North Riding of Yorkshire County Council, *The North Riding of Yorkshire: The Official County Handbook*, (Cheltenham: Ed. J. Burrow & Co. Ltd., n.d., ca. 1970), 17-19.

Soon after this was written, East Cleveland ceased to be part of Yorkshire and became part of the Borough of Langbaugh, one of the four districts of Cleveland County. The Cleveland ironstone area was thus split between what is generally perceived to be a rural, agricultural county and an urban, industrial county. The Cleveland ironstone industry had been instrumental in the development of Middlesbrough as an iron and steel town that ultimately led to this differentiation. Whilst Teesside is one legacy, it can also be traced in the many other North riding settlements that the Cleveland ironstone industry also touched. Those settlements will now be identified.

5 Ironstone Settlement Identification and Classification

This chapter has so far established that industrial settlements provide evidence of the history of industrialisation and shown that the settlements associated with the Cleveland ironstone industry had an enduring impact on the human occupation of the area that bears witness to the industrial history. The thesis now proceeds with studying the relationship between the Cleveland ironstone mines and the settlements that housed its workers to determine if the relative success of mining adjacent to a settlement impacted on its post mining experiences. As a first step it was necessary to identify the settlements associated with all the mines listed in Chapter 3.

For most of the Cleveland ironstone mines it was possible to use the various editions of the OS map series to determine the nearest settlement to the mine site before, during and immediately after mine operation. The maps also documented changes to the settlement over time. Due to the elapsed time between map editions the operating phase of a number of the shorter-lived mines was not captured on the OS maps. In such cases the location and fate of the closest settlement to the mine was inferred from a variety of sources, unique to each instance, and confirmed by fieldwork. The condition immediately after mining was compared with the current OS maps to identify changes that have occurred since mining ceased. For the purposes of this analysis a settlement was defined as any group of buildings that contained 4 or more dwellings. Each of the identified Cleveland ironstone settlements was classified using the two-stage system laid out in Table 7. For each mine there was either a new settlement built for the workers, an existing settlement that expanded to accommodate them or no discernible impact on any settlement in the area. For settlements in the first two primary categories there are three possible modes of change since mining ceased. Firstly, they could no longer exist in their mining era layout, either through total loss or the survival of only a fragment. Secondly the settlement could have seen very little change since mining ceased, with the core remaining essentially the same. Finally, a settlement could have grown post mining.

Table 7: Settlement classification factors

| Primary Factor | Secondary Factor |
|---|---|
| A: New settlement built during mining | |
| | A1: Lost / substantially reduced post mining |
| | A2: Essentially the same / peripheral losses post closure |
| | A3: Expanded post closure |
| B: Pre-existing settlement developed during mining | |
| | B1: Lost / substantially reduced post mining |
| | B2: Essentially the same / peripheral losses post closure |
| | B3: Expanded post closure |
| C: No settlement building or development associated with mine | N/A |

The following three subsections describe the work to identify the settlements associated with the Brotton Mine, the Beck Hole Mine, part of the Grosmont Group, and Levisham Mine. Brotton is an example of a mine and settlement that can traced on the OS map editions, whilst at Beck Hole and Levisham other sources had to be used. To conclude, the section lists all the categorized Cleveland ironstone settlements.

5.1 Brotton Mine

Brotton mine operated, without any periods standing, between 1865 and 1921. Figure 30 shows the future mine site, marked with a red spot. It is located in a field close to Brotton Grange, with the small market town of Brotton to the south east.

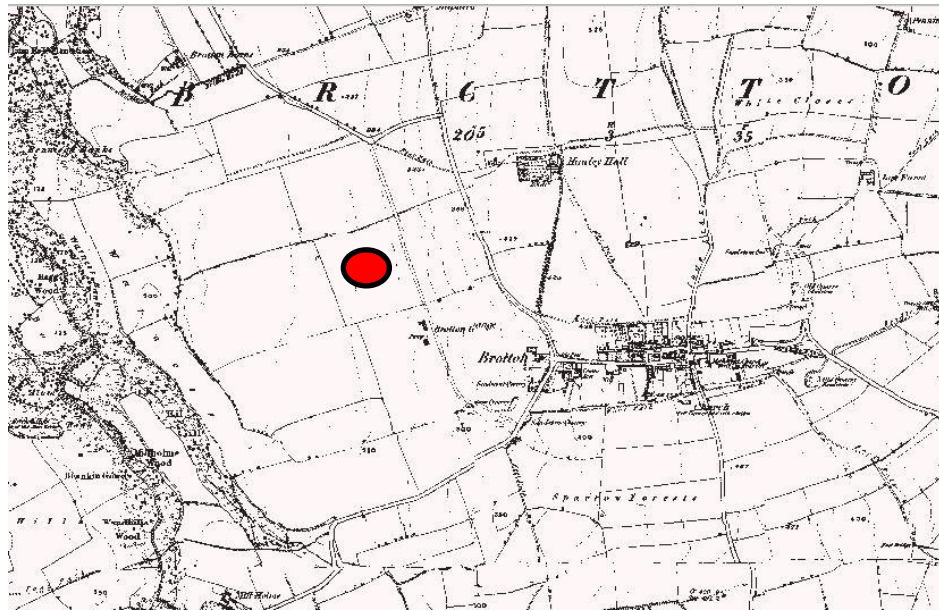


Figure 30: Brocton Mine site circa 1856 (OS 1st edition 1:10,560 map)

Figure 31 shows the equivalent area after the mine had been in operation for approximately 30 years. It is circled in red and marked as 'Brocton Mine (Ironstone)'. There is an adjacent railway line with terraces of housing close to the railway station, to the south west of the original town.

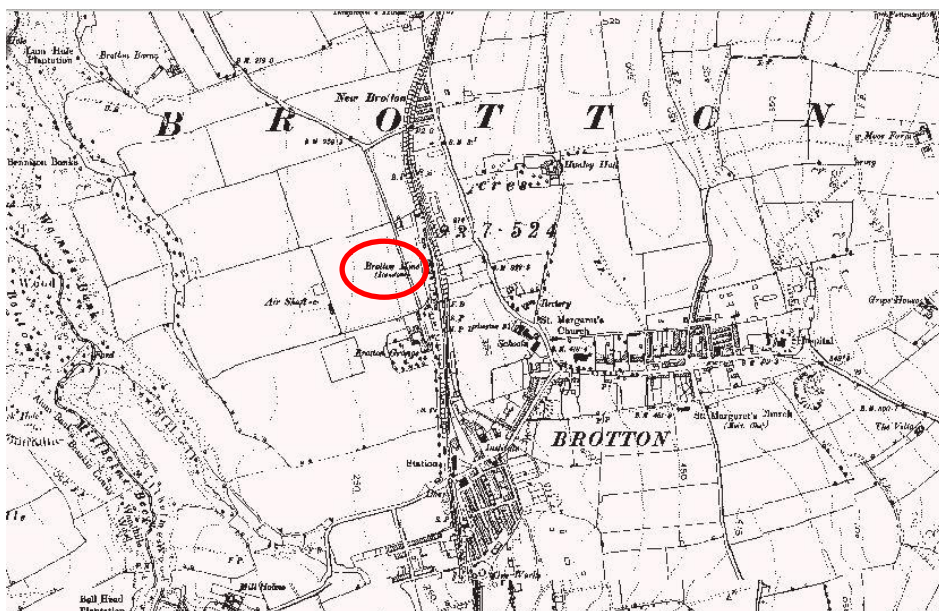


Figure 31: Brocton Mine circa 1895 (OS 2nd edition 1:10,560 map)

The area after the mine had closed is shown in Figure 32. An 'Air Shaft', circled in red, is marked on the site and some of the buildings remain but, unusually, the site is not identified as a disused mine.

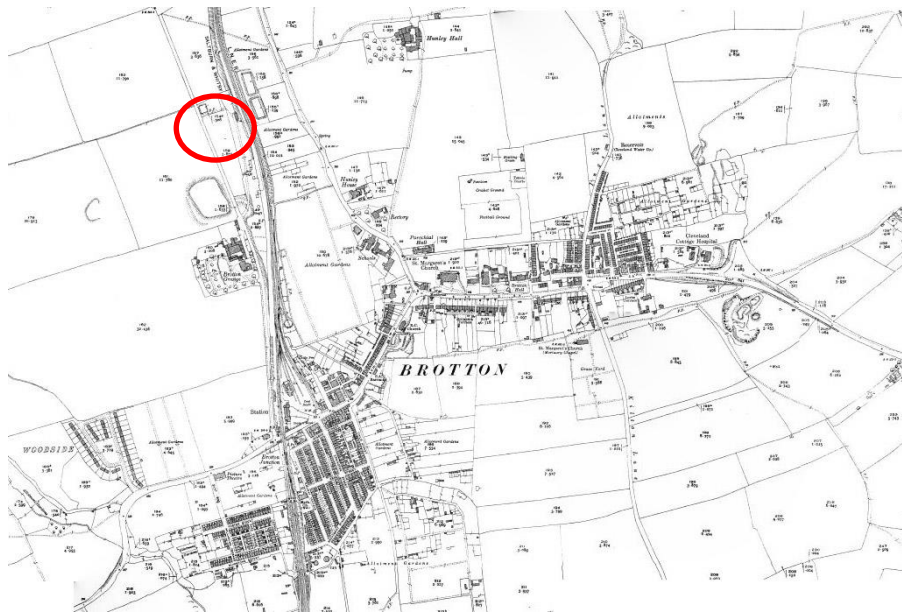


Figure 32: Broton Mine site post 1921 (OS 3rd edition 1:10,560 map)

Figure 33 shows that Broton has continued to grow since the end of mining. Broton Grange, rebuilt for the mine owner, still stands but the mine site has been covered in housing. Housing estates clustered around the original village centre have resulted in a substantially larger settlement than in 1921.

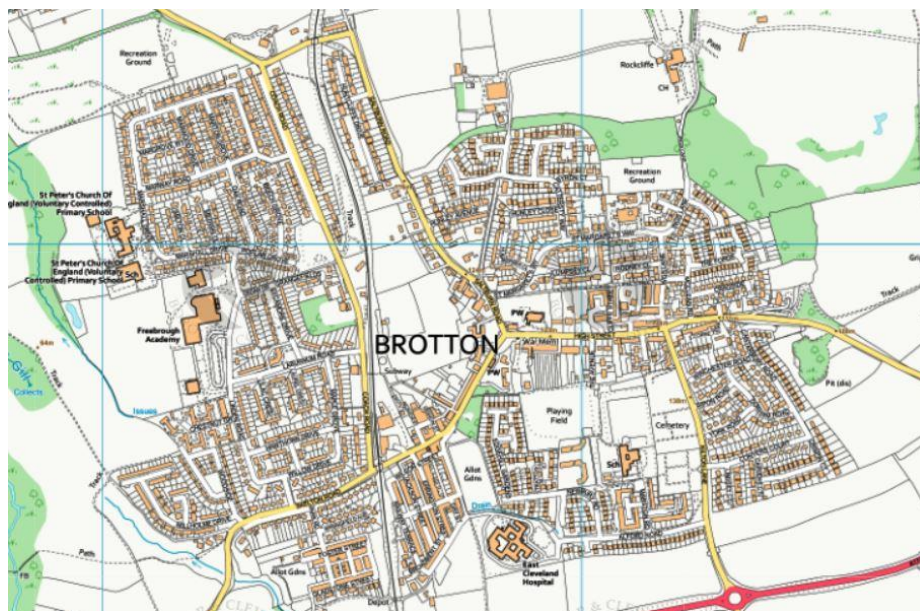


Figure 33: Broton in 2021 (Source: Redcar and Cleveland Borough Council)

No physical evidence of the mine site remains, and its position was identified by matching the skyline with that in the image of the demolition of the mine chimney shown in Figure 34.



Figure 34: The demolition of the Brotton Mine chimney (Source: Author)

Figure 35 was taken from approximately the same position as Figure 34.



Figure 34: The mine site in 2014 (Source: Author)

The railway still operates, but as a freight only line that serves the Skinningrove Works and the Boulby Potash Mine. No major private sector employers are located within Brotton and the town has become a dormitory town with people commuting by car. The businesses located on the Skelton Industrial Estate offer the closest work opportunities to Brotton, but the large units built for manufacturers from the

1950s onwards are no longer in demand.⁷⁶ To improve employment prospects locally the Council is seeking to re-invigorate the Estate.

For the Brotton Mine the conclusions drawn were that the closest settlement was Brotton, a pre-existing settlement that expanded during the mining era and continued to grow since mining ceased. This places it in category B3.

5.2 Grosmont Group: Beck Hole Mine

The Beck Hole mine operated between 1859 and 1864. It was associated with the short-lived Beck Hole ironworks and continued to be worked after the works closed in 1861.⁷⁷ Mining came to a sudden end when a landslip closed off the mine entrance in 1864. The timing of the enterprise was such that it does not appear on any of the OS map editions. The hamlet of Beck Hole was adjacent to the site of the ironworks, but a row of 33 cottages was built in the nearby Buber Wood, also referred to as Bluebell and Blue Ber, to house the workers.⁷⁸ The site of the Buber Wood cottages is circled in red on Figure 36.

⁷⁶ Skelton & Brotton Parish Council, *Skelton & Brotton Neighbourhood Development Plan SPD* (Guisborough: Redcar & Cleveland Borough Council, 2013), 16.

⁷⁷ Peter Wainwright, *The Mines and Miners of Goathland, Beckhole and Greenend* (Guisborough: Peter Tuffs, 2005), 7.

⁷⁸ Wainwright, *Goathland*. 6.

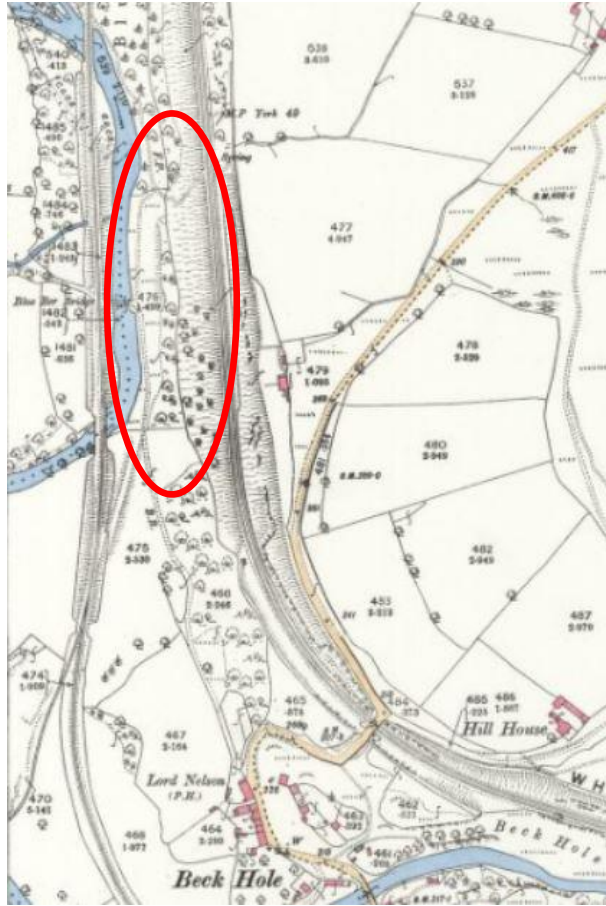


Figure 36: Beck Hole circa 1895 (OS 2nd edition 1:10,560 map)

Whilst not captured on any maps the existence of Buber Wood cottages is recorded in the census returns of 1861, 1871 and 1881. The cottages were stone built and were of the two-up, two-down plan. They were demolished in the late 1880s and the stone taken away by the North Eastern Railway Company.⁷⁹ Sandwiched on a thin strip of land between the River Murk Esk and the railway line little remains of the cottages. Figure 37 shows, on the right, a stone gatepost that marks the site.

⁷⁹ Wainwright, *Goathland*. 12.



Figure 37: Site of the Buber Wood Cottages (Source: Author)

For the Beck Hole Mine the conclusions drawn were that the closest settlement was Buber Wood Cottages, a settlement built for the miners and iron workers that was demolished after mining ceased. This places it in category A1.

5.3 Levisham Mine

Little information on the ironstone mining enterprise at Levisham exists and it is not certain if the mine ever went into full production, The site is shown on Figure 38, where 'Iron Works (Disused)' are marked below the older quarries. A branch line from the Whitby and Pickering Railway served the site.

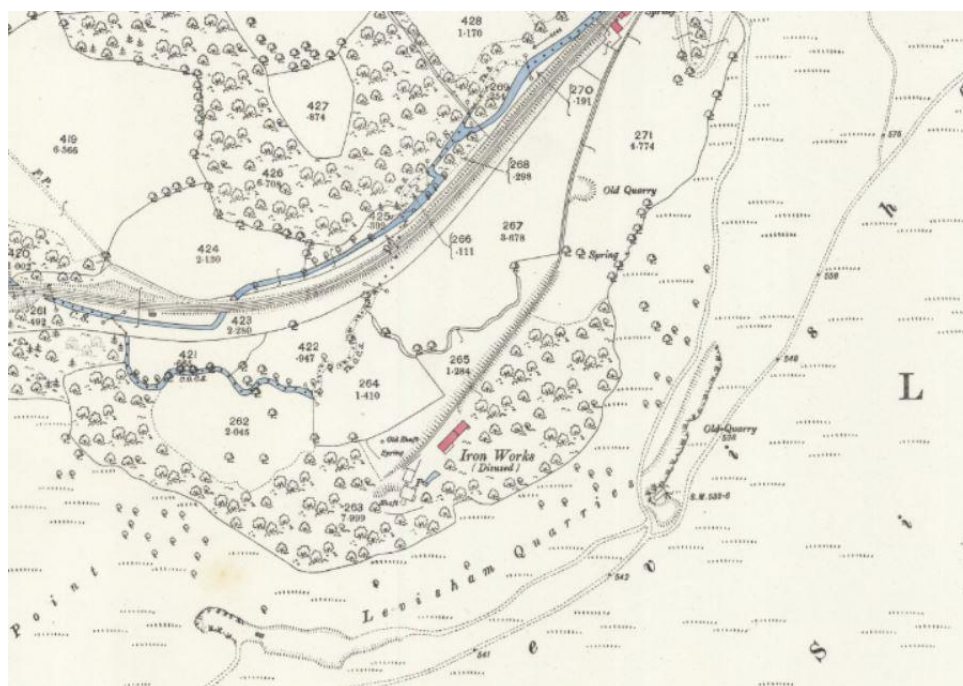


Figure 38: Levisham circa 1895 (OS 2nd edition 1:10,560 map)

The manor of Levisham was put up for sale in 1856 by the local vicar, the Rev. Robert Skelton.⁸⁰ Included in the sale was the freestone quarry, let to a tenant, with three cottages for workers. It is probable that the buildings marked on Figure 37 are these cottages. In accordance with the ironstone speculative boom at the time it was also said that there were “extensive Beds of Iron Ore” under the estate which would be easy to remove due to the proximity of the railway. The mention of mineral resources is said to have attracted the attention of James Walker, a Leeds cloth manufacturer, who bought the property.⁸¹ At the time of the 1861 census the Walker family were living at Levisham Hall and their two youngest children had been born there. Things did not work out well for Walker at Levisham and in 1866 the estate was put up for sale to pay off the mortgage.⁸² The sales particulars include information on a shaft sunk to reach the ironstone, said to be a seam 12 feet thick and with 31% iron. It appears that water ingress was a problem at the site and caused the mine to be abandoned.⁸³ The machinery was maintained with the hope of restarting but was eventually sold for scrap iron. Walker returned to Leeds but the failure of the Levisham mine did not prevent him from continuing to seek his fortune in mining, aged 74 at the time of the 1891 census he gave his occupation as ‘Explorer for Mines and Minerals’.

⁸⁰ “Levisham, near Pickering.” *Yorkshire Gazette*. February 2, 1856, 1.

⁸¹ “Memorial to Old Leeds Family: Tablet in Levisham Church,” *Yorkshire Post*, April 9, 1937, 6.

⁸² “Ironstone at Levisham,” *Yorkshire Post and Leeds Intelligencer*, October 6, 1866, 2.

⁸³ “Memorial to Old Leeds Family,” 6.

Nothing remains to mark the mine site and the quarry workers cottages have been removed. The closest settlement, Levisham, was not impacted by the ironstone mine, placing it in category C

5.4 Cleveland Ironstone Mining Settlements

The identified Cleveland ironstone settlements are listed in Table 8 and shown on maps in Appendix 1. Table 8 shows the settlements linked with each of the mines that appear in Chapter 3, Table 5. In the case of five mines, it was not possible to determine a single primary associated settlement and two are given, resulting in a list with 85 entries. For Kilton these represent two distinct phases of mining. At Rosedale East and West Mines accommodation for miners was split between housing on the valley sides, close to the mines, and the village of Rosedale Abbey. Miners at Craggs Hall initially had to travel from Brotton until Carlin How was built. At Grinkle a light railway took workers to the mine from settlements on the coast.

Table 8: The Cleveland Ironstone Settlements

| I.D. No. | Mine | Nearest Settlement | Primary Factor | Secondary Factor |
|----------|--------------------------------|-----------------------|----------------|------------------|
| 6 | Boulby | Boulby | A | 1 |
| 14 | Eston Group: Upsall Pit | Upsall Cottages | A | 1 |
| 18 | Grosmont Group: Beck Hole | Buber Wood Cottages | A | 1 |
| 44 | Kildale Group: Warren Moor | Leven Valley Cottages | A | 1 |
| 45 | Kilton (1) | Kilton Thorpe | A | 1 |
| 61 | Rosedale Group: East Mines (1) | Florence Terrace | A | 1 |
| 64 | Rosedale Group: West Mines (1) | High and Low Rows | A | 1 |
| 70 | Slapewath | Charltons | A | 1 |
| 3 | Ayton Banks | Gribdale Terrace | A | 2 |
| 8 | Carlin How | Carlin How | A | 2 |
| 11 | Craggs Hall (2) | Carlin How | A | 2 |
| 12 | Eston Group: Chaloner | Chaloner Houses | A | 2 |
| 16 | Grinkle (1) | Port Mulgrave | A | 2 |
| 22 | Grosmont Group: Esk Valley | Esk Valley | A | 2 |
| 23 | Grosmont Group: Eskdaleside | Hardstruggle Cottages | A | 2 |
| 27 | Grosmont Group: Holey Gill | Hardstruggle Cottages | A | 2 |
| 43 | Kildale Group: Lonsdale | Wood End Cottages | A | 2 |
| 46 | Kirkleatham | Dunsdale | A | 2 |
| 54 | North Loftus | Carlin How | A | 2 |
| 57 | Port Mulgrave | Port Mulgrave | A | 2 |
| 63 | Rosedale Group: Sheriff's Pit | Thorgill | A | 2 |
| 66 | Skelton Park | Skelton Green | A | 2 |
| 67 | Skelton Shaft | Skelton Green | A | 2 |
| 74 | Spawood | Spawood Cottages | A | 2 |
| 76 | Stanghow | Margrove Park | A | 2 |
| 17 | Grosmont Group: Bagnall | Grosmont | A | 2 |
| 19 | Grosmont Group: Bird's | Grosmont | A | 2 |
| 20 | Grosmont Group: Birtley | Grosmont | A | 2 |
| 26 | Grosmont Group: Hay's | Grosmont | A | 2 |

| I.D. No. | Mine | Nearest Settlement | Primary Factor | Secondary Factor |
|-----------------|--------------------------------------|---------------------------|-----------------------|-------------------------|
| 28 | Grosmont Group: Hollins | Grosmont | A | 2 |
| 29 | Grosmont Group: Lease Rigg | Grosmont | A | 2 |
| 33 | Grosmont Group: West | Grosmont | A | 2 |
| 5 | Boosbeck | Boosbeck | A | 3 |
| 36 | Hob Hill | Saltburn | A | 3 |
| 38 | Hutton | Hutton Village | A | 3 |
| 48 | Lingdale | Lingdale | A | 3 |
| 49 | Liverton | Liverton Mines | A | 3 |
| 51 | Long Acres | New Skelton | A | 3 |
| 55 | North Skelton | North Skelton | A | 3 |
| 72 | South Skelton | Boosbeck | A | 3 |
| 80 | Upleatham | New Marske | A | 3 |
| 24 | Grosmont Group: Glaisdale End | Glaisdale | B | 2 |
| 25 | Grosmont Group: Glaisdale, Post Gate | Glaisdale | B | 2 |
| 50 | Loftus | Skinningrove | B | 2 |
| 61 | Rosedale Group: East Mines (2) | Rosedale Abbey | B | 2 |
| 64 | Rosedale Group: West Mines (2) | Rosedale Abbey | B | 2 |
| 2 | Ayton (Monument) | Great Ayton | B | 3 |
| 4 | Belmont | Guisborough | B | 3 |
| 7 | Brotton | Brotton | B | 3 |
| 9 | Cliff | Brotton | B | 3 |
| 11 | Craggs Hall (1) | Brotton | B | 3 |
| 13 | Eston Group: Eston | Eston | B | 3 |
| 16 | Grinkle (2) | Staithe | B | 3 |
| 37 | Huntcliff | Brotton | B | 3 |
| 52 | Lumpsey | Brotton | B | 3 |
| 53 | Normanby | Normanby | B | 3 |
| 56 | Ormesby | Ormesby | B | 3 |
| 71 | South Belmont | Guisborough | B | 3 |
| 73 | Spa | Guisborough | B | 3 |
| 77 | Swainby Group: Ailesbury | Swainby | B | 3 |
| 78 | Swainby Group: Swainby | Swainby | B | 3 |
| 81 | Waterfall | Guisborough | B | 3 |
| 82 | Whitecliff | Loftus | B | 3 |
| 1 | Aysdalegate | Charltons | C | |
| 15 | Eston Group: Wilton Clay Drifts | Wilton | C | |
| 30 | Grosmont Group: Mirkside | Beck Hole | C | |
| 31 | Grosmont Group: Partridge Nest | Sleights | C | |
| 32 | Grosmont Group: Sleights Bridge | Sleights | C | |
| 34 | Grosmont Group: Whitehall Pit | Whitby | C | |
| 35 | Grosmont Group: Wintergill | Glaisdale | C | |
| 39 | Ingleby | Ingleby Greenhow | C | |
| 40 | Kettleness | Kettleness | C | |
| 41 | Kettleness (Coastal) | Kettleness | C | |
| 42 | Kildale Group: Coate Moor | Kildale | C | |
| 45 | Kilton (2) | Lingdale | C | |
| 47 | Levisham | Levisham | C | |
| 58 | Raithwaite | Sandsend | C | |

| I.D. No. | Mine | Nearest Settlement | Primary Factor | Secondary Factor |
|----------|---------------------------|--------------------|----------------|------------------|
| 59 | Roseberry | Great Ayton | C | |
| 60 | Rosedale Group: Blakey | Church Houses | C | |
| 62 | Rosedale Group: Lane Head | Rosedale Abbey | C | |
| 65 | Rosedale Wyke | Hinderwell | C | |
| 68 | Skinningrove | Skinningrove | C | |
| 75 | Staithes | Staithes | C | |
| 79 | Tocketts | Guisborough | C | |
| 83 | Wreckhills | Runswick Bay | C | |

If each of the 85 entries is considered separately then the split between categories A, B and C is 48%, 26% and 26%. This indicates that approximately twice as many settlements were built for the miners than either pre-existing ones that were expanded during mining or where there was no discernible impact on any settlement. This simple analysis ignores the fact that each mine entry in Table 8 does not have a unique associated settlement. In a number of cases, most notably Grosmont, where mines were closely grouped a single settlement was home to workers of a number of mines, not always under the same ownership.

A total of 53 distinct settlements that were the nearest communities to an operating Cleveland ironstone mine were identified. These ranged in type from single, isolated rows of cottages through to the growth of an already substantial market town, Guisborough. 55% of these settlements fall into category A, 23% category B and 23% category C. Whilst 28% of the settlements built for the ironstone miners have been lost or substantially reduced, category A1, none of the expanded settlements have been reduced in size, category B1. When considering Cleveland ironstone settlements that have endured, those that pre-dated mining have fared better than ones created by it. In the former case 25% have stayed at about the same size, B2, whilst 75% have continued to expand, B3. The equivalent figures for category A settlements are 45% (A2) and 28% (A3) respectively.

Statistical analysis was undertaken to determine if there was a significant difference between the mean mine ranks for settlements in different categories.⁸⁴ Due to the limited sample size these tests could only be carried out at the primary factor level. There is no statistically significance difference in the mine ranks for category A and B settlements, but there is one for both to the ranks associated with category C

⁸⁴ The mean rank scores for the mines associated with each of the categories were 1.62 (A), 1.66 (B) and 1.04 (C). Two sample t-tests were carried out to compare the means between the sets of ranking scores for each group. Method reference: Dr Michael de Smith, "Test of the difference between two means, standard deviation not known," *Statistical Analysis Handbook, 2021 update, 2021*, accessed Nov 24, 2021, <https://www.statsref.com/HTML/index.html>.

settlements. As would have been expected, less successful mines were less likely to produce industrial settlements.

6 Case Study Settlements

In order to explore the relationship between the Cleveland ironstone mines and the settlements that housed their workers a representative selection of settlements had to be identified. The number of case studies needed was set at five, one from each of the categories into which settlements impacted by mining fell, A1 to A3 plus B2 and B3. Considering each of these categories in turn the following sections describe how the case study to represent each was selected.

Eight settlements fell into category A1, a settlement built for miners that was either totally lost or substantially reduced after mining ceased. One of these, Kilton Thorpe, was associated with the first phase of operation of the Kilton mine that had a successful second phase. As it would not be possible to separate the influence of the two phases of operation Kilton Thorpe was discounted. The mine ranks for each of the remaining seven associated mines fell in the range 12 to 65. Leven Vale Cottages, associated with the lowest scoring mine, Warren Moor, were selected to represent housing for an unsuccessful, short-lived mine that was demolished after the mine closed. It fulfilled the requirement that at least one case study be associated with a low ranked mine.

The 13 settlements in category A2, a settlement built for miners that has remained essentially the same as it was when mining ceased, include a number of isolated rows of cottages, such as Gribdale Terrace, near Great Ayton, and Chaloner House, near Guisborough. To avoid possible overlap with Leven Vale Cottages these were not considered as case studies. The mine ranking ranged from 6 to 73. Grosmont, associated with seven mines with rankings towards the upper end of the range, was selected as the case study for this category. It was the earliest settlement built for Cleveland ironstone miners.

There are eight category A3 settlements, built for the miners and expanded after mining ceased. One of these, Boosbeck was associated with two mines, Boosbeck and South Skelton. The mine rankings for the associated mines were in the range 3 to 50. Liverton Mines, associated with a mine with a rank in the middle of this range, was selected to represent this group. The mine did not operate continuously through its life.

Only three settlements fell into category B2, a pre-existing settlement that grew during mining but has remained essentially the same since. These are Glaisdale, Rosedale and Skinningrove. The mine rankings for the mines associated with Glaisdale and Skinningrove were close to the Leven Vale Cottages and Eston respectively, so Rosedale was selected as the case study in this category.

Eight settlements fell into category B3, a pre-existing settlement that has continued to expand since mining ceased. The mine rankings ranged from 1 to 73. Eston, the most successful Cleveland ironstone mine was selected to represent this group. It fulfilled the requirement to have at least one case study associated with a high ranked mine.

This chapter has established the value of settlements as evidence of industrial activity and determined that those associated with the Cleveland ironstone industry remain as testament to a lost industry. The Cleveland ironstone industry settlements looked different to previous housing in Cleveland and established numerous new population centres in an area traditionally dominated by agriculture.

Chapter 5 looks at the impact of the Cleveland ironstone industry on the case study settlements during the ironstone era and Chapter 6 their history since mine closure.

Chapter 5

Case Studies: During Industry

1 Introduction

This chapter begins the exploration of the impact of the Cleveland ironstone industry on the case study settlements identified in Chapter 4. In order to do this the years in which the industry operated within commuting distance of the settlement are first identified. This is necessary to take into account the situation where the local mine closed but, rather than having to move away the workers were able to travel daily to other employment opportunities within the industry. A history of each settlement during the mining years follows; the first part of exploring the complex impacts on the communities of mine operation. The chapter concludes with a discussion of how each settlement was represented, on maps, in census returns and in images, and perceived, in written descriptions, during the years of local mine operation.

2 Period of Active Local Mining

The years during which ironstone mining took place within 5 km of each settlement are those during which the industry could exert the greatest direct influence on the communities. The history of Cleveland ironstone mining outlined in Chapter 2 identifies the overall industry events with the potential to have an impact, but circumstances specific to each case study are discussed in the following sections. Figures 39 to 43 use data discussed in Chapter 3 to show the years of operation for the primary and secondary mines for each of the case study settlements.

At Leven Vale there were two periods of operation in the nineteenth century, 1866 – 1868 and 1872 – 1876. No further mining took place in the immediate vicinity, but between 1910 and 1931 it did occur a short distance away. These mines were closer to settlements other than Leven Vale Cottages. Mining was carried out at Grosmont continuously between 1836 and 1891, and there was an attempt to restart operations between 1907 and 1909. There were operating mines within commuting distance of Liverton Mines between 1847 and 1964, the longest period of potential impact for any of the case study settlements. Other than in 1879 and 1926 – 1927 mining occurred at Rosedale between 1856 and 1928. At Eston the primary mine operated continuously between 1850 and 1949.

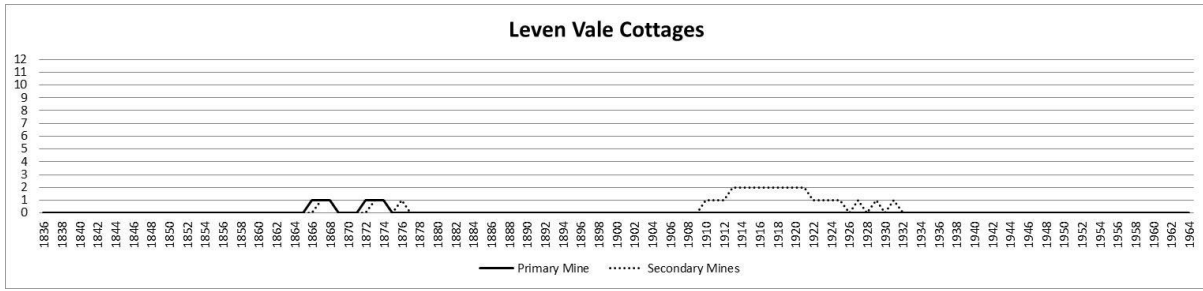


Figure 39: Mines within 5 km of Leven Vale Cottages

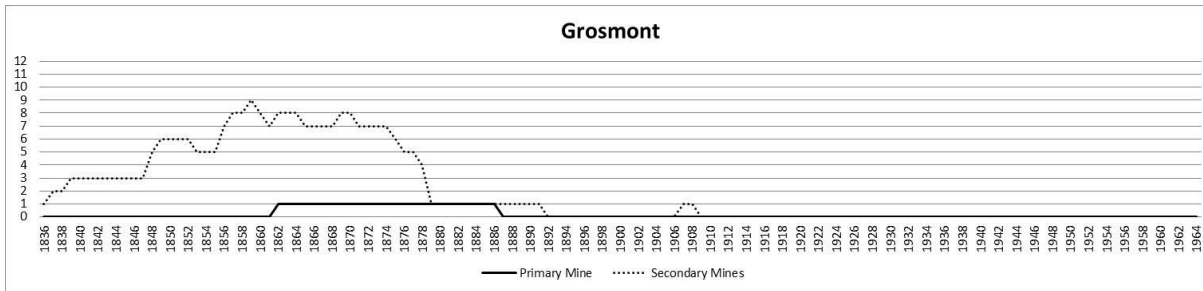


Figure 40: Mines within 5 km of Grosmont

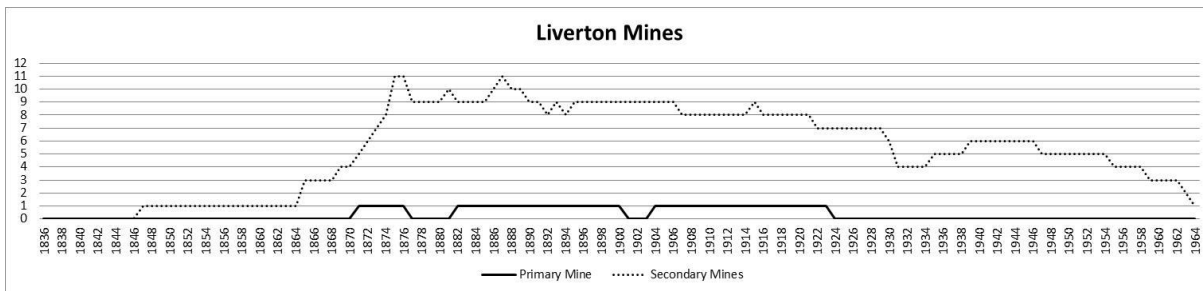


Figure 41: Mines within 5 km of Liverton Mines

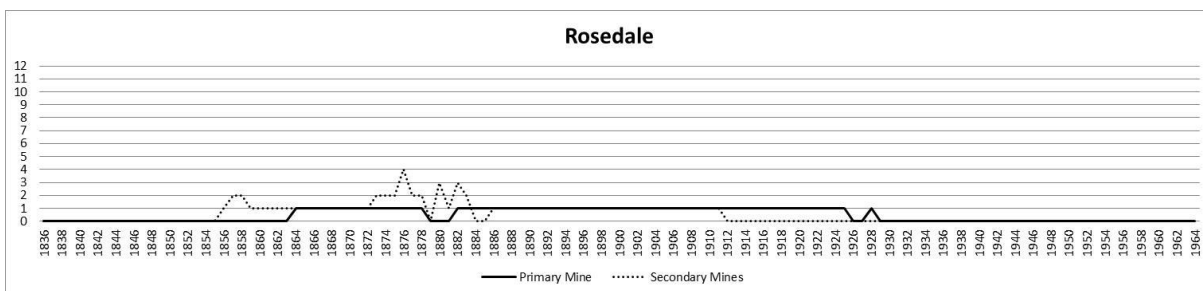


Figure 42: Mines within 5 km of Rosedale Abbey

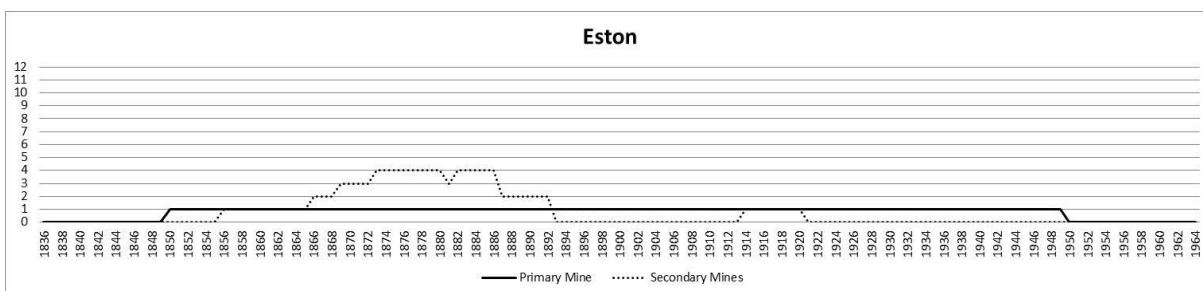


Figure 43: Mines within 5 km of Eston

3 The Settlements During Mining

3.1 Leven Vale Cottages

3.1.1 The Kildale Land Ownership

The Warren Moor Mine, for which the Leven Vale Cottages were built, was developed to exploit the ironstone in the southern portion of the Kildale Estate. The Estate, synonymous with the parish of Kildale, is an ancient one that has had few owners. Kildale is mentioned in the Domesday Book and, unusually in an area of widespread waste, had increased in value since the Conquest.¹ It formed part of the grant to Robert de Brus and passed to the Percy family. Circa 1660 it was sold to the Turner family, of Kirkleatham.² Prior to the death of Sir Charles Turner in 1810 the estate was sold to Robert Bell Livesey.³ The Kildale Estate passed to the Turton family via a son-in-law and remains in the possession of their descendants, the Sutcliffe's.⁴

3.1.2 Kildale Ironstone Mining

Owners of estates in the Cleveland area became increasingly aware of the income potential offered by the minerals under their land after the Eston Hills find. John Owen, who had access to the Kildale Estate papers, states that the trustees of Robert Livesey had arranged for "some preliminary survey to be carried out by the year 1852".⁵ This may account for the presence of the Ironstone Miner lodging with his wife in Kildale village at the time of the 1851 census. He was the only one of the 145 residents of the parish with an occupation unrelated to the functioning of a rural, agricultural estate. In 1857 Bell Brothers turned down the option to take a lease on the Kildale royalty.⁶ In the opinion of Joseph Bewick, geologist and mine manager, the Kildale stone was not worth mining. Modern geographical knowledge has confirmed that Berwick was correct, but the Cleveland ironstone speculative booms in the 1860s and 1870s attracted many who were willing to risk their capital without any of the required specialist knowledge.⁷

¹ Myra Curtis, "Kildale," in *The Victoria History of the County of York: North Riding*, ed. William Page (London: The St. Catherine Press, 1932), 250.

² John Walker Ord, *The History and Antiquities of Cleveland: Comprising the Wapentake of East and West Langbaugh, North Riding, County York* (London: Simpkin and Marshall, 1846), 425.

³ Curtis, *Kildale*, 251.

⁴ Mrs. Cook, Park Farm, Kildale interviewed by E.C. Marsh on April 10 2015.

⁵ J.S. Owen, "Mining Failure in Cleveland No. 3: The Kildale Mines," *Bulletin of the Cleveland & Teesside Local History Society*, no. 14 (1971): 18.

⁶ J.S. Owen, "Warren Moor Ironstone Mine, Kildale," *The Cleveland Industrial Archaeologist*, no. 13 (1981): 33.

⁷ Owen, "The Kildale Mines 14," , 18

The North Yorkshire and Cleveland Railway reached Kildale in April 1858, shortly before the company was taken over by the North Eastern Railway (NER).⁸ This facilitated the removal of the mineral resources of the Kildale Estate. When the 1861 census return was taken the population had increased to 221, including a number of occupations not related to running the Estate. There were railway employees and workers at the Whinstone Quarry that had been established close to Woodend Farm. Initially the quarry workers were housed in huts but by the time of the 1871 census were living in the stone cottages erected for the ironstone miners of Lonsdale Vale Iron Co. Ltd. (LVIC), that had failed in 1868.⁹

In 1864 John Watson, of London, took out an option on the lease of the whole of the Kildale royalty and returned home to find backers.¹⁰ The Kildale Estate Agent, Peirson, was concerned that Watson was a speculator who did not intend to establish a mine, but negotiations continued.¹¹ A 42 year lease for the northern portion of the royalty was signed by the LVIC, to run from January 1 1865, and the equivalent for the southern portion was signed by the Warren Moor Co. Ltd. (WMC), to run from January 1 1866.¹² Other than an insistence from Peirson that he retain ultimate responsibility for the lease that he had sub-let, Watson was not involved in the Lonsdale Vale venture. At the same time he passed the lease of the Liverton royalty to the Liverton Ironstone Co. Ltd (LIC), discussed further below.¹³ It would seem that Peirson was correct in his assessment of Watson, however he did choose to remain involved at Warren Moor. The optimism regarding the Kildale Estate ironstone mines can be gauged from a news item that appeared in June 1865. This stated that: "No less than 500 people are about to settle in this hitherto rural hamlet, that formerly had a population hardly reaching two figures."¹⁴ This both overestimates the rise in populations, which peaked at 280 in 1881, and underestimates the number of residents in the early nineteenth century, which was approximately 200 but had dipped to 145 in 1851.¹⁵

During 1866 the WMC started work on the Warren Moor mine site, removing ironstone from the Top Seam via drifts in the valley side and starting to sink a shaft to reach the Main Seam.¹⁶ Initial

⁸ Cedric Anthony, *Glimpses of Kildale History* (The Chew Valley: Geni Printing, 2012), 327.

⁹ Owen, "Warren Moor Ironstone Mine, Kildale", 33.

¹⁰ Owen, "The Kildale Mines 14," 19.

¹¹ Owen, "The Kildale Mines 14," 23.

¹² J.S. Owen, "Mining Failure in Cleveland No. 3: The Kildale Mines," *Bulletin of the Cleveland & Teesside Local History Society*, No. 17 (1972): 12.

¹³ Simon Chapman, *Liverton Mine "One of the Poor Mines": A History of Ironstone Mining at Liverton Mines near Loftus* (Guisborough: Peter Tuffs, 1997), 7.

¹⁴ "The Kildale Estate," *Yorkshire Gazette*, June 3, 1865, 7.

¹⁵ "Kildale CP/AP Through Time: Population Statistics: Total Population," *University of Portsmouth*, n.d., ca. 2009, accessed April 13, 2015, http://www.visionofbritain.org.uk/unit/10440324/cube/TOT_POP.

¹⁶ Owen, "Kildale Mines 17", 12-14.

progress was not sustained and by the beginning of 1867 rent arrears had built up. Peirson set the Estate Bailiff the task of regularly visiting the site to prevent the removal of equipment and materials that could be seized to pay the debt. All the workers, who had been living in wooden huts about half a mile down the valley from the mine site, were let go. Although Watson attempted to pay the debts the company failed. In October 1867 the sale of equipment from the Warren Moor site was advertised.¹⁷ Some people remained living in the wooden huts into 1868, with the rent collector living in a cottage next to the Tommy Shop, the company shop where the employees were obliged to spend some of their wages at frequently uncompetitive terms.¹⁸ The main elements of the Warren Moor site were in place by the time the company failed and their relative location, along with some later features, are shown in Figure 44.

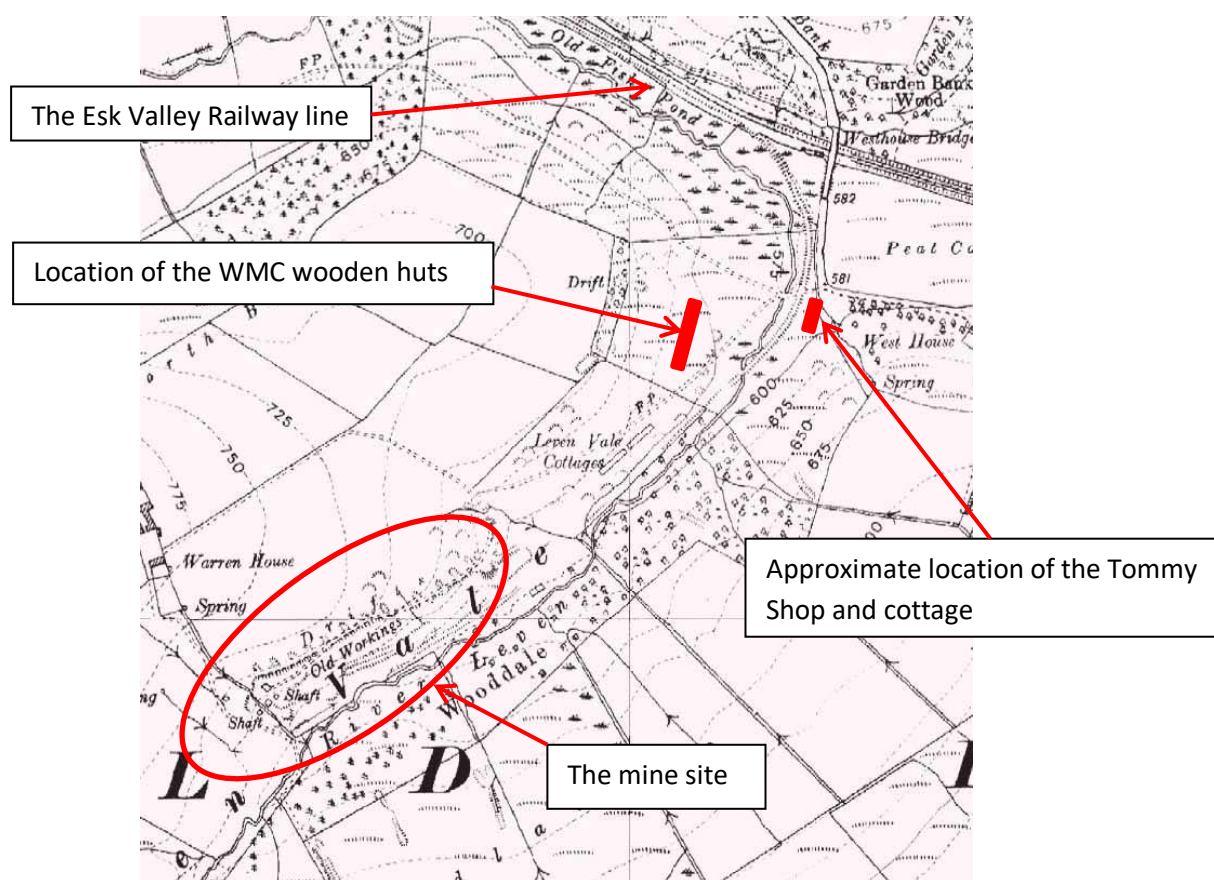


Figure 44: The features of the Warren Moor site (OS 3rd edition 1:2,500 map)

The wooden huts were sold off by the Estate as part of the debt recovery process and by the time of the 1871 census there were no residents on the mine site. With few facilities, no local jobs and a community that had not had enough time to establish itself there would have been little incentive to stay in such a remote location.

¹⁷ "Warren Moor Iron Works, Kildale, North Yorkshire," *Yorkshire Post and Leeds Intelligencer*, Oct 24, 1867, 1.

¹⁸ Owen, "Kildale Mines 17", 14.

When the iron trade revived in the 1870s there was renewed interest in the Warren Moor site and three London gentlemen took out a 42 year lease dated from August 26 1872.¹⁹ Given the previous failure the Kildale Estate Agent, Moss, went to great lengths to satisfy himself that the lessees had sufficient resources to carry out the enterprise. The Leven Vale Iron Co. Ltd. was registered in October 1872 and changed the name of the mine to Leven Vale, a name that has not endured.²⁰ Initially things went well, ironstone was worked and the stone built cottages erected to house the workers. Despite the 1873 strike the outlook remained positive and at the end of the year there were plans to build more houses for an increased workforce. The 1874 slump in the iron trade caused the company to fail and a winding-up notice was published in April 1874, with the final liquidator's meeting being held on April 5 1875.²¹ A preliminary notice of the sale of equipment at the mine was published in July 1875.²² The Leven Vale Iron Company had fared no better than the WMC and also failed to establish an enduring industrial community in Kildale.

A fourth company was involved in working the Kildale royalty in the nineteenth century. The Coate Moor Iron Co. Ltd. (CMIC) worked the Coate Moor Mines, on approximately half of the failed LVIC property, from 1872.²³ Due to the non-payment of rent the Estate took action against the company in 1875 and 1876, when the mines were said to have been abandoned. The Coate Moor Iron Company was impacted badly by the 1873 and 1874 strikes and this, coupled with financial irregularities perpetrated by a previously bankrupt director, brought it down.²⁴ Some activity aimed at continuing to win the stone seems to have taken place post 1876 and at the time of the 1881 census the four ironstone miners present in the parish of Kildale could have been engaged in a small scale enterprise of this type.

All four of the companies who worked the Kildale royalty failed rapidly, owing debts to the Estate. The mineral resources here did not bring the hoped for prosperity to Kildale and the ironstone workers left little record of their lives in the parish. Neither Owen nor Anthony were able to uncover much information on the Kildale miners. The timing of the operations did not coincide with any census return and they are largely anonymous. Anthony did uncover the names of 36 Kildale miners

¹⁹ J.S. Owen, "Mining Failure in Cleveland No. 3: The Kildale Mines (concluded)," *Bulletin of the Cleveland & Teesside Local History Society*, No. 18 (1972): 15-16.

²⁰ "Money Market," *Leeds Mercury*, Oct. 28, 1872, 2.

²¹ "Bankrupts, &c.," *Sheffield and Rotherham Independent*, April 15, 1874, 2; "Money Market," *York Herald*, March 4, 1875, 4.

²² "Sales by Auction," *Leeds Mercury*, July 16, 1875, 4.

²³ Owen, "Kildale Mines 18", 18-21.

²⁴ J.S. Owen, "Mining Failure in Cleveland No. 3: The Kildale Mines: Addendum," *Bulletin of the Cleveland & Teesside Local History Society*, No. 19 (3) (1972): 10-12.

in the records of the 'King of the Forest Lodge' of the Cleveland Miners Association which was short lived and ceased to exist in April 1873.²⁵ Which company the men worked for is not noted.

3.2 Grosmont

3.2.1 Grosmont Land Ownership

After the Norman Conquest part of what was to become the Parish of Grosmont was granted by the King to the Earl of Morton, William de Percy, with the remainder being retained by the crown as a Royal hunting forest.²⁶ Some of the land was granted to Whitby Abbey and Grosmont Priory, but after the dissolution of the monasteries the Duchy of Lancaster held the former hunting forest and the Manor of Egton retained control over the area to the west and north of the Rivers Esk and Murk Esk.²⁷ Subsequent sales of land resulted in four main estates surrounding Grosmont, with other smaller parcels of land in separate ownership being created by enclosure acts during the eighteenth and nineteenth centuries.²⁸ Consolidation of plots did occur and by the early nineteenth century there were two main landowners, Mary Clark and Thomas Hay, holding the site of the future village. Figure 45 shows their land around the fledgling village in 1843.

²⁵ Anthony, *Glimpses of Kildale History*, 376-378.

²⁶ David Counsell, *A Short History of Grosmont* (Whitby: Whitby Literary and Philosophical Society, 1981), 4 – 5.

