Abstract

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Land Management: Welbeck and Holkham in the Long Nineteenth Century

The intention of this thesis is to explore the professionalisation of the management of the country house estate during the long nineteenth century through a meticulous examination of the archives at Welbeck Abbey and Holkham Hall. It uniquely surveys the impact of these changing dynamics of management through four broadly defined themes. Firstly it examines the concept of the patriotic landowner and the ways in which this affected farming practice. Secondly it investigates the characteristics of the expanding agricultural press and questions whether this corpus of knowledge contributed to professionalisation. Thirdly it considers the factors which contributed to the changing face of land management including: mechanisation, scientific farming, and agricultural experimentation, the dissemination of knowledge through agricultural shows and societies and increasing legislation. Fourthly it studies how changes within the landscape impacted on estate management and the ways in which this changed the characteristics of estate management. This is the first detailed micro-study relating to the changing dynamics of professionalisation. Previous studies have lacked detail or depth. The diary of William Gould and the correspondence of William Cripwell both agents at Welbeck form the basis of this study and create a historical perspective which is missing from the limited amount of previous research into this subject. Despite the lack of formalised training, by the beginning of the twentieth century the land agent was classed as a professional and this thesis for the first time starts to provide the answers as to why and how this change occurred.
ACKNOWLEDGEMENTS

School worried me after noticing that out of the 3 R’s only one began with an R and most of the Masters carried sticks that were strangely attracted to me. My fuller education began when The O.U. was in its infancy. I found myself hooked and signing on for some fourteen years until they ran out of available Bachelors: Thank you Harold Wilson for that inspired creation. Thank you revered Architectural Historian Bruce Bailey for your confirming in me a passion for Country Estates and their Land Management. A passion that was sealed by so many fondly remembered private visits and dinners at so many of the Great Houses. Thank you Professor Lindley, Dr Gill White, Professor Susan Gordon and Professor Aubrey Newman for the fantastic Master’s Degree: I am glad that I managed a merit for you.

In the production of this Doctorate I have been so extraordinarily fortunate in having the perfect supervisor. I would very much like to extend my very sincere thanks to Pro Vice Chancellor Professor Steve King. His extremely wise counsel and steerage has helped beyond measure and again I remain so profoundly grateful.

I would like to thank an old friend Christopher Gott whose Aunt Lady Anne Cavendish-Bentinck was daughter to The 7th Duke of Portland: It was some of his fascinating reminiscences that flagged Welbeck so strongly for me. In achieving all of this work very extensive investigation into surviving archival primary documentation and letters was necessary. In fact some 65,000 words of that were transcribed into a side reference file for ease of use. For the access on Welbeck that enabled this I would very much like to extend thanks to Nottingham Record Office and to The Department of Manuscripts and Special Collections, Kings Meadow Campus, Nottingham University. For access to the still privately held archives at Holkham I am so very grateful to archivist Christine Hiskey whose system is superb and personal knowledge enormous. Her hospitality was memorable and I very much look forward to her new book on the Hall.

I would like to thank The Royal Historical Society for their kind support in researching Holkham.

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‘Luck is what happens when preparation meets opportunity’ – Seneca.
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Chapter 1

Introduction

Thesis

This thesis explores the idea of the professionalisation of the land agent on the great estates of Welbeck Abbey in Nottinghamshire and Holkham Hall in Norfolk between c1780 -1914. It will through close textural analysis of the archives of these two landed entities investigate how changes in agricultural methods, mechanisation, the labour question and legislation all impacted and created the need for highly skilled men to run these large business enterprises. They were by far the leading sector of their day. Previous studies have looked at short periods, specific agents or estates but as yet there has been no long term direct compare and contrast major analysis of the professionalisation of estate management. The context of this change over time will be examined through four key perspectives. Firstly, it will investigate the concept of the patriotic landowner who felt a moral duty to improve the lands under his control. As early as the beginning of the nineteenth century specialised knowledge of fertilizers, water meadows, new crops and farming methods were already an essential component of farming expertise. It is apparent from the 3rd and 4th Dukes of Portland at Welbeck and Thomas Coke at Holkham that both were well aware of these changes and initially it would appear that change was landowner driven. However at Welbeck by the 1870s the emphasis had totally changed and improvements had become agent orientated. It will specifically explore the experimentations of the 3rd Duke at the beginning of the nineteenth century and the increasing mechanisation of the estate by chief land agent William Cripwell at the end of the nineteenth century. Secondly this thesis will explore the impact of the dissemination of agricultural knowledge both upon the farming community and the professionalisation of the land agent. This was not simply a matter of books and pamphlets but encompasses the expertise of the land owner, the expanding agricultural literature and the part played by agricultural shows and societies. Thirdly, it will explore the men who became agents and investigate how their role changed over time. The early agents at Welbeck were mainly concerned with the agricultural aspect of the estate but William Cripwell’s role encompassed so much more. He was expected to manage and mechanise agriculture and any other process including brick making where it was possible to do so. Cripwell also became far more involved in the rural community by acting as the 5th Duke’s representative in matters of education and the
coming of the railway. Part of the professionalisation of this role required the agent to be informed of any appropriate legislation, for example the Education Act of 1870, and to be able to describe its impact to the reclusive 5th Duke. This thesis will study the implications of legislation and its effect upon development and change. Finally this thesis will explore the impact that change had on the landscape and how the desire by every land owner to adapt the landscape around him forced professionalisation upon the agent. Unlike previous studies the in-depth analysis of the archives of Welbeck and Holkham provide a unique and previously unexplored investigation into the ways and means in which the role of the land agent developed and changed during this period. The working life of William Gould at Welbeck might have been recognised by his medieval counterparts but by the end of the nineteenth century the work and role of the agent had changed almost beyond recognition.

**Historiography**

The most substantial research on Welbeck was carried out and produced in two volumes by Tuberville in 1939.¹ This work related almost entirely to a potted history of the Dukes of Portland and contained one solitary chapter on estate management, half of which concerned the family holdings in Troon, Scotland. In terms of providing any detail on the manner by which the estate was managed it is only a brief overview of the running of the estate and almost of no consequence. Holkham has been researched in considerably more detail firstly by R. A. C. Parker and then S. Wade Martins although heavy emphasis in both cases was placed on the ownership of one of the most famous improving proprietors Thomas William Coke and his land agent Francis Blaikie.² During the period under investigation both estates moved towards scientific farming, mechanisation, improved livestock husbandry and experimentation.

There has been considerable debate over the last forty or more years concerning the timing of the agricultural revolution. Kerridge suggested that it occurred between the mid-sixteenth and eighteenth centuries, while Chambers and Mingay implied that it

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took place from around 1750 and was completed by 1880. Thirsk, on the other hand proposed that no such phenomenon took place but instead there were two distinct periods whereby there was effected a transformation of farming methods and techniques.¹ In the only article dedicated to the professionalisation of land agents Webster stated that the timing of the movement at least on the Egremont lands which she used as a case study was just as difficult to determine but may well have been the reaction to rapid revolutionary agricultural change.² In fact no meticulous and comprehensive study has ever been undertaken on when or even if professionalisation of those who ran the largest business enterprises of this period ever took place. Thus a more detailed understanding of the historiography of the agricultural revolution through the main historical arguments forms an important background to this thesis.

The dissemination of knowledge formed a key component of the increasing skill and knowledge of the land agent. Although agricultural books, texts, pamphlets and treatises have been in existence from Anglo-Saxon times, in the mid-eighteenth century the publication of these works expanded rapidly. The main body of research on agricultural writers was carried out by Fussell and in more recent times by Goddard.³ However despite the enormous number and variety of works which have survived the agricultural press has attracted little new attention. To some extent the impact of these works has been overshadowed by the issue of the animosities between Arthur Young and William Marshall. One of the main sources for this thesis has been the transcription of William Gould’s diary – agent at Welbeck in the 1780s – however despite the easy availability of this source the nature and function of his employment have not been compared to the performance of his contemporaries or successors. While Thompson, Mingay and Spring have all written about land agents and the great estates they fail to

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provide the detailed and close contextual analysis that this thesis will examine and utilise to provide a true sense of how estate management changed during this period.⁶

**Key Research Questions**

The aim of this thesis is to investigate the professionalisation of the land agent over the long nineteenth century and it will do this through six key questions. Firstly, how was the role of the land agent perceived by landowners and others at the beginning and end of the period under research? The diary of William Gould and the letters of the Dukes of Portland at the end of the eighteenth and beginning of the nineteenth century provide a good overview of the working life of the agent at this early stage.⁷ The correspondence sent to the 5th Duke of Portland by William Cripwell, his agent, in 1870s form a detailed and important part of this essential comparison. They probably form one of the most comprehensive and meticulous archives relating to a late nineteenth century agent than exists anywhere else. Secondly how did the agricultural revolution affect farming practice and what new skills were required by a land agent managing a large estate? Thirdly what responsibilities were placed on the agent to equip those who lived and worked within the estate with the appropriate knowledge needed to improve the land and increase productivity? Fourthly, can professionalisation of land management be traced through the close textural analysis of surviving estate documentation. None of the men studied within this thesis appear to have received any formal training and yet all are involved in more than merely the administration and supervision of agricultural land. Cripwell as will be seen throughout this thesis was involved in a number of large engineering projects as well as managing the tenants and other estate functions. Fifthly, was the professionalisation of the land agent driven by legislation rather than an agricultural revolution? Legalisation of education, public health, electoral change and mining by the end of the nineteenth century was becoming more prevalent and therefore the question of how this drove change must be considered. Finally by the end of the nineteenth century the landscape was being altered and transformed by more than the aristocracy building large houses and altering their parkland. The railways and mining enterprises threatened the land-holdings of many

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⁷ Hanson, M., (ed.), *Ducal Estate Management in Georgian Nottinghamshire and Derbyshire: The Diary of William Gould 1783-1788* (Nottingham, 2006).
and this thesis will consider whether the agents played a part in the protection of the countryside while at the same time developing their own powers of negotiation and communication. Both of the estates under examination are classed as two of the most notable during this period and for being forces for driving forward agricultural innovation and technological change; but the overriding and central question of this thesis is what effect did this have on the professionalisation of those who acted as their agents.

**Sources and Methods.**

This thesis will rely on the archives of two estates Welbeck Abbey and Holkham Hall. Although both are extensive they are not without their problems. The Portland archive is scattered across a number of repositories. It was the wishes of the 7th Duke of Portland who had control over a vast family archive that it was divided in this manner. In 1986 the Portland papers from Welbeck Abbey were accepted by the nation in lieu of tax and added to the appropriate collections where a large number of papers had already been held for many years. However as at Nottingham record office the archive is not necessarily in any logical order and just using the catalogue has at times been difficult to negotiate. The opposite is true of the Manuscripts and Special Collections at the University of Nottingham where an excellent online catalogue exists which means much time has been saved. However this means that finding the documents used by Tuberville can be difficult to allocate because many have since been given new folio numbers or moved between offices. Despite the enormity of the collection there are large gaps which are sometimes hard to fill not least because the records were stored in London during World War II and have suffered significant water damage. One of the biggest further problems is the handwriting of the 5th Duke which is frequently completely illegible (Fig 1). Fortunately both the agents and his clerks writing is much clearer.

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[8] www.nottingham.ac.uk/manuscriptsandspecialcollections
The Holkham archive remains in the private hands of Viscount Coke. Despite the problem of having no public access the estate has been most helpful in providing time for the examination and viewing of the family documents. The archivist for the estate Christine Hiskey has a clear understanding of the records in her care and has been able to produce from the collection all documents requested. The Holkham archive in this thesis has been used as a comparison to that at Welbeck; it has though in the past been extensively examined by two main scholars, Parker and Wade Martins. One substantial problem has been to find a number of emblematic examples to support and illustrate themes covered in this thesis from the tens of thousands of documents which exist. In order to facilitate a conceptual understanding of the information thus contained

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it has been necessary to transcribe at least 65,000 words of primary papers and letters into word documents.

This thesis takes both a thematic and chronological approach. The archives under investigation cover a large timespan and one of the key challenges has been to keep the chronology under control whilst discussing themes. This study has made use of those archives which give the most information and illustrate change, this however means that there are gaps in the material where no archival documents have been found to exist which can be compared across the two estates or where it exists for only one of the estates. Using this approach occasionally chronology has been sacrificed in order to explore the themes which illustrate most change. Four main archival sources have been used, the Diary of William Gould, the letters of the Dukes of Portland at the beginning of the nineteenth century, the agricultural documents of Francis Blaikie and the correspondence of William Cripwell. These provide long running and very detailed data sets which are missing from some of the more fragmented elements of the collections. These have not been chosen randomly but rather they are a careful selection of emblematic examples in an attempt to illustrate chronology, themes and change across both.

This thesis has made extensive use of the works of contemporary eighteenth and nineteenth century agricultural writers. Other secondary sources have included the publications of the better known modern agricultural historians and include Spring, Mingay, F. M. L. Thompson. There is relatively little written on the role and position of land agents beyond Francis Blaikie and Nathaniel Kent. Therefore this study has been undertaken by studying the main and established changes brought by the agricultural revolution to assess how and in what manner the land agent became a professional asset to a large estate by the start of the First World War. This two estate study will provide substance and detail to the arguments surrounding the professionalisation of estate management. It will provide an in-depth analysis of the expectations placed upon land agents and the skills they needed to acquire as both scientific farming and mechanisation of estate processes became more prevalent during this period. It will through a close textual analysis of the estate documents take the existing literature in new directions.
Chapter Overview

Chapter 1 This is a short introduction to this thesis and contains a brief outline of the contents of the study; it surveys the historiography, lays out the key research questions, examines the sources and methods employed and finally provides an assessment of what is contained within each chapter.

Chapter 2 will contain an examination of the general historiography relating to this research. It will explore the rise of the great estate and the effect of strict settlement on their formation. It will investigate sustainability and the methods employed by the aristocracy to ensure their survival and it will discuss the arguments surrounding the agricultural revolution and examine the ideology of professionalisation,

Chapter 3 will investigate the concept of the patriotic landowner, survey the idea of scientific farming and the experimentation carried out by the aristocratic landlord. It will research mechanisation, discuss the concept of high farming and the role of the agricultural show in the improvement of farming techniques and animal husbandry.

Chapter 4 will explore the development of the agricultural press. It will investigate newspapers and periodicals with specific reference to Arthur Young’s Annals of Agriculture, analyse the information within the rapidly growing market of books and treatise. It will seek to assess the type of knowledge these publications sought to impart. This chapter will investigate whether the growth of an agricultural press began to form a body of literature which led to the professionalisation of estate management.

Chapter 5 will analyse the changing role of the land agent. It will explore the men who became agents, investigate their role in agriculture, scrutinise how they were expected over time to become involved in labour disputes, analyse how mechanisation affected the skills which were required not just in agriculture but in terms of all estate functions. Finally it will assess the impact of legislation with particular attention to education and public health.

Chapter 6 will examine the relationship between estates agents and landscapes. It will explore how the changes made to their surroundings by landowners challenged the knowledge of the agents, particularly when large engineering projects such as the construction of lakes and dams were required. The railway age threatened perceived areas of natural beauty and those where previously large sums of money had already
been expended and here the agent was required to act as negotiator in order to protect the estate’s position.

**Chapter 7** Conclusion, this final chapter will pull together the themes of this thesis and answer the key research questions posed in the introduction. It will address the existing historiography and assess the ways in which this thesis has firstly, contributed to this knowledge and secondly how it has moved our knowledge into new and different dimensions.
Chapter 2

Historiography

Landed property at the beginning of the eighteenth century was the base on which society was built. Land bestowed wealth, power and social influence on its owners and in turn allowed the landowning classes to control local government and Parliament.¹ Froude wrote ‘land is sought after for social consequences and political influence which the possession of a large estate in such a country as ours confers’.² This historiography will explore the rise of the great estate and the use of strict settlement to ensure their survival as this is pivotal to understanding the mind-set of those who owned these large entrepreneurial enterprises. It will examine the debates surrounding the agricultural revolution as this phenomenon became in its own right one of the driving forces of change. The agents employed by the landowning aristocracy were forced to confront and adapt their management styles as science and technology forged new forms of fertilizer, drainage technology, improved seeds, animal husbandry and the mechanisation of all estate processes. Legislation by the end of the nineteenth century was passed which increased in some cases agent involvement with managerial responsibilities among the community which were no longer directly related to agricultural. There was a rapid expansion of published material from the mid-eighteenth century onwards to help the agent to manage all aspects of the great estate but these still do not cover the full range of his duties as will be explored in this study. This historiography will briefly explore the secondary literature appertaining to the broad themes of this thesis and include: the rise of the great estates and strict settlement, sustainability and the diversification of the portfolio, the role of the land agent, the agricultural revolution, the patriotic landowner, agricultural literature, the changing role of the agent and the relationship of owner and agent with the landscape. The aim of this research is to provide an in-depth study of how the myriad of changes from around 1780 onwards meant the agent had to adjust his managerial skills and how this adaptation resulted in the professionalisation of the role. It will examine the interaction between the agent and the community and the relationship between landowner and agent. It will seek to establish how change over time is reflected within the two

different estate archives. In order to understand the complexities of the great estate it is first necessary to explore the dynamics of their creation.

The Rise of the Great Estates and Strict Settlement

For Beckett during the nineteenth century one of the most ‘hotly’ debated subjects was the ‘land question’. An extremely vocal reform movement began to draw attention to the monopoly of land ownership. The census of 1861 had revealed that around 30,000 out of a population of 30 million actually owned the land. The Earl of Derby among others had campaigned for a ‘general survey of ownership’. In 1873 what was heralded as the New Domesday was carried out. Although this was by no means accurate and failed to take into account land held in London it did at least illustrate who owned land and where. Those who had believed land ownership was still very diverse were to be disappointed. Mingay has argued that it was not easy to calculate what proportion of land was held by the different ranks of nobility and landowning elite. He maintained that in 1883 it was estimated some 24 per cent of England was held in holdings of 10,000 acres or more and 29.4 per cent in estates between 1,000 and 10,000. When country gentleman who owned less than 1,000 acres and allowance made for institutions which included the Crown, Oxford and Cambridge Colleges, old established London hospitals and other charitable trusts then the total held by landlords of all kinds must have been approximately 90 per cent of the whole.

Land was the basis on which the power base of the ruling classes rested. This was still true at the end of the nineteenth century and Lord Derby in 1881 claimed the main purpose of owning a landed estate was the political influence it conferred. It continued to bolster their position as the ruling classes, even when falling agricultural prices reduced the value of aristocratic estates. Their position had been further weakened by reforms to the franchise and the arrival of new representative institutions in government. The landowning classes also formed a ‘cultural elite’ whose influence pervaded the arts, music, dress, manners, sport, entertaining, the landscape, gardens and architecture. This small group of perhaps no more than a few thousand exercised enormous influence and power as their beliefs, ideas and ideologies spread throughout

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4 G. E. Mingay, Land and Society in England 1750-1980 (Harlow, 1994), p. 120.
the multifarious strata of society in Britain. The landowning class held this status continuously for many hundreds of years it has been argued through stubbornness and the strength of finding legal procedures to maintain the status quo.

It was the desired intention of those who had significant land holdings to pass on this intact to the next generation and in accordance with the principles of primogeniture, that is to the eldest surviving male relative. The Stones refer to this as ‘preferential partibility’. Using this method the seat and major part of an estate were tied up more or less in perpetuity. At the same time if possible small amounts of land or property were left unencumbered and this allowed the owner at least some means of raising money should the need arrive. In practice the solution seems sensible but has in fact attracted considerable debate. Eileen Spring argued that Habakkuk and Stone recognised the function of settlement was to primarily preserve the landed estate as intact as possible but in practice they do not deal with the subject in this way. Instead they perceive settlement as the manner in which the portion of the estate received by the younger siblings might be increased.

According to Bonfield, John Habakkuk has been responsible for much of the work which has been carried out over the last fifty years or so on landed families. In two central arguments he suggested that movements in the land market, estate continuity, intra-familial relations and settlement practices were all interlinked. Furthermore he argued that strict settlement in its simplest form ensured through a series of arrangements most commonly made when the eldest son either came of age or on his wedding day settled and secured the estate for at least a generation ahead. This had the effect of turning the present incumbent into nothing more than a life tenant. When the settlement took place on the marriage of the eldest son it served two main purposes. Firstly the interests of the father were curtailed and settlement inflicted on the son the same restraints. It was usual for the settlement to name in the event of the eldest son’s death his eldest son as ‘tenant in tail’ and this secured a landed estate for a minimum of two generations. Secondly the estate was charged with a jointure which

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6 Mingay, Land and Society, p. 119.
8 Ibid, p. 70.
should the wife outlive her husband then she would receive an annual income in the same manner as the younger sons and daughters. Once an agreement had been reached little could be done to reverse it and neither father nor son was at liberty to dispose, lease or mortgage the estate for a term longer than their lives. Each successive generation was encouraged to enter into a similar settlement and it was rare for an elder son to refuse to do so.

The search for a suitable match for either son or daughter could be a protracted affair. It was essential to find someone of at least equal wealth and with the right political connections. Matches could be agreed while the couple were still children and the wedding would take place once the bride had reached a suitable age. Once a marital arrangement had been agreed negotiations began and often involved the exchange of several written proposals and a number of meetings between the respective families. Families often looked to secure the continuance of their estate and a chance to improve their wealth and status; this is why so much effort was put into finding the right partner. Habakkuk estimated that calculations of ‘material interest’ featured prominently in the choice of marriage partner. During the late sixteenth and early seventeenth century political power had been dependent on royal patronage. However by the early eighteenth century political influence had become closely linked to landownership and marriage became an important tool that aided the accumulation of land and thus an extension of authority. Having all the information relating to a prospective bride became essential and the ways and means of acquiring this knowledge became increasingly concentrated in the hands of a small number of London conveyancers.11 As land and power became intertwined it meant that many owners were required to spend long periods of time away from their estates in London but this necessitated the employment of an agent to manage the land and it is the professionalisation of these men that this thesis investigates.

Bonfield argued that strict settlement was not entirely based on primogeniture although its prime aim was to pass on the estate intact. It also dealt with wealth distribution within the family. By using this legal system daughters might also be included rather than excluded. Through the establishment of a series of complex trusts the settlor was able to make provision for all his children born or unborn and this had

the effect of spreading a family’s wealth amongst the next generation rather than concentrating the family’s assets in the eldest male. An estate was thus burdened with charges and debts through the necessity of paying the allotted portions due. Strict settlement treated estates as a capital asset as well as a family seat with its attached lands and tenements. However, the evoking of this legal scheme meant that it was impossible for an heir to inherit an estate until he had paid the portions due. This could be difficult when borrowing money or raising a mortgage was limited to the life of the present owner. Bonfield thus concluded that while strict settlement gave the estate to the heir, it stipulated that the wealth it generated had to be shared, but land remained dynastic.\textsuperscript{12} Once land was acquired it needed to be sustained and this chapter will now examine how this was achieved.

**Sustainability of the Great Estate**

Whilst a number of historians including: Spring, Habukkuk, Stones and Daunton have debated how the great estates were formed, much less research has been undertaken on their sustainability. Daunton stated, that the nineteenth century opponents of land law and settlements assumed, that these legal frameworks hindered a free and competitive market in the sale of land and this helped to maintain and preserve the small estate. However, he proposed the opposite was true as many of the smaller owners sought to release capital which resulted in a continual flow of land onto the market.\textsuperscript{13} Once acquired, land had to be retained and it needed to generate enough income to pay for estate requirements, family needs (including any portions due under the various settlement agreements), parliamentary costs and leisure activities which comprise: hunting, the London season and visiting spa towns. It became increasingly difficult to sustain a large estate through just agriculture.

Survival depended on the highly adaptable nature of the landed elites and both Thompson and Cannadine have shown that the landed and non-landed elites during the nineteenth century were agreeable to the diversification of their interests into mining, railways and a variety of urban and industrial ventures.\textsuperscript{14} The Dukes of Portland as will be explored in this thesis are an exceptional case study of this expansion of commercial

\textsuperscript{12}Spring, ‘Strict Settlement’, p. 454.
interests. As well as owning a large estate at Welbeck Abbey they invested in trade, minerals and property development in both London and Scotland. This ‘new’ money was then utilised to improve the house and landscape the park. Although it might be said the rather eccentric 5th Duke used it to adapt the house to his own foibles. Holkham was on the opposite side of the spectrum and its owners concentrated almost entirely on agriculture and therefore play no further part in this particular discussion. Due to the poor and almost illegible handwriting of the 5th Duke research will be concentrated in two main time frames, the first, at the end of the eighteenth and beginning of the nineteenth and the second from c1870 using the detailed correspondence of William Cripwell agent at Welbeck.

Marriage has already been discussed in terms of strict settlement but it also played a part in the sustainability of the great estates. An emblematic example of this in practice was the 3rd Duke of Portland. He had two well publicised affairs, the first with the Countess Maria Walpole and the second with Anne Liddell daughter of the first Lord Ravenscroft and wife of the Duke of Grafton. However Grafton preferred the company of his mistress Nancy Dawson and eventually divorced his wife. After Portland’s appointment as Lord Chamberlain uneasiness and uncertainty crept into his personal letters to Anne Liddell as he came to the conclusion that his political and social position and status meant marriage to this divorcee was impossible. In March 1766 he announced his engagement to Lady Dorothy Cavendish daughter of the 4th Duke of Pembroke. Portland had his political career to consider and he needed an heir. This marriage linked the two great estates of Chatsworth and Welbeck and was politically advantageous.

Holkham too benefited from a number of advantageous marriages. In 1718 Thomas Coke married Margaret Tufton the third surviving daughter of the Earl of Thanet. She brought to the estate a large £15,000 portion. £10,000 was put aside to provide portions for Coke’s two sisters, how the rest of the money was spent remains according to Parker obscure. The monies brought to the estate by his wife removed a huge financial pressure which had been caused by Coke’s poor investments in stock particularly that of the South Sea. All in all he had spent around £58,300. It might be argued that he had tried to diversify the estate’s capital and thus acquire new money but it was a risky gamble which unfortunately he lost. Besides her portion Coke’s wife was
entitled to the revenue from Dungeness lighthouse.\textsuperscript{15} Holkham throughout the period this thesis covers was devoted almost entirely to agriculture, while the Portland’s looked outside their traditional form of revenue to increase family income and diversify their portfolio.

**Diversification of the Portfolio**

Spring argued the expansion of many estates in the nineteenth century was made possible because they took advantage of the economic possibilities which were created simply because they owned the land.\textsuperscript{16} Other historians proposed the idea that the aristocracy and business classes had common behaviours because both used their assets to pursue their own business interests. In this way hereditary landowners became involved in urban growth.\textsuperscript{17} Beckett advocated this was most commonly seen in the heavy investment of the great landowners in the development of London.\textsuperscript{18} The names of many London streets continue to reflect this impact upon the urban landscape and in the Portland’s case this includes: Henrietta Street, Holles Street, Margaret Street – after the 3\textsuperscript{rd} Duke’s mother – Cavendish Street, Welbeck Street, Wimpole Street and Bolsover Street.

Holkham and Welbeck were diametrically opposite in the handling of their business matters. At Holkham Thomas Coke had inherited numerous assets which had included some £4,000 from across Kent, Somerset, Oxfordshire, Lancashire and London. Unlike many other landowners including the Portlands, Coke decided to concentrate his attention on his agriculture. In order to carry out this consolidation in 1786 he sold off the properties which lay in London, Kent and Somerset, the money raised was used to purchase the c3,000 acre Warham estate which cost £57,750. The sale of the land in Oxfordshire followed in 1812 and 1,190 acres at Egmere procured for £53,400. The difference in price between the two acquisitions reflected the inflationary effect of the Napoleonic Wars on land prices. Higher land values were a consequence of the increase in agricultural prices and resulting greater profit and higher return on

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\textsuperscript{17} T. Nicholls, “Businessmen and Land Ownership in the Late Nineteenth Century” in *The Economic History Review, 52*:1 (February, 1999), p. 44.
\end{flushleft}
capital. Between 1790 and 1806 Coke rid himself of his holdings in Manchester and Wade Martins claimed that he took very little interest in any of the sales.

Francis Blaikie began to work for Holkham as agent around 1816 and was unaware of any of the previous land sales until he was sent a query relating to the mineral rights on land Coke no longer owned. Coke himself was unable to recall the terms under which he had conveyed the sale. Blaikie travelled to Manchester to investigate and discovered that the land transfers were well below his own standards and amateurish in the extreme. He wrote to Coke ‘I wish I had been here 20 years ago, I am even now not without hope of picking up a little remnant’. The mineral rights had been sold with the land and all but one were found to contain considerable deposits of coal. The remaining mineral rights on two small parcels of land at Pendlebury although mined for coal never produced any significant amounts and only provided £300 per annum. Blaikie understood the ways and means a good agent could impact on both commercial and agricultural matters.

In London the Portland family were responsible for the development of Marylebone. In 1739 there were less than 600 houses in the parish, once the 3rd Duke had inherited development gathered pace and by his death this number had risen to 7,000 and the population had reached 60,000. Although the 3rd Duke was almost perpetually in debt the 4th Duke was able to reap the rewards of his efforts and within four years of inheriting had managed to reduce the family debt by £350,000, the bulk of which came from the fines received for the renewal of leases in Marylebone. This example illustrated the effects diversification might have on the survival and continued growth of a great estate. The 4th Duke of Portland concentrated his expansion on Troon in Scotland which he had acquired through marriage. To this he added an estate at Fullerton. The coastal area around Troon and the coalfields at Kilmarnock formed the most profitable part of the Scottish portfolio.

Although Coke concentrated on agriculture it is possible that if Blaikie had been employed earlier and the mineral rights of the estate maintained perhaps Holkham might have invested in diversification. The Portlands on the other hand made the most

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of all and any opportunities. By developing interests beyond that of agriculture the Portland’s were able to ensure the sustainability of the family and their estates. Above all the landed elite had the money available to capitalise on speculative ideas. Profits from these schemes in turn paid for the modernisation of country estates, agricultural improvements and mechanisation and the landscaping of parklands. Considerable research has been undertaken on the flow of money from industrial magnates and bankers into the landed elite but little on how the money moved in the other direction. A good agent was an essential component of this exchange. Although little is known or understood about how this worked understanding how it formed part of the funding of the great estates is important.

The Land Agent and Professionalisation

An investigation into the role of the land agent and the move towards professionalisation of estate management forms the crux of this thesis. By the Victorian age country house life was based on elaborate visual consumption and a social life which necessitated a sound structure of management and administration. A large or great estate consisted of an administrative bureaucracy of bailiffs, stewards, ground officers, clerks, mineral managers and a variety of sub-agents. At the top were the land agents; the men on whom the entire responsibility of administration rested. Due to the large size of the business enterprises attached to the country estate large sums of money could pass through the agent’s hands. For example between 1816 and 1895 more than 4 and a ½ million pounds was handled by the agents for the Duke of Bedford.21 Agents and stewards came from many walks of life and included: lawyers, farmers, merchants, ironmasters and army officers. They were in effect the sons of practical men and many had close links from birth with the land and its management. For those who had started their working life in other careers, they learnt on the ‘job’ as experience and practice enabled them to hone their skills.

Beckett submitted that owners were unable to escape the responsibility of improving, developing and conserving their inheritance.22 By the end of the seventeenth century demesne farming as a system had more or less disappeared. Although many of the landed elite maintained a home farm the majority of the land was leased or rented to

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tenant farmers. That is not to say that they relinquished all responsibility or ‘opted’ out of all personal involvement in the overall management of their estates. Houston argues that from the Restoration onwards landlords became increasingly more detached and left the day to day management of estate business to ‘doers’ or ‘men of affairs’. Land management simply became a more complicated process. Technological advances meant that many owners were required to make substantial capital investments. Some landlords were able to exploit large mineral deposits, while urban development promised large financial returns for others. These advances called for an increased level of skill in the day to day running of the estate. All of this required detailed input from the top but the London season, leisure activities and Parliament kept many landowners away from their estates. It was therefore essential that the landlord found a suitable and efficient agent or steward to manage his estate while he was absent elsewhere. Management was a symbiotic relationship between landowner and land-agent. It should not be assumed that all responsibility for the management of an estate passed into the agent’s hands, nor should it be supposed that an agent simply carried out a set of instructions with no input into the day to day administration.

Large estates of several thousand acres upwards needed the attention of a full time agent. A great estate could cover as much as forty or fifty thousand acres and incorporate numerous tenants, this amount of acreage required its own bureaucracy and might incorporate the service of a full-time agents, a number of clerks, part-time under stewards or bailiffs and the help of specialist surveyors and solicitors. Many larger estates faced the problem of controlling a number of scattered holdings frequently distributed across more than one county. Mingay concluded that management by the late eighteenth century had become more ‘thorough and scientific’ so the land might be farmed more efficiently and profitably. During this period timber and minerals were also exploited in order to increase the estate revenue. Welbeck in Nottinghamshire is one such estate. Letters from the 4th Duke of Portland to his steward at Welbeck prove the diverse nature of this estate. These primary letters contain instructions regarding the planting of trees, the cost of coal shipped on the Worksop canal and the tolls charged. A considerable amount of primary material concerning both the game and the kennels at

23 R. A. Houston, Peasant Petitions: Social Relations and Economic Life on Landed Estates 1600-1850 (Basingstoke, 2014), p. 34.
Welbeck has also survived.\textsuperscript{25} Although the 4\textsuperscript{th} Duke was often away from home it is evident that the estate was never far away from his mind.

Smaller landowners either undertook the job of estate management themselves or employed part-time bailiffs or a county attorney to collect the rents and carry out routine administrative functions. Agents of estates the size of Welbeck required men with sound legal knowledge who understood land law and the drawing up of leases. Mingay argued that those who administered large estates had to adopt strict methods of accounting, establish well organised offices and they expected a higher level of bureaucratic management from those who collected the rents and worked in the outlying areas. The Duke of Northumberland and Hugh Taylor organised the Alnwick estate into one of the most advanced administrative practices of the time. The Northumberland estate was divided into two regions northern and southern and each area was provided with a drainage and building specialist who put together an annual programme of work for their area. The drainage superintendent had a permanent work force of around one hundred men under his command. As mechanisation started to become more common place the post of ‘His Grace’s Manager of the Steam Plough’ was created. This dignitary had the implements and labour force at his command and was available to the tenants to undertake work at fixed piece rates. A surveyor and a valuer were retained by the estate on a permanent basis although not employed full-time. Besides these men the estate employed a clerk of works with a labour force of craftsmen who were usually found at work on the castle, home farm or other lands that had fallen into hand. Then there was a head forester, head keeper, head gardener, and a bailiff to manage the home farm.\textsuperscript{26} While this estate may have been the best organised estate in the country at the time by careful examination of other great estates records we may further our knowledge of how the aristocracy moved to a more efficient and organised administration. Little has been written about individual estate administration even Wade Martins in her studies based on Holkham provided little information on this aspect of the estate at work

Efficiency in administration was of the utmost importance with these large and complex business organisations. However the appointment of a full time steward or the


\textsuperscript{26} Thompson, \textit{English Landed Society in the Nineteenth Century}, p. 169.
setting up of a central office did not automatically solve all the day to day managerial problems. The establishment of an estate bureaucracy it will be argued was an integral part of the professionalisation of the estate management. It is however a much neglected field of study. This thesis is based on the estate records and correspondence which formed the expansion of organisational procedures during the late eighteenth and nineteenth centuries. This corpus of information and knowledge affords a unique insight into the increased number of activities the agent was expected to control.

Mingay contended that estate management depended on a number of factors. Perhaps the most important of these was the attitude of the landowner himself. Not all agents or stewards were honest or even reliable. Given the amount of time many landowners spent away from home and the large amounts of cash which might pass through an agent’s hands it is hardly surprising that thefts and frauds occurred. Thomas Coke at Holkham was suspicious of the agent Ralph Cauldwell and when he inherited one of his first tasks was to question the integrity of this man. Coke believed Cauldwell had been taking bribes from the tenants in order to keep rents low. He had arrived at Holkham to take up the agency as a reasonably poor man with little or no assets but dubiously left a wealthy man. In 1770 he had purchased the 3,000 acre Hilborough estate in West Norfolk. Although Coke had his doubts all the accounts had been inspected and passed by a Master of the Court seemingly without question. For a less than honest agent there were plenty of opportunities to make extra money, for example, looking the other way when tenants broke covenants, providing favourable conditions to some tenants when they took out leases and by falsifying the accounts. Stewards and agents were renowned for holding on to their employer’s cash and using it for their own purposes or failed to present the accounts to the auditor for inspection and had the reputation for over-charging for produce supplied to the house. Sensible landowners kept a close eye on their estates, agents and particularly their accounts. Although Mingay described the problems caused by less than scrupulous agents he provided no specific case studies. This thesis will explore what measures, if any, Welbeck and Holkham established to prevent dishonest agents from exploiting any weaknesses in estate management during owner absences.

27 Mingay, English Landed Society, p. 59.
28 Wade Martins, Coke of Norfolk, pp. 85-86.
Agents were frequently very powerful men and when the landowner was absent for long periods found himself in charge of and responsible for the entire estate and house. Capital decisions made by landowners had of necessity to be based on the information garnered by the land agent as he moved around the estate, talked to tenants and observed working practices. Some agents managed by creating a sense of fear amongst the local population; however the majority were hardworking and honourable men who had the welfare of those who resided within the estate at the heart of all their policies. As the Victorian Age advanced those who managed estates were called upon to administer rapidly diversifying communities. The Portlands like many other owners of great estates began to expand their business interests into industry, mining, transport and urban development. As a result their agents were required to become more versatile and adaptable, understand where expert advice might be sought, acquire the skills needed to forge ahead with mechanisation and negotiate the intricacies of new legislation, all of these changing dynamics fashioned a profession. Occasionally the foibles of the owner added to the responsibility for example the 5th Duke of Portland was a virtual recluse and William Cripwell on top of all his managerial responsibilities became his representative within the rural community.

Thompson argued that the increasing importance of the land agent was reflected in the increasing salaries paid to these men. By 1790 a small number of those running the largest estates were already being paid £1,000 per annum, although the usual salary was closer to £300-400. During the Napoleonic Wars salaries comfortably rose above the increases in the cost of living. Once the conflict ended the levels of remuneration did not fall to their pre-war levels.\(^{29}\) Obviously monetary payments varied according to the size of the estate or the responsibilities expected. Salaried agents would often receive a bonus or a brokerage fee for successful estate transactions which might be the sale of a property or the negotiation of a valuable lease. Payments in kind might include a free house or a farm tenancy at a very low or reasonable rent.

The land agent played a pivotal role in the life of the rural community and yet remains a relatively invisible figure within the literature. Spring, Thompson and Mingay have all written general synopsises of the work undertaken by these men and the development of their role during the eighteenth and nineteenth centuries. Spring has

\(^{29}\) Thompson, *English Landed Society*, p. 180.
tended to concentrate on the administration of the estate in general and although research is included on the role of the land agent he has concentrated on all aspects rather than any specifics. Thompson has produced perhaps the most quoted publication on the nineteenth century and an exploration of estate management is contained within one chapter but although this is an excellent overview it is somewhat cursory in nature.\textsuperscript{30} Beckett in his publication on the aristocracy between 1660 and 1914 contains just twenty-four pages on estate management of which eight are dedicated to its professionalisation. This is almost too short to be of anything other than an extremely short survey of the themes related to this topic. The most recent research into the professionalisation of the land agent has been undertaken by Sarah Webster. Her bibliography to this article has helped to establish how little has been written in recent years pertaining to this subject. This thesis will provide a detailed case study of how two estates helped to forge professionalism and it will add considerably to the small amount of research which has until now be carried out. Vital to understanding how agriculture changed over the period researched in this thesis is an understanding of the debates pertaining to the agricultural revolution and it to this phenomenon this chapter now moves.

**Agricultural Revolution**

Considerable debate and discussions have occurred over the timing, impact and status of this phenomenon. This thesis will explore the impact of improvements on all aspects of estate farming. It will question firstly whether change was driven by the landowner or agent and secondly how these changes forged forward the idea of the professionalisation both of estate management and the role of the land agent. Many agents including Francis Blaikie at Holkham perceived themselves as practical men with experience and knowledge to pass on to the next generation. However this thesis will examine the impact of agricultural change on the great estate, investigate the forms it took and investigate the extra skills needed by the agents to effectively manage.

Early reporters perceived the revolution as ‘agrarian’ However Marx thought of it as an agricultural revolution in which ‘enclosures, sheep-farming, rising prices and long leases’ created the capitalist farming class. Toynbee too proposed that enclosure

and the intensification of landownership into the hands of a small number of families helped to promote and instigate new farming methods. Unlike Marx he believed the period of change was later and took place after 1760 and was intertwined with the ending of common-field cultivation, enclosure on a large scale and the amalgamation of small farms into larger entities. Other historians were interested in the technical aspects of rising outputs. Ernle established in 1912 a link between tenure and technology. He reasoned that pioneer innovators who had forged ahead with large farms and invested substantial amounts of capital had transformed the English countryside, thus instigating an agricultural revolution. Ernle’s revolution had two main components, firstly, the traditional idea of enclosure after 1760 and secondly, the introduction and take up by farmers of new crops and rotations, mechanisation and improved animal husbandry. An important element of this change was the progressive landowners of large estates and specifically Thomas Coke at Norfolk. In 1966 Chambers and Mingay re-examined the concepts surrounding the agricultural revolution but still concluded that it occurred after 1760. Since its publication Mingay has put back its beginning to 1700. The following year 1967 Kerridge published his more radical assumptions. He argued that in the sixteenth century a mixture of land hunger and population growth with the resultant increased demand for food had prompted the reorganisation of agriculture. Thus he argued that any revolution took place much earlier in the sixteenth and seventeenth centuries. Although these views were contentious it was clear that change had begun much earlier than first supposed. Since the publication of these two seminal texts a third concept has emerged where change is perceived as having taken place over a long period of time with considerable local variations. During the 1970s it was concluded by many historians that the agricultural revolution took place between 1560 and 1880. Thirsk had indicated the term should be discarded completely and the improvements seen as a ‘continuum’ wherein there were periods of rapid change.31

One of the most noteworthy transformations of the agricultural revolution was the introduction of turnips and clover. Although historians agree these nitrogen fixing crops had an immense impact on farming, the timing and spread of their introduction is much less distinct.32 Kerridge argued that in many areas the turnip was not generally

cultivated. The heavy soils of the Wealden Vales, the Midland Plain, the Cheese, Cheshire Cheese and Butter counties was not suitable. In these areas the land was simply too heavy to allow the turnip to ‘apple’ properly. It was also too cold and wet to allow the animals on the land to feed off the crops in the field. Harvesting the turnip was not a suitable alternative because it left the landscape pockmarked and these filled with water. If the beasts were put onto land in this condition the soil was ruined beyond recovery. The fertility of the soil in the Chalk country was insufficient for successful turnip cultivation or it was too shallow to allow ‘appling’. The transformation of agriculture was not solely reliant on the turnip as winter fodder. Kerridge alleged cole-seed could be grown for both oil and cake and could also be used to feed sheep in the winter months.\textsuperscript{33}

Technological innovations were equally at the core of an agricultural revolution as landowners, agents and farmers sought innovative ways of making the best use of the land available. Beckett identified two crops as being central to the revolution, firstly nitrogen fixing which included: clover, sainfoin, trefoil and lucerne and secondly, turnips. The former of these improved the soil and increased yields by adding nitrogen. Both types were a source of winter fodder for livestock and meant that larger flocks and herds could be kept through the winter months. This resulted in the production of larger quantities which could then be spread on the land and again increase fertility. The use of clover is believed to have spread from Italy to Holland during the sixteenth and by 1620 clover seeds were regularly imported into England. Chambers and Mingay thought it possible that the benefits of clover might have been discovered accidently after farmers dressed their land with white chalk and noticed that the grazing dramatically improved. White chalk can introduce white clover on to the land.\textsuperscript{34} While improvements in crops and husbandry were vitally important, if land remained saturated any added nutrients would soon be so diluted as to be virtually useless. Adequate drainage was the only way to improve the situation.

Chambers and Mingay proclaimed that ‘drainage was the great improvement of the age’.\textsuperscript{35} When correctly installed it allowed those who farmed heavy and waterlogged soils to cut the costs of their cultivation and move towards mixed farming.

\textsuperscript{33} Kerridge, \textit{The Agricultural Revolution}, p. 29.
\textsuperscript{34} Chambers and Mingay, \textit{The Agricultural Revolution}, p. 8.
\textsuperscript{35} \textit{Ibid}, p. 175.
Once properly drained machinery could be used on the land which speeded up farming operations, saved money and once available the soil was now suitable for the use of modern fertilizers. Drainage in the form of ridge and furrow had been standard and Kerridge maintained that in most cases this was adequate. One problem with the tile drainage of the nineteenth century was the cost and it remained expensive even after the invention of mass produced cheap drainage pipes. It was not until the government introduced drainage loans in 1846 with low interest rates of three and a half per cent that drainage schemes really took off. There is little doubt that for many farmers this revolutionised the way in which they farmed and stocked the land and the quality of the soil was improved by the addition of artificial fertilizers in the second half of the nineteenth century. Technological improvements of tools and machinery improved more slowly.

It is at this point that there is a direct correlation between the Industrial and Agricultural Revolution as cast iron and standardised factory made tools slowly replaced those made out of wood, wrought iron or stone by local craftsmen. New ploughs such as the Rotherham tended to be lighter and smaller and needed few animals in its use. During the 1780s Robert Ransome of Ipswich introduced a self-sharpening, hardened cast iron plough share, but it could not said to be standardised as 86 varieties were made to cope with all and any local conditions. Rollers had previously been constructed from stone or a sturdy log started to be made from cast iron. In the north threshing machines were installed early as industry and agriculture competed for labour. However the uptake of mechanisation in agriculture was not on the scale of that in industry. In order to conceptualise the part played by the landowner in this revolution and in the professionalisation of the agent this chapter will now review the role of the patriotic landowner.

**The Patriotic Landowner**

As early as 1699 Lord Belhaven, a Scottish landowner, believed that ‘all those whom God [had] blessed with Estates’ needed ‘to Double their Diligence in the Improvement of their grounds’. Throughout the period of this research this attitude was reflected in the way estates were farmed and managed, the ultimate aim was to improve

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37 Chambers and Mingay, *The Agricultural Revolution*, p. 70.
38 Wade Martins, *Coke of Norfolk*, p. 80.
productivity. These changes are reflected in the adoption of scientific farming, with experimentation to improve crops and animal husbandry, advances in technology led to improved fertilizers, agricultural tools and the increasing mechanisation of many estate processes. The dissemination of knowledge was part of this movement. Agricultural societies and shows were formed to promote agricultural change. The formation of the Board of Agriculture was the first attempt to establish an organisation which concentrated its entire attention on agricultural innovation.\textsuperscript{39} The function of agricultural shows was two-fold. Firstly there was the obvious educational element especially as many of those who participated distrusted any form of book learning or innovation and secondly they fulfilled an important social function.\textsuperscript{40} Goddard has undertaken much of the research into this subject and this has mainly dealt with Royal Shows. Many of the local shows were a far cry from these grand events. At Welbeck the agricultural society revolved around the tenants but the sheep shearings at Holkham were often perceived to be a reflection of Thomas Coke’s status and egotism. In the middle of the nineteen century farming witnessed a renewed interest in improvements and a readiness to invest in such concepts as drainage, new buildings and machinery. This period has become known as high farming.

Perry argued that ‘high farming’ is a notoriously ambiguous term which was likely to be misunderstood and whose origins were uncertain and perhaps had little usefulness. It is used to describe the period of agriculture in Britain from 1840 to 1880 which reflected the ‘golden age of British farming’. The phrase ‘golden age’ was probably first applied to the mid-nineteenth century period of high farming by Ernle an influential agricultural writer. The most well-known of his works \textit{English Farming Past and Present} was first published in the mid-1880s but within living memory of the heyday of agriculture. This lucrative and productive period had been preceded by an era of uncertainty and followed by a deep depression. Fussell between 1948 and 1951 produced four articles in the form of a comprehensive study and exposed enough of a diversity of practice to question whether a quantitative study was possible.\textsuperscript{41} The era before 1846 and after the mid-1870s has both been thoroughly re-examined but research

into this period has been more limited. This thesis will investigate the latter part of the period relating to high farming particularly through the correspondence of William Cripwell and will add further knowledge to our understanding of how these forty years differed from the rest of the century. Furthermore this thesis will explore how the attitude of the patriotic landowner added to agricultural productivity and improvements generally. These changing attitudes had a massive impact on the role of the land agent, he became responsible for ensuring the farmers and labourers were all educated and equipped to deal with any technological advances. Although agricultural literature had existed since at least Roman times the number of publications and authors increased rapidly from the mid-eighteenth century onwards.

**Agricultural Literature**

Although an enormous amount of literature from the eighteenth and nineteenth century has survived it has attracted surprisingly little research in recent years. This thesis will briefly explore the development of agricultural publications from the Gerefa onwards as it is important to understand the basis on the agricultural press was built. An assessment of the main authors and their publications was produced by Fussell in the late 1930s and early 1940s. Goddard took up the study in the 1980s and since that time practically nothing new has been published.42 Occasionally references to this corpus of literature appear in short sections within articles or chapters but rarely as a stand-alone subject. Goddard concluded that potential readers of an agricultural press included 30,000 landowners and around 10,000 farm bailiffs and managers.43 Yet no detailed book or article exists which has studied the information contained with this myriad of publications. Yet, it has been claimed that the journals and weekly farming papers provided significant amounts of technical information and market intelligence.44 This thesis will explore the knowledge contained within both contemporary journals, weekly papers, local papers, books, treatise and pamphlets. It will survey through a number of broad themes how Welbeck and Holkham might have used the information thus gained.

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Historians have debated the reputations of both Arthur Young (1740-1821) and William Marshall (1745-1818). Young became one of the most prolific writers of his generation and published one of the longest lived regular agricultural journals as well as some twenty-five books and pamphlets on agriculture, fifteen connected to the political economy and numerous other articles which appeared in various publications. To this day he remains one of the best known authors of the late eighteenth and early nineteenth centuries. He is perhaps most famous for his periodical *Annals of Agriculture* which was founded in 1784. Throughout its existence Young remained a regular contributor and editor. Young was not without his critics and was disparaged by his contemporaries. William Marshall’s was both Young’s contemporary and his great critic. His output possibly equalled that of Young and according to Fussell his writing was possibly of greater value. Young gained political and governmental recognition which Marshall was reputed to have strongly resented. This was in part because it was he who had suggested a national farming survey and a Board of Rural Affairs.\(^{45}\) No survey of the available literature would be complete without an examination of these two authors and their influence upon the general nature of agricultural literature.

This thesis will argue that the development of agricultural publishing played a large part in the professionalisation of the land agent. O’Day suggested that for any group to form a professional body they needed to form a homogenous community within which members shared a common identity, values, perception of the role to be carried out and a unified sense of perception.\(^{46}\) Many agents practised in remote communities with roads that were impassable in the winter due to mud and in the summer because of their rutted surfaces and forging professional relationships were incredibly difficult. The different written mediums allowed these men to form common bonds and the establishment a general level of knowledge for all those who worked in estate management. Therefore the themes that will be discussed will encompass practical information as well as material which pertained specifically to management. The breadth of agricultural literature encompassed experimentation as well as established practices and provided both the background knowledge and new information which allowed the agent to adapt to his changing role especially during the nineteenth century.

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Changing Role of the Land Agent

Historians have written about the land agent during different periods, for example Mingay explored the eighteenth century and Thompson the nineteenth, but no study has been carried out on one estate over a long time span. This thesis will explore the long nineteenth century beginning around the 1780s and end just before the beginning of the First World War. It will explore, particularly through the use of William Gould’s diary at the end of the eighteenth century and Cripwell’s correspondence in the 1870s both of Welbeck, the extent to which the land agent’s role changed. These two data sets have been chosen because they contain the most detailed information relating to the management of the estate. Both agents although using different mediums meticulously record the intimate and intricate minutiae and therefore a direct comparison can be made. Even Blaikie’s record keeping at Holkham does not compare with these two men. In order to investigate the extent to which the role of the agent developed this thesis will investigate five broad themes. Firstly it will examine the men who became agents and secondly investigate the role played by the agent in agriculture. While historians including Spring, Thompson and Mingay have stated landowners continued to take an interest in their landed estates specific examples are not given. The correspondence of the 3rd Duke of Portland revealed his continued involvement in his estate even when absent. Thirdly an examination of the involvement of the agent in labour issues will be undertaken. Both Gould and Cripwell found themselves embroiled in labour problems and by directly comparing their experiences any change will be identified and explored. Fourthly mechanisation affected all areas of the estate from agriculture to brick making and this thesis will research the differing skill sets needed to deal with the problems this caused. Finally there has been little if any studies undertaken which have explored the impact of legislation on the working life of the agent. Cripwell’s involvement with railway and mining companies, schools, education and public health are possibly highlighted because of the eccentric reclusive life style of the 5th Duke. After the 1870 Education Act for more than a year Cripwell was involved on at least a weekly if not daily with the problems this caused for the estate. The Duke a staunch supporter of the Church of England had very definite ideas on state involvement in estate schools. While there is an extensive secondary literature on the battle between the established church and non-conformism there is a very scanty body of knowledge relating to estate intervention in education. There is relatively little
literature against which a study of the role of the land agent over time can be compared and this thesis will stimulate both a discussion on professionalisation and the changing work patterns of these men. Ultimately the technological advancements of the nineteenth century were reflected in the relationship between estates, agents and the landscape and an investigation of these ideas form the last chapter of this thesis.

**Estates, Agents and Landscapes**

Hoskins argued that at the beginning of the sixteenth century the most remarkable single aspect of the English countryside was the number of sheep to humans; a ratio of 3:1. This in reality equated to a population of three and a half million people to eight million or so sheep. The primary function of the countryside was to produce enough food to feed everyone and the land agent’s or steward’s role in this situation was to ensure the estate was farmed efficiently and effectively. From around the mid-eighteenth century the population began to rise but this was not the only challenge there was a rapid shift towards urban centres and an increasingly proletarianized labouring force had no land of personally to produce their own food stuffs. Running a great estate became ever more challenging as mineral extraction became more common and landscapes were threatened by railway expansion. Repton produced Red Books for both Welbeck and Holkham and they are an indication of the extent landowners were prepared to manipulate the landscape to meet fashion trends.

Water played a large part in landscape change at Welbeck. The water meadows formed an important part in the alterations which were carried out to implement an intensive agricultural system. One very noticeable adaptation of the landscape was the amount of timber planted on the estate. By the late eighteenth century descriptions of Welbeck noted the sensitivity applied to the felling of some of the older trees. Even those that were planted were not left to simply grow, the woodlands were carefully managed and their care was part of the agent’s terms of employment. The land agent while able to employ expert advice would have needed to have at least a basic idea of how the system installed functioned. However this was not the only water feature at Welbeck for successive Dukes built and altered the lakes on the estate. The 5th Duke designed and added to the house underground as much as above ground. He built the second largest riding house in Europe and constructed a number of extremely long

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One of the problems with his underground work was the manner in which it was affected by previous engineering works. Cripwell needed to deliver the Duke’s ideas while at the same time ensuring the integrity of previous workings. This was a long way from the Anglo-Saxon steward of the Gerefa or Chaucer’s bailiff in The Canterbury Tales. William Cripwell needed to have considerably more skills and expertise than mere farming skills. Shortly after the 5th Duke inherited there was an extensive expansion of the railway network across the country and he became embroiled in a battle to save areas of the estate he perceived as areas of outstanding beauty. Cripwell was called in to act as negotiator and his inter-personnel skills were sorely tested.

**Conclusion**

This thesis has employed a close textual analysis of two extensive archives. Keeping control of chronology has been a constant problem and at times has been sacrificed to follow the given themes and for continuity. There is no single corpus of secondary literature which comes close to covering the entire range of topics covered in this thesis. This study will add to our understanding of the sheer size of the task that agents of the great estates faced. They needed to be men able to adapt their skill set to a wide variety of differing problems while continuing to deliver the expectations of the owner and maintaining profitability. This thesis will uniquely research across a long time frame thus illustrating both continuity and change. It is frequently suggested that the role of the Anglo-Saxon bailiff was recognisable in the eighteenth and nineteenth century agent but the research conducted into these two estates would suggest that while fragments of his role are visible the modern agent had many more responsibilities and needed considerably more skills.
Chapter 3

The Patriotic Landowner

The phrase ‘age of improvement’ has been used by historians to cover different periods of history. Wade Martins argued that in agriculture it has a specific meaning and covered the approximately one hundred and thirty years when those involved in its practice used the word ‘improvement’ to cover their exertions and struggle to increase productivity in order to feed an increasingly urban population. The process had already begun in some areas before the Civil War and when it erupted there was a break in the ‘general picture of progress’. After the Restoration and as the royals and aristocrats began to return from the Low Countries, they brought with them new ideas and methods of farming which they sought to apply to their own lands. The seventeenth century is perceived by some, as constituting an agricultural revolution. Hunger and population expansion had inevitably brought to an end medieval farming practices. Kerridge declared that the ‘backbone’ of this change was the conversion of permanent tillage and grassland to cultivated arable land in a pattern of seven years of cereal followed by grass leys for six to twelve years. Despite the continual and steady rise in the population grain prices fell and indicated that output matched or exceeded demand.

The ideas of improvement matched those of the Enlightenment, the Grand Tour brought the aristocracy into contact with a renewed interest in classical civilisations and this was underpinned by the education system. Virgil proscribed that the cultivation of land was a symbol of civilisation. He advocated ‘a patriotic combination of beauty and utility, pleasure and profit: land and commerce with a strict, but benevolent, social hierarchy’. It became the prime duty and moral obligation of a ‘patriotic landowner’ to improve the lands under his control. The characteristics of symmetry, tidiness and formal patterns of the eighteenth century landscape reflected the ideals of the philosophies of the Enlightenment and embodied the boundaries between ‘culture’ and ‘nature’. Controlling and subjugating nature was seen as being an integrated part of human civilisation.

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2 Ibid, p. 4.
4 S. W. Martins, Coke of Norfolk 1754-1842 (Woodbridge, 2009), p. 80.
The monarch George III revelled in the title of ‘Farmer George’ which had been bestowed on him. His dedication to farming was illustrated in the carriage of Arthur Young’s last volume of the *Annals* whenever he went travelling. His love of agriculture was demonstrated in the model farm he kept at Windsor. He used this establishment as an experimental base for animal husbandry and home for his flock of merino sheep.\(^5\)

The King was part of a recognised group of reforming agriculturalists which included: The Duke of Bedford at Woburn, Lord Rockingham at Wentworth, Thomas Coke at Holkham and the Dukes of Portland at Welbeck Abbey. Lord Ernle concluded that the enthusiasm for progress and improvement which Arthur Young brought to agriculture spread rapidly. Part of the success of this campaign was it promised improved financial returns. Higher productivity allowed the landowner to charge higher rents but it also appeared to guarantee farmers increased revenue for the farmers and higher wages for the labourer. The drive for higher yields was a consequence of war with France in the late eighteenth and early nineteenth century which had created food shortages through blockades and poor harvests. A rapidly expanding population combined with a growth in the concentration of landless people living in urban areas all required increased food supplies. At the same time landowners were often absent as they attempted to forge political careers or took advantage of the growing number of leisure activities. Skilled men were therefore required who understood the new farming methods and the ongoing technological changes in crops, machinery and animal husbandry.

Despite their long absences landowners did not lose interest in their estates. The Dukes of Portland wrote copious letters to those they left in charge. The letter sent to Edward Turner in 1804 is emblematic of this correspondence

> I should like to have an account of each farm of the daily proceedings to which may be subjoined the state of the thermometer, weather. I also wish Thomas Wood to state the progress made in the completion of the scarifyer and other machines I directed to be completed.\(^6\)

Many of the letters written around this time demand information on what was happening at Welbeck or giving directions as to what was to be done. Even so there were times when the Dukes had to leave some of the decisions to be made by those actually at Welbeck as in 1799 when he wrote

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\(^6\) Pw H 1316 Letter from Scott Titchfield to Edward Turner dated London February 20 1804.
With regard to the purchase of the hay. You must be governed by your knowledge of circumstances with wheat. I am not sufficiently acquainted to be able to give you directions.\footnote{PwH 1297 Letter to Mr Turner dated August 26 1799.}

There is little doubt that as the period researched in this thesis progressed the nature of the correspondence changed. William Cripwell provided considerably more information to the then incumbent Duke than the earlier agents. It would appear from Cripwell’s letters that he approached his role in a logical and scientific manner as will be demonstrated later on in this chapter. The Cripwell archive is extensive and the tone and language of his letters are more informed, he was allowed an independence that early agents do not appear to have been afforded. However proving whether this was because the agent was more educated or merely a change in Duke would be hard to establish.

Wade Martins stated that a change in farming practices was very much the concern of the farmer himself.\footnote{Wade Martins, Farmers, Landlords and Landscapes, p. 4.} However the evidence from Welbeck would suggest that the Portland’s, particularly in the early nineteenth century, were the driving force behind the many improvements carried out and they appeared well informed. Thomas Coke had also gained a reputation as an improving landlord and his dedication was praised by Francis Blaikie in the Agricultural Letter Book. He stated that the community owed much to Coke’s

\[\ldots\text{industry combined with the application of his large capital to the improvement of this County than [to] any other individual.}\footnote{Holkham, Agricultural Letter Book Volume I.}

This chapter will explore the role of the patriotic landowner and the part this idea played in the professionalization of the land agent through four main themes. It will firstly examine the part of the landowner and agent in scientific farming, secondly explore mechanisation, thirdly investigate the concept of high farming and discuss whether it was in reality continuity rather than change and finally survey the part played by agricultural shows and societies in agricultural improvement. The improvement ideals of the patriotic landowner could not have been achieved without an equally enthusiastic and like-minded land-agent. In working alongside such an owner the agent would have needed to acquire new knowledge and understanding of the methods being introduced. The chapter will begin by assessing scientific farming.
Scientific Farming

From the late eighteenth century onwards the application of science to farming became increasingly important. Fussell argued that Warrington’s *Chemistry of the Farm* covered the ‘whole of it’ and presented the subject in such a way that it appeared distinct if not particularly comprehensible and yet deserved to be called agricultural science in its own right. The high price of wheat and other agricultural prices created the need for greater productivity than the then present methods allowed. Some owners such as Coke at Holkham had already tried various ideas with reasonably good results. The Holkham sheep shearings provided the ideal opportunity to demonstrate these advances to other farmers and landowners on whom he lavished hospitality. Although scientific and technical knowledge had become more readily available it was only those with a reasonable level of education who could benefit. The idea of having an educated farming community was at this time unlikely and it seemed more sensible to try and motivate the interest of those who were already in a position to take advantage of the information. Caird however saw the relationship between improving landowner and tenant as entwined and wrote of Holkham in 1850

> Mr Coke determined to get men if he could, to take into their hands that improvement of farms which he could not accomplish himself; for it is through an enlightened Tenantry that a large estate can be permanently and profitably improved.

In order to encourage the land to produce the highest yield possible it was fast becoming necessary to use science as well as local knowledge. Early historians of science exploring contemporary agricultural writers have argued that scientific discoveries played a crucial role in the agricultural revolution. With the formation of agricultural societies a ‘mild passion’ developed for trial plots. The timing of this coincided with the timeframe of Chambers and Mingay’s agricultural revolution. Fussell argued that these societies possibly encouraged the use of improved farming methods in the areas which they covered. Experimentation was not undertaken in the controlled conditions of the modern world but there was an understanding that if the trials were to have any benefit

11 Ibid, p. 66.
they should at least be carried out in the same type of soil. Young would keep one plot untreated and this acted as a control at the most basic level. He also understood that many experiments needed to be carried out over a reasonable period of time and in some cases many years to ascertain whether they were successful. This process could be expensive and not always carried out by individuals who had the education to understand the basics of scientific experimentation. The gentry and aristocracy could also behave in ways which were counter-productive, they would ride hounds through experimental plots or allow game and vermin to eat the trial crops. The gulf that existed behind scientific experiment and the amateur trial plot of the eighteenth century was not bridged until Thaer, Lawes, Gilbert and Liebig late in the nineteenth century.\footnote{Ibid, pp. 46-47.}

Historians of technology have suggested that the registration of patents is another indicator of the quantity and pace of innovation. However a review of the institutional conditions from this period has two main problems, firstly the disparity between the rates at which patents were registered and the limited assortment of those granted. The legal framework of the patent process remained the same between 1624 and 1852. In the early part of the system up to the Restoration the situation was relatively inactive but grew gradually thereafter. In agriculture measuring change in this way had another problem because many of the innovations which included: crop rotations, pasture management and livestock breeding were not possible to patent. Even with agricultural implements the uptake of patents remained low. It is advocated this stemmed from the involvement of the aristocracy in their development and they believed more in the common good than profits. Where patents were sought the most popular were for threshing and grinding machinery.\footnote{Lerner, ‘Science and Agricultural Progress’, pp. 14-16.} However not all new inventions could be patented but stemmed instead from experimenting with naturally occurring products, it was productivity above all that was important.

One of the most important technological advances was in the use of fertilizers. Originally these had been organic and might include rape dust, pigeon droppings, marl, lime, bone, animal manure or whale blubber. However these were eventually replaced by guano and new and expensive artificial varieties, for example potash which was acquired by adding sulphuric acid to bones and then artificial chemicals. Large landowners with abundant spare capital were able to experiment with improved crops.
and husbandry practices. These scientific changes in agriculture can be viewed in the same vein as the industrialisation of production. They altered procedures of cultivation in the same way as the processes which improved the manufacture of steel or iron. The main thrust of all and any advances were increased productivity and consequent rises in remuneration for the landowner or investor.

The letters from the 4th Duke of Portland to his steward Edward Turner at Welbeck portray a landowner who understood the need to combine scientific knowledge and empirical experimentation to achieve the best possible results. It was not just the soil that benefitted from the application of science. In 1844 the 4th Duke wrote to George Kelk

Thomas Wood has written to me that the Therm in his haystack has never risen above 62°. I suspect that he does not understand the use … If young Sam Field thoroughly understands the use of it send him to Clipstone to enquire Thomas Woods knowledge on the subject. If not send the father.17

If hay was stacked when too green or became damp during cutting or stacking a complex series of biological and chemical processes took place. Micro-organisms such as bacteria and fungi grow in this moist environment and generate heat and thus combustion.18 It was probable the Duke was experimenting with scientific instruments to try and prevent such accidents and the loss of a valuable commodity. In this case it appeared the tenant did not understand the equipment and therefore the benefits such knowledge might convey. Using these letters and those of other agents and stewards this section will examine how landlord and agent worked together to improve the quality of farming on the Welbeck estate.

Science and nature can also be ironical as demonstrated by William Cripwell agent to the 5th Duke of Portland in August 1872. He attempted to predict the weather through the use of a barometer and he wrote ‘The weather today is better and my glass [barometer] keeps steadily rising but I do not like the appearance of the clouds’.19 Despite the use of a scientific instrument Cripwell understood the best way to determine what the weather would do in the short-term was still to look outside at the sky.

17 PwH 1974 London July 2 1844 Letter to George Kelk.
19 Pw K 947 Letter from William Cripwell 12 August 1872.
concentrate on those related to higher productivity or the introduction of new and improved crops whether for fodder or food-stuffs. One of the biggest improvements was the use of turnips as winter feed.

Mingay stated that turnips were first grown as a field crop in a few areas of Suffolk and Norfolk. It appeared that small areas of these root crops were grown as additional cattle feed or alternative to hay. Extra winter fodder for beasts meant that more animals could be kept and more manure produced which benefitted the land and helped to improve crop yield. According to Ernle, Worlidge in his Systemica (1669) tried to persuade farmers to cultivate roots and Reeve (1670) reprinted Weston’s advice counselling turnips as one of the best methods available to improve both ‘barren and healthy land’. As early as 1683 Worlidge had observed that ‘sheep fatten very well on turnips which prove an excellent nourishment for them in hard winters when fodder is scarce’. Turnips were already being cultivated at Welbeck by 1764 and two payments were made in July and August of the same year which related to the maintenance of this crop. The first was to Sam Norman £1 3s 6d for forty-seven pounds of turnip seed and the second in August to Henry Clark who was paid for hoeing turnips. Nathaniel Kent advocated that extensive preparation of the ground was needed to successfully grow turnips and this was in vain unless the ground was kept properly hoed. He believed that turnip ground should be hoed twice, the first about a month after sowing and then in the right conditions the land:

‘should then be hoed with a ten-inch hoe … without paying any regard to the apparent health, in the choice of those that are left. About ten days after the first hoeing, or a fortnight at farthest, the ground must be hoed a second time, so as to stir the mould effectively between the plants, and to check any rising weeds.

At Welbeck turnips were definitely used as winter feed and there are many references to this crop throughout the archive. On 5 December 1788 William Gould – agent at Welbeck – recorded in his diary ‘Son Joseph sent John Webster from Pilsbury with five calves to be wintered on turnips’. The 4th Duke had a genuine desire to see what impact feeding turnips to the sheep had and consequently wrote to his agent in March 1804.

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21 Ernle, English Farming Past and Present, p. 135.
22 DD/P6/7/2/11 The Account Book of James Brounton.
I wish to have the opinions of the farmers and shepherds on the productiveness of the underground turnips and how the stock have thriven upon them. The turnip was a principal component of the agricultural improvements of the eighteenth and nineteenth century and its usefulness as winter fodder was well understood both at Holkham and Welbeck. The type of turnip seemed to have varied from locality to locality and two letters amongst the vast Welbeck correspondence in 1799 mentioned the sowing and hoeing of ‘Swedish’ turnips. In 1816 at Holkham Blaikie wrote in the letter book

Swedish Turnips have not heretofore been cultivated in perfection in the County – but there is now symptoms of improvements & the Scotch of Northumberland Ridge System of Growing Swedish Turnips likely to become more general in his far farmed & justly celebrated County. At Welbeck Swedish turnips were certainly grown in ridges and the Duke decreed in 1799

Tell Thomas Wood to hoe out two acres of Swedish Turnips in each place into rows with a horse hoe sufficiently wide to be afterwards moulded up with a mould board plough.

Historians have tended to group the different types of turnips together without differentiating between the varieties. However even eighty years later the Welbeck agent distinguished between the types sown, this time the seed used had been the ‘white’ strain. More meticulous archival research would be required to identify how many types were being used and in which localities. There is as yet no research data available which details what type of soil was best for which variety. As the 3\textsuperscript{rd} Duke often bought and sent the seeds on to Welbeck he must have had good local knowledge as to the best strains to buy. In many ways he took the decision of what variety to plant and where out of the hands of the agent. Again in 1804 the Duke wrote, ‘Tell the farmers I am going to send twelve quarters of South County Barley for seed’. It is clear that in this early part

\begin{itemize}
  \item Pw K 1321 Letter from the 4\textsuperscript{th} Duke of Portland March 3 1804.
  \item Holkam Archives Copy Letter Book for 1816, p.129.
  \item Letter to Edward Turner 1799 PwH 1308.
  \item PwK 1317 Letter sent to Edward Turner from London February 22 1804, the seed it appeared was purchased in London and then sent north.
\end{itemize}
of the nineteenth century it was the owner himself who was driving change. Cultivation still remained the responsibility of the agent and he needed to comprehend the right amount of manure and fertilizer and even the correct amount of water required to promote the maximum growth and yield. The importance of the turnip crop was quickly recognised and could even be valuable as Gould recorded in 1785:

Rode along with Thomas Walkden to the New Park … we have there several acres of good turnips which are valuable on account of the scarcity, the crop having failed in general through this county and the neighbouring ones.  