²⁷ Counsell, *A Short History of Grosmont*, 11.

²⁸ Counsell, *A Short History of Grosmont*, 18 - 19.

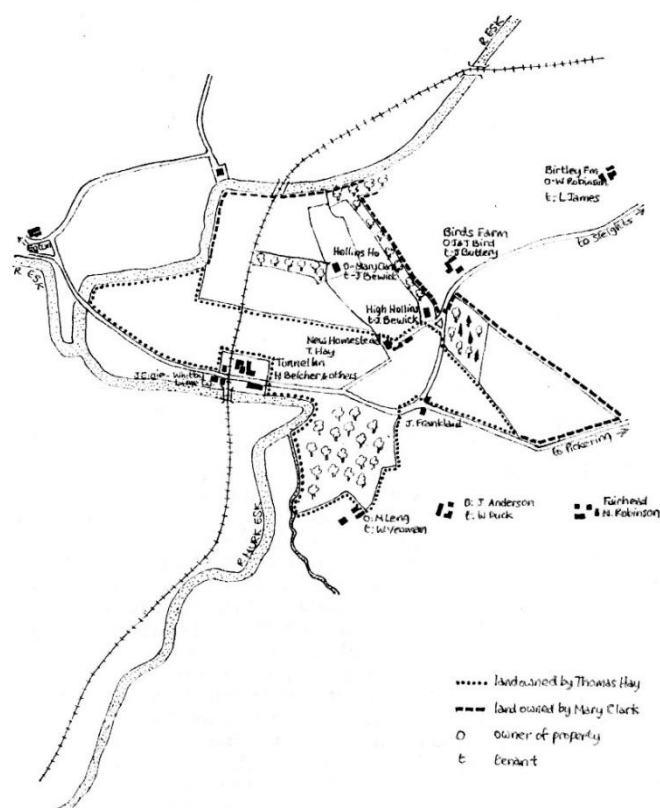


Figure 45: Grosmont landownership in 1843 (Source: Counsell, *A Short History of Grosmont*, 21)

3.2.2 Grosmont Ironstone Mining

The village of Grosmont, which takes its name from the Priory, was established when the Whitby and Pickering Railway (W&PR) was built in the 1830s.²⁹ The first building erected was the Tunnel Inn, which served as a refreshment stop for passengers on the horse-drawn service that commenced on June 8 1835.³⁰ The railway had been promoted by a group of predominantly Whitby gentlemen as a means of reviving the fortunes of the town, which had suffered with the decline of the whaling and wooden ship building industries, by connecting it to inland areas from which freight could be exported. The possibilities presented by the local ironstone were first recognised in 1835, when Mr. Wilson, of the Tyne Iron Company, identified the seam where it outcropped in the banks of the River Murk Esk close to a tunnel that had been built by the railway.³¹ This led to the formation of the Whitby Stone Company in 1836 and the shipment of trial loads to blast furnaces further north of the River Tees, then the centre of the iron trade. Despite early issues with contamination of the ironstone loads the company persisted and the first Grosmont mine was opened in 1837.

²⁹ Counsell, *A Short History of Grosmont*, 7.

³⁰ David Joy, *Whitby and Pickering Railway* (Clapham: Dalesman Publishing Co. Ltd., 1969), 15.

³¹ B.W. Clarke and Dr. J.A. Soulsby, *The Story of Grosmont: Church and Village* (Grosmont: B.W. Clarke, 1975), 8.

Grosmont then entered a period of speculation and development that put in place the framework of the village as it stands today. Mary Clark opened mines on her land following advice from Joseph Bewick Junior, a geologist who became her mine manager, and Thomas Hay started to sell plots of land on which houses and workshops were built and leased other parts of his estate to the Whitby Stone Company for ironstone mining.³² This mode of development has resulted in the centre of Grosmont having a less uniform appearance than other ironstone mining communities. During this time both the original St. Matthew's Church, commenced in 1840, and the school, opened in 1846, were built. The period of expansion was temporarily halted in the mid-1840s when imports of cheap Scottish blankband iron ore reduced demand for the local stone but trade soon revived and the number of mines climbed throughout the 1850s, many strung along Eskdaleside towards Sleights. Improvements to the port of Whitby and the conversion of the W&PR to steam haulage were enablers to this expansion.³³ As part of the upgrading of the railway Grosmont Station was built and a larger bore tunnel, served by a new bridge across the River Murk Esk, installed. The spirit of optimism at this time is clearly seen in a speech made by Mr. J. Hugill, a promotor of the local railways, on the occasion of him leaving Whitby after 50 years. He considered that the railways would "together with the ironstone which pervades the whole district" result in making Whitby and the Vale of the Esk, one of the greatest commercial places in the kingdom".³⁴

A further period of change at Grosmont commenced in the early 1860s when brothers Charles and Thomas Bagnall started to buy up land, including the estates of Mary Clark and Thomas Hay.³⁵ The Bagnalls were part of a Staffordshire family of iron founders and had been in partnership with their brother John, operating Black Country coalmines, since the 1850s.³⁶ Their background made them familiar with the iron trade before choosing to explore the opportunities in Cleveland, something that set them apart from many of the other speculators at this time. Charles Bagnall had married a Whitby resident in 1860 and moved to Sneaton Castle, just outside the town.³⁷ Using his local knowledge he advised his brother that they should enter the Cleveland iron trade. After their arrival in Grosmont they chose to erect blast furnaces to save the cost of transporting the ironstone to the Teesside ironworks, and these began operating in 1864.³⁸ To help secure an adequate ironstone

³² Counsell, *A Short History of Grosmont*, 25.

³³ Simon Chapman, *Grosmont and its Mines: A Short History of Ironstone Mining around Grosmont* (Guisborough: Peter Tuffs, 2002), 15.

³⁴ "Testimonial to Mr. Hugill," *Whitby Gazette*, Oct. 31, 1857, 4.

³⁵ Counsell, *A Short History of Grosmont*, 28.

³⁶ Ray Shill and Ian Minter, "The Bagnall Family and Grosmont Furnaces," *Industrial Railway Record* 12, no. 137 (1994): 289.

³⁷ Shill and Minter, "The Bagnall Family," 289.

³⁸ Shill and Minter, "The Bagnall Family," 291 – 292.

supply they opened the Grosmont West Mine, the only mine on the Egton side of the River Esk.³⁹ With the arrival of the North Yorkshire and Cleveland Railway at Grosmont in 1865 an overland route to export goods was in place, a final factor that allowed the Bagnalls to make significant profits for the next decade.⁴⁰

The Bagnall brothers oversaw building in Grosmont that contributes significantly to the appearance that the village has today.⁴¹ Brick was used in place of local stone to build terraces of houses and was also used to build the Working Men's Institute that they provided in 1871. With the expanded workforce, St. Matthew's Church was found to be too small and the brothers, along with Mary Clark, were major contributors towards the 1875 re-building. Also during this era both the Grosmont Methodist Church and the Grosmont Co-operative Society were founded. Methodism arrived in Grosmont in 1854 with the appointment of a new Station Master, Robert Ingham.⁴² The congregation grew and after the Bagnalls granted a lease on land the foundation stone for a chapel was laid in 1867. The Grosmont Co-op was founded by the local working people in 1867 when the population had reached about 1,000.⁴³ The shop was operated on premises rented from the Hay family and included grocery, drapery and butchery departments.⁴⁴ Trade declined after the ironworks closed but the Grosmont Co-op kept going and was sufficiently affluent to buy its site in 1895.⁴⁵ The Grosmont Co-operative Society played a significant role in the life of the village, providing financial support to those in distress and donating to various village clubs and events.

At the peak of this period of prosperity for the village the population reached approximately 1,600.⁴⁶ The care that the Bagnalls took of their workforce resulted in good industrial relations and the Grosmont community was less involved in industrial disputes than others in the Cleveland ironstone area.⁴⁷ The brothers did not join the Cleveland Mine Owners' Association and as a result refused to recognise the Cleveland Miners Association. Figure 46 shows the layout of the village after it had been developed by the Bagnalls.

³⁹ Clarke and Soulsby, *The Story of Grosmont*, 10 – 12.

⁴⁰ Shill and Minter, "The Bagnall Family," 290.

⁴¹ Black Country Bugle User, "Golds Hill Church and the Face in the Window," *Black Country Bugle*, 2006, accessed Oct 19, 2014, <http://www.blackcountrybugle.co.uk/GOLDS-HILL-CHURCH-FACE-WINDOW/story-20122851-detail/story.html>

⁴² Janet Besford, "Grosmont Methodist Church and Schoolroom," in *The Grosmont Millennium: Reflections and Recollections*, ed. Yeoman Williamson (Northallerton: North Yorkshire County Council, 2002), 19 – 20.

⁴³ Dave Counsell, "Grosmont Co-Operative Society: The First Fifty (or so) Years," *The Bulletin of the Cleveland and Teesside Local History Society*, no. 65 (1994): 30.

⁴⁴ Counsell, "Grosmont Co-Operative Society," 32.

⁴⁵ Counsell, "Grosmont Co-Operative Society," 34.

⁴⁶ Shill and Minter, "The Bagnall Family," 292.

⁴⁷ "Mr. Thomas Bagnall," *Yorkshire Post*, Jan 6, 1912, 10.

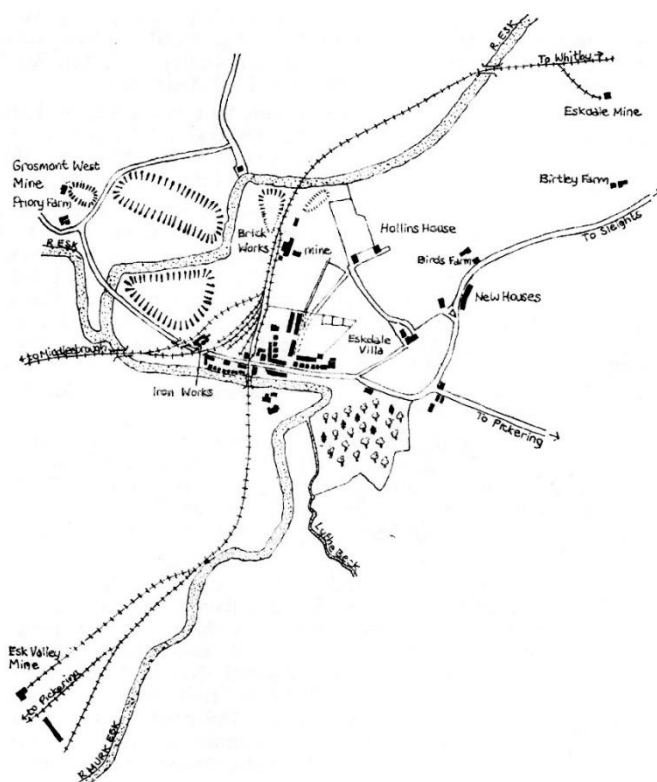


Figure 46: Grosmont in 1890 (Source: Counsell, *A Short History of Grosmont*, 32)

The Bagnalls were aware of the potential for financial losses within the iron trade having seen their family firm struggle with the transition from iron to steel and the closure, due to exhaustion, of many Black Country coal and ironstone mines.⁴⁸ Mining operations at Grosmont began to be wound down during the late 1870s, requiring increasing amounts of raw materials to be transported in, with the West Mine closing in 1886.⁴⁹ The Grosmont ironstone could not compete with higher grade Spanish ore imports or East Cleveland reserves that were both better quality and easier to extract.⁵⁰ Thomas relocated to Grosmont and continued to run the firm after Charles died in 1884 but the ironworks became increasingly uncompetitive, and it was not a surprised when the failure of “Messrs C. and T. Bagnall” was reported in July 1891.⁵¹ Factors noted as contributing to this were the inability to establish an export trade due to the lack of port facilities at Whitby and “the cost of transit of coke and limestone to the works”.⁵² The closure of the ironworks along with the preceding financial difficulties had a depressing impact on Grosmont and the population halved during the 1890s as people moved to find work elsewhere.⁵³ Despite the longstanding connection of their

⁴⁸ “John Bagnall and Sons, Limited,” *Sheffield and Rotherham Independent*, March 29, 1876, 3.

⁴⁹ Shill and Minter, “The Bagnall Family,” 293.

⁵⁰ Clarke and Soulsby, *The Story of Grosmont*, 12.

⁵¹ H.C.M. Austen, “The Story of Grosmont Ironworks: Cradle of Cleveland’s Great Industry,” *Whitby Gazette*, Dec, 1956, unknown; “Trade at Middlesbrough,” *Yorkshire Herald*, July 22, 1891, 3.

⁵² *Ibid.*.

⁵³ Counsell, *A Short History of Grosmont*, 30.

family to the iron trade, ultimately the Bagnalls were another example of those who lost a fortune in Cleveland ironstone.

Arthur Gladstone, a Hartlepool ship-owner who had contacts in the Cleveland iron trade, bought, at a low price, much of the Bagnall property in 1892. In the run-up to WWI newspaper reports were very optimistic that mining on a large scale would be undertaken by Gladstone's company, the Grosmont Ironstone Company, and that Grosmont would have to be expanded to accommodate the expected influx of workers.⁵⁴ Although some ironstone was extracted from re-opened drifts Grosmont was never again a significant mining centre.

3.3 Liverton Mines

3.3.1 The Liverton Royalty

Liverton Mines is a village built on farmland for those working ironstone under the Liverton Royalty. It lies just over 1 mile to the north of the ancient village of Liverton. In the Domesday Book the manor of Liverton is described as being in the "soke of the 'manor' of Loftus" and there after "under the over lordship of the lords of Loftus".⁵⁵ This subservient status results in complications in determining who was in possession of the manor post 1086. Atkinson devotes some considerable effort in attempting to do so but is unable to satisfactorily resolve the issue.⁵⁶ Those who have followed rely heavily on Atkinson and have not been able to improve on his conclusions. It is certain that the manor was purchased by a member of the Dawnay family in the seventeenth century, probably by Sir John Dawnay, circa 1656. Figure 47 shows the manor as it was in the late eighteenth century. It shows a village around an open green with a road entering across the common from the south.

⁵⁴ Special Commissioner, "Cleveland Ironstone Mining Developments: Increasing Out-put at Grosmont; and Extensive Boring in Various Parts," *Whitby Gazette*, Sept 27, 1907, 10.

⁵⁵ Ada Russell, "Liverton," in *The Victoria History of the Counties of England: York North Riding, Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 383-385.

⁵⁶ Rev. J. C. Atkinson, *Cleveland, Ancient & Modern: Part 10* (Barrow-in-Furness: J. Richardson, 1873), 230-238.

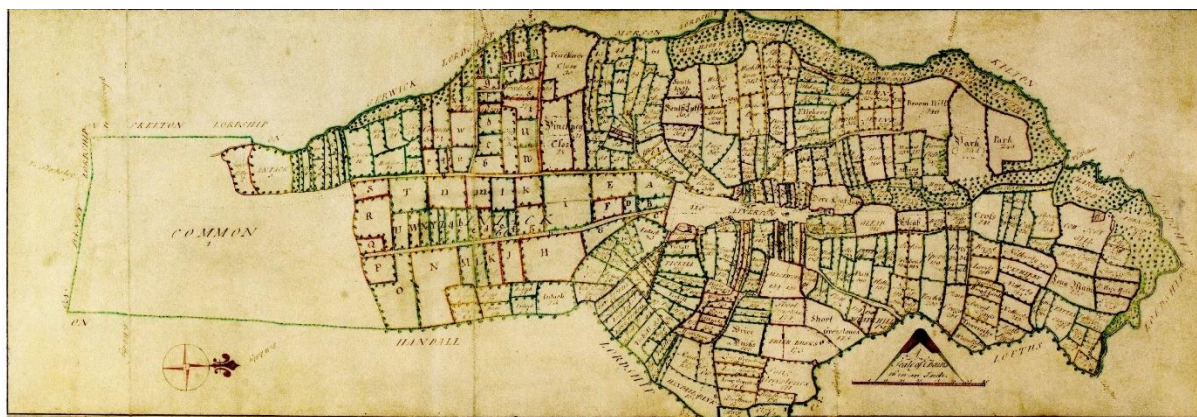


Figure 47: Late Eighteenth Century map of Liverton Manor (Source: The Dawnay Archive, *Historic map of Liverton (late 18th cent)* (Northallerton: North Yorkshire County Council County Record Office, 2015): ZDSM1-6A4C)

The village green was enclosed in 1800 and the population dropped as fewer farm workers were required due to new agricultural practises.⁵⁷ Figure 48 shows the Liverton property of Viscount Downe as it stood in 1865. The village is now shown as a linear settlement with no green and a single road running from the Whitby / Guisborough road to the south towards Liverton Lodge to the north. Further to the north a block of buildings are shown that have no roads leading to them. This is part of Downe Street which was the start of the village of Liverton Mines.

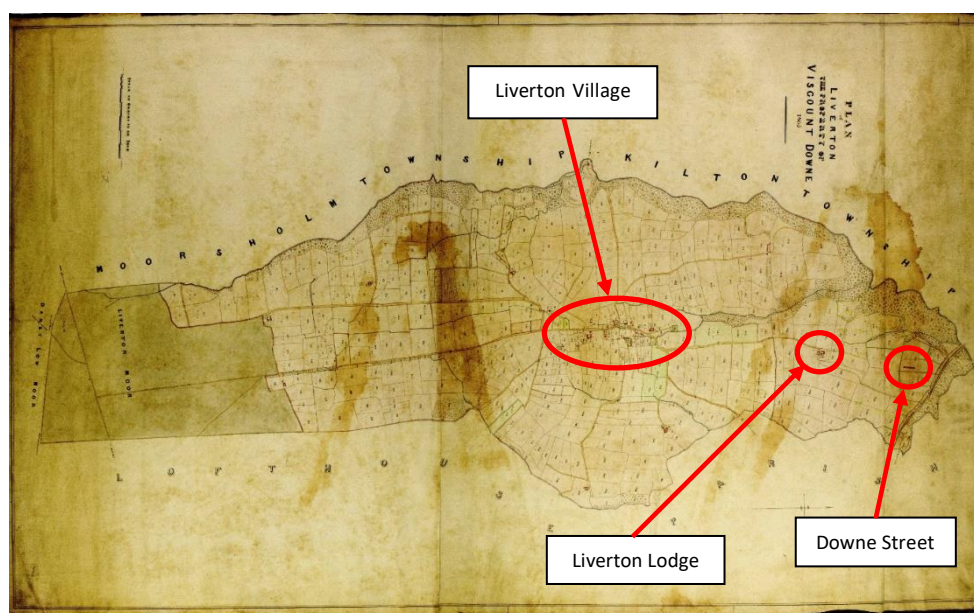


Figure 48: 1865 map of Viscount Downe's Liverton property (Source: The Dawnay Archive, *Historic map of Liverton 1865* (Northallerton: North Yorkshire County Council County Record Office, 2015): ZDSM1-20A4C)

⁵⁷ Alastair Laurence, *A History of Liverton* (Skipton: Pioneer Press Limited, 2014), 18.

3.3.2 Liverton Ironstone Mining

A railway line was needed to enable large scale exploitation of ironstone reserves to the east of Middlesbrough and in 1857 an application to Parliament was made to build one.⁵⁸ Construction of the line was delayed by rivalries between railway companies and the difficult terrain. A NER line opened to Loftus, just to the north of Liverton Mines in January 1867.⁵⁹ Once the railway became a certainty landowners became interested in leasing out the rights to mine for the ironstone under their land. Lord Zetland leased the royalty to the north of Loftus to Pease and Partners, one of the Cleveland ironstone companies discussed in Chapter 1, in 1864 and Lord Downe signed a lease for the Liverton royalty with John Watson on June 1 1865.⁶⁰ Whilst Lord Downe owned most of the land there was 35 acres of Glebe land and a small number of freeholders, needing separate lease arrangements.⁶¹

John Watson, who's involvement at Kildale is discussed in Section 3.1, did not retain his interest at Liverton for long, selling on to Peter Graham, a London upholsterer, on August 29 1865.⁶² Graham realised that he did not have the correct knowledge and skills to run a mining enterprise and sought partners with technical expertise. On November 8 1865 the LIC was formed with the shareholders being four members of the Graham family along with Sir Charles Fox and two of his sons. Fox was a civil engineer who specialised in railway structures and projects, knighted for his work on the building of the 'Crystal Palace' for the Great Exhibition of 1851. Seven members of the Graham and Fox families held a total of 480 £50 shares in the LIC, giving £24,000 in authorised capital. To be close to the railway the firm selected a site for the mine and new village at the northern end of the royalty. Digging the shafts uncovered issues that would result in repeated problems with the profitability of the mine during its lifetime.⁶³ The ironstone had a relatively poor iron content and the seam was split by a band of shale that became thicker to the south. The mine had the unenviable moniker of being one of the 'poor mines'. Shaft sinking was still ongoing in 1869 when it was reported that a "second shaft is in progress; and it is expected that the mines will shortly be producing considerable quantities of stone".⁶⁴ There were miners at the site by February 1870, when they were reported to be expected to go on strike as part of a dispute about wages that was occurring in Cleveland at the time.⁶⁵ The article incorrectly gives the name of the company

⁵⁸ "Durham and Cleveland Union Railway," *Leeds Mercury*, Nov 28, 1857, 3.

⁵⁹ Chapman, *Liverton Mine*, 5-7.

⁶⁰ Chapman, *Liverton Mine*, 7.

⁶¹ Laurence, *A History of Liverton*. 18-20.

⁶² Laurence, *A History of Liverton*, 38-42.

⁶³ Laurence, *A History of Liverton*, 39.

⁶⁴ "Iron Mining Extension in Cleveland," local news, *Whitby Gazette*, May 29, 1869, 1.

⁶⁵ "The Strike at the Cleveland Ironstone Mines," *Leeds Mercury*, Feb 3, 1870, 4.

operating the mine as Sir Charles Fox and Co. This is one of many instances where the web of individuals involved in the companies running the mine complicated determining which companies had actually been involved.

Progress on building Liverton Mines was slow and in July 1870 the Guisborough Board of Guardians investigated overcrowding and a shortage of privies.⁶⁶ Despite assurances that improvements would be made not much progress was evident by the time of the 1871 census, when the 443 residents were crowded into the still under construction Downe Street. This census gives the name of the village as New London, and based on this a number of writers have assumed that the village was originally known by this name. No conclusive evidence that this was the case has been found, it may have been that the residents were having a joke at the expense of the enumerator. The initial authorised capital was insufficient for rapid progress to be made on building the village or establishing the mine, and in the six years between 1868 and 1873 authorisation was obtained to successively raise it to £120,000 and a mortgage taken out to fund house building.⁶⁷ As a result of the building work the village took on the form shown in Figure 49. Housing was provided in six streets of terraced housing; Martin Row, Cleveland Street, Graham Street, Downe Street, Liverton Terrace and Cliff Terrace. There was a hospital for the miners, run by nuns, a school and a Methodist chapel. No pubs were allowed. Further facilities were available in Loftus, within walking distance on the opposite side of the railway line.



Figure 49: Liverton Mines 1894 (OS 2nd edition 1:2,500 map)

⁶⁶ "Overcrowding at Liverton Mines," *Evening Gazette*, July 4, 1870, 4.

⁶⁷ Chapman, *Liverton Mine*, 10-14.

Francis Fox, Sir Charles' son, claimed that his 1872 appointment as manager of an unnamed mine was unexpected as he was a civil not mining engineer.⁶⁸ Atkinson obtained his information on the mine and village from Fox, who appears to have not been completely truthful. The mine was described as "extensive" and capable of producing approximately 30,000 tons per-month of stone that was "of the usual or average quality of Cleveland ironstone".⁶⁹ He also stated that the ironstone contained no shale. In a later description of the problems encountered at the mine Fox was more honest, acknowledging that the shale separating the ironstone seams had always been known about but that over time the problem became worse, increasing mining costs and decreasing ironstone value. Perhaps a sign of his inexperience, Fox did not seem to be aware of picking as a solution. Whilst he may not have been technically up to the challenge Fox did have a genuine concern for the welfare of the workforce. He consulted over housing provision, banned pubs, established sporting clubs, instituted reading and recreation rooms, gave lectures and tried to provide "other civilising influences".⁷⁰

The first annual production figures for the mine were produced in 1871, just prior to a downturn in the iron trade. With a poor quality ironstone and a lack of a captive ironworks the LIC tried to control costs by reducing wages, leading to workforce unrest. The mine developed a reputation for poor industrial relations. The miners first refused to work and then gave notice that they would be leaving en masse.⁷¹ They returned to work and initially did not join the 1873 Cleveland District strike over pay, which ended in victory for the owners.⁷² Confidence in the Ironstone trade returned later in the year and the LIC was reported to be building more than 100 houses.⁷³ The miners again clashed with the mine owners in May and June 1874.⁷⁴ During this strike Sir Charles Fox died, the company losing one of its main shareholders. LIC had difficulty recruiting the staff needed to re-start the mine and continued building work in the village to make it a more attractive place to live. By August a visiting journalist was impressed with the village layout, the size of the houses, the size of the gardens and the soon to be opened school.⁷⁵ A 1875 report, commissioned to investigate the high death rate in the mining areas, calls Liverton Mines "a modern, well-planned, and well-constructed mining hamlet", with a form of closet that was being adopted elsewhere.⁷⁶ Despite this

⁶⁸ Sir Francis Fox, *Sixty-three Years of Engineering, Scientific and Social Work* (London: John Murray, 1924), 210 – 213.

⁶⁹ Atkinson, *Cleveland Part 10*, 242-243,

⁷⁰ Francis Fox, *River, Road, and Rail: Some Engineering Reminiscences* (London: John Murray, 1904), 110 – 119.

⁷¹ "Strike at Liverton Mines," *Evening Gazette*, Jan 31, 1872, 3.

⁷² "Great Stoppage of Work in the Cleveland District," *York Herald*, May 24, 1873, unnumbered.

⁷³ "Lofthouse; Improvements." *Whitby Gazette*, Oct 4, 1873, unnumbered.

⁷⁴ "The Crisis in Cleveland." *Northern Echo*, May 4, 1874, 3.

⁷⁵ "Flower Show and Athletics Sports at Liverton Mines," *Northern Echo*, Aug 31, 1874, 3.

⁷⁶ "Sanitary Condition of Cleveland," *Northern Echo*, Oct 9, 1875, 3.

the company continued to blame their lack of ability to attract workers for the low output of the mine.⁷⁷ The LIC was hit hard by the downturn in the iron trade that occurred from 1873 onwards and went into voluntary liquidation soon after Peter Graham died in July 1877.⁷⁸ A few men were kept on to prevent the flooding of the workings, in the hope that the mine would soon restart. Reflecting on his family's involvements at Liverton Francis Fox said that all he had as a reminder of a £150,000 loss was a 1½" diameter Pecten fossil.⁷⁹

On November 12 1878 the assets of the LIC were auctioned and bought on behalf of the debenture holders by Peter Graham's son, Walter.⁸⁰ In May 1879 a limited liability company was formed and a phase of raising money commenced.⁸¹ Contrary to what appears to have become the accepted wisdom this company did not use the name of its predecessor and was the Liverton Co. Ltd. Figure 50 shows this name on an 1880 Mortgage Debenture Bond.

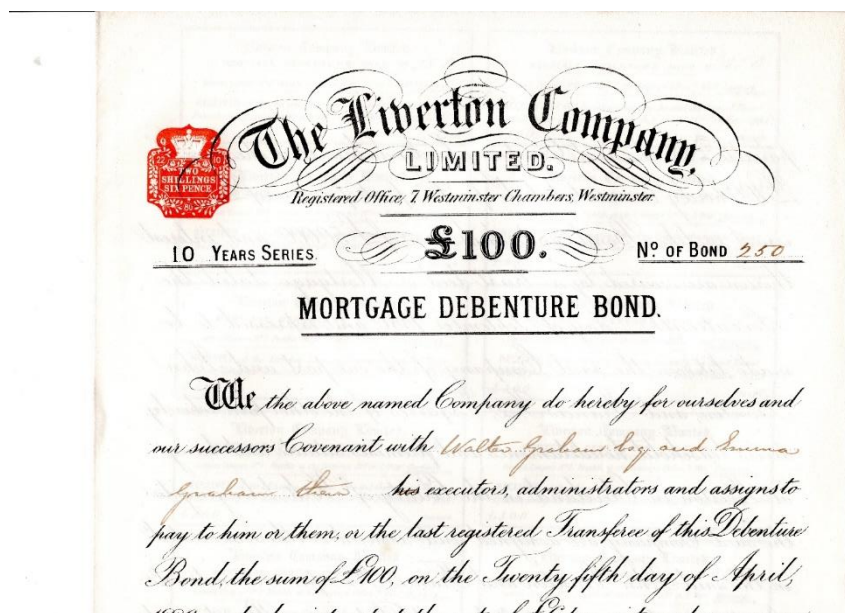


Figure 50: A Liverton Company bond (Source: Author)

The 1879 Durham Miners strike starved the Cleveland blast furnaces of fuel and caused the ironstone mines to close. Visiting Liverton Mines just before the strike was ended a journalist described the village as “one of the prettiest and, I should say, healthiest villages in Cleveland”.⁸² However at this time, due to a lack of employment at the mine most of the houses were boarded up and the place appeared to be deserted. Liverton was one of the Cleveland Mines that did not

⁷⁷ Chapman, *Liverton Mine*, 20.

⁷⁸ “The Liverton Mines,” *Daily Gazette*, Aug 10, 1877, 2.

⁷⁹ Sir Francis Fox, *Sixty-three Years of Engineering*, 210 – 213.

⁸⁰ “Sale of Liverton Mines,” *York Herald*, Nov 12, 1878, 3.

⁸¹ “The Liverton Ironstone Mine,” *Whitby Gazette*, May 24, 1879, un-numbered.

⁸² “The Distress in Cleveland,” *Daily Gazette*, May 16, 1879, 3.

immediately restart when the coal strike ended. Mining did recommence in early 1880 but by the end of May low iron prices were causing the ironstone mines to reduce their output and within a month the workforce had been laid off and the mine was being closed down.⁸³ Optimism for better times ahead and a restart endured.⁸⁴ By the time trade revived it was too late for the Liverton Company, which was wound up in August 1882.⁸⁵

Lord Downe had become concerned about his lack of income from the mine but was persuaded not to take legal action as a sale of assets was imminent, which it was in July 1882.⁸⁶ There is some confusion as to who owned the mine at this time, with the names Messrs Swan & Company, H.F. and J.G. Swan and the Cargo Fleet Iron Company appearing.⁸⁷ The confusion arises as the Cargo Fleet Iron Company Limited (CFIC), registered in January 1883, took over the business of H.F. Swan, brother of J.G. Swan, who had traded as an unlimited company of the same name.⁸⁸ Some of the capital raised was used to improve the mine facilities and in September J.G. Swan proudly showed a group from the Iron and Steel Institute around.⁸⁹ Large scale production was predicted for the future, aided by a new boring machine and shale picking belt. Shortly after this visit the Company hosted a dinner at the Station Hotel, Loftus for all their employees to celebrate the re-opening of the mine.⁹⁰

Unfortunately 1884 saw a downturn in the local iron trade that caused distress amongst the miners as they were on short time.⁹¹ CFIC was better able than other mines to handle the downturn as their ironstone went to their own ironworks. The trade recovered, but a boom in the late 1880s was followed by a downturn in the iron trade in 1890. The depression in the trade continued and in September 1891 about 60 workers at the Liverton mine had been given notice.⁹² Miners were said to be leaving the area to earn higher wages in the Durham and West Yorkshire coal mines. A Durham coal miners strike that began in March 1892 again caused Cleveland ironstone mines to close.⁹³ At least 6,000 Cleveland ironstone miners were said to be out of work and Liverton was one of the pits that had shutdown. As the coal miners continued to strike, concerns grew that a famine could result

⁸³ "The Cleveland Ironstone Miners," *Whitby Gazette*, July 3, 1880, unnumbered.

⁸⁴ "The Cleveland Mining Trade," *Northern Evening Mail*, June 23, 1882, 3.

⁸⁵ "Winding up of a Local Company," *Northern Echo*, August 11 1882, 3.

⁸⁶ Chapman, *Liverton Mine*, 27-28.

⁸⁷ "Liverton Mines," *Northern Echo*, Oct 24, 1882, 3; "Cleveland Mines," *Newcastle Daily Journal*, July 12, 1882, 4.

⁸⁸ "Cargo Fleet Iron Company Limited," *North-Eastern Daily Gazette*, Feb 6, 1883, 9.

⁸⁹ "The Iron and Steel Institute," *North-Eastern Daily Gazette*, Sept 22, 1883, 3

⁹⁰ "Dinner to the Liverton Mines Workmen," *North-Eastern Daily Gazette*, Sept 24, 1883, 3.

⁹¹ "The Distress among the Cleveland Miners," *North-Eastern Daily Gazette*, May 10, 1884, unnumbered.

⁹² "The Cleveland Iron Trade: A Gloomy Outlook," *Shields Daily Telegraph and Shipping Telegraph*, Sept 11, 1891, 2.

⁹³ "Cleveland", *North-Eastern Daily Gazette*, March 16, 1892, unnumbered.

and numerous relief efforts were undertaken. At Liverton J.G. Swan acted on behalf of the CFIC and allowed all the employees to stay in their homes rent free and provided a soup kitchen for them and their families.⁹⁴ In thanks for the help received during the 15 weeks of the strike the work force presented J.G. Swan with an engraved silver bowl and 4 silver candle sticks.⁹⁵ J.G. Swan died unexpectedly on December 23 1900 and the future of the mine passed into the hands of a more commercially minded management team.⁹⁶ Within a month the Directors had requested a report on how to improve output quality and the economics of operation.⁹⁷ On considering this they decided that the best option would be closure as soon as the terms of the lease allowed, June 30 1902. However this decision was soon reversed after Sir Christopher Furness began the process of buying CFIC. He wanted the ironstone from Liverton to feed a steel plant planned for the River Tees.

Furness kept the company name and set about implementing the upgrades recommended in the report. Whilst the overhaul was being undertaken only a skeleton crew were retained and the rest of the workers were given two weeks' notice on January 4 1902.⁹⁸ Rumours of a re-start periodically surfaced but this did not occur until July 1904.⁹⁹ The mine struggled to achieve capacity and the lack of housing for all the necessary workers was cited as the reason, a factor increasingly raised during the rest of the life of the mine.¹⁰⁰ The Directors considered that the iron content of the ironstone should be at least 2% higher than the 35 – 36% achieved, making the mine marginally profitable.¹⁰¹ Despite this the Company was proud of the mine, hosting visits from groups including the BMA and the Yorkshire Naturalists and producing a guidebook.¹⁰² The guide includes information on the equipment used and of the village. It states that there were 177 houses and that these were supplied with piped water from a spring. There was a Wesleyan Chapel and a mission room for C of E services and community events. The school had a Master's house and had recently passed from the Company to the Education Authority.

In 1907 signs of conflict between the Mine Manager, George Burton, and the Directors began to emerge. Burton blamed the failure of the mine to achieve full output on a lack of manpower,

⁹⁴ "Distress in Cleveland: Schemes for Relief," *Sunderland Daily Echo*, April 20, 1892, 3.

⁹⁵ "Presentation to Mr. J.G. Swann, J.P.," *Evening Press*, Oct 24, 1892, 4.

⁹⁶ "Sudden Death of a Cleveland Ironmaster: Captain J.G. Swan, of Upsall Hall," *North-Eastern Daily Gazette*, Dec 24, 1900, unnumbered.

⁹⁷ Chapman, *Liverton Mine*, 39.

⁹⁸ "Impending Stoppage of a Cleveland Iron Mine," *Whitby Gazette*, Jan 10, 1902, 4.

⁹⁹ "Weardale Steel Company: The Chairman and the Recent Amalgamation," *Sunderland Daily Echo*, Sept 24, 1904, 5.

¹⁰⁰ "Education Enquiry At Loftus: Application to Provide a Roman Catholic School," *Whitby Gazette*, April 7, 1905, 8.

¹⁰¹ Chapman, *Liverton Mine*, 42

¹⁰² Chapman, *Liverton Mine*, 44 – 46.

particularly driven by a shortage of housing. The Directors kept the pressure on Burton to improve profitability of the mine and commissioned the Mine Manager of the Loftus Mine, William Moore, to report on the operation of the mine.¹⁰³ His June 1908 report concluded that the low output was the cause of the high running costs and the quantity of shale thrown out was a significant factor. Burton stayed to implement some changes designed to improve economics but relations soured and he left the Company in December 1908.¹⁰⁴ In November 1908 the Loftus Urban District Council Medical Officer reported that there were defects, unspecified, in the cottages in both Upper and Lower Cleveland Street.¹⁰⁵ His report went to the Company, who eventually did demolish 16 houses that had been condemned. There was also an issue with the water supply to Downe Street, Liverton and Cliff Terrace and the spring supplying them finally dried up in 1911. The Company had them connected to the Cleveland Water Company supply, which was already being used to supply the rest of the village. The new Mine Manager, Armstrong Varty, started work on New Year's Day 1909 and he was soon complaining about the short notice given of furnace demand and struggling with the removal of water from the mine.¹⁰⁶ He claimed that the irregular working of the mine had caused it to have a bad reputation in the area, making recruiting staff difficult. Demand for ironstone was high in the run up to WWI, which should have provided a boost to the mine. Despite this and further investment at the site the Directors continued to consider closure.¹⁰⁷ Like Burton before him Vardy was often in conflict with the Directors, but stayed in post until 1918.

The Directors were expecting better quality and cheaper ironstone from Northamptonshire, giving added impetus to closing the mine. The workforce was given two weeks' notice on February 5 1921 and the mine closed on February 18. A small number of workers were retained to keep the mine in a state that that would allow it to be easily restarted whilst the termination of the lease was being negotiated with Lord Downe.¹⁰⁸ It was agreed that this would occur on January 31 1923, although stopping regular maintenance saved the Company money they retained the option of restarting the mine should economic conditions favour this. During the AGM of the CFIC Lord Furness cited the deterioration of iron content and high mining costs as the reasons behind the decision to close Liverton Mine.¹⁰⁹ This is generally accepted to be the last time that Liverton Mine was operated as a separate entity.

¹⁰³ Chapman, *Liverton Mine*, 48.

¹⁰⁴ "Presentation to Mr. G.A. Burton," *Whitby Gazette*, Dec 4, 1908, 5.

¹⁰⁵ "Miscellaneous," *Whitby Gazette*, Nov 20, 1908, 3.

¹⁰⁶ Chapman, *Liverton Mine*, 50-52.

¹⁰⁷ Chapman, *Liverton Mine*, 59.

¹⁰⁸ Mike Gill and Roger Burt, *The Mines of Yorkshire: Metalliferous and Associated Minerals* (Sheffield: The Northern Mine Research Society), 247-248.

¹⁰⁹ "Cargo Fleet Iron Co., Limited," *Yorkshire Post*, Nov 29, 1923, 2

In 1937 Dorman, Long and Co. (DL) investigated the possibility of restarting Liverton Mine as they were about to reopen the neighbouring Kilton Mine.¹¹⁰ The project did not proceed at this time due to WWII. After the war advances in technology made it feasible to enter and work the Liverton reserves from the Kilton Mine. Agreement with Lord Downe was reached in 1951. Cross working continued until Kilton closed in 1963. Other than the those for ventilation the surface structures at Liverton were not used and this phase cannot be viewed as a re-opening of Liverton Mine.

3.4 Rosedale

3.4.1 Rosedale Land Ownership

The village of Rosedale sits at the centre of a large dale that is approximately 9 miles long. It is relatively sheltered compared to the moors above so traditionally was farmed. Although it does not have an entry in the Domesday Book it must have been in the King's possession at this time as "together with Middleton and Cropton, for these places afterwards formed part of the honour of Rosedale".¹¹¹ A Priory was founded in the centre of the village by William de Rosedale in 1154, as a relatively small establishment, housing a total of 10 nuns plus lay workers, it is not well recorded. After the dissolution the land became the property of the Crown who periodically granted the estate as a favour to various noblemen but retained ownership into the nineteenth century. In 1836 the east-side estate was the property of the Rev. Dr. Penfold, the west-side estate having been conveyed to H.B. Darley in 1784.¹¹² When mining started the former was in the ownership of Captain Vardon, he and Darley were the major landowners. Other smaller freeholders also existed.

3.4.2 Rosedale Ironstone

The discovery of ironstone and start of mining in Rosedale is discussed in Chapter 2. The development of the trade and its impact on the settlements will now be outlined. After Thompson and Snowden recognised the magnetic ironstone deposits on Thomas Garbutt's farm many of those involved in the Cleveland ironstone industry wanted to get involved in further exploration in the dale. A group of individuals who were involved the in Eskdale Iron Company wanted to secure leases on Garbutt's farm, on land belonging to Jane Spink and to have first refusal on one for Darley's estate, all on the west-side.¹¹³ They secured a lease with Spink in 1855 but the Eskdale Iron Company decided not to proceed and chose to sell their interests on. George Leeman and a group

¹¹⁰ Chapman, *Liverton Mine*, 63-64.

¹¹¹ Ada Russell, "Middleton," in *The Victoria History of the County of York: North Riding*, Volume 2, ed. William Page (London: The St. Catherine Press. 1923), 457.

¹¹² Ada Russell, "Lastingham," in *The Victoria History of the County of York: North Riding*, Volume 1 ed. William Page (London: The St. Catherine Press. 1914), 525.

¹¹³ Simon Chapman, *Rosedale and it's Ironstone Mines: A History of the Rosedale Valley Mines* (Guisborough: Peter Tuffs, 2004), 10-13.

of other investors took on the Garbutt's interest in April 1856 and secured the Spink one in October 1857. Leeman was a Deputy Chairman of the NER and was able to use his position to promote a railway across the difficult terrain and into the valley.¹¹⁴ The line from Battersby, up the Ingleby Incline and round to the calcining kilns at Bank Top opened on March 27 1861. The kilns were used to drive off volatiles and reduce transport cost, a key consideration in such a remote location. The investors formed themselves into the Rosedale Mining Company and expanded their search for ironstone by taking out a 60 year lease with Darley. The company was amalgamated with the business interests of James Morrison in July 1862 and was re-named the Rosedale and Ferryhill Iron Company (R&FIC).¹¹⁵ Morrison had made his fortune using a process he had invented to turn waste coal into coke.¹¹⁶ He began building the Ferryhill Ironworks in 1859 and previous experience had made him well aware of the dangers posed by a poor ironstone supply. This would have made securing access to the Rosedale reserves attractive to him. Before it failed it was called "a magnificent speculation".¹¹⁷

Not content with their explorations on the west-side Leeman and the other investors bought the Rosedale East Estate from Captain Vardon and leased it to the R&FIC in November 1864¹¹⁸ They also entered into discussions with Viscount Downe's agent to secure a lease for mining under the Danby Estates land that abutted the Rosedale East royalty. An agreement was reached in January 1865. The East Mine commenced production in 1866 and consisted of a series of drifts into the hillside. Calcining of the ironstone took place in two sets of kilns, one built from stone and the other from metal. An extension of the railway had reached the mine site on August 18 1865.

There were a total of five ironstone mines operated in Rosedale. Their relative locations are shown on Figure 51.

¹¹⁴ T.E. Rounthwaite, *Ironstone Mines and Railways of Cleveland and Rosedale* (Guisborough: Peter Tuffs, 1997), 53.

¹¹⁵ Chapman, *Rosedale*, 38-39.

¹¹⁶ J.S. Jeans, *Pioneers of the Cleveland Iron Trade* (Middlesbrough: H.G. Reid, 1875), 298 – 307.

¹¹⁷ Jeans, *Pioneers*, 307.

¹¹⁸ Chapman, *Rosedale*, 38.

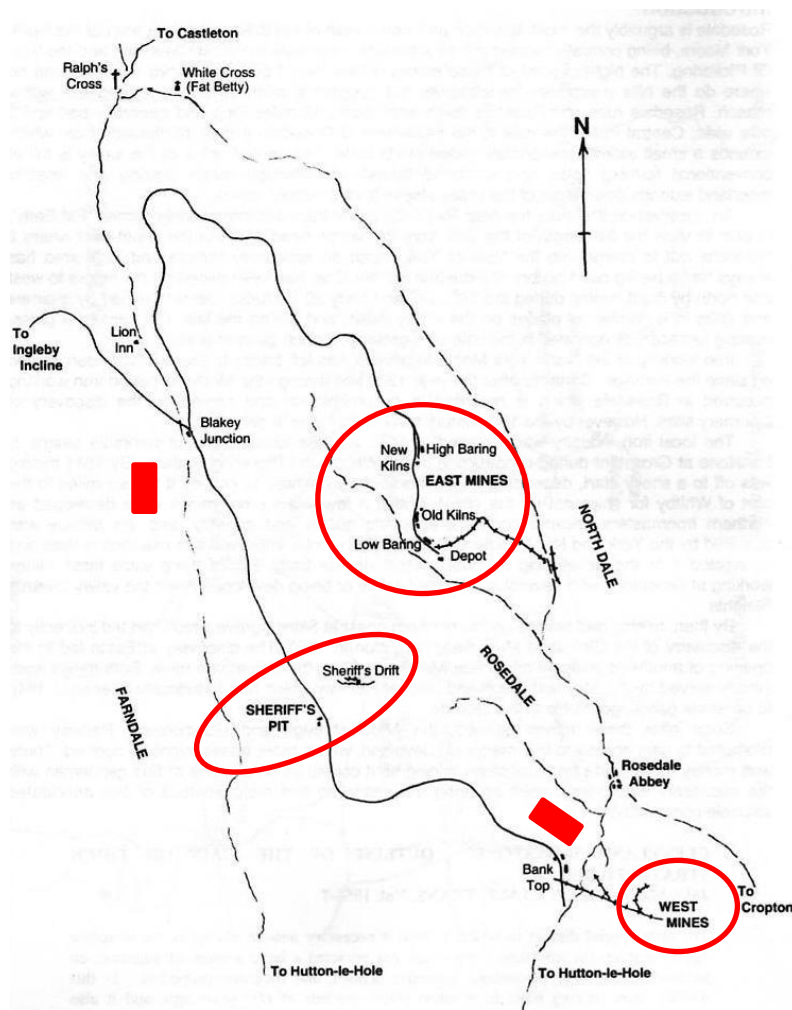


Figure 51: The relative location of the Rosedale ironstone mines (Source: Chapman, *Rosedale*, 6, with Author's mark-up)

The East and West Mines and Sheriff's Pit had begun operating when times were good but the peak output in Rosedale was reached in 1873. By the time the Lane Head and Blakey mines, marked by red rectangles in Figure 50, were ready to come into operation there was a depression in the iron trade. There were strikes in 1874 and 1875 at Rosedale that caused temporary closures and they, like the rest of the Cleveland ironstone area, were seriously affected by the 1879 Durham coalfield strike. The R&FIC, upon which Rosedale depended so much, failed in 1879 and their assets were auctioned in Middlesbrough on March 23 1880.¹¹⁹ The West Mines and Sheriff's Pit were taken over by the Rosedale West Ironstone Company, formed specifically for this purpose.¹²⁰ The magnetic reserves were running out and the company extracted as much as they could until the quarries were finally abandoned in 1885.¹²¹ The Company also ceased to operate Sheriff's Pit in the same year and

¹¹⁹ Dodds and Co., "Counties of Durham and York (North Riding), - Most Valuable Ironworks, Colliery, Ironstone Mines, and Freehold Landed Estate for Sale," *Northern Echo*, February 28, 1880, 2.

¹²⁰ "Rosedale Ironstone," *Whitby Gazette*, Oct 23, 1880, unnumbered.

¹²¹ Rounthwaite, *Ironstone Mines and Railways*, 53 - 54.

withdrew from Rosedale. Sheriff's Pit was taken over by the Carlton Iron Company Ltd. (CIC) who ran it until issues with underground extraction and water ingress caused it to close in 1911.¹²² At this time there was still believed to be winnable stone in the mine.

The Liquidators of the R&FIC had more difficulty selling the Rosedale East Estate, which included the village, land (moor and farm) and mine. A proposed purchase fell through due to a legal dispute.¹²³ Whilst this sale was stalled Lord Zetland expressed interest in the estate but was advised against it due to the poor quality of the ironstone.¹²⁴ The Rosedale East Estate was bought by William Milburn, a Newcastle ship owner, in 1882 and soon after the CIC took over the working of the mine.¹²⁵ CIC struggled to make it profitable and it spent periods standing. They closed the mine in 1911, at the same time as Sheriff's Pit. This caused many workmen to leave Rosedale to find employment in "Cleveland and other places".¹²⁶ The running of the mine was taken over by the CIC's former Mine Manager Frank Lascelles, in partnership with John Shepard, in February 1912. Quality issues continued and in 1917 the Milburn family, concerned about their lack of income from the mine, asked for a report to be prepared on its operation.¹²⁷ This highlighted that the seams were thinning and that some drifts had had to be abandoned. The partnership between Lascelles and Shepherd was dissolved on March 1 1919 and the business taken over by Joseph Shepherd and Henry Pringle.¹²⁸ Mining ceased after the 1926 General Strike and the Shepherd and Pringle partnership was dissolved on October 4 1928.¹²⁹ The Rosedale Mineral Railway remained open to allow the calcining dust, belatedly recognised as being of value, to be harvested for processing at Middlesbrough. It finally closed on June 13 1929, bringing an end to the Cleveland ironstone era in Rosedale.¹³⁰

The mining companies provided terraces of homes and lodging houses in the village and closer to the mines. The latter reduced commuting times but caused complaints about the lack of facilities and the high prices charged by retailers linked to the companies.¹³¹ High Row and Low Row were built near the West Mine. Low and High Baring, Florence Terrace, Hill Cottages, School Row and Plane Tree Cottages near the East Mines. Workers' housing was scattered across the whole of the

¹²² R.H. Hayes and J.G. Ru, "The Rosedale Ironstone Industry and Railway," *The Transactions of the Scarborough and District Archaeological Society* 2, no. 11 (1968): 11.

¹²³ "The Proposed Sale of the Easby Abbey Estate," *York Herald*, July 15, 1881, 6.

¹²⁴ Chapman, *Rosedale*, 73 – 74.

¹²⁵ "Sale of the Rosedale Estate," *North Eastern Daily Gazette*, April 29, 1882, 1.

¹²⁶ "Rosedale," *Whitby Gazette*, Nov 3, 1911, 7.

¹²⁷ Chapman, *Rosedale*, 90 – 93.

¹²⁸ "Lascelles and Shepherd," *London Gazette* April 29, 1919, 5386.

¹²⁹ "Shepherd and Pringle," *London Gazette* October 30, 1928, 7048.

¹³⁰ Hayes and Rutter, "The Rosedale Ironstone Industry and Railway," 13.

¹³¹ Chapman, *Rosedale*, 55 – 56.

dale, Figure 50, resulting in the most dispersed of the Cleveland ironstone settlements. During the boom years in the 1870s the village was very overcrowded and shift workers on different hours sometimes shared beds. Due to the lack of accommodation some chose to walk in from surrounding settlements, many a considerable distance away across the moor top.

Hastings identifies Rosedale as the epitome of the Cleveland ironstone mining communities.¹³² He is critical of the mine owners, not members of the Cleveland Mine Owners' Association, saying that they failed to provide sufficient housing and built a school to replace two that they had demolished that was too small. The impression given of Rosedale is of a rather unruly place, with drunkenness and illegal prize fighting. Attempting to cut down on disorder, late arrivals for shifts and absences the mine owners put in place a police presence and had the licenses of two pubs withdrawn. Giving a view of life in Rosedale that is not obvious in other sources Hastings says that "Rosedale was a community where relations between capital and labour were more polarised than elsewhere". Certainly the mine owners were not keen on unionisation, but this was not unusual. To address the reputation of a high accident rate a shilling a week was stopped from each miner's wages to contribute towards a sick club and a doctor.¹³³

Workers in the mines came from many places and it was a transient population used to moving to where the work was. When employment ended they drifted away to where the work was, if they could not find alternative employment locally. Figure 52 shows how the population varied over time. The trends reflect the fortunes of the Rosedale ironstone mines. They climb steeply through the 1860s to a peak in the boom years of the early 1870s then drop steeply when the recession hit. Despite a recovery as mines started to reopen the population never again approached the peak level.

¹³² R.P. Hastings, *More Essays in North Riding History* (Northallerton: North Yorkshire County Council, 1984), 131 – 133.

¹³³ Hastings, *More Essays in North Riding History*, 137.

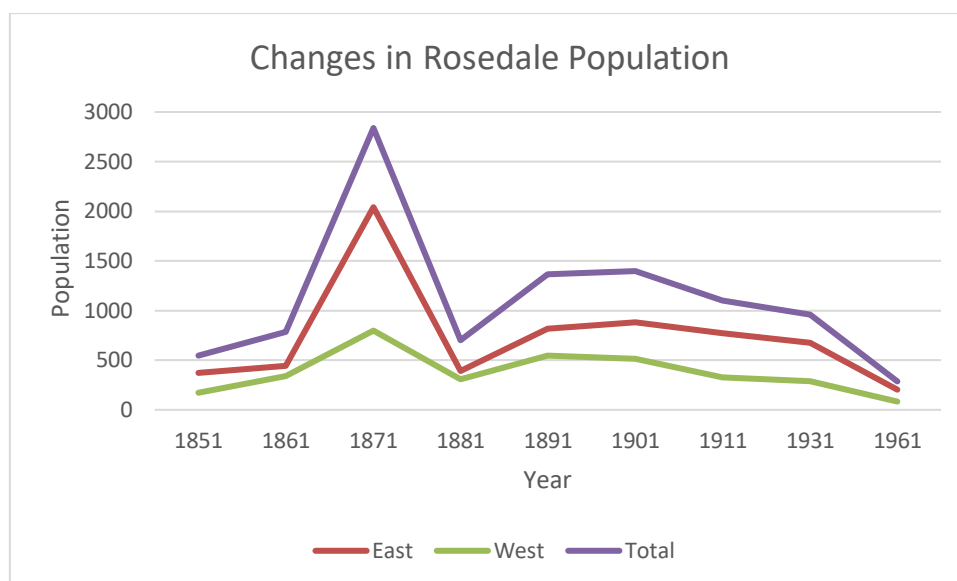


Figure 52: Changes in the population of Rosedale over time (Data Source: Hayes and Rutter, “The Rosedale Ironstone Industry and Railway,” 16)

The data used to produce Figure 52 is based on census returns that only produce a data point every decade. This may result in true peaks and troughs being missed. This could explain why the maximum population shown above, 2,839, is below the “the three to four thousand” peak estimated by Mowforth.¹³⁴ Life in the mining community was hard, with large families in small, one down, two up, houses. High death-rates occurred, both from accidents and illness. Between 1871 and 1902 the average life expectancy in Rosedale was only 21.