Turnips were expensive, labour intensive and at times hard to cultivate, prone to fail when weather conditions were unsuitable and it was therefore hardly surprising that the Duke was more than interested in the results. Although the problems were numerous it was worth all the effort as it proved to be an invaluable winter feed. The interest in turnips continued with the 4th Duke of Portland who when absent frequently requested reports which detailed both how the crop was growing and the condition of the beasts to which they were fed. There was a scientific element to his questioning and it was no longer a case of simply planting a new crop and hoping it thrived. One crucial element to its successful cultivation appeared to be ample applications of manure to ensure the soil quality remained in the best possible condition.

The importance of maintaining soil fertility through adding manure and other substances had long been recognised, the ways of improving soil fertility is discussed in more detail in chapter 4. Kent had written in 1775:

The manuring of land is so necessary a part of husbandry, that no object is more essential, in the practice of farming, than that of procuring a suitable and sufficient quantity of this useful improvement.

Furthermore this enrichment had to be applied regularly for it had been found that even

… the richest land will not yield a long succession of crops without help: at the same time that the poorest soil will make a considerable return, when we take pains to assist it. We should therefore first endeavour to raise as much vegetable, and animal, manure as possible; and, next, contrive to multiply it, by

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30 Hanson, *The Diary of William Gould*, p. 86.
adding such other useful, component parts as industry may find in different situations.\textsuperscript{31}

There was an implicit understanding from the land agent’s perspective that tenant farmers would look after the land on which they farmed. Those who tried to over-farm and continued to plough and plant for profit without worrying about soil fertility would soon find themselves with problems. Part of the problem faced by land agents was that some tenant farmers would continually plant white straw or other profitable crops which might deplete the soil with no thought to the long term consequences. It was therefore essential that those who managed estates observed the condition of the land and used their experience to notice when tenants were maybe ‘mining for profit’ had exhausted their land. An illustration of this occurred on 18 February 1786 when Gould viewed the land which the Earl of Bathurst was to exchange with the Duke of Portland for the Norton tithes and stated

\ldots it is held by Joshua Alliston and is a good deal under the plough… he has a great quantity under tillage, he generally ploughs the land as long as it will produce a crop and lays it down to take care of itself without laying any manure upon it, he has greatly injured the farm and should be ordered to quit.\textsuperscript{32}

‘Alderman’ Mechi one of the central advocates for high farming wrote ‘the more meat you produce the more manure you make and consequently the more corn per acre you will grow on the arable portion’\textsuperscript{33} In September 1799 the Duke was worried that the sheep they owned would not produce enough manure for their own needs and ordered his agent to purchase further quantities

\begin{quote}
By all means buy the 50 quarters of Sheep Dung and let be carried where there is opportunity to dung the Woodban Lucerne – and buy all sheep dung you can lay your hands on.\textsuperscript{34}
\end{quote}

At Holkham it is harder to determine the products used on the soil. Thomas Coke’s father through his farming at Longford had set a good example to his son when he introduced into Derbyshire ‘Norfolk’ style husbandry. This scheme abolished a fallow year and instead introduced crop rotations and turnips grown in ‘drills’, this afforded easy access for hoeing and weeding. Coke Senior also used marling to help maintain soil quality and would cart lime and farmyard dung to the marl pits where the two

\textsuperscript{31} N. Kent, \textit{Hints to Gentleman of Landed Property} (London, 1775), p. 70.
\textsuperscript{32} Hanson, \textit{Ducal Estate Management}, p. 99.
\textsuperscript{34} PwH 1298 3 September 1799 Letter from Lord Titchfield to his agent George Kelk.
would be mixed together ready to spread on the land. Thomas Coke had been brought up with, taught by and been part of an agricultural culture of land improvement and this he would take to and continue at Holkham.\textsuperscript{35}

Coke’s agent, Francis Blaikie was a firm believer in farm yard manure, but, he had a firm understanding of the importance of other materials especially in the absence or shortage of organic manure. In 1821 he replied to a set of questions posed by the Morayshire Farmers Club one of which was how to proceed if a farmer found himself short of manure. In this instance Blaikie stated

\begin{quote}
When a farmer is short of Farm Yard Dung or of Compost Manure for his wheat … in autumn and is unacquainted with or not having the means of applying Rape Cake or other extraneous Manure, he should defer sowing the residue ‘till Spring.\textsuperscript{36}
\end{quote}

Shortage of supply was one of the problems of farmyard manure, it was not always available as illustrated above in the quantities required and of course there was always the possibility the beasts would die either as the result of disease or natural disasters. As a consequence of this variability owners and agents experimented with other substances.

Adding substances other than manure could improve not just the richness of the soil but also its texture. Thin sandy soils could be improved with the addition of a dressing of clay marl which then enabled the soil to return water as well as giving it a degree of body. Heavy clay soils could be prodded into productivity by adding chalk or lime. The action of these chemicals on the soil helped to break it down to a fine texture, which had several consequences. It allowed the crops to uptake more readily the nutrients which it naturally contained. There was the added advantage of making soil less ‘sticky’ in wet weather and when dry it did not form large hard clumps. At Welbeck experiments which related to crops being fertilized with different substances are evident in the correspondence from the 3\textsuperscript{rd} Duke of Portland who wrote in 1799

\begin{quote}
I directed to have had an account of the produce of the Lucerne how it was consumed, how long it lasted and & the specific differences of that manured with rape dust. It was begun to be cut the 3 July.\textsuperscript{37}
\end{quote}

\textsuperscript{35} Wade Martins, \textit{Coke of Norfolk}, p. 84.
\textsuperscript{36} Holkham Agricultural Letter Book I, 7 August 1821, p. 25.
\textsuperscript{37} PwH 1313 Letter from Lord Titchfield to the Edward Turner.
Attempts were made to invent a more reliable form of fertilizer. Nitrogen had been in use since the seventeenth century when Digby had discovered its benefits after watering barley with a weak solution of the compound. It was not until the 1830s when sodium nitrate began to arrive in sufficient quantities that its full potential was unleashed. Another attempt at producing a reliable alternative was illustrated in a letter from James Shepphard in 1838 with an accompanying flyer which described his new product ‘Patent Dessicated Carbonised Manure’. He claimed that he had proved most effectual in all parts of France where it had been adopted for upwards of two years. The flyer declared

Several respectable Farmers tried it last year with Turnips and confidently assured me that the Wheat after it is looking as vigorous, strong and healthy, as after Bones, Farm Yard Manure or Sea Weed. I have sown it with Potatoes this season and find its effect on them most striking, and is a decided enemy to the fly, maggots etc.  

However the 4th Duke was not so easily convinced and wrote to his steward Edward Turner

I beg you would inform him that I am quite ready to try any of his inventions on the condition of not paying for them unless they are found to be successful in which case if I am thoroughly convinced I shall be quite ready to give him all the publicity I can but not otherwise.

In consequence on Shepphard the Duke stated ‘I will do nothing about him’ and it is presumed the estate made no further investment in this product. The reputation of the improving landowner was evident even to the lowliest of salesmen for Shepphard addresses his correspondence to the Duke and not the agent or he simply understood who held the purse strings. The Duke however put the onus back on to the agent to investigate the product and then based his final decision on information received.

Correspondence which tried to convince the landowner or agent to purchase some of the new substances on the market was also received at Holkham. In 1839 the Earl of Leicester received a letter from the seller of salt petre, in an attempt to persuade the Earl to purchase, the vendor stated, ‘I have taken some pains to have it investigated
as well by Practical Farmers & by Scientific Men’. Blaikie made further enquiries into this substance and wrote to a salt petre manufacturer in London. The reply stated:

Salt Petre is composed of Nitric Acid & Potash. The Nitric Acid is a compound of Nitrogen … the latter being as regards Quantity in the ratio of 5 to 1 of the former. Thus with the oxygen present in the Salt Petre it only remains to get it into the Land … to draw out from the Earth the Virtue which it contains.

‘However the cost of this new material did not come cheap and the Earl was quoted ‘£28 11s 0d per Ton Duty paid and exclusive of shipping and loading Expenses’. No landowner was going to spend this kind of money and then leave its application in the hands of the uneducated or ignorant. The final major agricultural chemical to appear in the first part of the nineteenth century was potassium and which began to be exported from Germany in 1860. Suddenly the farmer and agent had more than dung, marl, lime, chalk and bones to enrich the soil. As the above demonstrates throughout the nineteenth century fertilizing the land became more complicated as new products appeared on the market. It might be argued that local knowledge and expertise became ever more important as a complete understanding of soil types was required in order to have any idea of what if any of the new fertilizers might be suitable. The agent no longer needed to worry whether there was simply enough farmyard manure for requirements but needed to learn the implications of spreading a variety of chemicals on the land.

Thompson argued that the establishment of the fertilizer industry can be dated to 23 May 1842; the day John Bennett Lawes obtained the patent for using sulphuric acid to decompose bones. Farmers had been greatly puzzled by the differing and unpredictable performance of using bones on the land on some soils they acted well and on others had no little or no effect but were certainly used at Welbeck and in 1844 a letter from the Duke to George Kelk requested, ‘I want to have 5 or £6 worth of bones and the same of Guano bought’. Guano was a high nitrogen fertilizer produced by sea birds and imported from rainless islands off of Peru. There is no indication how the bones were used they might have been burnt and then ground or simply ground. Bone meal is high in phosphorous and well suited to turnips, while farm yard manure is high

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43 Ibid, p. 31.
45 PwK 4575 15 August 1844.
in potash. Two different minerals whose usage the agent must have understood even if not necessarily understanding the chemical compounds. Through his experimental work Lawes commenced production of a super-phosphate. He had discovered the properties of this chemical by dissolving in sulphuric acid the bones that farmers had applied to their land and left to slowly dissolve over time. Production had only become possible after the discovery of coprolite beds in Cambridgeshire. Coprolites are the remains of fossils which once mined and treated with sulphuric acid create the same chemical as that discovered by Lawes. Farming during the eighteenth and nineteenth century became ever more scientific. Improving landowners needed agents who were au fait with the new trends and who were capable of adapting farming practice to embrace this progression. All but a very small minority of those who managed large estates were, at the beginning of the period covered by this study, untrained. As the century progressed and technological changes became more embedded more education was needed. This was a slow process even after the foundation of the Agricultural College in 1845 and it was not until 1902 that the Land Agent’s Society was formed. It was a testament to the adaptability of those who ran these large businesses that they embraced new technological improvements and used them for the benefit of their employers. It was not just how crops were fertilized that altered for the good other processes changed too and in particular the introduction of mechanisation.

**Mechanisation**

Overton suggested that many of the processes which led to higher agricultural productivity naturally resulted in a need for increased labour. As permanent pastures and fallows were replaced by convertible husbandry more labour was needed to prepare the soil through ploughing and harrowing and once planted crops required careful attention to keep them weed free. During the harvest period – perhaps the busiest time of the year – higher productivity necessitated a larger labour force to reap, gather, store and thresh the crop. Ultimately this came through mechanisation. During the 1830s agricultural machinery became a specialised field in its own right as the agricultural engineering industry began to evolve. From this period onwards the price of steel began to fall which resulted in a simultaneous fall in the price of machinery. Engineers who were involved in the design of these instruments began to improve overall quality and

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reliability. Overton estimated that the introduction of harvesting and threshing machinery in wheat production reduced the need for human labour by about seventy per cent. Machinery was labour effective and allowed some tasks to be carried out more effectively and thus the use of human and animal labour could be concentrated where it was most needed.\textsuperscript{48}

Collins declared that mechanisation came late to English agriculture and appeared towards the end of what has become known as the second agricultural revolution. This also encompassed the introduction of artificial fertilizers and buying in improved food stuffs for livestock.\textsuperscript{49} It is hard to determine when either Welbeck or Holkham began to mechanise but it had already begun by 1787 when Gould recorded in his diary ‘This morning I rode and viewed the reapers who are cutting down the oats in the Park’.\textsuperscript{50} It might be argued that this entry does not differentiate between mechanical or human reapers. However less than twenty years later in 1804 Lord Titchfield wrote to Edward Turner ‘I wish Thomas Wood to state the progress made in the completion of the scarifyer and other machines I wish to be completed’.\textsuperscript{51} One reason for the late introduction of machinery into English agriculture may well be illustrated in a letter from Mr Bennett to Charles Neale one of the Welbeck agents

\begin{quote}
We have been very successful in [matters] of Steam Cultivation in the County the first great outlay is the only drawback and hindrance to its now general introduction.\textsuperscript{52}
\end{quote}

The Swing riots of 1830 might have played a large part in the delay of mechanisation. Collins proposed that these riots had emphasised the consequences of arbitrarily introducing machinery. The cost of a threshing machine it has been submitted did not ‘cost the wages of one man for a year’ but its introduction could mean saving the cost of two men’s wages every year. One problem with this theory is that ‘saving’ the expense of one man’s yearly salary was not necessarily cost effective as those who were unemployed would look to the parish for relief. A rise in the cost of poor relief could result in the rise of the poor rate which was levied on every tenant. The threshing machine has from the Hammonds onwards been classed as one of the primary causes of

\textsuperscript{48} Ibid.
\textsuperscript{50} Hanson, \textit{The Diary of William Gould}, p. 146.
\textsuperscript{51} PwH 1316 Letter from Lord Titchfield 20 February 1804.
\textsuperscript{52} DD/6P/13/10 Letter from Mr Bennett to Charles Neale 24 August 1863.
un- or under-employment during the winter months. After Swing wheat continued to be threshed by hand until labour became very short in the 1850s. This process had begun around 1835 and as the availability of surplus labourers dropped there was a resultant increase in wages and suddenly mechanisation became more cost effective. This was illustrated by Collins who stated that between 1830 and 1880 agricultural output rose by some 60-80 per cent while the numbers of those employed rose by the much smaller 17 per cent between 1831 and 1851 and declined by approximately 20 per cent between 1851 and 1881.53

Arable farming was considerably more labour intensive than pastoral farming and as the labour supply dwindled the mechanisation of agricultural processes became inevitable. When harvesting corn it was estimated that between 4.5 and 5 worker days were required to ‘cut, sheaf and stook’ an acre of wheat using a saw edge sickle and between 2.5 and 3 worker days to undertake the same task using a scythe. Around 5 or 6 bushels of wheat could be threshed using a flail which equated to approximately a quarter of an acre of wheat. Root crops were even more labour intensive and could take 10-15 worker days per acre to harvest. Simply keeping a crop weed free needed an extensive work force in the days before the use of a horse drawn seed drill and hoe. The land agent would have needed to understand the lie of the land and which parts of the estate were suitable to use machinery on and those which were not. Little is known about the corpus of knowledge and information held by the owner himself. Mechanisation began early at Welbeck and the Portland’s were well versed in the use and performance of the machinery in their possession.

If the land can be safely ploughed for the carrots it may but I think the Harrow and the Scarifier will be a much safer mode of proceeding for preparing the land to be ploughed without the danger of churning it up.54

By 1821 Blaikie was already reported on the ‘inverted horse hoe’ and which far exceeded his ‘most sanguine expectations on their general utility’.55 The specific piece of machinery was more complicated than first appeared for he recorded

They are made with several sizes of shares … for wide and narrow…for strong & for light land, for ridge and for flat surfaces. The running size of shares are all made to fit into the same sockets and these moveable at pleasure upon a frame.

53 Collins,‘The Age of Machinery’, p. 201.
which is attached to the carriage of a Drill machine or to any axle with four wheels.\textsuperscript{56} The purchase of machinery was not always successful as the Welbeck records revealed. A letter to Edward Turner stated

On Wednesday next a man employed by Mr Massie the maker of the fire engine will be sent to Welbeck for the particular purpose of seeing the performance of the Engine there made by him.

When Mr Massie sent down that engine five years ago it proved itself better than two or three engines against which it was tried according to my recollection & was moved by less force and in consequence I ordered another engine to be made.

Last year Nicholas Swift confirmed as I believe … that it required greater manual strength to work it and on one occasion … it refused to work.\textsuperscript{57}

Massie was under the impression that the failure of the machine to work was probably the result of human error and it was arranged for him to visit to observe the pump in operation. It was assumed this pump had a dual purpose for both fires and pumping water for irrigation in periods of drought or low rain fall.

After 1850 the speed at which agricultural machinery was adopted began to quicken. The two most common items purchased were the steam thresher and mechanical harvester. One of the best examples at Welbeck of the care and attention that was paid to purchasing a specific piece of equipment is illuminated by Cripwell in September 1872. Instead of rushing out and acquiring the latest model Cripwell sought to hold a trial to ascertain which machine most suited Welbeck. He stated

I did not intend that new Machines should be got now, but that it would be useful to look about us with a view of selecting the best. Mr John Hemsley who was one of the Judges of Agricultural Implements at Cardiff is coming here to see me on Saturday afternoon and I will question him about them.\textsuperscript{58}

Hemsley recommended that the estate would be best served by one of Hornsby’s machines rather than a Samuelson but this was still not enough for Cripwell and on 11 September 1872 Cripwell assembled six different reaping machines and put them to the test on Welbeck land. Even before the trial Cripwell explored ways of ensuring that he was able to get the best out of purchasing this type of equipment and wrote to the Duke ‘I got some very useful hints from Mr Hemsley yesterday as to the management of

\textsuperscript{56} Ibid.
\textsuperscript{57} PwK 1321 Letter to Edward Turner March 3 1804.
\textsuperscript{58} PwK967 Letter from William Cripwell to the Duke of Portland dated 5 September 1872.
machines and preventing them from clogging with Clover. After the trial Cripwell composed a detailed report which was sent to the Duke (Appendix 2) it contained information on the way the machines cut the corn, the type of sheaves it formed and how it cut when the corn lay flat. The Woods American Reaper (Fig 2) appeared to be the most suitable and Cripwell sought information on how one might be acquired and reported

I asked Forrest on Wednesday how these were obtained when he told me they were sent to him direct from America carefully packed in a strong Box probably through some shipping Agent in Liverpool or elsewhere but he did not say this. He said that he got 6 this summer viz. the one tried at Cuckney Hill sold to Mr Parkin, one sold to Milner of Creswell and the other four not getting customers at Worksop he sent to the Agricultural Meeting at Doncaster where he sold them all and could have sold more. The price is 30 Guineas each.

This experiment more than anything demonstrated the changing role of the land agent. It was no longer simply a case of managing the agricultural land with the landowner issuing his orders. Cripwell approached the task of buying a new reaper in a scientific manner taking care that each machine was subject to a stringent set of tests over the same piece of land and then each carefully evaluated in order to reach the right decision for Welbeck.

Another area which Welbeck mechanised from the 1860s was steam ploughing. Although John Fields wrote a series of letters to the Duke of Portland which detailed the land ploughed using this method, it also appeared the estate used a company of contractors to undertake its steam ploughing. In 1872 the contractor raised his prices

I have a letter from Mr Yates this afternoon asking for an increase of 10 per cent on the price paid for steam cultivating and £1 per day when working in the Park where they are now paid £5 per day.

On top of this the Duke was required to supply his own coal and Cripwell explained

They have only to pay for repairs and the men’s wages who work the Engines and ploughs &c. We pay the boys who more the porters’ and for the water loading. I have no doubt the wear and tear is considerable and renewals are required they are very costly but the amount paid by your Grace for the last 12 months will bear this (nearly £2600).

59 PwK 970 Letter from Cripwell 8 September 1872.
60 PwK 974 Letter to the Duke of Portland 13 September 1872.
61 Ibid.
This was a large sum of money to pay out every year, if Charles Neale was correct and the estate’s revenue amounted to nearly £40,000 this equated to approximately 6.5% of the monies collected. One has to ask just how much money the Duke might have saved by cultivating his land in this way. Although some of the costs were met by the contractors the agent still needed the skills to estimate the fuel and water consumption and the cost of the carriage to the required sites to decide whether steam power was cost effective.

Holkham too was becoming highly mechanised. In 1869 the sale of chattels by the executors of the tenant John Hudson illustrated the type of equipment being used in Norfolk. Amongst his chattels were about 30 ploughs and a similar number of harrows. They also included scarifiers, cultivators and rollers all of which were used in the preparation of the soil for planting. Amongst the machinery for harvesting existed a reaping machine, a threshing drum and two elevators with horse gearing, for carting the crops and other materials around the farm. Hudson also owned 15 wagons and 11 tumbrils. On top of this was a portable steam engine which could be used in the fields. Unfortunately bills for the purchase of this equipment have not survived and so we do not know how much of Hudson’s capital was tied up with this machinery. In order to pull and operate this machinery Hudson owned 24 cart horses and five riding and carriage horses. On the death

63 DD/4P/62/70/1 May 4 1855 Mansfield Woodhouse.
of the man who succeeded Hudson a sale of his farm machinery, which was of similar quantity, fetched £4,556 and Wade Martins suggested Hudson had probably invested between £4,000 and £5,000 in stock and machinery. No small sum. Although both estates appeared to invest heavily in mechanisation they were not alone. Those tenants who had plenty of capital were also willing to take the same risks. The importance of capital to invest was well understood by Coke at Holkham and James Caird wrote

Mr Coke determined to get men, if he could to take into their own hands that improvement of his farms which he could not accomplish himself … As opportunities arose he offered his farms to men of capital and intelligence.

To the Victorian mind-set steam was a ‘symbol of technical progress’ and it was believed that the mechanisation of agriculture would allow fortunes to be made from the land in the same way that it was possible to do so from industry or mining. For the patriotic improving farmer steam allowed them to subdue the countryside to their will while reducing the amount of labour needed. Harwood Long argued that the move towards mechanisation was not caused just by the scarcity and increased cost of labour but the price of purchasing and keeping horses was another significant factor. When oxen were used they were hardier and needed less nurturing than the horse. A horse needed proper housing and good quality food in order for it to perform efficiently.

Through the correspondence and papers of Welbeck and Holkham we are given an insight into how both estates approached the technological changes of the nineteenth century. This research adds to our knowledge of the role the land agent played in helping to push forward change. The evidence from the two estates suggests there was more landowner involvement in this process than hitherto thought. In the earlier period at Welbeck both the 3rd and 4th Dukes of Portland are intrinsically linked with improvements however by the 1870s it was Cripwell who experimented with and attempted to purchase the new reaping machine. However rather than buying what appeared to be the most suitable or expensive he made a great effort to trial all the machines to find the one most suited to Welbeck. This group of letters are important because they exhibit Cripwell’s methodical approach to setting up the trial and how he

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66 Collins ‘The Age of Machinery’, p. 208.
meticulously recorded the results. Past historians have not provided this level of detail and the surviving archives of these two landed estates begin to give an idea of just how varied and intense the working life of the agent was. All of these changes were taking place as English farming moved into the ‘golden age’ which is now called High Farming.

High Farming: In Reality Continuity or Change?

Ernle stated that by 1837 English agriculture was in dire straits. Horn, too argued that the period at the end of the Napoleonic War was a difficult time for many farmers who after many years of prosperity now found themselves heavily in debt.\(^{68}\) Many had taken on leases at high rents and continued to pay these inflated prices although the price of wheat had fallen.\(^{69}\) Ernle maintained that low prices meant that many of the heavy clay lands were either abandoned or ‘foul’ and the rest in a poor state of cultivation. Mediocre pasture lands which had been ploughed up and turned into arable land had at first produced good yields but through neglect were now exhausted. Farmers on the light soils came under less pressure than those who farmed on the heavier soils and the Norfolk system had allowed those farming in the eastern counties to suffer less than many others. It appeared that much of the progress which had been attained during the war years with France had been lost. Consequently it became apparent in the wake of the post-war prices farming had to become more efficient to be profitable. There was however a renewed interest in improvements and a readiness to invest in such ideas. Thus ‘progressive’ farmers and landowners invested in drainage, new buildings, stocked lighter soils more heavily and mechanisation became more popular as a means of cultivation.\(^{70}\) This ultimately led to the golden era of English agriculture. Collins unlike Ernle argued that high farming prosperity was a recurrent theme in ‘rural folklore’ which contained tales of enormous profits made from wool and corn in the 1850s and 60s, a period where the standard of living gap between farming and other middle class occupations dwindled and farmers overall doubled their profits.\(^{71}\) Agriculture’s contribution to the national income declined during the third quarter of the nineteenth century but it still benefitted from Victorian prosperity. The beginning of

\(^{69}\) Ernle, \textit{English Farming}, p. 348.
\(^{70}\) Chambers and Mingay, \textit{Agricultural Revolution}, p. 131.
the Golden Age started off with acute depression in 1851 but prices recovered and with the start of the Crimean War remained buoyant until the mid-1870s.\textsuperscript{72} This thesis will argue that at Welbeck and Holkham ‘high farming’ was a period of continuity rather than change. It was the result of earlier investment and not that of a significant shift in farming techniques and ideology.

Perry declared that the term ‘high farming’ was vague and likely to be misunderstood. Outside of academia it is more likely to be understood as a reference to excellence or elevation to a higher status. This was true even in the agricultural community a century or so ago where it’s meaning was clear and understood.\textsuperscript{73} Regular readers of the \textit{Journal of the Royal Agricultural Society of England} would certainly have been familiar with the term. The origin of the expression ‘high farming’ is unknown; but there can be little doubt about the existence and extent of the phenomenon between 1840 and 1850. The phrase was widely in use by the 1830s for those who acted as reporters for the compilers of the tithe files which were assembled from 1837 onwards were asked to state whether a parish ‘was high or low farmed’ which would ‘affect materially the quantity of produce’.\textsuperscript{74} Nash defined high farming as a system which employed ‘a high volume of inputs per acre and aims at a high volume of output’.\textsuperscript{75} Perry has proposed that high farming was expensive and placed considerable financial demands on both landowners and farmers. If economic conditions became more difficult after the Corn Laws and agricultural protectionism ended, compensation it is argued came through cheap drainage, railways, imported fertilizers and feeding stuffs.\textsuperscript{76} Perry has declared that the problem was more complicated because each section of the agrarian community had different objectives. Landowners were mainly interested in long term investment and therefore did not expect either quick or large returns on the capital spent.\textsuperscript{77} At both Welbeck and Holkham the contemporary correspondence reveals that investment in improvements continued throughout the whole period under review rather than in short bursts which

\begin{thebibliography}{9}
\item \textsuperscript{72} Ibid, p. 75.
\item \textsuperscript{73} P. J. Perry, ‘High Farming in Victorian Britain: Prospect and Retrospect’, \textit{Agricultural History}, 55:2 (April, 1981), p. 156.
\item \textsuperscript{74} Wade Martins, \textit{Roots of Change: Farming and the Landscape in East Anglia, c.1700-1870}, (Exeter, 1999), p. 131.
\item \textsuperscript{76} P. J. Perry, ‘High Farming in Victorian Britain: The Financial Foundations’ \textit{Agricultural History}, 52:3 (July, 1978), p. 365.
\item \textsuperscript{77} Perry, ‘High Farming in Victorian Britain’, p. 365.
\end{thebibliography}
equates to the period 1850-1870. For tenant farmers monies spent in the short term were even in ‘good times’ speculative, poor harvests and fluctuating prices could adversely affect returns. How much capital was required is debatable, but contemporary estimates varied from £8-£20 per acre.\(^78\)

One of the continued complaints of the 1850s and 1860s was a lack of men with enough capital to invest in agriculture.\(^79\) Wade Martins stated that Coke chose his tenants with care and that there was great competition for his farms, it would therefore suggest that he chose tenants with at least some capital to invest.\(^80\) Although almost at the end of the high farming period Cripwell certainly looked for tenants with money to invest and this is illustrated in two letters, the first in 1872 when looking for a tenant for Georg Harvey’s land ‘I think either Hawkins or Barker would be the most likely of the lot. They both have kept public houses at Mansfield and have sufficient capital’.\(^81\) Secondly, in 1873 Cripwell wrote to the Duke of Portland regarding the farm at Bondhay

> We have possession from Monday and I ought to have consulted your Grace as to the future Tenant and the Rent before this. Mr Walker would be glad to have the Farm to work with his Castle Hill and Whitwell Farms and he is a good manager with plenty of Capital.\(^82\)

Mechi suggested that all landowners or farmers who applied capital to the erection or modernisation of farm buildings, invested in under-draining, purchased fertilizers, improved the quality of livestock and purchased good seed might have been described as ‘farming high’. This concept was somewhat more complicated and it has been described as the attainment of high production not simply by the use of the above but included the introduction of new knowledge, techniques and equipment.\(^83\) We have already used one example in the previous section of the Duke of Portland purchasing seed but it was not an isolated incident nor as already discussed was it a factor of high farming. Not all the purchases related to seed for crops a letter written around 1840 details the delivery of acorns probably for use in the plantations around the estate

\(^78\) Ibid, pp. 371-372.
\(^79\) Ibid, p.365.
\(^80\) Wade Martins, A Great Estate, p. 106.
\(^81\) PwK 989 Letter from William Cripwell 23 September 1872.
\(^82\) PwK 1197 Letter from William Cripwell 27 September 1873.
Fifty sacks [of acorns] will leave by the railway on Friday next at eleven and fifty more on Wednesday at the same time they will arrive the same day late at night at Eckington.

Besides purchasing seed the Dukes of Portland also dictated where it should be planted. This would suggest that they possessed a good understanding of their land and what crop would grow best and where. It has to be said that at Welbeck this happened long before the dawn of high farming as a letter written in 1804 indicates

I enclose Mr Mason’s the seedman’s letter … I would have seeds sown as follows:

A bushel of eyegrass to be shown over every acre.

In the Park twelve pounds of white clover & twelve pounds of trefoil per acre

At Gibson’s eight pounds of white clover and fifteen pounds of trefoil per acre

At Scotland [Farm] the land sown with rye, eight pounds of white clover & fifteen pounds of trefoil per acre

The land planted with Potatoes and sown with Turnips eight pounds of Red Clover, eight pounds of White Clover and ten pounds of trefoil per acre

At the Wood Barn ten pounds of white clover and fifteen pounds of trefoil per acre.

The above directions indicate the Duke’s interest in maintaining the quality of the soil within his estate. This would suggest that he has undertaken his own research, resourced the best possible quality seed at a price he was prepared to pay and then dictated the areas where it should be sown. Both the clover and trefoil are nitrogen fixers and this demonstrates that even while away on business the Duke continued to ensure the viability of his estate. The modern and scientific approach which was already being taken on large estates such as Welbeck and Holkham would suggest that as agriculture moved out of the crises and short sharp depressions of the post war years, they were aptly placed to take advantage of the new economic climate. The large landowning elite were perhaps the only members of the agrarian community who had the capital to invest in the post war years and their long term investment eventually proved successful. It might therefore be argued that high farming was part of a movement of continuity rather than change.

Ernle firmly believed that the decline of the small farmer, yeoman, open field farmers and commoners while a social loss to the countryside and rural community

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84 PwH 1315 Written and sent from London, February 15 1804.
prepared the way for a different approach to farming. Small farmers were just not able
or equipped to adapt to the new agricultural improvements and technologies that were
beginning to appear. Their loss was regarded as an economic necessity.\textsuperscript{85} In 1832
Blaikie had stated

\begin{quote}
‘The Sheep Fold … That admirable husbandry is indispensably necessary in
maintaining the light Arable land in a good state of cultivation more particularly
when situate at a distance from Manure and Market, and a flock of sheep cannot
be kept to advantage upon a small farm’\textsuperscript{86}
\end{quote}

However at Holkham in 1851 the number of small farms had remained constant since
Coke had inherited although there was a slight increase in the number of farms with
more 1,000 acres from four in 1780 to six in 1851.Fig 3 There was a much larger
increase in the number of farms with more than 500 acres.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|}
\hline
      & 5 to 49 & 50 to 99 & 100 to 299 & 300 to 499 & 500+  \\
\hline
1780  & 25      & 5        & 23         & 18         & 18    \\
1851  & 25      & 6        & 19         & 17         & 34    \\
\hline
\end{tabular}
\caption{Size of Farms in Acres at Holkham 1780 - 1851}
\end{table}

Fig 3

Source: Coke of Norfolk.\textsuperscript{87}

The enhancement in size appears from the wider archive to be the result of land
purchased and enclosure of the common grounds rather than the breaking up of smaller
farms. This chain of events is again suggestive of continuity rather than change.

High farming as already discussed was a system of intensive farming and
Wade Martins has argued that in Norfolk this came about not through the use of
mechanisation but instead was the product of improved fertilizers and feedstuffs both of
which could help to push up grain yields and improve the quality of the livestock.\textsuperscript{88} Her
theory is based on the mixed farming of the estate combined with the Norfolk four
course system of cultivation. In light soils this usually entailed planting a corn crop two
years in every four or five years. In between times the remaining arable land was under
fodder. The most famous of the husbandry leases were those issued by Thomas Coke at

\textsuperscript{85} Ernle, English Farming Past and Present, p. 349.
\textsuperscript{86} Ibid, pp. 164-165.
164.
\textsuperscript{88} Wade Martins Great Estate at Work, p. 19.
Holkham. A memorandum in the ‘Field Book of the estate of T. W. Coke Esq. in the County of Norfolk’ read

The benefit which results from a Check of this kind [husbandry lease] upon the Tenants of a large Estate is very great, as it fully guards against any improper course of Cropping and by shewing what has been the past system of husbandry upon any particular Farm, a Landlord or Agent is the better enables to judge what regulation to lay it under in Future.\footnote{Parker, \textit{Coke of Norfolk}, p. 106.}

Alongside husbandry covenants Coke was well known for granting long leases. Parker argued that the long agricultural lease was often seen as one of the main \textit{tour de forces} of agricultural change.\footnote{R. A. C. Parker, ‘Coke of Norfolk and the Agrarian Revolution’, \textit{Economic History Review}, 8:2 (1955), p. 158.} At Holkham Ernle declared the granting of long leases guaranteed ‘improving farmers a return for their energy and outlay’. He contended that the problems which might occur as a result of a ‘long unrestricted tenancy’ were mitigated by the use of husbandry covenants and consequently this was ‘comparatively unknown in English Leases’.\footnote{Ernle, \textit{English Farming Past and Present}, pp. 119-120.} Parker argued it was impossible for Ernle to make such sweeping statements on leases in general and in any case were already in place at Holkham long before Coke inherited in 1776. More explicit husbandry clauses were inserted after this date.\footnote{Parker, ‘Coke of Norfolk and the Agrarian Revolution’, p. 159.}

Blaikie’s opinion on crop rotations was apparent in a letter he wrote to Lord Lynedoch in September 1816

\begin{quote}
The leading feature in the Norfolk Arable Cultivation is not growing two white straw Crops in succession & the principal difference in opinion … in the proper Rotation of Crops viz whither a four, five or six course shift is the best.
\end{quote}

Blaikie provided greater detail by explaining the crop rotation within the different ‘shi

A Four Crop Rotation

1. Turnip or other Green Crop generally eat upon the ground 
2. A White Straw Corn Crop generally Barley
3. Red Clover generally sown once
4. White Straw Corn Crop generally Wheat

A Five Course Shift

1. Turnip or other Green Crop – Generally eat upon the ground 
2. A White Straw Corn Crop – generally Barley
3. Mixed Seeds viz Clover/Trefoil/Rye Grass &c &c
4. Do Do – pasture
5. A White Straw Crop generally Wheat
A Six Course Shift

1. Turnips or other Green Crop generally eat upon the ground
2. A White Straw Crop – generally Barley
4. Do Do pasture
5. Peas, Beans or Vetches
6. White Straw Corn Crop generally wheat sometimes the Wheat crop is taken before the pasture and answers best so in a late Harvest

Blaikie did not believe that each rotation was right for all soils because he wrote ‘Of these courses or shifts I believe the four course to be most injurious to the land and the five course to be most in favour.’