3.5 Eston

3.5.1 Eston Land Ownership

The village of Eston is mentioned in the Domesday Book, where it is listed as ‘Astune’.¹³⁵ Human settlement of the area stretches back much further than this, with Stone Age and Bronze Age artefacts being found in the Eston Hills, which rise to the south. After the Norman Conquest Eston Manor was awarded to the Count of Mortain, William the Conqueror’s half-brother.¹³⁶ It passed to the Lords of Whorlton in the twelfth century and remained with the family until split between the three daughters of John, Lord Conyers on his death in circa 1556. Two portions of the estate were eventually combined and passed to the Staplyton family, who were still in possession during the mining era. The remaining third of the estate was sold, at an unknown date, to the Hewley family.

¹³⁴ Rev. E.H. Mowforth, *Rosedale Priory and the Church of St. Laurence* (Hull: A. Brown and Sons Limited, n.d., ca. 1962), 6.

¹³⁵ Mary Williams, “Know Your Parish: Eston and Normanby,” *Cleveland Family History Society Journal* 4, no. 10 (1991): 44.

¹³⁶ Margaret L. Mackay, “Ormesby,” in *The Victoria History of the County of York: North Riding*, Volume 2, ed. William Page (London: The St. Catherine Press. 1923), 279.

Prior to her death in 1710 Lady Hewley transferred much of her property, including 624 acres at Eston, to a charitable trust.¹³⁷ This trust was another of the royalty owners with which Bolckow and Vaughan (B&V) had to negotiate with for the Eston Mine. Land ownership in the area had fragmented over the years and the Company also had to reach agreements with owners of local stately homes Gisborough Hall, Normanby Hall, Wilton Castle and Kirkleatham Hall.

3.5.2 Eston Ironstone

Due to the importance of the Eston Hills finds in the development of the Teesside iron and steel industry much of the history of the formation of B&V and the Eston mines is covered in Chapter 2 and will not be repeated here. The Eston Mine has the right to lay claim to be the biggest and the best of all the Cleveland ironstone mines, and they operation has been well documented. The Wilton Clay Drifts are the exception as they were a short lived endeavour during WWI to win more ironstone.¹³⁸ They commenced operation in 1914 and were closed in 1920. Many sources omit them from discussions of mining at Eston. Given this it is slightly ironic that the ironstone extracted from them was found to have a higher iron content than that from the main mine: 35% versus a typical 33%.

B&V was keen to obtain ironstone as soon as possible and commenced quarrying to remove ironstone before all the necessary leases had been signed. By the end of 1850 4,040 tons had been removed and taken by cart to Cargo Fleet.¹³⁹ Extracting the ironstone by road was not feasible in the long run and by August 1850 plans were being drawn up for a two mile long standard gauge railway to connect with the Middlesbrough to Redcar Railway. The new line would be owned by B&V and connect to inclines from the drifts at Eston. The system was completed rapidly and went into service on January 4 1851.¹⁴⁰ By the time of the 1851 census there were approximately 125 men quarrying ironstone. Output was increased rapidly, reaching 181,950 tons in 1851 and 198,427 tons in 1852. Quarrying could not continue for ever due to the danger posed by the overhanging overburden. Underground working commenced in 1852. By the late 1850s the total workforce seems to have reached 700. The downside of this pace of working and number of employees was that the mine developed a reputation of being dangerous.¹⁴¹

¹³⁷ J. Harrington, "Know Your Parish: Eston and Normanby Parish," *Cleveland Family History Society Journal* 4, no. 11 (1991): 33 - 34.

¹³⁸ Richard Pepper, *Eston and Normanby Ironstone Mines* (Guisborough: Peter Tuffs, 1996), 16.

¹³⁹ Pepper, *Eston and Normanby Ironstone Mines*, 5 – 8.

¹⁴⁰ "The Eston Railway and the Cleveland Ironstone," *Newcastle Courant*, Jan 17, 1851, 4.

¹⁴¹ Pepper, *Eston and Normanby Ironstone Mines*, 7.

Emboldened by their success B&V started to look at adjoining royalties into which they could expand. They looked to the south-west and signed back-dated leases with John Greenwood, on January 4 1855, and Robert Chaloner, on February 19 1855.¹⁴² They failed to win a lease from the Jackson family at Normanby Hall, who did not wish to see any further industrial activity from their house. The understanding of geology and the ability to investigate structures underground were still evolving fields at this time. It was known that there were faults to the south of the Cleveland Hills and, in some instances their locations and impact on the strata were understood. Unfortunately this was not the case on Greenwood royalty and it took B&V a considerable amount of effort, time and money to find the main seam. Next to one of the deepest shaft mines, reaching 530 ft deep, in Cleveland a row of cottages and a school room were built. The settlement was known as Barnaby Moor. It is an exposed location and would have been a bleak place to live.¹⁴³ The Upsall Pit did not come fully into operation for many years after the leases were signed, which would have annoyed the royalty owners due to the loss of income. The Main seam was not reached until January 10 1863 and the first load passed through the link to the Eston Mine on January 1 1870. Upsall Pit spent little time as an independent mine.

Reviews of the effectiveness of operation of all elements of the mines were continually being made and as a result in 1867 mining in Lady Hewley's royalty ceased. Seeking to replace areas that were ceasing to be effective B&V had been looking to expand to the north-east but their ambition had been thwarted by Sir John Lowther.¹⁴⁴ He had given them a lease for lands further from his home but had blocked working in areas that overlooked it. After he died in 1868, his brother, Sir Charles, gave B&V a more sympathetic reception and a lease was signed on July 1 1869. They also needed to have the permission to develop a new mine, the Chaloner Mine, under the Chaloner royalty. Even though they had had a lease since 1855 the problems establishing the Upsall Pit had resulted in B&V failing to meet production targets and accumulating a deficit of £13,950 with the Chaloner Estate. Fortunately at the new location the Main Seam was far easier to locate and mining commenced with minimal delay. The issue was how to export it and a stockpile built up at the mine until a branch line to the Middlesbrough to Guisborough Railway was completed. This occurred on November 23 1872, when the first load was dispatched. To avoid the railway freight charges it was decided to link the Chaloner and Upsall mines underground. This was achieved in 1879 allowing and the branch line to be abandoned. Workers at the Chaloner Mine could commute from nearby Guisborough but in 1873 B&V decided to build a row of 23 cottages next to the mine.

¹⁴² Pepper, *Eston and Normanby Ironstone Mines*, 8.

¹⁴³ Pepper, *Eston and Normanby Ironstone Mines*, 10.

¹⁴⁴ Pepper, *Eston and Normanby Ironstone Mines*, 11 – 14.

The output of the Eston Mine exceeded a million tons in 1880 and remained at this level until 1899, except for strike hit 1882. Ironstone became increasingly difficult to win and gradually areas of the mine became worked out. The Eston mines continued to operate for the whole 99 years of the leases taken out by B&V, finally closing on September 16 1949 when their successor, DL, took the decision that insufficient ironstone remained to make it worthwhile negotiating an extension.¹⁴⁵ They estimated that more than 63 million tons had been extracted but that there was only 100,000 winnable tons left at closure.

The first workers to arrive at Eston would have found lodging locally but as the population grew this was no longer sustainable and the settlement of California, reputedly named after the Gold Rush, grew up to the west of the old village. This stage in development is shown in Figure 53. The cottages were built of local stone and most were single story back-to-backs, an unusual form of housing in the Cleveland ironstone area. Later they were criticised for lack of ventilation, light and large, damp middens. Eventually the back-to-backs were knocked through in pairs and a proper second storey added by raising the walls, using brick. Later houses were the brick built, two storey terraces so common in the Cleveland ironstone settlements. As California grew, more of the workers chose to live there than in dispersed locations and the population climbed steeply.

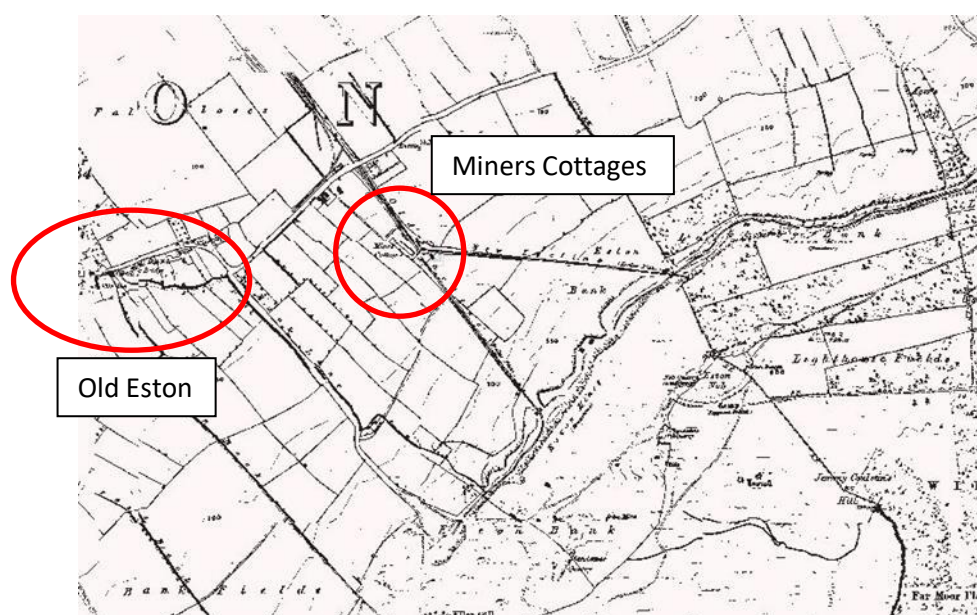


Figure 53: Eston circa 1856 (OS 1st edition 1:10,560 map with Author's mark-up)

Atkinson seemed rather in awe at the rate at which the village had grown, but admits to being a little ashamed of repeating oft quoted numbers on how fast the population had grown and the impact of

¹⁴⁵ Richard Pepper, "An Introduction," in *Eston Ironstone Mines: An Introduction*, Cleveland Industrial Archaeology Society and Cleveland County Council (Middlesbrough: Cleveland County Council, 1989), 1.

mining on commercial activities.¹⁴⁶ He compares the population of Eston given by Graves, Ord and the 1871 census. The numbers are 268 in 1808, 285 in 1846 and 4,151 in 1871. By the time he was writing he estimated that it was approaching 10,000. Housing was built to accommodate the swelling population and amenities built. Atkinson mentioned a National School licensed for use as a Mission Chapel, a number of Non-Conformists Chapels and an Oddfellow Hall. Being of a less religious bent the Victoria County History of the Counties of England (VCH) also mentions the following amenities: Railway Station; Public Elementary School (built 1873); Infant School (built 1909); Christ Church (built 1889) to replace the old chapel of St. Helen's that was being used as a mortuary chapel; Hospital (built 1884).¹⁴⁷ There was also an Institute on the High Street with games and reading rooms. B&V did not object to public houses and there were eight in South Eston. B&V were not paternalistic at Eston but did pay for a hospital, however they seemed reluctant to fund the extension needed to cope with the high accident rate at the mine, the most dangerous in Cleveland. It passed out of the Company's control to the board of Trustees in 1927.¹⁴⁸ In line with many writers at the peak of the industry Atkinson appears proud of the industrial giant that had been unleashed on the area. He imagines that a stranger travelling into Middlesbrough on a train past the "vast panorama of Pits, Tramways, Furnaces and Mills" would be amazed rather than shocked by the changes that had taken place in such a short time.¹⁴⁹

W.E. Brighton was born in California in 1920 and describes the living conditions of the Eston mining community between 1920 and 1940 as being of an "extremely poor standard".¹⁵⁰ Without the Welfare State in place there was no safety net and people became ill from hunger and easily treatable diseases. Every item of expenditure had to be carefully considered and nothing edible, including potato peelings, could be wasted. Meat was a rare luxury and a garden or allotment was key to supplementing the diet. Brighton's home is described as solidly built and dry, with two rooms. No gardens were attached to the houses, water had to be collected from an outside tap and there was a midden. Work in the mine was hard but the women also worked hard to undertake all the domestic chores and keep the home together. The downstairs layout consisted of an alcove to store food and a room that doubled as a kitchen and living room. This room contained a range, marked as the property of B&V, to provide heat, hot water and for cooking. The wife had the responsibility of lighting this and keeping it alight to provide hot water and meals to fit in with her

¹⁴⁶ Rev. J.C. Atkinson, *History of Cleveland Ancient and Modern, Vol. II (Part 2)* (Guisley: M.T.D. Rigg Publications, 1993), 7 – 11.

¹⁴⁷ Mackay, "Ormesby," 277.

¹⁴⁸ S. Mottershead and G. Stout, *The History of Eston Hospital* (Stokesley: G. Stout, 1985), 8.

¹⁴⁹ Atkinson, *History of Cleveland*, 10.

¹⁵⁰ W.E. Brighton, *Ironstone Mining in Eston: a Personal Account* (Guisborough: Peter Tuffs, 1996), 4 – 8.

husband's shift pattern. The cost of coal, 9d for a hundredweight, was a continual source of concern. Overall life in Eston between 1920 and 1940 was one of "depression and hardship".¹⁵¹

4 Representations and Perceptions

This section explores the impact of mining operations on the associated case study settlement by using a variety of sources split into two categories: Representations and Perceptions. Sources classed as representations are those that are more factual in nature. These are maps, mainly the OS 6" series, census returns, and images. Whilst photographic images can be manipulated they were taken to be more reliable than etching or paintings, which are open to artistic interpretation. Sources classed as perceptions are those that involve the observer making a value judgement during their interpretation of what they were seeing. These include travel guides, local histories and newspaper articles. The section commences with a consideration of English attitudes to changes in the countryside, reflected in how Cleveland has been handled in county and regional histories. The representations and perceptions of each case study settlement is then discussed.

4.1 Teaching People What to Value

The English are prone to believing in a mythical rural idyll to a degree not seen in other countries. Matless explores the evolution of what was viewed as 'wrong', as 'right' and 'character' in the English relationship with their countryside.¹⁵² He sought to challenge the assumption that organisations concerned with nature, countryside and history, such as the Council for the Protection of Rural England, were anti-modern.¹⁵³ Bluemel and McCluskey advanced a similar agenda in a series of papers that aim to "promote rural people and places as important yet often ignore subjects for studies of British modernisation, modernism and modernity".¹⁵⁴ Although focused on the introduction of change into rural settings these texts largely ignore industry. Holt does consider the textiles industry in the Borders, an area portrayed in travel guides as a tourist destination.¹⁵⁵ It is in their commentary on the differences in reaction to a landscape by different people that these texts have most to contribute to this thesis. Values judgements are inherent in describing both landscapes and heritage and can conflict, as discussed in relation to the author's MA dissertation in

¹⁵¹ Brighton, *Ironstone Mining in Eston*, 4

¹⁵² David Matless, *Landscape and Englishness* (London: Reaktion Books, 2016), 34. Reprint of 1998 original.

¹⁵³ Matless, *Landscape and Englishness*, 16.

¹⁵⁴ Kristin Bluemel and Michael McCluskey, "Introduction," in *Rural Modernity in Britain: A Critical Intervention*, ed. Kristin Bluemel and Michael McCluskey (Edinburgh: Edinburgh University Press, 2018), 1.

¹⁵⁵ Ysanne Holt, "Borderlands; Visual and Material Culture in the Interwar Anglo-Scottish Borders," in *Rural Modernity in Britain: A Critical Intervention*, ed. Kristin Bluemel and Michael McCluskey (Edinburgh: Edinburgh University Press, 2018): 171.

Chapter 1. Matless argues that the planner-preservationists, who wished for a clear separation of town and country with planned change in both, gained “cultural and political power” during post WWII regeneration.¹⁵⁶ In their world the expert ruled and the rest of the population had to submit to their superior knowledge of how to value what they were seeing.¹⁵⁷ Travel guides were part of this education process, with H.V. Morton credited with establishing the “motoring pastoral genre” with ‘In Search of England’.¹⁵⁸ Morton’s route skirted Cleveland to the west but he did not enter the area. He passed through industrial Lancashire and despite his prejudice against industrial landscapes was sufficiently impressed by Wigan to say he would spend a holiday there.¹⁵⁹ Peter Lowe makes some useful observations on the influence of travel guides published by B.T. Batsford in the 1930s and 1940s.¹⁶⁰ Produced in a time of great change and uncertainty Lowe contended that they promoted an agenda of reform being needed to shape the future and prevent the “rural idyll being overrun by modernity”.¹⁶¹ Underpinning the thinking was a “near-unshakable faith in the role of the state as a force for good in Britain’s rebuilding process”.¹⁶² Matless identified Hoskins as a “key figure in the emergence of an anti-modern, anti-state, anti-progress culture” that emerged to challenge the planner-preservationists from the late 1940s.¹⁶³ Hoskins, Betjeman and others cultivated a “melancholy way of seeing England” as a place where all that was good lay in the past.¹⁶⁴

Alan Crosby provided a useful summary of the local and regional histories that have covered the seven Northern counties of England.¹⁶⁵ This does not cover either the Shell or Penguin guide series as these never covered the majority of Northern England. Crosby made some insightful comments on the pitfalls inherent in producing guide series intended to cover the whole of England. Firstly there is the question of how to subdivide the country. Debates within academia on the topic are not of interest to the general reader and most guides are based on the old county and administrative boundaries.¹⁶⁶ Even down to the parish level this works in rural areas where there has been little change over time, but poses significant difficulties where large scale urban developments have

¹⁵⁶ Matless, *Landscape and Englishness*, 33.

¹⁵⁷ Matless, *Landscape and Englishness*, 95.

¹⁵⁸ Matless, *Landscape and Englishness*, 97.

¹⁵⁹ H.V. Morton, *In Search of England* (London: The Folio Society, 2002), 203. Reprint of 1927 original.

¹⁶⁰ Peter Lowe, “Rural Modernity in a Time of Crisis: Preservation and reform in the Books of B.T. Batsford,” in *Rural Modernity in Britain: A Critical Intervention*, ed. Kristin Bluemel and Michael McCluskey (Edinburgh: Edinburgh University Press, 2018): 255 – 269.

¹⁶¹ Lowe, “Rural Modernity in a Time of Crisis,” 257.

¹⁶² Lowe, “Rural Modernity in a Time of Crisis,” 268.

¹⁶³ Matless, *Landscape and Englishness*, 369.

¹⁶⁴ Matless, *Landscape and Englishness*, 372 – 374.

¹⁶⁵ Alan G. Crosby, “Local and Regional History Series for the Northern Counties: A Survey and Assessment,” *Northern History* 51, no.1 (2014): 1 – 30.

¹⁶⁶ Crosby, “Local and Regional History Series,” 1.

resulted in many boundary changes.¹⁶⁷ For guides covering the North Riding of Yorkshire the main problem was how to handle the rapid industrialisation of Teesside, whilst the rest of the county remained essentially rural. To appeal to the general reader guides tend to contain more illustrations and less text than an academic tome. This precludes in-depth coverage of all areas and arising debates, making the books unlikely to satisfy an academic audience.¹⁶⁸ Those with a particular specialism will always be critical of the lack of coverage of their area in a general work.¹⁶⁹ This author would want more coverage of industrial history. No author of a county or regional level guide is going to have in-depth knowledge of the whole area leading to patchy coverage. Crosby was critical of the relatively weak coverage of the southern part of the West Riding of Yorkshire in the ‘Making of England’ series volume that was written by Raistrick, a Dales expert.¹⁷⁰ Producing a country wide series is costly and time consuming, with the expectations of readers changing over the production time, and a number of planned series were never completed.

The coverage of the Cleveland area in the main county and regional series will now be discussed. Two volumes of the VCH plus an index have been published for the North Riding of Yorkshire.¹⁷¹ They cover the study area at a parish level but are of the old school antiquarian style, focused on the manor and the church, with the modern world only mentioned only when absolutely necessary. The entries for the parishes within which the case study settlements sit are referred to in the text of this thesis.

Batsford published the ‘Face of Britain’ series volume that covered Cleveland in 1937.¹⁷² When it was being written the North Country was in a state of flux with economic changes causing centres of industry to shift and the population to move.¹⁷³ The iron, steel and engineering industries were said to have rebounded from the depression and there was optimism that new industries would be established in the area to halt mass migration.¹⁷⁴ Vale covered the history of the Cleveland ironstone industry and the rise of industry well, noting that at the time Loftus was the main centre for ironstone mining.¹⁷⁵ A picture of Rosedale that shows the mine remains was included in Vale,

¹⁶⁷ Crosby, “Local and Regional History Series,” 4 -5 and 23 – 24.

¹⁶⁸ Crosby, “Local and Regional History Series,” 16.

¹⁶⁹ Crosby, “Local and Regional History Series,” 17.

¹⁷⁰ Crosby, “Local and Regional History Series,” 21.

¹⁷¹ William Page, *The Victoria County History of the County of York: North Riding, Volume 1*, ed. William Page (London: The St. Catherine Press, 1914); William Page, *The Victoria County History of the County of York: North Riding, Volume 2*, ed. William Page (London: The St. Catherine Press, 1923).

¹⁷² Edmund Vale, *North Country* (London: B.T. Batsford, 1937).

¹⁷³ Vale, *North Country*, vi.

¹⁷⁴ Vale, *North Country*, 18.

¹⁷⁵ Vale, *North Country*, 103.

but the text makes no comment on the industry there.¹⁷⁶ His biggest concern for the impact of industrial changes was reserved for the mining settlements of County Durham.¹⁷⁷ Local authorities were condemning houses said to be perfectly sound to force the tenants to move on. Batsford also published guides covering Yorkshire, in 1967, and the North Riding, in 1977. In his Yorkshire guide Wood conformed to the anti-modern Batsford tone identified by Lowe. He particularly disliked the three radar domes, known as the 'Golf Balls' that had been built on Fylingdales Moor, to the south of Whitby, in the 1960s.¹⁷⁸ Although he did cover the industrial zones of the West Riding he makes little mention of industry in the North Riding. Where he was forced to mention it he immediately countered with a link back to an earlier time. The Rosedale Chimney was still standing when he wrote, even though he was aware that it was nineteenth century he linked it to iron working in the area by the monks of Byland Abbey.¹⁷⁹ Describing the view of Middlesbrough from Roseberry Topping he thought it merciful that James Cook, the explorer, would not have seen the "pall of smoke" rising from the town when he climbed the hill in his youth.¹⁸⁰ In contrast the North Riding guide, published as a tribute to the loss of the county post the 1974 local government reorganisation, presented the best summary of the Cleveland ironstone industry seen by the author in a text intended for the general reader.¹⁸¹ Barker was a journalist, born in Whitby, who became editor of the Yorkshire Evening Post and wrote about his home county for many years. He captured the impact of the Cleveland ironstone industry succinctly when saying it had "left its mark on so many villages and towns in the North Riding and has one lasting memorial in the industrial complex of Middlesbrough".¹⁸² This text is referred to at other points in this thesis.

The Darwen County History series was launched by publisher Darwen Finlayson, founded by Lord Darwen in 1954, to provide guidance to the growing band of non-professional local historians.¹⁸³ The series was completed but the format changed considerably over the years. The Yorkshire guide was first published in 1960, with a third edition in 1995. As Rawnsley and Singleton admitted in their preface there was too much to cover in such a heavily illustrated short text to be comprehensive.¹⁸⁴ The authors, both academics based in the West Riding, focus the limited coverage of industry to that riding. Hoskins' 'The Making of the English Landscape' appeared in 1955 and the intention was that the general book would be followed up by ones for individual counties, but the project was never

¹⁷⁶ Vale, *North Country*, 99.

¹⁷⁷ Vale, *North Country*, 59.

¹⁷⁸ G. Bernard Wood, *Yorkshire* (London: B.T. Batsford, 1968), 216. Reprint of 1967 first edition.

¹⁷⁹ *Ibid.*

¹⁸⁰ Wood, *Yorkshire*, 222.

¹⁸¹ Malcolm G. Barker, *Yorkshire: The North Riding* (London: B.T. Batsford Ltd., 1977), 11.

¹⁸² Barker, *Yorkshire*, 87.

¹⁸³ Crosby, "Local and Regional History Series," 12.

¹⁸⁴ S.J. Rawnsley and F.B. Singleton, *A History of Yorkshire*, 3rd ed. (Chichester: Phillimore & Co. Ltd, 1995), 11.

completed.¹⁸⁵ The northern counties rarely appear in Hoskins' work as he was "neither particularly interested in them, nor especially positive towards them".¹⁸⁶ No volume for the North Riding of Yorkshire was published. The Regional History of England series published by Longmans from the mid 1980s was intended to comprise of 21 volumes, but was never completed.¹⁸⁷ In an attempt to overcome dealing with archaeology and history in the same volume each region was to have one volume using predominantly archaeological evidence followed by history of the period for which more written evidence was available. Only the history volume for Yorkshire appeared. Crosby considered this to be the best of the Longman series, which he judged to be the worst of the publishing projects he considered.¹⁸⁸ David Hey produced a more academic book than the other histories considered but the volume is heavily biased towards the West Riding, where he was based. Other than coverage of the industrial history of Middlesbrough, Cleveland receives very little mention.¹⁸⁹ Eight regional volumes of 'England's Landscape', a collaboration between English Heritage and the publisher Collins, were launched simultaneously in 2006. They were expensively produced books with lots of colour illustrations. Middlesbrough was mentioned a number of times throughout the text and there is a summary of the growth of the town that acknowledges the role of the Cleveland ironstone industry in its expansion.¹⁹⁰ Nineteenth century ironstone mining was mentioned as part of the industrial history of the North York Moors that has left another layer of remains to interpret.¹⁹¹

Having discussed influences on how the English view the countryside and the coverage of Cleveland in national and regional histories the representation of and perceptions of each case study settlement will be considered in turn.

4.2 Leven Vale Cottages

The timing of the short lived mining enterprises at this location mean that there are a limited number of additional contemporary records regarding this settlement. No map editions cover the period when the mine was working and the cottages were occupied. There are also no known pictures from this era. No census returns were completed during the time in which any of the mines

¹⁸⁵ Crosby, "Local and Regional History Series," 18.

¹⁸⁶ Ibid.

¹⁸⁷ David Hey, *A Regional History of England: Yorkshire from AD 1000* (London: Longman, 1988), xiii.

¹⁸⁸ Crosby, "Local and Regional History Series," 26 – 28.

¹⁸⁹ Hey, *Yorkshire from AD 1000*, 273 – 274.

¹⁹⁰ Thomas Faulkner and Linda Polley, "Townscapes and Cityscapes," in *England's Landscape: The North East*, ed. F.H.A. Aalen and Colm O'Brien (London: Collins, 2006), 175 – 176.

¹⁹¹ F.H.A. Aalen and Richard Muir, "Mosaic of Landscapes." in *England's Landscape: The North East*, ed. F.H.A. Aalen and Colm O'Brien (London: Collins, 2006), 204.

in Kildale were active. Only a few descriptions of Kildale were published during the ironstone mining period.

Bewick published a geological treatise covering Cleveland in 1861, at a time when mining leases at Kildale were being negotiated. Even though the valley appeared to be “still and secluded” the presence of the railway made it clear that it was within “humanity’s reach”.¹⁹² The appearance of a train “at once tells you that industry and enterprise have reached this bleak and desolate region”. He foresaw a time when “legitimate and successful enterprise” would be carried out “along the green and sylvan slopes of our beautiful dales” providing employment for many.¹⁹³

Gordon published his description of walks around Cleveland in 1869 and was not averse to industrial developments as he included a chapter on a visit to the Upleatham Ironstone Mines.¹⁹⁴ He did visit Kildale, at a time when the first phase of mining was drawing to a close. He made no mention of any industrial activity and describes the scene thus:

On we passed through the dale, and then entered a dark pine grove, on emerging from which the lovely valley of Kildale burst into view. So picturesque was the scene that our steps were unconsciously arrested as we gazed with all a poet’s rapture upon the glowing landscape. Below us lay the extensive vale clothed with green woods from which peeped out many a snug, red-roofed cottage against a background of high hills.¹⁹⁵

The section of Atkinson covering the parish of Kildale was published in 1873, during the second phase of ironstone mining.¹⁹⁶ Despite his work being commissioned by the Middlesbrough Ironmaster Henry Bolckow to update the earlier Cleveland histories of Graves and Ord by including industrial developments, Atkinson made no mention of any industrial activity in Kildale.¹⁹⁷

After initially enthusiastic reports regarding the potential of the Kildale ironstone reserves and the advertisements for workers the newspaper coverage of the initial phase of operation was muted when compared to other ironstone enterprises. The miners did instigate something of a crime wave with a number of appearances at the Stokesley Petty Sessions for crimes such as assault and

¹⁹² Joseph Bewick, *A Geological Treatise on the District of Cleveland in North Yorkshire* (Newcastle-upon-Tyne: Reid, 1861), 112 – 113.

¹⁹³ Bewick, *Geological Treatise*, 84.

¹⁹⁴ Samuel Gordon, *The Watering Places of Cleveland; Being Descriptions of These and Other Attractive Localities in that Interesting District of Yorkshire* (Guiseley: M.T.D. Rigg, 1992), 64-73.

¹⁹⁵ Gordon, *Watering Places*, 115.

¹⁹⁶ Rev. J.C. Atkinson, *Cleveland, Ancient & Modern: Part 13* (Barrow-in-Furness: J. Richardson, 1873), 301 – 311.

¹⁹⁷ Tom Scott Burns, *Canon Atkinson and his Country* (Guiseley: M.T.D. Rigg Publications, 1986), 54 – 55.

poaching.¹⁹⁸ The worst fears of the established population must have been confirmed when a former miner committed murder at New Row, the LVIC cottages, in 1871, an event covered by the national press.¹⁹⁹ The second phase of ironstone mining activity at Kildale resulted in a very similar pattern of press coverage to the first. From the number of repeat advertisements for ironstone miners in mid-1873 there were obviously issues in attracting staff.²⁰⁰ Industrial unrest, the remote locations without facilities and negative impressions of the viability of the companies based on the previous failures could have been contributory factors.

This settlement received much less attention when mines were operating locally than any of the other case studies. In addition to the short period of operation a contributory factor to this could have been the isolated location of the site. It was sited in an otherwise unpopulated tributary valley and could not easily be seen by those passing along the Esk Valley by either road or railway.

4.3 Grosmont

Figure 54 shows Grosmont, marked as Tunnel, on a revision of the 1st edition 6-inch Ordnance Survey (OS) map that must date from after 1865, as it shows the Esk Valley railway line which arrived at Grosmont that year.²⁰¹ The village had been known as Grosmont for some years by the time this map revision was published. The Ironworks are shown plus the original St. Matthew's Church and housing along the road that forms the centre of the village. Rows of houses have been built along the Eskdaleside road. They are above the mines on the Hollins land, started by Mary Clark but by this time owned by the Bagnalls.

¹⁹⁸ "District News: Stokesley," *York Herald*, Aug 18, 1866, 4; "District News: Stokesley," *York Herald*, Nov 16, 1867, 5.

¹⁹⁹ "Murder at Kildale, in Cleveland," *Leeds Mercury*, Aug 22, 1871, 6.

²⁰⁰ "Wanted," *Northern Echo*, July 4, 1873, 2.

²⁰¹ K. Hoole, *A Regional History of the Railways of Great Britain: Volume 4, The North East*. (Newton Abbott: David St. John Thomas, 1986), 72.



Figure 54: Grosmont circa 1856 (OS 1st edition 10,560 map)

The initial development of Grosmont occurred before photography was commonplace and the first image, Figure 55 is a painting. The Tunnel Inn and associated W&PR buildings stand on the left with a horse drawn railway carriage being pulled past it in the direction of the railway tunnel. The building in the centre of the picture is a pre-mining era farmhouse, Linten House. Figures 56 and 57 are engravings, probably from photographs, of roughly the same view of Grosmont from Lease Rigg, the ridge between the Esk and Murk Esk Valleys. Both show the ironworks in operation. Figure 56 is the earlier image which shows the ironworks relatively accurately but takes a rather less rigorous approach to the village. The extent of the buildings is roughly correct but they are shown in a generic way and some are not accurately placed in relation to the road. Figure 57 shows more accurate building details, but does not cover so much of the village.



Figure 55: Grosmont circa 1835. (Source: Whitby Literary & Philosophical Society)

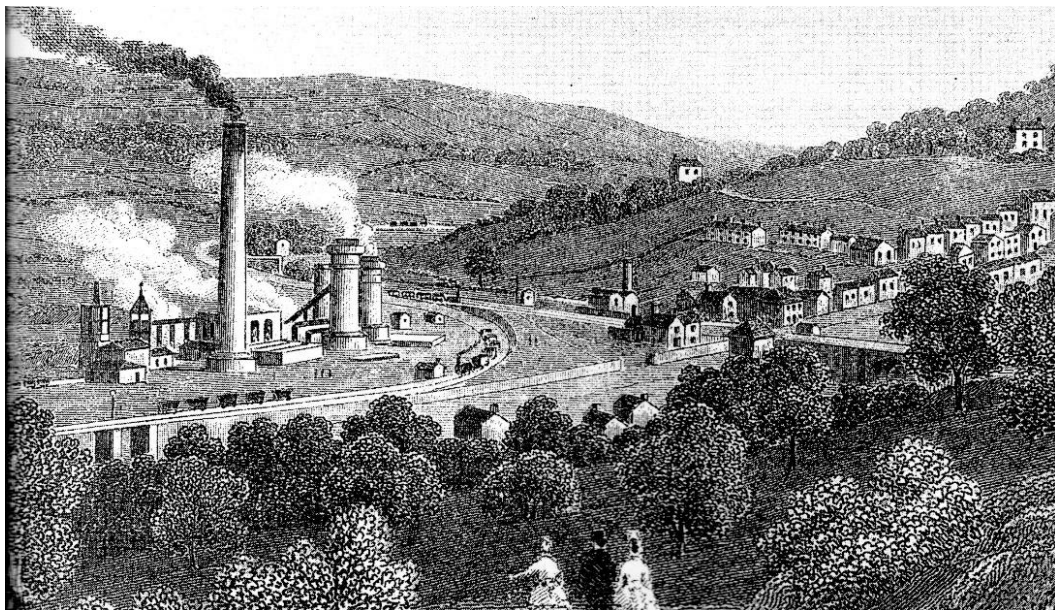


Figure 56: Grosmont in the 1860s (Source: Alan Whitworth, *Esk Valley Railway: A Travellers' Guide* (Barnsley: Wharnccliffe Publishing, 1998), 41)

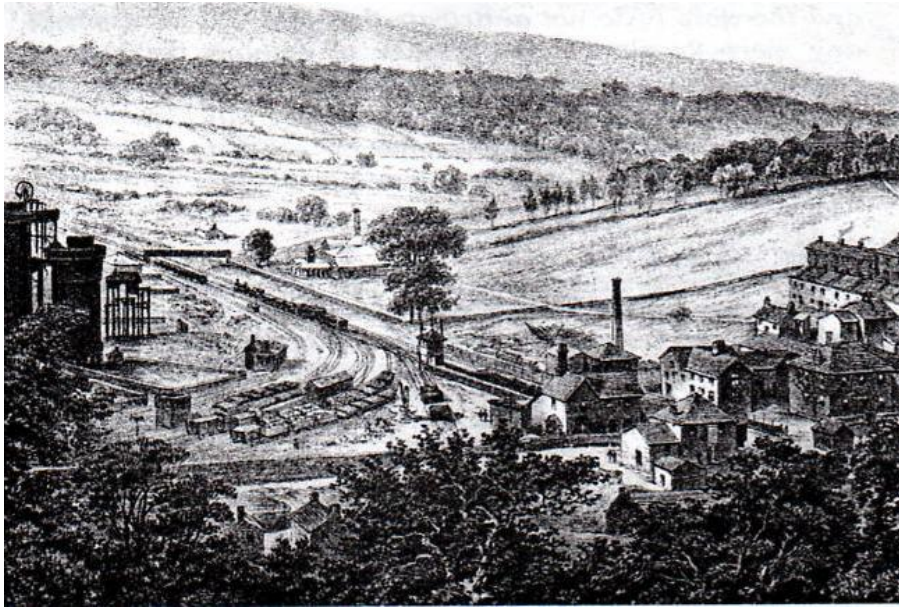


Figure 57: Grosmont circa 1874 (Source: Rev. J.C. Atkinson, *History of Cleveland Ancient and Modern: Volume 1* (Leeds: M.T.D. Rigg Publications, 1988): Opposite page 209)

Few images of the centre of Grosmont during the mining era have been located. Figures 58 and 59 show the centre of the village, the first looking up the High Street from outside the Station and the second down it towards the Station. The Tunnel Inn, by then renamed the Station Hotel, is on the left of 8Figure 58 and Linten House is just visible to the left of the end of the brick built railway cottages. The cottages on the left-hand side of the High Street are stone built. These are shown in more detail in Figure 59.



Figure 58: Looking up Front Street (Source: Private collection of Tammy Naylor)



Figure 59: Looking down Front Street. (Source : Private collection of Tammy Naylor)

The 1841 census reflects the settlement that was to become Grosmont at a time before it was fully established. There were 24 houses in addition to the Tunnel Inn, with 12 ironstone miners amongst a population of 133. Other miners lived close by in the townships of Egton and Eskdaleside. The majority of heads of household in the area had occupations associated with agriculture. By the time of the 1851 census Grosmont had become sufficiently established to be included as a village within the township of Eskdaleside. 39 of the 40 properties in the village were occupied, housing a total of 165 people. The 37 ironstone miners were the largest group of workers and there was also an Ironstone Mine Agent. Other occupations were largely associated with service industries and the railway. Other miners continued to live in adjacent settlements, with the increase in numbers in Eskdaleside being particularly marked. Changes in interpretations of what constituted a property in Grosmont between different enumerators complicates the production of comparable population figures over the decades. Figure 60 represents a plausible representation.

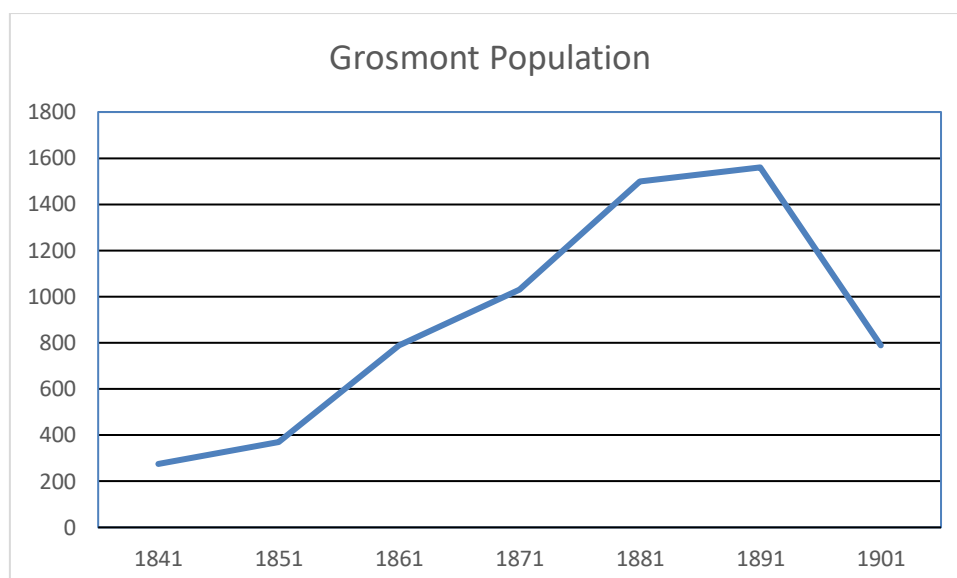


Figure 60: Population of Grosmont (Data Source: Counsell, *Grosmont Co-Operative Society*, 31)

Bewick painted a picturesque picture of the dales around the W&PR prior to its arrival in 1836. They were described as “rich in wild and magnificent scenery of surpassing beauty, and hitherto but little known to the public at large”.²⁰²

Henry Belcher, a Whitby based solicitor, served as the W&PR Solicitor and was keen to improve the lines revenue by promoting it to a wider audience. Conceived as a freight line the directors were taken by surprise at the number of passengers who wanted to take excursions. The Tunnel Inn, part owned by Belcher, provided refreshment for these travellers and was said to be “so situated as to command much beautiful scenery”.²⁰³ As well as the inn other buildings, forming the nucleus of the village, erected in “the last two years” were identified as cottages, workshops and a warehouse. Lime kilns were being erected. Belcher expected that it would grow due to “the great facilities which the situation affords for speculation in a variety of ways”. He did not mention ironstone mining in the Grosmont area, which was in its infancy at the time of writing. Seven years later Belcher published another guide to the line which was aimed at encouraging day trippers from Scarborough to travel to Pickering by road and then use the railway to reach Whitby. The journey was described in the reverse direction to the earlier work and more space was devoted to Grosmont. The 1843 publication was reproduced by Bell.²⁰⁴ The basic description of the core of Grosmont remained as written in 1836, but the lime kilns had been completed. Belcher had been involved in fundraising for

²⁰² Bewick, *Geological Treatise*, 16.

²⁰³ Henry Belcher, *Illustrations of the Scenery on the Line of the Whitby and Pickering Railway* (London: Longman, Bees, Orme, Brown, Green and Longman, 1836), 11.

²⁰⁴ Gordon Bell, *The Whitby and Pickering to Scarborough Railway from Early Victorian Guides* (Pickering: Blackthorn Press, 2008) 174 – 189.

the first church at Grosmont, opened in June 1842, when excursions were run to bring people to the bazaar, and proudly described this building as evidence of “an improving village”.

Grosmont was the only one of the case study settlements where ironstone mining had commenced when Ord published his ‘History of Cleveland’ in 1846. The settlement was covered in his chapter on Egton Parish, in which it sat at this time. Whilst Ord did mention industry at Grosmont he limited his coverage to the defunct alum industry.²⁰⁵ He seemed to regret the arrival of the W&PR saying that it “has somewhat interfered with the peaceful, unbroken retirement of these vales”.²⁰⁶ Ord’s description of the route that includes mention of the Tunnel Inn, the tunnel and the Beck Hole incline amongst a rather romantic portrayal of the surrounding scenery, which described the track across the moors as “leaving the lovely sequestered vales of the Esk behind”.²⁰⁷

Whellan published his work when ironstone mining at Grosmont had been undertaken for over 20 years and the novelty of the enterprise had been superseded by the larger scale Eston Hills find. The settlement was described as a “modern” one that had grown into “a thriving village of neat houses and other buildings” constructed to serve the miners.²⁰⁸ The role of the W&PR in founding the village was acknowledged and the surrounding scenery said to be “richly diversified and highly romantic”.²⁰⁹ The speculation fuelled by the Eston Hill find was evident in the quoting of prospectuses for the Julian Park Iron Co. and the Iburndale Iron Co. Neither of these local enterprises ever really got off the ground. Whellan was also impressed by the number of leases that were being let for mining along the North Yorkshire and Cleveland Railway line that was advancing along the Esk Valley towards Grosmont.²¹⁰

White spent a month walking around Yorkshire at the same time that Whellan was reviewing the country but generally tried his hardest to avoid mentioning the ironstone industry. His original 1858 publication was followed by a number of revisions to correct errors without updating the text, hence by the 5th Edition in 1879 the information on industry was very out of date and has to be treated with caution. It did not reflect changes since his original visit, including the building of blast furnaces. At Grosmont, White visited to see the “pretty scenery” of the lower Esk Valley and a

²⁰⁵ Ord, *History and Antiquities of Cleveland*, 326.

²⁰⁶ Ord, *History and Antiquities of Cleveland*, 320.

²⁰⁷ Ord, *History and Antiquities of Cleveland*, 328.

²⁰⁸ T. Whellan and Co., *History and Topography of the City of York and the North Riding of Yorkshire, Volume 2* (Beverley: T. Whellan and Co., 1859), 826 – 827.

²⁰⁹ Whellan, *History and Topography*, 300.

²¹⁰ Whellan, *History and Topography*, 168.

whinstone quarry and considered that the “sylvan character” had been marred by quarrying and ironstone mining.²¹¹

Bradshaw did include a short paragraph on Grosmont in the 1863 edition of his railway guide and this serves to illustrate an issue that periodically crops up with descriptions of the settlement, confusing it with the village of the same name in Monmouthshire. The latter is an ancient village, formerly a Medieval township, with a thirteenth century church and the ruins of a Norman Castle. These attributes were all ascribed to the case study Grosmont by Bradshaw, when it does not have any of them.²¹² However in this case the description of the castle included indicates that Bradshaw may simply have moved Pickering Castle north.

By the time Atkinson was writing, ironstone mining was well established at Grosmont. The population growth was such that Grosmont Parish had been created by taking land from the surrounding parishes, something that seems to have irritated Atkinson, as he referred to it as the “so-called parish of Grosmont”.²¹³ Atkinson clearly regretted the loss of local antiquities, saying that “every remnant” had been “swept away within the past few years”.²¹⁴ Nevertheless he was of the opinion that there was plenty to “quicken and stimulate our interest”. Atkinson correctly summarised the history of ironstone mining in the surrounding area and acknowledged its role in making “Cleveland a famous district”. Due to this role he appeared to be unwilling to be too negative about the place but did call St. Matthew’s “entirely without architectural merits or pretensions”.

Baines wrote at approximately the same time as Atkinson. He covered the Cleveland ironstone industry but the only references to Grosmont were the inclusion of the mines in the output tables and the membership of C&T Bagnall of the Cleveland Ironmasters’ Association.²¹⁵ The village was not mentioned in his description of the River Esk.²¹⁶

²¹¹ Walter White, *A Month in Yorkshire* (London: Chapman and Hall, 1879), 94.

²¹² Bradshaw, *Bradshaw’s Descriptive Railway Hand-book of Great Britain and Ireland: Section IV* (Oxford: Old House, 2010), 73.

²¹³ Atkinson, *History of Cleveland Vol 1*, 199 – 200.

²¹⁴ Atkinson, *History of Cleveland Vol 1*, 205 – 207.

²¹⁵ Thomas Baines, *Yorkshire Past and Present: A History and a Description of the Three Ridings of the Great County of York, from the Earliest Ages to the year 1870; with an Account of its Manufactures, Commerce, and Civil and Mechanical Engineering Vol 1 Part 1* (London: William Mackenzie, 1870): 183; Thomas Baines, *Yorkshire Past and Present: A History and a Description of the Three Ridings of the Great County of York, from the Earliest Ages to the year 1870; with an Account of its Manufactures, Commerce, and Civil and Mechanical Engineering Vol 2 Part 2* (London: William Mackenzie, n.d., ca. 1875): 576.

²¹⁶ Baines, *Yorkshire Past and Present Vol 1 Part 1*, 266.

Murray passed through Grosmont when taking the W&PR which he considered “passes through some very pretty scenery”.²¹⁷ The Bagnall’s blast-furnaces were said to be of “considerable importance” in 1874, the smoke from the ironworks was said to have been “a good landmark” in the area. Bevan took a scenic excursion on the line at about the same time, but was behind the times in saying the area around Grosmont was “becoming of considerable importance as a busy seat of the iron trade”.²¹⁸ It was in decline by the mid 1880s.

Leyland was published the year after the Grosmont Ironworks closed and his description of a “busy place where ironstone is quarried” and blast furnaces operated was out of date.²¹⁹ The village was considered to be “something of a disfigurement in the dale”.

4.4 Liverton Mines

Liverton Mines is shown on the 2nd and 3rd editions of the OS 25-inch series. Figure 48 shows the village circa 1894 and there was little change by 1914. What was the Hospital is marked as Liverton Grange and the condemned houses in Lower Cleveland Street have been demolished.

Few images of the settlement of Liverton Mines during the mining era have been located. Figures 61 and 62 do show some of the housing, but coverage is limited to the two storey brick built houses in Liverton Terrace and Cliffe Terrace. No contemporary images of the single storey cottages on Cleveland Street have been located, these were of an unusual form for the Cleveland ironstone area. Figure 61 shows the two blocks of houses that make up Liverton Terrace, the gap between them being the entrance to Downe Street. At either side of this gap there are three houses with ground floor bay windows and two upstairs windows, indicating that they were of a higher status than the others in the row. The four houses in Cliffe Terrace, Figure 62, were of a similar form and housed the more senior mine employees. The terraces forming Graham Street and Downe Street were of the same form as the majority of houses in Liverton Terrace.

A strict hierarchy that linked a person’s job with the location and form of their housing existed in Cleveland ironstone settlements. Typically the mine manager occupied a detached house set apart from the rest of the housing. Deputies and other senior staff lived in larger houses, frequently in terraces separate to those that contained the cottages of the workers. The distinction has endured

²¹⁷ John Murray, *Handbook for Travellers in Yorkshire: New Edition, Thoroughly Revised* (London: John Murray, 1874), 211.

²¹⁸ G. Phillips Bevan, *Tourist’s Guide to the East and North Ridings of Yorkshire: Containing Full Information Concerning all the Favourite Places of Resort, Both on the Coast and In-land* (London: Edward Stanford, 1884), 80.

²¹⁹ John Leyland, *The Yorkshire Coast and the Cleveland Hills and Dales* (London: Seeley and Co. Limited, 1892), 88.

in some of the larger villages where residents in the 'upper' parts of the community look down on those who live in the 'lower' portions.



Figure 61: Liverton Terrace (Source: Author)



Figure 62: Cliffe Terrace and Liverton Terrace (Source: East Cleveland Image Archive)

The 1861 census was taken just before mining commenced and at that time there were 186 people living in 38 households in the parish of Liverton. All but one had been born in Yorkshire, 182 came from the North Riding and all but 5 of these were born within 10 miles of Liverton. This indicates a stable population that was not moving far from their places of birth. 78% of those in employment relied directly on agriculture for their livelihood, with the remaining 22% in occupations that supported this industry.

By 1871 there were 443 people living at Liverton Mines, all crowded into Downe Street. This street was still under construction and many of the uninhabited dwellings were still being built. Eventually there were 40 houses in the street, arranged in 2 parallel rows, but at this time they appear to have been sub-divided in order to fit everyone in. 78% of the male heads of household were Ironstone Miners, indicating that the pit had gone into production by this date, and the others were in supporting roles such as Labourer and Engine Driver. A measure of the lack of housing is the fact that 38% of households had boarders, single men who had come seeking work at the new mine. The majority of the incomers had been born in England, but there were also people from Ireland, Wales, the Isle of Man and Scotland. It was probably a bustling and vibrant place with the residents hoping that the mine would be a success.

Despite closure in 1877 the building of the village continued and by the time of the 1881 census the village was in the form that would endure throughout the mining era. With the exception of the more desirable houses in Liverton Terrace and Cliffe Terrace all the streets had uninhabited properties. Those closest to the mine being least popular. This was even more obvious at the time of the 1891 census when the whole of Cleveland Street and Martin Row were empty. This continued to be the case in 1901, with the population essentially static over this period. Driven by a restart after upgrading it jumped by 1911, with all the streets inhabited and households once again sharing properties. Some families were living in two rooms only, something particularly the case for Cleveland Street and Martin Row, obviously the accommodation for the poorer members of the community. The detailed post 1911 returns have not yet been released, but the population of Liverton Parish was sustained in 1921, only to take a sharp downturn in 1931, after the mine had closed. Table 9 summarises the fluctuations in population and occupancy levels.

Table 9: Population of Liverton Mines (Data extracted from the census returns)

| Census Year | Liverton Civic Parish Population | Liverton Mines Population | Liverton Mines as % of Parish Population | Liverton Mines number of houses | Liverton Mines number of houses inhabited | Liverton Mines % Inhabited |
|-------------|----------------------------------|---------------------------|--|---------------------------------|---|----------------------------|
| 1861 | 186 | 0 | 0 | N/A | N/A | N/A |
| 1871 | 593 | 443 | 75% | 79 | 66 | 84% |
| 1881 | 669 | 490 | 73% | 201 | 93 | 46% |
| 1891 | 764 | 561 | 74% | 198 | 106 | 54% |
| 1901 | 766 | 595 | 78% | 208 | 116 | 56% |
| 1911 | 1,147 | 977 | 85% | 198 | 183 | 92% |
| 1921 | 1,057 | | | | | |
| 1931 | 791 | | | | | |

In Fletcher, Liverton Mines suffered the same fate as in many other sources throughout its history, namely a lack of attention due its position between two more 'popular' settlements. It is the ugly duckling between Liverton, with its ancient church, and Loftus, which developed into a more

substantial industrial settlement.²²⁰ A lack of Fletchers' familiarity with industrial history was evident in the statement that the "prevalent industry of the district" was alum, when it had been long eclipsed by ironstone. Morris treated the settlement in the same way and was clearly no fan of industry. Liverton was said to have retained "the character of an old-world Cleveland village, though closely overlooking the frightful havoc wrought by the iron mines".²²¹

Home did not mention Liverton Mines but his comments on adjacent Loftus and Skinningrove made his views on the industrial area clearly apparent. Local ironstone mining had resulted in Loftus growing with the addition of "un-picturesque" miners cottages, but he did allow that the number of trees present render the situation "pretty".²²² The Skinningrove blast furnaces, sitting above the village, were judged to be ugly during the day but at night the visible flames "speak of the potency of labour".