Although no husbandry leases of the detailed nature of those at Holkham have been found at Welbeck the Portlands were not adverse to ordering their tenants to plant certain crops, the density in which the seed was to be sown and even what mixture of seeds to plant. Landowner and agent understood the land and soil at Welbeck no less than Coke and Blaikie at Holkham the estate was simply managed in a different way. Long leases and husbandry clauses were not invented or introduced during the golden age of farming but did ensure the continued health of the soil. These still fit the pattern of continuity, change was very slow and occurred over a long period of time and was not the result of a forty year period in the middle of the nineteenth century.

Tenants when left to their own devices did not always get it right. This is illustrated by Joshua Alliston who Gould gave notice to quit his farm ‘for neglecting his hedges and running out his land by ploughing etc.’ However Alliston begged to stay and ‘promised to take care of his fences, lay down 14 acres this spring with seed and cultivate his land in a husbandlike manner’. Gould rescinded the eviction notice in return for the reformation of his farming techniques stating, ‘I told him I probably might repair his buildings’ because whoever rented the farm would soon need a new barn. Gould used the promise of a new barn as leverage to persuade Alliston to carry out his own pledges. At Holkham tenants had to have specific permission to sow crops out of rotation. In 1816 Diana Bourne requested and was ‘hereby authorised to sow wheat in

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93 Holkham Letter Book Volume I September 1 1816.
94 Hanson, *The Diary of William Gould*, p. 128.
95 Ibid.
the present season’ but in the following year she was to ‘make a clear cut summer fallow’ on the same land.  

Wade Martins states that a field book of the estate revealed that the lease system at Holkham was employed to form ‘a check upon the tenants of a large estate … as it fully guards against any improper course of cropping’.  

Furthermore by ensuring that the tenants had to request in writing any changes the estate was always aware of what was being grown and when. Under Thomas Coke the clauses within the leases were tightened and improved. Wade Martins argues that the presence of the field book is evidence that each farm was regularly visited and inspected and therefore gave little room for a planting regime outside of that laid down within the lease. As yet no evidence of husbandry clauses of this nature have come to light at Welbeck.

The period defined as high farming came to an end with a series of bad harvests in the late 1870s. The summers of 1879, 1880 and 1882 were extremely wet and consequently ploughing was late and conditions difficult. At first it seemed that the agrarian problems were caused by the inclement weather. Usually poor harvests led to a rise in prices but instead they continued to fall. It was already understood that the price of British corn was no longer dependent on the domestic harvest. Even when the weather improved prices still continued to fall. Consequently rent arrears increased and farmers had to resort to using their capital to survive, others quit their farms and land was left to return to grass or fell out of cultivation altogether. Between 1892 and 1895 the weather turned from excessively wet to drought conditions and the harvests again failed. By the mid-1890s any notion of high farming lay in ruins and its ethos of high input in return for high yields lay in tatters. Wheat prices during this period fell by as much as fifty per cent while barley and oats by about a third.  

Even at Holkham where both land and buildings were in a healthy state rents fell rapidly after 1880.

Holderness declared that high farming was an abstract proposition and the juxtaposition of agricultural process in the period 1840-70 no longer appears particularly convincing.  

Wade Martins argued that high farming was synonymous with the use of oil cake as animal feed, the introduction of artificial fertilizers and mechanisation, the

96 Holkham Agricultural Letter Book 1816, authority to change the crop rotation 15 September 1816.  
97 Wade Martins, A Great Estate, p. 74.  
rationalisation of field boundaries, tile drainage and the improvement of farm buildings. She however proposed that many of the origins of high farming can be found in the late eighteenth century. Neither under-draining, intensive cattle feeding nor mechanisation were inventions of the 1840s but part of a long and continued on-going process. The improvements in agriculture were partly due to improved transport networks and large scale industrialisation in other parts of England and advances in chemical science and technology. Agriculture took advantage of technological innovations outside of its own influential sphere.  

High farming owed much to an expanding and increasingly urban society which had to be fed and while foreign products had free access to the home market it was as yet unable to compete with the domestic producer. Evidence from both Welbeck and Holkham would suggest that many of the improvements which are alleged to form the basis of high farming where already being experimented with and used long before 1840. On both estates owner and agents continually sought out and trialled new technologies or improved existing ones. They were uniquely placed to take advantage of changing socio-economic circumstances and thus this period was merely a continuation of practices which had been occurring from the beginning of the period under study. The ability to understand long term investment and capacity to make the most of all situations and economic climates it is argued were part of the professionalisation of the role of the land agent. While the land agent may have had frequent access to agricultural literature and corresponded with other agents in similar positions as their own, encouraging tenant farmers to acquire new knowledge could be somewhat harder. Many were suspicious of the written word; however, agricultural societies and shows provided a practical option. These provided a platform which could be utilised by the increasingly professional agent and owner to influence those who lived and worked on their estates.

**Agricultural Societies and Shows.**

Professionalisation of estate management and of the land-agent himself was part of a slow and ongoing process. At no point during the period under discussion is it possible to identify a single defining moment. Historians have always found it difficult to delineate the boundaries and characteristics of a professional group. A general consensus exists which suggests that a body of specialised knowledge over which such a group has

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detailed insight, autonomy and a service ideal beyond what would be expected in a commercial occupation are all essential components of professionalisation. Land agents like agriculture itself have a strong ethical code bound to ‘doing right by the land’. Young’s ‘gentleman farmers’ were identified as having the skills, interests and methods to acquire new knowledge. From the seventeenth century onwards professional institutions began to appear. These included the Royal Society founded in 1660 and the Society for the Encouragement of the Arts, Manufactures and Commerce (commonly The Society of Arts) in 1754. The latter organisation until well into the nineteenth century listed promotion of agricultural innovation as one of its main spheres of interest. However the first of these institutions to confer its whole attention on agriculture and themes associated with its practice was the Board of Agriculture (1793-1822). Its most well-known publications are probably the reports on the state of agriculture within a number of counties. The Board acted as an independent and private body despite receiving government funding. However it failed to attract the confidence of the farming community because of its governmental connections. It was replaced by the Royal Agricultural Society in 1838. Not all clubs and societies were national bodies. Local groups began to be founded from the late eighteenth century onwards and by 1835 there were around one hundred of these recorded. Growth in their numbers was rapid and within two decades there were around 700. Goddard argued that both national and local institutions had roughly the same aims but with different ideas. For example the Society of Arts declared its role lay in ‘intervention, innovation and improvement’ and these ideals were promoted through publication. Much of the work that has been undertaken in this field has researched the work and publications of the Royal Agricultural Society and most of this some twenty years or so ago. Although some studies have focused on the sheep shearings at Holkham in general little research if any has concentrated on the Welbeck Tenants Show at the end of the nineteenth century. It is intended to demonstrate in this section how local societies and shows were able to take advantage of the expertise and knowledge of an expert agent and how the Portlands used their estate show as a way of improving farming and husbandry methods and techniques. The Welbeck archive will provide a unique under-researched perspective of the dispersion of knowledge amongst the tenant farmers. Part of the professionalisation of

estate management it is argued was ensuring that those who worked and farmed the land were provided with the ways and means of improving both the standard of livestock and increasing crop productivity.

The English Agricultural Society was granted a royal charter in 1840 and its aim was to promote the use of science in order to increase agricultural productivity. As free trade became inevitable it was essential that if a Malthusian style prediction was to be prevented productivity had to grow. In early 1838 Henry Handley had written to the third Earl Spencer in which he declared his support for the English Agricultural Society. He claimed that agriculture remained under the control of men who had no time for ‘book learning’, who distrusted innovation and who lived their lives within the confines of their immediate locality and were disinclined to look for new technologies in the form of science, chemistry, botany, entomology, or mechanics. Goddard argued that the main concern of the promoters of this society was to encourage the spread of agricultural knowledge and to bring new techniques and improved methods to local farmers who had only limited information to call upon. The Dukes of Portland had been attempting to improve farming methods through experimentation from at least late in the eighteenth century. An example of which is present in the letter from the 4th Duke’s letter to Edward Turner in 1799.

I directed to have an account of the produce of the Lucerne, how it was consumed, how long it lasted & the specific difference of that manured with dung & that manured with rape dust. It was begun to be cut the 30th July.

The desire to improve is evident in the ethos surrounding the Welbeck Tenants Agricultural Show. It stemmed from an earlier horse show which had been held at the end of July or early August although it has not been possible to ascertain the dates when this was held. The 6th Duke wished to expand on this initial idea he proposed that an extra show which concentrated on the cattle, sheep and pigs belonging to the Welbeck Tenants should be held. The Duke proposed that he would put up the prizes which would be needed to ensure the show’s success. It was his intention that the animals be displayed in their natural condition and prizes awarded to these rather than those specifically groomed for the occasion. It was hoped that this would encourage the

105 PwH 1313 dated 1799, this is a letter from William Cavendish-Scott-Bentick who later became the fourth Duke of Portland to the agent Edward Turner.
poorer tenants who had a ‘good-looking’ animal to enter and they would stand an equal
chance of obtaining a prize. Consequently ‘The Welbeck Tenants’ Agricultural
Society’ was formed. A management committee was appointed and a set of rules and
regulations drawn up. The show was a success and quickly encompassed a variety of
events (Appendix 2). The Duke continued to make suggestions of different classes that
might be included within the shoe and at the back of the shoeing competition report for
1896 was written

Suggestions by the Duke of Portland

For the Farm Labourer who has lived the longest time without intermission on the
same Farm or with the same Tenant and has never received parochial assistance

To the Master who has employed a Labourer for the greatest number of years
continuously

To the ___ servant who has lived the longest time without intermission and is still
living with the same Family

To the Master’s wife who has employed the female servant for the greatest number
of years continuously.106

The Welbeck Show contained and illustrated all aspects of estate life and brought
under its umbrella not just the tenant farmer but also the labourers and other
employees. The tenant farmers were to be presented with prizes not just for their
entries but for actually holding on to their farm servants, thus helping to create an
estate identity. As the graph below indicates horses still constituted the largest
number of entries and reflected its origins.107

106 DD/P/6/18/1-33 Added on to the back of the Report on Shoeing at the 1896 Welbeck Show.
107 A complete break-down of entries is included see Appendix 1
Welbeck was by no means the only great estate to hold an agricultural show. According to Wade Martins, Thomas Coke’s intense interest in agriculture was most apparent in the immense attentiveness that he bestowed upon the annual sheep shearing. However amongst the Holkham archive there is not the same wealth of detail as for the Tenant’s Show at Welbeck. The sheep shearings commenced in 1776 and began as a ‘get together’ of local farmers so that ideas and knowledge might be shared. It was the perfect opportunity for those who came to inspect the Home Farm at Holkham. The event took place in July and corresponded obviously with the annual shearing of the sheep. Although not as inclusive as the later show at Welbeck the shearings at Holkham encompassed many aspects of agricultural life. The Agricultural Letter Book entry for the sheep shearing of 1821 lists eight groups which were to be judged and included: classes for South Down Sheep, Devon Cattle, Horses, Pigs, Drill and Dribble Husbandry and for the Shepherds. Parker argued that the variety of livestock kept at Holkham impacted on the variety of animals which were kept in the county and this is

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108 DD/P/6/18/1-33 papers relating to the Tenants Agricultural Show at Welbeck
most evident in Coke’s choice of sheep. At the 1806 sheep shearing Coke stated that having some years before found the Norfolk sheep ‘a vile degenerate breed’ he attempted to improve them through the introduction of a Leicester tup. At the same time he had encouraged his tenants and other farmers within the county to follow suit. The *Annals of Agriculture* for 1793 recorded

> In regard to the black-faced breed of the county, Mr. Coke has completely given them up. He this year disposed of his flock from an entire conviction on absolute an long experience that they are a most unprofitable breed.

However this was not the end of the story as *The Annals* continued

> The breeds Mr. Coke is at present trying, are Bakewell and South Down the latter stock he is now beginning with and we viewed a new importation sent him this autumn by Mr. Ellman, of Glynd … he is determined to fix a capital South Down flock in the country.

Eventually Coke decided that South Downs were the breed most suited to Holkham and phased out all other breeds within the flock. By 1817 at the latest the Leicester breed were no longer considered as entrants for the sheep shearing and in 1821 all the prizes were awarded to South Downs. Parker suggested the sheep shearings were a campaign by Coke against the most used breed of Norfolk sheep. In 1808 Coke stated that he had with difficulty persuaded his tenants to change their stock. For those who ‘retained their own prejudices’ he threatened

> That if they could afford to keep such an un-profitable breed of sheep upon their farms as the Norfolks were, it would fully justify him in raising their rents at the expiration of their leases.

It has been proposed that the sheep shearing’s were part of Coke’s egotistical temperament and an attempt to show him in the best light.

> The show at Welbeck was more local in its appeal, its purpose was to disseminate knowledge within the estate and encouraged the tenants to improved techniques of animal husbandry and crop production. The entrants of the Welbeck show were by contrast to that at Holkham local tenants, this is reflected in the classes and it seems a more genuine attempt to improve the quality of farming within the estate. Similarly though both shows were an attempt to import into a local community

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111 Parker, *Coke of Norfolk*, p. 120.
112 A. Young, *Annals of Agriculture and Other Useful Arts*, Volume XIX (Bury St Edmunds, 1793), p. 446.
114 Parker, *Coke of Norfolk*, p. 121.
some of the wider changes that were taking place in agriculture. Coke used the event at Holkham to forcefully express to both guests and tenants his own personal views and opinions.

It was the custom at local shows to offer premiums to farm workers who exhibited skills in specific farming practices, techniques or methods such as ploughing or shepherding, they might even include a prize to someone who had brought up a large family without resort to parochial relief or other charity. It has been argued that this type of prize was anti-change for it did not reward change methods already in existence. Likewise machinery exhibited at the Royal Shows attracted criticism. For example the steam engines presented it was suggested had been developed for the purpose of winning ‘accolades’ rather than for long term practical use upon the farm.\textsuperscript{115} However this is far too general a statement and at Holkham in 1821 in the ‘ Implements of Husbandry’ class it was recorded, ‘We do not consider any Implements exhibited to us this day to be deserving of the Premium’.\textsuperscript{116}

In 1896 in order to judge the effect of holding the shows the Duke of Portland asked the judge of the horse shoeing competition to compile a report. The document produced endorsed the inclusion of this type of class within agricultural shows and the judge wrote

Referring to our conversation upon horse shoeing competitions I beg to say that after many years' experience of them I am perfectly certain that they have done a very good deal of good more particularly in preserving the foot from injury that was caused by excessive paring, rasping & burning. When I first began to judge horse shoeing it was quite an easy thing to pick out the prize winners, but now, it requires extreme care & watchfulness to do.\textsuperscript{117}

Despite the improvement in the standard of workmanship displayed the judge was not without reservation

Speaking entirely for myself I must admit that I am not satisfied that all the good that might result from these competitions is attained. When the competitions are going on the Judges cannot point out mistakes or faults in workmanship … Personally I always caution the men that I will stop & disqualify any of them that in my opinion are doing anything likely to injure the horses foot.\textsuperscript{118}

\textsuperscript{115} Goddard, ‘Royal Shows and Agricultural Progress’, p. 46.  
\textsuperscript{116} Holkham Agricultural Letter Book Volume 1, p. 33.  
\textsuperscript{117} DD/P/6/18/1-33 Report to the Duke of Portland by Clement Stephenson on the horse shoeing competition at the 1896 Welbeck Tenants Agricultural Show  
\textsuperscript{118} Ibid.  

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In 1885 Thomas Plowman, secretary to the Bath and West and South of England and Southern Counties Association, illustrated the importance of agricultural associations and shows. He stated ‘that without the activities of farmers’ associations’, English agriculture would have been ‘many years behind its present position’.  

Examining a list of judges and their expenses for the Welbeck Tenant’s Agricultural Show (although undated) revealed that even local events may have been important in bringing into the locality a wide variety of information from other regions. The judges invited were not just from clubs and societies in the county but from much further afield. Payments were made to the Royal Lancashire Society and to the Cambridgeshire, Peterborough, Staffordshire, Leicestershire, Malton, Nottinghamshire, Tring, Bedfordshire, Northumberland and Driffield Agricultural Societies. The sums expended included payments for travelling and hotel expenses with the daily allowance being typically two to three guineas per day. It is hard to ascertain the value of this shared information but it would have been an excellent opportunity to discuss and share ideas. The judge of the shoeing competition had impeccable credentials and worked out of the Chief Veterinary Inspection Office for the County of Northumberland. Men of this calibre would have brought with them innovations, theories, experience and knowledge which might not have been available in books, treatises or pamphlets or by any other means in isolated rural communities. Throughout the period under study many remained suspicious of any form of printed material and agricultural shows would have provided ample opportunity of exhibiting first-hand experience.

The importance of belonging to the Welbeck Tenant’s Agricultural Society and the status to exhibit at the annual show are emblematically illuminated by a set of letters from 1909. These are important for two main reasons; firstly, it reflected the reputation of the tenants who belonged to the society. Secondly, when threatened with expulsion tenants would take appropriate measures to prevent such action taking place. The incident was detailed by Horseman Bailey

Before the end of the last Hunting Season, one of his Grace’s tenant farmers at Sibthorpe (named Mr. Stretton) was very rude to Lord Harrington, the Master of the

120 DD/P/6/18/1-33 List of judges and their expenses for the Welbeck Tenants Agricultural Show unfortunately it is hard to ascertain which year it is for as it is undated.
121 DD/P/6/18/1-33 Report to the Duke of Portland written by Clement Stephenson.
South Notts Hounds and wrote his Lordship an offensive letter in consequence of some of the members of the Hunt cutting some barbed wire which had been put up to prevent stock getting to a young quick fence; there happened to be some gates near, but the Hunt did not see them.\footnote{U of N PI E12/16/3/3/1 Letter from E. Horseman Bailey dated 20 May 1909, p. 1.}

The mere audacity of Stretton writing to Lord Harrington had greatly annoyed the Duke and his response was to instruct Horseman Bailey

To write to Mr. Stretton to say that he [the Duke of Portland] did not wish him to come to Welbeck, and also that he would not allow him to exhibit at the Show, and in fact that he was to cease being a member of the Tenants Agricultural Society.\footnote{Ibid.}

The Committee of the Tenants Agricultural Society were asked to investigate whether the Rules of the Society would allow the Duke to act in this manner. Stretton himself was described as a ‘man fairly well-to-do, and of a cantankerous nature’.\footnote{Ibid.} He admitted writing to Lord Harrington and ‘begged the Duke to forgive him and he would be careful for the future’.\footnote{Ibid.} The Duke refused to forgive him and Stretton stated that should the Duke continue to pursue moves to expel him he would see it as a serious slander on him and his position, so much that if it became known outside it would be a very serious matter for him and would probably result in his being removed from the Board of Directors of Stretton’s Brewery, and generally lower him in the estimation of his friends and neighbours.\footnote{Ibid.}

He threatened that ‘if the Duke still insisted on carrying out his instructions to me, he would have a legal action against his Grace for slander’.\footnote{Ibid.} Horseman Bailey firmly believed the Duke should drop his action as Stretton was in a position where he could cause considerable trouble for the estate. Eventually after much persuasion the Duke did see sense in June and Horseman Bailey wrote ‘His Grace quite felt that it would never do to go to law with a tenant and attempt to sustain a petition that could not legally hold good’.\footnote{Ibid.} As a consequence of the problems caused by Stretton and the inability of the Duke to carry out his own wishes he insisted that the rules of the Tenants Agricultural Society were changed so that in the future he had control over who was granted membership. This is a good example of the diplomacy and people skills required by the land agent. Tenants were not necessarily passive and the Dukes had preconceived ideas of how they expected their tenants to behave and the agent was frequently caught in the
middle. Membership of the local society was obviously of local importance or Stretton would not have fought so hard to stay. The true impact of local agricultural shows and societies has yet to be discovered but at Welbeck it attempted to include all members of the estate to participate.

Conclusion

From the mid-eighteenth century onwards there was an increasing need for expert estate managers to take over the day to day management of the great estates. Landowners began to spend more time away either in parliament or participating in an ever greater range of leisure and social activities. These longer absences corresponded with Chambers and Mingay’s dating of the agricultural revolution and left the land-agent to drive forward changes and improvements. However, many landowners including the Dukes of Portland continued to take considerable interest in their landed estates and much of the early correspondence for Welbeck are requests for information. The ideas of the Enlightenment became intertwined with the moral obligation of a landowner to improve the lands under his control and by nature of their relationship this became part of the professionalisation of the land agent.

The application of science to agriculture it has been argued played a crucial role in the agricultural revolution. An increase in the number of patents registered was a further indicator of the quantity and pace of innovation. Unlike industry many of the changes were impossible to register within any legal framework but relied on the skill, knowledge and expertise of the land-agent. A lack of patents for agrarian implements should not be seen as a lack of development, many landowners were involved in this development and they frequently believed improvements should be available to all. The ignorance of the farming community was illustrated with the inability of Thomas Wood to accurately use the ‘therm’ supplied by the estate to measure the temperature within his hay stack.

Historical debate has tended to concentrate on those scientific procedures which related to higher productivity. One noticeable problem with this idea is that many of the alleged innovations which led to the agricultural revolution or high farming were already in use by the latter part of the eighteenth century. Turnips were being planted and used as winter feed by at least 1732 at Holkham and the early 1760s at Welbeck. On both estates the landowners sought to keep abreast of technological advancements
but in order to do this their land-agents needed to be men with the same interests. The planting and growing of different seeds and crops was an essential part of improving productivity and those managing estates had to understand and adapt to ensure successful propagation. As new fertilizers started to become available an understanding of the soil and the exact amounts to use became far more precise than the addition of farmyard manure. As seen above sales representatives were already attempting to persuade land owners to purchase new and improved soil enrichers in the first part of the nineteenth century. The introduction of artificial fertilizers were a continuation of this process but it created more than ever a need to assemble a general corpus of managerial knowledge which it has been argued was an essential element in the creation of a professional organisation.

Mechanisation altered albeit in many respects slowly the working life of the land agent. Higher productivity necessitated a larger labour force to sow, tend, reap, gather, store and thresh the crop and ultimately this came with mechanisation. This process began early at Welbeck although the early machines were horse drawn; steam ploughing was very much in evidence in the 1860s. The increasing professionalisation of the land manager is evident in the care and attention Cripwell paid to the purchase of a new reaper at Welbeck. Not only did he investigate the best type of machine suitable for the land but organised a detailed trial to explore and examine how they worked in practice. This example provides a level of detail that has been missing from previous accounts and illustrates the level of knowledge the land agent had to acquire. At Holkham it is less easy to explore the idea of mechanisation of farming practices although records exist for a number of farmers. Mechanisation and in particular steam were recognised by the Victorian period as a symbol of technical progress.

Historians have argued that high farming is in fact a myth and it is proposed that from the evidence at Welbeck this would indeed be the case. The continued investment of the estate, the purchase of good quality seed and the use of mechanisation were not new in this period. At Welbeck there are records and letters which chart some of the seed bought by the Duke of Portland as early as 1804. At both Holkham and Welbeck tenants were selected for the amount of ready capital they had to invest as well as for their skills. The long leases at Holkham with their specific husbandry clauses were already in use long before Thomas Coke inherited and do not constitute a change between 1840 and 1880. High farming owed more to an expanding and urbanising
population than to changes in agriculture. Professionalisation continued during this golden age but it is hard to single out any specific events that speeded the process.

Agricultural societies and shows formed part of the movement to professionalise agriculture in general. However in this instance at both Welbeck and Holkham the change was landowner driven. Coke used the sheep shearings to influence the breed of sheep grazed both on his estate and in Norfolk generally. The horse classes at Welbeck Tenants Agricultural Show were based on the provision of a stallion by the Duke of Portland to improve the horse stock within the estate. The other classes reflected the local nature of this show and included entries for butter, employees poultry, long service, cheese and honey as well as livestock. Thus this enabled all levels of estate employees to participate in general improvement of standards across the board. Judges who came from outside the locality brought with them new ideas and standards. Research has concentrated in the large and more recognised shows but this study had provided a meticulous and detailed study of the importance of a small local show.

Changing attitudes to productivity and managing the land from the late eighteenth century onwards impacted on the professionalisation of land management. It became necessary for the land agent to develop and adapt new skills as slowly agriculture began the process of modernisation in line with industrialisation. However this new role would not be fully recognised until the Land Agents Society was founded in the early twentieth century. The rest of this thesis will examine other factors which influenced this process as it is far more complex than historians have previously assumed.
Chapter 4

Estate Management and the Written Word

‘Books will not teach farming, but if they describe the practices of the best farmers they make men think, and show where to learn it’.¹

Goddard stated the ‘English countryman’ who wished to turn to the printed word for help or advice in the hundred years between 1750 and 1850 had at his disposal an ever increasing number of books, pamphlets and treatises.² Despite the survival of an enormous amount of agricultural literature it has attracted surprisingly little in the way of research. Fussell catalogued and provided a narrative of the authors of English farming books from 1523-1839. Although it contained useful biographical details it lacks any in-depth understanding of the processes at work either locally or nationally. Goddard more recently has in a similar manner to Fussell explored individual publications rather than providing an analysis of the impact these might have had on the farming community and in particular on land management strategies. This thesis will take a very different approach. It will investigate thematically rather than chronologically and will firstly explore the rise of the agricultural press and why despite the development of a culture of improvement it took so long to become established. Secondly, it will survey the knowledge which these publications sought to offer to landowner, agent and farmer including: advice connected to the establishment of the relationship between landowner and agent, administration of the estate, soil improvement, drainage, manure and fertilizers, horses and the management of thorn hedges. Finally O’Day maintained that the professions which eventually included land agents ‘may be considered as relatively homogenous communities, with members sharing identities, the same values and interests and a similar understanding of their role in general.³ Unlike many of the other professions land agency and those who practised within its framework could never create a fully standardised set of rules, for them professionalisation was more a loose collection of like-minded men who sought to

¹ J. Caird, English Agriculture in 1850-51 (London, 1852), title page.
improve and advance the art of ensuring estate success and viability. The individualistic needs of each land owner ensured that a rigid ethical statute was never possible. This chapter will investigate whether the growth of the agricultural press began to form a body of literature which eventually led to the professionalisation of land management and helped to create a mutual sense of belonging, cohesion and a common bond amongst those who managed its resources. It will focus on two main periods the first starting around 1780 and ending in about 1810 and the second covering the agency of William Cripwell from around 1860 to 1875. This is simply because these two data sets have the most surviving easily extractable material and allows a comparison across a long timeframe, and therefore an examination of any potential influence on the working practices of country estate management.

Past historical debate has discussed whether the corpus of published works pertaining to agriculture - despite the declarations that each individual was contributing an illustrious and great advance – was in fact written by men who had a limited, insufficient and impractical knowledge of the subject matter. If this theory is accepted at face value it explains two things, firstly, why book-learning was despised and secondly, why so many of the early agrarian authors declared they were first and foremost ‘practical farmers’. Horn too has subscribed to the same theory that not all those who ‘jumped’ on the ‘literary band-waggon’ had adequate knowledge or experience to impart. The agricultural community was based on a predominantly practical culture where information was passed via word of mouth or acquired by working with other family members from childhood. The foundation of an agricultural press began to bring together all aspects of land management although it was a slow process.

The Development and Influence of Agriculture Journals and Periodicals

At the beginning of the period under discussion training for land agents came via ‘the school of experience’. It was, according to Mingay, not unusual for the farming community to deride those agents who were family relations, retired army officers or friends of the landowner. However it frequently went unnoticed that these so called ‘amateurs’ were often in reality younger sons of large landowners and farmers. In effect

they were individuals who had acquired their knowledge by practical experience. One of the best known contemporary figures involved in the formation of an agricultural press during the late eighteenth and early nineteenth century was Arthur Young (1740-1821). He might not have been the most successful of farmers but he used his expertise to publish what was to become one of the longest lived regular agricultural journals. In addition he produced some 25 books and pamphlets on agriculture, fifteen connected to the political economy and numerous other articles. The idea of a regular periodical to impart information ‘relative to agriculture’ was not new but was in fact more than a century old. John Houghton during the reign of James II had published a bi-weekly paper which these sentiments at its heart. Ernle suggested this was the first attempt to found a ‘scientific paper’ but thinks it was unlikely it was read by a wide audience even amongst the wealthiest of the landowners or gentry. Goddard suggested that periodicals fell into three main categories, the first group dealt with the distribution of agricultural prices and commercial information, the second articulated agricultural opinion and the final cluster spread scientific and technical knowledge. This classification of the various forms of regular journal type publications actually illustrated the reasons why so many were founded in the nineteenth century. The characteristics described reflect the ideals of the patriotic landowner and the ideas of improvement and the subjugation of nature in order to increase productivity as discussed in chapter 3. Young was not the only energetic and recognised writer of the period and the relationship between Young and William Marshall has attracted considerable academic debate.

William Marshall was Young’s contemporary and great critic published his first book in 1778. His output possibly equalled that of Young’s and according to Fussell his writing was possibly of greater value. Marshall wrote that little of what is useful could be attained through touring. He stated that he had ridden for four or five hundred miles and probably only discovered four or five ideas that were worth bringing home. This was a direct criticism of the manner in which Young had set about collecting the information he used in his Annals. Marshall believed the best way to observe and learn was to set up residence for approximately twelve months in a given location and self-

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practice. In the 1760s and 1770s Marshall believed that anything that had been written on agriculture no ‘matter how frivolous, or ridiculously void of useful information it might be’ was enthusiastically and eagerly read. Young gained political and governmental recognition which Marshall was reputed to have strongly resented. This was in part because it was he who had suggested a national farming survey and a Board of Rural Affairs. These two writers together often appear to have dominated agrarian writing at the end of the eighteenth and beginning of the nineteenth century.

Young’s most famous periodical was and remains The Annals of Agriculture (Founded 1784) and throughout its life he remained a regular editor and contributor. Altogether some 46 volumes were published. A number of historians including Fussell and Brunt declared he had been unfairly and disadvantageously compared to William Marshall. Brunt especially argued the demise of Young’s reputation began with Ernle who wrote ‘As a practical farmer he [Young] failed and the impression left by his writings is that he always would have done so’. However matters were not so ‘cut and dried’ as Ernle also praised Young’s contribution to the general improvement of agricultural

The stagnation [of agriculture] was mainly due to the prevalence of wastes, the system of open-field farming, the risk of loss of capital in improvements made under tenancies-at-will, the poverty and ignorance of hand-to-mouth farmers, the obstinacy of traditionary practices, the want of markets, and difficulties of communication. Till these obstacles were to some extent overcome, agricultural progress could not become general. It was with the removal of these hindrances that the name of Arthur Young is inseparably connected.

According to McDonald the writings of Arthur Young contained an incredible mix of information which ‘had no small effect on the progress of agriculture’. Young was not without his critics, he was disparaged by his contemporaries because they did not believe it was possible to survey agriculture while travelling in a chaise at 10 miles per hour through the countryside. The strength of his work, it has been argued, lay not in his observation but in his investigation of farming methods at the local level in
England and Wales. Fussell argued that the importance of Young’s new and innovative *Annals of Agriculture* rested in the way he collected his information. He conversed with and collected from provincial farmers and other members of the rural community the information which formed the basis of this periodical. Therefore it could be said to represent the views of those who farmed the land within the regions. However modern writers such as Overton continue to question his contribution to agriculture and argued that the ‘general consensus’ hypothesised that his judgments were based on standards and principles with which he was familiar with. It is therefore possible that improvements made in countryside of which he had little knowledge were missed. His vast output affected the accuracy of his observations and it was alleged that many of the places which appeared in his writings he had never visited. Wade Martins suggested however that a desire for this type of information began the process of changing the local and regional nature of agriculture into a more standardised industry.

The Duke of Portland owned a large collection of the *Annals* and had obviously read and studied the volumes as illustrated in July 1812 when he wrote to his steward Edward Turner

> I wish you would take the trouble of looking through the ten or twelve last volumes of the Annals of Agriculture and in it you will find directions for killing rats – if you should Be so good as to get the things – prepare them & pursue the plan directed in the slaughter-house & if it succeeds there – Let it be tried in the dressing house at Scotland (Both are safe places) & then elsewhere.

Later the same day he sent further instructions explaining exactly where to find the article if he was having difficulty locating it

> I think there are 42 Vols. of the Annals of Agriculture but there may be one or two more. If the article to which I pointed your attention should not be found in any of the ten or twelve last volumes you should find an index in the 30th Vol which will show it.

Although the Duke had stated the article could be found in the index of the 30th volume it has not yet been possible to find the article discussing the extermination of rats. There is an article in the *Annals* which discussed whether rats or mice ate more grain; a subject which the author of the letter believed to be of considerable ‘consequence and

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16 PwH 1435 Letter from the 4th Duke of Portland to Edward Turner 19 July 1812.

17 PwH 1437 Letter from the 3rd Duke of Portland to Edward Turner.
much more prejudicial, than the generality of farmers are aware’.\textsuperscript{18} The author proposed farmer’s should carry out a simple experiment which entailed confining a single rat and a single mouse and feeding them with corn in order to maintain a comparison of the amount consumed. This in turn would help farmers to ascertain the quantities of their stored grain which was possibly lost to vermin. The sheer amount of damage these creatures could inflict was emphasised in a later edition which offered a reward

To the person who shall discover the best method of destroying rats and other vermin without the use of poison, ten guineas. – Claims for this premium, with certificates to be sent to the secretary, on or before the 1st July 1796.\textsuperscript{19}

Chambers and Mingay claimed the influence which Young brought to bear upon agricultural improvement was probably limited. According to Young himself the \textit{Annals of Agriculture} had a very small circulation of around 400 or so.\textsuperscript{20} However this does not take into account the nature of those who owned or read his books. The Duke of Portland not only read the journal but deemed the information significant enough to have passed the expertise contained within them on to his land-agents and employees. Influential landowners like Coke at Holkham frequently used the \textit{Annals} to spread their own views and opinions and in this instance, the most appropriate breed of sheep and other aspects of agriculture. Wade Martins argued that the \textit{Annals} were important in the diffusion of knowledge and the model plans for farms which were published would have provided landowners with a useful source of information. She stated that agriculture was becoming less local and regional and more standardised.\textsuperscript{21} However if the circulation of the \textit{Annals} was as low as Young believed it becomes harder to accept Wade Martins opinion and there must have been other factors responsible for the regularisation of agriculture.

Ernle in particular had implied that farmers and others employed in agriculture simply did not read the various publications available to them. Although it is almost impossible nationally to ascertain exactly who read the various publications, diaries and letters can provide evidence of what was happening locally. We have already witnessed the Duke of Portland ask his agent to seek for a given journal article. The diary of

\textsuperscript{18} A. Young, (ed.), \textit{Annals of Agriculture and Other Useful Arts Vol. XIII} (Bury St Edmunds, 1790), p. 254.
\textsuperscript{19} A. Young, (ed.), \textit{Annals of Agriculture and Other Useful Arts Vol. XXVII} (Bury St Edmunds, 1790, p. 235.
William Gould, agent at Welbeck in the 1780s, provided further evidence of just how widely read some agents were. His tastes are eclectic but an interest in the work of those employed within the estate is apparent. In his diary for March 1 1783 Gould writes

Employed myself in reading Speechly on the pineapple, from which I received but little instruction, also Kennedy on planting forest trees, from which I gathered some little hints that may be useful.²²

On the 23 January of the same year Gould had previously recorded

Mr Dowland returned home this evening...He is very severe and satirical against any person he dislikes, this day he poured out a torrent of abuse against Mr Speechly and ridiculed both him and his publication on the pine[apple] most severely.²³

Speechly was the head gardener at Welbeck and renowned for his work on the cultivation of pineapples. He began his career as a novice at Milton Abbey and then moved to work for the Earl of Carlisle at Castle Howard; after which he proceeded to become head gardener for Sir W. St Quentin moving to Welbeck in 1767. In 1771 the 3rd Duke of Portland sent Speechly on a tour of Holland and on his return the recognised and ‘justly celebrated stoves’ at Welbeck were built from his designs. In 1796 he was approached by Sir John Sinclair to write some articles for the Transactions of the Board of Agriculture although they were never published. He is perhaps best known for his Treatise on the Culture of the Pine-apple (1779) and Treatise on the Culture of the Vine (1789). On the death of his younger son who farmed extensively at Woodborough Hall Speechly left Welbeck to take over its management. On his departure Speechly took with him the idea of agricultural experiment and improvement which he continued to practice and write essays upon. It was written of him

Mr Speechly was not a systematic botanist, but, as a kitchen, fruit and forcing gardener, he was exceeded by no man of his time ... It was his good fortune to be in the employ of a family who ever were, and still are, the most enlightened and liberal patrons of agriculture, gardening and planting.²⁴

Speechly is included here for two reasons. Firstly, the Duke of Portland’s interests in all matters pertaining to his estate are confirmation of his enquiring and scientific mind. When Speechly left the estate to take up farming, the systematic experimentation undertaken as a gardener would certainly have influenced his agricultural enterprise.

²² Hanson, The Diary of William Gould, p. 7.
²³ Ibid, p. 4.
Secondly although they were not published the simple fact that he was approached to write for the Transactions of the Board of Agriculture was an acknowledgement of the ways in which his skills crossed the horticultural/agricultural divide.

This dissemination of knowledge is obvious in William Gould’s diary and suggests he utilized information where practical on the estate. On 1 March 1783 he recorded that he had been employed in reading Kennedy ‘on planting forest trees, from which I gathered some little hints that may be useful’. Ernle argued that ‘Rumours of the progress of the outside world scarcely penetrated to distant villages’. While this might be true of some of the more remote areas of Britain a large estate like Welbeck obviously allowed for experimentation and there must have been a certain kudos attached to the published work of an important employee such as Speechly. Ernle undertook little or no research into the reading habits of the land-agent but Gould cannot have been the only agent to have turned to the written word for new knowledge and information.

According to Goddard the early agricultural periodicals need to be studied against a background of attempts to improve the movement of farming information. Claudio Veliz advocated that instead of placing the emphasis on the limited circulation of Young’s *Annals* attention should focus on the support it received during the late eighteenth century by the ‘farming interest’. In the main this was a progressive group of agriculturalists, who were articulate, social and more importantly were willing to discuss the methods they used to pioneer more productive farming methods. Ultimately these men would become the founder members of agricultural societies. Veliz has examined the first 25 volumes of the *Annals* and discovered that they contain the work of some 316 authors of which 53 made more than five contributions or more. The vast majority of the articles centred on either practical or experimental farming methods. Given that many local societies contributed to the *Annals* it possibly reached more than 3000 readers. Although this still represents only 0.5 per cent of those involved in agriculture it is considerably more than many historians have supposed. Fussell however, argued that not all periodicals necessarily suffered from low circulation. In fact he stated that the 1805 issue of the *Farmer’s Magazine* went through six editions.

between its first appearance and 1810. It was not unusual in order to facilitate readership for periodicals such as the Farmer’s Journal to provide free copies to prominent inns, hotels and other hostelries. Agricultural periodicals provided the channel through which ideas and information could be exchanged and provided the medium for the promotion of discussion. Goddard has proposed that newspapers and the more popular journals provided forums were current topics might be discussed. For example between 1816 and 1819 the Farmer’s Journal was linked to the call for protectionism of agricultural produce. The Agriculturalist (founded 1835) promoted debate on the currency question, while others helped to alter opinions on free trade among the agrarian community. The Gazette (1844) clearly stated that it was independent of all parties and the debate in 1846 which surrounded the Corn Laws is hardly mentioned. It has been suggested that journals and periodicals tended to attract those members of the farming community who were already progressive in outlook.

The fact that many of these weekly or monthly publications widened participation in the ongoing important deliberations and discussions of the nineteenth century could help to explain why modern historians think that readership was probably considerably higher than previously thought. It almost impossible to assess how many people might have read a single paper.

Books and agricultural periodicals were not the only means for the rural community of obtaining knowledge. A brief inkling of this appears in William Gould’s diary when he wrote

> Intended to have gone to Calke to enquire about the distemper among horned cattle which has lately broke out there, but saw so satisfactory accounts published by Doctor Darwin in the [Dewry’s] Derby Mercury prevented me.

Periodicals were also a useful platform through which various movements might spread their ideas and theories. The impact on the distribution of information through local or provincial newspapers is rarely taken into account in discussions relating to the impact of the agricultural press. However the diffusion of knowledge might rest solely on the shoulders of an enthusiastic agent, who read new works on agricultural matters and then

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27 Goddard, ‘The Development and Influence of Agricultural Periodicals and Newspapers’, p. 120.
29 Hanson, The Diary of William Gould, p.24.
sought to note or put into practice the ideas thus gleaned. One such man was Francis Blaikie at Holkham.

Francis Blaikie was agent to Thomas William Coke at Holkham and he fully understood the benefits which might be obtained through passing on gained knowledge and experience. He worked for the Earl of Chesterfield and published a number of treatises prior to moving to Norfolk. His ideology related to his ideas on educating those who came within his sphere of influence is recorded within his Agricultural Letter Book.

I consider it a duty incumbent upon man to diffuse to his fellow man the fruits of his opinions in this life. All men have not the same advantages of acquiring information. Those advantages are bestowed upon us by the providence of God.  

Blaikie gave his own treatises to the tenant farmers at Holkham therefore ensuring that they were given the benefit of his own experience which he had collected over many years. Parker believed this was typical Blaikie behaviour and reflected the sense of duty which permeated his working life. His overall aim was to see the land farmed in a sensible but profitable manner. An example of his expertise was emblematically illustrated within the circular sent out to the Holkham tenants in 1817. It advised them against sowing barley seed from the previous season as it was not in the best condition. 

Whilst acting as agent for Coke Blaikie continued to share his ideas with a wider audience and posted on a regular basis questions in monthly periodicals including the Farmer’s Magazine. This particular publication Goddard described as ‘the leading independent agricultural periodical of the nineteenth century’. In 1818 this periodical pronounced that ‘Mr Blaikie’ was ‘the active and enlightened steward to Mr Coke’ and that nothing ever gave ‘him greater pleasure than to be the means, active or passive, of disseminating information and instruction’. Besides making his own contribution to various farming journals Blaikie read and made notes on articles he personally had read. His practice is best exemplified by the notes he made on wire worms and recorded in the Agricultural Letter Book.

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30 Holkham Agricultural Letter Book Volume I, p. 78.
32 Ibid.
Memorandum Wire Worms

A Hint taken from the Farmers Magazine

July 5th 1841 I employed Thomas Bushams one of my Labourers who had 3d an hour and 16 to 20 children at 4d a day each had a piece of Wood flattened to dig the Worms up with gathering them into Tin mugs in 13½ days they gathered 192,000 chiefly in 35 Acres.35

Wire worms were pronounced by The Farmer’s Magazine as ‘one of the great pests of the farm’.36 In fact their population could reach several million per acre and it is debatable whether the above method would have been cost effective. Reverend John Wilson’s The Rural Cyclopaedia provided extensive information on the different types of wire worm. It explained that whilst this pest attacked most crops they were more likely to abound in particular types of soil and specific situations. They were predominantly a scourge of land which had long been fallow, recently ploughed grassland or clover ley. They seemed to cause the most damage to some of the most valuable crops including: oats, wheat, barley, grasses, rape, turnips, cabbages and potatoes to name but a few. Wilson provided several remedies to help control wire worms; one idea suggested farmers at the end of a ‘clean and careful’ summer fallow ‘conduct a thorough burning of rubbish as ‘will surely destroy both the larvae and the eggs’ of the click beetles. The theory behind this suggestion was the clearance of the ground of all couch grass and similar weeds as these provided sustenance to a large number of wire worms until the corn crop was seeded. A second hypothesis recommended sowing a crop at the time of ploughing up the fallow or grassland which was fatal to the wire worm population. The success of this idea was reliant on finding a crop which starved the larvae to death or poisoned them, by destroying the young the adult population were curtailed and the cycle broken. Two crops had this effect: woad and white mustard. In line with the type of accreditation frequently seen in nineteenth century publications Wilson included the practical experience of Mr Tallent of Little Houghton. He stated that he had first demonstrated the efficacy of this practice on half an acre in a fifty acre field of fallow. The year following the planting and gathering of the mustard seed the whole field was fallowed for wheat and the area which had contained the mustard was found to be totally free of wire worms. Another alternative was to dress the soil with a substance

detrimental to the pest. Wilson also proposed employing children to follow the plough in order to collect the worms as they surfaced even though as already implied this was probably ineffectual.37

The 1832 *Code of Agriculture* was again published and acted as the expert on two diverse themes. The first detailed the rotation of crops on the Holkham estate and the second was described as ‘observations by Francis Blaikie, Esq on the erection of farm houses and offices’.38 He used the latter of the two letters to state

Much has been said, and volumes have been written upon the designs and situations of farm buildings; but the construction of those buildings and the execution of the work, are seldom properly attended to.39

The aim of writing was to point out a few leading principles and prominent errors. This as has already been discussed was typical of Blaikie’s attitude to farming and improvements. His influence stretched far and wide and it seems from this research that it was individual attempts by skilled men of his ilk who tirelessly wrote and published their findings that started the move to the standardisation of agriculture rather than individual publications.

At Welbeck apart from Speechley who was a horticulturalist rather than agriculturalist there is no-body who published treatises or pamphlets of the ilk of Blaikie. The agent William Cripwell did however seek to educate those employed on the estate through the use of the written word when necessary. In December 1872 Cripwell reported

I noticed some lamb Hogs of [Mr Walker] looking very ill in a field by the road side as I was going to Gringley last week I will send him one of Mr H Woods pamphlets when I get them.40

Cripwell must have decided that all the shepherds on the estate might benefit from this information for he ordered twelve copies of this publication and wrote to the 5th Duke of Portland

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39 Ibid.
40 PwK 1049 Letter from William Cripwell 18 December 1872.
While farmers’ might not have been influenced by published works considerable evidence suggests that landowners and agents corresponded both verbally and orally in order to disseminate any useful knowledge they acquired. Amongst the rural community, agricultural shows not only provided social interaction but provided fertile ground for discussions relating to agricultural questions, local experimentation and experience of new technologies. Blaikie’s letter books from Holkham reveal a steady stream of correspondence from others seeking his advice on a range of farming subjects or simply thanking him for the information he had published in one journal or another. This is demonstrated through an extract from the following letter received by Blaikie in 1820 which read

I lately saw a very interesting letter of yours in the Farmers Journal on preventing Mildew, The value of these observations … are invaluable every line is a fact & big with instructions. I can only say that you and Mr Herod have thrown more light on preventing Mildew than I ever seen.  

The above letter is a personal thank you, but Blaikie also received many letters seeking his help on specific problems. He had of course, as the manager of two high profile estates those of the Earl of Chesterfield and Holkham, and the author of a number of published treatises become very well known. His practical experience meant farmers were more likely to ask for and accept his advice. Books and periodicals were much more impersonal and often contained the counsel of a stranger with no gravitas or reputation. Despite the extensive material which has survived from the eighteenth and nineteenth centuries relatively few close textual micro-studies have been undertaken using this material. The archive at Holkham reveals that both farmers and owners from far and wide including the Duke of Portland actively sought the advice and guidance of both Coke and Blaikie, a number of these are detailed below.

The premise of agricultural societies being the medium through which knowledge might be shared and spread was discussed in the previous chapter. It is intended here though to explore one of the ways in which the Morayshire Farmers Club attempted to obtain the advice of an expert land agent.  

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41 Pwk 1069  Letter from William Cripwell 18 January 1873.  
42 Holkham Letter Book 1 30th September 1830.  
Letter Book a set of questions posed by this group to Francis Blaikie has survived. Their queries covered a range of subjects. They posed the question ‘at what age should they [beasts] be sold’ to provide the ‘best advantage to the Farmer say at 2, 3 or 4 years old’, to this wide ranging question Blaikie provided a much more specific answer.

Pigs should be marketed at one year old. Leicester Wethers at two years. Short horned Oxen at 4 years & all other stock in proportion to their early maturity.\(^{44}\)

If members of clubs and societies were able to obtain this type of quality information from an agent with a proven track record there might have been little incentive to turn to ‘book learning’ which might be a more dubious nature. There has been practically no research into the type of information which might have been obtained in this way let alone comparing it to that available in periodicals or other literature. The respect which Blaikie commanded is illuminated through the actions of Thomas Coke who was not shy of putting himself in the limelight but would still pass to his agent notes he had personally received for answering. This is not to say that Coke did not give his own opinions on matters as Blaikie recorded

Mr Coke having handed me your letter addressed to him on the 7\(^{th}\) inst with instructions for answering your queries.\(^{45}\)

This continues to suggest that even Coke relied heavily upon the word of an agent who had received no formal training in the modern sense. Blaikie was not the only agent to publish his knowledge in books and periodicals, others had already done so and others would increasingly seek to impart their wisdom in this manner throughout the nineteenth century. This chapter will now explore the ever expanding number of books that began to appear and through the estate correspondence, seek to investigate how and if any of the information contained within these tomes was practised on a regular basis.

**Books and Treatises**

Agricultural education during the late eighteenth and nineteenth centuries continued to be conducted by the traditional and time-honoured system of passing knowledge on to the next generation through the spoken rather than the written word. As the art of farming developed it has been argued that the early literature proved useless and was thus distrusted. Furthermore many farmers worked in localised or isolated locations

\(^{44}\) Holham Agricultural Letter Book volume 1, p. 23.
\(^{45}\) Holkham Agricultural Letter Book volume 1, p. 13.
which made the dissemination of knowledge much more difficult than in urban areas.\textsuperscript{46} The oldest surviving documents were those compiled by educated monks who were able to study the ancient manuscripts of Greek and Roman Scholars.\textsuperscript{47} The \textit{Gerefa} is a complex and multi-faceted manual relating to the administration of a late Anglo-Saxon estate. It is the only surviving evidence of the obligations and perquisites of the various tenants and workers written before the Norman Conquest. Although this was a literary overview of the duties of an estate overseer rather than a practical treatise it still stressed many aspects of management that would be recognisable in the twenty-first century land-agent.\textsuperscript{48} Other early authors included Sir Walter of Henley, Robert Grosseteste, Sir Thomas Littleton, John Fitzherbert and Thomas Tusser. Perhaps the most famous description of an estate reeve in medieval England can be found in Chaucer’s \textit{Canterbury Tales}. The reeve was a man who understood his Lord’s estate, could read the land and recognised the competency and honesty of his bailiffs. Despite the survival of large numbers of agricultural publications this remains an under-researched area of agricultural history. This chapter will concern itself with the literature which appeared mainly during the eighteenth and nineteenth century. During this period, which corresponds with the timeframe of this thesis, contemporary writers expanded the genres under discussion and this movement is reflected within the changing role of the land agent and increasing professionalisation. Previous research has concentrated heavily on circulation rather than on readership and procedural implementation of the information provided. This study will therefore explore the contemporary press using a new and different methodology.

The first book which exclusively pertained to agriculture was the \textit{Boke of Husbandrye} which appeared in 1523. Over the next two centuries English farming books were published continuously without disruption. Some authors only published one volume, others more, but few managed to match Arthur Young’s output.\textsuperscript{49} Many of the books which appeared were heavily promoted by the publishers for ‘short-term gain’.\textsuperscript{50} William Marshall took umbrage over agriculture being used in this manner and was disgusted that the ‘First of Human Sciences’ should become ‘\textit{the hobby horse of

\textsuperscript{46} D. McDonald, \textit{Agricultural Writers from Sir Walter of Henley to Arthur Young 1200-1800} (London, 1908), p. 2.
\textsuperscript{47} Ibid, p. 7.
\textsuperscript{48} http://www.earlyenglishlaws.ac.uk/laws/texts/rspger/ accessed 16 April 2014.
\textsuperscript{50} Horn, ‘The Contribution of the Propagandist, p. 319.
Projectors and the catch-penny of Bookseller[s].\textsuperscript{51} Fussell ascertained that during the nineteenth century nearly everybody was interested in farming and there were profits to be made from working the land. Likewise money could be made and reputations established by writing and publishing on agricultural subjects.\textsuperscript{52} A large variety of occupations can be found amongst the authors of agricultural literature which included clergymen, schoolmasters, self-styled gentlemen and farmers as well as barristers. The amount of land they farmed ranged from small plots to large estates. Farming practices were often written about simply because they were new or unique. This has created at least some measure of difficulty in trying to decide what actually constituted current practice or the ‘thought trend’ of ‘advanced farming theory’.\textsuperscript{53} There were of course many writers including Francis Blaikie and Nathaniel Kent whose works were based purely on their own experiences. As the wealth of farming literature blossomed the manner in which it can be categorised altered too.

Heather Holmes has proposed the growth in agricultural books reflected the expansion of different genres which began to emerge from the eighteenth century onwards. The separate categories indicated an escalating desire for more specialist works with particular focuses rather than more generalist volumes. These groupings tended to become more thematic and comprised books dealing with a specific item for example a type of crop, beast or farm implement, others dealt with the science of agriculture and others embraced a single form of agricultural system. From the 1760s onwards compilations of essays appeared and from the 1770s and 1780s books appeared which were solely concerned with agricultural development. At the same time other works materialised which examined the current state of farming and finally the reference book surfaced from the late eighteenth century onwards.\textsuperscript{54}

The wide variety of texts now available provided all those who worked within the rural community the ability to investigate different practices and techniques which were in use throughout the British Isles. Authors with practical farming experience needed to stand out from those who just decided to join using it as a money-making machine. It is hardly surprising therefore that Kent wanted to ensure that the reader of

\textsuperscript{53} \textit{Ibid.}
his book *Hints to Gentleman* understood his reasoning for writing and publishing this work. Thus he wrote

…the Hints are published from no motive of interest whatever, but merely to enable gentleman of landed property to be competent judges whether their estates are properly managed or not.\(^55\)

Notwithstanding this growth by the second half of the nineteenth century according to Goddard, farmers and agricultural students still lacked a concise synopsis of ‘best agricultural practice’ in a form that was easily comprehensible.\(^56\) The Royal Agricultural Society had been founded in 1838 in the wake of an increased interest in the application of agricultural science as a means of increasing farming productivity. This idea is summarised in the Society’s motto ‘Practice with Science’. It promoted its ideals through the annual show, education, consultancy and the publication of its own journal.\(^57\) At its conception and under the editorship of Philip Pusey it contained numerous short articles which frequently dealt with reports of experiments and agricultural observations as well as larger essays. After Pusey’s death in 1855 the journal was not quite so dynamic. J. C. Morton took over the reins in 1868. Although it was supplied free to the members of the Royal Agricultural Society Goddard advocated that many never even opened the publication. It appears to have been consulted more frequently from the 1870s onwards as it began to include matters of more practical matters. The *Journal* was a platform for the publication of original agricultural research.\(^58\) In order to produce a suitable agricultural textbook the R.A.S.E. commissioned William Fream who had written previously for the *Journal* to devise *Elements of Agriculture*. Goddard maintains that in order to promote accessibility and sales the Society kept the purchase price as low as possible and the book was an instant success.\(^59\) This is evidenced by the different print runs in 1892; the first consisted of around 1,250 copies, the second and third 5,000 copies and the final run 10,000. The following year another 11,000 copies were printed.\(^60\) The individuality of estate management and farming ensured that the process of handing knowledge down by word of mouth continued late into the nineteenth century. However as the agricultural press

\(^{57}\) *Ibid*, p. 653.
\(^{60}\) *Ibid*, p. 683.
grew in reputation it might be said to reflect the increasing professionalisation of estate management. This chapter will now look at a number of different aspects of running an estate and explore the advice offered.

**Repairs**

David Low Professor of Agriculture at Edinburgh University believed, as did Kent, that the success of an estate was undoubtedly dependent on the relationship between landowner and tenant. To explain this association Low wrote in 1856

> All experience shews that the means of perfecting the agriculture of the British Islands … depend essentially upon the relationship which we shall be able to establish between the landholder and the farmer.\(^\text{61}\)

This was not a new idea and Kent in his *Hints* used the example of Mr Anson whose estate was under his management as the perfect example of how this unique affiliation should be conducted. He wrote of the man

> ...by agreeing with his tenants to allow them all reasonable accommodations, and all necessary materials for repairs ... they shall sustain the moiety of all expenses for workman’s wages, unless tempests or accidents shall bring the expense of such workmanship in any particular year, to more than six per cent. upon the rent; in which case the landlord pays the surplusage.

Consequently Kent believed

> The saving has already been considerable; and as no tenant have a better landlord, nor any landlord a better set of tenants, they find mutual convenience, and satisfaction, in this regulation; as others may do, if they will imitate it.\(^\text{62}\)

It is important at times to contextualise the background against which comments are written. The historiography to the relationship between Kent and Anson is provided by Horn who stated that one of the first property developments which Kent undertook in Yarmouth was probably for the Anson family and together they would establish a political connection in the town.\(^\text{63}\) Almost from the beginning of his career Kent was also employed to manage the Anson’s property in Norfolk and Rippon Hall. Hevingham part of Anson’s estate in Norfolk became his place of residence in the county.\(^\text{64}\) It is hardly surprising that Kent should hold up as an exemplary landlord the owner of an estate he himself managed. It was also good propaganda for the Anson family and

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\(^{64}\) *Ibid*, p. 3.
ensured that Kent remained in their employment and continued to live in their house. Without a myriad of schemes where landowner and tenant co-operated it would have been impossible to keep tenants. Kent was in fact merely stating the obvious and preaching to agent and owners who were already converts to this way of thinking. The diary of William Gould agent to the Duke of Portland records several examples of the complex arrangements which took place between tenant and landlord on the Welbeck estates. One emblematic example of this pattern occurred in December 1783 when Gould recorded

Let to Thomas Poyser the Park House and Ludwall farms from Lady Day next at the clear rent of £185 per year, he is to plough about 6 acres at Park House and about the same quantity at Ludwall, to lay out and spread upon the Park House twenty cart loads of lime and ten ditto on Ludwall yearly, and whenever I order him he is to lay out yearly £5 in draining properly with stone and £10 in lime at the kiln, including the 30 cart loads.

In return William was

repair the Park House barn and build him one bay there for a labourer to live in, also to build him a cow-house at Ludwall for 20 calves or stirs. 65

The estate was not always so generous but even so the tenant was not to pay for everything as Cripwell’s entry for May 21 1784 testified

This morning came Mr John Foster about the farm at Staveley Woodthorpe occupied by the late Mrs Tyson, I informed him the rent was £91 per year, the buildings was in bad repair, but if he entered upon the place I should expect him to repair them, finding him timber for that purpose. 66

Horn’s broad sweeping statements relating to Kent’s theories on how to establish good relations between landowner and tenant is flawed because of the close relationship which existed between himself and Anson. To some extent any landowner who wished to retain his tenants needed to build some form of symbiotic relationship with them. Beastall declared tenants expected to invest their capital within their estates to provide financial aid during periods of agricultural depression and to appear fair and sympathetic.

Low on the subject of repairs declared that at the time of entry by a new tenant the premises should be in ‘good and tenantable repair … and the liability undertaken by

65 Hanson, The Diary of William Gould, p. 31.
66 Ibid, p. 43.
him should be worded in accordance with this assumption’. At Holkham the agent in 1852 could not pass up an occasion to exhort one of the tenants to carry out necessary maintenance and wrote

I cannot allow this opportunity to pass without mentioning again to you my hope that you will not omit any longer to have the roofs of your Farm Buildings cleaned from moss and otherwise repaired – It may be that they are done, but such was not the case a few weeks ago. I really must say this present state is a disgrace to you, to the Holkham estate and to myself as the agent … I have no hesitation in saying that there are many buildings upon the Holkham Estate which have been much injured by its non-removal.

Ultimately the amount of capital that landowner and tenant were prepared to invest was crucial and 1861 the problems created by lack of investment were clear to Keary when he surveyed the Duke of Norfolk’s south Norfolk estate which he stated were old and dilapidated. Lower expenditure by the landowner may have meant that he retained a larger percentage of the rents received but the poor state of the buildings probably attracted a reduced ‘calibre’ of tenant, which resulted in the land being farmed in a slovenly manner. The state of buildings and the amount that might be required annually for repairs played a significant part when deciding whether or not to purchase further properties. When considering the purchase of Hayton Castle estate Cripwell was able to suggest that a tenant could be readily found that would meet some of the cost of the repairs to the Farm buildings but his main concern was how much the estate might have to spend annually on the church. Considering the importance of keeping houses and farm buildings in a good state of repair there was relatively little written about this aspect of estate management in the contemporary agrarian literature. An area where much more advice was proffered was in the care which should be taken when choosing an agent.

Choosing an Agent

The perfect ideal of what constituted a good agent was the subject of considerable debate in eighteenth and nineteenth century agricultural literature. John Mordant pointed out

… it is a requisite in a Steward, that he has not only honesty and integrity to recommend him, but likewise judgement and experience, founded upon some

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68 Holkham E/C/2/1 Mr H. Keary February 1852
70 PwK 963 William Cripwell 2 September 1872.
skill and knowledge in the law (especially parish law) in agriculture, in trade, arithmetic, the mathematics, mechanics &c.  

William Marshall provided a check list of attributes an agent or manager had to have acquired: firstly managers had to have a practical knowledge of agriculture. He declared that it was difficult to become an accurate judge of the value of land without having an understanding of its realistic uses. Likewise it was impossible to correct the errors of farmers or assist them to improve without a sound perception of agriculture. Secondly, land-surveying was an essential requisite qualification. Marshall perceived this skill was not so much for ‘measuring and mapping an estate’ but for observing, checking and correcting the works of professional surveyors and to assist in laying out lands to the estates best advantage. Thirdly knowledge of mechanics and science similar to that of an engineer was highly ‘useful’ in forging forward improvements. Fourthly it was important for an agent to have a competent familiarity and awareness of rural architecture and the ability to supervise ‘artificers … may be said to be of daily use’. Fifthly experience and expertise in planting and the management of woodlands was indispensable. Sixthly an agent’s attentions and comprehension should not just be confined to the ‘surface of the estate’ but he ought to be acquainted with the local natural history which allowed him to search for any subterranean ‘productions’ which the land might contain. Finally a thorough grasp and insight into the collection of accounts was an absolute necessity for the manager of a landed estate.  

R. E. Brown explained the agent of a landed proprietor occupied a responsible position in the neighbourhood where ‘he has his charge’ and where in the landowner’s absence he would exercise a large share of the power. It was therefore suggested within the literature that the landowner needed to explore the background of any potential agent and advised that any choice should be influenced by the following

Nearly all of the most successful improvers or estate agents are men who have been trained from early life in the country, where farming was daily going on before them; where they saw, and could not avoid seeing, certain operations in this respect attended with certain results, and where they heard the farmers and their friends talk and reason about crops and cattle, and the best mode of dealing with certain kinds of land, &c. &c. An agent, to be a successful manager of an estate, must therefore, not only have a thorough practical training and theoretical education to fit him for the position, but also have had

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early associations in connection with the country to give him a strong natural bias for the work.\textsuperscript{73}

The above examples portray a number of key skills and attributes which land agents needed to successfully manage large entrepreneurial estates. It is possible to see at least the majority if not all of these proficiencies and competences in the land agents discussed within this thesis. At the beginning of the period it appeared that farming ability was the most important but by the time Cripwell takes up the agency at Welbeck being an agrarian expert was no longer enough. The surviving literature would suggest that even the early agricultural writers were aware of the changing nature of the role and foresaw many of the diverse skills that would be increasingly required. Marshall acknowledged the importance of accounting and eighteenth and nineteenth century books and treatises provided ample but often conflicting information for those who sought advice through this medium.

Accounts

Accounting and the compilation of accounts was not a new phenomenon, Edwards proposed that a ‘visual and oral system’ of exchequer accounting originated in twelfth century England. A written system of charge and discharge accounts was used by many of the priories and monasteries of England from the thirteenth century onwards. As the religious orders were frequently large landowners it is hardly surprising that this was the system adopted by many estate managers. By this method those who ran large agricultural enterprises: agents, stewards, reeves and bailiffs were able to demonstrate the way in which they had discharged their financial responsibilities. This was invariably through a written statement which had been constructed from the information gathered at the audit and from other estate activities. The final result was a document which consolidated all the estate’s businesses into one.\textsuperscript{74} Holderness has argued that detailed farm accounts were more common on large estates and elsewhere judiciously particularised accounts during the early part of the nineteenth century were relatively uncommon.\textsuperscript{75}

More often than not it was the agent or steward who entered the sums of money collected into the account books. This income came mainly from the rents collected and from these sums any expenses owing were then disbursed. At the end of the rent audit the agent did not always have the cash to cover all disbursements due, as was reported by William Gould at Welbeck on 7 January 1788 when he recorded in his diary

I consulted with Mr Heaton [the agent-in-chief] where the cash must come from to discharge the debts of the Welbeck establishment, about £1000; to this he could not give an answer. I informed him I could remit as much as usual on account of the estate and spare £500 towards paying the debt, to this he agreed.76

After the payments were complete any remaining balance was sent to his employer’s bank which was usually based in London. William Gould provided an example of just how large the sums of cash might be when he wrote that he will remit to ‘Messrs Child and Co £10,000’. It is therefore hardly surprising that the Dukes of Portland asked their agents to provide surety.

The importance of good accounting practices were underlined by Brown in 1869 he advised

It is an important matter in the management of landed property to have correct statements of all the transactions connected with it, whether of income or expenditure, and in regard also to daily transactions. A proper system of accounts is a great desideratum; and with all the new improvements in the management of an estate, it is absolutely indispensable to have a correct record of all the operations, with expenses incurred, and a statement of the results.77

Brown suggested that each individual department within the estate enterprise should have its own separate set of accounts and these should be comprised of: cash account, ledger account, yearly statement of account and expenditure, order book, letter book, memorandum book and yearly statement of account.78 From Gould’s diary it is possible to ascertain that the accounts at Welbeck were divided into various sections as exampled by the entry for June 18 1788 which read

Proceeded in examining my accounts with Mr Heaton till near 3 o’clock, he passed the Welbeck House establishment ending 31st December 1786 and went through part of that for the land.79

76 Hanson, *The Diary of William Gould*, p. 159.
78 Ibid.
Not all contemporary agricultural writers agreed with this system and the early nineteenth century author Jon Lawrence had a ‘strong aversion to a multiplicity of books’, he found that moving backwards and forwards between the various accounts doubled the amount of work involved.\textsuperscript{80} Gould must have been particularly adept with figures and accounts because it is evident from his diary that he kept the ‘books’ for more than Welbeck and in 1785 recorded

This morning we finished the memorandums and examined my year’s accounts which we went through and signed and he [Heaton] appeared greatly satisfied both with those of the Dukes of Portland and Devonshire, Lord George Henry Cavendish’s and his own.\textsuperscript{81}

Being skilful at compiling the final statements did not mean that agents even on large estates such as Welbeck did not have problems gathering the required information especially when they were unable to obtain the appropriate farm accounts. This problem frustrated Cripwell and in desperation he wrote to the 5\textsuperscript{th} Duke of Portland regarding John Fields the steward at Welbeck

He has delivered no part of his Farm Account for more than a year and has not settled either with the Dairy woman or Poultry woman for 18 months. I have kept constantly urging him to make out his Accounts…I fear he has got them in such a muddle that he is quite fast with them.

Consequently Cripwell was unable to complete his own accounts for he continued

…as there as so many things which connect the farms with the other departments that it is impossible to complete the other Accounts without first having the Farm Accounts to refer to.\textsuperscript{82}

The latter extract revealed just why the farm accounts were so important. While it was essential that the land agent had an extensive knowledge of the profitability or not of the estate elsewhere it was rare for farmers to differentiate between income and expenditure.\textsuperscript{83}

Parker believed the main characteristic of ‘efficient’ estate management was the correct evaluation of land ‘potentialities’. By inspiring the tenants to acquire the most from a given piece of land it was possible to secure a rent that reflected its true value.\textsuperscript{84}

At Holkham it was acknowledged that the easiest way to achieve this was by the

\textsuperscript{80} J. Lawrence, \textit{The Modern Land Steward} (London, 1806), p. 122.
\textsuperscript{81} Hanson, \textit{The Diary of William Gould}, p. 94.
\textsuperscript{82} U of N Pwk 1158 Letter from William Cripwell dated 14 July 1873.
\textsuperscript{83} Holderness, ‘Prices, Productivity and Output’, p. 181.
\textsuperscript{84} Parker, \textit{Coke of Norfolk}, p. 6.
introduction of a ‘lucid form of estate account’. Parker maintained this system was similar to a scheme laid out in George Clerke’s *The Landed Man’s Assistant: or the Stewards Vade Mecum, Containing the newest, most plain and perspicuous Method of Keeping the Accompts of Gentleman’s Estates yet Extant* which first appeared in 1715. The opening page of the 1728 edition stated that this book is

A Compendious Form of taking a Survey of an Estate in Hand, Rack-Rents, high Rents, or upon Loves, with as Abstract of the same: Also and Inventory of Cash, Stock, Debts &c. The Method of entring Lives dropt and new Leases granted; together with a CASH BOOK and an Abstract of Receipts and Disbursements; also the Method of Charging and Discharging each Tenant’s Accompts and to know what remains due from any of them.

An almost identical system was introduced into Holkham in 1707 (even before the above account was published) and each parish or group of parishes where Coke owned properties were then accounted for separately. Money which was owed by individuals in a given area was first recorded alongside any arrears remaining outstanding from previous years and these formed the ‘Charge’. This was also the sum which the agent needed to be able to account for. The ‘Discharge’ consisted of noting all items of expenditure in a locality. In summary these accounts were added to the arrears when the books were closed as was the net money – that is the monies which the agent remitted as net income – and then it was all balanced against the charge. Using this system an ‘Abstract’ of the account was constructed, the totals entered which included: old arrears, yearly accounts, casual profits, rents paid out, court keeping expenses, bailiffs fees, monies expended on repairs, improvements, deficiencies and arrears still outstanding. Once this had been done the ‘Account Current’ was formed and this was basically a statement detailing where and what on the agent had spent the estate’s revenue. This system was used at Holkham for the best part of two centuries and is remarkably similar to modern profit and loss accounting.

At both Welbeck and Holkham great emphasis was put on the construction of accounts although the systems used appear to be different. At Welbeck the accounts seemed to be more fragmented as the page below from James Brounton’s improvement account from 1762 -1766 demonstrated.