The VCH for Liverton parish was published at the time that the mine closed but the reference to it, based on Atkinson, was both out-of-date and incorrect.²²³ Viscount Downe was the landowner but did not own the mine, he leased the mineral rights to all of the identified mining companies. Ironstone from the mine had been sent to blast furnaces in Middlesbrough, but by the time of publication this was no longer the case.

A large number of newspaper reports covering Liverton Mines are discussed in Section 3.3. Others identified covered accidents in the mine, social events such as village shows and sporting fixtures and a high number of crimes, often involving theft or violence. The overall impression gained is of a rather rough at the edges settlement which would not have been regarded well by 'polite' society.

4.5 Rosedale

Mining started at Rosedale at the same time as the OS 1st Edition 6-inch map was being prepared for publication. Figure 63 shows the village circa 1857. In the village the church, a school, a pub, the Hall, substantial remains of the priory and two mills are shown.

²²⁰ J.S. Fletcher, *A Picturesque History of Yorkshire: Divisional Volume VI* (London: Blackwood, Le Bas & Co., 1901), 307 – 308.

²²¹ Joseph E. Morris, *The North Riding of Yorkshire* (London: Methuen & Co., 1904), 239.

²²² Gordon Home, *Yorkshire: Coast and Moorland Scenes* (London: Adam and Charles Black, 1907), 50.

²²³ Russell, "Liverton," 383.

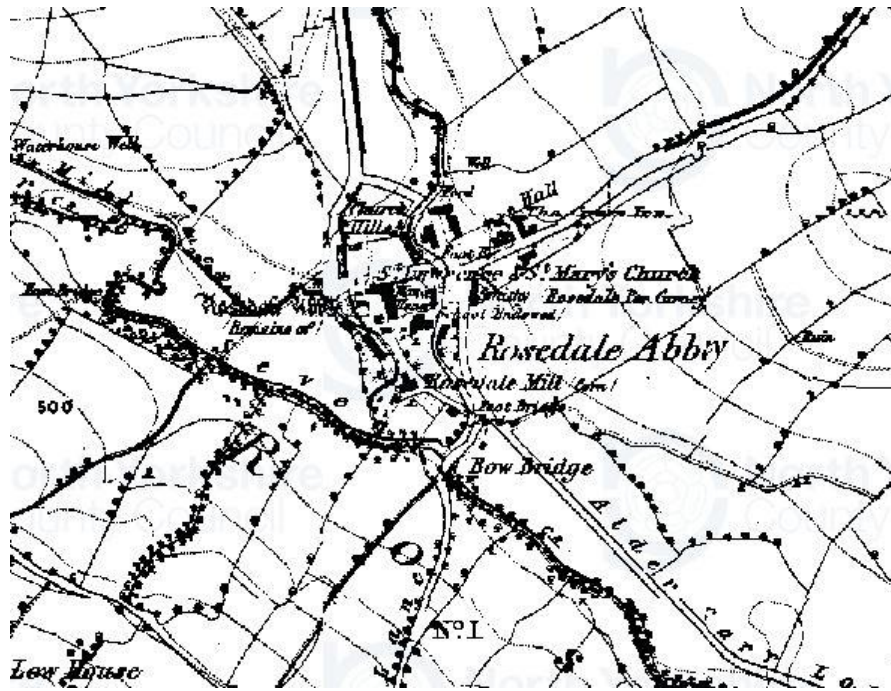


Figure 63: Rosedale Abbey circa 1854 (OS 1st Edition 1:10, 5600).

Figure 64 shows the village circa 1893, when the peak of ironstone mining had passed and the village had assumed the form that it retains to this date. Housing has been built in a number of locations but the most significant changes have taken place around the Priory site. The remains have largely been removed. The combined Lecture Hall and School has replaced the gateway and curtain wall. The Mill and curtilage buildings have been replaced with housing. Two Methodist Chapels have been built, one on the Egton Road and the other on the road leading to the East Mine. There is a Post Office and an hotel.

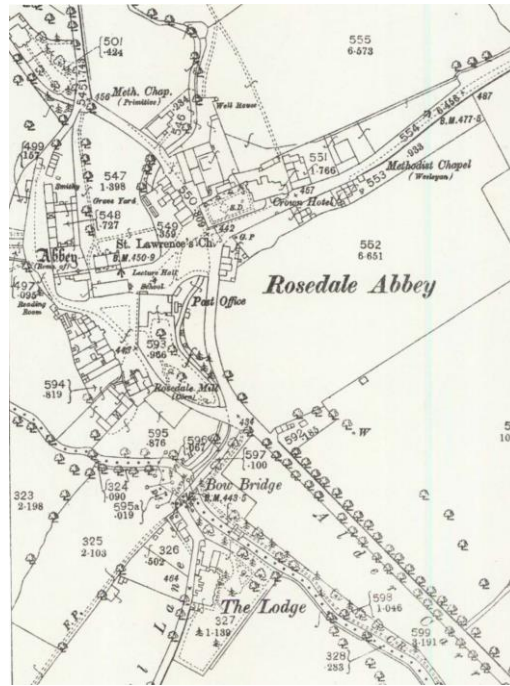


Figure 64: Rosedale circa 1893 (OS 2nd Edition 1:2,500 map)

The housing and amenities dispersed around the dale, close to the mines will now be discussed.

None of the OS map editions show the West Mine in operation, but Figure 65 show the area when most of the mining era features were still standing.

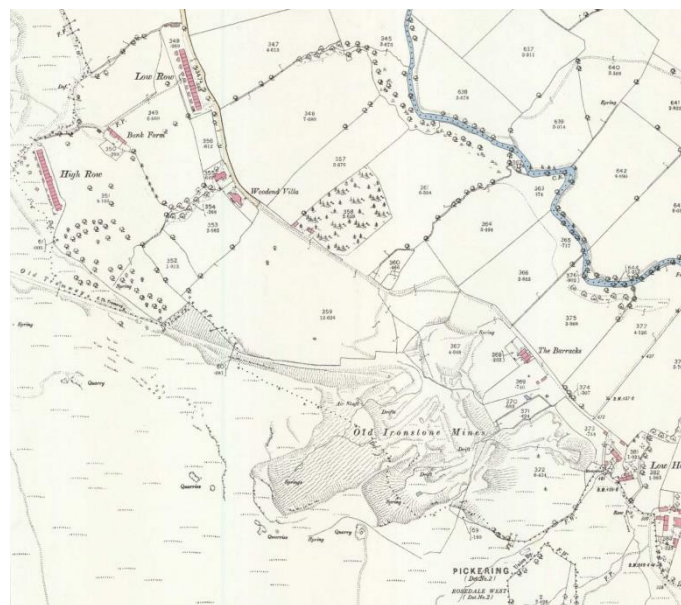


Figure 65: West Mine circa 1893 (OS 2nd Edition 1:2,500 map)

Close to the disused mine are the Barracks and cottages, High and Low Rows, built for the workers.

Prior to mining commencing at the East Mines the only buildings are scattered farmsteads, some of which appear to be substantial enterprises. Figure 66 shows the East Mine after it had been in operation for approximately 30 years.

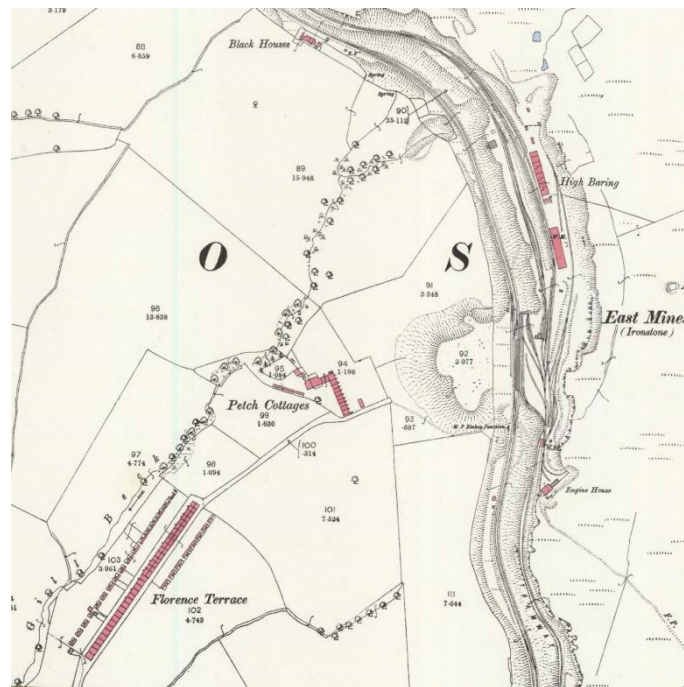


Figure 66: East Mine circa 1893 (OS 2nd Edition 1:2,500 map)

In addition to the railway and mine building, housing has been added at High Baring, Petch Cottages and Florence Terrace. There was additional housing a short distance away, shown in Figure 67. The railway facilities at the eastern end of the railway are shown along with terraces of cottages at Low Baring, Hill Cottages, School Row and Plane Tree Cottages. There are two schools but no other amenities marked.

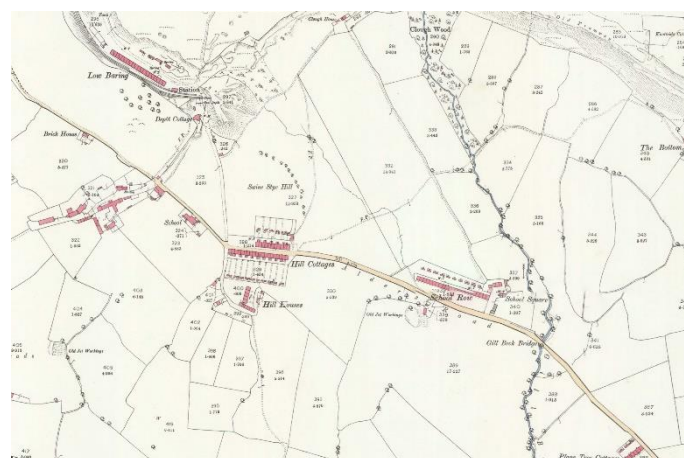


Figure 67: East-side housing circa 1893 (OS 2nd Edition 1:2,500 map)

The mine was still operating when the OS 3rd Edition 1:2,500 maps were produced, but fewer people were employed and some of the housing at Petch Cottages had been removed.

Rosedale during the mining era was relatively well documented by contemporary photographs, but the railway attracted more attention than the settlements. Pictures of the village itself largely show people attending events rather than the buildings. Figure 68 shows Mill Street, built for the miners, with a butchers shop in the property nearest to the camera. These are well built stone houses with more architectural detail than was usual.



Figure 68: Mill Street (Source: Raymond H. Hayes, *A History of Rosedale: The Story of Yorkshire's most Beautiful Dale* (Helmsley: North York Moors National Park, 1985), 48)

No pictures of the West Mine in operation, nor the associated housing at that time have been discovered, but Figure 69 is believed to show High Row after the mine closed but when the East Mine was still operation. Despite the loss of the roofs, by collapse or deliberate removal, the walls still stand, a tribute to the quality of their build. As late as the 1970s some of the abandoned back-to-back cottages in Low Row were said to have retained their roofs.²²⁴

²²⁴ Barker, *Yorkshire*, 74.



Figure 69: West Mine housing (Source: Simon Chapman, *Cleveland Ironstone Mines: Old Pictures Volume 4: Rosedale Mines and Railway* (Guisborough: Peter Tuffs, 2007), 50)

Figures 70 to 72 show some of the terraces of housing built at Rosedale East-side. Florence Terrace, Figure 70, was below the East Mine. Originally there were over 30 cottages but as the numbers employed at the mine decreased they were no longer needed and demolitions occurred



Figure 70: Florence Terrace, below East Mine. (Source: East Cleveland Image Archive)

Figures 71 and 72 show the terraces of housing built along the valley road below the East Mine. To the left on Figure 71 are the pre-mining era Hill Houses that formed an agricultural complex. Just up the slope the rear elevations of the eastern row of Hill Cottages can be seen with lines of washing hung out in the gardens. A parallel row of cottages faced these on the other side of the road. On

the skyline in the centre of the picture the roofs and chimneys of the Low Baring houses can be seen. The single terrace of cottages known as School Row is shown in Figure 72.



Figure 71: Hill Cottages (Source: Hayes, *A History of Rosedale*, 82)



Figure 72: School Row (Source: Chapman, *Old Pictures Volume 4*, 34)

Whellan was writing before the railway arrived at Rosedale and mining had had a chance to really impact on the dale. He considered it to be a “romantic district” that was visited by “numerous picnic and pleasure parties” in the summer season.²²⁵ It was known that ironstone existed in the area, and

²²⁵ Whellan, *History and Topography*, 875 – 877.

the magnetic ore was being worked. At this time there was an excited optimism that all the local reserves would be of as good a quality, but this did not turn out to be the case.

Despite having an interest in industry and writing at a time when the Cleveland ironstone industry had been in existence for some time Baines presents it in a slightly odd manner. His geology information was based on the, by then, rather dated 1856 *Memoirs of the Geological Survey of Great Britain* and he generally wrote as if everything was new and exciting. The output of the Rosedale mines was mentioned but Baines incorrectly assigns the thickness and high iron content of the magnetic ore to the Top Seam ironstone.²²⁶ The R&FIC were mentioned in relation to their membership of the Cleveland Ironmasters' Association as owners of the Ferryhill Ironworks.²²⁷

Murray found the contrast between the moors and Rosedale, described as "green with trees and fields", pleasant.²²⁸ The influx of ironstone miners had filled the village with life, with "sundry Dissenting Chapels" built and a hospital provided by the R&FIC. They were said to have 600 men in their employment and to be willing to show visitors the mines, allowing them to ride on their mineral railway line if permission was sought. By the time the third edition of Murray's *Handbook* was published in 1882 the R&FIC had failed but the entry for Rosedale did not reflect this.

Leyland found that the beauty of Rosedale was "somewhat detracted from by the ironworks and the "conspicuous" chimney and much preferred the adjoining Farndale, which was rural."²²⁹ He was another author who incorrectly places an ironworks in Rosedale and links the chimney to them.

Baddeley made his views regarding the industrialised regions of Yorkshire clear in the Introduction to his guide to the county. He was writing a travel guide and would only "very lightly" touch upon the "large manufacturing towns, and many districts naturally beautiful but spoilt from a picturesque point of view by the deleterious character of the commercial pursuits carried on in them".²³⁰ To have been a successful author Baddeley must have had an appreciation of the tastes of his readers, so may have been reflecting a wider prejudice when he stated that they are places that a tourist "wishes to avoid rather than visit". Sheriff's Pit and the East Mine at Rosedale were still operating when Baddeley was writing and he stated that "On the hillside are the Works of the Rosedale and

²²⁶ Baines, *Yorkshire Past and Present Vol 1 Part 1*, 179 – 183.

²²⁷ Baines, *Yorkshire Past and Present Vol 2 Part 2*, 576.

²²⁸ Murray, *Yorkshire, New Edition*, 210 – 211.

²²⁹ Leyland, *Yorkshire Coast*, 166 - '67.

²³⁰ M.J.B. Baddeley, *Thorough Guide Series: Yorkshire (Part I): The East Coast, York and the County between the N.E. Main Line and the Sea also the Cathedral and Castle of Durham* (London: Dulau & Co., 1897), xiii.

Ferry Hill Iron Co., not so brisk as in years gone by”.²³¹ The assessment of reduced productivity is correct but by 1897 the remaining mines were operated by the CIC.

Michael Heavisides, a Stockton-on-Tees printer, published descriptions of his rambles in Cleveland and along the River Tees in the early twentieth century. He was from the picturesque tradition and wanted to open people’s eyes to how “lovely and romantic” the Cleveland district was.²³² When visiting Rosedale he was intrigued by the operation of the Ingleby Incline but found the buildings at the top “grim”.²³³ Heavisides hitched a ride on the returning locomotive and seems to have enjoyed the experience. On reaching Blakey Ridge he chose not to enter industrial Rosedale but headed for rural Farndale. Morris did venture into the dale but considered that the mines and railway “solely detract from its natural charm”.²³⁴

In his history of the parish of Lastingham, Rev. Weston covers ironstone mining, but concentrates on West Rosedale as it had been in his parish until 1876.²³⁵ He acknowledged that the “rich and extensive deposits of iron-stone” had brought the valley fame in the past but that the reserves, by the time he was writing, were “virtually exhausted”. Sheriff’s Pit was closed and the East Mines “now maintain very few miners”. Prior to the arrival of the miners West Rosedale had “consisted of a few scattered homesteads and a tiny settlement at Thorgill”. Weston did not make any comments on the impact of mining other than that on local population. Miners were said to have lived in Lastingham, Hutton-le-Hole and Farndale as well as Rosedale and the mine closures were said to have had “a very serious effect on the population of these villages”. The population of West Rosedale in 1824, 1891 and 1911 was given to illustrate this point, the figures being 179, 549 and 414 respectively. The only mining era remains that Weston describes were the ruins of the incline engine-house and its associated chimney, said to be “a conspicuous landmark for miles around”.

Research for the VCH sections covering Rosedale was undertaken at the same time as Weston was writing. It is covered in two sections, Rosedale West under Lastingham parish, published in 1914 and Rosedale East under Middleton parish with publication delayed until 1923. The coverage of ironstone mining was confused and mixes up activities on the east and west-sides of the dale. Mining on the west-side had ceased by the time of writing and so mention of the industry was made in the Lastingham section but was included under Middleton Parish. This stated that “there are

²³¹ Baddeley, *Yorkshire (Part I)*, 71

²³² Michael Heavisides, *Rambles in Cleveland and Peeps into the Dales on Foot, Cycle and Rail* (Guisley: M.T.D. Rigg (Publications), 1988), 7.

²³³ M. Heavisides, *Rambles in Cleveland*, 86 – 87.

²³⁴ Morris, *The North Riding of Yorkshire*, 321.

²³⁵ Rev. F.H. Weston, *History of the Ancient Parish of Lastingham* (newcastle: J. Whitehead, 1914), 62 – 63.

ironstone mines on Rosedale Moor, a vein of great thickness having been discovered some years ago, but being nearly exhausted".²³⁶ The East Mine was below Rosedale Moor and was running out of reserves by 1923 but the seams were quite thin. The only thick deposits at Rosedale were those at the West Mine, which closed in 1885.

4.6 Eston

Mining had commenced at Eston by the time the OS 1st Edition 6-inch map was produced, Figure 73.



Figure 73: Eston circa 1853 (OS 1st Edition 1:10,560 map)

The start of the industrial phase of Eston's evolution can be seen in a line of cottages located where the two inclines meet. Figure 74 shows the settlement as it stood after nearly 50 years of mining. California and South Eston contain rows of terraced housing and amenities. Old Eston, to the west, meets the new settlement in its north east corner, but has not yet been subsumed. The railway sidings at the start of the line to the ironworks have been extended and a branch line runs along the north side of the High Street. Sandwiched between California and South Eston is the hospital, with the school behind it. Dating evidence for the map is provided by the presence of Christ Church, in Old Eston, which opened in 1889.

²³⁶Russell, "Middleton," 453



Figure 74: Eston circa 1894 (OS 2nd Edition 1:2,500 map)

Little expansion occurred during the early twentieth century, with the most significant change shown being the through railway line, which allowed the town to have a railway station. Some additional housing appears, primarily as infill on what may have previously been allotments.

More pictures of Eston during mining exist than for any of the other case study settlements. This is partially the result of the length of time the mine operated but is also an indication of the interest that the rate of growth generated. The village was not a planned company settlement but largely the result of speculative building. As a result there was no uniform style of architecture or form of housing. Figures 75 to 77 show the two main styles of terraced housing built. The earliest housing was built adjacent to the incline end at The Square, California. It comprised rows of single storey back-to-back terraces and a smaller number of two storey houses, all were stone built and with slate roofs, Figure 75. Conditions were cramped and the cottages were not popular. This subsequently led to some of the terraces being modified, with brick built second stories added, Figure 76, and pairs knocked through to form through houses. Post the initial boom the form of housing provided became two storey, brick-built terraces, Figure 77, that was common throughout East Cleveland. The streets were tightly packed and without adjacent gardens, although allotments were provided a short distance away. These were important in supplementing the diets of the families.



Figure 75: Back-to-back housing in The Square, California. (Source: Middlesbrough Borough Council)

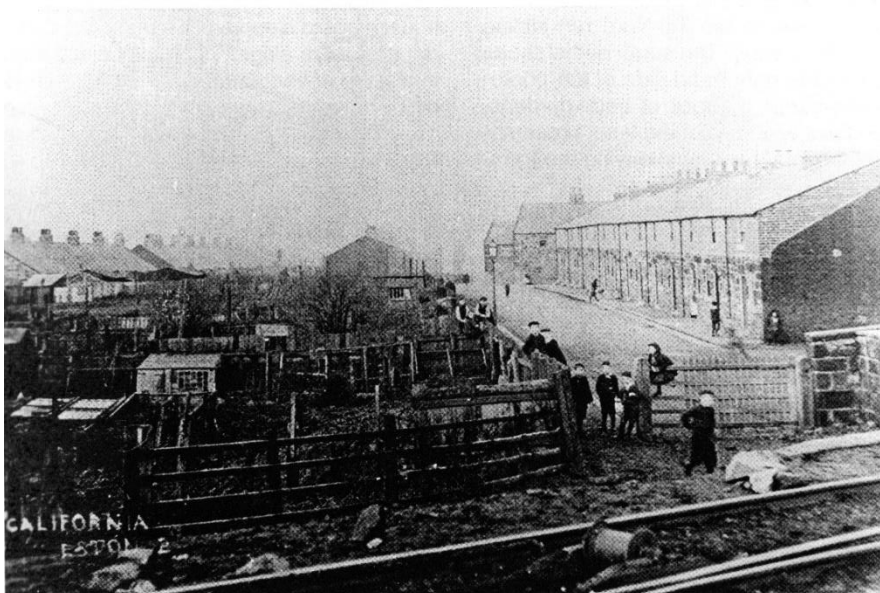


Figure 76: Modified back-to-back housing in The Square, California (Source: Richard Pepper, *California and South Eston: Mining Communities 1850 to 1949* (Guisborough: Peter Tuffs, 2000), 26)

South Eston was developed after California and consisted largely of streets of two storey terraced houses, Figure 76, laid out in a grid pattern. Corner shops were included to serve the local population.



Figure 77: South Street, South Eston. (Source: Middlesbrough Borough Council)

Little effort was made to separate Eston from the mining infrastructure, something that did occur in company built, planned settlements. Living in the end terrace house shown in Figure 78 there was little to separate the Pepper family home from the winding station at the bottom of the incline. This operated continuously and would have been very noisy.

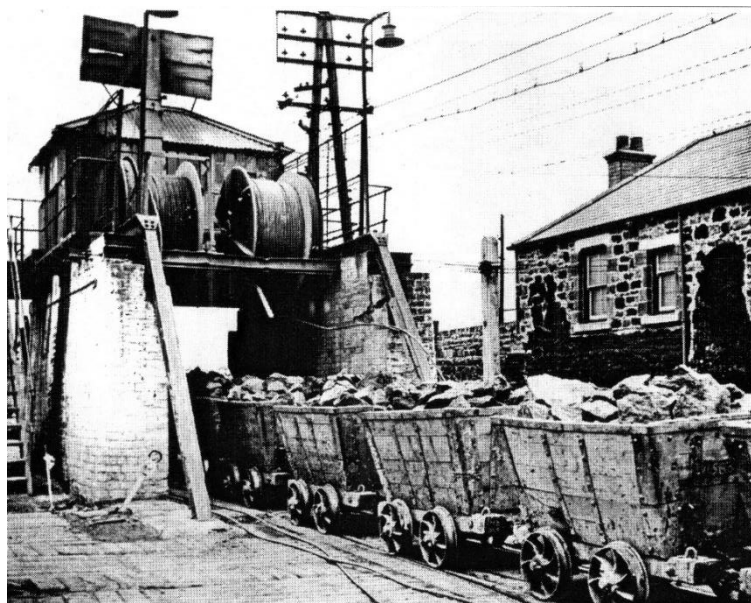


Figure 78: Pepper's family home adjacent to the incline winding station (Source: Pepper, *California and South Eston*, 28)

The institute at Eston, Figure 79, was a grander affair than many, but was not built until approximately 50 years after mining started.

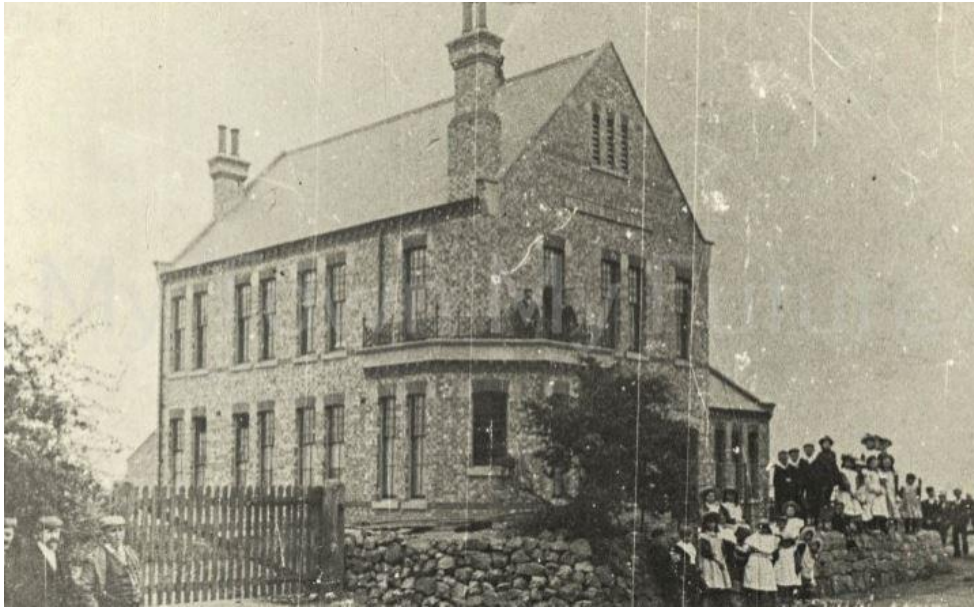


Figure 79: Eston Institute circa 1901. (Source: Middlesbrough Borough Council)

There was a close, almost symbiotic, relationship between the development of Eston and Middlesbrough. The former drove the growth of the latter but was later subsumed into the town as a suburb. It is difficult to separate descriptions of the two places in contemporary sources as they tend to treat them as parts of the same story.

At the time Whellan was writing the Eston Hills find was considered an awe inspiring discovery that was fuelling expansion and prosperity in Eston and Middlesbrough. The population of Eston had been 1,172 in 1851 but had multiplied by a factor of four within 8 years.²³⁷ Whellan noted that a new village had been built for the miners.²³⁸ He gave California and South Eston as alternative names for the same place, which others did not do. They were described as “well built and of considerable extent”. Whellan was impressed by the facilities that were already provided at South Eston, mentioning a Post Office, Primitive Methodist Chapel, Independent Chapel, Public School and Mechanics Institute. Rather optimistically the ironstone in the Cleveland Hills was said to have been an “inexhaustible store” that “had been pronounced one of the greatest wonders of the modern world.”²³⁹

White viewed the Tees plain as different to the rest of the North Riding and was clearly not impressed by the impact of the Cleveland ironstone industry. Whilst visiting an alum works, somehow more acceptable than any iron industry infrastructure, the Foreman told him that he and his father started ironstone mining in the area by finding reserves at Skinningrove, then still a fishing

²³⁷ Whellan, *History and Topography*, 808.

²³⁸ Whellan, *History and Topography*, 811.

²³⁹ Whellan, *History and Topography*, 166 – 167.

village.²⁴⁰ This is incorrect. Changes wrought by the ironstone industry on Guisborough and Middlesbrough were not well regarded. At Guisborough “the old honest look has disappeared forever” and the rapid growth of Middlesbrough had masked the sunlight with a “smoky veil”.²⁴¹ White sympathised with families from the town who were having a picnic on Roseberry Topping to escape the smog.

Henry Heavisides, father of Michael, had observed Middlesbrough grow into a town in a short period of time and marvelled at the inventions that the “age of iron” had brought into people’s lives.²⁴² The Eston area was described as “a scene of the greatest activity, swarming with an industrial population all employed in the manufacture of iron”. No thought seemed to be given to the conditions under which the workforce lived and worked. H. Heavisides happily reported that the partners in B&V had made sufficient success of their “gigantic operations” to build “splendid residences in Cleveland” and retire to “enjoy the fruits of their united labour” amongst “peaceful, sylvan shades”. Neither of their retirements were particularly long. Whilst Bolckow did build Marton Hall in 1858, Vaughan bought Gunnergate Hall in 1860, when it was three years old.²⁴³ The houses were substantial buildings in extensive grounds, on the outskirts of Middlesbrough. Both partners lived in their properties until their deaths, in 1878 and 1868 respectively. Their families failed to maintain economic affluence and had to sell up. Marton Hall was sold to Middlesbrough Council in 1923 and burnt down in 1960 whilst awaiting demolition. Gunnergate Hall was neglected by subsequent occupants and was demolished in 1946. The grounds of both houses are now public parks owned by Middlesbrough Council and accessible to all residents.

Gordon published in 1869 when the mining at Eston had been going on for approaching 20 years, but still he described the ironstone finds as recent.²⁴⁴ The way that the Eston Hill ironstone reserves, their mining and the impact of the industry on the local settlements were described shows that Gordon was conflicted in his feelings about them. He was proud of the development of Middlesbrough into a world renowned industrial centre and the contribution that this made to the “commercial resources of the British Empire” but was generally unimpressed by the settlements. Middlesbrough was called a “crowded, smoky town” and Eston a “straggling village”.²⁴⁵ Middlesbrough was still expanding and places such as Ormesby that were destined to become

²⁴⁰ White, *Month in Yorkshire*, 103.

²⁴¹ White, *Month in Yorkshire*, 125 – 133.

²⁴² Henry Heavisides, *The Annals of Stockton-on-Tees; with Biographical Notices* (Stockton: H. Heavisides and Son, 1865): 38.

²⁴³ Nikolaus Pevsner, *The Buildings of England: Yorkshire: The North Riding* (London: Penguin Books, 1992), 239.

²⁴⁴ Gordon, *Watering Places*, 54.

²⁴⁵ Gordon, *Watering Places*, 57.

suburbs were still rural villages, a form of settlement Gordon obviously preferred. He was quite blunt in his assessment of the housing in Eston, and despite some houses having a “neat and cleanly look” condemned most as having “that dirty, slovenly appearance which is unfortunately so characteristic of the houses of workmen of this class”. This shows no understanding of the impact of the quality of housing provided and the poor economic conditions of the inhabitants. Climbing past the incline Gordon described the view, paying complements to the rural aspects but simply noting the “vast ironworks” bordering the Tees. Nevertheless he was impressed by “the low murmuring hum” of the “ceaseless industry” of this area and agreed with Gladstone’s assessment that Middlesbrough was an “infant Hercules”.²⁴⁶

Baines correctly identified Eston as where the outcropping of the Main Seam was at its thickest.²⁴⁷ He appeared impressed by the incline and the contribution the mines had made to the Cleveland iron field becoming “the richest in England”. The growth of the industry was seen as remarkable, with access to the County Durham coalfields being another key enabling factor in the expansion of Middlesbrough. Population figures for the town show the two growth spurts, the first the arrival of the S&DR and the second the Eston Hills find.

The second edition of the Yorkshire Handbook for Travellers appeared in 1874, when the Cleveland ironstone industry was in robust health, and the third in 1882, after a downturn had occurred. Coverage of the industry was markedly different between the two editions, reflecting a loss in confidence. The Introduction to the second edition quoted extensively from an 1866 paper by Edward Hall on the Cleveland ironstone reserves, which were considered to be the most important in England and to have facilitated the growth of Middlesbrough to the extent that the town “is destined to have no rival”.²⁴⁸ By the time that the third edition was published the downturn and consequent failure of companies such as R&FIC was reflected in a much less optimistic introduction. The Cleveland ironstone reserves were no longer considered to be the most important in the country. The role of the Eston Hills find was still mentioned but other mining areas, including Rosedale and the Esk Valley, were no longer included.²⁴⁹ Middlesbrough was referred to as “the metropolis of the [iron] trade” but was no longer predicted to have no rival. One element that remains unchanged between the two editions was the difference in the treatment of the coastal plain and the Moors. The latter were described as having “the most picturesque scenery”, whilst the

²⁴⁶ Gordon, *Watering Places*, 63.

²⁴⁷ Baines, *Yorkshire Past and Present Vol 1 Part 1*, 177 – 183.

²⁴⁸ Murray, *Yorkshire, New Edition*, xxxiv.

²⁴⁹ John Murray, *Handbook for Travellers in Yorkshire and for Residents in the County: Third Edition, Thoroughly Revised* (London: John Murray, 1882): xxxi – xxxii.

former was excluded on the basis that “though occasionally not unpicturesque” it was “very distinct”.²⁵⁰ The second edition was far from complementary about Middlesbrough calling it “neither the pleasantest nor the most comely” child of the industrial revolution.²⁵¹ Housing was described as streets of dreary, small properties. When the surrounding countryside was glimpsed through the smog the opinion given was that it “only serves to make the prison of the town seem yet more gloomy”. Little was said of Eston other than calling the ironstone mines the “famous Eston Quarries”. By the time the third edition was published the view of Middlesbrough included had mellowed and most of the critical comments had been removed. In their place was a rather grudging admiration for the pride the residents had in the town and the way the stall in development and prosperity caused by the advent of steel had been overcome.²⁵² Unusually for a travel guide writer the author displayed a detailed knowledge of the iron industry and feared that the “frequent fluctuations in the trade will cause other interruptions to increase in prosperity” in the area. The author had visited housing in Middlesbrough and, although still considering it to be small, had revised his opinion of the layout of the town to describe the streets as “remarkably broad and well paved”. A typically patronising view of the interiors of working class housing expressed when they were found to be “unusually clean inside and comfortably furnished”.

Those who developed Middlesbrough found that their carefully planned symmetrical plan including amenities was soon overwhelmed by an expanding sprawl. An 1899 guide to the town, quoted by Hey, was forced to admit that:

At first sight Middlesbrough is not calculated to create a particularly favourable impression upon the visitor. Its utilitarian aspect is somewhat too pronounced. With its numerous ironworks lying between the town and the river, the town itself being built upon a low stretch on the south side of the river, and its streets composed for the most part of plain brick houses, it presents essentially a business town, and little that is picturesque to attract and please the eye.²⁵³

Writing shortly before the above was written Baddeley reflected a move away from being uncritically impressed with what had been achieved on Teesside. He did venture up Eston Nab and noted that it commanded panoramic views but that the “north-west side is almost devoured by

²⁵⁰ Murray, *Yorkshire, Third Edition*, xii - xiv

²⁵¹ Murray, *Yorkshire, New Edition*, 248 – 250.

²⁵² Murray, *Yorkshire, Third Edition*, 230 – 231.

²⁵³ Hey, *Yorkshire from AD 1000*, 274..

ironstone quarries”.²⁵⁴ Beyond the mines Stockton and Middlesbrough were said to be “amongst the busiest and most uninviting of localities”.

Although focused on the picturesque and finding the lower reaches of the River Tees hard to appreciate Fletcher had a grudging respect for “the modern” marvel of Middlesbrough that the Cleveland ironstone industry had produced.²⁵⁵ Viewed from the vantage point of Roseberry Topping Teesside was not described as negatively as by others and was simply said to be “smoke-laden and suggestive of much human industry and burning of coal”.²⁵⁶ Fletcher also treated Eston relatively kindly, saying that those approaching it across Barnaby Moor could have “the pleasure of seeing how a rapidly developed industry can change the face of Nature”.²⁵⁷ The B&V ironworks, although belching smoke, had “done much to transform the banks of the Tees at this point from a comparative wilderness to a thickly-populated region”. Despite considering the adjacent villages of Normanby and Ormesby as more picturesque than Eston, Fletcher was by no means disparaging about the latter settlement, describing it as “quite a considerable town – streets upon streets of small houses, and new churches and chapels, gas-lamps, and many evidences of the modern spirit on every hand”. He, like others, seemed somewhat in awe of the impact of the Eston mines had wrought on the transformation of Middlesbrough.²⁵⁸ Fletcher was keen on encouraging people to go and see “one of the most remarkable centres of population in the world”, which was modern but whose residents were proud of what their ancestors achieved.²⁵⁹ He pondered that if the population expansion continued apace then by 2000 the town would be “one of the greatest centres of industry in the world”. In the 40 years between 1841 and 1881 the population of Middlesbrough grew by 868%, a mean annual rate of 21.7%, but in the 130 years between 1881 and 2011 the equivalent figure was 150%, a mean annual rate of 1.2%. Despite his more positive reaction to industrial Teesside than many of his contemporaries, Fletcher revealed his true feelings when looking out from Eston Nab. He found little to admire when looking out towards the sea and seemed glad to leave the “long rows of dull, formal-looking streets of small cottages” behind. In 1918 Fletcher issued a single volume history of Yorkshire and in the condensed contents he still regarded Middlesbrough as having “a strong claim to be looked upon as the most wonderful town of the nineteenth century” with “worthy and handsome” buildings.²⁶⁰

²⁵⁴ Baddeley, *Yorkshire (Part I)*, 108 – 109.

²⁵⁵ Fletcher, *A Picturesque History of Yorkshire*, 261.

²⁵⁶ Fletcher, *A Picturesque History of Yorkshire*, 271.

²⁵⁷ Fletcher, *A Picturesque History of Yorkshire*, 276 – 277.

²⁵⁸ Fletcher, *A Picturesque History of Yorkshire*, 282 – 283.

²⁵⁹ *Ibid.*

²⁶⁰ J.S. Fletcher, *The Making of Modern Yorkshire, 1750 – 1914* (London: George Allen & Unwin Ltd., 1918), 76 – 77.

M. Heavisides took the first train to run on the Middlesbrough to Eston branch line on New Year's Day 1902.²⁶¹ For the want of something to do before the return journey he and his companion climbed Eston Nab. The view in the rural, south-easterly direction was described as "sublime". Looking towards the River Tees there was still some clear ground between the villages of Eston, Lackenby and Lazenby and the blast furnaces by the river that were "sending out volumes of dense smoke".

Morris was keen to point out that industrialisation was restricted to a small part of the North Riding. He considered that "the ugly strip of coast between Middlesbrough and Redcar may be abandoned to the blast furnace without regret".²⁶² In a very brief mention of Eston, Morris restricted his censure to stating that it "retains traces of vanished beauty", reserving his ire for Middlesbrough.²⁶³ He expresses the opinion that he wished "it had never been built".²⁶⁴ The houses, public buildings, churches and industry were all dismissed.

Post WWI Weston was more positive about the impact of industry than those from the picturesque tradition. The ironstone in the Cleveland Hills was identified as an enabler that was transforming the area "from a quiet farming region into a noisy and bustling manufacturing centre".²⁶⁵ There was a shift in population from the rural to urban areas with half the population of the North Riding living on the industrial Tees plain amongst "less interesting scenery", but this area was positively described as "a wonderful industrial region".²⁶⁶ Evidence of economic activity was seen as compensating for the lack of the picturesque. Eston may have been a "typical mining town" but "its situation makes it attractive".²⁶⁷

The VCH made no value judgements on the impact of mining on Eston but noted the amenities that the settlement had and when they had been built. By the time of writing Eston had become a parish which "owes its importance and size to the Ironstone mines" which were the principal industry in the parish.²⁶⁸

²⁶¹ M. Heavisides, *Rambles in Cleveland*, 134 - 135.

²⁶² Morris, *The North Riding of Yorkshire*, 18 – 19.

²⁶³ Morris, *The North Riding of Yorkshire*, 154.

²⁶⁴ Morris, *The North Riding of Yorkshire*, 256 – 257.

²⁶⁵ Capt. W.J. Weston, *The North Riding of Yorkshire* (Cambridge: The University Press, 1919), 7.

²⁶⁶ Weston, *The North Riding of Yorkshire*, 16 and 26.

²⁶⁷ Weston, *The North Riding of Yorkshire*, 149.

²⁶⁸ Mackay, "Ormesby," 277.

4.7 Summary

The late 1860s and early 1870s ironstone mining enterprises on the Kildale Estate were speculative ventures in an area where there were insufficient ironstone reserves to justify the expense of opening a mine. The second phase of operation of the Warren Moor mine resulted in the building of the Leven Vale Cottages, but there was no demand for housing in that location once the mine closed and the settlement was demolished. There was initial optimism that the ventures would bring prosperity and large scale development of the surrounding area but once it became evident that this was not going to occur very little notice was paid to ironstone mining around Kildale. Other than appearing on an OS map Leven Vale Cottages were not occupied for long enough to leave any identified records or commentary. Visitors to nearby Kildale expressed relief that the area had escaped significant industrial development.

As the site of the first Cleveland ironstone mine the Grosmont area also saw the first speculative boom in the late 1830s and into the 1840s. The village of Grosmont started as a halt on the W&PR and was developed, in a piecemeal fashion, to house the miners in the various mines clustered around the settlement. Other, isolated terraces of housing were built for short-lived mines located along the Esk Valley between Grosmont and Sleights. The draw back of all their locations was, until 1865, a reliance on the port of Whitby to export the ironstone. Once the Main Seam was discovered at Eston in 1850 the centre of exploration shifted to East Cleveland and interest in the Grosmont area waned. The arrival of the Bagnalls brothers in the early 1860s and their decision to build an ironworks to consume local stone ensured that the population of Grosmont continued to grow through the 1860s, 1870s and 1880s. Buildings were added to the village to accommodate them. The population declined after the ironworks closed in 1891 but the rate of decline was modified by the presence of other employment, most noticeably a brickworks and slag harvesting, into the mid twentieth century. As a result none of the mining era housing was abandoned. Ironstone mining took place at Grosmont for over 50 years and, once official record keeping became increasingly formalised from the 1850s onwards the era was reasonably well recorded. Whilst visitors attracted by the beauty of the Esk Valley found the presence of the ironworks itself, particularly the smoke and fume produced, unwelcome the village itself attracted relatively little censure.

Liverton Mines suffered by association with one of the 'poor' Cleveland ironstone mines. The seam being worked was split by a layer of shale that had to be separated from the ironstone and the iron content of the stone was at the lower end of viability for economic working. A succession of owners struggled to make the mine pay and it was prone to being left standing. As a company village Liverton Mines saw peaks and troughs in its population, depending on the state of operation of the

mine. Visitors during downturns in business noted the number of empty houses and in boom times that all available housing was overcrowded. The lack of housing and a reputation for failing to provide stable employment made it difficult to attract and maintain a long term population. Other than in official records, Liverton Mines was rarely mentioned as a separate entity, sandwiched between well regarded, rural Liverton and the larger mining settlement of Loftus. Rudimentary welfare provisions were in place by the time the mine closed in 1921 and these, coupled with alternative employment within commuting distance, meant that the village population had declined rather than plummeted by 1931.

Rosedale experienced an ironstone speculation frenzy after deposits of unusually high iron content magnetic ironstone were discovered in the dale in the 1850s. Despite much exploration in the area no other reserves of equivalent quality were located. Still, mines were developed on the east and west-sides of the valley, linked by a mineral railway that permitted the ironstone to be hauled out of the dale. Due to the isolation of Rosedale the transport distances were long and the ironstone was calcined to reduce its weight prior to loading onto railway trucks. Rosedale is approximately 9 miles long and the mining operations were separated by considerable distances. As a result, housing close to the dispersed mines was developed as well as the village of Rosedale Abbey. The population of Rosedale grew through the 1860s and 1870s but dropped dramatically after the R&FIC failed in 1879. The mines were reopened, but fewer people were employed. They closed in three phases, 1885, 1911 and 1926 and after each closure the population decreased and the more remote housing that no longer had a use was demolished. During the 1870s peak of industrial Rosedale most visitors to the North York Moors chose to avoid it, but found the West Mine incline engine chimney a useful navigation marker. It noted the miners housing was seen as rather alien to the environment in which it sat.

Although the Cleveland ironstone mining industry started at Grosmont it was the 1850 Eston Hills find that transformed the fortunes of Middlesbrough and shifted the centre of the iron industry south to the River Tees. The Eston Mine was the most successful of the Cleveland ironstone mines, enabling both the development of Middlesbrough and the large community of Eston. The stability of employment at the mine throughout its 99 years of operation enabled generations of families to remain working locally. Visitor's scruples regarding the impact of industrialization and the quality of the housing were tempered with admiration for the scale of human achievement.

Chapter 6

Case Studies: Post Industry

1 Introduction

This chapter follows-on from Chapter 5 and covers the second part of exploring the complex impacts on communities of mine operation. It explores the history of the case study settlements since mining ceased. Utilising the same methodology as employed in Chapter 5, how each settlement was represented, on maps, in census returns and in images, and perceived, in written descriptions, during the years after mining is discussed. The chapter asks if the relative success of mining in a vicinity of a settlement has had any impact in the period after the end of mining. The chapter concludes with photographic surveys of the settlements, to capture remaining ironstone mining era fabric and later memorials to the industry.

2 Perceptions

This section utilises the same methodology as described and applied in Section 4 of Chapter 5, but to explore the impact of mining operations on the perceptions of the case study settlements after mining ceased. Before discussing the case studies individually, it is necessary to consider the impact on perception of factors covering the whole study area. These are explored by looking at descriptions of the area over time and at national government initiatives.

2.1 The Cleveland Area

Well before the profound changes in local authority boundaries, discussed in Chapter 1, formed the County of Cleveland the Cleveland area of the North Riding was treated as consisting of two parts; “Rural Cleveland, with Stokesley as the centre” and “ironstone Cleveland around Guisborough and Middlesbrough”.¹ In 1889 the recently formed North Riding of Yorkshire County Council (NRYCC) determined that, despite Middlesbrough being within its boundaries, the only technical education of topic of interest in their area was agriculture.² With the formation of the County of Cleveland the North Riding of Yorkshire lost a relatively small acreage but included in that was its largest town,

¹ Alfred J. Brown, *Fair North Riding* (London: Country Life Ltd., 1952), 141.

² M.Y. Ashcroft, *A History of the North Riding of Yorkshire County Council 1889 – 1974* (Northallerton: North Riding of Yorkshire Council, 1974), 77.

Middlesbrough, with 20% of the population and “its only sizable industrial centre”.³ The North Riding reverted to the “almost exclusively rural society” it had been before the mid-nineteenth-century. Whilst it is acknowledged that pockets of industrial activity, such as ironstone mining, had existed they had not changed the overriding character of a rural county of “scattered communities living in small towns and villages”. Gerrard considered it fortunate that the North Riding away from the Middlesbrough area had “escaped the most awful consequences of Victorian industrial expansion”. This distinction between ‘rural desirable, industrial reprehensible’, introduced in Chapter 1, has coloured many representations of the study area, including publications produced by official organisations, and influenced national government interventions.

2.1.1 Official Publications

In a guide published shortly before the closure of the Eston mine, Eston Urban District Council acknowledged the role of ironstone in the growth of the district and stated that “its chief industry is still the making of iron and steel”.⁴ By the mid 1950s, whilst stating that their district was “principally a flourishing industrial area”, Eston Urban District Council were keen to point out that agriculture was still being carried out.⁵ A guide to the Stokesley Rural District Council area, published circa 1950, was keen to emphasise its rural nature.⁶ The first three paragraphs start with the phrase “The rural district”. It was said to show that the district had “all the charm of a predominantly agricultural area, untouched by the invasion of industry”. This ignores the nine ironstone mines that operated within the council area, including the substantial standing remains of the Warren Moor mine. At approximately the same time the Skelton and Brotton Urban District Council published a guide to their area, choosing to omit the ‘urban’ part of their name from the title. At this time a number of ironstone mines were still operating in the council area, including the last Cleveland ironstone mine, North Skelton. The long standing presence of the industry is acknowledged, however the author was keen to show that the district was moving on from its dependence on mining.⁷ A great deal of hope for the future was pinned on the Skelton Trading Estate. It was pointed out that “the southern part of the urban district is completely free of the iron industry”.⁸ The Skelton and Brotton Council produced a revised guide in the early 1960s and this

³ David Gerrard, *The Victorian & Edwardian North Riding* (Stroud: Amberley Publishing, 2008), 5 – 7.

⁴ Eston Urban District Council, *Eston Urban District: District Handbook 1946 – 48* (London: Pyramid Press Limited, 1946), 12.

⁵ Eston Urban District Council, *Eston Urban District, Yorks: The Official Guide* (Croydon: The Home Publishing Co., n.d., ca. 1955), 9 and 13.

⁶ Stokesley Rural District Council, *Stokesley Rural District, Yorkshire: The Official Guide* (Croydon: The Home Publishing Co., n.d., ca. 1950), 2.

⁷ Skelton and Brotton Urban District Council, *Skelton and Brotton and District, North Riding – Yorkshire: Official Guide* (London: The Homeland Association Ltd., n.d., ca. 1950), 5.

⁸ Skelton and Brotton Urban District Council, *Skelton and Brotton and District*, 10.

shows little change in tone. Descriptions of the district emphasise topography, nature and the remains of ancient human activity.⁹ The iron and steel industry is described as a long term “staple” of local industry, but that it had “caused none of the major eyesores found on Tees-side”.¹⁰

In 1949, the year that the Eston Mine closed, the Teesside Chamber of Commerce and Teesside Industrial Development Board published ‘Tees-side Enterprise’, designed to promote local firms to potential customers. The emphasis was on diversification of the industrial base, away from a dependence on the iron and steel industry, with the Foreword pointing out that Teesside was also home to chemical plants, shipyards and engineering works.¹¹ As part of its pitch to attract businesses to the area even this industry focused publication was keen to emphasise the “natural beauty” of Teesside.¹² Based on their successful role in tackling inter-war unemployment in South West Durham hopes were pinned on the development of a number of trading estates.¹³ Problems with regenerating the Teesside economy continued and in 1960 two academics produced a follow-on assessment of its economic position.¹⁴ By this time only three ironstone mines were still operating and “economically extractable supplies approach exhaustion”.¹⁵ House and Fullerton stated that, but for the increase in positions at ICI and on the Skelton Trading Estate, unemployment on Teesside would have increased with the decline of the Cleveland ironstone industry. At the time the report was issued less than 1,000 men were employed in the industry, down from a peak of approximately 8,000, and the end had become inevitable. During the late 1960s there was hope that there would be an industrial boom on Teesside. Kielder Water was developed to provide water to the anticipated expansion that never materialised.¹⁶

At the start of the 1970s the NRYCC issued an ‘alternative’ guide to the county with the aim of attracting businesses, new residents and visitors.¹⁷ It was a rather subdued version of ‘Tees-side Enterprise’. At the time of publication, the county was part of the Northern Development Area with grants available to attract businesses. Ironstone mining was largely avoided and downplayed. At Rosedale the nineteenth-century mines were incorrectly said to have left “only slight trace” with the

⁹ Skelton and Brotton Urban District Council, *Skelton and Brotton and District: The Official Guide* (Cheltenham: Ed. J. Burrow & Co. Ltd., n.d., ca. 1962), 5.

¹⁰ Skelton and Brotton Urban District Council, *Skelton and Brotton and District: Official Guide*, 8.

¹¹ J.H. Thompson, *Tees-side Enterprise* (Derby: Bemrose Publicity Company Limited, 1949), 35.

¹² Thompson, *Tees-side Enterprise*, 68 – 70.

¹³ I.G. Simmons, *An Environmental History of Great Britain: From 10,000 Years Ago to the Present* (Edinburgh: Edinburgh University Press, 2001), 214.

¹⁴ J.W. House and B. Fullerton, *Tees-side at Mid-Century: An Industrial and Economic Survey* (London: Macmillan & Co Ltd, 1960), Foreword.

¹⁵ House and Fullerton, *Tees-side at Mid-Century*, 146 – 147.

¹⁶ Simmons, *An Environmental History*, 246.

¹⁷ B.H. Belshaw, *The North Riding of Yorkshire: The Official County Handbook* (Cheltenham: Ed. J. Burrow & Co. Ltd., n.d., ca. 1970), 9 – 10.

valley “restored to farmers” and the “happiest of holiday-makers”.¹⁸ The desire to create local employment opportunities was driven by a fall in jobs available within commuting distance, including Teesside.¹⁹ Then, as now, the Council was struggling with the need to provide jobs without spoiling the area as a tourist destination. After the 1974 local government rearrangement a single executive authority took over the control of each National Park. Shortly afterwards the North York Moors National Park (NYMNP) issued a National Park Plan. This shows that at this time the remains of industry were generally seen as a problem to be addressed rather than as assets. Whilst adding “variety to the landscape” some were viewed as “ugly scars” with “most unattractive” abandoned machinery.²⁰ In the Cleveland area of the NYMNP reclamation was identified as the solution, whilst in North Yorkshire the recreational potential was to be explored. This division of approach has endured.

2.1.2 National Government Interventions

The study of national government policies on the regeneration of economically disadvantaged areas and their impact is an established research area that will not be explored in this work. The North East of England has “one of the longest histories of local and regional policy interventions” aimed at attracting inward investment.²¹ Driven by a fear of high unemployment, the industrial core North-East England had been designated a Special Area pre-WWII and a Development Area post-war. Whilst there was “severe unemployment” across the Cleveland ironstone mining area it received less attention as it impacted a “comparatively small population”.²² This section briefly outlines the application of regeneration initiatives since the 1980s.