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85 Ibid.
86 G. Clerke, *The Landed Man’s Assistant: or the Stewards Vade Mecum, Containing the newest, most plain and perspicuous Method of Keeping the Accompts of Gentleman’s Estates yet Extant* (London, 1728) front piece. George Clerk signs himself as a ‘Steward to a Person of Quality’.
87 Parker, *Coke of Norfolk*, p. 6.
Improvement in accounting practices was part of the increased professionalisation of estate management and greater answerability suggested a greater understanding of good working practices and a growing sense of responsibility. A firm grasp of an estate’s finances became ever more important as landowners like the Portlands’ sought to diversify their portfolios to take advantage of the opportunities offered by industrialisation. As the role became more professional, the agent was more accountable for the finances of his employer.

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88 DD/P/6/7/2/1 Brounton’s Improvement Account to the 3rd Duke of Portland.
Increasing Profitability

One way to ensure and boost profitability was by raising yields. Overton has argued that the easiest way to achieve this was by increasing inputs. Higher seeding in appropriate areas might produce a rise in the amount of grain harvested but on its own would probably prove ineffectual. A more certain method involved augmenting and amplifying the amount of manure and fertilizer used on the ground. However, this could prove a delicate balancing act as adding too much nitrogen could create its own problems such as weakening the straw causing the entire crop to topple on its side. During the period covered by this thesis soil fertility was of paramount importance. The significance of adding additional ingredients to the soil had long been understood. When farms changed hands landowners were eager to keep any form of manure or fertilizer and were happy to pay for the privilege. Gould laid down specific terms which related to these substances when he let one of the farms in 1787.

The manure that is left by the present tenant the Duke of Portland is to pay for, and if Mr Sheperdson quits the premises hereafter he is to leave the dung and compost on the same.

To a great extent this section overlaps with a discussion on artificial fertilizers in Chapter 3 in the section on scientific farming. However it is impossible to discuss the type of advice contained within farming books and other publications without some reference to manures and other additives. In this instance this is not intended to do more than use a number of emblematic examples to illustrate the issues raised or information imparted. Despite the number of references made in generalist accounts of agricultural procedure to soil fertility little if any research has attempted to link the information contained in manuals on farming practice to what actually happened.

As already established the Duke of Portland owned a complete set of Young’s Annals and in 1793 a long article appeared which examined the ‘Nature and Effects of Manure’, it stated

…we want a full suite of experiments, varied and compared relatively to manures considered under their different affinity with the soils, the aspects and the productions. If this part of rural oeconomy was better known we should

90 Hanson, The Diary of William Gould, p. 127.
perhaps see cultivations succeed, which the nature of the soil has rendered hitherto impracticable in some districts of the kingdom.\textsuperscript{91}

This was typical of Young’s philosophy not only did he personally carry out thousands of experiments on his own farm but he collected on his travels a myriad of information which related to the practice of other farmers and reported on both sets of data.\textsuperscript{92} It is assumed given the Duke’s ability to locate a previous article that he read the Annals regularly. Experimentation at the end of the eighteenth century was at Welbeck landowner rather than agent driven. In 1807 the wrong manure was put on the wrong piece of land it necessitated Edward Turner the steward sending a communication to the 3\textsuperscript{rd} Duke which stated

\begin{quote}
I had discovered and mentioned to Joseph Wright the Error of Dung being said to be carried into the Stand Close on the 1\textsuperscript{st} Instant; it was the Lime Rubbish as your Lordship had directed.\textsuperscript{93}
\end{quote}

The Code of Agriculture advised that quick lime dissolved in water was injurious to plants, but lime which had been freshly burnt or ‘slacked’ formed a compost when mixed with vegetable matter which was soluble in water and nutritious to plants.\textsuperscript{94} In the case of green crops which could be grown through the application of large quantities of dung when the lime was mixed with vegetable and animal matter a far smaller amount of the latter components was needed.\textsuperscript{95} Consequently less farm-yard dung was required to have the same effect and at the same time ensured its effects were more powerful and longer lasting. Lime was used on the estate from at least Gould onwards and probably earlier. However agents were well aware that using any of these materials on poorly drained ground was in effect a waste of money, time and effort. Thus he recorded in 1788

\begin{quote}
…Frith Pasture, where Son Joseph is busy liming, there is only one kiln, which draws about 100 horse-loads every day, and they appear to lay on nearly 300 load of lime on every acre. Humphrey Adams is draining some of the boggy part, but I am in some doubt whether it will answer our expectation.\textsuperscript{96}
\end{quote}

At Welbeck a wide variety of substances were spread on the ground. It is assumed that large estates were in a position to purchase the latest fashion in fertilizer. In 1801 Edward Turner received word that the latest consignment was on its way but was not necessarily what had been ordered. He wrote to the Duke

\begin{quote}
\textsuperscript{91} Young, Annals of Agriculture), p. 28.  
\textsuperscript{93} U of N PwK 1123 Letter from Edward Turner dated 6 August 1807.  
\textsuperscript{95} Ibid, p. 137.  
\textsuperscript{96} Hanson, The Diary of William Gould, p. 174.  
\end{quote}
Inclosed I beg leave to send your Lordship an account of work done at the Farms; as the Fish which is arrived is different from that which was sent from Scarborough I suppose it to be part of the Whale Blubber ordered at Hull, though I have yet received no advice of it; having been shipped it will be mixed with Clay and left as your Lordship has directed.\textsuperscript{97}

Its inclusion in the 1819 edition of the \textit{The Cyclopedia} suggests that it had become common practice and described it as

\ldots a material which has been used as a manure in some cases with success, especially when employed in mixture with clayey loam, sandy loam, or any other common earthy or mouldy substances. These matters should be blended together in such a manner it is said by the writer of the “Elements of Agricultural Chemistry” as to expose a large surface to the action of the air, the oxygen of which produces soluble matter from them.\textsuperscript{98}

The importance of manure was further emphasised by Morice in 1824. He stressed

Previously then to the soil’s producing luxuriant crops, it must contain substances which the plants can immediately assimilate; hence the utility of Farmers were urged to collect as much as possible of this vital material ‘to manage it well and to apply it skilfully to the soil’.\textsuperscript{99}

Pigeon dung was described as possessing ‘much fertilizing power. It readily ferments when moist; but is generally applied in as fresh state as possible’.\textsuperscript{100} In an 1854 document relating to tenant right on the Welbeck there was a reference to ‘pigeon manure’ but not where it came from or how it was used. The same document refers to large sums of money being expended on ‘leading and spreading Mud whereby the Land so heated has been greatly improved’. Even when the farmyard material was available some struggles with what to do next. Cripwell identified this problem with John Fields and wrote to the Duke that he was ‘having difficulty’ in converting his large quantity of straw into manure through not having the usual supply of cattle.\textsuperscript{101} However as has been discussed both at Welbeck and in the literature there were a multitude of different substances that were utilised. This section on fertilizers has concentrated on Welbeck

\textsuperscript{97} PwH 1132 Welbeck 24 August 1801 Letter written by Edward Turner.
\textsuperscript{98} A. Rees, \textit{The Cyclopedia or Universal Dictionary of Arts, Sciences and Literature in thirty nine volumes, Vol XXXVIII} (London, 1819) no page numbers in this book.
\textsuperscript{100} J. Sinclair Bart, \textit{The Code of Agriculture; including Observations on Gardens, Orchards, Woods and Plantations, First American Edition with Notes} (Hartford, 1818), p. 131. Although this is the American Edition there are notes in the Holkham Agricultural Books Francis Blaikie made pertaining to the English editions of this book.
\textsuperscript{101} PwK 1022 Letter from William Cripwell 15 November 1872.
purely because the material is readily available in this archive and it is much harder to find reference to anything other than manure at Holkham.

**Grasses, Grazing and Water Meadows**

In the early part of the sixteenth century both pastures and meadows existed, Overton proposed, purely in their natural state. However, by the end of the seventeenth century many were being deliberately cultivated, fertilized and sown with specific grass seeds which the farmer had purposely introduced to the farm. Strictly speaking a meadow is a field used as pasture that has not been ploughed or cultivated. Laying these types of land to grass was to bring about the demise of either permanent pasture or arable ground. The seventeenth century also saw the improvement of meadows through the technique of ‘floating’. This involved deliberately flooding the meadows during the winter months by passing over them a thin layer of water, thus keeping the land frost free. This allowed the growth of sufficient grass much earlier in the year which was particularly useful for feeding sheep.\(^\text{102}\) Pusey described water meadows as the ‘triumph of agricultural art’.\(^\text{103}\) In 1806 William Smith wrote

> Even a small piece of water meadow, which will produce an early crop of spring feed at the very time of the greatest pressure of scarcity and when the turnips ought to be off the ground, must be much more valuable to a poor arable farm, than easily be imagined.\(^\text{104}\)

This was certainly an innovation embraced at Welbeck and will be discussed in more detail in Chapter 6 in relation to the landscape. However it is worth noting here that the interest of the Duke of Portland was apparent in 1804 when he wrote

> I should think on about the end of the week we might take the water off the first watered land and in a week afterwards put some of the Ewes upon it whose lambs are to be fed.\(^\text{105}\)

There is a further reference to the water meadows at Welbeck later in the month when the Duke wrote again

> I should like to know whether the grass has appeared to have grown under the water on that piece of ground, from whence the water has been taken, and whether the grass has appeared to grow there since the water has been taken off.

\(^{105}\) PwH 1324 Letter to Edward Turner 13 March 1804.
What sort of a pasture is it, & whether it appears to have been much improved by watering.\textsuperscript{106}

It would seem that the timing as to when to draw the water off was far too important a decision to leave to the agent alone. The Duke was not only directing operations from afar but wanted detailed knowledge sent of the results. However this was just one small innovation in the production and provision of greater quantities of winter fodder for animals. There were also a number of new and improved grasses which included clover and which were usually planted on arable land. Not only did clover act as an animal feed but because it was a legume it increased soil fertility.

Of the temporary grasses and clovers which were sown the greater variety available was only matched by the many different ways and techniques of managing them. The type farmers chose to sow was often decided by the soil type or how the crop would be used when harvested. For example rye grass on light free-draining land produced a healthier crop. Clover sickness was also a factor in choice so the differing varieties of clover, trefoil and rye grass might be grown in some form of rotation. At Holkham Blaikie wrote that as Trefoil did not ‘subsist entirely upon the same description of food as Clover and for that reason these plants should be cultivated alternatively in the Courses of Cropping’. He suggested the following rotations


Brown and Beecham advocated that sainfoin and lucerne were planted less frequently but both were experimented with at Welbeck as some of the correspondence demonstrated.\textsuperscript{108}

J. Mordant describes lucerne as ‘a plant highly commended for excellent fodder and preferable to St Foin, and is produced upon the most dry and barren land’. It was also a member of the legume family and had the same effects as clover. An emblematic example of the knowledge which an experienced land agent might gain was evident in a

\textsuperscript{106} PwH 1326 Letter to Edward Turner 20 March 1804.
\textsuperscript{107} Holkham Agricultural Letter Book I, p. 87.
\textsuperscript{108} J. Mordant, \textit{The Complete Steward or The Duty of a Steward to his Lord} (London, 1761), p. 222.
letter written by a J. Seymour to Francis Blaikie. Although this correspondence did not
provide any proof that sainfoin was grown at Holkham it does acknowledge that Blaikie
understood the enhancement this crop could bring to the soil (although strictly speaking
it is not a grass). Seymour requested Blaikie’s opinion on the laying down of permanent
meadows and pasture

… there must be certain species fitted to one & others to other soils a matter
which I believe has not been the subject of any accurate investigation. Perhaps
your long experience & …attention may have given you an insight into these
matters which has escaped the notice of more superficial observers & such
notices will be most acceptable to me who am laying down large quantities of
land to different qualities of permanent Grasses. I have an idea that permanent
Grasses such St Foin, Lucerne &c only wear away by the intrusion of other
indigenous grasses … that if proper care were taken to weed them of such
intrusions they would last indefinitely.\(^\text{109}\)

Although it is at times hard to ascertain exactly what crops were grown and when at
Welbeck lucerne was grown at the end of the eighteenth and beginning of the nineteenth
centuries for in March 1798 the Duke sent a letter which stated

Four pounds of Lucern Seed were yesterday sent by the coach all which you
direct Thomas Wood to Sow in the ground prepared for it in the North Field.\(^\text{110}\)

The following year Turner was requested to provide the Duke with an account of how
this crop fared and declared in no uncertain terms

I expected to have had an account of the produce of the Lucerne, how it was
consumed, how long it lasted & the specific differences of that manured with
dung & that with rape dust.\(^\text{111}\)

Brown and Beecham suggested this crop was not frequently grown. At Holkham it is
harder to ascertain the grass crops grown. Parker however argued that soon after
Thomas Coke took up his inheritance in Norfolk that he established a home farm as part
of the estate. This land was stocked with 2,232 sheep, rye, wheat, barley, turnips,
nonesuch, lucerne and clover were grown almost from the beginning.\(^\text{112}\)

One crop which was grown extensively by both estates was trefoil although
neither estate states which variety was actually sown. The \textit{Flora Rustica} published in
the 1790s has entries for three sorts of this plant and by using this book it is assumed
that the type grown was most probably birdsfoot trefoil because the entry for melilot

\(^{110}\) PwH 1283 Letter sent from London on March 18 1798.
\(^{111}\) PwH 1313 Letter to Turner the Agent at Welbeck.
\(^{112}\) Parker, Coke of Norfolk, p. 57.
trefoil states ‘grows wild in corn fields, pastures and by way-sides… there cannot be a worse weed among bread-corn for a few seeds ground with it spoil the flour’. The same book states flesh coloured trefoil ‘We do not know that it has been, or may be, cultivated to effect.’ While birds-foot trefoil is described as

...another instance of the excellence of leguminous plants as food for cattle. It is common in good pastures … is of equal quality, if not superior, to most of the trefoils, contributes to give substance to the hay and might doubtless be cultivated to good advantage alone.

Further weight is added to the usefulness of this crop in The Complete Steward which described it as ‘...both finer and sweeter than the common or great clover’ as well as reiterating that it ‘will grow on any soil whatever; it may also be sown with or without corn, as suits best with conveniency, or being sprinkled on meadow-ground, will very much improve the hay in burden and quality’.

In February 1804 at Welbeck a letter from the Duke requested that trefoil be sown with a mixture of other seeds. In some instances it was mixed with white or red clover and in others with both rye and white clover. Even land planted with potatoes had also been sown with ‘turnips, eight pounds of Red clover, eight pounds of white clover and ten pounds of trefoil’. However it is possible that trefoil might not have been as easy to grow as suggested in the above books in fact it has been suggested that it was a difficult crop to establish. Evidence indicated that the Duke of Portland was aware of these difficulties for in March 1804 the Duke wrote to Edward Turner ‘I would not have Trefoil sown unless Thomas Wood is very confident it will grow’. No reasoning was provided for this decision and therefore no indication as to whether the Duke felt the problem might lie with Thomas Wood’s land or his skill or the price of the seed. It is not always easy to interpret the reasoning behind the Welbeck correspondence because the actual contextual nuances are missing. The sowing of trefoil at Holkham was encouraged and appears within Francis Blaikie’s information on the different types of

113 T. Martyn, Flora Rustica: Exhibiting Figures of Such Plants as are Either Useful of Injurious in Husbandry (London, 1792), p. 72.
114 Ibid, p. 63.
115 Ibid, p. 53.
117 PwH 1315 Letter dated February 15 1804.
118 PwH 1329 March 29 1804.
rotation. A common factor whether it be a four course or six course rotation was the inclusion of sowing mixed seeds which include ‘clover, trefoil and ryegrass’.119

Tares were also mentioned in the Welbeck correspondence although not their usage for the Duke wrote in March 1804 ‘I was in hopes I should have heard that Joe Wright had sown some tares’.120 The Complete Steward described tares as

…a sort of *vetches*, and are as advantageous to land as other pulse, they are proper to feed cattle with, and the seed excellent food for pigeons. They are to be sown in February, upon dry ground and require but one ploughing, and will do without any manure, than the ploughing in the last *corn* stubble, for *Tares* themselves enrich land.121

It would however seem that this crop had another purpose for J. Adam suggested in 1789 that

Buck-wheat and *tares or vetches* are the two plants most commonly sown in England for manure. They are plowed in while in full bloom being then in their most succulent state.122

Tares were obviously used to help with soil fertility although seemingly not suited to all types of soil. When the price of seed was high and specific ground not guaranteed to produce a good crop it was perhaps decided that the expense was too great to take any risks. An example of this can be seen at Welbeck when in 1801 the Duke wrote

You may reserve as many tares, as will enable Sam[ue]l Field to sow four acres on the land which was planted with cabbages last year. Thomas Wood’s land is not good enough for tares when the seed is 15s per bushel.123

Dickson stated ‘It has been contended by an intelligent cultivator’ that tares might be ‘the means of enabling the arable farmer to support as much livestock as the grazier’.124 He further maintained that this crop was most useful when large flocks of sheep were kept, ‘for they come in at a spring when rye and turnip crops are eaten off, and before the clovers and others grasses are in sufficient forwardness … and afford a seasonable supply of food for ewes and lambs’.125 Tares are not individually included in the rotations at Holkham but that is not to say they were not grown especially given their

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119 Holkham Agricultural Letter Book 1816, p. 129.
120 PwH 1324 March 1804.
123 PwH 1373 London April 8 1808 Letter to Edward Turner.
125 Ibid, p. 893.
valuable contribution to early grazing. It is impossible from the Holkham correspondence to determine whether the soil in Norfolk was suited for their use or not. While crops and fodder were of course essential components of the improvements which agriculture witnessed throughout the late eighteenth and nineteenth centuries the most important agricultural implement remained the horse.

**Farm Horses**

Farm horses were recognised in the contemporary literature as being of the utmost importance to farming operations. In the debates and discussions which have since taken place over the timing of both the agricultural revolution and mechanisation their significance has been overlooked. However many of the agricultural writers which have been researched for this thesis recognised their worth as did the Dukes of Portland. According to Curtis ‘farm horses are, perhaps, the most valuable portion of a farmer’s capital. They are the working power, and if one fails, it cannot but affect the routine of work’.

At Welbeck there was much interest in this beast not just those used on the farm but also those bred for horse racing. The Dukes of Portland also took a great interest in the horses bred upon the estate and expected the best from the grooms who worked with these prized animals. An example of this can be seen in a letter from 1799 when the 3rd Duke wrote to Edward Turner

> John Wheeler must be told to preserve with the Bullfinch Colt, to be very quiet with him and to give him a great deal of exercise on the Lunge and to lead him about in all sorts of places for many hours in the day. If he cannot manage him he is not fit to be a groom.

Brown in his *The Book of the Landed Estate* (1869) conducted a comparison between the cost of steam traction engines and the horse. It argued that steam engines were never particularly numerous. For most jobs horses were cheaper. He maintained that even when taking into account both ends of the spectrum that is farmers who fed their horses cheaply and others whose ‘particular hobby’ was ‘keeping their horses in high condition’ a fair estimate could be found. Importantly for those looking to Brown for advice the costing he arrived at same from his own experience and those of his account books. He thus estimated the following per annum

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127 PwH 1313 Letter from the 3rd Duke 1799.
Oats and Hay ................... £18 10 0
Bran &c .......................... 4 10 0
Farrier and Saddler ............. 2  0 0
Blacksmith ....................... 2 10 0
Interest on value .............. 2  0 0
Deterioration in value ......... 2  0 0

£31 10 0

Dickson argued in 1805 that

… care and judgement must be exercised in selecting such mares and stallions
as the most suitable for the particular purpose which the farmer has in view in
breeding them … The too common of breeding from any mare that may chanc
... chance to be in the possession of the farmer should never be adopted.129

This attitude was also taken by one of the judges of the horse classes at the Welbeck
Tenants Show in 1896 and at the beginning of his report to the Duke he wrote

I may preface my remarks by stating how much interest I attached to my
engagement to judge at your show because I have always been of the opinion
that a superior class of cart horses (or rather I should say heavy horses for town
and commercial purposes) can be evolved by the judicious blending of Shire
and Clydesdale blood than by sticking hard and fast to Stud book lines … the
result of blending the two breeds was fully demonstrated at your show.130

The interest taken by the Portlands in creating improvements in the quality of the
horses used by the tenantry fitted with the ideas which abounded in books and treatises
and with the concepts of scientific farming and the patriot landowner. At Holkham data
relating to the improvement of this particular animal does not appear to exist although it
is possible to ascertain that 62 horses were kept to undertake the work on the home
farm and in the parkland.

According to Fussell, Blaikie’s publications carried great weight although
many were written while he was still working for the Earl of Chesterfield prior to
moving to Holkham. Fussell argued that Coke encouraged Blaikie to prepare a tract on
farmyard manure which he distributed amongst his tenants and farms. This it is alleged
was published in London in 1811 however this statement is hard to understand for

129 Dickson, Practical Agriculture, p. 1170.
130 N.R.O DD/P/6/18/1-33 Report on the judging of the horse classes at the Welbeck Tenants Show
pertaining to horses.
Blaikie did not begin to work for Thomas Coke until 1816.\textsuperscript{131} Blaikie’s tracts tended to be short in length and dealt with ‘odd but important details of management and technique’ and incorporated the duties which must have been carried out by him in his day to day work upon the estate. One of Blaikie’s treatises was concerned with the management of hedges but he was by no means the only author who wrote on thorn for hedging. Lawrence in 1806 provided advice on the planting of white thorn for hedging

\[
\text{The quicksets of white thorn will always thrive best in a rich, deep and mellow soil, and to a sufficient degree, in a middling one, but great disappointments frequently arise both from planting them in improper ground, and the want of attention in the best adapted.}\]

Blaikie in 1821 was very dismissive of those who had previously written on the subject of quick-set hedges for he stated

\[
\text{As fences in general, but more particularly whitethorn hedges, form a prominent feature in rural management, I am led to believe that a treatise on the subject will prove acceptable, perhaps instructive, to some of our young readers. It is with this view I now address myself to you, while at the same time I cannot avoid expressing regret that the subject has not been taken up by some other pen better qualified than mine to do it the justice it merits.}\]

At Welbeck whitethorn hedges were being planted by the mid-1760s and James Brounton recorded in his Improvement Account: Receipts and Payments for 1764 the following purchase

\[
\text{To Mr William Perfect for 32000 white thorn quick setts and 200 English Elms £13 0 0.}\]

The overall cost of the plants themselves seemed low but the amount of labour needed to plant 32,000 plants would have added considerably to expenditure and any advice that might increase the success rate of germination was probably therefore most welcome. Furthermore Blaikie advised

\[
\text{All young hedges should be kept perfectly free from weeds; and in the operation of cleaning, the workmen should be careful that his hoe does not injure the bark of the plants.}\]

Unfortunately Brounton’s accounts do not contain any details of the work undertaken by the labourers maintaining the hedge once planted but simply recorded their pay.

\[
\text{\textsuperscript{131} Ibid, p. 114.}\]
\[
\text{\textsuperscript{132} Lawrence, The Modern Land Steward, p. 376.}\]
\[
\text{\textsuperscript{133} F. Blaikie, A Treatise on The Management of Hedges and Hedge-Row Timber (London, 1821), p. 1.}\]
\[
\text{\textsuperscript{134} N.R.O DD/P6/7/2/11 Entry for May 1764.}\]
\[
\text{\textsuperscript{135} Blaikie, Management of Hedges and Hedge-Row, p. 7.}\]
There is no way of knowing whether or how the new plantings were kept weed free. However William Gould’s diary does reveal what happened when the hedges owned by the tenants were not maintained correctly for in May 1786 he wrote

Went this morning to Oxcroft and viewed the fences on Shuttlewood belonging to the tenants, those of Joseph Alliston are in a shocking condition, it does not appear he has paid any regard to them since they were planted, very few of the quicks in the inner fence are arrive ... Henry Simpson’s are little better and he has paid very little regard nor bestowed very little trouble in weeding those on his farm.136

The advantage of planting quick sett hedges had financial benefits for the landowner evidence by the entry in Gould’s diary for July 1784.

I went with Joseph Thompson and viewed his fences near Budby Forest plashed last year, which he has performed very well, his mode is to throw down one of the banks and to put a dead fence near the quicks, lay and cut the hedge from whence a number of young branches arise and promise very soon to become a fence, by this mode we shall quit of supplying the farmers with stoop and rail.137

At Holkham according to Wade Martins and Parker the estate books for the early eighteenth century contain a large number of references to payments made to tenants for the construction of fences however the type used is not distinguished as it was at Welbeck.138 References to fencing at Welbeck like at Holkham become less common as the eighteenth century drew to a close. At Welbeck the amount of hedging planted was enormous. On both estates while the landowner might have contributed to the initial cost but the expense of maintenance remained the responsibility of the tenant.

Conclusion

The aim of this chapter was not to follow in the narrative methodology of Fussell and Goddard but instead sought to examine and explore the ways and means that the available literature may have been utilised in a practical setting. Both of the land owning families owned large libraries and the indications suggest that they read and kept ‘up-to-date’ with the latest agriculture knowledge. There has been the infancy of an agricultural press from almost the first books that were ever produced. Documents like the Gerefa although a literary work rather than a practical treatise still sought to explain and elucidate the role undertaken by the Anglo-Saxon bailiff. A large

137 Hanson, The Diary of William Gould, p. 47.
138 Parker, Coke of Norfolk, p. 41.
percentage of the works carried out by this early estate official were still recognizable in the role played by the land agent and steward covered by this thesis. Books of this early nature provide a long history of continuity of rural landscape management. However despite the huge number of publications which have survived and are readily available in libraries and through access to the internet the influence and impact of management and farming manuals has been almost entirely forgotten except by a few historians of the ilk of Fussell and Goddard.

Two main problems have been highlighted by this chapter; the first was the distrust by the farming community of any form of book-learning. Agriculture was based on a predominantly practical culture where information was passed via word of mouth or acquired by working with other family members from childhood. Ernle suggested that some of the early authors did not inspire confidence and even brought disgrace to the ‘book farmer’. Marshall disliked the commercialism that suddenly became attached to agricultural writing, whereby authors perceived it as a method of making both money and reputation. The many different occupations of those who suddenly became an authority on a wide variety of farming subjects was perhaps the best evidence to the number of charlatans who unexpectedly became experts almost overnight. However there were a large number who were recognised as skilful and practised doyens in their field and this would include Francis Blaikie, Nathaniel Kent, Speechley, David Low (Professor of Agriculture at Edinburgh University) and Richard Bradley (Professor of Botany at Cambridge). Blaikie in particular would distribute his pamphlets amongst the tenant farmers at Holkham as a way of encouraging better and more efficient farming practices. The second problem revolved around circulation. Young himself believed that the Annals had a very small readership, but this chapter has discussed and sides with the belief that while relatively few copies of a publication might be sold this does not reflect the numbers that might have read the journal or book. Journals were distributed to local hostelries and other meeting places and as literacy improved throughout the nineteenth century it would seem most likely that readership would have increased.

The biggest explosion of printed material relating to all and any aspect of managing estates or farming the land happened simultaneously with a growing interest in patriotic and scientific farming and a growing professional ethos. The writers of much of the agricultural literature proclaimed themselves as ‘purchasers of specialist
knowledge’ and took the viewpoint that the information that they would impart would help to give their critics confidence in the stand taken.\textsuperscript{139} Even land agency over the nineteenth century was moving along with the more established specialisms of medicine, surgery, law and the church towards professional status. Thus it was becoming elevated to a superior form of employment and came to represent a unique position within the rural community. As estates became larger and management more complicated land agency was no longer seen as the preserve of the ‘amateur gentleman farmer’. The idea of professionalism was beginning to create an ideal of specialist training, organisation, dedication and an \textit{esprit de corps}.\textsuperscript{140} Beginning with Arthur Young’s travels and his \textit{Annals} the agricultural press and publications began to provide a range of knowledge that geographically started to bring together all those involved in working the land. Wade Martins acknowledged that the \textit{Annals} was responsible for beginning the standardisation of farm buildings and ultimately it has to be said agriculture itself.

Both the Dukes of Portland and Thomas Coke read agricultural material and the latter encouraged Blaikie to continue his writing practice. The thousands of agricultural books, treatise and pamphlets that have survived have rarely been assessed for their contribution to the professionalisation of estate management. Yet it seems logical that whether they were correct or not in the assumptions made they did much to unite those who were beginning to experiment with new seeds, crops, grasses and husbandry. They provided a forum for discussion at a time when travelling might be limited for many months of the year when roads were impassable by mud or rutted tracks. This explosion of printed material also coincided with Chambers and Mingay’s timing of the agricultural revolution in a way that did not happen within Kerridge’s theory. This thesis therefore maintains that while more research is essential there is little room for doubt that the agricultural press created a corpus of knowledge which ultimately led to the full professionalisation of the land agent and land management.

\textsuperscript{139} P. Corfield, \textit{Power and the Professions in Britain 1700-1850} (London, 1995), p. 201.
\textsuperscript{140} \textit{Ibid}, p. 203.
Chapter 5

The Changing Role of the Land Agent

By the late eighteenth century just as agricultural change was beginning to gather pace landowners found their time increasingly divided between governmental duties in London and new leisure activities. As a consequence it became necessary and more commonplace to employ a hard-working, knowledgeable and efficient land agent to manage all aspects of land management. The public reputation of the land agent was mixed. Professionalism and a high moral responsibility alongside excellent managerial skills and technical expertise were the aspirations of those who wished to be leaders in the field. It is frequently argued by historians that land agency was simply too varied to create a collective identity for the agents who managed the land. Each individual agent had to meet the needs of landowner, tenant farmer and the different soil types; this meant that there could never be a rigid laid down form of farming. However the men who managed rural Britain began to share a common sense of identity and status and this is exhibited in the formation of a Land Agent’s Society in 1902. Welbeck was typical of these rapidly developing enterprises and incorporated agriculture, timber production, mining, quarrying, urban developments both in London and Scotland as well as assorted industrial works and from the later nineteenth century its agents found themselves also embroiled in education, welfare and the public health of those who resided within the estate. Although Richards proposed that the profession attracted more than its fair share of ‘unsavoury characters’ those on the two estates studied were in the main honest and hardworking apart from possibly Cauldwell at Holkham.¹ After the repeal of the Corn Laws agriculture began more susceptible to seasonal and external factors than any other part of the economy. Richards argued that the scarcity of good agents was reflected in the salaries they might command. However as this study will show this was not necessarily true.

Despite their lack of professional training Mingay has argued that signs existed during the eighteenth century that land management was moving towards professional status. Young men and those wishing to take up the role learnt from experience, although as discussed in chapter 4 agricultural authors were beginning to create a corpus of knowledge. Edward Lawrence advised landowners to take their farmers’ sons

who showed promise and aptitude and give them a good education. ² Gradually a number of agents began to build national reputations, but some of these like Francis Blaikie did not necessarily view themselves as professionals. Wade Martins conceded that despite his status there was little evidence to suggest he had received any form of theoretical training and in fact was most derogatory towards any form of ‘book learning’. ³ Porter argued that between 1750-1850 estate stewards grew in importance and both the land agent and surveyor gradually developed into professional men. ⁴ The change in status and stature of the land agent corresponded in this argument with the timing of Chambers and Mingay’s agricultural revolution. Beckett maintained that by the latter part of the nineteenth century around sixty individuals were responsible for managing two thirds of England. As running an estate became more time consuming at the exact moment that other activities exerted their influences professional management gained in importance. Management became too complicated for the untrained amateur. ⁵

William Marshall stated that estate management required ‘the whole of any man’s attention’ and during the hours of work his duties ‘lie in the field’. ⁶ This chapter will argue that by the end of the nineteenth century agents needed considerably more skills and interests than just agriculture and in turn this contributed towards the establishment of land-management being recognised as a profession. In order to achieve this there will firstly be an examination of the type of men who became agents and how their training developed throughout the period and remunerations paid. Secondly an investigation will be undertaken into the changing face of the great estate and how this affected the role of the men who undertook its management. Thirdly this chapter will explore the labour question and survey the way in which land agents sought to keep control of the work force. Fourthly it will investigate the way in which mechanisation and technology helped to increase the rate of professionalisation, agents needed to experiment and source the right kind of machinery to use upon the estate and to ensure adequate training was provided to the work force. Fifthly a brief survey will be carried

out exploring the skills that agents needed when dealing with the extraction of minerals and at Welbeck particularly coal. Sixthly increasing legislation on education and public health took the agent away from his traditional agricultural roots. Finally this chapter will seek to define how the incumbent owner influenced the work of the agent and whether the transition was seamless when each new landlord took up his position. While historians such as Mingay, Beckett and Webster have started to explore the historical perspectives of the professionalisation of land management none of the historiography encompasses estates as intricate and complicated as the two under discussion in this thesis. By using these two great estates it will extend our knowledge of this subject through the exploration of the different roles the agent was expected to undertake from the mid-eighteenth century onwards. This chapter will focus chiefly on Welbeck and the archives left by William Gould and William Cripwell because more correspondence and information on the rural community has survived from these two agents than any other. These two agents operated almost a century apart and this allows for an analysis across a reasonable time frame. Examples have been chosen to illustrate the themes discussed rather than for their chronology. It will seek to define whether change in the late nineteenth century was driven by a desire for improvement or new legislation. In order to understand the role played by the land agent it is necessary to comprehend the men who took up the profession.

The Land Agent

The function of the eighteenth and nineteenth century land agent can be traced back to medieval origins where it originated in the bailiffs and stewards of the great medieval estates. The modern land-agent is still recognisable in the Gerefa which came into existence circa 1000AD. This literary text was concerned primarily with the management of the land and clearly revealed the duties and qualities which were indicative of the wise reeve. Essentially these were defined as an awareness of local customs and traditions, the necessity of understanding land and folk law and success depended on an intricate attention to detail. These qualities were also recognisable in Chaucer’s reeve. He was described as a man who could guess from the weather in terms of the quantity of rain or the level of drought what the land could be expected produce in terms of yield, could easily recognise how competent his bailiffs were in keeping his

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7 J. Moody, Paper given at the University of Leicester Conference on The Land Agent: Past, Present and Future 2 July 2013.
lord’s livestock and ultimately at the end of the growing season to present a balance. He needed to understand and be observant of, all the trickery which a bailiff, herdsman or any other individual might commit. On top of this he ensured a surplus was stored within his employers or his own stores which could then be used when required. Many of these attributes are still an essential part of the role of the twenty first century land agent and were equally if not more important for the men being examined in the period under discussion covered by this thesis.

Thompson suggested that for more or less the entire period under review in this thesis land-agency had no clear cut form of institutional organisation or indeed anything which might be considered as a professional body. However, the land agents themselves were well aware of the common interests they shared. They would often write to each other especially when conditions necessitated co-ordinating the timing and scale of rent reductions. By 1868 – when The Institute of Surveyor’s was founded - surveyors still considered the management and improvement of landed estates as two of the four main branches of their profession. John Clutton a prominent surveyor and land agent of the nineteenth century was astonished to discover that ‘a considerable number’ of those working in this field were ‘in fact not surveyors at all’. 8 Another contemporary commented that much of England was under the control of solicitors who usually did nothing more than collect the rents; furthermore these men had little knowledge of anything else. However by 1877 it was argued some sixty per cent of the larger estates were under the control of members of the Institute of Surveyors. Contemporaries perceived this organisation as being devoted to urban management and the more gentlemanly agents gave it a wide berth. Consequently the land agents formed their own society in 1902.