Wetherell summarises the thinking and ideology behind the evaluation of enterprise zones, from the Non-Plan movement in the late 1960s through their implementation in the early 1980s.²³ Designed to address a perceived crisis in British cities “facing simultaneous economic and demographic collapses” the focus was solely on urban areas. The initial wave of 14 did not include Teesside, which was added in 1987 when the Teesside Development Corporation was formed. With a narrow focus on economic regeneration the remains of the industrial past of the area were assigned no

¹⁸ House and Fullerton, *Tees-side at Mid-Century*, 41.

¹⁹ House and Fullerton, *Tees-side at Mid-Century*, 17.

²⁰ North York Moors National Park, *North York Moors National Park Plan Summary* (Helmsley: North York Moors National Park, n.d., ca. 1977), 12.

²¹ David Byrne, “Deindustrialization, planning and class structure: A study of the effects of social policy on social structure,” (DPhil thesis, University of Durham 1993), 91.

²² Northern Industrial Group, *North East Coast: A Survey of Industrial Facilities – Comprising Northumberland, Durham and the North Riding of Yorkshire* (Newcastle: Andrew Reid & Co. Ltd., 1949), 134.

²³ Sam Wetherell, “Freedom Planned: Enterprise Zones and Urban Non-Planning in Post-War Britain,” *Twentieth Century British History* 27, no. 2, (2016): 268 – 276.

value and were to be swept away in the name of progress. Figure 80 summarises the development bodies, in green, that have been in place on Teesside since then. Most recently these have been linked more strongly to the local authorities via the Tees Valley Combined Authority. There is no equivalent structure in rural areas.

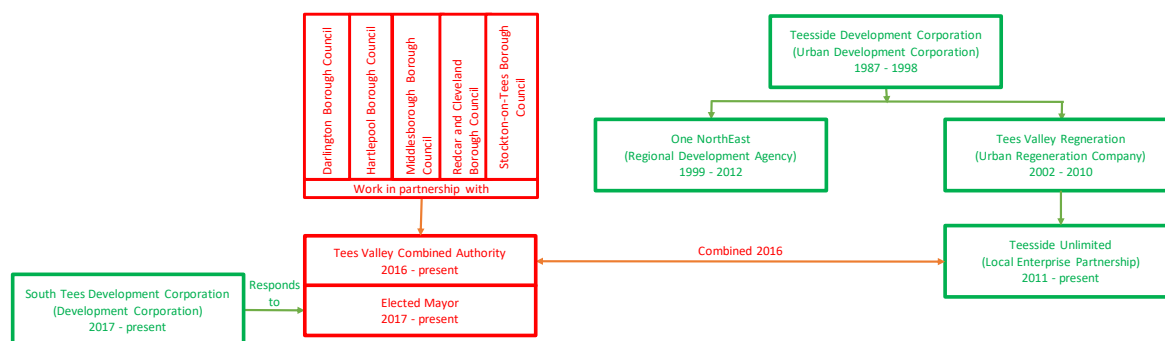


Figure 80: Teesside regeneration bodies

2.2 Leven Vale Cottages

This section discusses perceptions of the Kildale area, where Leven Vale Cottages sat, written since ironstone mining ceased in the area in 1874. The reasons behind any changes and their links to mining history are discussed.

By the time Fletcher was writing, mining around Kildale was long gone. Given that he was producing a ‘Picturesque History of Yorkshire’ it would not be surprising if industrial features, current or historic, were omitted. At Kildale he limited himself to observing that the settlement was close to the Captain Cook Monument and that members of the Percy family, the Dukes of Northumberland, are buried there.²⁴ M. Heavisides also makes no mention of industry at Kildale. He visited Kildale on Coronation Day 1902 and found the residents celebrating “in the picturesque grounds in front of Kildale Hall”.²⁵ He found the landscape “very beautiful”, with the scenery enhanced by the “deep blue haze” hanging above “the distant hills”. Home, originally published in 1904, described what he saw during a walking tour around an area including three of the five case study settlements, excepting Eston and Rosedale. He passed through Kildale 30 years after the local mines closed and, despite poor weather that gave him the impression that the moors above the village were “uninhabited and inhospitable-looking”, formed a favourable impression of the valley itself.²⁶ Very much in the picturesque and romantic rural tradition Home was taken by the pastoral valley and the

²⁴ J.S. Fletcher, *A Picturesque History of Yorkshire: Divisional Volume VI* (London: Blackwood, Le Bas & Co., 1901), 266 – 269.

²⁵ Michael Heavisides, *Rambles in Cleveland and Peeps into the Dales on Foot, Cycle and Rail* (Guisley: M.T.D. Rigg Publications, 1988), 107 – 108.

²⁶ Gordon Home, *Yorkshire: Coast and Moorland Scenes* (London: Adam and Charles Black, 1907), 111 – 113.

wide range of colours it presented after the moors. He liked the setting of the “little village of Kildale” that nestled in the valley. No mention of any industry in the vicinity was made.

The Victoria County History (VCH) describes Kildale as a “wild moorland parish on the slopes of the hills where the River Leven takes its rise”.²⁷ Unusually for a source of this date Curtis did mention that ironstone had been worked in the parish in the past.

Harland found Kildale more attractive than its neighbours to the east calling it a “good little village”.²⁸ Although apparently supportive of plans to ensure the long term economic prosperity of Teesside, when leaving the area he passed through Kildale and was “glad that the great fold of hill to my left” would mark “the southernmost limit [of] the new industrial expansion”.

The North Yorkshire volume of the ‘Villages of Britain’ series makes no reference to industry in the introduction.²⁹ Kildale was the only one of the case study settlements in the county that has an entry. The text does not include any reference to mining or quarrying.³⁰ In a 1979 revision of a guide to the NYMNP, first published in 1966, it was acknowledged that the landscape was not natural but the product of thousands of years of human activity. Industry is covered but the tone was set by comments stating that in comparison to “the industrial corner of Cleveland” which had been “scarred by extensive ironstone workings” the “moorland has remained almost unspoiled”.³¹ Keen to promote walking as a way of exploring the history of the moors it is surprising that no mention was made of the Warren Moor mine site, particularly the predominant chimney next to a public footpath.

Concluding his chapter on the ironstone industry in Kildale Anthony expressed the opinion that those who “love the beauty of Kildale” should be glad that the industry had not prospered as: “Instead of a small rural village, Kildale could have become an urban blot on the landscape with streets of identical mean little cottages crammed together.”³² This is another example of the disdain for industrial landscapes felt and expressed by those in rural communities. Monumental elements, such as the Warren Moor Chimney, and picturesque ruins, such as the Lonsdale Vale Mine remains, are accepted as enhancing the landscape but anything more substantial is viewed in a negative light.

²⁷ Myra Curtis, “Kildale,” in *The Victoria History of the County of York: North Riding, Volume 2*, ed. William Page (London: The St. Catherine Press, 1923), 249.

²⁸ Oswald Harland, *Yorkshire: North Riding* (London: Robert Hale Limited, 1951), 125.

²⁹ North Yorkshire Federation of Women’s Institutes, *The North Yorkshire Village Book* (Newbury: Countryside Books, 1991), 5.

³⁰ North Yorkshire Federation of Women’s Institutes, *The North Yorkshire Village Book*, 139.

³¹ Alec Wright, “General Description of the National Park,” in *North York Moors: National Park Guide No. 4*, ed. Arthur Raistrick (London: Her Majesty’s Stationary Office, 1979), 3.

³² Cedric Anthony, *Glimpses of Kildale History* (The Chew Valley: Geni Printing, 2012), 380.

Two of the best known travel guide series first published in the nineteenth-century ceased to be produced in the 1970s; Ward Lock and Baedeker. The market for published guides persists and currently the three best known brands are Eyewitness, Lonely Planet and Rough Guides. Their first editions covering Great Britain appeared in 1995, 1995 and 1996 respectively. Kildale was not mentioned in the national level guides. At a regional level some twenty first century guides do include Kildale, but none make reference to any industrial history. Bagshaw mentions it as a way to access walks using public transport.³³ Morrison's only reference to the nineteenth-century was the arrival of the railway.³⁴

Increasingly people rely on internet content to obtain information on places of interest. Wikipedia is an example of a commonly utilised data source of this type. The entry for Kildale is not supported by reliable citations, which is flagged on the site.³⁵ Attempts to link the 1881 peak population to ironstone mining are simply wrong. Mining had ceased some years before and the census shows that the main industrial activity at the time was whinstone quarrying. A more reliable on-line source is the NYMNP website. Kildale does not have a dedicated page but the Industrial Archaeology section contains a comprehensive summary of the history of the Warren Moor site.³⁶ This dates the demolition of the Leven Vale Cottages to 1927.

2.3 Grosmont

This section discusses perceptions of Grosmont written since mining ceased in 1891.

In common with many of his contemporary commentators Fletcher found the River Esk "one of the most picturesque and interesting of the minor rivers of Yorkshire" with "charming and often very romantic" scenery.³⁷ He was unusual in devoting more space to the ironstone industry than to the Priory. The village developed "considerably" after ironstone was found and Fletcher considered that "it now presents the somewhat incongruous spectacle of a place enjoying the advantages of a wonderfully beautiful situation, and of the less beautiful advantages of a mining industry."³⁸ The village was said to be "quite" populous, although by this time the number of residents had dropped considerably from the peak. Fletcher rather overstated the amenities in the village, claiming "places of worship, institutes, libraries, and the like", but concluded that "its commercial success has not

³³ Mike Bagshaw, *Slow Travel: North York Moors & Yorkshire Wolds* (Chalfont St Peter: Bradt Travel Guides Ltd, 2018), 23 – 26.

³⁴ John Morrison, *Mini Guides: North York Moors* (Basingstoke: AA Publishing, 2007), 56.

³⁵ "Kildale," *Wikipedia*, 2019, accessed Feb 25, 2019, <https://en.wikipedia.org/wiki/Kildale>

³⁶ "Warren Moor," *North York Moors National Park*, n.d., ca. 2015, accessed Feb 25, 2019, <https://www.northyorkmoors.org.uk/discover/archaeology/industrial-archaeology/warren-moor>.

³⁷ Fletcher, *Picturesque History of Yorkshire*, 339.

³⁸ Fletcher, *Picturesque History of Yorkshire*, 334.

destroyed the charm of its situation amongst the moors and Hills". Overall his was an unexpectedly positive reaction to Grosmont for early twentieth-first century writers.

M. Heavisides admired the scenery along the Esk Valley when he took the train to Whitby in 1902.³⁹ He was generally complementary about the settlements along the line, except where the remains of industrial activity were evident. Glaisdale was considered marred by "the masses of debris from the old blast furnaces". Grosmont escapes such severe censure but was incorrectly labelled as where "the first ironstone was turned into iron in the Cleveland district". Writing at approximately the same time Morris was a harsher critic of the impact of industry and was pleased that the "hideous blast furnaces have disappeared, and the slag heaps are now slowly disappearing".⁴⁰ He could not "profess to regret their disappearance, or the consequent restoration of these beautiful places to their natural and primitive beauty".⁴¹ Home was also not impressed with what humans had done to Grosmont. The "modern influences" were said to have made the village "architecturally depressing".⁴² Descending towards the village Home came across the "enormous heaps above the pits of the now disused iron-mines".⁴³ Despite Grosmont's origin as the birthplace of Cleveland ironstone mining he referred to it as a "dull place" where nature was trying to "make amends for this uninteresting spot". Home regretted that the confluence of the Esk and the Murk Esk rivers was "lost in a haze of smoke and a confusion of roofs and railway-lines". This was a rather exaggerated reaction as the spot mentioned is some distance from the village.

Immediately post WWI writers were generally less overtly judgemental about the impact of industry. Weston called Grosmont "a beautiful place".⁴⁴ Given that the ironstone industry had operated there for over 50 years he somewhat underplayed its role by stating that "the dismantled furnaces and slag heaps will show that the iron industry failed to establish itself here". Taylor thought that Grosmont was "not an interesting village at first sight" but identifies it as an important railway junction and a good base for angling and exploring the district.⁴⁵ He considered that the blast furnaces, by then demolished, "have turned the green into black".

³⁹ M. Heavisides, *Rambles in Cleveland*, 116 – 118.

⁴⁰ Joseph E. Morris, *The North Riding of Yorkshire* (London: Methuen & Co., 1904), 168.

⁴¹ Morris, *The North Riding of Yorkshire*, 18 – 19.

⁴² Home, *Yorkshire: Coast and Moorland Scenes*, 17.

⁴³ Home, *Yorkshire: Coast and Moorland Scenes*, 21 – 22.

⁴⁴ Capt. W.J. Weston, *The North Riding of Yorkshire* (Cambridge: The University Press, 1919), 149.

⁴⁵ Ernest E. Taylor, *'Handy' Guide Series 3: Yorkshire Moors & Sea* (London: British Periodicals Limited, 1920), 45.

The VCH included Grosmont in the section on the Parish of Egton, even though it had been a separate parish since 1852.⁴⁶ Russell refers to Atkinson on the local ironstone mining industry in the area. She correctly stated that the mines were disused and that “Grosmont has still slag merchants, quarries and brick manufacturers”.

The twelfth Edition of Ward Lock’s Red Guide to Scarborough and the Yorkshire coast, aimed at motorists touring the area, recommended Grosmont as a base for fishing but refers to the settlement as an eyesore.⁴⁷ The author was obviously not aware of the origins of the village as they stated “what was evidently at one time a picturesque village having been completely spoilt by great heaps of slag from the disused iron and alum works”. Writing at the end of the 1940s Brown targeted the walking fraternity and displayed a particular fondness for finding pubs and describing the weather. Visiting the Esk Valley he thought that “its pristine beauty has been somewhat tarnished by progress and industry”.⁴⁸ Not an enthusiast for either of these he found his walk through Arncliffe Woods marred by people working to replace bridges that had been washed away in a flood. Comment on Grosmont was avoided but in adjacent Beck Hole ironstone mining was sufficiently in the past for it to be described as a “lovely little village”. In describing a visit to the Esk Valley Harland was clearly happy that “Grosmont, like Glaisdale, has seen the rout of the iron-miner”.⁴⁹ He did however acknowledge that settlements are the enduring legacy of the Cleveland ironstone industry.

Writing in 1966 Pevsner, with his focus on architecture, was intrigued by the ogee-headed windows of both the Station Tavern and Whitby & Pickering Railway (W&PR) Warehouse.⁵⁰ He also found he approach to St. Matthew’s Church, over the suspension bridge with the two railway tunnels ahead, interesting. He did identify that a horse-drawn railway passed through the smaller tunnel from 1836 but, his narrow focus on architecture did not allow for an exploration of why the built elements were there. Mee and Beckwith were not as architecturally focused as Pevsner but the approach was very much in the same vein. Originally published in 1941 the North Riding of Yorkshire volume of ‘The King’s England’ series was re-issued as an updated edition in 1970.⁵¹ The Introduction makes it clear

⁴⁶ Ada Russell, “Egton,” in *The Victoria History of the County of York: North Riding, Volume 2*, ed. William Page (London: The St. Catherine Press. 1923), 343.

⁴⁷ Ward, Lock & Co. Limited, *Guide to Scarborough and the Yorkshire Coast* (London: War, Lock & Co. Limited, 1940), 183.

⁴⁸ A.J. Brown, *Striding Through Yorkshire: Revised Edition*, (Country Life Ltd.: London, 1949), 214 – 217.

⁴⁹ Harland, *Yorkshire: North Riding*, 128.

⁵⁰ Nikolaus Pevsner, *The Buildings of England: Yorkshire: The North Riding* (Penguin Books: London, 1992), 176 – 177.

⁵¹ Arthur Mee and Frank Beckwith, *The King’s England: Yorkshire: North Riding* (London: Hodder and Stoughton, 1970), unnumbered.

that the authors were not keen on industrialisation, describing the North Riding as “unmarked by industry” except for Teesside, which they were reluctant to describe as they view it as “not pretty” and somewhere tourists do not go.⁵² In a rather patronising way they acknowledged that Middlesbrough was instrumental in the setting up of the NYMNP to give its residents somewhere to escape from their “uninspiring surroundings”. The low number of visitors from Teesside are a concern to the NYMNP in the twenty-first century. Askins was commissioned to investigate whether perceptions of national parks as rural spaces for the white population existed and presented a barrier to visits from multi-ethnic urban areas.⁵³ One of her case studies was Middlesbrough, 6.3% non-white, and the NYMNP.⁵⁴ Askins concluded that the national parks needed to undertake more outreach work to engage with this population.⁵⁵ The hijacking of the NYMNP by middle-class incomers was anticipated by Mee and Beckwith who foresaw the loss of job opportunities and the rise of second home ownership. The latter has had a big impact on Grosmont and Rosedale. The re-opening of the W&PR between Grosmont and Pickering was being planned when Mee and Beckwith were writing, but they make no mention of any other industrial activity at Grosmont.⁵⁶

By the time Hammond wrote his Yorkshire travel guide, mining at Grosmont had ceased over 80 years before.⁵⁷ He made no mention of industry in the village, or any other Esk Valley settlement, but highlighted it as a good centre for walkers and anglers. Writing to celebrate the centenary of the re-building of St. Mathew’s Church, Grosmont, Clarke and Soulsby reflected a view of the remains of industry that was prevalent in the 1970s. They said:

In the short space of 145 years, the village, which in 1830 was a collection of small holdings scattered round the periphery of the parishes from which the ecclesiastical parish of Grosmont was taken, has now practically returned to its original state. Mother Nature has thrown her kindly mantle of green over most of the man-made sores created by a century of industry, and within a few years the industrial past will be completely forgotten.⁵⁸

They made this prediction at a time when there was an increased interest in industrial archaeology and rather than being forgotten the interest in the remains of industry has increased.

⁵² Mee and Beckwith, *Yorkshire: The North Riding*, 1 – 4.

⁵³ Kye Askins, ‘Multicultural Country/side? Visible Communities’ perceptions and use of the English National Parks,’ (DPhil thesis, University of Durham, 2004)

⁵⁴ Askins, ‘Multicultural Country/side?,’ 9

⁵⁵ Askins, ‘Multicultural Country/side?,’ 202.

⁵⁶ Mee and Beckwith, *Yorkshire: The North Riding*, 82.

⁵⁷ Reginald J.W. Hammond, *Complete Yorkshire* (London: Ward Lock Limited, 1973), 85 – 88.

⁵⁸ B.W. Clarke and Dr. J.A. Soulsby, *The Story of Grosmont: Church and Village* (Grosmont: B.W. Clarke, 1975), 20.

Discussing the remains of industry within the NYMNP Raistrick highlighted “heaps of mine debris “ around Grosmont as one of the elements that “remind the visitor of a chapter of history now closed but formerly of great economic importance for the area”.⁵⁹ He was however not an enthusiast for the remains saying that:

Industry has dealt in a kindly fashion with the North York Moors and its scars are now overgrown but make features still clear enough to provide interest yet not such as to disfigure the scene.

The role of Grosmont in establishing the Cleveland ironstone industry was correctly outlined but it is with respect of its role as a railway junction that most mention of the settlement was given. The NYMNP Authority was keen to explore the potential of the North Yorkshire Moors Railway (NYMR) to interpret “the landscape of the Park to the visitor”.⁶⁰ A conflict between the preservation of landscapes and securing access for visitors lies at the heart of the national park movement.

Concluding his 1981 history of Grosmont, which acknowledges the industrial origin of the village, Counsell perpetuated the familiar theme of the scars of the industrial past healing.⁶¹ He stated that the village has a ‘rural character’, which was at odds with the mode of its development, and functioned as a dormitory settlement for those commuting to work elsewhere. Counsell predicted that tourism would become important to the prosperity of the village, and this has occurred.

Writing in 1994 about the Bagnall family’s involvement at Grosmont in the ‘Industrial Railway Record’ it could be expected that Shill and Minter would have had a more sympathetic attitude towards the remains of industry. However to them it appears that railway remains are more acceptable than the remains of other industries. They introduced their article by saying:

There are certain parts of Britain where the ravages of industry have been repaired by nature, so that it is now difficult to tell where industry’s handiwork has been. In fact (sic) some are now considered to be quite scenic locations to visit.⁶²

The NYMR was identified as one such place. The NYMNP published a guide to the park in 2001 to celebrate the fiftieth anniversary of its founding. It was very much focused on promoting the park as

⁵⁹ Arthur Raistrick, “Industrial History,” in *North York Moors: National Park Guide No. 4*, ed. Arthur Raistrick (London: Her Majesty’s Stationary Office, 1979), 56.

⁶⁰ D.C. Statham, “The Work of the National Park Authority,” in *North York Moors: National Park Guide No. 4*, ed. Arthur Raistrick (London: Her Majesty’s Stationary Office, 1979), 79.

⁶¹ David Counsell, *A Short History of Grosmont, North Yorkshire* (Whitby: Whitby Literary and Philosophical Society, 1981), 31.

⁶² Ray Shill and Ian Minter, “The Bagnall Family and Grosmont Furnaces,” *Industrial Railway Record* 12, no. 137 (1994): 288.

a tourist destination. Industry was discussed but there was little acknowledgement of the scale and impact of the Cleveland ironstone industry, instead alum was said to have been “the most extensive extractive industry in the history of the North York Moors”.⁶³ This perpetuates an imbalance in coverage that is present in much literature. Ironstone from the area was mentioned as having given impetus “to the iron and steel industry of Middlesbrough”, but this was not linked to Grosmont. No mention of ironstone mining in the area was made and the village was presented as a tourist destination for train enthusiasts.⁶⁴ Sampson was glad that “nature has masked many of the scars of the nineteenth-century mineral exploitation of the moors”.⁶⁵

The Rough Guide described Grosmont as “little more than a level-crossing station and a couple of tea rooms” that was busy in summer.⁶⁶ In common with all twenty-first century guides the emphasis was very much on the NYMR. The Eyewitness Travel Guide took this to the extreme by covering the railway but not including Grosmont in the index.⁶⁷ Regional guides generally covered industry at Grosmont as well as the NYMR, although Vesey failed to do so.⁶⁸ Morrison correctly linked the discovery of ironstone to the building of the railway and gave a concise summary of the role of industry in the growth of the village.⁶⁹ Bagshaw focused on the NYMR and was far from complementary about the industrial past, calling Grosmont and Glaisdale “two survivors of a brutal industrial past”.⁷⁰

The NYMNP website makes no reference to Grosmont on the Industrial archaeology page, a rather glaring omission. The village does have a dedicated page which states that it “was once a hive of industry but is now a peaceful village”.⁷¹ Ironstone mining is identified as being responsible for the size of the village, noted as now being dominated by the railway. This and walking are given as the main attractions. In this instance the Wikipedia page for Grosmont gives much more information on the industrial history of Grosmont than the NYMNP site.⁷² The article is well referenced and

⁶³ Ian Sampson, *The Official National Park Guide: North York Moors* (Newton Abbot: Pevensey Press, 2001), 30.

⁶⁴ Sampson, *North York Moors*, 96.

⁶⁵ Sampson, *North York Moors*, 57 – 58.

⁶⁶ Robert Andrews et al., *The Rough Guide to Britain* (New York: Rough Guides, 2004), 709.

⁶⁷ Michael Leapman, *Eyewitness Guides: Great Britain* (London: DK, 2004), 308.

⁶⁸ Barbara Vesey, *Country Living Magazine Guide to Rural England: The North East of England* (Aldermaston: Travel Publishing Ltd., 2006), 122.

⁶⁹ Morrison, *Mini Guides: North York Moors*, 45 – 49.

⁷⁰ Bagshaw, *Slow Travel*, 51.

⁷¹ “Grosmont,” *North York Moors National Park*, n.d., ca. 2015, accessed Feb 25, 2019, <https://www.northyorkmoors.org.uk/visiting/see-and-do/attractions/grosmont>.

⁷² “Grosmont, North Yorkshire,” *Wikipedia*, 2018, accessed Feb 2019, https://en.wikipedia.org/wiki/Grosmont_North_Yorkshire

provides a concise summary of how and why the village developed. A weakness is a focus on listed buildings when highlighting landmarks, which results in an over emphasis on railway structures.

2.4 Liverton Mines

This section discusses perceptions of Liverton Mines written since mining ceased in 1923.

Walking up the coast from Whitby when he reached Loftus, adjacent to Liverton Mines, Harland commented that it was “the fringe of a new population area whose focal point is Middlesbrough and whose life lies with coal, iron and steel”.⁷³ Even though he had worked in industrial communities Harland was far from comfortable amongst their populations. His dislike for the people may have coloured his judgement when he said that Loftus and Skinningrove were “sad, unlovely places”.⁷⁴ Writing at a time when the Cleveland ironstone industry was drawing to a close McDonnell stated that travellers to the area would have seen little evidence of mining other than “the occasional whale-back of a monster shale-tip like a gravestone over some dead mine such as Liverton”.⁷⁵

As was his normal focus Pevsner concentrates on St. Michael’s Church when discussing Liverton. He made no mention of Liverton Mines but made his ambivalence towards the remains of industry clear by stating: “Liverton still has the countryside to itself, but a mile N you are in the industrial coast strip of the North Riding and among the slag heaps.”⁷⁶ He would probably prefer the view now that all bar the Kilton tip have been either removed or landscaped. Mee and Beckwith shared a negative view of Liverton Mines, saying that the area scarred the landscape.⁷⁷

In his foreword to Horton the Chairman of Cleveland County Council (CCC) made it clear that Horton can be viewed as an authorised history of the Authority, capturing the authorities view of places under its watch.⁷⁸ The Liverton Mine was mentioned in passing as the first shaft sunk in the Loftus area, after the arrival of the railway.⁷⁹ Facts are presented without value judgements being made except to observe that overcrowding caused by the influx of workers resulted in Loftus “to know crime, drunkenness and fighting on an unprecedented scale”. The foreword to the Cleveland volume of the ‘Villages of Britain’ series acknowledged that the area had a history of involvement in a range of industries, including extractive ones, but choose to conclude that “despite all the industry

⁷³ Harland, *Yorkshire: North Riding*, 78.

⁷⁴ Harland, *Yorkshire: North Riding*, 128.

⁷⁵ John McDonnell, “End of Cleveland Iron Age - a Chapter in Industrial History,” *Iron and Steel Trades Review* February 13 (1959): 379.

⁷⁶ Pevsner, *Yorkshire: The North Riding*, 229.

⁷⁷ Mee and Beckwith, *North Riding*, 127.

⁷⁸ Minnie C. Horton, *The Story of Cleveland: History, anecdote and legend* (Middlesbrough: Cleveland County Libraries, 1979), xi.

⁷⁹ Horton, *The Story of Cleveland*, 386.

Cleveland is a beautiful county”, perpetuating the narrative of ‘rural good, industry undesirable’.⁸⁰ Liverton Mines did not have an entry but that for nearby Liverton referred to ironstone mining. This indicated a sense of relief that the village had “escaped being developed as a dormitory for the influx of miners to the area from all over the country” and had managed to retain “its rural farming community atmosphere even to the present day”.⁸¹

East Cleveland was given scant notice in the twenty-first century travel guides and Liverton Mines is not covered at all. Unusually amongst the sources referred to, Liverton Mines has a longer entry than Liverton in Wikipedia. Still it is limited and includes no references.⁸² The settlement is at least correctly identified as associated with the Cleveland ironstone industry.

Liverton Mines was included within the area covered by the East Cleveland Area Spatial Framework of the Redcar and Cleveland Regeneration Masterplan produced by Redcar and Cleveland Borough Council (R&CBC). Their somewhat conflicted attitude to this area of their borough was clear in the version issued in 2010, covering the period to 2025. The vision was to turn the district into “one of the most popular districts in the North of England”, with increased visitor numbers bringing prosperity whilst maintaining the “environment and heritage assets of the coast and countryside that render it attractive in the first place”.⁸³ There was a focus on the Heritage Coast and the small part of the borough that falls within the NYMNP. These boundaries were seen as desirable but industrial Teesside as a problem. Whilst the “prosperous rural hinterland” did cover a larger area than the “areas of severe deprivation” more of the population lived in the latter.⁸⁴ The text may focus on the rural but the projects identified were almost exclusively in the urban areas of the district.⁸⁵ One of these was the development of an industrial heritage trail linking Middlesbrough / Redcar to East Cleveland. Such a trail has been produced but this does not mention Liverton Mines, or even include it on the map. The settlement once again loses out by being neither an attractive rural village nor a large industrial town. In the Local Plan issued by R&CBC in May 2018 Liverton Mines was barely mentioned at all. The settlement is a member of the East Cleveland Villages Big Local Partnership, set up in 2013 to “improve opportunities and facilities within the area”.⁸⁶ The Partnership is in agreement with the R&CBC in wishing to promote the area as a tourist destination

⁸⁰ Cleveland Federation of Women’s Institutes, *The Cleveland Village Book* (Newbury: Countryside Books, 1991), 5.

⁸¹ Cleveland Federation of Women’s Institutes, *The Cleveland Village Book*, 91.

⁸² “Liverton Mines,” *Wikipedia*, 2018, accessed 25 Feb 2019, https://en.wikipedia.org/wiki/Liverton_Mines.

⁸³ Redcar and Cleveland Borough Council, *Redcar and Cleveland Regeneration Masterplan: East Cleveland Area Spatial Framework* (Guisborough: Redcar and Cleveland Borough Council, 2010), 5 – 6.

⁸⁴ Redcar and Cleveland Borough Council, *Regeneration Masterplan: East Cleveland Area*, 10.

⁸⁵ Redcar and Cleveland Borough Council, *Regeneration Masterplan: East Cleveland Area*, 18.

⁸⁶ East Cleveland Villages Big Local, *East Cleveland Villages Plan* (London: Local Trust, 2013), 3.

and has staged a professional cycle race since 2017 to attract visitors.⁸⁷ It is called The East Cleveland Klondike Grand Prix and is focused on celebrating the East Cleveland villages it passes through, including Liverton Mines. The 2019 running of the race took place on April 14 and the Liverton Mines Village Hall was open for refreshments and fete stalls. In describing the race route the focus was very much on the scenery and landscape, with a desire to distance the area from its industrial past.

2.5 Rosedale

This section discusses perceptions of Rosedale written since mining ceased in 1928.

Under the Town and Country Planning Act of 1932 planning control was extended to all types of land, with the power resting with the local government level below county, unless relinquished.⁸⁸ The Ryedale Branch of the Council for Preservation of Rural England prepared a report intended to inform the planning powers scheme being prepared by the NRYCC about the district, including Rosedale.⁸⁹ Wishing to maintain the amenity value of the area the report pointed out things the Ryedale Branch members considered would spoil the countryside. Written about a decade after mining ended a “few desolate houses at Rosedale Chimney and Blakey Ridge” were noted.⁹⁰ Overall the area was said to be “as yet, but little disfigured by the hand of man”.⁹¹ The rails and sleepers had been removed from the Rosedale mineral line, and the route was not seen as intrusive. Housing built for the miners was held up as an example of “what uncontrolled building is capable”.⁹² The cottages were described as “sad examples of an utilitarian and industrial age”, and Duncombe, a local landowner, thought it would be difficult to find a “more deplorable” form of housing.⁹³

Ward Lock described Rosedale as a “valley which has much of the simple beauty associated with its name”, though it was pointed out that the name does not derive from the flower.⁹⁴ The ironstone mines were described as having “long been deserted” despite working having only ceased just over a decade before. They were probably considering only the West Mine, something that a number of

⁸⁷ “East Cleveland Klondike Grand Prix Est. 2017,” *East Cleveland Villages Big Local*, 2019, accessed April 15 2019, <http://eastclevelandklondikegp.co.uk/>

⁸⁸ John Sheail, “The Introduction of Statutory Planning in Rural Areas: The Example of the North Riding of Yorkshire,” *The Town Planning Review* 50, no. 1 (1979): 73.

⁸⁹ The Rt. Hon. The Earl of Feversham, “Note,” in *Ryedale: A Report on the District*, ed. Colonel C.W.E. Duncombe (Appleton-le-Moor: Ryedale Branch: Council for the Preservation of Rural England, circa 1935), 10.

⁹⁰ Catharine J. McDougall, “Landscape Study,” in *Ryedale: A Report on the District*, ed. Colonel C.W.E. Duncombe (Appleton-le-Moor: Ryedale Branch: Council for the Preservation of Rural England, circa 1935), 19.

⁹¹ Colonel C.W.E. Duncombe, “Landscape Study,” in *Ryedale: A Report on the District*, ed. Colonel C.W.E. Duncombe (Appleton-le-Moor: Ryedale Branch: Council for the Preservation of Rural England, circa 1935), 20 2

⁹² Duncombe, *Landscape Study*, 23.

⁹³ *Ibid.*

⁹⁴ Ward, Lock & Co., *Guide to Scarborough*, 124.

commentators do, giving the impression that they did not venture to Rosedale East. A possible reason for this could be a reliance on Weston as an information source. He was a local vicar who wrote a history of his parish that had historically included West Rosedale but not East Rosedale.⁹⁵ He did mention the East Mine, which was still operating at the time of writing, but included much more information on the west-side mines, describing the ruined incline engine house with associated chimney. There were no descriptions of any mining structures on the east-side.

Pontefract and Hartley described a journey made around Yorkshire in 1939 and profess to their main interest being social history. Their description of their visit to Rosedale displays both a disdain for, and ignorance of, industrial history. They incorrectly stated that there was a smelt mill at Rosedale Bank Top from which the stone for Hutton-le-Hole Village Hall came and for which the Rosedale Chimney vented fumes from the mill.⁹⁶ Smelting is a form of processing that extracts metal from ore and was never carried out at Rosedale in the nineteenth-century. The Hutton-le-Hole Village Hall is a re-building of the Bank Top Railway Engine Shed and the chimney was the stack for the engine house that powered the incline from the West Mine. The calcining kilns were not linked to a chimney. The source of these errors may be a misinterpretation of Weston. He described the ruined incline engine-house and associated chimney and those without technical knowledge have confused the railway engine-shed with the engine-house. Weston referred to the remains of “old smelting works” in the valley side on the west side but was referring to iron working that took place prior to the nineteenth-century boom. Such confusion has led some subsequent writers to conflate these old remains with the calcining kilns. Pontefract and Hartley found irony in that Rosedale had a rural sounding name but had been “the most exploited for iron of all these dales”. Their general attitude towards industry and industrial settlements is summed up by the following quote:

There are still signs of it [ironstone mining] in the dull rows of houses built for its workers, the tipplings on the hills, and the track which carried the railway round the basin like valley to collect the ore, though the country is gradually healing itself, going back in spirit to the time when its priory for nuns stood on the banks of the river Seven.

Brown’s opinion of Rosedale was, as he admitted, coloured by the bad weather that he encountered whilst crossing the moors. He was disappointed that the old railway cottage at the former Blowath level crossing was deserted.⁹⁷ It stood “brooding over the desolation” of the abandoned mineral railway and, if not turned into an inn, wanted “blowing up as a blot on the landscape”. The isolated

⁹⁵ Rev. F.H. Weston, *History of the Ancient Parish of Lastingham* (Leeds: J. Whitehead & Son, 1914), 62.

⁹⁶ Ella Pontefract and Marie Hartley, *Yorkshire Tour*, (London: J.M. Dent and Sons Ltd., 1939), 248 – 249.

⁹⁷ Brown, *Striding Through Yorkshire: Revised Edition*, 196.

property no longer stands. Crossing the high moor Brown found the chimney at Bank Top a useful navigation marker, but was not keen on its, or the mining era cottages impact on the village.⁹⁸ They were said to overshadow it with the “hand of industry” leaving “its mark on this village of the lovely name” and resulting in “a touch of grimness”. Brown did acknowledge that mining had brought a prosperity to the dale that it no longer possessed. For a travel writer with a somewhat florid style Harland was accurate in his coverage of the industrial history of Rosedale, but this did not translate into a fondness for this aspect of the past. He was glad that the industrial endeavours listed had failed to industrialise the “North York Moors and Cleveland apart from the Middlesbrough area”.⁹⁹ When visiting the area Harland confessed that Rosedale and Rosedale Abbey “have never exerted much pull on my mind”.¹⁰⁰ The industrial remains meant that he had “never loved that walk”. McDonnell also had a negative view of Rosedale, saying that those who developed the mines had “run up hasty terraces of shoddy little cottages”, but that the dale had reverted to “its rural peace” after mining ceased.¹⁰¹ The houses were said to have been either combined to make them bigger, used as holiday accommodation or “taken over at nominal rents by old-aged pensioners who prefer the rigours of independence in Rosedale to the disciplined security of an institution”. In East Cleveland miners had “Middlesbrough and Billingham close at hand to offer him an alternative living” hence were less likely to leave the area.

When Pevsner visited Rosedale, the West Mine chimney was still standing and he did mention it.¹⁰² The calcining kilns below it were mentioned, but simply as being eight arches with no attempt to explain what they were there for. He postulated, incorrectly, that the mine dated from the early nineteenth-century. Neither the railway nor the East Mine remains received a mention. The housing was referred to as “estate housing” not company housing. Mee and Beckwith also mentioned the West Mine chimney but this was their only industrial reference in what they also called a “beautiful valley”.¹⁰³

Raistrick regretted the demolition of the Rosedale Chimney, incorrectly linked to the kilns, but regarded the railway track as the foremost industrial remnant in the NYMNP.¹⁰⁴ He provided a quite detailed description of the line and concluded that it “should be preserved and kept in condition as a splendid moorland walk”. To a large extent this has occurred. This tourist utility overcomes

⁹⁸ Brown, *Striding Through Yorkshire: Revised Edition*, 213 – 214.

⁹⁹ Harland, *Yorkshire: North Riding*, 118.

¹⁰⁰ Harland, *Yorkshire: North Riding*, 131.

¹⁰¹ McDonnell, “End of Cleveland Iron Age,” 380.

¹⁰² Pevsner, *Yorkshire: The North Riding*, 313.

¹⁰³ Mee and Beckwith, *North Riding*, 181.

¹⁰⁴ Raistrick, *Industrial History*, 56 – 61.

Raistrick's scruples regarding the traces of industry expressed in his opinion that it was fortunate that the ironstone mines in the NYMNP "have made little alteration to the scenery in spite of their great output". In addition to the loss of the Rosedale Chimney a number of the other remains of the industry standing in the 1970s have since been lost. The "gaunt skeleton of a building" marking Sheriff's Pit has disappeared.¹⁰⁵ Rosedale was the only Cleveland ironstone location in the NYMNP that Sampson links to the industry. He said that "the village became a frenzied frontier town in the nineteenth-century, when ironstone was discovered in the dale".¹⁰⁶ Rosedale was identified as one of the "tourist honeypots" in the park, with plenty of walking opportunities.¹⁰⁷ A picture of the west-side calcining kilns was included in the book, but they were dismissed as only being of interest to industrial archaeologists. Hey included an aerial photograph of Rosedale.¹⁰⁸ Hey found it "surprising to find the dale was once the home to various industries" and seemed glad that the post-industrial population had dropped dramatically, "creating the peaceful surroundings of today".¹⁰⁹

Of all the case study settlements, Rosedale attracted the most coverage in the twenty-first century travel guides and its industrial past is inevitably included. The Rough Guide called it a "trim and tidy" place that was busy in summer and where the remains of the ironstone industry "lie scattered all over the high moors round about".¹¹⁰ The Eyewitness Travel Guide included two photographs of Rosedale and stated that "this beautiful village still has some remains of the kilns from its nineteenth-century ironstone mining industry" that had been "imposed" on an agricultural landscape.¹¹¹ Vesey mentioned crowding in Rosedale during the ironstone mining era and recommended the rail track as a walking route.¹¹² She was another writer who incorrectly linked the demolished West Mines chimney to the "smelting furnaces". Morrison provided an accurate summary of ironstone mining in Rosedale which was said to be "quietly going back to nature" with the railway providing a good cycling route.¹¹³ He was perhaps rather unfair on the miners to blame them for the demolition of the Priory, the process of re-using the stone had started long before they arrived. Bagshaw also made the same claim.¹¹⁴ He found it difficult to imagine the "loud, smoky and crime-ridden" industrial past in the "fields, folds and pastoral corners" of the dale. Most of the

¹⁰⁵ Malcolm G. Barker, *Yorkshire: The North Riding* (London: B.T. Batsford Ltd., 1977), 73.

¹⁰⁶ Sampson, *North York Moors*, 104.

¹⁰⁷ Sampson, *North York Moors*, 15.

¹⁰⁸ David Hey, *A History of Yorkshire: 'County of the Broad Acres'* (Lancaster: Carnegie Publishing Ltd., 2005), 402.

¹⁰⁹ Hey, *A History of Yorkshire*, 251.

¹¹⁰ Andrews et al., *The Rough Guide to Britain*, 708.

¹¹¹ Leapman, *Eyewitness Guides: Great Britain*, 366 – 369 and 381.

¹¹² Vesey, *The North East of England*, 133.

¹¹³ Morrison, *Mini Guides: North York Moors*, 180 – 186.

¹¹⁴ Bagshaw, *Slow Travel*, 92 – 93.

information on ironstone mining was correct but for the common mistake of stating that all the ironstone had a high iron content.

Even though acknowledging that there were “dozens of ironstone mines” and several ironworks within the park the NYMNP website Industrial Archaeology page displays a bias towards Rosedale.¹¹⁵ It makes the oft repeated mistake of assigning the characteristics of the West Mines magnetic ironstone to all of the Rosedale ironstone. No ironstone of this high grade was mined post 1885. However the role of ironstone mining in generating population growth and the transformation of the village is correctly outlined. The remains of the industry around the mineral railway route are highlighted. The webpage dedicated to Rosedale Abbey does not add anything significant to this content. Wikipedia covers Rosedale on two separate pages, one for the dale and another for the village.¹¹⁶ Neither is robustly referenced and contain relatively little content on the ironstone industry. Both make interesting, but unsubstantiated, comment on the residents reaction to the impact of the rise in second home ownership. Parish Council election candidates are said to have campaigned on a platform of blocking housing development whilst so many properties lack permanent residents. Conversations with local people have unearthed anti second home sentiments so this form of campaigning would not be a surprise.

2.6 Eston

This section discusses perceptions of Eston written since mining ceased in 1949.

Writing at the time when mining ceased at Eston, Brown only mentioned the industrial Teesside belt when it was unavoidable. He climbed Roseberry Topping but said that it “has lost some of its original glory owing to the intensive mining to which it used to be subjected”.¹¹⁷ Fog obscured the views out to sea during Brown’s visit and all he could see “was a cloud of smoke that spelt Middlesbrough unmistakably”. Shortly afterwards Harland visited Teesside. His general prejudice against the industrial region of the North Riding and its population was tempered by pity for an area that had known both “prosperity and dire depression”.¹¹⁸ At the time Harland was writing there was optimism that the cycles of boom and bust could be broken by the planned industrial developments.¹¹⁹ It was predicted that the drift eastward of industrial importance would continue

¹¹⁵ “Industrial Archaeology,” North York Moors National Park, n.d., ca. 2015, accessed Feb 25, 2019, <https://www.northyorkmoors.org.uk/discover/archaeology/industrial-archaeology>.

¹¹⁶ “Rosedale, North Yorkshire,” *Wikipedia*, 2018, accessed Feb 25, 2019, https://en.wikipedia.org/wiki/Rosedale,_North_Yorkshire; “Rosedale Abbey,” *Wikipedia*, 2018, accessed Feb 2019, https://en.wikipedia.org/wiki/Rosedale_Abbey.

¹¹⁷ Brown, *Striding Through Yorkshire: Revised Edition*, 198.

¹¹⁸ Harland, *Yorkshire: North Riding*, 170.

¹¹⁹ Harland, *Yorkshire: North Riding*, 272 – 280.

past Middlesbrough towards Eston, Grangetown, South Bank and Redcar, and to a large extent this came true. Middlesbrough, a town that had given the author “a good deal of pleasure”, was beginning to lose its importance and the tendency was to speak of Teesside as a whole. The large investment by ICI at Wilton, where many former Eston miners found employment, was identified as an integral part of this process. In line with other writers at the time, trading estates were seen as a way of diversifying the employment base and ensuring “Tees-side shall never again lapse into long periods of depression”. In Harland’s opinion “a proliferation of industrial ugliness along Tees-side or its penetration far into the Cleveland Hills” was a price worth paying if plans resulted in “a clean, well-ordered industrial region” with a “well-informed, politically alert and modern-minded” population.

Mee and Beckwith dismissed Eston as “an ironstone centre not far from Middlesbrough”.¹²⁰ This comment must date from the original edition of the work as by the time the revised edition was published the mine had been closed for over 20 years. The only sites of interest on Teesside that Mee and Beckwith identify were the Transporter Bridge, ICI Wilton and the steelworks. As of 2019 the Transporter Bridge remains in use, ICI no longer exists, with the remaining Wilton plants in multiple ownership, and the steelworks are awaiting demolition. Written at the same time the Baedeker travel guide also found some of the churches and civic buildings in the town of note.¹²¹ Rather patronisingly Middlesbrough was found to be “an unexpectedly clean town”. Approaching Teesside from Stokesley, Hammond regretted that Middlesbrough had “engulfed and submerged rapidly several villages and hamlets in a somewhat formless sprawl of buildings”.¹²² Despite identifying one of the “main attractions of this town is that one can quickly escape from it to the beautiful countryside of Cleveland” he did not find it “devoid of interest”. The town serves as “an object lesson in the problems of industrial development and the achievements of the Victorians on a virgin site”. Hammond noted that much of the original town had been demolished and replaced with modern housing. This building stock has been in turn demolished and in 2019 the original town hall was surrounded by wasteland.

The attitude of CCC towards the settlement of Eston was expressed by Horton who said that “its position at the foot of the escarpment of the Eston Hills has saved it from much of the ugliness of the Victorian era which overwhelmed so many towns and villages in England”.¹²³ In the late 1970s

¹²⁰ Mee and Beckwith, *North Riding*, 70.

¹²¹ Karl Baedeker, *Great Britain Volume III: Northern England* (London: George Allen & Unwin Ltd, 1970), 139 – 140.

¹²² Hammond, *Complete Yorkshire*, 118 – 119.

¹²³ Horton, *The Story of Cleveland*, 286.

the original settlement was considered to have “a number of blighted streets of workmen’s houses which were hurriedly built in the early days”. There were undoubtedly issues with the back-to-backs initially erected, particularly with lack of amenities such as running water and the shortage of living space. They have been successfully upgraded to meet modern living standards, as the properties to the east of ‘The Square’, California demonstrate. Fortunately the attitude that workers housing is a blight to be demolished is no longer as prevalent as at the time that Horton was proud to say the old houses in Eston were “being rapidly demolished”. Some of the buildings that the CCC were proud of in the 1970s have not stood the test of time and have now themselves been demolished.

The entry for Eston in the Cleveland volume of the ‘Villages of Britain’ series traces its history back to the Domesday Book.¹²⁴ The coming of industry was not portrayed in as positive a light as Eston was said to have “lost its pastoral peace in 1850 when John Vaughan discovered a rich seam of ironstone in the Eston Hills” resulting in a change “from an agricultural hamlet to a mining village”.

Both the Rough Guide and Eyewitness Travel Guide detached the old CCC area from Yorkshire and cover this part of the study area in their chapters on the North East. The latter barely mentioned Cleveland at all and oddly did not include the iron industry when describing the Industrial Revolution.¹²⁵ The former did discuss the Tees Valley and stated that most visitors by-pass it on their way to Durham.¹²⁶ The fact that the area was “so far off the contemporary tourist map as to be invisible” was not “the fault of the towns” that had been left behind as the industries that built them ceased to be important to England’s prosperity.¹²⁷ The remains of these industries were said not to “lend themselves easily to the celebration of industrial heritage” compared to the coalfields.

The Wikipedia entry for Eston is the longest of those for the case study settlements but coverage is patchy and poorly referenced. Reliance for the history of ironstone mining is placed on a 2004 film and there are some very fundamental errors. The story of the Eston Hills finds is incorrectly summarised as is the rise of Teesside steel.¹²⁸ Never-the-less the article is correct in stating that regeneration plans intend to give the tired town centre a facelift.

Eston fell within the Greater Eston Area Spatial Framework of the Redcar and Cleveland Regeneration Masterplan produced by R&CBC. The attitude here was remarkably different to that for East Cleveland, see Section 2.4, given that the two areas overlap. In April 2010 the vision for

¹²⁴ Cleveland Federation of Women’s Institutes, *The Cleveland Village Book*, 51-54.

¹²⁵ Leapman, *Eyewitness Guides: Great Britain*, 336 – 337.

¹²⁶ Andrews et al., *The Rough Guide to Britain*, 721.

¹²⁷ Andrews et al., *The Rough Guide to Britain*, 733 – 735.

¹²⁸ “Eston., *Wikipedia*, 2018, accessed 25 Feb 2019, <https://en.wikipedia.org/wiki/Eston>.

Greater Eston in 2025 was that it would have been transformed from “the current impression of housing estates dominated by roads” into a small town with a defined centre and distinct neighbourhoods.¹²⁹ The challenge was to try and achieve coherency in an area that “began as a series of small settlements, that later grew and joined together through the incremental development of estates”. R&CBC seemed to think the area a better fit with Middlesbrough and wish it were not their responsibility. The plan was typical urban regeneration, with little mention of heritage and none of a tourist economy. The loss of the industries that produced the development of Greater Eston had resulted in high unemployment and districts such as Eston suffering from “high levels of deprivation”.¹³⁰ The building blocks of a sustainable community have to be put in place before attempting anything else. The Local Plan issued by R&CBC in May 2018 reflects the same position and approach.

3 Representations

This section utilises the same methodology as described and applied in Section 4 of Chapter 5, but to explore the impact of mining operations on the representations, on maps and in census returns, of the case study settlements after mining ceased.

3.1 The Settlements when Mining Ceased

The appearance of each case study settlement on the closest possible OS map edition to the end of mining is shown below.

Figure 81 shows the Leven Vale Cottages as they were when mining ceased. In the top right portion of the map the three rectangles mark the site of the wooden huts that housed the miners engaged in the first phase of mining at the site.

¹²⁹ Redcar and Cleveland Borough Council, *Redcar and Cleveland Regeneration Masterplan: Greater Eston Area Spatial Framework* (Guisborough: Redcar and Cleveland Borough Council, 2010): 5 – 6.

¹³⁰ Redcar and Cleveland Borough Council, *Regeneration Masterplan: Greater Eston*, 10.

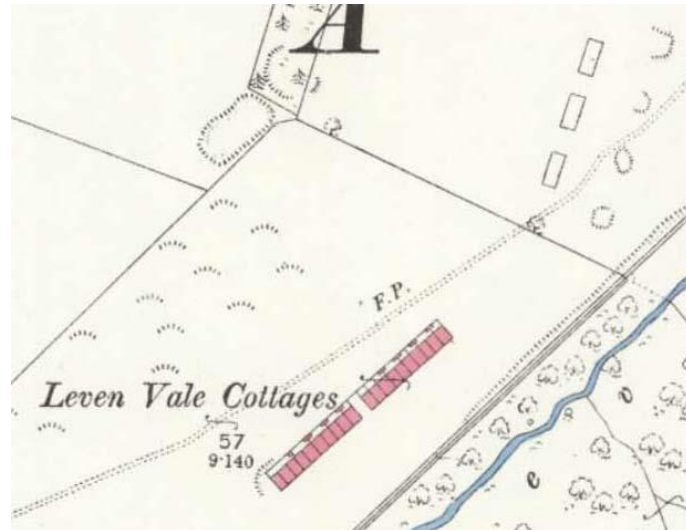


Figure 81: Leven Vale Cottages circa 1894 (OS 2nd edition 1:2,500 map)

There appear to be two terraces of 10 cottages, separated by a small gap, not the semi-detached properties described by Owen's source.¹³¹ Other than building the cottages and running a Tommy Shop the mining companies made no attempt to provide facilities for the workers and their families. To access other shops, schooling and entertainments, primarily pubs, people would have had to walk to either Kildale or Commondale.

Dating from shortly after mining ceased Figure 82 shows Grosmont including all the developments under the Bagnalls.

¹³¹ J.S. Owen, "Mining Failure in Cleveland, No. 3: the Kildale Mines (concluded)," *Bulletin of the Cleveland & Teesside Local History Society*, No. 18 (1972): 16. A degree of caution needs to be exercised before reading too much into the representation of individual buildings on large scale maps. The current OS 1:1,250 scale map, commonly used to support planning application, does not show the authors property as it stands.



Figure 82: Grosmont circa 1893 (OS 2nd edition 1:2,500 map)

The topography of the area surrounding the Tunnel Inn, stables, warehouse and other W&PR facilities that constituted the start of Grosmont restricted the areas that could be developed. This would have been a serious impediment to the growth of a substantial settlement, even if the economic climate had been right for this.

Although a number of structures on the mine site have already been demolished Figure 83 shows Liverton Mines as it stood when mining ceased.



Figure 83: Liverton Mines circa 1928 (OS 4th edition 1:2,500 map)

Most of Lower Cleveland Street has been demolished, leaving only one short block. The Church is the only new building.

As discussed in Chapter 5, some of the peripheral housing in Rosedale was demolished before mining finally ceased in the dale. The village of Rosedale Abbey remained as shown in Figure 64, Chapter 5 at the end of the mining era. Figure 84 shows the area around the West Mine just after the East Mine closed.