Beckett argued that the nineteenth century author James Caird summed up very aptly the position of the landowner. He suggested the landowners were the ‘capitalists’ to whom the land belonged. In effect their property consisted of the soil including any minerals beneath it and any buildings or permanent works upon it. The landowner was expected to share the cost of any improvements which arose from the ‘progress of agriculture’. At Welbeck there was never any doubt that the Portland’s maintained control of the estate, the letters from the various Dukes which demanded both

information and advice demonstrated their ownership. At Holkham the lease system was indicative of the protective nature of Coke over the estate’s soil quality. Naturally a landowner was concerned with the general well-being and prosperity of his estate. Caird estimated that the income of the landowners’ exclusive of minerals was worth ‘sixty-seven million’ sterling per annum and he continued that the land had a capital value of two thousand million.9 For Caird there was no other group of men in the country who managed such a large volume of capital and whose influence spread so widely.10 Although not all estates were huge the larger ones including Welbeck were dependent on efficient stewardship despite the involvement of many of the landowners. Those estates which were renowned for their improving ethos relied on both landowner and agent working together. An owner who spent much of his time elsewhere could achieve this through regular visits, a willingness to make decisions relating to policy, being in regular contact and to ensure the relationship between agent and tenant was successful.11

The aristocracy were often a consistent force for agricultural change as discussed in chapter 3. However this could not be achieved without an agent who shared their views, or likewise an owner who was not prepared to listen to ideas from his agent. Sarah Webster proposed that the definition of ‘agent’ was not an established idea and in many cases is often interchanged with ‘steward’. It covers many different occupations and aspects of estate management. Even during the eighteenth century there was a considerable overlap between the role of the steward and a legal advisor.12 Formal education for agents or in fact anything to do with agriculture was not, according to Overton, established until 1845 when the Royal Agricultural College was founded at Cirencester.13 However the idea of training for those involved in farming and managing the land was not new and as early as 1651 Samuel Hartlib had proposed the setting up of a ‘College of Husbandry’. William Marshall in 1790 put forward the idea of creating ‘rural seminaries’. At the turn of the century Loudon had put these philosophies into practice and founded an educational establishment at Tew in

9 If these figures are correct the low return on capital has to be questioned.
Oxfordshire. This was some thirty seven years before the establishment of Cirencester by several large land owners (and also upon Lord Bathurst’s land).

Loudon was born at Ombuslang in Lanarkshire in April 1783, the son of a farmer. From a young age his interests lay more with horticulture than agriculture and his father, keen to avail his son of a ‘liberal education,’ sent him to Edinburgh where he might attend the public schools. Due to his skills as an artist he became a draughtsman and assistant to one John Mawer and resided with Mr Dickson a nurseryman in Leith Walk. It was during this latter period that he went to classes which taught botany, chemistry and agriculture at the city’s university. From 1803 he worked in London as a landscape gardener. At the home of his friend Sir Joseph Banks he probably met the most eminent scientific men of the day. However while travelling in Wales he contracted rheumatic fever which left him with a stiff knee. While recovering his health he stayed at a farm called Wood Hall which he later persuaded his father to take over the lease on so that the appalling husbandry Loudon had witnessed might be improved. Loudon himself rented another farm nearby at Tew where he established a kind of college for young men interested in following agricultural careers14. Fussell maintained this must have been incredibly successful because when he gave up the farm he had managed to amass a fortune of some £15,000.15 Although Loudon prospered he was by no means unique and schools of this nature had begun to appear in ever greater numbers. The earliest commenced in the 1770s and by 1803 Young listed twenty-three, by 1835 there were more than 100 and by 1855 over 700. Education was also provided as already discussed in chapter 3 by local farmers and agricultural societies.

An increasing level of knowledge was required to run the large estate as the nineteenth century progressed and this manifested itself within the correspondence of Welbeck Abbey. At the beginning of the period under question William Gould, although experienced both in farming and land management, referred any decision to be made back to the agent in chief. Heaton the agent in chief was a barrister at law and personally had much experience of land-management. In September 1873 William Gould described his house thus

Mr Heaton’s house is situate upon a high hill and command[s] a most extensive prospect for 50 miles over the counties of Essex and Surrey [Kent] … his own

estate about the house has much the appearance of a park and all the uses of a farm … his whole estate contains about 350 acres of clay and gravel worth 20s. per acre, it is divided into about 20 acre closes and [is] in a high state of cultivation, free from weeds, the fences kept in excellent order, and upon the whole very well cultivated and managed.\textsuperscript{16}

Exactly the type of property one would expect of an agent-in-chief. It should be noted that Heaton’s own land is some considerable distance from Welbeck and this must have necessitated much time spent travelling from home. It has to therefore be presumed that he too employed an agent to keep his own land in such good order. At the beginning of the nineteenth century the evidence of who drove change at Welbeck is found within the correspondence which clearly indicated that it was the Dukes of Portland themselves who sought to control and drive forward improvements and experimentation. Although the letters which have survived detailed work undertaken on the estate that is not to say the Dukes always understood the letter writer’s message. In 1799 the 3\textsuperscript{rd} Duke wrote to his steward ‘I do not understand in general what Thomas [Wood] writes therefore you had better write it from this month’.\textsuperscript{17} The later letters of William Cripwell are far more detailed and a shift has occurred over the first seventy years or so whereby the agent was the main \textit{tour de force} within the estate. However it is impossible to determine whether this is due to the eccentricities of the 5\textsuperscript{th} Duke or something that would have happened naturally. Cripwell deals with the entire minutiae of estate management including agriculture, mineral extraction, school boards, public health, railway expansion and the everyday lives of the tenants. This shift does not appear to have been gradual but instead the result of changing legislation.

It is argued by Thompson and others that the growing importance of the agricultural steward in the nineteenth century was mirrored in the remuneration they received. He maintains that by as early as 1790 a number of agents on the larger estates were already being paid more than \£1000 per annum. However the usual figure was probably closer to \£300 or \£400 even on the great estates. David Spring suggested that some agents were paid in the form of a commission which was usually three to five per cent of the gross rental. Fixed salaries were often accompanied by allowances for rent, etc, these were common forms of supplementing cash payments. At the height of his career in 1821 it is believed that Blaikie earned \£650 per annum and Beasley who acted

\textsuperscript{17} PwK 1242 Letter from the 3\textsuperscript{rd} Duke July 20 1799.
for several large landowners including the Spencers of Althrop £1000 a year.18 However good times and high salaries did not always last and in 1822 Blaikie had told a troubled tenant that Mr Coke was making ‘great reductions in his expenditure so as to endeavour if possible to meet the times’.19 In that year Blaikie’s salary fell by £100 to £550 suggesting that even well renowned and respected agents were not immune from the effects of agricultural depression.

At Welbeck from the late eighteenth century to the middle of the nineteenth the agents were not paid anything like these sums. In January 1785 Heaton told William Gould that he was to have an assistant at Welbeck and that he ought to find his own. The Duke of Portland proposed that Gould should be paid £10 a year towards paying this assistant. However Gould was incensed and recorded in his diary that he had told Heaton

I ought to have £20, I informed him if I was to bargain I would not serve the Duke of Portland and give £14,000 security for £200 per year and find my own assistant.20

It can be ascertained from this letter that Gould’s annual salary at £200 was a long way off the figures suggested above. In fact as a result of Gould’s protests Heaton found him an assistant who was to come to Welbeck for a period of three years at £30 per annum. This was an arrangement which Gould was happy to accept and wrote to Heaton stating that he was ‘satisfied with the agreement’. Little had changed sixty years later. In April 1854 Charles Neale consulted Charles Heaton Ellis on the best way to solicit for an increase of salary. He stated that it was almost forty years barring nine or ten months since he had first had ‘the honor to serve the Duke and family’ under one Mr Godfrey. Over the years the Duke had on several occasions written to Neale to thank him for his work. However Neale was ‘quite sure his Grace had no idea that [he] was underpaid and would have acceded to my request if I had ever asked for an increase of salary’.21 This letter emblematically illustrated that the agents themselves were well aware of how during the first half of the nineteenth century their own role had expanded and developed. Neale suggested that when he had first started the ‘salary was doubtless a

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21 DD/4P/33/94 Letter from Charles Neale to Charles Heaton Ellis April 6th 1854.
fair & sufficient one’. However the estate had been continuously added to and was by 1854 very large and the duties much increased. The receipts from the various trusts, collieries, wood, agriculture and other enterprises was by now approaching £40,000 per annum. Unfortunately the series of letters relating to this matter do not detail what Neale was earning at the time but he was certainly after a considerable increase. In a letter to Heaton Ellis in May Neale argued that he was most anxious not to ask for a rise which was classed as either ‘unreasonable or extravagant’. In order to try and persuade the Duke to provide a wage increase Neale had sent the Duke a statement of a few examples of the salaries paid by other landowners in the adjoining counties. However an agent’s overall remuneration was affected by the simple matter of whether he or the landowner was responsible for paying the clerks. Neale asked for a yearly advance of £200 out of which he was required to remit to the head clerk some £50 leaving him a net increase of £150.22 The struggle Neale had to persuade the Duke to provide an increase in wages hardly sits comfortably in Thompson’s ideal of greater professionalism ensuring higher pay for agents on the great estates. If anything Neale almost persuaded himself that the Duke was unaware of the conditions he laboured under. The detailed estate records would suggest in fact the complete opposite was probably true and the Dukes were perfectly au fait with the sums any and all staff were paid. However from Heaton’s comments at the end of the eighteenth century the Portland’s expected perhaps more than their employers were prepared to give. William Gould recorded a conversation in 1785 in which Heaton remarked ‘the Portland family were very ungenerous to their servants’. Further commenting ‘he had served his Grace eight years and not received a shilling’ and observed ‘they supposed it was every man’s duty to serve them and when they had no occasion for their further assistance it was not unusual for them to pick a quarrel and discharge them’.23 From the nineteenth century onwards agents were expected to take on new and more technological aspects of farm management and in the case of Welbeck extensive building projects and it is therefore hardly surprising that they requested an increase in remuneration. This chapter will now examine how the agent’s role in agriculture over the period under study changed and altered.

22 DD/4P/62/70/1 May 4 1855 Mansfield Woodhouse.
The Agent and the Changing Face of Agriculture

There has already been considerable discussion about agricultural improvements and changes during the eighteenth and nineteenth centuries and it is not intended to repeat the same arguments here. Instead this section will specifically look at the perceived role of the earlier agents in particular at Welbeck. It will first explore the early agents William Gould and Edward Turner and then compare them to the changes which appear in the working life of the later agent William Cripwell. This section will mainly deal with Welbeck simply because the archive of this estate allows for easy comparison in a way that Holkham does not. There is no doubt a different feel to the letters of this latter agent; Cripwell’s voice is commanding and he comes across as a man in charge of the environment around him. The earlier agents were responding to specific requests or acting on instructions from the Dukes of Portland but the domineering presence of the landowner does not appear to be so prevalent in the later letters. In the early nineteenth century for example the Duke demanded reports on the farms and dictated what was planted and when. However with Cripwell’s letters even when the Duke attempted to command a set idea the agent was prepared to make his voice heard. In June 1872 the Duke had sent a message to John Birkenshaw the old foreman at Clipstone Park whereby Portland wished one or both of the paddocks nearest to ‘Cavendish Lodge’ to be broken up ‘at once’ and the whole planted with white turnips. Birkenshaw reported that both pieces of land were heavily invested with twitch weed and the land could not be cleared in time for planting with turnips. Instead it was suggested that the land be ploughed up, fallowed and cleaned ready for swedes the following year and after which it would be sown with barley and seeds for permanent grass in 1874. Cripwell affirmed that this in his opinion was the best plan and recommended that a dressing of ‘Crick Lime’ be applied to the soil before it was sown.24 On other occasions the agent appeared to be totally in command, for example in April 1874 he reported, ‘I met Sam Field at Cuckney and arranged with him what grass land should be mown and what pastured – manures for Turnips and other things’.25 What is very apparent is the sheer diversity of the work undertaken by Cripwell and this amplification of the role had already been described by the earlier agent Charles Neale:

24 PwK 914 Letter from William Cripwell 3 June 1872.
25 PwK 1258 Letter from William Cripwell 15 April 1874.
… the outlay as you are perhaps aware has been increased the late Duke having constantly kept improving every part of the estate by the employment of vast numbers of men in draining, planting & in the forming of water meadows &c and also in erecting Farm Buildings &c.26

On top of his added responsibilities Cripwell was accountable in a way that the earlier agents do not appear to have been for labour relations on the estate.

The Labour Question

A series of letters in 1870 detail the discussions which took place relating to the estate’s labourers and are titled by Cripwell ‘the labour question’. The majority of contracts throughout the period under discussion were verbal, even after, rural literacy improved written agreements were rare. It was commonplace for employers not to pay for days lost through bad weather or illness. During periods of inclement weather a generous employer might seek to find alternative work for his labourers but this was by no means guaranteed. The working week was technically fifty two weeks a year and six days a week, the only official day off being Christmas Day. The length of a labourer’s working day was perhaps more difficult to estimate as it varied according to custom and in different localities.27 This section will examine perquisites, the level of commitment expected from the landowner and the remuneration received by those who worked on the estate both labourers and house servants.

Labourers were recompensed in a variety of ways, payment in money alone was associated with piecework and this was encouraged by a great many farmers. Payment might be split, a percentage paid in money and the rest as payments in kind and according to one Wiltshire labourer in 1868 these constituted half of his wage.28 Daunton proposed that these entitlements were not standardised but could include: gleaning after the harvest, foraging on commons and in woods, maybe an allotment, food, beer the list is endless.29 The single biggest payment in kind was often the letting of a cottage frequently with a garden either free – often for horsemen, stockmen and shepherds – or at a reduced rent for the farm labourer. It might also include the

26 Ibid.
allowance of a small piece of land on which to keep a pig or grow potatoes. Livestock keepers might also be entitled to lamb or foal money and journey money; the ordinary labourers might receive slightly higher pay in the summer months and harvest money. It was not unusual for coals to be transported free of charge to a labourer’s home or an allowance of fuel made. Although it is hard to estimate the value of these payments the most credible attempt at estimating their worth was, undertaken according to Dewey, by the Board of Trade Labour Department in 1907. Daunton maintains that these payments should not be seen as either part of the moral economy nor separate from the market as they were often a crucial area of bargaining for the labouring classes. This system of perquisites continued right up to the beginning of the First World War. However Cripwell’s correspondence would suggest that by the early 1870s the attitude to these non-monetary payments was beginning to change.

The level of commitment a landowner might expect from his employees was evident from the correspondence of the 4th Duke. In 1818 he wrote that in the consequence of the dry weather he required that ten men be employed every day pumping water over those parts of the Park nearest to the lake with the fire pump. In order for this to be achieved successfully two shifts were to be employed ‘incessantly’ from ‘4am to 8pm’. The first shift was to start at 4am and the men were then to work in four hour stints relieving each other appropriately. The Duke gave the order supposing that this quantity of labour could be spared from other jobs. At the beginning of the nineteenth century the Duke was able to dictate the terms on which the men worked, however the situation changed as the century progressed as recruiting and retaining labourers became more difficult.

Even as late as 1850 Lord Henry Bentinck had been able to dictate that the helpers employed by Mr [Horsham] would after the 1 May 1850 have their wages reduced by two shillings a week. This situation was to continue as long as free trade prices lasted. The Portland’s as leading agriculturalists were advocates of protectionism and they had been firmly convinced that the strength of the landed

31 PwH 1514 Letter from Fullerton August 20 1818.
32 PwK 4703 Letter from Lord Henry Bentinck 1850.
interest would carry the day. Less than twenty-five years later hiring and keeping the workforce on the estate was proving somewhat problematic as William Cripwell recorded in 1872 ‘Your Grace is probably aware several labourers principally young single men have recently left your Grace’s employ in order to get work on the Railway or elsewhere at higher wages’. The farm labourers as a result of the increased remuneration being paid elsewhere began to demand an increase in their pay. Cripwell aware of the situation used his local contacts and newspaper reports to monitor the situation.

The difficulties presented by the ‘labourers’ question’ was debated by the Chamber of Agriculture a meeting which Cripwell personally attended. He and the other employers with whom he talked were of the opinion that the farmers would henceforth need to pay more ‘wages in coin and less in kind’. This change was necessary as the labourers themselves did not place a ‘proper value’ on the items they received as perquisites. Cripwell felt that this was a great misfortune both to the farmers and men as this method of payment allowed for an ‘immeasurable’ number of ways in which both sides could advantageously assist the other. Hard cash had in the past been used to pay only the very best men. The Duke had asked Cripwell how much the men were paid and when the facts are revealed it is hardly surprising the men were either leaving or seeking a pay rise. For it appears that Mr Tebbet’s men had been paid 2/6 per day for the last 35 years. During the last 12 or 14 years they had received 2/9 when not by the piece and 3/- by the piece. Swift’s men had until the last 8 or 10 years received 2/- to 2/3 when the best had been paid 2/6. The farm men were paid 2/6 and 2/- for Sunday. The stablemen received some perquisites in the form of beer and vegetables and 15/- per week. Cripwell gleaned from the Chamber of Agriculture Journal that the stablemen at Newmarket and gone on strike and their remuneration increased from 15/- to 18/- per week. Cripwell believed that to pay the additional 3/- per week it would be necessary to make five men undertake the work of six.

The question of wages was still rumbling on into early 1873 when Cripwell stated, ‘we are certainly at present rather under the rate paid by farms in the district’ he

34 PwK 881 Letter from William Cripwell 16 April 1872.
35 PwK 890 Letter from William Cripwell 28 April 1872.
36 Ibid.
further argued in the estate’s defence. ‘but then our men are not so sharply looked after and take things easier’. Finally it was proposed from the 1 February 1873 to increase the wages of all able-bodied by 3d. ‘Second-rate’ hands and boys were to continue on the same pay as special arrangements were already in place for those that were deserving of a raise in remuneration. The best of the navvies and quarrymen were to be paid full wages of 3/- per day but from hereon in were required to give a week’s notice on quitting. Able bodied labourers under this agreement were to be paid 2/9 per day; the same for first class labourers, second rate men and boys were to receive ‘what they are worth’. Garden labourers and those who laboured in the woodlands were to receive 2/9 and the skilled woodsmen 3d more. It was stipulated that all labourers were to be at work for ten hours a day that is from 6am to 6pm allowing two hours for meals. On Saturdays those who worked on areas of the estate other than the farms were allowed to leave at 3.30pm and not return until 7am on Monday. When the men took time off during the working day their pay was to be stopped unless the weather was bad and then they could make up the time on fairer days. Dewey maintains that nationwide information on agricultural wages is scanty until after 1900. Thus the information at Welbeck demonstrates the importance of micro-studies in exploring what was happening in different localities and further studies of this kind are vital. The situation at Welbeck however concurs with Daunton’s assessment of the situation concerning rural wages. He advocates that the emergence of the National Agricultural Labourers’ Union in 1872 had challenged the dominance of rural society by farmers and the gentry. Although the 1870s witnessed a severe agricultural depression there was a marked improvement in the standard of living of agricultural workers with real wages often rising by as much as twenty-five per cent. Wade Martins has investigated the wages of the labourers at Holkham in the mid-nineteenth century and states that they were similar to those elsewhere. In 1840 wages varied between nine and ten shillings a week for men, around two shillings a week for boys and 4 to 6 shillings for women. On top of this the labourers were paid a bonus at harvest time which amounted to around £5 or £6 each as well as extra monies for other family members who participated. The Earl of Leicester did not provide

37 PwK 1063 Letter from William Cripwell 13 January 1873.
38 PwK 1075 Labourers wages at Welbeck proposed arrangement from 1 February 1873.
harvest beer or ‘harvest folic’ and so those who worked for him directly during this period were given extra remuneration. This could amount to 10 shillings in place of beer and 5 shillings in respect of the frolic. Although wages were no higher than elsewhere Wade Martins states that cottage rents were lower. She maintains that Holkham rents were around £2. 10s and £3 and in open villages between £4 and £5. According to Clifford large estates rented cottages out to their labourers so that wages could remain low.\(^{41}\) However at present the same amount of information on Holkham is not available in the same amount as there is for Welbeck. It was not just the farm labourers that were unhappy, other employees joined in the scramble for higher wages.

The dispute over wages spread and Cripwell faced discontent from the house servants too. The head laundry maid applied on behalf of herself and her maids for a pay rise which led Cripwell to investigate the perquisites received by this section of the household staff. It transpired that many years previous the servants board wages had been reduced by 1/- a week as they had been supplied with vegetables. However during the last winter this supply had frequently been short particularly of potatoes. Although Welbeck grew its own and there should have been plenty this was often not the case. Stratton’s *Agricultural Records A.D. 200-1977* details the weather and suggests that the weather was either too wet or too dry for the successful cultivation of root crops and this demonstrated why potatoes were in short supply in the late 1860s and early 1870s.\(^{42}\) When the payments in kind were compared to those at Thoresby it transpired the male servants were paid 1/6 more and the females 2/- more than those at Welbeck. The servants were given milk, butter and vegetables but no beer, while at Welbeck they paid for milk butter but received beer. Cripwell suggested that if the Duke felt obliged to increase wages it should be by more than 1/- per week and only extend to the ‘servant’s hall people’.\(^{43}\) The evidence from Welbeck suggests firstly that the land agent was expected to deal with the whole estate rather than just the agricultural labourers and secondly that a certain degree of agency existed within those who worked on landed estates. In areas where there was more than one large estate in close proximity it appears that the servants and labourers talked to each other and were well aware of what each land owner paid.

\(^{43}\) PwK 1166, Letter from William Cripwell, 20 August 1873.
The agent at Welbeck at least as far back as William Gould had always had considerable dealings with the house staff and took an interest in their well-being. In 1788 when the housemaids had threatened to leave because of the housekeeper’s treatment it was left to William to sort out.\textsuperscript{44} By the 1870s young single labourers were easily able to find work elsewhere and therefore part of the changing role of the land-agent was to ensure that he kept as many of these young men in employ as was necessary to ensure the smooth running of the estate. Labourers who found work outside of agriculture did not necessarily need to move from the countryside. This was the case at Welbeck as work could be found in mining, building and the railways. Dewey argues that the falling labour supply was matched by falling labour demand.\textsuperscript{45} Perhaps the main reason for this was increased mechanisation and the need to fill the gap in the labour market might well explain Welbeck’s increasing mechanisation under Cripwell. It seems there can be little doubt that part of the changing role of the land-agent was the need to adapt as conditions and legislation changed rapidly in the latter part of the nineteenth century.

During the 1830s and 1840s it has been argued that the introduction of threshing machines and other machinery were responsible not just for the Swing riots but for mass under and un-employment in rural areas. However the example at Welbeck suggests that by the 1870s men had left because they could obtain higher pay elsewhere. This exodus would indicate that men like Cripwell needed to alter their working practices to counteract a falling labour force. Although strikes occurred Dewey maintains that long term technological unemployment in the nineteenth century does not appear to have been a social factor. In adopting mechanisation land-agents were required to invest large amounts of landowners capital and therefore needed as already discussed in chapter 3 to quickly assimilate what types of machinery worked best and on which land. It could be argued that their skills in handling men became less important and technological skills more important. Education into new patterns of land-management became essential as the labour force shrunk and the population continued to grow. The land-agents role was, during this period, very much changing.

\textsuperscript{44} M. Hanson, (ed.), \textit{Ducal Estate Management in Georgian Nottinghamshire and Derbyshire: The Diary of William Gould 1783-1788} (Nottingham, 2006), pp. 185-186.
\textsuperscript{45} Dewey, ‘Farm Labour’, p. 850.
Mechanisation and Technology

Although mechanisation has already been covered in more general terms in chapter 3 it is worth noting here that the technological advances that the agent had to come to grips with extended beyond agriculture into other aspects of the work undertaken upon the estate. Agricultural improvements were not just about the purchase of ever increasingly more sophisticated machinery, it was instead above all about making sure it was being used both correctly and efficiently by those carrying out its operation. It was no longer sufficient to carry out long established practices instead new routines and procedures had to be invented and put into practice.46

The technological movement towards steam power within the agricultural community (see Chapter 3) was also hampered by a lack of education for those who were to be responsible for the operation of this new equipment. This can be seen in the accident relating to the steam plough at Woodhouse Hale in 1871. Cripwell called together the steward John Fields and Mr Atkinson who was a partner in the firm from whom Charles Neale had arranged to do the steam ploughing. Atkinson attributed the failure of the steam pan ‘entirely to its being over filled with cut straw’.47 It appeared that Atkinson instructed the men in charge not to fill the pan ‘with chop’ but leave ‘a chamber space of four or five inches at the top for the spare steam and to allow it free access to the outlet pipe’. Instead it appears that the pan had been filled ‘quite full’ by a ‘fresh man’ who had not previously undertaken the task and this had left no room for expansion and had prevented the steam being able to enter the outlet pipe.48 Importantly he did not consider that there was the slightest danger of the pans bursting if they were properly managed in the first place. Ultimately Cripwell came to the conclusion that the cause of the incident was as presumed by Atkinson but the agent laid the blame squarely on this man’s shoulders. He alleged that his initial instructions to the men in charge had not been ‘sufficiently explicit’.49 This leads to the question of who was responsible for the employment and education of the men in the correct use of this new technology. In the past boys would have learnt their trade by watching and working at their father’s side. The example of the damage to the steam plough detailed above demonstrated that

47 PwK 856 Mr Atkinson’s Report into the Failure of the Steaming Apparatus at Woodhouse Hale 7 February 1871.
48 Ibid.
49 PwK 855 Letter from William Cripwell 7 February 1871.
the introduction of finely tuned machines needed far more instruction than mere word of mouth, the time was fast approaching where a more formal approach was required. The agent also needed to understand the processes involved and thus the skills required moved from oxen and horse husbandry to the world of mechanical engineering.

In 1871 it was not just agriculture that was beginning the process of mechanisation. At Langwith Corn Mill the Duke agree to pay £600 towards the installation of a steam engine. Mr Jarvis who leased the mill had met with Cripwell and agreed to contribute £200 towards the overall cost, ‘do all the team work’ and pay five per cent per annum interest on the remainder. Jarvis had hoped to request that the Duke would allow him to pay the whole cost but realised that it would probably cost more capital than he had readily available. The downside of this agreement was the engine installed remained the property of the Duke. Often buildings would need adapting to this new form of power but in this instance the mill was already ‘lofty’ and therefore the existing chimney would not require to be any higher above the roof than that of an ordinary house. Importantly for the Duke this would ensure its invisibility from Welbeck. The intention was to only use the new steam engine when water levels fell below the level where they could successfully be harnessed.\(^50\) No wonder mechanisation was slow; few would have been able to afford the expense just for a short period and occasionally.

The introduction of machinery could speed up a number of processes. A letter amongst the Welbeck archive from John Bradshaw at Knowle explained that after making ‘every enquiry from practical men & [having] personally examined the performance of two rival systems’ he had no hesitation in deciding that Mr Smith’s system of smashing up the land was perhaps the best. He stated that the last week in Feb we had not ploughed one acre of land for roots & had 90 acres very foul to prepare. We immediately set it to work with the 3 tine implement penetrating the land 10 inches, cross cut it with the same & then with the 5 tine. The first two operations succeeding each other the latter following at an interval of three weeks or as the land became sufficiently dry we then drag harrowed & rolled to reduce the surface soil & kill the weeds we can get through 7 acres per day with the 7 tine 10 to 11 with the 5… the cultivator leaves all weeds where they ought to be at the top to be killed by the sun or carried off.

Bradshaw proposed that there were two other benefits to the introduction of this type of machinery. His ideas indicate the changes that were beginning to occur as legislation

\(^{50}\) PwK 849 Letter from William Cripwell 31 January 1871.
started to explore the working conditions of the labouring classes. The first theory suggested that steam would benefit the employer by helping to fill his ‘purse’ and the second acknowledge it would elevate the social and physical condition of the labourer.\textsuperscript{51} An agent confident of his own abilities would have helped during this period of transformation and Blaikie fitted into this category. \textit{The Farmer's Magazine} published ‘Mr Coke’s present steward, Mr Blaikie, is a good mechanic, and has invented some implements which are well adapted, in the best way’.\textsuperscript{52}

The 5\textsuperscript{th} Duke undertook a number of large building projects at Welbeck. According to Tuberville these included the development of the kitchen gardens which encompassed some twenty-two acres and were surrounded by high walls, an extension to both ends of the south wing of the house and then the addition of another storey and towers to the same wing, the construction of a large riding school, a tunnel over a 1000 yards in length from the main house to the riding school and alongside it another rougher one for the use of the workmen. Another much more elaborate tunnel was excavated and built leading to Worksop and intended as a carriage drive. Other excavations included an underground great hall 160 feet long and 63 feet wide which was originally intended as a chapel and provision was made for a library. In the area of the new riding house other buildings arose for example gasometers to supply the now introduced gas lighting, new stables and offices.\textsuperscript{53} In light of all the construction work Cripwell had trouble keeping up a ready supply of the right type of bricks and so the brickyard was mechanised. Granger the foreman in charge estimated that once the men got used to the work they would be capable of turning out ‘1000 per hour’. The added bonus of the machinery installed was that it needed less skilled hands as ‘making by hand’. Importantly the estate Cripwell recorded ‘shall not have so much difficulty in getting the necessary labour’ and they had plenty of clay. The intention was that once the machines were fully operational it would no longer be necessary for the estate to buy in supplies.\textsuperscript{54} Although it was Cripwell’s responsibility to oversee these works it was not unusual for the Duke himself to appear and according to those he addressed he often seemed most knowledgeable.\textsuperscript{55} There can be little doubt that the eccentricities of

\textsuperscript{51} DD4P/62/71/5 John Bradsaw 11 September 1861
\textsuperscript{52} The Farmer’s Magazine: A Periodical Work Exclusively Devoted to Agriculture and Rural Affairs Volume 19 (Edinburgh, 1818), p. 482.
\textsuperscript{53} Tuberville, A History of Welbeck Abbey, pp. 437-438.
\textsuperscript{54} PWK 1258 Letter from William Cripwell 15 April 1874.
\textsuperscript{55} Tuberville, A History of Welbeck Abbey, p. 442.
the 5th Duke impacted on the need to mechanise the brick making capacity of the estate and this in turn affected the role of the agent. In order to meet the needs of his employer it was necessary to adjust and to learn another trade that he might ensure its efficiency. One other area which the land agent was required to learn new skills rapidly was with the advent of coal mining and mineral extraction

**Coal Mining**

Mineral extraction was not a skill many medieval land agents would have required but at Welbeck evidence from Gould’s diary suggests that coal mining was fast becoming an established industry by the mid-1780s. He recorded on August 15 1785

> In consequence of a letter I received from Mr Heaton [agent-in-chief] on Saturday evening I went to Chesterfield this morning, called on Mr Maynard to consult with him respecting a colliery at Brampton belonging the Duke of Portland in possession of Mr David Barnes.\(^{56}\)

Spring proposed that rural landowners in the age of ‘coal and iron’ frequently took advantage of the opportunities presented by the presence of minerals on their land to set up mining companies or to lease the rights. This in turn led to a secondary interest in the building and construction of railroads.\(^{57}\) The importance of the railway to such enterprises was of vital importance for transporting coal and other minerals to market. At Welbeck the issue of a proposed railway route was used to try and force the Duke to grant a coal right to the Arkwright Trustess. William Cripwell wrote in 1872

> The more I consider this the more I feel an attempt is being made as Mr Bailey expresses it ‘to leave your Grace’s interests out in the cold’. Early in June Mr Mills applied on behalf of the Arkwright Trustees for a lease of the best part of your Grace’s Coal Field and as he had got no decisive reply it would appear some influence has been brought upon the Midland Officials inducing them to project their new Line so as to shut us out. The statement that the Sutton side is more favourable for the construction of the line is mere subterfuge and particularly as the line is already made more than half a mile on our side and their new scheme runs parallel with it.\(^{58}\)

Mr Bailey had been consulted legally and commented on the 22 November that Bailey was considering

\(^{56}\) M. Hanson, (ed.), *Ducal Estate Management in Georgian Nottinghamshire and Derbyshire: The Diary of William Gould 1783-1788* (Nottingham, 2006), p. 85.


\(^{58}\) U of N PwK 1026 Letter from William Cripwell 25 November 1872.
... whether it will be to your Grace’s interest to listen to Mr Mills proposal for the Arkwright trustees taking a Lease of your Grace’s Coal with a view of working it in conjunction with their Coal.\footnote{U of N PwK 1024.}

The Arkwright Trustees were prepared to go to great lengths to ensure the expansion of their own coal mining ventures even if this meant forcing the Portlands to grant them a lease. Although coal was an all-important commodity in the age of industrialisation it did not stop the Portland’s worrying about the impact mining might have on the view from their mansions as recorded by Cripwell in early 1873

Mr C J Neale was at Bolsover on Monday when it was clear and went to the top of the Castle … the Coal workings near the termination of the existing railway [are] very objectionable although at a considerable distance they would be fully in view from the Windows of all the principal Rooms in the Castle… I will be at Bolsover some day next week and will if the weather is clear get a view from different points to enable me to form an opinion where the coal workings can be placed so as to be the least eyesore.\footnote{U of N Pwk 1091 Letter from William Cripwell 14 February 1873.}

There was a developing gap between expectations of large royalties and achieving this with as little impact on the landscape around the family homes, a difficult path for the agent to tread. The extraction of minerals it seems created the need for an educated professional man who understood the aims of the landowner yet was equipped with the expertise to influence the manner in which these were reached.

The sale and marketing of these lucrative commodities was a skill that many land-agents needed to acquire during the nineteenth century. No longer was running an estate such as Welbeck simply a matter of keeping an eye on the house and ensuring agricultural productivity remained buoyant. For an agent with little or no specialised education this must have been a steep learning curve. A letter from William Cripwell in 1872 provides evidence of just how much income coal mining could generate through the letting out of the mineral rights and simply collecting the royalties. He recorded

I have this morning received from Mr Woodhouse the account of Coal worked here the six months ending 30 June. The Royalty for the half year amounts to £2977.\footnote{U of N Pwk 944 Letter from William Cripwell dated 10 August 1872.}

Many landowners leased their mineral rights rather than working the mines themselves. Like all leases at this time they varied in the detail but most stipulated a fixed annual rent often called the ‘certain rent’ and this protected the income of the landowner even
when the mine was not being worked. The lease was perhaps the easiest way to utilise the coal under their lands without actually distracting from the landowner’s usual political and social pursuits. At Welbeck Cripwell’s correspondence refers to the royalties obtained rather than the rents paid by those who leased the mines. Working out at what rate these royalties should be set seemed to be no easy matter. On 26 October 1872 Cripwell wrote to the Duke of Portland

On receipt of your Grace’s letter of the 20th I wrote to Mr Woodhouse and told him that your Grace thought fluctuating Royalties regulated by the market price much fairer than a fixed rate

Furthermore the letter continued this moving royalty already had credence for

The system of fluctuating Royalties will be readily adapted to the Acre Principle as it will be much the same as was adopted by the late Duke with regard to the Farm Tenants when the Corn Laws were repealed only we shall have to deal with Tons of Coal instead of Quarters of Wheat.

The matter of royalties was complicated because the Portland Coal mines had certain peculiarities. It is hard to ascertain whether these were local to the area or occurred more generally in other areas. In order to explain the situation William wrote

As the mines here are deep the works extend a very considerable distance from the Shafts and it frequently happens the Coal under the lands of different proprietors are being worked from the same shaft at the same time and I do not see how a Tonnage Royalty could be correctly proportioned amongst the Proprietors as when the Coal was brought to the Bank it would not be known from whose land it came.

Nottinghamshire coal was of different qualities and this posed its own set of problems for in the same letter William recorded

Again in this District Coal from the same seam is sold at various prices according to quality and not infrequently comprises Hand Coal, oft Coal, Cobbles, Slack &c &c which is probably not the case in Scotland.