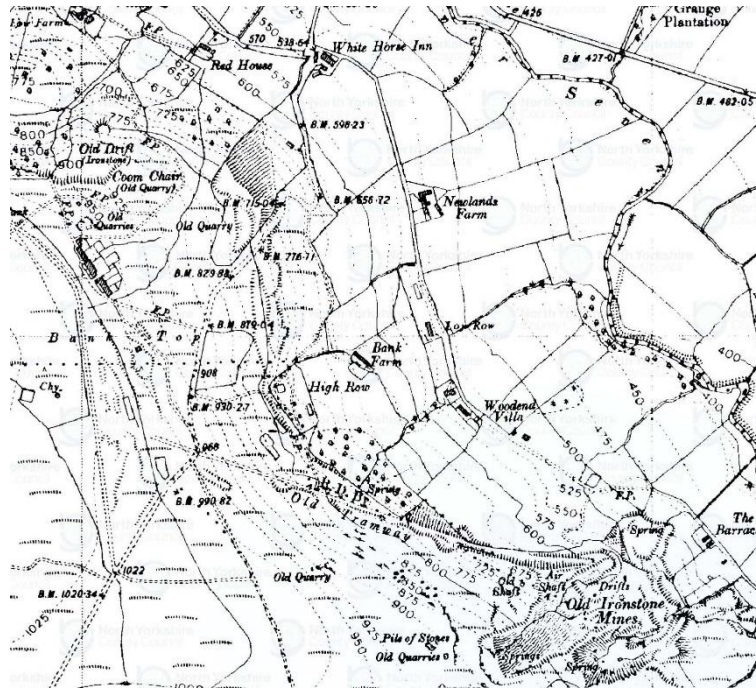


Figure 84: West-side of Rosedale circa 1930 (OS 4th Edition 1:10,560 map)

The housing in High Row has been demolished and only the southern end of Low Row remains standing. Figure 85 shows the east-side at the same date.

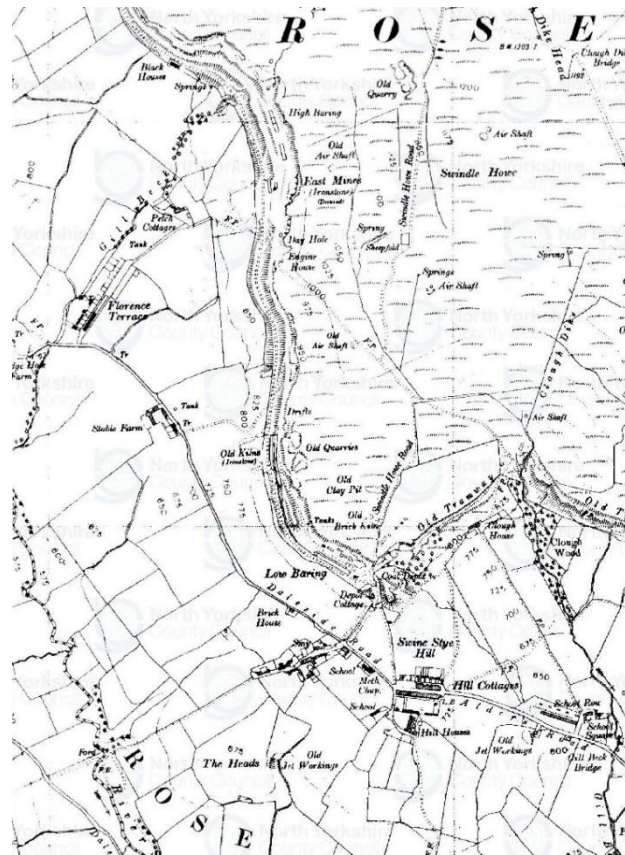


Figure 85: East-side of Rosedale circa 1930 (OS 4th Edition 1:10,560 map)

The cottages at High and Low Baring have been abandoned and only the west end of Florence terrace remains standing.

Figure 86 shows Eston just after mining had ended.

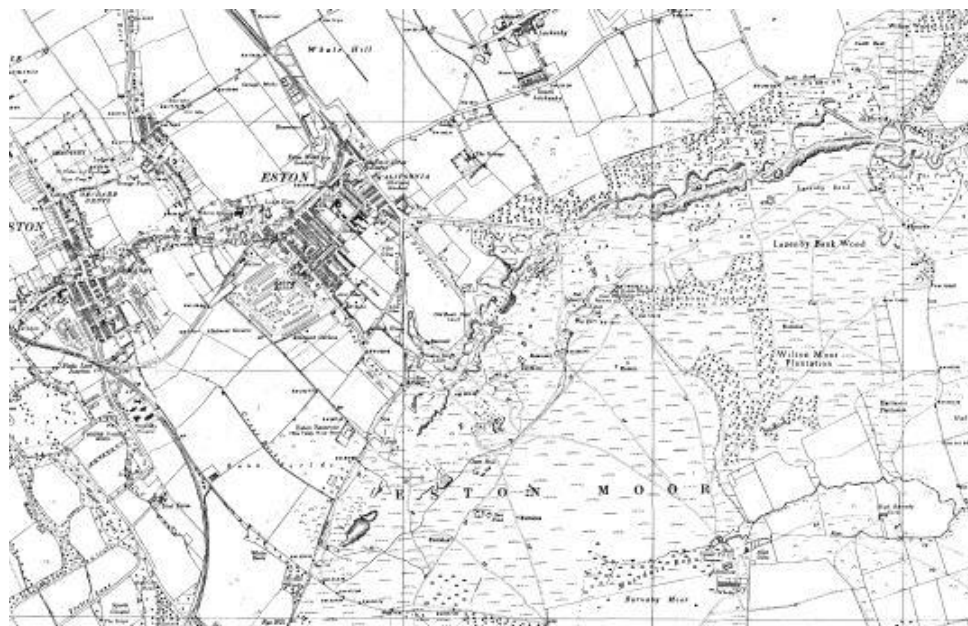


Figure 86: Eston circa 1953 (OS 5th Edition 1:10,560 map)

By comparing Figures 74 and 86 it can be seen that Eston did not grow significantly during the first half of the twentieth-century.

3.2 Changes to the Settlements since Mining Ceased

This section includes the current OS map representations of each of the case study settlements and discusses the changes evident between these maps and those included in Section 3.1. The section concludes with an exploration of the relative deprivation of the case study settlements.

3.2.1 Leven Vale Cottages

Figure 87 shows the current OS representation of the Warren Moor site. The site of the cottages is not marked but the route of the dismantled railway is shown along with the position of the two mine shafts and chimney.



Figure 87: The mine site and village in the early twenty-first century

Leven Vale Cottages were still standing when ironstone mining recommenced in the Ayton area in 1910, within commuting distance, however no evidence has been located that they were occupied after the Estate took back possession of the site. The 1881, 1891, 1901 and 1911 census returns do not mention the properties at all, indicating that the Estate did not have either a need or a use for housing in this location.

No standing remains of domestic structures exist at the site, although earthworks can be seen. The date of the cottages demolition has not been definitively established, although the NYMNP information board at the site gives the year as 1927. If Owen's informant was correct in stating that the stone was used to build Kildale Village Hall and a garage at Kildale Hall it must have been before 1929, shown on the date stone on the Village Hall.¹³²

¹³² Owen, "Kildale Mines 18," 16.

It can be concluded that the gap between the closure of the local mines and the later phase of local mining preclude the latter having an impact on Kildale. Post the brief period of ironstone exploration in the late 1860s and mid-1870s and the longer-term whinstone quarrying, Kildale again became an agricultural community, which it remains to this day. By 1911 there were 220 residents, living in 45 properties, with the additional houses being those built for railway employees and New Row. The only significant difference to the employment pattern seen 70 years earlier was the presence of railway employees.

3.2.2 Grosmont

Figure 88 shows the current OS representation of Grosmont. Although there have been changes to the village post mining those who knew the village during the industrial era would still find much that they would recognise.

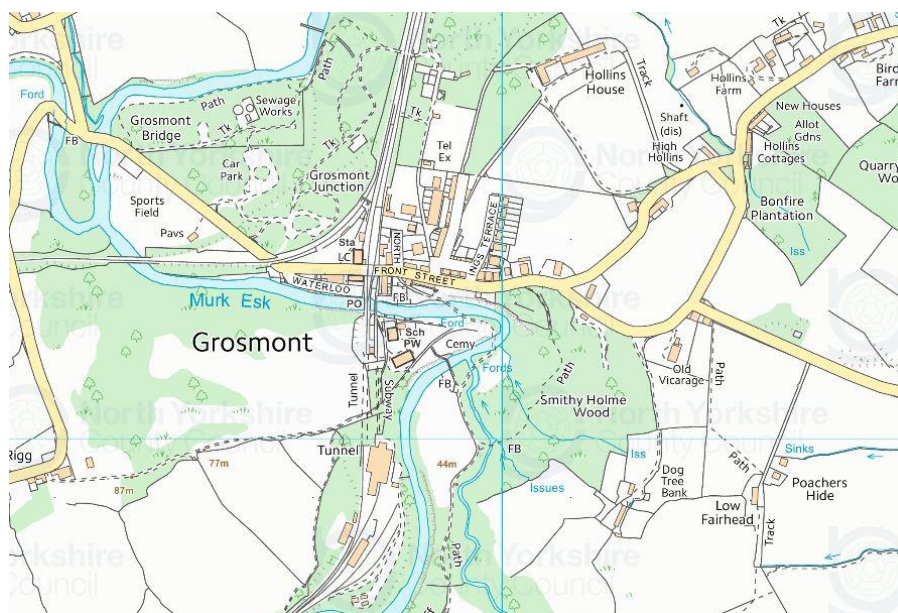


Figure 88: Grosmont village and ironworks site in the early twenty-first century

The demolition of the structures on the ironworks site began on February 1 1892, immediately after Arthur Gladstone purchased the estate, but no significant changes were made to the village.¹³³ Work for the remaining inhabitants was available in the brickworks, in slag removal and in slag wool manufacture.¹³⁴ The brickworks closed in 1957. All structures, except the blast furnace bases and a later hoist have been removed from the ironworks site, which serves as a NYMNP visitors car park. The brickworks is owned by an individual who is against its redevelopment and it retains some structures. After Gladstone died most of the properties in the village of Grosmont were put up for

¹³³ Shill and Minter, *The Bagnall Family*, 293.

¹³⁴ Counsell, *A Short History of Grosmont*, 31.

auction in September 1926.¹³⁵ Some sitting tenants brought their properties prior to the auction and those which failed to reach their reserves were sold privately afterwards. As the village houses passed into owner occupation the scope for making large scale alterations diminished and subsequent changes have been small scale. The village sustained a small amount of damage during a WWII bombing raid. Damage to the Church and the school was repaired but the W&PR stable block was destroyed.¹³⁶

As local industry declined Grosmont lost its importance as a railway junction. A concerted campaign was needed to save the Middlesbrough to Whitby line via Grosmont after the 1963 Beeching Report recommended that Whitby be isolated from the railway network. The Grosmont to Pickering line closed on March 6 1965 and on June 3 1967 a group of railway enthusiasts met to plan reopening the section as the NYMR. The line was officially re-opened by the Duchess of Kent on May 1 1973.¹³⁷ In 1975 the last Station Master left Grosmont and the Station House was converted to provide a NYMR shop and a holiday home. A number of period railway features, including a signal box and tearooms have been added to the station to make it an effective heritage railway station. Out of sight of the village, in the Murk Esk valley, the maintenance facilities conform less rigidly to a period style.

The success of the NYMR as a tourist attraction has had a significant impact on Grosmont, which is the engineering centre for the line. Railway enthusiasts have brought holiday homes in the village and other houses have become holiday cottages and B&Bs. This keeps the resident population of the village low, circa 300, and has resulted in the loss of many community facilities and an increase in businesses catering for visitors. St. Matthew's Church and the Station Tavern are the only village amenities that remain in totality in their original use. St. Matthew's has not held weekly services since 1966 and now hosts community events in the absence of a village hall. The vicarage is a private house, as is the village doctor's surgery. With falling pupil numbers, the school closed in 1996 and, after standing empty for many years, the building has been converted into a tearoom with owner's accommodation. The head teacher's house is now a holiday cottage. With a falling congregation the Methodists ceased to hold a Grosmont meeting in 2010. The chapel and school room have been converted into a house and a holiday cottage. The Institute acted as the village hall for many years but was sold and converted into a house in 1990.

¹³⁵ "The Grosmont Estate," *Yorkshire Post*, Sept 18, 1925, 13.

¹³⁶ Levisham Station Group, *North Yorkshire Moors Railway: Grosmont Station – A Brief History* (Levisham: Levisham Station Group, 2007), 18.

¹³⁷ North Yorkshire Moors Railway, *North Yorkshire Moors Railway: Official Opening by H.R.H. The Duchess of Kent, May 1st 1973* (Pickering: North Yorkshire Moors Railway, 1973), 9.

The Grosmont Co-Operative Society, which claims to be the oldest independent Co-op in the country, still operates from premises that they extended in 1924, but now occupy only part of the building.¹³⁸ Alternative commercial activities take part in the rest of the building. Part is a private members club set up by residents. There is also both a second-hand bookshop and a memorabilia shop, targeting railway tourists. Traditional village shops, such as the butcher and garage, have been converted into houses. The presence of four tearooms in such a small settlement is another clear indicator of a tourist based economy.

Many of the houses in the village built for the miners remain in their original use, all be it modified and with changes to their curtilage structures. There have been no large scale losses of housing and in most cases a demolished house has been replaced by one in a more up-to-date architectural style. Whilst houses have been added to the village over the years this has been piecemeal and small scale, often in the form of individual villas. The largest development in the centre of the village consists of four pairs of semi-detached houses on Ings Terrace. The only large scale building project in the area took place at Priory Park, a council built estate on flat land on the Egton side of the River Esk. Other housing stock has been created by the conversion of buildings including the company offices, the school, shops and the Institute.

3.2.3 Liverton Mines

Figure 89 shows the current OS representation of Liverton Mines. Part of Loftus is visible in the top right hand corner. The proximity of this settlement and the availability of employment within commuting distance has influenced the way in which the village has developed since mining ceased.

¹³⁸ Dave Counsell, "Grosmont Co-Operative Society: The First Fifty (or so) Years," *The Bulletin of the Cleveland and Teesside Local History Society*, no. 65 (1994): 34.

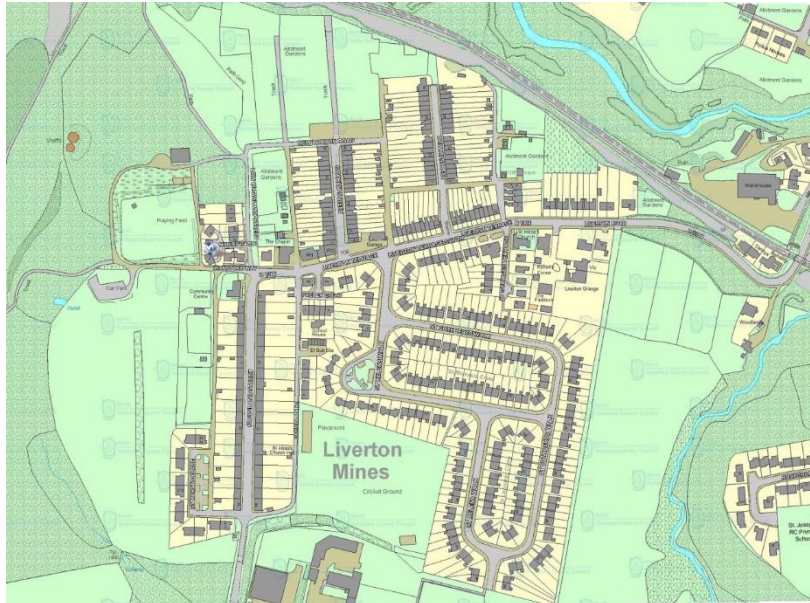


Figure 89: Liverton Mines in the early twenty-first century

Demolition of structures on the mine site began even before it was officially declared abandoned. Figure 90 shows the demolition of the chimney stack in 1926. Gradually other structures were removed and only one remains, a former workshop that the current owner of the site still uses for this purpose. NRYCC granted outline planning permission for a reclamation scheme for the site in March 1974.¹³⁹ The CCC reviewed this scheme in 1975 and concluded that although the removal of the spoil heaps would lead to “an improvement in the local environment” the economic case for building an industrial estate was weak.¹⁴⁰ No work was undertaken until the late 1980s, when the site was landscaped and the shafts capped. An industrial estate was built on the road to Liverton in the 1990s but has failed to attract and retain any major employers. When visited in 2018 none of the large units were occupied, but the smaller units erected circa 2000 did have tenants.

¹³⁹ Cleveland County Council, *Liverton Mines Reclamation Scheme, Industrial Estate and Access Road: Report No. 52* (Middlesbrough: Cleveland County Council, 1975), 3.

¹⁴⁰ Cleveland County Council, *Liverton Mines Reclamation Scheme*, 9.



Figure 90: Demolition on the mine site (Source: Author)

Liverton Mines was never provided with many amenities. The Wesleyan Methodist Chapel, with an 1874 date stone, operated as a commercial premises after worship ceased but is now empty. C of E services for miners were held in the Reading Rooms and St. Hilda's was not built until the 1930s. The Reading Rooms stood somewhere on Cleveland Street. A possible site could be where the Community Centre now stands. St. Hilda's is also used for community events. It shares a vicar with two other parishes and the vicarage, formerly the hospital, is now two private houses. The school sustained subsidence damage in the summer of 1937 and was demolished.¹⁴¹ Although much modified, the School House still stands and is a private residence.

On the corner of Graham Street and Liverton Terrace the old village shop still stands. This ceased trading in 2018 and is empty. All other commercial premises date from after mining ceased. An agricultural merchant operated from a warehouse on the school site until demolished circa 2007 and replaced with housing. A shop was built as part of the 1950s council development and is still in use. The other retail outlet is a fish and chip shop, converted from a house on Cleveland Street. There were two licensed premises on Liverton Road, which would have disturbed the original owners. One was a working mens' club that became a nightclub before being demolished circa 2007 and replaced with housing. The other, a modern infill building, is still run as a pub. Close by is another in-fill building, built as garage but now operating as a used car salesroom.

The most notable change to Liverton Mines has been to the housing stock. Cliffe Terrace, Downe Street, Liverton Terrace and Graham Street remain essentially as built, although modifications have

¹⁴¹ "New Schools in North Riding: Committee Pass Proposals," *Leeds Mercury*, Dec 15, 1937, 3.

resulted in the loss of the uniform appearance. Structures such as sheds and garages take up space in many gardens, but the allotments remain in use. None of the original houses in Low Cleveland Street remain. At the southern end of this street Miners' Garth is a small development of eight houses built on the site of the nightclub. Martin Row has also been demolished, with the southern end replaced by a group of 12 semi-detached houses, St. Martin's Close, dating from the 1950s post-war regeneration. Also part of this work was a substantial development of council houses on Liverton Terrace South, St. Cuthbert's Walk and St. Helen's Walk. The homes are a mixture of semi-detached houses and bungalows. Other smaller scale private developments have been taking place since the 1930s, these are a mixture of single properties built on in-fill sites and groups of houses such as Pecten Court (2007), St. George's Terrace (1980s) and blocks of houses on the road leading to Loftus (1930s). The expansion in housing stock has allowed the population to grow beyond the mining era peak.

3.2.4 Rosedale

Figures 91 to 93 show the current OS representations of Rosedale Village, the East Mines area and the West mine area. The dale remains relatively isolated, without a railway line and with poor road access.



Figure 91: Rosedale Abbey in the early twenty-first century

Although there have been changes within the village it retains sufficient of its mining era character that someone from that time would not feel out of place. Most of the housing stock remains in use, but the resident population has been impacted by the rise in the number of holiday homes and temporary holiday rentals, circa 50% of the homes do not have year round occupiers. This usage is also prevalent amongst the conversions that have taken place, including two Methodist Chapels,

farm buildings, shops, the Old Reading Room and the Vicarage. There have only been two demolitions, with both lost buildings replaced with housing. The biggest developments have been two caravan and camping sites with associated facilities. In combination they provide more accommodation than the permanent houses in the village. Houses have also been built, but in a piecemeal fashion and on a small scale.

Facilities and amenities within the village have shifted away from those required to support a permanent population to those designed to service a tourist economy. Part of the school building is a bunk house, a barn has become a glass blowers studio, there are two pubs, two tearooms with gift shops and public toilets.

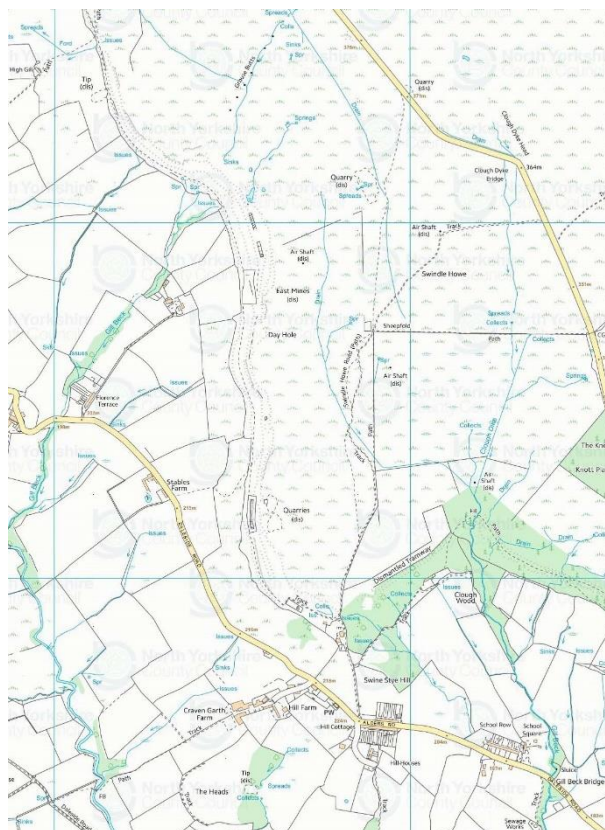


Figure 92: East Mines in the early twenty-first century

The East Rosedale community has retained a considerable amount of the infrastructure built to service the miners. Housing closest to the mines has largely been lost, this includes High Baring, Low Baring and most of Florence Terrace. Only two new builds have been erected, a house close to Hill Houses and a farm opposite School Row.

Two amenities remain in the area. The Methodist Chapel, although the school is now an outdoor activity centre, and the Reading Room, now a village hall. All the other buildings that are used for their original purposes are either houses or farms. Additional housing has been created by the

conversion of the school at the end of School Row. Other conversions in East Rosedale provide further evidence of the shift towards a tourist based economy. A relaxation retreat and B&B has replaced the shop and post office. At Craven Garth Farm, new farm buildings have been built to replace the capacity lost when the historic buildings were converted into eight holiday lets. This is perhaps the most extreme example of the move from an economy based on agriculture to one based on visitors.



Figure 93: West Mines in the early twenty-first century

The area around the West Mines has suffered the highest loss of buildings in Rosedale. Farms and their associated structures are the most likely to have survived. Of the housing built in the mining era, half of the railway cottages at Bank Top have been demolished, along with the Engine Shed, High Row is no more and only one cottage in Low Row remains, incorporated into a farmyard for Bank Farm. Other losses are Low Hollins, The Barracks and three other houses on the road leading to Hollins Farm. Replacement houses have been erected on the latter two sites.

3.2.5 Eston

Figures 94 and 95 show the current OS representations of Greater Eston and Eston. Figure 94 illustrates the point made in the Greater Eston Area Spatial Framework, discussed in Section 2.6, regarding the evolution of the settlement pattern. What were originally small, discrete villages have been joined together in a rather haphazard manner by housing estates. This is not a town in a conventional manner, it lacks an obvious centre and green spaces remain between the jumbles of residential streets.

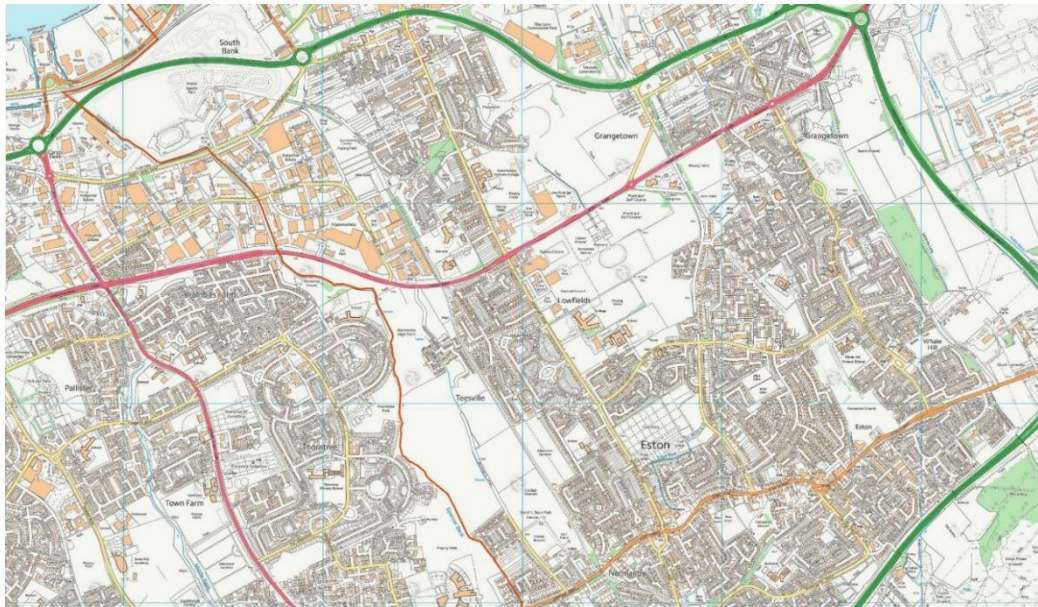


Figure 94: Greater Eston in the early twenty-first century

Of all the case study settlements Eston has undergone the greatest change since mining ended. It is often assumed that life carried on pretty much as before on closure, with the miners all going straight into new jobs in the steelworks or at ICI Wilton. This was not the case as these alternative employers did not start requiring large numbers of workers until sometime later. Horton states that families left the area to seek employment elsewhere, leaving empty cottages and shut shops.¹⁴² The isolated community of Barnaby Moor, adjacent to the Upsall shaft, was abandoned and eventually demolished. Employment opportunities did eventually become available and many of the housing estates shown in Figure 94 were built during the 1960s and 1970s to accommodate the workers. Much of the provision was built by the Local Authority. Greater Eston forms part of the Middlesbrough urban sprawl and has more in common with this neighbour than many parts of the borough in which it sits. With the loss of local industrial jobs Greater Eston has increasingly become

¹⁴² Horton, *The Story of Cleveland*, 286.

a base for commuters. Whilst the population has been in decline since the 1980s, the size of households has reduced, continuing to drive a demand for new houses.

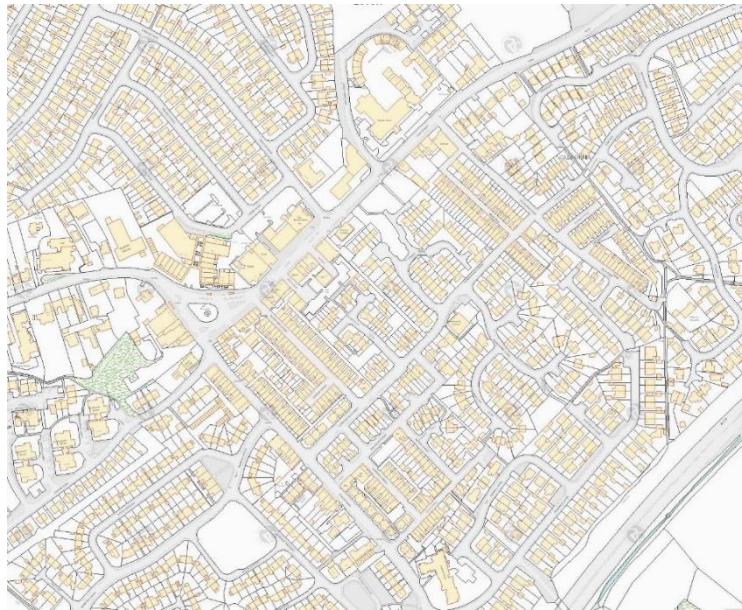


Figure 95: Eston in the early twenty-first century

Figure 95 shows housing now fills the whole of the area bounded by Jubilee Road, the High Street, the Incline and the A174 trunk road. The A174 constrains development in that direction but it has taken place in the other three, past the core of the mining era settlement. Most of the original housing in both California and South Eston still stands and is in use. Elsewhere in Eston demolitions did occur when old housing stock was condemned as slums during the 1960s and 1970s. Surviving miners housing is easy to identify on the map as it stands in tightly packed, uniform straight rows. More recent housing sits on larger plots, lining irregular shaped roads. The infill between California and South Eston, replacing the school and hospital are typical of this pattern of development. The old Eston Parish Church has been moved to Beamish Museum but the replacement built for the miners is still in use, as are some of the mining era chapels, pubs and shops.

3.2.6 Index of Multiple Deprivation

The Index of Multiple Deprivation (IMD) provides a means of comparing the relative deprivation of areas across England. Data is based on information contained within the census returns and the series using data from the 2011 census was released in 2015.¹⁴³ IMD values are calculated by combining 7 individual indices: Income Deprivation, Employment Deprivation, Education, Skills and Training Deprivation, Health Deprivation and Disability, Crime, Barriers to Housing and Services and

¹⁴³ Department for Communities and Local Government, *The English Indices of Deprivation 2015* (London: Department for Communities and Local Government, 2015)

Living Environment Deprivation.¹⁴⁴ Taken together the indices provide a picture of the quality of life of the residents of an area. Data is available for each of the 326 local authority areas in England, or broken down further to the level of 32,844 Lower-layer Super Output Areas (LSOA) within England, each one covering the post codes of approximately 1,500 residents. The lower the IMD ranking for a local authority or LSOA the more relatively deprived the area. The data presented and discussed in this section was all downloaded from the UK Government website.¹⁴⁵

Figure 12 in Chapter 3 shows the distribution of Cleveland ironstone mines across the modern local authority areas. The IMD ranks for the four local authority areas in which the mines sat plus the rank for Middlesbrough are given in Table 10.

Table 10: IMD Rank for Cleveland Local Authorities

| Local Authority | IMD - Rank of average score | IMD - Rank of proportion of LSOAs in most deprived 10% nationally |
|----------------------|-----------------------------|---|
| Middlesbrough | 6 | 1 |
| Redcar and Cleveland | 49 | 33 |
| Scarborough | 82 | 71 |
| Ryedale | 199 | 200 |
| Hambleton | 250 | 200 |

Of all the local authority areas in the country, Middlesbrough has the highest proportion of LSOAs falling within the most deprived 10% in the country. Ryedale and Hambleton are in the group of local authorities at the opposite end of the scale, with the lowest proportion of LSOAs in this category. Table 11 shows the relative deprivation of the LSOAs in which the case study settlements sit.

Table 11: Relative deprivation of the case study settlements

| Case Study | Overall ranking score | Decile |
|---------------------|-----------------------|--------|
| Liverton Mines | 3,079 | 1 |
| Eston | 5,539 | 2 |
| Grosmont | 13,214 | 5 |
| Rosedale | 14,169 | 5 |
| Leven Vale Cottages | 27,483 | 9 |

Leven Vale Cottages sat within the Kildale postcode LSOA, with an overall ranking score of 27,483, making this LSOA the least deprived of the case study settlements. Its position away from services,

¹⁴⁴ Department for Communities and Local Government, *The English Indices of Deprivation 2015*, 25.

¹⁴⁵ "National Statistics: English Indices of Deprivation 2015," *Community and Society*, UK Government, September 30, 2015, accessed January 20, 2016, <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

scarcity of housing stock and high house prices result in a low ranking for the Barriers to Housing and Services Domain. The LSOA covering Liverton Mines does include part of the neighbouring settlement of Loftus, but no data is available that covers only the village. With an overall ranking score of 3,079 the LSOA is the most deprived of the case studies, and within the bottom 10% across England. It fared particularly badly in the Income, Employment and Education, Skills and Training Deprivation indices. In contrast, with a large housing stock available at low prices and proximity to the larger settlement of Loftus, Liverton Mines is in the 10% least deprived LSOAs regarding barriers to housing and services. The LSOA covering the core of Eston built during the mining era is the second most deprived of the case study settlements, with very low scores in the Crime and Health Deprivation and Disability indices. Grosmont and Rosedale sit within LSOAs with similar rankings, with extremely low scores in the Barriers to Housing and Services index, due to the lack of local services and poor access to affordable housing. This issue is more acute in these two communities than at Kildale.

3.2.7 Summary

Leven Vale Cottages, a category A1 settlement that was built for miners and demolished after mining ceased, was associated with the Warren Moor mine.¹⁴⁶ This mine achieved the lowest rank of the mines associated with case study settlements, 65th. Mining in the area ceased in 1876, the earliest date for the case study settlements. The Kildale LSOA within which the settlement site sits is the least deprived of those for the case study settlements LSOAs. By comparing the attributes of the other case study settlements to those of Leven Vale Cottages it will now be considered if there is a relationship between them and relative deprivation.

The two most deprived case study settlements, Liverton Mines and Eston, are those that have continued to expand post mining, categories A3 and B3 respectively. With approximately the same relative deprivation, falling between Kildale and Liverton Mines / Eston, Grosmont and Rosedale have stayed roughly the same size since mining ceased, categories A2 and B2. Eston was associated with the mine that achieved the highest rank, 1st, and whilst the Liverton mine was ranked 23rd the North Skelton mine that was within commuting distance of Liverton Mines ranked 3rd. Groups of mines were associated with both Grosmont and Rosedale and achieved a range of ranks. For Grosmont this was 14th to 79th, with the equivalent figures at Rosedale being 17th to 77th. The order in which mining ceased within commuting distance of the other case study settlements is; Grosmont 1891, Rosedale 1928, Eston 1949 and Liverton Mines 1946.

¹⁴⁶ The settlement categories are defined in in Table 7, Chapter 4.

Considering the above it appears that settlements associated with higher ranking mines, where mining ceased from the mid-twentieth-century and that have continued to grow are more likely to be deprived. In order to be able to test this statistically it would be necessary to extend the analysis to all of the Cleveland ironstone settlements.

4 Settlements Photographic Survey

This section contains the results of photographic surveys of the case study settlements undertaken between 2014 and 2019. Where possible images equivalent to those included in Chapter 5 were taken, for the purposes of comparison. The survey was carried out to determine the extent of survival of mining era fabric.

4.1 Leven Vale Cottages

The site of the Leven Vale Cottages and other features associated with the Warren Moor Mine is within pasture land without public access. Although most elements can be viewed from public footpaths, but other than at the mine site none would be obvious as the remains of an industry to the uninformed observer. Figure 96 shows three elements of the site but appears to be a picture of a field with cows in it. In the foreground is the site of the Tommy Shop and associated cottage, running across the middle of the picture is the railway that served the mine and in the background, beyond the cattle, is the terrace upon which the Warren Moor Co. wooden huts stood.



Figure 96: The north east end of the Warren Moor site (Source: Author)

Figure 97 is a view down Leven Vale from the mine. The site of the Leven Vale Cottages is circled in red. The drifts into the Top Seam are in the sloping hillside on the left. In the foreground the uneven ground occupies part of the main mine site .



Figure 97: Looking down Leven Vale (Source: Author)

Figure 98 shows the mine site and Leven Vale. The most obvious feature is the chimney, which is a finely detailed structure in good condition. Most of the other above ground remains were removed when the stone was salvaged but foundations are visible.



Figure 98: The mine site (Source: Author)

4.2 Grosmont

For the purposes of comparison wherever possible current equivalents of the images included in Chapter 5 have been taken. The development of the village prevents Figure 55, Chapter 5 being reproduced. Figure 99 shows the largest building in the painting as it stood in 2009. The Station Tavern, formerly the Tunnel Inn, has remained essentially the same.



Figure 99: Station Tavern (Source: Author)

Lack of public access and vegetation growth prevented Figures 56 and 57, Chapter 5, being replicated. Figure 100 shows that the ironworks chimney no longer stands and that the village has not spread outside its mining era boundaries.



Figure 100: Grosmont from Lease Rigg (Source: Author)

It was possible to take photographs from the same positions as Figures 58 and 59, Chapter 5. These are shown as Figures 101 and 102. The most obvious changes to the view up Front Street relate to the NYMR. A signal box has been erected between the railway line and the Station Tavern. This is a modern construction to an old style. A single storey building of unknown function has been removed between the railway and the Railway Cottages.



Figure 101: Looking up Front Street (Source: Author)



Figure 102: Looking down Front Street (Source: Author)

Elements of the settlement for which no mining era photographs have been located are equally important with respect to the role that they can play in telling its story. Figures 103 to 105 show elements of the Bagnall era development. Figure 103 shows Office Row, one of the terraces of

workers cottages that they built. They are fairly typical of the cottages in the Cleveland ironstone area, but different to the original workers stone built houses lining Front Street. Figure 104 is of the Institute, now a private house. The original stone built Co-Op building is at the far end of the block in the centre of Figure 105. The post mining brick built extension is closer to the camera. This is now in a variety of retail uses.



Figure 103: Office Row (Source: Author)



Figure 104: The Institute (Source: Author)



Figure 105: Grosmont Co-Op (Source: Author)

4.3 Liverton Mines

Figure 106 shows approximately the same view as Figure 61, Chapter 5. The two blocks of Liverton Terrace remain but modifications by the private owners have resulted in the loss of the uniform appearance. Commonly seen changes are the addition of cladding and fenestration replacements. In place of the field opposite the terrace there is the post war housing development and a garage stands on what seems to have been allotments. Replicating Figure 62, Chapter 5 was complicated by the building of housing on the greenspace in front of Cliffe Terrace, Figure 107. The houses on Cliffe Terrace are greatly altered with their main access now being what was their back door.



Figure 106: Liverton Terrace (Source: Author)



Figure 107: Cliffe Terrace and Liverton Terrace (Source: Author)

Figures 108 and 109 show parts of the settlement of which no mining era pictures have been found. The single storey houses on Cleveland Street, Figure 108, are examples of a housing type that is rare in the Cleveland ironstone area. They are particularly unusual as they were built in the 1870s when other examples, at Eston, date from the 1850s. The Methodist Chapel, Figure 109, has been disused for some years. In the background is one of the most recent housing developments in the village, Miner's Garth.



Figure 108: Cleveland Street (Source: Author)



Figure 109: Methodist Chapel (Source: Author)

4.4 Rosedale

Mill Street in Figure 68, Chapter 5, has changed very little in Figure 110. A car has taken the place of a horse drawn vehicle and there are no longer any shops. The NYMNP Authority are the planning authority within the national park and have designated Rosedale Abbey a conservation area. This planning regime has resulted in an high level of retention of original character.



Figure 110: Mill Street (Source: Author)

The success of planning control can be gauged by the appearance of the chapel conversion shown in Figure 111. Although in domestic use the exterior retains the appearance of a place of worship.



Figure 111: Converted chapel (Source: Author)

As stated in Section 3.2.4 the mining era buildings on the westside have suffered a higher level of loss than in other areas of the dale. Figure 112 shows the site of the High and Low Rows at the West Mine, with the ruins of High Row being shown in Figure 69, Chapter 5. High Row stood on the area of light green grass just below the disturbed area. Low Row was further down the valley side, where a standing building can be seen in the middle distance.



Figure 112: West Mine housing site (Source: Author)

Florence Terrace, below the East Mine, was largely demolished before mining ended. The eight cottages that remain are shown in Figure 113. Additional curtilage buildings have been added at the eastern end.



Figure 113: Florence Terrace (Source: Author)

Along the same road that leads to Florence Terrace, both Hill Cottages and School Row are still occupied. Due to access issues it was not possible to recreate Figure 71, Chapter 5, but Figure 114 shows the two parallel rows that make up Hills Cottages. The facades on the right of the picture are the fronts of the houses shown with washing in their back gardens in Chapter 5. Figure 115 is taken from approximately the same position as Figure 72, Chapter 5. There has been little change to the front façade of School Row.



Figure 114: Hill Cottages (Source: Author)



Figure 115: School Row (Source: Author)

4.5 Eston

No single storey houses as shown in Figure 75, Chapter 5 remain at Eston. Figure 116 shows the same terrace, Old Row, in their modified two storey form. The application of render and changes to fenestration have masked the uniformity seen in Figure 76, Chapter 5. The house shown in Figure 117 has the original stonework still visible but the brickwork used to raise the height has been rendered.



Figure 116: Old Row, The Square, California (Source: Author)



Figure 117: Modification of house on Old Row, The Square, California (Source: Author)

The amount of change on South Street made the identification of where Figure 77, Chapter 5 had been taken from complicated. As far as could be determined Figure 118 was taken from roughly the same position. As well as modifications to the remaining terraced housing some of the original properties, including the shop, have been demolished and replaced.



Figure 118:South Street, South Eston (Source: Author)

One of the supports for the winding station at the bottom of the incline, shown in Figure 78, Chapter 5, remains in place as it forms the garden wall of the last house in The Square. Although rendered, the house behind the support has retained the original upper floor window positions and the chimney stack, Figure 119.



Figure 119: Winding engine support, California (Source: Author)

The Institute shown in Figure 79, Chapter 5 still stands and at first glance the building, Figure 120, looks quite different to that originally built, but the core remains the same. Extensions in very different styles have been added and the regular pattern of windows disrupted.



Figure 120: Eston Institute (Source: Author)

The piecemeal nature of redevelopment of housing stock in Eston has resulted in a patchwork of different styles, frequently mixed along a single street. Figure 121 shows a substantially intact mining era street but even here there is a gap site, on the left closest to the camera, awaiting redevelopment. In Figure 122 the pub, often the last building standing, has been left somewhat marooned amongst developments that form a very different streetscape to tightly packed terraces. An even more recent housing estate is shown in Figure 123 where the desire to move away from straight roads has disrupted the line of the incline and made the site more difficult to interpret.



Figure 121: Edwards Street, South Eston (Source: Author)



Figure 122: Pub amongst a mixture of old and new housing, South Eston (Source: Author)



Figure 123: Looking up the incline from a new housing estate (Source: Author)

5 Industrial Memorials Photographic Survey

This section contains the results of photographic surveys of memorials to the industrial heritage present in each case study settlement. The surveys were undertaken between 2014 and 2019. This

work was undertaken to determine what a visitor to the settlement would be able to learn about the industrial history during a walking tour.

5.1 Leven Vale Cottages

In 2019 there was little evidence to alert a visitor to Kildale of the industrial history of the area. For those arriving by train a flower display has been created in a wheeled vehicle that could be intended to be a stone tub, but more probably represents a railway goods trolley, Figure 124. The information board adjacent to this outlines the history of the village and suggests a walking route, but misses an opportunity by making no mention of industry.



Figure 124: The platform display at Kildale Railway Station (Source: Author)

For those using the bridleway that runs past the south western limit of the site the NYMNP has installed an information board, Figure 125, that provides a good, basic summary for those curious as to why they have come across the stone and brick built chimney in the countryside.



Figure 125: The NYMNP information board at Warren Moor (Source: Author)

In a 2006 summary of industrial archaeology work in the NYMNP, Lee mentions that the boiler-house chimney had been conserved but there was a need for further work.¹⁴⁷ Seeking to redress an historic lack of focus on industrial history the NYMNP Authority started to prepare an application to the Heritage Lottery Fund for funding under the Landscape Partnership scheme on this theme in 2013. The scheme, entitled ‘This Land of Iron’ (TLI), was intended to tell the story of how industry has shaped a landscape that many visitors appear to think is natural. Approval to develop a full proposal was granted in April 2014 and the project won funding in February 2016. Excavations commenced at the Warren Moor mine site in 2018 as part of the intention to make the site safe and present it to a wider audience. Budgetary constraints mean the TLI was not able to conserve all the remains of industry in the scheme area and an alternative means of recording structures was used. At Warren Moor a 3-D model of the chimney has been produced using a drone to take the necessary photographs. The model allows those who are unable to visit the site to view it in detail. The project was completed in 2021 and the NYMNP website has a section dedicated to the achievements.¹⁴⁸

5.2 Grosmont

The main car park used by visitors to Grosmont is situated on the site of the ironworks, Figure 126. The road in the picture splits around the site of one of the three furnace bases. The TLI project, discussed in Section 5.1, aimed to raise awareness of the ironworks remains, educating visitors to

¹⁴⁷ Graham Lee, “Industrial Archaeology in the North York Moors National Park: Recent Work and Research,” *Industrial Archaeology Review* XXVIII, No. 2 (2006): 81 – 82.

¹⁴⁸ “Land of Iron,” *North York Moors National Park*, 2021, accessed October 14, 2021, <https://www.northyorkmoors.org.uk/looking-after/landofiron>

treat them with more respect. Figure 127 shows the 3-D model of the works installed by this project. It sits in front of the most substantial blast furnace remains. There is an additional information board at the foot of the steps leading to the footbridge that takes visitors onto the platform of the NYMR. Visitors who park in the Esk Railway car park or arrive by train, using either line, will not see this information and there is no industrial heritage information on the railway platforms.



Figure 126: Car park on the Grosmont Ironworks site (Source: Author)



Figure 127: 3-D ironworks model in the Grosmont car park (Source: Author)

The popular Rail Trail walking route follows the original 1836 route of the W&PR between Grosmont and Goathland and passes a large number of sites related to industrial history. These include the

entrances into the drifts of the first Cleveland ironstone mine, the Esk Valley ironstone mine and the site of the Beck Hole ironworks. In order for many people to appreciate what they are looking at there is a need to provide some form of interpretation. The NYMNP has installed information boards at various points but these have been subjected to deterioration and vandalism, making them increasingly illegible. A number of guides to the walk have been produced, varying in their coverage of industrial heritage, and outlets in Grosmont sell copies. The Grosmont Business Group, set up in 2014 to promote the village and the businesses around it, have produced the only guide to any of the case study settlements that explains the origins of the buildings and sites.¹⁴⁹ Information boards providing additional information were installed at various points but unfortunately by early 2019 a number of these were missing, although the brochure was still available.

5.3 Liverton Mines

Of the case studies Liverton Mines is the one that currently would present the greatest challenge for anyone to find out about the history. The village is part of the Big Local initiative and a village notice board that shows the head gear of a pit has been installed outside the community centre, Figure 128. Coupled with the name of the village this would alert a visitor that mining had been carried out, but provides no other information.



Figure 128: Mining themed notice board (Source: “Liverton Mines.” *Google Maps*. n.d., ca. 2020. accessed December 7, 2021, [https://www.google.co.uk/maps/place/Liverton+Mines/.](https://www.google.co.uk/maps/place/Liverton+Mines/))

¹⁴⁹ Grosmont Business Group, *Visit Grosmont: Steam, Moors & More...* (Grosmont Business Group: Grosmont, undated)

R&CBC seem to have made efforts to bring the heritage to the fore in the street names selected for new developments. Pecten Court is named after a fossil commonly occurring in ironstone, New London Road harks back to the original nickname for the settlement and both Ironstone Way and Miner's Garth should be self-explanatory. However anyone not familiar with the ironstone industry may well not appreciate the significance.

The greatest evidential potential at Liverton Mines is the village itself. Despite the large post war estate and other smaller scale changes the layout of the mining era settlement is sufficiently intact for it to be used as an example of life in a Cleveland ironstone mining community. The relatively small scale and flat topography would assist in this.

5.4 Rosedale

The long acknowledged utility of the bed of the Rosedale Mineral railway as a walking and cycling route has focused attention on the remains of industry along its route. This largely omits the possibility of including the settlements in the narrative. There are numerous other public footpaths within Rosedale, many of them following the routes that the miners would have taken from their homes to and from work, that could be part of addressing this omission. The three sets of calcining kilns are the most monumental remaining structures and images of them are so frequently used to represent the remains of the Cleveland ironstone industry that they have become by default 'the' pictures to use. Figure 129, of the East Mine stone built kilns is typical of this imagery. Their acquired status is somewhat ironic as they represent features unique to Rosedale rather than structures that occurred at the other Cleveland ironstone mines. Calcining to reduce transport costs was not necessary where the mines were closer to the ironworks. Due to their iconic status there is a desire to preserve the Rosedale kilns for future generations. Restoration work was carried out by the NYMNP and English Heritage in the 1990s but there was enough money to conserve only "a representative range of structures at the East Mines".¹⁵⁰ Deterioration continued. It has been realised that there are insufficient funds to arrest the eventual collapse and the focus of the TLI project shifted to recording what stands. Photogrammetry was used to produce a 3-D model. To show how things have changed over time historic images and modern photographs were merged together.

¹⁵⁰ Lee, *Industrial Archaeology in the North York Moors National Park*, 81.



Figure 129: The East Mine stone built calcining kilns (Source: Author)

A holistic view of the ironstone era in Rosedale, including the settlements is provided by the well-researched and illustrated 'Rosedale Railway Heritage Trail', produced in 2011 to mark the 150th anniversary of the first journey on the line.¹⁵¹ The Rosedale History Society was formed in 2008 to work across the dale to form an archive of historical material. They intend to make the material they have collected available on-line but progress is resource limited.

With a wide range of sites spread over a large area and multiple entry points the problem of interpretation for visitors is particularly acute at Rosedale. In the past the NYMNP has installed information boards at the main walk access points but these have become a confusion of styles and levels of legibility. A clear example of the rate at which such boards can deteriorate in exposed positions is given by comparing Figures 130 and 131. In just over 10 years the text and pictures have become illegible and the lettering on the board itself dulled. An overhaul is needed, with alternative means of presenting the information considered. The TLI project installed updated information boards and Figure 132 shows the one at Bank Top. It can only be hoped that the money has been spent on a design that will endure.

¹⁵¹ Kirby, Great Broughton and Ingleby Greenhow Local History Group and Rosedale History Society, *Rosedale Railway Heritage Trail* (North York Moors National Park: Helmsley, 2011)

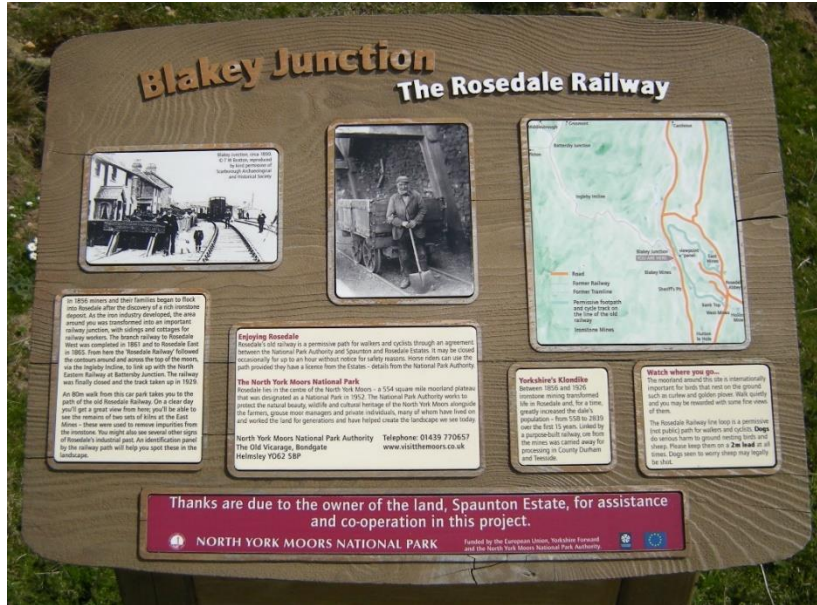


Figure 130: Blakey Junction information board in 2008 (Source: Author)



Figure 131: Blakey Junction information board in 2019 (Source: Author)



Figure 132: TLI information board at Bank Top (Source: Author)

5.5 Eston

An Ironstone Heritage Trail, including Eston, was produced in response to an action in the East Cleveland Area Spatial Framework. The guide booklet has background information on various aspects of the Cleveland ironstone industry and suggested routes, in a car or by foot.¹⁵² It was published to celebrate “the iron and steel history of the Borough” and to recognise the “commitment of many of the villages and community groups that are promoting the importance of the heritage in their area”. One such organisation is the Eston Residents Association (ERA). The introductory information is accurate, covering the settlements and lives of the miners and their families as well as the more commonly occurring elements of industrial history. The car tour description is disappointing due to the lack of information on the ironstone industry and reliance on directing people to more general tourist attractions. Possibly due to space limitations the text is limited and a more industry specific coverage could have been achieved if separate leaflets had been produced for the two modes of transport, car and foot. The walking route makes a better job of presenting and explaining the industrial sites along the way. However its coverage of Eston is limited to the site of the hospital and California housing. Despite the many changes enough remains of mining era Eston to bear witness to the impact of the Cleveland ironstone industry. It is a pity that the ERA do not appear to have produced anything that would guide a visitor around all the mining monuments that they have been instrumental in installing. The wording of the material that the ERA has produced makes their pride in those who worked in the mine very clear.

¹⁵² Redcar and Cleveland Borough Council, *Redcar & Cleveland Ironstone Heritage Trail* (Guisborough: Redcar and Cleveland Borough Council, n.d., ca. 2015).

With the mine sites relatively inaccessible on the slopes of the Eston Hills, memorials are focused on highlighting the industrial history within the town. As a result of the efforts of the ERA, Eston has the highest concentration of Cleveland ironstone industry memorials of any of the case study settlements. Their first project appears to have taken place in 2004 in a small park that marks the site of the Eston Hospital. There are a number of elements to this and the majority of them can be seen in Figure 133. Flanking the entrance to the park are the ironstone pillars that had stood at the entrance to the hospital until it was demolished in 1980. The pillar on the right has an information board dedicated to the hospital and that on the left one covering the mine and the miners. Ornamental railings face the road and contain six roundels, each one containing a metal silhouette dedicated to a different aspect of the ironstone heritage. These are the school, hospital, miners, the mine, St. Helen's Church and a working horse. The housing built to fill the gap between California and South Eston is in the background of Figure 133. Some years later the ERA added a planter in the shape of the hospital flanked by a nurse and a miner to the park, Figure 134.



Figure 133: Park on the site of the Eston Hospital (Source: Author)



Figure 134: Planter in the shape of Eston Hospital (Source: Author)

In 2007 the ERA undertook a number of projects at various locations in the town. An information plaque was installed on the wall of the Eston Institute, Figure 135. This features a picture of men digging the foundations and brief text summary of the history of the building. In 2013 an additional plaque was attached to the walls of the institute. This exhibits an 1881 quote from H. Reid celebrating the use of Eston iron in railway tracks around the world. The second 2007 project was the erection of ornamental railings around the War Memorial in The Square. These include three pierced metal roundels, Figure 136, that are a celebration of Bolckow and Vaughan and the communities pride in the impact that the mine they started had had on the community. The final 2007 project was the installation of a very large plaque on a wall bordering the incline at the end of Old Row, Figure 137. This celebrates those who worked in the mine.



Figure 135: History of institute plaque (Source: Author)



Figure 136: Memorial roundels on the war memorial railings (Source Author)



Figure 137: Memorial to workers, Old Row, Eston (Source: Author)

The ERA is not the only organisation installing memorials celebrating ironstone mining at Eston. Figure 138 shows the gates installed by R&CBC to restrict access to the back alley behind South

Street, South Eston. The wording along the top is “Home of the original iron man: Eston”. At the bottom the operating dates for the mine are given.



Figure 138: Gates on South Street back alley, South Eston (Source: Author)

6 Summary

This chapter has considered how the history of mining in the vicinity of each case study settlement has impacted on the settlements since mining ceased. It has been noted there are long standing differences in how areas were represented as ‘rural, untouched’, referring to North Yorkshire, in comparison to ‘industrial, despoiled’, referring to Teesside. These differences had their roots in the 1889 local government reform that saw the creation of the NRYCC, with Middlesbrough as a County Borough, independent of county council control. This sense of being ‘apart’ and ‘other’ was reinforced by twentieth-century actions such as the creating of the NYMNP in 1952, the formation of Teesside County Borough in 1968 and the local government reorganisation of 1974 that saw CCC being separated from the North Yorkshire County Council. During the years of industrial prosperity, the County Borough was able to hold its own but ever since structural issues with an economy too dependant on a narrow range of industries emerged in the inter-war years, Teesside has been seen as in need of assistance. Despite numerous interventions it has not been possible to create a sustainable, stable economy. With a population of over 400,000 in Middlesbrough when the last Cleveland ironstone mine closed the loss of jobs in an industry that had employed less than 10,000 at its peak was not going to attract much attention.

At each of the case study settlements, the local population was, to varying degrees, affected by the end of mining in the locality of the settlement. The size of these effects was influenced by when the closures occurred and the scale of the job losses. At one end of the scale was mining on the Kildale Estate, including Leven Vale Cottages, where none of the ironstone ventures in the 1860s and 1870s endured for long enough to overwhelm the local village with incomers or developments. In contrast the failure of the R&FIC at Rosedale in 1879 caused hardship and the population dropped sharply as people were forced to leave to find work elsewhere. Subsequently, the mines were not all under the same ownership and were closed individually, resulting in a less marked effect. Grosmont experienced a similar sudden loss of the main employer as Rosedale. The population dropped sharply to adjust to the reduced local job market. The closure of the Eston Mine at the end of its lease in 1949 was not a surprise. Despite being close to other employment opportunities in the Teesside iron and steel works the population of Eston did dip until the ICI Wilton site started to come on-line in the 1950s. The experience at Liverton Mines was similar to that at Eston, although the Liverton Mine itself closed in 1921 and the population declined, mining continued in the area until 1964 and this, along with other local employment opportunities limited the reduction.

Maps and surveys of remaining ironstone mining era fabric show what physical changes occurred to the case study settlements in response to the changes in population discussed above. Leven Vale Cottages, the category A1 example, were totally demolished when the miners left and their site is not marked on current maps. There was no demand for housing in that location amongst the agricultural workers. A board at the Warren Moor mine site is the only information on the industrial past available. The drop in the population of Rosedale did result in the loss of some of the more remote miners housing but the core of the village remains as it was when mining ceased in 1928, placing it in category B2. By this time there was sufficient welfare provision for people without an income to live independently if they could find somewhere cheap to live. The houses built for the miners in Rosedale provided such accommodation. Rosedale Abbey is a conservation area, limiting the amount of changes to the external appearance of buildings. It is a gentrified version of its past self. At Grosmont, the core of the village remains essentially as it was in 1891, placing it in category A2. Despite the drop in population no housing was demolished. Post WWII housing estates built by the local authority have increased the size of Liverton Mines, placing it in category A3. The extent of surviving mining era fabric is such that the village has the potential to educate people about life in a Cleveland ironstone community. Other than a mining themed village notice board and ironstone related street names, no attempts have been made to do this. Eston, category B3, has also expanded post mining, initially with local authority housing estates and latterly with private developments. Elements of mining era Eston survive, but only in fragments. It is the most altered of

the case study settlements, but the community has expressed its pride in the mining history by installing a number of memorials.

How the case study settlements were perceived has altered over time, with reactions generally becoming more positive as mining recedes further into the past. The exception is Kildale where the brief industrial phase escaped the notice of most visitors. It is viewed as a rural, agricultural place that was lucky to escape industrialization. Up until the late twentieth-century, visitors to Grosmont viewed it as an unattractive place, spoiling the beautiful Esk Valley. A change in how it was perceived came with the opening of the NYMR in 1973, the catalyst to the development of the village as a major tourist site. Information on the industrial history for the many visitors is in the form of information boards and a walking trail. Rosedale has followed a similar trajectory to Grosmont. Attitudes to the housing built for the miners has mellowed from intense dislike to passive acceptance. The former railway line is viewed as an asset that helps draw in the tourists on which the local economy depends. Information on the industrial history of the dale is provided at various points around the line. How Eston has been perceived offers a contrast. Always in the shadow of Middlesbrough it was admired for its contribution to the area's prosperity, but this perceived value has faded over time. It is now viewed as a place no-one would want to visit. Liverton Mines has generally been ignored by commentators, being neither rural, ancient Liverton nor large, urban, reprehensible Loftus.

On the evidence reviewed in this chapter it is observed that a Cleveland ironstone settlement is more likely to be relatively deprived if associated with a higher ranking mine, that operated for longer and closed later than others, and if it has continued to expand after mining ceased, particularly with the addition of local authority housing in the 1950s.

Chapter 7

Conclusions

This thesis has studied the relationship between the Cleveland ironstone mines and the settlements that housed its workers. The history of the whole period of mining activities was considered to capture the complex impacts on communities. This chapter is structured to first summarise the work undertaken and then draw out the conclusions reached.

1 Summary

A brief summary of the work contained, and conclusions reached, in each chapter will now be given.

Chapter 1 reviews a sample of the substantial and diverse body of secondary work studying industrial settlements in order to illustrate the range of approaches that have been taken. This enabled this thesis to be positioned with respect to this cannon, especially industrial histories. The main contribution of the thesis has been to examine the impact of the history of an industrial activity, ironstone mining, on the settlements that initially housed its workers but which survived long after that activity had ceased. The chapter acknowledged the work of amateur local historians and industrial archaeologists of the Cleveland district who have produced the majority of the written output about the Cleveland ironstone settlements and mines. For instance, members of the Teesside Industrial Archaeology Group came together at the end of the Cleveland ironstone era to record sites before they were lost; and the Cleveland Industrial Archaeology Society has continued to research the industry in the face of neglect outside Cleveland. This thesis hopes to have bridged the gap between the local historians and the industrial archaeologists.

Chapter 2 explained where the Cleveland ironstone industry operated, what geological strata it exploited, its duration and impact. The Cleveland ironstone industry consisted of the mining of Lias group ironstone deposits, of the Jurassic period, which occur across the Cleveland area of the pre 1974 North Riding of Yorkshire. It developed in the early nineteenth-century to supplement the inadequate ironstone reserves in the County Durham coalfields, where ironworks had been built after coke replaced charcoal as blast furnace fuel. After railways enabled the bulk movement of raw materials and ironstone mining commenced at Grosmont in 1836 and Eston in 1850, the centre of the iron industry shifted southwards to Teesside. The advent of steel saw the start of the importing of haematite ore that spelt the beginning of the end for the Cleveland ironstone industry as, initially,

it could not be used to feed the Bessemer convertors. Eventually the local ironstone could neither compete on cost nor quality and mining peaked in 1875, with the industry sustained by a combination of reducing production costs and government subsidies. Without the Eston Hills find, Middlesbrough would not have experienced the spectacular growth it experienced in the second half of the nineteenth-century. Cleveland ironstone enabled the town to become not only the UK's but one of the world's leading pig iron production centres

It was necessary to produce a definitive list of mines and their locations in order to identify the associated settlements and this task was undertaken in Chapter 3. Due to the inconsistencies between various sources consulted this was a more complex and time consuming task than had been anticipated. After resolving inconsistencies in mine names and locations a consolidated list of 93 sites was produced. 10 of these locations were removed from further study as they were found to be trial sites that had never gone into full production. Detailed investigation into the settlements associated with all 83 remaining mines was not possible and it was necessary to select case studies. In order to ensure that they were representative of the full range of mine histories it was necessary to develop a mine ranking tool. Applying this required data on mine ownership and number of years in operation to be collected. Insufficient data was found for three sites so the ranking scores for the remaining 80 mines were calculated. The Eston mine achieved the highest score, 2.88/3, and Tocketts the lowest, 0.34/3.

Chapter 4 presented the work undertaken to identify all the Cleveland ironstone settlements, the first time that this has been done. The value of industrial settlements as evidence of industrial activity has been widely acknowledged; they were part of the system necessary to operate an industrial enterprise. With many Cleveland ironstone mine sites having lost their ability to bear witness to the industry, the surviving settlements are a valuable resource for industrial history. Mining introduced a new form of housing, the terraced cottage, into the Cleveland area and made a distinct, if not always welcome, contribution to the settlement pattern. For each of the 80 ranked mines it was determined which settlement would have housed the workers. For 22 mines no settlement specifically associated with them could be identified. With some settlements serving more than one mine 53 distinct Cleveland ironstone settlements were identified. These were split into those built for the miners and those expanded to house them, with these further subdivided by what had happened to them post mining. They could have been lost, stayed essentially the same or been expanded. With no pre-existing settlements lost after mining ceased, one case study settlement was selected from the remaining five categories. The selection process ensured that the

associated mines had a range of ranking scores. The identified case studies are Leven Vale Cottages (A1), Grosmont (A2), Liverton Mines (A3), Rosedale (B3) and Eston (B3).

For each of the case study settlements, Chapter 5 establishes the history of ironstone mining in the area, determining the duration of the potential influence and events that impacted on life in the community. How those visiting the settlements when the mines were operating perceived them is also discussed. Of the case study settlements Leven Vale Cottages was influenced by ironstone mining for the shortest time, limited to brief periods during the speculative boom of the 1860s and 1870s, and end date of mining was the earliest. Mining had started within 5 km of Liverton Mines before the settlement was built and continued until the last Cleveland ironstone mine closed in 1964. It is the case study settlement which the industry had the greatest opportunity to influence, even though the mine for which the settlement was built was 'one of the poor' mines. Although Grosmont was the site of the first Cleveland ironstone mine and saw a number of ventures during the speculative boom, it was the only case study other than Leven Vale Cottages where mining did not continue into the twentieth-century. Mining in Rosedale did continue until 1928, but the population dropped after the failure of the mine operator in 1879 and never fully recovered. The Eston mine operated for longer than any other Cleveland ironstone mine, the full 99 years of the lease. With long term, stable operation the community had less change to react to than at the other case study settlements. How visitors perceived the case study settlements during the mining era depended on the value judgements that they took, influenced by what was deemed to be 'right' and 'wrong' in the English landscape at the time they wrote. Leven Vale Cottages and Liverton Mines were both largely ignored by commentators, but for different reasons. The former escaped notice due to its isolated position and short life, and the latter because it suffered by comparison to its neighbours, rural Liverton, and the larger Loftus. The miner's housing at both Grosmont and Rosedale attracted negative comments from visitors, who disliked the 'alien' form in what were otherwise seen as a beautiful valley and dale respectively. Eston, which visitors often treated as an extension of Middlesbrough rather than a separate place, had achieved so much in such a short period of time that visitors were prepared to overlook the living conditions of the workers.

What has happened to the sampled settlements since mining in the vicinity ceased is explored in Chapter 6. It was observed that the difference in perception of the industrialised zone of the North Riding of Yorkshire, now commonly referred to as Teesside, compared to the rest of the largely rural county dates back to the nineteenth-century when the founders of Middlesbrough were set on self determination. Ever since the inter-war depression, Teesside has been seen as needing repeated interventions aimed at returning the area to economic prosperity. The perceptions of the case study

settlements reflect this split. Leven Vale Cottages were demolished circa 1927 and Kildale resumed a quiet life as a pleasant agricultural community, little impacted by its brief flirtation with industry. The site of the Warren Moor mine, one of the lowest ranking of the mines, is sufficiently secluded to escape the notice of most visitors. Rosedale is the only one of the case study settlements where some of the more isolated housing was demolished before mining ended. Attitudes to the remaining housing has changed over time and the old railway line is now seen as an asset helping to draw in visitors. Interpretation has been provided to explain the industrial sites encountered along its route. The village of Rosedale Abbey has changed little physically but has transformed itself into a tourist hub. Grosmont has also built a tourist economy around a railway, in this case the preserved North Yorkshire Moors Railway. This industrial relic is seen as more acceptable than the 'scars' of ironstone mining that nature had to 'heal'. Eston is still in the shadow of Middlesbrough and has become a suburb of the town. The mining era fabric of the town only survives in fragmented pockets, with much housing lost to redevelopment during the 1960s and 1970s. Despite this the people of the town clearly have a pride in the industrial past and the Eston Resident's Association has worked hard to install more memorials to the Cleveland ironstone industry than any of the other settlements, case studies or not, that the author visited. The most deprived of the case study settlements is Liverton Mines, where ironstone mining had the longest influence and finished at the latest date. Local authority housing schemes were added to the village in the 1950s but the trading estate built to attract jobs has failed to prosper. The least deprived of the case study settlements is Kildale, the village closest to Leven Vale Cottages.

This thesis has shown by compiling a representative sample of settlements that being associated with a mine having a high rank was detrimental to long term prosperity. The next section sets out the key findings in greater detail.

2 Conclusions

This thesis has studied the relationship between the Cleveland ironstone mines and the settlements that housed its workers. Based on a sample of five Cleveland ironstone settlements that were subjected to a range of different mining experiences a number of conclusions can be drawn.

Based on the Indices of Multiple Deprivation data released in 2015, the most deprived of the case study settlements is Liverton Mines. Whilst the mine for which the settlement was built did not have a particularly high rank, the village was situated within commuting distance of a number of higher-ranking mines, including North Skelton. This was the last Cleveland ironstone mine to close, in 1964, thus Liverton Mines was impacted by the Cleveland ironstone industry for longer than any

other of the case study settlements. The population of Liverton Mines did drop after the Liverton mine closed but the village was expanded with the addition of local authority housing in the 1950s, when there was optimism that it would be possible to address the dependence of the Teesside economy on a narrow range of industries.

Associated with the highest ranking of the Cleveland ironstone mines, which operated for the full 99 years of its royalty lease, Eston is also now relatively deprived. The ICI Wilton chemical complex started to come on-stream in the 1950s and may ex-miners found employment there. The first of the housing estates that now join Eston to Middlesbrough were local authority schemes to house the influx of workers. Local employment opportunities have declined and Eston is now viewed as a settlement that requires regeneration.

The least deprived of the case study settlements is Kildale, the closest village to where Leven Vale Cottages stood. All of the mines in the area were low ranking and did not operate for long enough to have a lasting impact on the long established agricultural community. Ironstone mining arrived and departed again during the speculative boom of the 1860s and 1870s. The last standing Cleveland ironstone mine chimney, listed as Grade II, stands at the Warren Moor mine site, but is secluded and not visible to the casual visitor.

Grosmont and Rosedale both had similar Indices of Multiple Deprivation scores, between Kildale and Liverton Mines. Mines with a range of ranks, again between Kildale and Liverton Mines, operated at both locations. The first Cleveland ironstone mine to open, in 1836, was sited at Grosmont and it was at the centre of a mini speculative boom before the Eston Hills find in 1850. Mining ceased in 1891 when the mining company failed and the population adjusted downwards to be in line with the local employment opportunities. A similar fall occurred at Rosedale when the mining company there failed in 1879. Mining did restart in that instance but never again employed so many and remote houses, surplus to requirements, fell out of use. The somewhat incongruous rows of terraced housing that remain dotted around the dale were seen as blots on the landscape when occupied by those seeking cheap housing so they could live independently on a low income but have become valued as accommodation for the tourist industry that dominates the dale. A similar change in perception occurred at Grosmont, in this case driven by railway enthusiasts wishing to visit or volunteer on the North Yorkshire Moors Railway. The growth of holiday rentals and second homes to service this trade have pushed up housing costs in both places. Services used by the residents have been displaced by those catering for visitors, for instance the former Grosmont School is now a tearoom. Whilst outwardly prosperous, at both Rosedale and Grosmont the lack of access to affordable housing and services actually mean that they are relatively deprived for residents.

Based on a consideration of the factors summarised above it can be observed that the history of ironstone mining in the vicinity of a settlement that housed the miners has had a lasting impact on the history of settlements. Considered individually the attributes that had an impact and what that impact was are as follows. The later the date that mining ended within 5 km of a settlement the more deprived it is likely to be. Settlements associated with the higher ranking mines, which operated for longer, are more likely to be deprived. Settlements that were expanded by the addition of local authority housing in the 1950s are more likely to be deprived. There are insufficient data points to undertake statistical analysis of any of these hypothesis.

One factor that has not been fully explored above is what lies at the root of the difference in official treatment of Teesside and North Yorkshire. In the Cleveland area there have been factors in addition to the deep seated English preference for the countryside over the town. These will be considered below.

2.1 Middlesbrough

In the study area there is a root cause of the difference in attitude to the case study settlements that lie within the North York Moors National Park compared to those within the Redcar and Cleveland Borough Council area that is separate to the usual English obsession with the countryside: that root cause is Middlesbrough.

Right from the start in 1829, the Owners of the Middlesbrough Estate who founded the town saw 'their' town as different to North Yorkshire, in which it sat, and fought for self determination. This culminated in the formation of the County Borough of Middlesbrough in 1889, the same year that the North Riding of Yorkshire County Council came into being. County boroughs did not fall under county council control. This separation worked well when the Middlesbrough trade prospered, but it was vulnerable to the negative impact of any downturns. Middlesbrough County Borough did expand its boundaries a number of times, taking in more bits of North Yorkshire, but it remained a small geographic area, with a large population and a narrow industrial base, and it can be argued that Middlesbrough was already in decline by the time of its golden jubilee in 1881.

The iron industry, driven by Cleveland ironstone, was the reason for its phenomenal growth and Middlesbrough led the world in blast furnace technology. The town lost its competitive advantage with the coming of the steel age, when the phosphoric Cleveland ironstone could not initially be used in the new steel technology, Bessemer convertors. Teesside has been attempting to regain its late nineteenth-century prosperity ever since having been badly affected by the inter-war depression. No matter how hard successive generations have tried, they cannot create a sustainable

economy on Teesside that provides sufficient employment for the local population. Middlesbrough was always seen as different to North Yorkshire, initially this was a positive thing with enviable growth and wealth generation, but for the last 100 years Middlesbrough has been a problem seeking a solution.

The impact of the difference in the treatment of rural and urban areas in relation to a currently operating industry, Potash, will now be considered.

2.2 Potash

A deposit of potash, a potassium bearing mineral valued as a fertiliser, was discovered at Aislaby, near Whitby in 1949 during boring for oil.¹ Whilst an economically viable means of extraction from the great depth was being debated, the North York Moors National Park came into being and concerns were raised about how a development could be undertaken without “spoiling the countryside”.² A compromise resulted in the Boulby mine, situated just inside the national park boundary, adjacent to the Grinkle ironstone mine site. Planning permission for the underground workings and surface buildings was granted in 1968 after a Public Inquiry established that it was in the national interest.³ Mining commenced in 1973, less than 10 years after the last Cleveland ironstone mine closed. The site sits right on the cusp between industrial East Cleveland and rural North Yorkshire. To the east are the Cleveland ironstone mining communities, where jobs were needed and to the west Staithes, a coastal settlement heavily dependant on tourism. As Figure 139 shows, no efforts were made to disguise the activities being undertaken. The mine is visible for miles around.

¹ “Potash Bed Found Near Whitby,” *Yorkshire Evening Post*, July 12, 1949, 4.

² Alfred J. Brown, *Fair North Riding* (London: Country Life Ltd., 1952), 114.

³ Cleveland Potash Limited, *2012 Supplement to Environmental Statement* (Loftus: Cleveland Potash Limited, 2012), 3.



Figure 139: Boulby Mine (Source: Author)

The new Woodsmith mine site is situated in the North York Moors National Park, approximately 6 miles to the east of Grosmont. By the time that plans for the mine were being developed it was over 100 years since ironstone mining had ceased in the area and it was viewed as a rural tourist destination. Controversy surrounded the granting of planning permission in 2015 and the National Park Authority has a series of pages dedicated to the development on their website that explain their decision.⁴ The project had to pass the Major Development Test, demonstrating that there were exceptional circumstances that made it in the public interest. The permission was subject to 95 planning conditions and a Section 106 legal agreement to mitigate the impact, compliance is being monitored by two dedicated members of staff. Sensitivities have resulted in a development that will look very different to Boulby, Figure 140.

⁴ "Planning Permission," *North Yorkshire Moors National Park*, n.d., ca 2018, accessed Aug 2, 2019, <http://www.northyorkmoors.org.uk/planning/Sirius-Minerals-Polyhalite-Mine-Woodsmith-Mine/planning-permission>.



Figure 140: Woodsmith Mine (Source: “Woodsmith Mine,” Sirius Minerals, 2019, accessed Aug 1, 2019, <http://siriusminerals.com/our-project/woodsmith-mine/>)

3 Contribution to the Field

This thesis has, in sum, three elements that make a contribution to the study of the Cleveland ironstone industry. Firstly, it has reconciled inconsistencies within the primary data to produce a definitive list of mines. This will, hopefully, provide a foundation for future scholarship. Secondly it has, for the first time, compiled a list of all the settlements associated with the Cleveland ironstone industry, and differentiates them in ways that allow for a representative sample of settlements to be established. Thirdly it has, for the first time, explored the impact of mine history on settlement history, and argued that: if a settlement had a significant association with mining (as measured by a high rank) it was detrimental to the long-term prosperity of a settlement. The development of this novel method could beneficially be applied to other areas where primary resources were extracted, both in the UK and beyond.

Appendix 1

Index

| | Description |
|---------------------------|--|
| Appendix 1.1 | UK map showing the region in which the mines were located ¹ |
| Appendix 1.2 | Regional map showing the location of the mines (modified from ²) |
| Appendix 1.3 | Diagram showing the 1 kilometre grid squares in which mines were located |
| Appendix 1.4 ³ | East Cleveland Mines and Settlements |
| Appendix 1.5 | Coastal Mines and Settlements |
| Appendix 1.6 | Eastern Outlier Mines and Settlements |
| Appendix 1.7 | Grosmont Mines and Settlements |
| Appendix 1.8 | Map showing the locations of the 6 southern mines |

The mines are shown as red dots on the maps and the settlements by dots of the colours given in the table below.

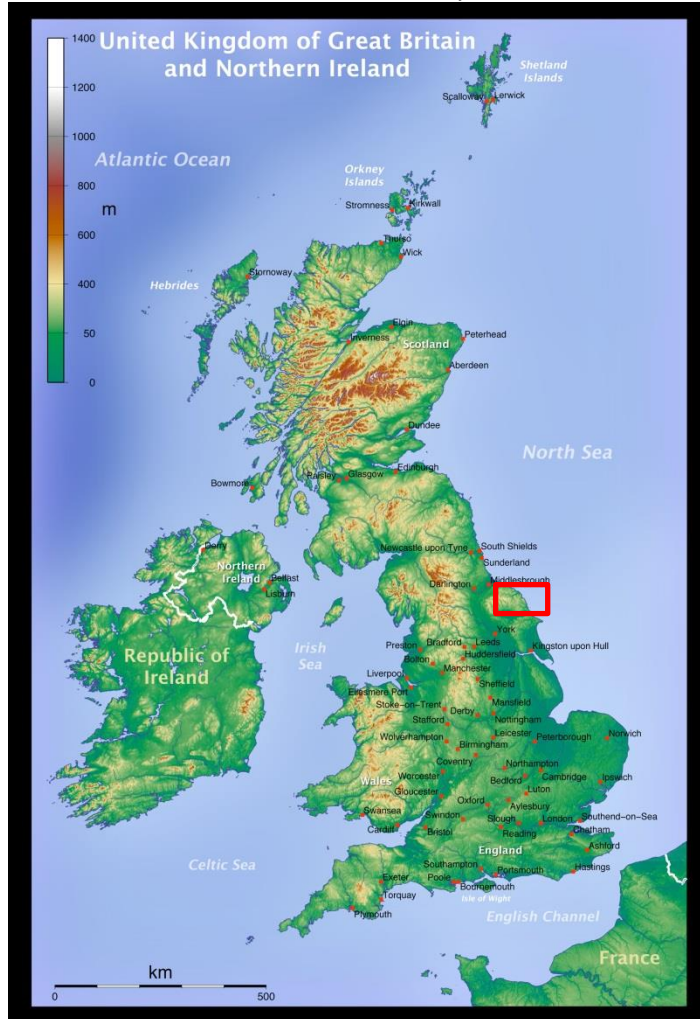
| Settlement Classification | Colour |
|--|--------|
| A1: Reduced / lost post mining | Orange |
| A2: Essentially the same as at closure | Yellow |
| A3: Expanded post closure | Green |
| B2: Essentially the same as at closure | Blue |
| B3: Expanded post closure | Purple |

¹ "Maps of Great Britain," Maps of Europe, undated, accessed Sept 16, 2019, <http://www.maps-of-europe.net/maps-of-united-kingdom>.

² "Map of North Yorkshire and Northern England," North Yorkshire County Council, March 20th, 2019, accessed Sept 16, 2019, <https://www.northyorkshire.gov.uk/maps>.

³ The maps shown in appendices 1.4 to 1.8 are the Author's mark-up of the OS map accessed via the North Yorkshire County Council website <https://www.northyorkshire.gov.uk/maps>.

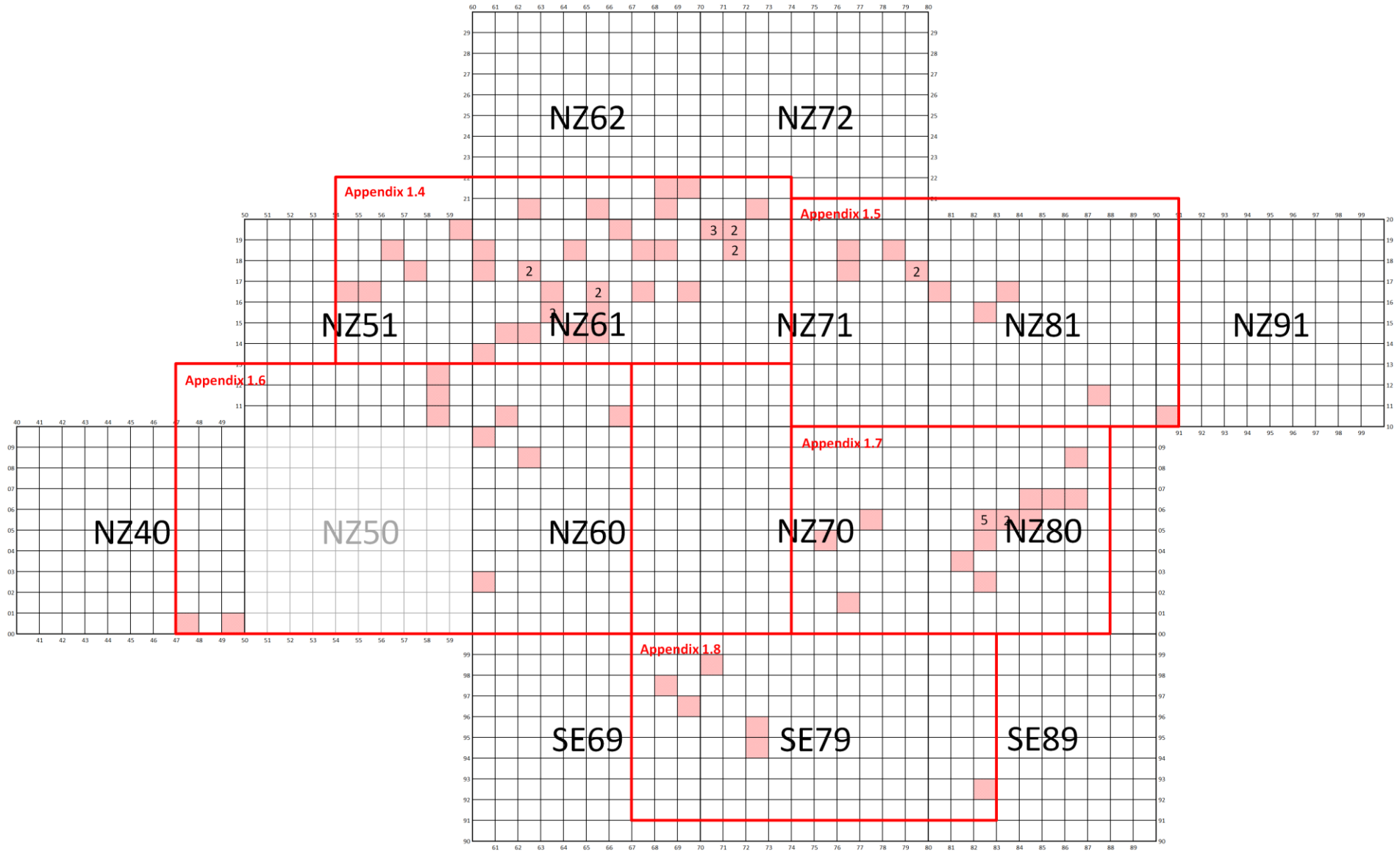
Appendix 1.1: Cleveland ironstone industry area within the UK



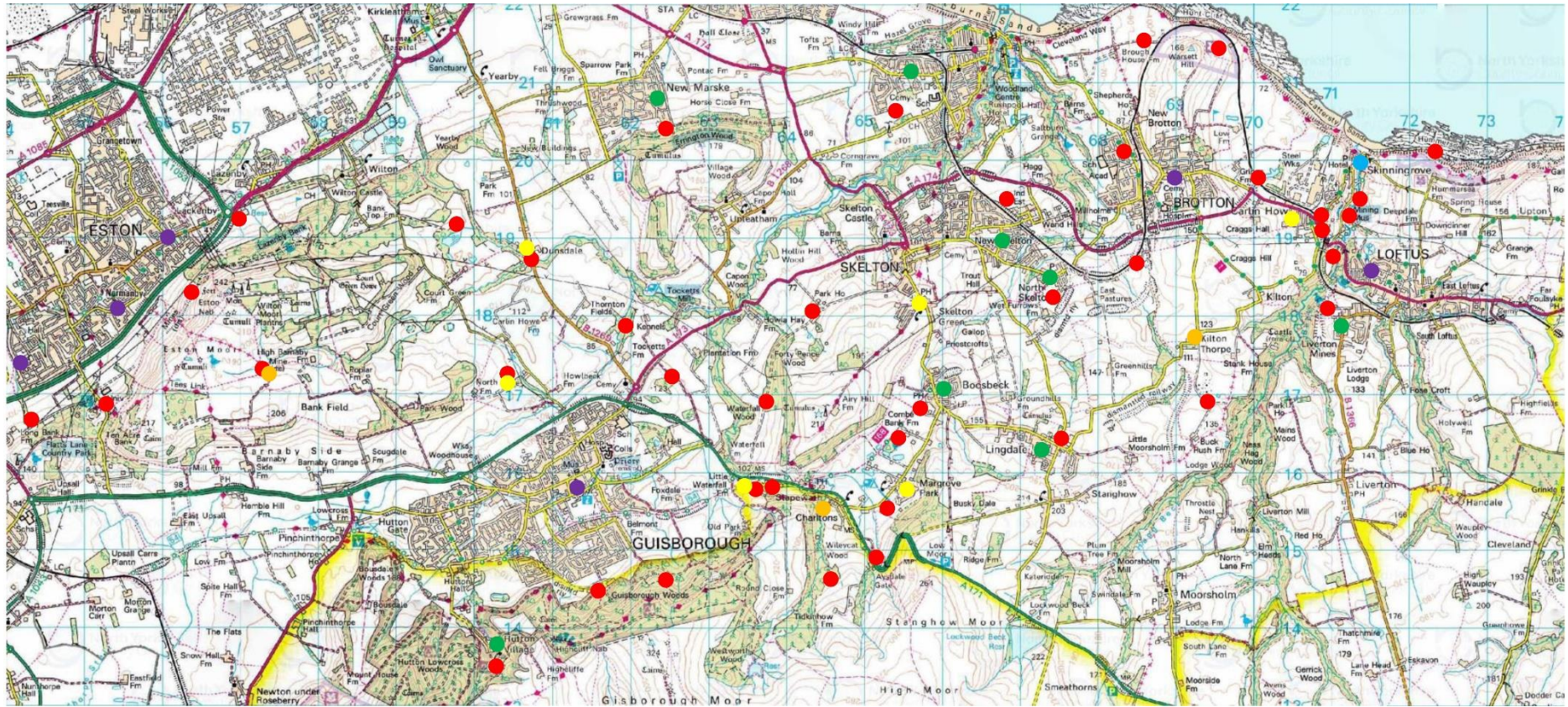
Appendix 1.2: Cleveland ironstone industry area within the region



Appendix 1.3: 1 kilometre grid squares (Source: Author)



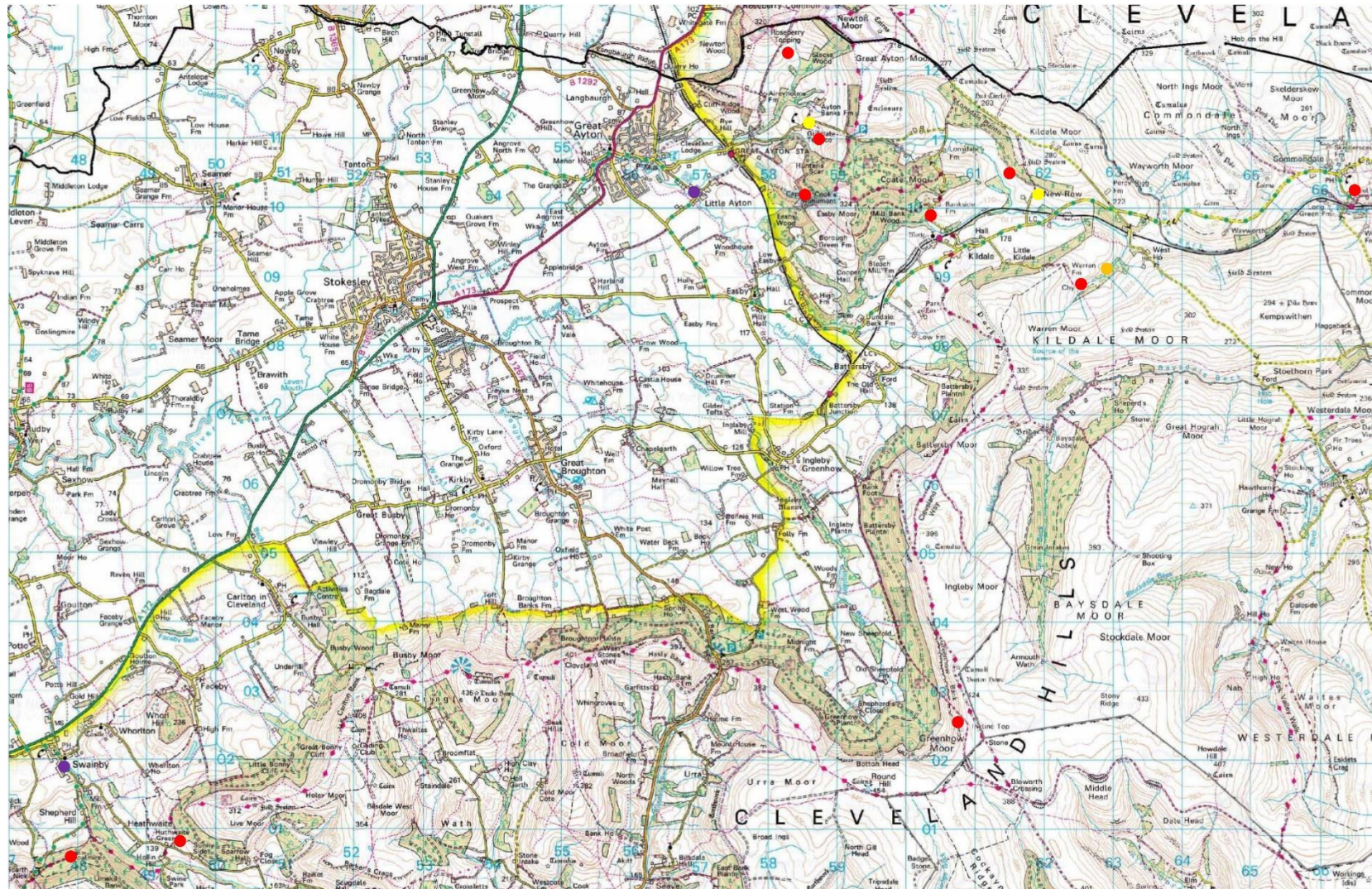
Appendix 1.4: East Cleveland Mines and Settlements



Appendix 1.5: Coastal Mines and Settlements



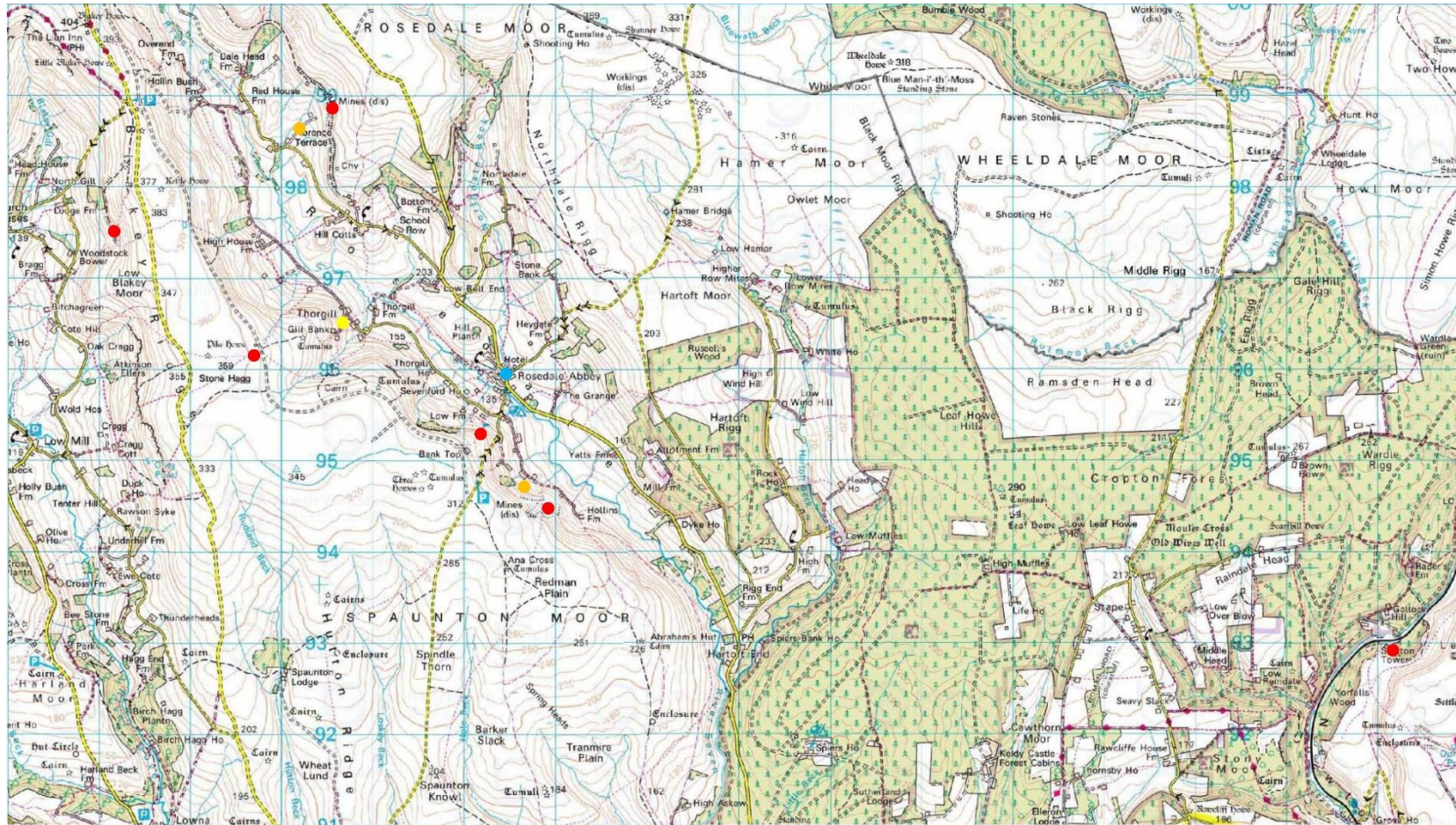
Appendix 1.6: Eastern Outlier Mines and Settlements



Appendix 1.7: Grosmont Mines and Settlements



Appendix 1.8: Southern Mines and Settlements



Abbreviations

| | |
|-------|--|
| B&V | Bolckow and Vaughan |
| BB | Bell Brothers |
| CBA | Council of British Archaeology |
| CBT | County Borough of Teesside |
| CCC | Cleveland County Council |
| CFIC | Cargo Fleet Iron Company |
| CIAS | Cleveland Industrial Archaeology Society |
| CIC | Carlton Iron Company |
| DL | Dorman, Long and Company |
| DMM | Durham Mining Museum |
| EH | English Heritage |
| ERA | Eston Residents' Association |
| IMD | Index of Multiple Deprivation |
| LIC | Liverton Ironstone Company Limited |
| LSOA | Lower-layer Super Output Area |
| LVIC | Lonsdale Vale Iron Company Limited |
| MPP | Monument Protection Programme |
| NER | North Eastern Railway |
| NRYCC | North Riding of Yorkshire County Council |
| NYMNP | North York Moors National Park |
| NYMR | North Yorkshire Moors Railway |
| OGS | Ordnance Geological Survey |
| OS | Ordnance Survey |
| P&P | Pease and Partners |
| R&CBC | Redcar and Cleveland Borough Council |
| R&FIC | Rosedale and Ferryhill Iron Company |
| S&DR | Stockton and Darlington Railway |
| SCLH | Standing Conference for Local History |
| TIAG | Teesside Industrial Archaeology Group |

| | |
|--------|---|
| TICCIH | International Committee for the Conservation of the Industrial Heritage |
| TLI | This Land of Iron |
| VCH | Victoria County History |
| W&PR | Whitby and Pickering Railway |
| WMC | Warren Moor Company Limited |
| YAHS | Yorkshire Archaeological and Historical Society |

Bibliography

1 Primary Sources

1.1 Newspapers

| | |
|--|-------------|
| Newcastle Courant | 1851 |
| Sheffield Daily Telegraph | 1903 |
| Sunderland Daily Echo and Shipping Gazette | 1892 – 1904 |
| The Daily Gazette (Middlesbrough) | 1875 - 1879 |
| The Evening Gazette (Middlesbrough) | 1870 – 1872 |
| The Evening Press (Yorkshire) | 1892 |
| The Leeds Mercury | 1857 – 1937 |
| The London Gazette | 1919 – 1928 |
| The Newcastle Daily Journal | 1882 |
| The Newcastle Journal | 1855 |
| The North-Eastern Daily Gazette | 1882 – 1900 |
| The Northern Echo | 1873 – 1880 |
| The Northern Evening Mail | 1882 |
| The Sheffield and Rotherham Independent | 1874 – 1876 |
| The Shields Daily Gazette and Shipping Telegraph | 1891 |
| The York Herald | 1854 – 1881 |
| The Yorkshire Herald | 1891 |
| The Yorkshire Post | 1912 – 1937 |
| Whitby Gazette | 1857 – 1956 |
| Yorkshire Evening Post | 1949 |
| Yorkshire Gazette | 1856 – 1865 |
| Yorkshire Post and Leeds Intelligencer | 1866 – 1867 |

1.2 Maps

Ordnance Survey County Series 6" to 1 mile editions

| | |
|-------------------------|-------------|
| 1 st Edition | 1853 – 1857 |
| 2 nd Edition | 1892 – 1895 |
| 3 rd Edition | 1912 – 1920 |
| 4 th Edition | 1938 - 1947 |

Ordnance Survey County Series 25" to 1 mile editions

| | |
|-------------------------|-------------|
| 1 st Edition | 1846 – 1863 |
| 2 nd Edition | 1889 – 1899 |
| 3 rd Edition | 1907 – 1924 |
| 4 th Edition | 1930 – 1954 |
| 5 th Edition | 1953 – 1958 |

Large scale current OS maps accessed via the North Yorkshire County Council on-line general map at <http://maps.northyorks.gov.uk/connect/analyst/?mapcfg=General>. 1:1,250, 1:2,500 and 1:10,000 scales consulted.

1.3 Census Returns

Census Enumerators' Books for 1841, 1851, 1861, 1871, 1881, 1891, 1901 and 1911 accessed via the Find My Past website, www.findmypast.co.uk.

1.4 Interviews

Mrs. Cook, Park Farm, Kildale. Interviewed by E.C. Marsh on April 10 2015.

Tammy Naylor, Esk Valley. Interviewed by E.C. Marsh on March 28 2013.

Malcolm Bisby, Kildale. Interviewed by E.C. Marsh on April 9 2011.

Robin Daniels, Tees Archaeology. Interviewed by E.C. Marsh on March 7 2011.

Graham Lee, NYMNP, . Interviewed by E.C. Marsh on February 24 2011.

Tony Nicholson, University of Teesside. Interviewed by E.C. Marsh on April 14 2011.

1.5 Archives

The Dawnay Archive. "Historic map of Liverton (late 18th cent)." *ZDSM1-6A4C*. North Yorkshire County Council County Record Office, 2015.

—. "Historic map of Liverton 1865." *ZDSM1-20A4C*. Northallerton: North Yorkshire County Council County Record Office, 2015

The National Archives. "Annual Reports of Inspectors of Mines." *POWE 7/1 to POWE 7/95*. The National Archives. n.d.

East Cleveland Image Archive. Images of East Cleveland accessed via the East Cleveland Images website. <http://www.image-archive.org.uk/>

Middlesbrough Council Image Archive. Images accessed via flickr photostream: <https://www.flickr.com/photos/middlesbroughcouncil/with/5201871396/>

2 Secondary Sources

- Aalen, F.H.A. and Richard Muir. "Mosaic of Landscapes." In *England's Landscape: The North East*, edited by F.H.A. Aalen and Colm O'Brien, 201 - 224. London: Collins, 2006.
- Allen, L.G. "Mayor's Foreword." In *The County Borough of Middlesbrough Survey and Plan*, edited by Max Lock, 1. Middlesbrough: The Middlesbrough Corporation, 1946.
- Allen, Robert C. "International Competition in Iron and Steel, 1850-1913." *The Journal of Economic History*, 39, no. 4 (1979): 911-937.
- Almond, J.K., "S Keith Chapman." *Cleveland Industrial Archaeology Society Newsletter* 94 (2008): 9.
- Andrews, Robert, Jules Brown, Rob Humphreys, Phil Lee, and Donald Reid. *The Rough Guide to Britain*. New York: Rough Guides, 2004.
- Anthony, Cedric. *Glimpses of Kildale History*. The Chew Valley: Geni Printing, 2012.
- Appleton, John B. "Iron and Steel Industry of the Cleveland District" *Economic Geography*, 5, no. 3 (1929): 308 - 319.
- Ashcroft, M.Y. *A History of the North Riding of Yorkshire County Council 1889 – 1974*. Northallerton: North Riding of Yorkshire Council, 1974.
- Atherton, M.A. and I.G. Simmons. "The Landscape." In *The North York Moors Landscape Heritage*, edited by D.A. Spratt and B.J.D. Harrison, 11-27. Helmsley: North York Moors National Park, 1996.
- Atkinson, Frank. *The Industrial Archaeology of North-East England (The Counties of Northumberland and Durham and the Cleveland District of Yorkshire) Volume 1*. Newton Abbot: David & Charles, 1974.
- Atkinson, Rev. J.C. *Cleveland, Ancient & Modern: Part 10*. Barrow-in-Furness: J. Richardson, 1873.
- . *Cleveland, Ancient & Modern: Part 13*. Barrow-in-Furness: J. Richardson, 1873.
- . *History of Cleveland Ancient and Modern: Volume 1*. Leeds: M.T.D. Rigg Publications, 1988.
- . *History of Cleveland Ancient and Modern Vol II (Part 2)*. Guiseley: M.T.D. Rigg Publications, 1993.
- Baddeley, M.J.B. *Thorough Guide Series: Yorkshire (Part I): The East Coast, York and the County between the N.E. Main Line and the Sea also the Cathedral and Castle of Durham*. London: Dulau & Co., 1897.
- Baedeker, Karl. *Great Britain Volume III: Northern England*. London: George Allen & Unwin Ltd, 1970.
- Bagshaw, Mike. *Slow Travel: North York Moors & Yorkshire Wolds*. Chalfort St. Peter: Bradt Travel Guides Ltd., 2018.

- Bainbridge, J.W. "The End of an Era: The Cleveland Ironstone Industry." *The Times Review of Industry and Technology* 2, no. 3, March (1964): 38-39.
- Baines, Thomas. *Yorkshire Past and Present: A History and a Description of the Three Ridings of the Great County of York from the Earliest Ages to the Year 1870; with an Account of its Manufactures, Commerce, and Civil and Mechanical Engineering Vol. 1, Part 1*. London: William Mackenzie, 1870.
- . *Yorkshire Past and Present: A History and a Description of the Three Ridings of the Great County of York, from the Earliest Ages to the year 1870; with an Account of its Manufactures, Commerce, and Civil and Mechanical Engineering Vol. 2, Part 2*. London: William Mackenzie, n.d., ca. 1875.
- Barker, Malcolm G. *Yorkshire: The North Riding*. London: B.T. Batsford Ltd., 1977
- Barrow, G. *Memoirs of the Geological Survey, England and Wales: The Geology of North Cleveland*. London: HMSO, 1888.
- Bartholomew. "Map of the North-East Yorkshire Moors & Coast." In *Handy Guide Series 3: Yorkshire Moors & Sea 4th Edition*, edited by Ernest E. Taylor, Inside back cover. London: British Periodicals Limited, 1920.
- BBC. "Dorman Long tower listed in emergency to stop demolition." *BBC*. 2021 Accessed Sept 20, 2021. <https://www.bbc.co.uk/news/uk-england-tees-58546361>
- . "Dorman Long tower to be destroyed after listed status revoked." *BBC*. 2021 Accessed Sept 20, 2021. <https://www.bbc.co.uk/news/uk-england-tees-58593615>
- Belcher, Henry. *Illustrations of the Scenery on the Line of the Whitby and Pickering Railway*. London: Longman, Bees, Orme, Brown, Green and Longman, 1836.
- Bell, Gordon. *The Whitby and Pickering to Scarborough from Early Victorian Guides*. Pickering: Blackthorn Press, 2008.
- Bell, Lady Florence. *At the Works: A Study of a Manufacturing Town*. London: Virago, 1985.
- Belshaw, B.H. *The North Riding of Yorkshire: The Official County Handbook*. Cheltenham: Ed. J. Burrow & Co. Ltd. n.d., ca. 1970.
- Beresford, Maurice. "Professor W.G. Hoskins – A Memoir." *The Agricultural History Review* 40, no. 2 (1992): 164 – 167.
- Besford, Janet. "Grosmont Methodist Church and Schoolroom." In *The Grosmont Millennium: Reflections and Recollections*, edited by Yeoman Williamson, 19-20. Northallerton: North Yorkshire County Council, 2002.
- Bevan, G. Phillips. *Tourist's Guide to the East and North Ridings of Yorkshire: Containing Full Information Concerning all the Favourite Places of Resort, Both on the Coast and In-land*. London: Edward Stanford, 1884.

- Bewick, Joseph. *A Geological Treatise on the District of Cleveland in North Yorkshire*. Newcastle-upon-Tyne: Andrew Reid, 1861.
- Black Country Bugler User. "Golds Hill Church and the Face in the Window," *Black County Bugler*. 2006. Accessed October 2014, 2014. <http://www.blackcountrybugle.co.uk/GOLDS-HILL-CHURCH-FACE-WINDOW/story20122851-detail/story.html>.
- Blake, Robert, Edward Miller, Trefor Owen, Norman McCord, Patricia Batty Shaw, Henry Stapleton and John West. "Committee to review local history." *The Local Historian* 13, no. 8 (1979): 451 – 456.
- Kristin Bluemel and Michael McCluskey, "Introduction." In *Rural Modernity in Britain: A Critical Intervention*, edited by Kristin Bluemel and Michael McCluskey, 1 – 16. Edinburgh: Edinburgh University Press, 2018.
- Boland, Peter and Gareth Wilson. "Local Heritage Lists and the Management of Industrial Sites." *Conservation Bulletin* 67 Autumn (2011): 20-21.
- Boulting, Nikolaus. "The law's delays: conservationist legislation in the British Isles." In *The Future of the Past: Attitudes to conservation 1147-1974*, edited by Jane Fawcett, 9-33. London: Thames Hutton, 1976.
- Bradshaw. *Bradshaw's Descriptive Railway Hand-book of Great Britain and Ireland: Section IV*. Oxford: Old House, 2010.
- Briggs, Asa. "Foreword." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, ix – x. Stroud: Sutton Publishing Ltd., 1996.
- . *Victorian Cities*. London: Penguin Books, 1990.
- Brighton, W.E. *Ironstone Mining in Eston: A Personal Account*. Guisborough: Peter Tuffs, 1996.
- British Geological Survey. "Our past." *British Geological Survey*. 2017. Accessed June 27, 2018. <http://www.bgs.ac.uk/about/ourPast.html>.
- . "Pioneers of the British Geological Survey." *British Geological Survey*. 2017. Accessed June 27, 2018. <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/archives/pioneers/home.html>.
- Brown, Alfred J. *Fair North Riding*. London: Country Life Ltd, 1952.
- . *Striding Through Yorkshire: Revised Edition*. London: Country Life Ltd, 1949.
- Buchanan, R.A. *Industrial Archaeology in Britain*. London: Allen Lane, 1980.
- Buchanan, Angus. "The origins and early days of the AIA." *Industrial Archaeology News* 169 Summer (2014): 2 – 4.

- Bulmer, Martin. "Change, Policy and Planning since 1918." In *Mining and Social Change: Durham County in the Twentieth Century*, edited by Martin Bulmer, 167-201. London: Croom Helm, 1978.
- . "Employment and Unemployment in Mining 1920 -1970." In *Mining and Social Change: Durham County in the Twentieth Century*, edited by Martin Bulmer, 150-165. London: Croom Helm, 1978.
- . "Introduction." In *Mining and Social Change: Durham County in the Twentieth Century*, edited by Martin Bulmer, 11 – 14. London: Croom Helm, 1978.
- . "Social Structure and Social Change in the Twentieth-century." In *Mining and Social Change: Durham County in the Twentieth Century*, edited by Martin Bulmer, 15 – 48. London: Croom Helm, 1978.
- Burns, Tom Scott. *Canon Atkinson and his Country*. Guiseley: M. T. D. Rigg Publications, 1986.
- Burt, Roger, Peter Waite, Michael Atkinson, and Ray Burnley. *The Yorkshire Mineral Statistics: Metalliferous and Associated Minerals 1845 - 1913*. Exeter: The Department of Economic History, University of Exeter, 1982.
- Chadwick, Edwin. *Report on the Sanitary Condition of the Laburing Population*. Edinburgh: University Press, 1964.
- Chapman, S.K. *Cleveland Ironstone*. Clapham: The Dalesman Publishing Company Limited, 1973.
- . *Dorman Museum Research Report No. 1: Gazetteer of Cleveland Ironstone Mines*. Middlesbrough: Dorman Museum, 1967.
- . *Gazetteer of Cleveland Ironstone Mines: Research Series No. 1*. Guisborough: Langbaugh Museum Service, 1976.
- Chapman, Simon. *Cleveland Ironstone Mines: Old Pictures Volume 4: Rosedale Mines and Railway*. Guisborough: Peter Tuffs, 2007.
- . *Grosmont and its Mines: A Short History of Ironstone Mining around Grosmont*. Guisborough: Peter Tuffs, 2002.
- . *Hope to Prosper: A History of Ironstone Mining at North Skelton*. Guisborough: Peter Tuffs, 1997.
- . *Liverton Mine "One of the Poor Mines": A History of Ironstone Mining at Liverton Mines near Loftus*. Guisborough: Peter Tuffs, 1997.
- . *Rosedale and its Ironstone Mines: A History of the Rosedale Valley Mines*. Guisborough: Peter Tuffs, 2004.
- . *The Loftus Mines, Skinningrove: A History of Ironstone Mining at Loftus Mines in Skinningrove Valley*. Guisborough: Peter Tuffs, 1998.
- Chitty, Gill. "Industrial Heritage as Contemporary Context." *Conservation Bulletin* 67 (2011): 41-42.

- CIAS Editorial Board. *Cleveland Ironstone*. Helmsley: CIAS and North York Moors National Park, 1998.
- Clarke, B.W. and Dr. J.A. Soulsby. *The Story of Grosmont: Church and Village*. Grosmont: B.W. Clarke, 1975.
- Claughton, Peter. "Foreword." In *The Archaeology of Mining and Quarrying in England: A Research Framework for the Archaeology of the Extractive Industries in England – Resource Assessment and Research Agenda*, edited by Phil Newman, xvi. Matlock Bath: National Association of Mining History Organisations, 2016.
- Claughton, Peter. "Iron and Ironstone." In *The Archaeology of Mining and Quarrying in England: A Research Framework for the Archaeology of the Extractive Industries in England – Resource Assessment and Research Agenda*, edited by Phil Newman, 115 – 126. Matlock Bath: National Association of Mining History Organisations, 2016.
- Cleere, Henry F. *The Iron Industry of Roman Britain*. Tonbridge: Wealden Industry Research Group, 1981.
- Cleveland County Council. *Liverton Mines Reclamation Scheme, Industrial Estate and Access Road: Report No. 52*. Middlesbrough: Cleveland County Council, 1975.
- Cleveland Federation of Women's Institutes. *The Cleveland Village Book*. Newbury: Countryside Books, 1991.
- Cleveland Potash Limited. *2012 Supplement to Environmental Statement*. Loftus: Cleveland Potash Limited, 2012.
- Coal and Coastal. "On Behalf of the People: Work, Community and Class in the British Coal Industry 1947 – 1994", *Coal and Community*. Accessed January 24, 2022.
<https://www.coalandcommunity.org.uk/>
- Cossons, Neil. *The BP Book of Industrial Archaeology*. Newton Abbot: David & Charles, 1993.
- Cossons, Sir Neil. "Saving the Age of Industry." *Conservation Bulletin*. 67 Autumn. (2011): 3-4.
- Counsell, David. *A Short History of Grosmont*. Whitby: Whitby Literary and Philosophical Society, 1981.
- . "Grosmont Co-Operative Society: The First Fifty (or so) Years." *Bulletin of the Cleveland and Teesside Local History Society* no. 65 (1994): 29 - 40.
- Cowan, Michael. "The British Association for Local History 1982 – 2007." *The Local Historian* 37, no. 1 (2007): 2 – 8.
- Cranstone, D. "After Industrial Archaeology?." In *Industrial Archaeology: Future Directions*, edited by Eleanor Conlin Casella and James Symonds, 77 – 92. London: English Heritage, 2005.
- Crosby, Alan. "The Amateur Historian and the Local Historian: Some Thought after Fifty Years." *The Local Historian* 32, no. 3 (2002): 146 – 155.

- Crosby Alan G. "Local and Regional History Series for the Northern Counties: A Survey and Assessment." *Northern History* 51, no.1 (2014): 1 – 30.
- Cross, Right Honourable R.A. *Reports of the Inspectors of Mines, to Her Majesty's Secretary of State, for the Year 1876*. London: Her Majesty's Stationery Office, 1877.
- Curtis, Myra. "Kildale." In *The Victoria History of the County of York: North Riding*, edited by William Page, 249-253. London: The St. Catherine Press, 1923.
- David Stovell & Millwater. *Planning, Design & Access Statement*. Middlesbrough: David Stovell & Millwater, 2006.
- Department of Communities and Local Government. *The English Indices of Deprivation 2015*. London: Department of Communities and Local Government, 2015.
- Dobson, John and Philip Battersby. "*Charltonian*": *A Family Bus Business in the Cleveland Ironstone District of Yorkshire*. Glossop: Venture Publications, 2005.
- Drummond, Diane K. *Crewe: Railway Town, Company and People – 1840 – 1914*. Abingdon: Routledge, 2017
- Duncombe, Colonel C.W.E. "Landscape Study." In *Ryedale: A Report on the District*, edited by Colonel C.W.E. Duncombe, 20 -24. Appleton-le-Moor: Ryedale Branch: Council for the Preservation of Rural England, circa 1935.
- Dunn, Atkinson, Dickinson, Higson, Hedley, Wynne, Brough, Bakrer, Evans, Williams, Alexander and Morton. *Reports of the Inspectors of Mines to Her Majesty's Secretary of State: For the year 1861*. Government, London: Her Majesty's Stationary Office, 1862.
- Durham Mining Museum. "Durham Mining Museum Colliers." *Durham Mining Museum*. 2007. Accessed July 30, 2013. <http://www.dmm.org.uk/colliery/index.htm>.
- . "Wearmouth Colliery." *Index*. Durham Mining Museum. 2021 Accessed October 18, 2021, <http://www.dmm.org.uk/colliery/w001.htm#creditpic>.
- East Cleveland Villages Big Local. "East Cleveland Klondike Grand Prix Est. 2017." *East Cleveland Big Local*. 2019. Accessed April 15, 2019. <http://eastclevelandklondikegp.co.uk/>.
- . *East Cleveland Villages Plan*. London: Local Trust, 2013.
- English Heritage. *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment*. London: English Heritage, 2008.
- . *Low Demand Housing and the Historic Environment*. London: English Heritage, 2005.
- Eston Urban District Council. *Eston Urban District: District Handbook 1946 – 48*. London: Pyramid Press Limited, 1946.
- . *Eston Urban District, Yorks: The Official Guide*. Croydon: The Home Publishing Co., n.d., ca. 1955.
- Falconer, Keith. *Guide to England's Industrial Heritage*. London: B.T. Batsford Ltd., 1980.

- Faulkner, Thomas and Linda Polley. "Townscapes and Cityscapes." In *England's Landscape: The North East*, edited by F.H.A. Aalen and Colm O'Brien, 147 – 182. London: Collins, 2006.
- Feversham, The Rt. Hon., The Earl of. "Note." In *Ryedale: A Report on the District*, edited by Colonel C.W.E. Duncombe, 10. Appleton-le-Moor: Ryedale Branch: Council for the Preservation of Rural England, circa 1935.
- Fletcher, J.S. *A Picturesque History of Yorkshire: Divisional Volume VI*. London: Blackwood, Le Bas & Co., 1901.
- . *The Making of Modern Yorkshire, 1750 - 1914*. London: George Allen & Unwin Ltd., 1918.
- Flinn, M.W. "British Steel and Spanish Ore: 1871-1914." *The Economic History Review*, 8, no. 1 (1955): 84-90.
- Foster, M.G. "Preface." In *North Yorks Moors: National Park Guide No. 4*, edited by Arthur Raistrick, v – vi. London, Her Majesty's Stationary Office, 1979.
- Fox, Francis. *River, Road, and Rail: Some Engineering Reminiscences*. London: John Murray, 1904.
- Fox, Sir Francis. *Sixty-three Years of Engineering, Scientific and Social Work*. London: John Murray, 1924.
- Fox-Strangways, C. *Memoirs of the Geological Survey of the United Kingdom: The Jurassic Rocks of Britain, Vol. 1 Yorkshire*. London: HMSO, 1892.
- Fox-Strangways, C, C Reid, and G Barrow. *Memoirs of the Geological Survey, England and Wales: The Geology of Eskdale, Rosedale, &c*. London: HMSO, 1885.
- Fulton, Terry, *Up the Black Lonnen: Up the Back Lane, Aspects of iron mining at Upleatham (1851 to 1872)*. Guisborough: Peter Tuffs, 2009.
- Gazette Live. "Gresham Housing Demolition: The 'Cancer' Ray Mallon Attempted to Cut Out of Middlesbrough." *Gazette*. 2013. Accessed Aug 18, 2014.
<http://www.gazettelive.co.uk/news/gresham-housing-demolition-cancer-ray-6330961>.
- Geological Survey. *Memoirs of the Geological Survey of Great Britain and of the Museum of Practical Geology: The Iron Ores of Great Britain Part 1: The Iron Ores of the North and North-Midland Counties of England*. London: Longman, Brown, Green and Longmans, 1856.
- Gerrard, David. *The Victorian & Edwardian North Riding*. Stroud: Amberley Publishing, 2008.
- Gill, M.C. and R. Burt. *British Mining No. 72: The Mines of Yorkshire, Metalliferous and Associated Minerals*. Sheffield: The Northern Mine Research Society, 2003.
- Google Maps. "Liverton Mines." *Google Maps*. n.d., ca. 2020. Accessed December 7 2021.
<https://www.google.co.uk/maps/place/Liverton+Mines/>.
- . "Middlesbrough Town Centre." *Google Maps*. n.d., ca. 2015. Accessed June 8, 2015.
<https://www.google.co.uk/maps/place/Middlesbrough+Town+Hall/>.

- Gordon, Samuel. *The Watering Places of Cleveland: Being Descriptions of These and Other Attractive Localities in that Interesting District of Yorkshire*. Guiseley: M.T.D. Rigg, 1992.
- Graves, Rev. John. *The History of Cleveland in the North Riding of the County of York*. Carlisle: F. Jollie and Sons, 1808.
- Grosmont Business Group. *Visit Grosmont: Steam, Moors & More...* Grosmont: Grosmont Business Group, n.d., ca. 2015.
- Hall, Christopher. "Some Notes on the History of Great Ayton [Monument] Ironstone Mine." *Transactions of the Scarborough Archaeological and Historical Society*, no. 34 (1998): 3-12.
- Hammond, Reginald J.W. *Complete Yorkshire*. London: Ward Lock Limited, 1973.
- Harland, Oswald. *Yorkshire North Riding*. London: Robert Hale Limited, 1951.
- Harrington, J. "Know Your Parish: Eston and Normanby Parish." *Cleveland Family History Society Journal* 4, no. 11 (1991): 33-36.
- Harrison, B.J.D and B.K. Roberts. "The Medieval Landscape." In *The North Yorks Moors Landscape Heritage*, edited by D.A. Spratt and Harrison B.J.D., 72-112. Helmsley: North York Moors National Park, 1996.
- Harrison, B.J.D. "The Alum Workers." *The Cleveland Industrial Archaeologist* no. 2 (1975): 20-24.
- Harrison, J.K. "Landscapes of Industry." In *The North York Moors Landscape Heritage*, edited by D.A. Spratt and B.J.D. Harrison, 159-183. Helmsley: North York Moors National Park, 1996.
- . "Industrial Archaeology in Cleveland: The First 30 Years." *The Cleveland Industrial Archaeologist* no. 24 (1997): 1-11.
- . "John Sinclair Owen 1918 – 1996" In *Cleveland Ironstone*, edited by CIAS Editorial Board, 9 – 10. Helmsley: CIAS and North York Moors National Park, 1998.
- Hastings, R.P. *More Essays in North Riding History*. Northallerton: North Yorkshire County Records Office, 1984.
- Hayes, R.H. and J.G. Rutter. *Research Report No. 9: Rosedale Mines and Railway*. Scarborough: Scarborough and District Archaeological Society, 1974.
- . "The Rosedale Ironstone Industry and Railway." *The Transactions of The Scarborough and District Archaeological Society*, 2, no. 11 (1968): 6-28.
- Hayes, Raymond H. *A History of Rosedale: The Story of Yorkshire's most Beautiful Dale*. Helmsley: North York Moors National Park, 1985.
- . "Reminiscences of the early days of the Society." *Helmsley Archaeological and Historical Society*. 2010. Accessed October 12, 2021. <https://www.helmsleyarchaeologicalandhistorical.society.org.uk/history.htm>.

- Heavisides, Henry. *The Annals of Stockton-on-Tees; with Biographical Notices*. Stockton: H. Heavisides and Son, 1865.
- Heavisides, Michael. *Rambles in Cleveland and Peeps into the Dales on Foot, Cycle and Rail*. Guiseley: M.T.D. Rigg Publications, 1988.
- Her Majesty's Government. *No. 187 The Cleveland (Structural Change) Order 1995*. London: Her Majesty's Government, 1995.
- Heseltine of Thenford CH, The Rt. Hon. The Lord. *Tees Valley: Opportunity Unlimited: An Independent Report*. London: Department for Communities and Local Government, 2016.
- Hey, David. *A History of Yorkshire: 'County of the Broad Acres'*. Lancaster: Carnegie Publishing Ltd., 2005.
- . *A Regional History of England: Yorkshire from AD 1000*. London: Longman, 1988.
- Holt, Ysanne. "Borderlands; Visual and Material Culture in the Interwar Anglo-Scottish Borders." In *Rural Modernity in Britain: A Critical Intervention*, edited by Kristin Bluemel and Michael McCluskey, 167 – 186. Edinburgh: Edinburgh University Press, 2018)
- Home, Gordon. *Yorkshire: Coast and Moorland Scenes*. London: Adam and Charles Black, 1907.
- Horning, Audrey and Marilyn Palmer. "General Introduction," In *Crossing Paths or Sharing Tracks?: Future Directions in the Archaeological Study of Post -1550 Britain and Ireland*, edited by Audrey Horning and Marilyn Palmer, xiii – xiv. Woodbridge: Boydell & Brewer, 2009.
- Hoole, K. *A Regional History of the Railways of Great Britain: Volume 4, The North East*. Newton Abbott: David St. John Thomas, 1986.
- Horton, Minnie C. *The Story of Cleveland: History, Anecdote and Legend*. Middlesbrough: Cleveland and County Libraries, 1979.
- Hoskins, W.G. *Fieldwork in Local History*. London: Faber and Faber, 1979.
- . *Local History in England*. London: Longman, 1984.
- . *The Making of the English Landscape* London: Hodder & Stoughton, 2005.
- House, J.W. and B. Fullerton. *Tees-side at Mid-century: An Industrial and Economic Survey*. London: Macmillan & Co. Ltd., 1960.
- Hudson, Kenneth. "Has Industrial Archaeology lost its way?." *Industrial Archaeology Review*, 23, no.1 (2001): 6 – 9.
- . *Industrial Archaeology: An Introduction*. London: John Baker, 1963.
- Hughes, Stephen. *Copperopolis: Landscapes of the Early Industrial Period in Swansea*. Aberystwyth: Royal Commission on the Ancient and Historical Monuments of Wales, 2008.

- Imperial Mineral Resources Bureau. *Iron Ore. (Summary of Information as to the Present and Prospective Iron-Ore Supplies of the World.) Part 1. - United Kingdom.* London: His Majesty's Stationery Office, 1922.
- Industrial Archaeology Group for the North East. "Yorkshire (NR): A checklist of sites." *Bulletin 4* (1967): 1 – 11.
- Inman, R., D.R. Brown, R.E. Goddard, and D.A. Spratt. "Roxby Iron Age Settlement and the Iron Age in North East Yorkshire." *Proceedings of the Prehistoric Society 51* (1985): 181-213.
- Jeans, J.S. *Pioneers of the Cleveland Iron Trade.* Middlesbrough: H.G. Reid, 1875.
- . *The Iron Trade of Great Britain.* London: Methuen & Co., 1906.
- Jefferys, Thomas. *The County of York, Survey'd in MDCCLXVII, VIII, IX and MDCCLXX.* London: Thomas Jefferys, 1771.
- Jennings, Bernard. "Arthur Raistrick (1896 – 1991): The Man and the Scholar." In *Boots and Books: The Work and Writings of Arthur Raistrick*, edited by Trevor Croucher, 1 – 12. Otley: Smith Settle Ltd., 1995.
- John, Angela V. "Introduction." In *At the Works: A Study of a Manufacturing Town*, edited by Lady Florence Bell, ix – xxiv. London: Virago, 1985.
- John Murray. *Handbook for Travellers in Yorkshire and for Residents in the County: Third Edition, Thoroughly Revised.* London: John Murray, 1882.
- . *Handbook for Travellers in Yorkshire: New Edition, Thoroughly Revised.* London: John Murray, 1874.
- Joy, David. *Whitby and Pickering Railway.* Clapham: Dalesman Publishing Company Ltd., 1969.
- Karl Baedeker. *Great Britain Volume III: Northern England.* London: George Allen & Unwin Ltd., 1970.
- Kendall, Hugh P. *History of the Old Castle of Mulgrave in Yorkshire.* Whitby: The Kendall Memorial Fund Committee, 1948.
- Kirby, Great Broughton and Ingleby Greenhow Local History Group and Rosedale History Society. *Rosedale Railway Heritage Trail.* Helmsley: North York Moors National Park, 2011.
- Lamplugh, G.W., C.B. Wedd, and J. Pringle. *Memoirs of the Geographical Survey, Special Reports on the Mineral Resources of Great Britain: Vol. XII - Iron Ores (contd.), Bedded Ores of the Lias, Oolites and Later Formations in England.* London: HMSO, 1920.
- Langbaugh Educational Resources. *Skinningrove: An Educational Study.* Guisborough: Langbaugh District Council, n.d., ca. 1984.
- Laurence, Alastair. *A History of Liverton.* Skipton: Pioneer Press Limited, 2014.
- Leapman, Michael. *Eyewitness Travel Guides: Great Britain.* London: DK, 2004.

- Leather, Philip, Brendan Nevin, Ian Cole, and Will Eadson. *The Housing Market Renewal Programme in England: Development, Impact and Legacy*. Sheffield: Nevin Leather Associates, 2012.
- Lee, Graham. "Industrial Archaeology in the North York Moors National Park: Recent Work and Research." *Industrial Archaeology Review*, 28, no. 2 (2006): 77 - 85.
- . "Rosedale Ironstone Industry East Mines: Conservation Project 1993 – 96." *The Ryedale Historian*, 16 (2000/01 14 – 18
- Leonard, J.W. "'City Beautiful': Planning in Mid-Twentieth Century Middlesbrough." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, 173 – 192. Stroud: Sutton Publishing Ltd., 1996.
- Levisham Station Group. *North Yorkshire Moors Railway: Grosmont Station – A Brief History*. Levisham: Levisham Station Group, 2007.
- Lewis, Richard. "The Evolution of a Political Culture: Middlesbrough 1850 – 1950." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, 103 – 126. Stroud: Sutton Publishing Ltd., 1996.
- Leyland, John. *The Yorkshire Coast and the Cleveland Hills and Dales*. London: Seeley and Co. Limited, 1892.
- Lillie, William. *The History of Middlesbrough: An Illustration of the Evolution of English Industry*. Middlesbrough: The Mayor, Aldermen and Burgesses of the County Borough of Middlesbrough, 1968.
- Lock, Max. *The County Borough of Middlesbrough Survey and Plan*. Middlesbrough: The Middlesbrough Corporation, 1946.
- Low, Peter. "Rural Modernity in a Time of Crisis: Preservation and reform in the Books of B.T. Batsford." In *Rural Modernity in Britain: A Critical Intervention*, edited by Kristin Bluemel and Michael McCluskey, 255 – 269. Edinburgh: Edinburgh University Press, 2018)
- Mackay, Margaret L. "Ormesby." In *The Victoria History of the County of York: North Riding Volume 2*, edited by William Page, 276-283. London: The St. Catherine Press, 1923.
- . "Skelton." In *The Victoria History of the County of York: North Riding Volume 2*, by William Page, 405-410. London: The St. Catherine Press, 1923.
- Mackay, Margaret L. and A.W. Clapham. "Brotton." In *The Victoria History of the County of York: North Riding Volume 2*, edited by William Page, 326-332. London: The St. Catherine Press, 1923.
- Mackin, B.E. "Gjers, Mills and Company Limited - A case-study of a Victorian Ironworks." *Transactions of the Teesside Industrial Archaeology Group*, 1, no. 1 (1967): 1-7.
- Mark Hines Architects. *Reviving Britain's Terraces: Life After Pathfinder*. London: SAVE Britain's Heritage, 2010.

- Marley, John. "Cleveland Ironstone: Outline of the Main or Thick Stratified Bed, its Discovery, Application, and Results, in Connection with the Ironworks in the North of England." *Transactions of the North of England Institute of Mining Engineers*, 5 (1856-7): 165-223.
- . "On the Magnetic Ironstone of Rosedale Abbey, Cleveland." *The Transaction of the North of England Mining Engineers* 19 (1869-70): 193-200.
- Matless, David. *Landscape and Englishness*. London: Reaktion Books, 2016.
- . "One Man's England: W.G. Hoskins and the English Culture of Landscape." *Rural History* 4, no. 2 (1993): 187 – 207.
- McDonnell, J. "After the Middle Ages: Agriculture and Settlement." In *The North York Moors Landscape Heritage*, edited by D.A. Spratt and B.J.D. Harrison, 113-140. Helmesley: North York Moors National Park, 1996.
- McDonnell, John. "End of Cleveland Iron Age - A Chapter in Industrial History." *Iron and Coal Trades Review*, February 13 (1959): 379-380.
- McDougall, Catherine. "Landscape Study." In *Ryedale: A Report on the District*, edited by Colonel C.W.E. Duncombe, 18 – 20. Appleton-le-Moor: Ryedale Branch: Council for the Preservation of Rural England, circa 1935.
- Mead, Harry. *Inside the North York Moors*. Newton Abbot: David & Charles, 1978.
- Medhurst, Franklin. *A Quiet Catastrophe: The Teesside Job*. Unknown: Citizens' Papers, 2010.
- Mee, Arthur and Frank Beckwith. *The King's England: Yorkshire: North Riding*. London: Hodder and Stoughton, 1970.
- M'Gonigle, G.C.M. "Poverty, Nutrition and Public Health (An Investigation into Some of the Results of Moving a Slim Population to Modern Dwellings)." *Proceedings of the Royal Society: Section of Epidemiology and State Medicine* (1933): 677-687.
- Middlesbrough Borough Council. *The Cleveland Ironstone Miners: Early Attempts at Combination and the Formation of the 'Cleveland Miners Association'*. Middlesbrough: Middlesbrough Borough Council, circa 1984.
- Mills, Catherine. *Regulating Health and Safety in the British Mining Industries, 1800 – 1914*. Abingdon: Routledge, 2010.
- Moore, Robert. *Pitmen, Preachers & Politics: The Effects of Methodism in an County Durham Mining Community*. Cambridge: Cambridge University Press, 1974.
- Morris, C.H. *Report on Abandoned Workings and Possible Surface Instability Problems*. Middlesbrough: County of Cleveland Department of County Surveyor and Engineer, n.d., ca. 1975.
- Morris, Joseph E. *The North Riding of Yorkshire*. London: Methuen & Co., 1904.

- Morrison, John. *Mini Guide: North York Moors*. Basingstoke: AA Publishing, 2007.
- Morton, H.V. *In Search of England*. London: The Folio Society, 2002.
- Mottershead, S. and G. Stout. *The History of Eston Hospital*. Stokesley: G. Stout, 1985.
- Mowforth, Rev. E.H. *Rosedale Priory and the Church of St. Laurence*. Hull: A. Brown and Sons Limited, n.d., ca. 1962.
- Neaverson, Peter and Marilyn Palmer. "Editorial." *Industrial Archaeology Review* 12, no.12 (1989): 5 – 8.
- Newcomen Society. "Welcome to the Newcomen website." *Newcomen Society*. 2014. Accessed September 27, 2013. <http://newcomen.com/about>.
- Nichols, Katherine. *The Social Effects on Unemployment in Teesside, 1919 - 1939*. Manchester: Manchester University Press, 1986.
- Nicholson, Tony, "'Jacky' and the Jubilee: Middlesbrough's Creation Myth." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, 32 – 52. Stroud: Sutton Publishing Ltd., 1996.
- . "Masculine Status and Working-class Culture in the Cleveland Ironstone Mining Communities, 1850 – 1881." In *Social Conditions, Status and Community 1860 – c. 1920*, edited by Keith Laybourn, 156 – 158. Stroud: Sutton Publishing Ltd., 1997.
- North Riding of Yorkshire County Council. *The North Riding of Yorkshire: The Official County Handbook*. Cheltenham: J. Burrow & Co. Ltd., n.d., ca. 1970.
- North York Moors National Park. "Grosmont." *NYMNP*. n.d., ca. 2015. Accessed February 25, 2019. <https://www.northyorkmoors.org.uk/visiting/see-and-do/attractions/grosmont>.
- . "Industrial Archaeology." *NYMNP*. n.d., ca. 2015. Accessed February 25, 2019. <https://www.northyorkmoors.org.uk/discover/archaeology/industrial-archaeology>.
- . "Land of Iron." *Looking after*. 2021. Accessed October 14, 2021. <https://www.northyorkmoors.org.uk/looking-after/landofiron..>
- . *North York Moors National Park Plan Summary*. Helmsley: North York Moors National Park, n.d., ca. 1977.
- . "Planning Permission." *NYMNP*. n.d., ca. 2017. Accessed August 2, 2019. <http://www.northyorkmoors.org.uk/planning/Sirius-Minerals-Polyhalite-Mine-Woodsmith-Mine/planning-permission>.
- . "Warren Moor." *NYMNP*. n.d., ca. 2015. Accessed February 25, 2019. <https://www.northyorkmoors.org.uk/discover/archaeology/industrial-archaeology/warren-moor>.

- North Yorkshire Federation of Women's Institutes. *The North Yorkshire Village Book*. Newbury: Countryside Books, 1991.
- North Yorkshire Moors Railway. *North Yorkshire Moors Railway: Official Opening by H.R.H. The Duchess of Kent, May 1st 1973*. Pickering: North Yorkshire Moors Railway, 1973.
- North, G.A. *Teesside's Economic Heritage*. Middlesbrough: County of Cleveland Council, 1975.
- Northern Industrial Group. *North East Coast: A Survey of Industrial Facilities – Comprising Northumberland, Durham and the North Riding of Yorkshire*. Newcastle: Andrew Reid & Co. Ltd., 1949.
- Ord, John Walker. *The History and Antiquities of Cleveland: Comprising the Wapentake of East and West Langbaugh, North Riding, County York*. London: Simpkin and Marshall, 1846.
- Owen, J.S. "Mining Failure in Cleveland No. 3: The Kildale Mines" *Bulletin of the Cleveland & Teesside Local History Society*, no. 14 (1971): 18-26.
- . "Mining Failure in Cleveland No. 3: The Kildale Mines" *Bulletin of the Cleveland & Teesside Local History Society*, no. 17 (1972): 12-17.
- . "Mining Failure in Cleveland No. 3: The Kildale Mines (concluded)" *Bulletin of the Cleveland & Teesside Local History Society*, no. 18 (1972): 15-21.
- . "Mining Failure in Cleveland No. 3: The Kildale Mines: Addendum" *Bulletin of the Cleveland & Teesside Local History Society*, no. 19 (1972): 10-14.
- . "The Cleveland Ironstone Industry." In *Cleveland Iron and Steel: Background and Nineteenth Century History*, edited by C.A. Hempstead, 9-48. Middlesbrough: The British Steel Corporation, 1979.
- . "Warren Moor Ironstone Mine, Kildale" *The Cleveland Industrial Archaeologist* no. 13 (1981): 33-53.
- Owen, John S. *Cleveland Ironstone Mining*. Redcar: C Books, 1986.
- Page, William, ed. *The Victoria History of the County of York: North Riding Volume 1*. London: The St. Catherine Press, 1914.
- . *The Victoria History of the County of Yor: North Riding Volume 2*. London: The St. Catherine Press, 1923.
- Palmer, Marilyn. "Industrial Archaeology and the Archaeological Community: Fifty Years On." *Industrial Archaeology Review* 32, no. 1 (2010): 5 – 20.
- Palmer, Marilyn, Michael Nevell, and Mark Sissons. *Industrial Archaeology: A Handbook*. CBA Practical Handbook No. 21. York: Council for British Archaeology, 2012.
- Palmer, Marilyn and Hilary Orange, "The Archaeology of Industry: People and Places." *Post-Medieval Archaeology* 50, no. 1 (2016): 73 – 91.

- Pendlebury, John, "Conservation, Conservatives and Consensus: The Success of Conservation under the Thatcher and Major Governments, 1979 – 1997." *Planning Theory & Practice*, 1, no. 1, (2000): 31 – 52.
- Pepper, Richard. "An Introduction." In *Eston Ironstone Mines: An Introduction*, edited by Cleveland Industrial Archaeology Society and Cleveland County Council, 1. Middlesbrough: Cleveland County Council, 1989.
- . *California and South Eston: Mining Communities 1850 to 1949*. Guisborough: Peter Tuffs, 2000.
- . *Eston and Normanby Ironstone Mines*. Guisborough: Peter Tuffs, 1996.
- . *Roseberry Ironstone Mine: Mining near Roseberry Topping*. Guisborough: Peter Tuffs, 1999.
- Perchard, Andrew. *Aluminiumville: Government, Global Business and the Scottish Highlands*. Lancaster: Crucible Books, 2012.
- Pevsner, Nikolaus. *The Buildings of England: Yorkshire: The North Riding*. London: Penguin Books, 1992.
- Phillips, John. *Illustrations of the Geology of Yorkshire or, a Description of the Strata and Organic Remains of the Yorkshire Coast*. York: Private Publication, 1829.
- Pickles, R.L. "Introduction" *Transactions of the Teesside Industrial Archaeology Group* 1 no. 1 (1965): Frontispiece.
- Pickles, Roger L. "A Brief History of the Alum Industry in North Yorkshire 1600 - 1875" *The Cleveland Industrial Archaeologist* no. 2 (1975): 1-10.
- Pollard, A.J., "Preface." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, xi – xiv. Stroud: Sutton Publishing Ltd., 1996.
- Polley, Linda, "Housing the Community, 1830 – 1914." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, 153 – 172 . Stroud: Sutton Publishing Ltd., 1996.
- Pontefract, Ella and Maria Hartley. *Yorkshire Tour*. London: J.M. Dent and Sons Ltd., 1946.
- Raistrick, Arthur. *Dynasty of Ironfounders: The Darbys and Coalbrookdale*. Newton Abbott: David and Charles, 1970.
- . *Industrial Archaeology: An Historical Survey*. London: Eyre Methuen, 1972.
- . "Industrial History." In *North York Moors: National Park Guide No. 4*, edited by Arthur Raistrick, 56-62. London: Her Majesty's Stationary Office, 1979
- . *Quakers in Science and Industry: Being an Account of the Quaker Contributions to Science and Industry during the 17th and 18th Centuries*. Newton Abbott: David & Charles (Holdings) Limited, 1968.
- . *The Coalbrookdale Company 1709 – 1959*. Telford: Ironbridge Gorge Museum Trust, 1965.

- . “The London Lead Company, 1692 – 1905.” *Transactions of the Newwcomen Society*, 14 (1935): 119 – 162.
 - . *The Making of the English Landsdcape: West Riding of Yorkshire*. London: Hodden & Stoughton, 1970.
 - . *Two Centuries of Industrial Welfare: The London (Quaker) Lead Company, 1692 – 1905*. London: Friends Historical Society, 1938.
 - . *Two Centuries of Industrial Welfare: The London (Quaker) Lead Company, 1692 – 1905*. Buxton: Moorland Publishing Company, 1977.
- Rawnsley, S.J. and F.B. Singleton. *A History of Yorkshire*. Chichester: Phillimore & Co. Ltd, 1995.
- Redcar and Cleveland Borough Council. *Redcar & Cleveland Ironstone Heritage Trail*. Guisborough: R&CBC, n.d., ca. 2015.
- . *Redcar and Cleveland Regeneration Masterplan: East Cleveland Area Spatial Framework*. Guisborough: R&CBC, 2010.
 - . *Redcar and Cleveland Regeneration Masterplan: Greater Eston Area Spatial Framework*. Guisborough: R&CBC, 2010.
- Reddan, Minnie. “Marske.” In *The Victoria History of the County of York: North Riding Volume 2*, edited by William Page, 399-405. London: The St. Catherine Press, 1923.
- Reddan, Minnie and A.W. Clapham. “Guisborough.” In *The Victoria History of the County of York: North Riding Volume 2*, edited by William Page, 352-365. London: The St. Catherine Press, 1923.
- Rix, M. “Industrial Archaeology.” *The Amateur Historian* 2, No. 8 (1955): 225-229.
- Rounthwaite, T.E. *Ironstone Mines and Railways of Cleveland and Rosedale*. Guisborough: Peter Tuffs, 1997.
- Russell, Ada. “Egton.” In *The Victoria County History of the County of York: North Riding, Volume 2*, edited by William Page, 343-348. London: The St. Catherine Press, 1923.
- . “Lastingham.” In *The Victoria County History of the County of York: North Riding, Volume 1*, edited by William Page, 524-529. London: The St. Catherine Press, 1914.
 - . “Liverton.” In *The Victoria History of the County of York: North Riding, Volume 2*, edited by William Page, 383-385. London: The St. Catherine Press, 1923.
 - . “Loftus.” In *The Victoria History of the County of York: North Riding Volume 2*, edited by William Page, 385-388. London: The St. Catherine Press, 1923.
 - . “Middleton.” In *The Victoria History of the County of York: North Riding, Volume 2*, edited by William Page, 453 - 460. London: The St. Catherine Press, 1923.

- Rutter, J.G. "Industrial Archaeology in North-East Yorkshire: List of Sites – Area I Scarborough." *Transactions of the Scarborough and District Archaeological Society* 2, no. 12 (1969): 17 – 33.
- . "Industrial Archaeology in North-East Yorkshire: List of Sites – Area II Ryedale and the Hambletons." *Transactions of the Scarborough and District Archaeological Society* 2 no. 13 (1970): 23 – 51.
- . "Industrial Archaeology in North-East Yorkshire: List of Sites – Area III Whitby and Eskdale." *Transactions of the Scarborough and District Archaeological Society* 2, no. 14 (1971): 17 – 49.
- Sampson, Ian. *The Official National Park Guide: North York Moors*. Newton Abbot: Pevensey Press, 2001.
- Sheail, John. "The Introduction of Statutory Planning in Rural Areas: The Example of the North Riding of Yorkshire." *The Town Planning Review* 50, no. 1 (1979): 71 - 83
- Shill, Ray and Ian Minter. "The Bagnall Family and Grosmont Furnaces" *Industrial Railway Review* 12, no. 137 (1994): 288 - 294.
- Simmons, I.G. *An Environmental History of Great Britain: From 10,000 Years Ago to the Present*, Edinburgh: Edinburgh University Press, 2001.
- Sirius Minerals. "Woodsmith Mine." *Sirius Minerals*. 2019. Accessed August 1, 2019. <http://siriusminerals.com/our-project/woodsmith-mine/>.
- Skelton & Brotton Parish Council. *Skelton & Brotton Neighbourhood Plan SPD*. Guisborough: R&CBC, 2013.
- Skelton and Brotton Urban District Council. *Skelton and Brotton and District, North Riding - Yorkshire: Official Guide*. London: The Homeland Association Ltd., n.d., ca. 1950.
- . *Skelton and Brotton Urban District: The Official Guide*. Cheltenham: Ed. J. Burrow & Co. Ltd., n.d., ca. 1962.
- Smith, Dr. Michael de, Dr Michael de Smith, "Test of the difference between two means, standard deviation not known," *Statistical Analysis Handbook, 2021 update*, 2021. Accessed Nov 24, 2021. <https://www.statsref.com/HTML/index.html>.
- Smith, Margaret. "An Industrial History Index." *The Yorkshire Archaeological Journal* 57 (1985): 189 – 202.
- Smout, T.C. *Nature Contested: Environmental History in Scotland and Northern England since 1600* Edinburgh: Edinburgh University Press, 2000.
- Sorby, H C. "On the Origin of the Cleveland Hill Ironstone." *Proceedings of the Geological and Polytechnic Society of the West Riding of Yorkshire* (1856): 457-461.
- Statham, D.C. "The Work of the National Park Authority." In *North York Moors: National Park Guide No. 4*, edited by Arthur Raistrick, 71-80. London: Her Majesty's Stationary Office, 1979.

- Stevenson, Catherine. "General election 2010: Lib Dems take Redcar with shock 21.8% swing," politics.co.uk. 2010. Accessed March 26, 2014.
<http://www.politics.co.uk/news/2010/5/7/general-election-2010-lib-dems-take-redcar-with-shock-21-8-swing/>.
- Stokesley Rural District Council. *Stokesley Rural District, Yorkshire: The Official Guide*. Croydon: The Home Publishing Co., n.d., ca. 1950.
- Strangleman, Tim. *Voices of Guinness: An Oral History of the Park Royal Brewery*. Oxford: Oxford University Press, 2019.
- Suter, J. and R. Vicker. "Recording and Communicating Yorkshire's Industrial Heritage." *Yorkshire Archaeological Journal*, 87 (2015): 198-199.
- T. Whellan and Co. *History and Topography of the City of York and the North Riding of Yorkshire, Volume 2*. Beverley: T. Whellan and Co., 1859.
- Tate, Ralph and J. F. Blake. *The Yorkshire Lias*. London: John Van Voorst, 1876.
- Taylor, David, "The Infant Hercules and the Augean Stables: A Century of Economic and Social Development in Middlesbrough, c 1840 – 1939." In *Middlesbrough: Town and Community 1830 - 1950*, edited by A.J. Pollard, 53 – 80. Stroud: Sutton Publishing Ltd., 1996.
- Taylor, Ernest E. *'Handy' Guide Series 3: Yorkshire Moors & Sea*. London: British Periodicals Limited, 1920.
- Teesside County Borough Council. *The County Borough of Teesside: Official Handbook*. Middlesbrough: Teesside County Borough Council, 1973.
- The Derwent Valley Mills Partnership. *Nomination of the Derwent Valley Mills for Inscription on the World Heritage List*. Derby: The Derwent Valley Mills Partnership, 2000.
- The Northern Echo "Durham Memories: The tiny colliery village that disappeared without a trace," *The Northern Echo*, 2004. Accessed Dec 19, 2020,
<https://www.thenorthernecho.co.uk/news/6995696.durham-memories-tiny-colliery-village-disappeared-without-trace/>.
- Thompson, J.H. *Tees-side Enterprise*. Derby: Bemrose Publicity Company Limited, 1949.
- TICCIH. *The Nizhny Tagil Charter for the Industrial Heritage*. Nizhny Tagil: TICCIH, 2013.
- Tomlin, David M. and Mary Williams. *Who was Who in 19th Century Cleveland*. Redcar: C Books, 1987.
- Trainor, Richard H. *Black Country Elites: The Exercise of Authority in an Industrial Area – 1830 – 1900*. Oxford: Clarendon Press, 1993.
- Trinder, Barrie. *The Making of the Industrial Landscape*. London: J.M. Dent & Sons Ltd., 1982.
- Tuffs, Peter. *Catalogue of Cleveland Ironstone Mines*. Guisborough: Peter Tuffs, 2003.

- . *Catalogue of Publications No. 62*. Guisborough: Peter Tuffs, 2020.
- . “Editorial.” *Cleveland Industrial Heritage Magazine*, no. 35 (2014): 1.
- Turners of Newcastle. “The End of an Era (1966).” *Yorkshire Film Archive*. 1966. Accessed May 2, 2018. <http://www.yorkshirefilmarchive.com/film/end-era>.
- UK Government, “National Statistics: English Indices of Deprivation 2015.” *Community and Society*. September 30, 2015. Accessed January 20, 2016. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>
- UNESCO. “Blaenavon Industrial Landscape.” *UNESCO*, n.d., ca. 2000. Accessed October 30, 2014. <http://whc.unesco.org/en/list/984/>.
- . “Cornwell and West Devon Mining Landscape.” *UNESCO*. n.d., ca. 2006. Accessed September 27, 2013. <http://whc.unesco.org/en/list/1215>.
- . “Derwent Valley Mills.” *UNESCO*. n.d., ca. 2001. Accessed October 30, 2014. <http://whc.unesco.org/en/list/1030>.
- . “Ironbridge Gorge.” *UNESCO*. n.d., ca. 1986. Accessed September 27, 2013. <http://whc.unesco.org/en/list/371>.
- . “New Lanark.” *UNESCO*. n.d., ca. 2001. Accessed October 30, 2014. <http://whc.unesco.org/en/list/429>.
- . “Saltaire.” *UNESCO*. n.d., ca. 2001. Accessed October 30, 2014. <http://whc.unesco.org/en/list/1028>.
- University of Portsmouth and Others. “William Camden, Britain, or, a Chorographical Description of the most Flourishing Kingdoms, England, Scotland, and Ireland.” *University of Portsmouth*. 2019. Accessed September 16, 2014. <http://www.visionofbritain.org.uk/travellers/Camden>.
- University of Portsmouth. “Kildale CP/AP Through Time: Population Statistics: Total Population.” *University of Portsmouth*. n.d., ca. 2009. Accessed April 13, 2015. http://www.visionofbritain.org.uk/unit/10440324/cube/TOT_POP.
- Vale, Edmund. *North Country*. London: B.T. Batsford, 1937.
- Vernon, Right Honourable Sir William. *Mines: Reports of the Inspectors of Mines to Her Majesty's Secretary of State, For the Year 1883*. London: Her Majesty's Stationary Office, 1884.
- Vesey, Barbara. *County Living Magazine Guide to Rural England: The North East of England*. Aldermaston: Travel Publishing Ltd., 2006.
- Vickers, Robert, “Creating an Industrial History Database for Yorkshire.” *Yorkshire Archaeological Journal* 85 (2013): 213 – 214.
- Wainwright, Peter. *The Mines and Miners of Goathland, Beckhole and Greenend* Guisborough: Peter Tuffs, 2005

- Waller, Robert. *The Dukeries Transformed: The Social and Political Development of a Twentieth Century Coalfield*. Oxford: Clarendon Press, 1983.
- Ward, Lock & Co. Limited. *Guide to Scarborough and the Yorkshire Coast*. London: Ward, Lock & Co. Limited, 1940.
- Warren, Jonathan. *Industrial Teesside, Lives and Legacies: A post-industrial geography*. Cham: Palgrave Macmillan, 2018.
- West, Karl. "After 160 years of pride, the last steel plant in the North East is shut down." *Mail Online*. 2010. Accessed March 26, 2014. <http://www.dailymail.co.uk/news/article-1252230/Partial-closure-Redcars-Corus-steelplant-threatens-strike-action.html>.
- Weston, Capt. W.J. *The North Riding of Yorkshire*. Cambridge: The University Press, 1919.
- Weston, Rev. F.H. *History of the Ancient Parish of Lastingham*. Leeds: J. Whitehead & Son, 1914.
- Wetherell, Sam. "Freedom Planned: Enterprise Zones and Urban Non-Planning in Post-War Britain." *Twentieth Century British History* 27 no. 2 (2016): 266-289.
- Wheeler, Michael. "The Industrial Archaeology Group for the North-East." *Bulletin* 1 (1966): 12.
- White, Walter. *A Month in Yorkshire*. London: Chapman and Hall, 1879.
- Whitehead, T.H., W. Anderson, Vernon Wilson, and D.A Wray. *Memoirs of the Geological Survey of Great Britain: The Mesozoic Ironstones of England: The Liassic Ironstones*. London: Her Majesty's Stationery Office, 1952.
- Whitworth, Alan. *Esk Valley Railway: A Travellers' Guide*. Barnsley: Wharnecliffe Publishing, 1998.
- Wikipedia. "Eston." *Wikipedia*. 2019. Accessed February 25, 2019. <https://en.wikipedia.org/wiki/Eston>
- . "Grosmont, North Yorkshire." *Wikipedia*. 2018. Accessed February 25, 2019. https://en.wikipedia.org/wiki/Grosmont,_North_Yorkshire
- . "Kildale." *Wikipedia*. 2019. Accessed February 25, 2019. <https://en.wikipedia.org/wiki/Kildale>
- . "Liverton Mines." *Wikipedia*. 2018. Accessed February 25, 2019. https://en.wikipedia.org/wiki/Liverton_Mines
- . "Rosedale Abbey." *Wikipedia*. 2018. Accessed February 25, 2019. https://en.wikipedia.org/wiki/Rosedale_Abbey
- . "Rosedale, North Yorkshire." *Wikipedia*. 2018. Accessed February 25, 2019. https://en.wikipedia.org/wiki/Rosedale,_North_Yorkshire
- Wilkinson, Adam. *Pathfinder*. London: SAVE Britain's Heritage, 2006.
- Williams, Mary. "Know Your Parish: Eston and Normanby." *Cleveland Family History Society Journal* 4, no. 10 (1991): 44-49.

Willis. "Mr. Willis's Report." In *Reports of the Inspectors of Mines to Her Majesty's Secretary of State, For the Year 1873*, edited by Willis, Dickinson, T. Evans, Wynne, Brough, Baker, Wales, Moore, Alexander, Southern, Wardell, Bell, C. Le Neve, Foster, and T.F. Evans, 1-20. London: Her Majesty's Stationary Office, 1874.

Winchester, Simon. *The Map that Changed the World: The Tale of William Smith and the Birth of a Science*. London: Viking, 2001.

Wood, G. Bernard. *Yorkshire*. London: B.T. Batsford, 1968.

Wright, Alec. "General Description of the National Park." In *North York Moors: National Park Guide No.4*, edited by Arthur Raistrick, 1-5. London: Her Majesty's Stationary Office, 1979.

Yasumoto, Minoru. *The Rise of a Victorian Ironopolis: Middlesbrough and Regional Industrialization*. Woodbridge: The Boydell Press, 2011.

Yorkshire Archaeological and Historical Society, "Industrial History Online." *IHO 2.5.7*. 2021. Accessed October 14. <https://www.industrialhistoryonline.co.uk.yiho/index.php>,

Young, Rev. George and John Bird. *A Geological Survey of the Yorkshire Coast: Describing the Strata and Fossils Occurring between the Humber and the Tees, from the German Ocean to the Plain of York*. Whitby: George Clark, 1822.

3 Unpublished Sources

3.1 Theses

Askins, Kye, 'Multicultural Country/side? Visible Communities' perceptions and use of the English National Parks' DPhil thesis, University of Durham, 2004.

Atkinson, Michael, 'Iron Ore Mining in Mainland Britain in the Nineteenth and Early Twentieth Centuries and its Links with the Iron and Steel Industry, with Particular Reference to Cleveland, Cumbria and the South Western Counties of England,' DPhil thesis, University of Exeter, 1981.

Bainbridge, J.W., 'A Comparative Study in the Growth and Decline of Two Iron Ore Mining Districts: Cleveland and West Cumberland' MSc thesis, University of Durham, 1964.

Beer, Simon Hanlon, 'The Trajectories of Industrial Change: Disrupting, Managing and Assembling Futures in Teesside,' (DPhil thesis, University of Durham, 2016).

Byrne, David, 'Deindustrialization, planning and class structure: A study of the effects of social policy on social structure' DPhil thesis, University of Durham, 1993.

- Cornish, M.S., 'Social Networks in East Cleveland: A Study of Powerlessness and Non-participation' DPhil thesis, University of Durham, 1982.
- Cornish, S.R., 'The Social Consequences of Industrial Decline: A Case Study of an East Cleveland Mining Community' DPhil thesis, University of Hull, 1984.
- Emery, Norman. 'Pease and Partners and the Deerness Valley: Aspects of the Social and Economic History of Waterhouses, Est Winning and Ushaw Moor MA thesis, University of Durham, 1984.
- Holmes, Hannah Briony, 'Spaces of demarginalization: Processes, policy and politics in addressing territorial in Middlehaven, Middlesbrough' DPhil thesis, University of Durham, 2020.
- Hughes, S.R., 'The Industrial Archaeology of Water and of Associated Rail transport in the Swansea Valley Area' MPhil thesis, University of Birmingham, 1984.
- James, Stephen, 'Growth and Transition in the Cleveland Iron and Steel Industry, 1850 to 1914' DPhil thesis, University of Durham, 2013.
- Leonard, James William, 'Urban Development and Population Growth in Middlesbrough 1831 – 71' DPhil thesis, University of York, 1975.
- Lloyd, Anthony. 'Life in a Northern Town: Call Centres, Labour Markets & Identity in Post-Industrial Middlesbrough' DPhil thesis, University of York, 2010.
- Marsh, Elizabeth Caroline, '19th Century Ironworks in the North York Moors' MA dissertation, University of York, 2008.
- Nicholson, T. 'The Growth of Trade Unionism Amongst the Cleveland Ironstone Miners 1850 – 1914' MA dissertation, Teesside Polytechnic, 1982.
- . 'Common Ground: The Dynamics of Mutuality in the Cleveland Ironstone Mining District 1850 – 1914' DPhil thesis, Teesside Polytechnic, 1988.
- Warren, Jonathan, 'Living the Call Centre – Global, Local, Work, Life, Interfaces' DPhil thesis Durham University, 2011.
- Warwick, Thomas (Tosh), 'Middlesbrough's Steel Magnates: Business, Culture and Participation – 1880 – 1934' DPhil thesis, University of Huddersfield, 2014.

3.2 Reports

Cranstone, David, *Monument Protection Plan: Iron and Steel Industries – Report on Step 3 Consultation* (Unpublished report for English Heritage, 2001).

—. *'Monument Protection Plan: Iron and Steel Industries – Introduction to Additional Step 3 Assessments* (Unpublished report for English Heritage, 2002).

Instone, Eric. *Monuments Protection Programme: The Iron Mining Industry, Introduction to Step 3 Site Assessments*. Research Assessment, Lancaster: Lancaster University Archaeological Unit, 1995.

Lane, Dr. Paul J., *The Archaeology of the Ironstone Industry of Rosedale, North Yorkshire: Volume One: The Report* (Unpublished Report, North York Moors National Park Authority, 1989).

3.3 Private Collections

Tammy Naylor. Postcards, maps, documents and artefacts relating to the Grosmont mines and ironworks.

CIAS Archive. An uncatalogued collection of images, newsletters, journals, minutes of meetings and books regarding the activities of the Cleveland Industrial Archaeology Society.

Authors personal collection of images, journals and books on the Cleveland ironstone industry.