Investment in or the leasing of mineral rights may well have helped many of the great estates survive and even prosper in the deep agricultural depressions of the late nineteenth century. As agricultural prices fell coal was still needed in large quantities and thus the incomes of the aristocracy were protected as they came to rely less on agricultural productivity and more on commercially based enterprises. In other areas

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63 U of N Pwk 1052 Letter from William Cripwell dated 26 December 1872.
64 U of N PwK 1109 Letter from William Cripwell 14 March 1873.
65 Ibid.
legislation itself forced change and this in turn affected the amount of work which fell upon the agent as will be seen with education and public health.

Education

The 5th Duke of Portland was a staunch supporter of the Church of England. Between 1869 and 1873 the Gladstone government in his opinion attempted to introduce legislation which the Duke believed was harmful to the interests of the established church. He was particularly wary of any measure that might affect the Church of England’s influence on education especially if it promoted in any way the views of the Dissenters. However it was the Education Act of 1870 that opened the flood gates for appeals for financial assistance from the clergy and others interested in church schools. Two opposing systems had been created that of Joseph Lancaster who in 1810 established the Royal Lancasterian Society which in 1814 became the British and Foreign School Society. This was essentially fashioned mainly by those who dissented from the established religion. To counteract their influence in 1811 the Anglicans created the National Society which was supported by Dr Bell. State inspection of elementary schools began in December 1839 when the first two His Majesty’s Inspectors (H.M.I.s) were appointed. From this point onwards acceptance of any government monies granted towards the education of the poor automatically conferred on the inspectorate the right to examine the said school. By 1850 the number of inspectors had risen to twenty-three. Most of these men came from the older universities and ‘middle-class’ backgrounds but it was not until the 1860s that these men gained the reputation of being ogres. This change in perception was the result of changing government policy with regard to the distribution of state grants. Rural schools had the added problem of attendance, children went to school regularly during the winter months but during busy agricultural periods their labour was essential back on the land. Therefore managers of rural schools often ‘begged’ the inspectors to carry out their visits during the months the children were most likely to appear in school on a regular basis.

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66 Ibid, p. 408.
67 Ibid.
By 1850 according to Digby the typical village school was voluntary and founded by the National Society and its main aim was to promote the ‘truths of the Church of England’. The local incumbent of the parish was usually the sole manager and he would be primarily interested in religious and moral rather academic prowess when appointing either a schoolmaster or mistress. From the mid-nineteenth century radical ideas were being proposed in order to increase educational provision and to raise its standards in both urban and rural situations. Through the Elementary Education Act of 1870 it was possible for a national system of schooling to be provided. It required that a school board be formed in an area where there was insufficient places for children within a National or British Society or school or by either dame or private schools. The drawback of this act was that it enabled a single rural school board to be formed on the basis of one parish. Ultimately this led to inefficiency and money being wasted on duplicated administration and elections. Most of the information available for Welbeck comes from the correspondence of William Cripwell in response to the 1870 Act.

References to education and the amounts expended by the Duke of Portland are relatively rare during the agency of William Gould. In fact it would appear from his diary as for the record of October 1785 that the Duke of Devonshire took more interest in this field than the Duke of Portland. On this occasion Gould and Heaton examined land at Whittington Common which had been requested by the freeholders of Newbold and Dunstan for the ‘augmentation of a free school’ which had been recently constructed by subscription. The intention of the visit was twofold to pay Mr Milnes of Dunston £50 which was a gift from the Duke of Devonshire and to report back to the Duke of Portland. A similar occurrence took place less than two months later when a number of residents from Gringley on the Hill met with Mr Heaton and William Gould to beg that a school house be built in that neighbourhood. They begged that the Duke of Devonshire grant some measure of endowment to the project. Mr Heaton – the agent-in-chief agreed on this occasion to allow 30 guineas towards the building. Part of the return on the common land of £14 a year would be given to the master for teaching 14

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71 Ibid, p. 1488.
72 Hanson. The Diary of William Gould, p. 90.
poor children annually. The Duke was to be allowed to appoint the master. In 1811 the Duchess of Portland allowed £5 14s 0d towards the teaching of 8 poor girls at Clipstone. This was split into £4 4s 0d teaching costs, 10s for school rent and £1 for coal. William Cripwell’s involvement in this issue is far more intense as a result of new legislation.

Almost immediately after the 1870 Act was passed William Cripwell found himself enmeshed within its administration. The correspondence between William Cripwell and the Duke of Portland between 1870 and 1873 is full of the problems that occurred as a result of the legislation. The Duke’s intermediary in all matters was Cripwell. On the Welbeck estate it propelled the agent to the forefront of education in a way which hitherto was unheard of. There was scarcely a week which passed within this period without reference to the problems which were being encountered in one school or another. In November 1870 William Cripwell received a letter from Edward Bailey explaining how the new law might affect the estate. The information he imparted was the result of a visit to the Education Department of the Privy Council. The knowledge thus obtained was not particularly distinct and the main issues would pertain to the questions of ‘sufficiency and efficiency’. Under the new Education Act it was decreed that there should be ‘provided for every school district a sufficient amount of accommodation in public elementary schools available for all the children resident in the district, for whose elementary education efficient or suitable provision is not otherwise made’. As a result of Bailey’s correspondence Cripwell put together a list of the parishes in which the Duke had an interest and the work that would need to be undertaken to bring the school up to the required standard. (Appendix 1)

The impact that an inspector could have on a school was such that it was hardly surprising that Cripwell himself dealt with H.M.I. the Reverend J Watkins when he visited Whitwell school in 1870. On the character of the inspector he stated that ‘he appears very intelligent and thoroughly acquainted with all matters connected with schools and education’. Afterwards he reported with relief to the Duke ‘In the first place Mr Watkins said the Scholars had generally passed a satisfactory examination and that

73 Ibid.
74 Edward Turner Welbeck estate vouchers
75 PwK 261/1 Letter from Edward Bailey, London, November 1870.
76 Tuberville, A History of Welbeck Abbey, p. 408.
he should report favourably to the state and efficiency of the Schools’.  
Furthermore the inspector offered to afford any further information that the Duke might require in the future on the subject. During the inspection Cripwell raised the issue of a suitable site for a school for Elinton and Cresswell and discovered that the inspectorate would not recommend it being built between the two villages. Instead it should be built within the confines of one or the other for it had been found that schools built without a population in the immediate vicinity did not do well. Cripwell had then suggested that a room be built which had dual purpose at Cresswell, being used both for ‘Divine Worship’ and as a school room. However Watkins replied that the government would not allow rooms which had been built with a grant to be used in this way. However he did know of cases where this happened without objection or comment from the bishop.  

The school master and mistress at Whitwell relied on support from Welbeck Abbey for the most ‘trifling’ of necessities. When the original scheme had been set up the schools were ‘under the eye of the Ladies’ and both the master and mistress were single. By 1870 the master was married with a wife and young family and the school mistress Mrs Hardcastle had her husband and three of four sons and one daughter all grown up but still living at home. Her sons worked as clerks to a solicitor in Worksop and used a pony which the estate paid to stable. Cripwell had mentioned the complexities of the circumstances relating to these two teachers to the Inspector who thought it was ‘a bad arrangement’. He thought the situation would be improved if an increased money grant was given and the teachers should then find for themselves all linen and minor articles of housekeeping. This situation continued until 1872.

Late in 1872 Cripwell met with the managers of the school and assessed the annual running costs even for this ordinary elementary school to be anything from £210 to £240 of which at least a third needed to be raised by subscription. In the past the majority of girls and some of the boys had been provided with free places and in return the girls had carried out any needlework required by Welbeck Abbey. However Cripwell was under the impression that the time had arrived when all free education should cease and all scholars be required to pay. The ‘sewing’ would be undertaken at

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77 PwK 836 William Cripwell 15 November 1870.
78 Ibid.
79 Tuberville, A History of Welbeck Abbey.
80 PwK 837 Letter from William Cripwell 15 November 1870.
Clipston where Mrs Walton had assessed the quality of workmanship was much higher. It was expected that the Duke would continue to contribute a subscription to the school but anticipated that it would be less than previously expended. Cripwell was glad to see the present situation come to an end and estimated that overall the school at Whitwell alone had cost the estate more than £200 per year.\(^81\)

This was not the only school that gave cause for concern. If anything the school at Gringley was even more problematic mainly because of the vicar of the parish. This man caused Cripwell to declare ‘I think’ he ‘must be insane’.\(^82\) Reverend Robert Gamson who was originally a native of Gringley had continued to take an interest in its affairs and he too described The Reverend Scott as ‘impracticable’ someone who had ‘so entirely alienated all his Parishioners that no one can act with him, nor will they contribute any money (of which plenty would be forthcoming where he at all rational and conciliatory)’.\(^83\) The situation deteriorated to such an extent that Cripwell had to intervene. Further investigation by Mr Bailey at the Education Office in London revealed that of those named on the deeds one had died and another had left the neighbourhood many years previously, a third had not paid his subscription and so was disqualified from acting and this had left the vicar to act on his own. Not an ideal situation when the head of the parish appeared to be somewhat mentally unstable. The Education Department attempted to have the school transferred to a School Board but the bishop would allow not the property of a Church school to be handled in this manner.\(^84\) With the encouragement and support of Cripwell the principal inhabitants of the parish prepared a ‘memorial’ which requested the Education Department instigated an enquiry into the problems being faced.\(^85\) Under this pressure Reverend Scott wrote to Cripwell stating ‘I should rejoice if the School could be fairly carried on without a School Board’.\(^86\) It was then arranged that the agent would meet the following week with Scott to ascertain ‘what gentlemen (if any) would be most acceptable to him as School Managers’.\(^87\) This meeting turned into a disaster and Cripwell reported ‘I found him the most intractable and unmanageable article I have ever had to deal with and I assure your Grace my temper & patience were sorely tried, but I hope I managed to

\(^{81}\) Pwk 1031 Letter from William Cripwell 30 November 1872.
\(^{82}\) PwK 1028 Letter from Cripwell 29 November 1872.
\(^{83}\) Included with PwK 1028.
\(^{84}\) PwK 1035 Letter from William Castleman 4 December 1872.
\(^{86}\) U of N PwK 1040 Letter from William Cripwell 7 December 1872.
\(^{87}\) Ibid.
control both’. Despite all the hard work the school managers had to force an entrance into the school room and act without the co-operation of the vicar. By February of 1873 matters had settled and the managers were running the school independent of the Reverend Scott, they wrote to Cripwell to thank him for the services rendered. They stated ‘we cannot allow this opportunity to pass without expressing our admiration of your straight forward and manly demeanour in directing your energies against the powers of darkness in this most iniquitous affair.’ They acknowledged the Duke of Portland’s contribution but understood the bulk of the work had been undertaken by his intermediary.

William Cripwell was also approached so that he might lay before the Duke calls for help rather than directing matters himself. In June 1824 a letter has survived from G. Dob[ell] who wrote to ask for the Duke’s kind help in ‘the effort made to educate the children of this parish [Worksop]’. Two new schools had opened in the past year where before there had only been one for ‘upwards of 600 children’ and it had been discovered that many of the boys had been without education. Of the 105 that had presented themselves to the new schools 42 were unable to read. Consequently a large girl’s school had also opened. It was estimated that £140 would be needed annually for maintenance, £25 would come from the as the parishioners had recently raised £700 to construct the girl’s school help was being sought from a few outside the parish.

On the Holkham estate the only schools which were built and entirely financed by the Coke family independent of any society were those at Holkham itself. Although their funding came from entirely private means much of the administration of both establishments (separate buildings for boys and girls) was carried out by the estate. According to Wade Martins the only other interest shown by the Earl of Leicester in education was in the building of a village reading room and library in 1886. Other schools were set up by local clergy including the national school at Tittleshall in 1836, another at Castle Acre in 1839 and the Earl of Leicester donated £30 to the building at Billingford. During the 1850s other schools were erected but none were the idea of the Earl, however as at Sparham once in existence he regularly contributed £5 to its running.

88 PwK 1043/1 Letter from William Cripwell 11 December 1872.
89 PwK 1069 Letter from William Cripwell 18 January 1873.
90 Letter from the Management Committee of Gringley School 25 February 1873.
91 DDP6/13/22/209 June 24 1874.
expenses. The limited interest in the building of schools before the 1870 Act was typical of many estates including Welbeck.

As already seen at Welbeck after the 1870 Act considerable more attention, time and effort was devoted to education not just here but on many estates in general. Following the act in 1872 the Earl gave a subscription of £100 towards the school at Wighton. The parishioners and the Earl constructed a school at Flitcham in 1875 with the Earl contributing £193 towards the cost. Small sums were given to enable the enlargement of the buildings at Burnham Thorpe, Sporle and South Creake. The school at North Creake received a significant donation of £388. All in all the amount expended by the estate in the 1870s amounted to some £1,059.\(^\text{92}\) The plans have survived for a school at North Creake which illustrate the quality of the intended building. Fig 6 and 7

**Proposed school at North Creake**

![Proposed school at North Creake](image)

Fig 6: Source Holkham Estate Archive

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However unlike the Duke of Portland the Earl of Leicester was not against school boards. Furthermore most of the members of these boards were his own tenants and therefore it was easy to maintain his control over their activities. The Duke of Portland on the other hand was exceptionally keen to prevent the interference of boards having any say in schools within the estate. At Gringley it was only the agents’ involvement albeit on the Duke’s insistence which stopped the board taking over the school. It is unclear why the Duke was so keen for the schools to remain independent and it can only be surmised that he believed this was the best way for the Church of England and the estate to retain control. Education was not the only area in which the agent played an expanding role, increasing the health of the labourers became part of his day to day responsibilities.

**Public Health**

Matters relating to health gradually began to creep into the remit of the land-agent or steward as new legislation and regulations came into force. The 1830s and 1840s constituted the formative years of modern public health. During this period
Edward Chadwick visualised a system whereby the health of the nation would be improved through public works and began to campaign for water and sewage works particularly in urban areas.\(^93\) Under the Public Health Act of 1848 local boards of health were formed.\(^94\) While neither the Dukes of Portland nor their agents sat on these boards there can be no doubt that their opinion was sought as to who should. In the case of the 1873 Worksop Board of Health election the 5\(^{th}\) Duke wanted Cripwell to vote as his proxy but Cripwell doubted this would be possible. Instead he gave his judgement that the first three men on the ballot paper constituted the best men and suggested the Duke simply put his initials next to their names and then leave the paper with John Hemmington for collection.\(^95\) Like public health, housing during the nineteenth century became subject to various Acts of Parliament. In 1868 Torrens’s Act was passed and it formed the starting point of all future legislation on housing. The main principle of this act placed the onus on the landlord to ‘keep it in good repair’.\(^96\) This act was amended in both 1879 and 1882 and helped to drive forward a continual but gradual improvement of the dwellings which were inhabited by the working classes.\(^97\) This section will examine a number of examples from William Cripwell’s correspondence which indicates the land-agent’s growing awareness of health and housing legislation which progressively altered his role during the latter half of the nineteenth century.

In September 1873 Cripwell received a letter of complaint from Greenhalph and Hardwick who were tenants of one of the Duke’s mills. Unfortunately this building was situated below the outfall of the Mansfield sewers into the River Mann. Two years previously it had been intended by the Commissioners to convey the sewage in an iron pipe to an outlet clear of the mills but after consideration and presumably an investigation into the expense of the scheme, it was postponed to a later date. The two men did not merely work but also lived in close proximity to the mill dams and Cripwell was under the impression that they ‘no doubt’ suffered much from ‘the foul state of the water’. Although he laid the problem before the Duke he proposed that the


\(^{94}\) *Ibid*, p. 47.

\(^{95}\) PwK 1163 Letter from William Cripwell 5 August 1873.


best way forward was to write a letter to the clerk of the improvement commissioners for their consideration at the first available meeting.  

One tenet of Chadwick’s vision was that water should always be available and preferably within the home. Securing access to water or routing mains across the land was not always simple. In draining the land around Cresswell Cripwell feared that they had interrupted the supply to the spring house which served this area, despite ordering the work not to be undertaken in the near vicinity. Tebbet and Baker had been of the opinion that the water to the pipes had been supplied by ‘vertical springs’. On 1 May 1874 Cripwell visited the site where the men were ‘puddling round the spring’ in the middle of the meadow and the water in the drain had then risen by 1 feet 10 inches. The level had been measured in the spring house before this had commenced and consequently it was found that the water had risen one and a half inches proving that there was a connexion between the two areas. More importantly it was discovered that the spring house was not water tight. Further investigation revealed that when it was constructed this had not been one of the requirements. Whilst it was being built it had been discovered that the water within it rose and fell according to the levels in Thorpes Dam which had since been drained. Cripwell stated that it was ‘no wonder the spring had failed’. The solution therefore was to proof the spring house from ingress of surface water leaving the bottom open to be filled by the vertical spring waters and which would resume the supply of ‘pure’ spring water. However it appeared that in dry weather in previous years it had been impossible to obtain water from the taps on higher levels and so it was proposed that a line of pipes be laid to the new pond. This water was suitable for all ordinary purposes and for the brick yard, stables, wood yard and gardens. As technology improved and procedures carried out which included extensive drainage it became essential that the agent fully understood the consequences of work which he ordered but also needed to be able to conceptualise the problems which might occur as the result of previous schemes. In cases such as those above remedial action needed to be carried out to correct the damage caused.

This was not the only case where draining affected water supplies. In 1873 Cripwell wrote to the Duke with reference to the house at Lindhurst. He stated that

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98 Pwk 1191 Letter from William Cripwell 18 September 1873.
100 Pwk 1269 Letter from William Cripwell 20 April 1874.
101 Pwk 1271/1 William Cripwell 1 May 1874.
twenty years previously a great deal of money had been spent in the construction of a large tank and the laying of pipes to supply water to the house, farm buildings and a pond which had been built near the stackyard. The source of water delivered to the pipes came from a spring located in a patch of wet land located in the high ground above the house. The spring had now completely failed and Cripwell surmised that this was because the land thereabout had been drained. As a result the tenant Mr Bowles was required to cart water for his horses and cattle throughout the summer months as the only other water supply came from a deep well which was laborious to pump from. Cripwell believed that it was in the best interests of both estate and tenant to find a method of getting water to the tank again. To that end Cripwell sought a new source of water and the most suitable place he surmised would be from the head of a pond adjacent to Mansfield Forest where the water was of an excellent quality. It was proposed that the best way to fill the tank from this pond was by a small water wheel. Cripwell discovered that Lord Manvers had such a wheel pump at Badbury and which worked on a fall of less than eighteen inches. Furthermore it was capable of sending three gallons of spring water per minute to the tap situated in the new house at Thoresby. Additional information was sought and it was unearthed that all the recent water works at Thoresby had been carried out by Messrs Eaton and Anderson of the Grove, Southwark Street, London. It appeared that the most expensive part of the exercise would be the laying of the pipe from pond to tank a distance of approximately 750 yards and a rise of around 113 feet. Cripwell felt duty bound to supply Bowles with the provision of water in some way.\textsuperscript{102}

It would appear that at Welbeck the tenants had a high expectations of the accommodation with which they were provided. The wife of J. Rhodes ‘a sort of foreman at the woodyard’ complained about the Lodge within which they lived stating that it was of poor quality and badly supplied with water.\textsuperscript{103} Cripwell fully understood the importance of a domestic water supply. The Rates Assessment Committee from Worksop attempted to assess the new Lodges at Carburton to the poor rate on such a high scale that Cripwell believed it was his duty to give notice to appeal. They valued the small Lodges at Carburton at £7 10s whilst the larger lodges at Millenthorpe were only £6 and those at Welbeck which were the same size as those at Carburton at only £5

\textsuperscript{102} PwK 1208/1 Letter from William Cripwell 11 October 1873.
\textsuperscript{103} PwK 957/1 28 Letter from Cripwell 28 August 1872.
10s. Cripwell stated that it would be impossible to find tenants who would pay a rate of £7 10s for a Lodge which had no garden and no water supply. At Creswell discussions were undertaken with the Duke in order to define the best position for a number of new cottages and offices. The idea was that they should be built near enough to the piggeries but not too close to the privies. Cripwell was sensitive to the issues as the Board of Health had ordered that similar flaws had been removed from cottages at Mansfield. Another issue which had to be taken into consideration especially in coal mining areas was the maintenance of the quality of the water available for both humans and animals. Contaminating the source might prove catastrophic. The role of the land agent had moved a long way from its agricultural roots.

Conclusion

To conclude for many large landowners whose land held rich deposits of minerals there was always the dilemma of where to place a mine so as to have the least impact from the house. For Welbeck Bowden’s coal field if situated nearer Harlesthorpe rather than Clowne was less objectionable to Welbeck but Cripwell feared that the water from the colliery would be brought into the stream which supplied the Hollin Hill reservoir and affect the ‘water injuriously’. The Coal Mines Regulations Act came into force in 1872. This introduced a requirement whereby all pit managers were to have state certification of their training. Under this law miners were given the right to appoint inspectors from among their ranks. In order to understand the impact that this new legislation would have upon Welbeck and to ensure the Duke was aware that he was prepared for its introduction in December 1872 he wrote I am at present ‘engaged upon the questions arising out of the new Mines regulations Act which comes into force on the 1st January’. This instance alone gives an idea of just how far from their agricultural roots land agents had moved by the end of the nineteenth century.

S. Webster argued that the increased competence, responsibility and salary of Tyler the steward on the Petworth estate between 1801-1835 suggested early

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104 PwK 1040 William Cripwell 7 December 1872.
105 PwK 1045 Letter from William Cripwell 12 December 1872.
106 PwK 945/1 10 August 1872.
107 PwK 972 11 September 1872.
108 http://www.parliament.uk/about/livingheritage/transformingsociety/livinglearning/19thcentury/overview/coalmines/.
109 Pwk 1052 26 December 1872.
professionalisation may have been taking place.\textsuperscript{110} Wage remuneration however does not appear to be an adequate indicator of this as even exceptional agents of the stature of Blaikie accepted a wage decrease during economic downturns. Charles Neale actually had to ask for a pay rise even though he was aware as was the Duke of Portland that his duties had expanded exponentially during his period of employment. The labour question of the early 1870s posed a huge difficulty for the estate, the agent needed to settle the question of wage increases and the terms under which the men worked. A better gauge of the professionalisation of the land agent might the increasing amount of responsibility agents like Cripwell took on. By the late nineteenth century his role encompassed many new factors which were the result of increasing legislation. This thesis submits that Cripwell’s involvement on behalf of the Duke in educational affairs after the 1870 Education Act, in public health matters after 1848 ensuring housing on the estate met the requirements of the local board and in the implementation of the Coal Mines Regulation Act 1872 indicates that legislation certainly by the end of the nineteenth century played a large part in the professionalisation of estate management. However the role played by all land agents which includes those of the twenty-first century are still recognisable in the \textit{Gerefa}. Ultimately the need for professional men who were well trained and educated in all aspects of estate management led to the establishment of the Royal Agricultural College and the Land Agent’s Society. The diary of William Gould while incredibly detailed just does not encompass the range of work undertaken by later agents. Much has been written about Francis Blaikie but the correspondence of men like William Cripwell indicates just how legislation drove the need for change. This case study shows the importance of close attention to archival records and it is hoped will form the basis against which future studies can be compared as the debate on professionalisation widens.

\textsuperscript{110} Webster, ‘Estate Improvement’, p. 62.
Chapter 6

Estates, Agents and Landscapes

At the beginning of the sixteenth century the most remarkable single aspect of the English countryside, according to W. G. Hoskins, was the number of sheep to humans; a ratio of 3 to 1. In real terms this was equal to approximately three and a half million people to eight million sheep.\(^1\) The primary task of the countryside and the farming community was to feed the population most particularly those who resided in urban areas without access to cultivatable land. Between the mid-eighteenth and mid-nineteenth centuries the population increased by about 6.5 million however there was only a relatively low increase in the amount of imported foodstuffs. This indicates that farming altered and improved in order to meet the expanding demand. It has been suggested that the growths in output were as follows: wheat 225 per cent, 68 per cent for barley and 65 per cent for oats. Livestock products according to Beckett witnessed a comparable rise. Wade Martins and Williamson posed the question, ‘where did all the additional food come from?’\(^2\) Enclosure is often classed as one of the most fundamental changes in the landscape in the post-medieval period. From the middle of the eighteenth century until shortly after the end of the Napoleonic Wars saw spectacular changes in areas of the countryside previously unaffected by enclosure.\(^3\) In many cases this movement was led by the landowning class who were gaining in both status and power, they were in turn encouraged by their land agents, who were gradually forming a professional body and occasionally by the tenants themselves. Enclosure however will not figure largely in this chapter as in both estates under analysis it had largely occurred prior to the period under investigation.

However enclosure was not the only change taking place within the landscape during the late eighteenth and nineteenth centuries. The concept of a country house which was built for the pleasure of living began in the early sixteenth century. Although many were constructed during the reign of Henry VIII it was a trend that was to continue right up to the latter part of the nineteenth century. Those who already owned large houses often carried out programmes of renovation, adding wings and storeys and

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adapting buildings to the latest fashion. Whilst many of these houses occupied commanding positions within the landscape it was the parks that were constructed around these edifices which would have the biggest impact. Parkland became more extensive in the eighteenth century a period which Hoskin’s termed ‘the age of the territorial aristocracy’. Village fields and even the villages themselves disappeared as privacy and scenic aesthetics became more important. The creation of lakes and gardens, as landowners sought to mould the landscape to their own values and ideals, would all have dramatic effects. This was not the only building work undertaken; new farmsteads were being constructed within the newly enclosed land. Wade Martins argued that it was in the new farms built by improving landlords that the central Enlightenment philosophies of ‘beauty, utility and profit’ are best seen. This chapter will explore the alterations made to both the houses and parkland of Welbeck and Holkham. It will assess the impact of the modifications made in farming practices on the landscape and survey the problems caused by industrialisation in particular coal mining and the railway around Welbeck.

At Welbeck successive owners carried out various alterations to the house and grounds. Amongst the Portland archive an account book has survived which was compiled by Thomas Thompson and titled ‘This Book of Account Relating to the Repairing, Beautifying & Ornamenting the Ancient Seat of the Cavendish Family at Welbeck’ from 14 November 1741 to March 25 1747. This book lists payments made to workmen and labourers, sums expended on materials and even £2 2s to Thomas Platt surveyor on 19 December 1741; it also includes a disbursement of £5 12s to Thomas Hott for loading rubbish. This book also indicated some of the ways in which the landscape was altered by this particular set of improvements. On April 2 1742 Joseph Roper and Partner were paid £12 10s for ‘Cording 20 Cords of Wood & making the Road in the Park towards Worksop’. In April 1743 Daniel Marsdon was paid £30 for making a riding in the Park from the Water Lane to Carburton Gate. This account includes the work carried out on the kitchen garden including a payment of £14 4s again to Thomas Hott for loading earth into the new kitchen garden for the planting of fruit trees. A water course was dug through the old canal which was 342 foot long, 15 foot wide and 4 foot 6 inches deep. The overall cost of the sums expended within this

4 Hoskins, The Making of the English Landscape, pp.130-134.
5 Wade Martins, Farmers, Landlords and Landscapes, p. 74.
6 DD/4P/70/55-56.
note book amounted to more than £12,000. Occasional glimpses of the effects achieved can be seen in the entry for October 7 1745 which records ‘To John Stanley for making Shutters to 22 Windows in the East Front & South End and finishing the Wainscott round each window & laying ye Floors in her Ladyships Bed room & Dressing Room…’.

Although this account book provides an understanding of the expenditure which the Portland’s spent on improving and beautifying their home it does not give any indication of the role of the land-agent within the process. Another round of work took place in 1778 and a schedule of plastering work undertaken by James Henderson to finish new appointments and its cost has survived. This gives some idea of the type of the decorative work undertaken to walls and ceilings. The document covers a number of rooms within the apartment and it is intended only to provide a sample of the variety of craftsmanship used in Fig 8. All in all the Duke spent £395 9s 3d.

<table>
<thead>
<tr>
<th>Yards</th>
<th>Work carried out in finishing the apartments at Welbeck</th>
<th>£</th>
<th>s</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>507</td>
<td>of three coat ceilings and three coat finishing upon laths @ 6d</td>
<td>12</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>311</td>
<td>of three coats finished white upon walls @ 5d</td>
<td>6</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>642½</td>
<td>of Stucco finishing upon laths @ 8d</td>
<td>21</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>105¼</td>
<td>of stucco finishing upon walls @ 7d</td>
<td>3</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>79½</td>
<td>of stucco Dados finished upon laths @ 9d</td>
<td>2</td>
<td>19</td>
<td>7½</td>
</tr>
<tr>
<td>108½</td>
<td>of smooth laid fair for paper three coats upon walls @ 4d</td>
<td>1</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>of one coat rendering upon walls @ 3d</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>33</td>
<td>of rendering one coat upon laths @ 2d</td>
<td>0</td>
<td>6</td>
<td>10½</td>
</tr>
<tr>
<td>1656½</td>
<td>of cornices to all the rooms and moulding in archition @ 4d</td>
<td>37</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>1568</td>
<td>of plain cove, freezes and grain’d arches</td>
<td>13</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>9¾</td>
<td>of circular bead round an archway @ 3d</td>
<td>0</td>
<td>1</td>
<td>7½</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>96</strong></td>
<td><strong>2</strong></td>
<td><strong>10½</strong></td>
</tr>
</tbody>
</table>

Fig 8

Welbeck Improvement Account

In contrast William Gould’s diary began to provide some indication of the part played by the estate and its agents in changing and altering the landscape. The Dukes of Portland were the instigators of this change for it is their money and capital which funded any alterations. The third Duke of Portland often found himself in financial

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7 All the examples here are taken from the account book of Thomas Thompson house steward at Welbeck.
8 Ibid.
difficulty but this did not stop him spending considerable sums on the development of
the house and grounds at Welbeck. However even his agent was more than aware of the
economic constraints for in 1787 Gould had had a conversation with his Grace
concerning the improvements he wished to make as soon as he could raise the money
for the purpose.9 His ambitions extended beyond the house to the grounds and all in all
the Duke wanted to be in a position to lay out around £2000 per year in
improvements.10 There may have been a degree of peer and status pressure to improve
the house and grounds but those that viewed were not always favourable.

Viscount Torrington described the house as ‘mean, ugly and ill-built’ and the
inside he viewed as ‘of no account’. He had expected from Welbeck ‘an ancient pile’
but instead he decreed that ‘nothing remains of antiquity’ except the chapel.
Torrington’s disappointment also extended to the gardens where there was an absence
of roses or indeed any other flowers.11 Portland expected Gould to keep abreast of
repairs as well as using him as a sounding board for his ideas. Eliott writing in 1788 had
stated ‘Welbeck is not a pleasing place by any means, and the house is not good. The
Duke’s financial problems were common knowledge for he declared the Duke had great
plans for rebuilding, ‘but the state of his fortunes would not permit their execution’.12
Although the Duke had plans to alter the house in the mean-time repairs had to be
undertaken. For these the agent would not always consult Portland as on 16 February
1787 when he recorded ‘Viewed along with Mr Smith the Gothic Hall at Welbeck and
find there is a little water comes into the roof which is occasioned by a sham chimney,
which I ordered him to take down this spring’.13 Later in the same year Gould found
himself observing the workmen as they set about repairing the roof of the riding school.
Gould believed that both the Duke of Portland and Lord Edward Bentinck were
‘perfectly easy and happy in this country and place’. He was convinced that his Grace
was ‘very partial to Welbeck and would wish to live here a great part of his time’.14 As
ever with the 3rd Duke sufficient funds to carry out his desired changes were a continual
frustration to any plans to improve and build. By the end of 1788 the Duke had come to

10 Hanson, The Diary of William Gould, p. 152.
12 Tuberville, A History of Welbeck Abbey, p. 310.
13 Hanson, The Diary of William Gould, p. 128.
14 Ibid, p. 150.
some conclusions about the future of Welbeck Abbey. He had decided not to raise the
east front of the house but instead to put on a new roof over the dining room, to pull
down the chapel and build a new kitchen at the north end. Gould concurred and
believed that if the Duke was to make any modifications then this was the best course to
follow.\textsuperscript{15}

When the time came to draw up the appropriate plans the Duke turned to the
well-known landscape gardener and architect Humphrey Repton. They first met at
Burlington House in 1789. Hesitant about his own ability as a draughtsman Repton
employed George Samuel who was a drawing master based in London who was well
known for his country house portraits to execute the work relating to water colours
depicting the Welbeck mansion.\textsuperscript{16} Repton put together three schemes in 1790, 1793 and
1803. It is apparent that the first plans had little input from Repton but were instead an
‘endorsement and elaboration’ of schemes put together by the Duke himself. At this
stage the Duke’s main idea involved burying the basement of the house, however the
main entrance to the house was at this level. Not far from the door there was a small
rise in the ground and this made the west front of the house appear to lie in a hollow. In
order to correct this fault Repton took the excess earth from this area and formed a
gently sloping bank which created the effect of making the house appear to stand upon
‘a pleasing prominence’.\textsuperscript{17} The same method was subsequently utilised on the east side
of the house. Repton wanted to further embellish the house by exchanging towers for
gables and pediments. However ultimately most of Repton’s work in relation to the
mansion involved carrying out essential repairs rather than any substantial
improvements. On his marriage Lord Titchfield chose to settle at Welbeck although he
would not technically inherit until 1809. He too would continue to alter and change the
façade of the house. Although the agents had little to do with the organisation of any
architectural change that is not to say that they were not involved. As with all other
aspects of estate management when the Duke of Portland was absent from the estate he
still issued his orders relating to ongoing works within the house. Edward Turner
received a letter in 1807 stating

\textsuperscript{15} Ibid, p. 183.
\textsuperscript{16} S. Daniels, Humphrey Repton: Landscape Gardening and the Geography of Georgian England (1999,
\textsuperscript{17} Tuberville, A History of Welbeck Abbey, p. 313.
I have to acquaint you, that the Blue breakfast is to be done the same colour as the drawing Room. The China closet is to be of the same colour it now is. If you do not know the expence of doing the Gilding in the two different ways you mentioned. Be so good as to make the enquiry & communicate to me the result.\textsuperscript{18}

However without a doubt it was within the parkland of the large landed estates that most changes within the landscape took place. At Welbeck some of the best surviving evidence for the role undertaken by the land-agent is found within the correspondence of William Cripwell particularly in regard to the lake and tunnels at Welbeck.

**Parkland**

During the 1720s ideas of improvement which fitted within the framework of the ideology of the Enlightenment and an interest in classical societies spread amongst the aristocracy as the Grand Tour became more fashionable. Even Virgil argued that the cultivation of the land was a symbol of civilisation. He promoted a mixture of beauty and utility, pleasure and profit and an understanding that land and commerce went hand in hand with a structured but benevolent social hierarchy.\textsuperscript{19} Evident in the ‘neatness, symmetry and formal patterns’ of the early eighteenth-century landscape garden was the division between ‘culture and nature’. In fact many landowners did not differentiate between the creation and the laying out of their parks and the development of the farmland beyond its borders. Both were seen as improvements and the language invoked by the landscape gardener were synonymous with each other. The large parks of the great estates were frequently more important than the houses themselves. Welbeck Abbey was one of four extremely large prominent ducal estates in north Nottinghamshire and nicknamed the ‘Dukeries’ by Horace Walpole in 1777. The Dukes of Portland, Newcastle, Norfolk and Kingston all competed with each other in improving and enclosing lands around their estates. By the end of the eighteenth century these parks became part and parcel of estate improvement plans and became subject to comprehensive schemes to manage the game, livestock, timber, crops, fruit and amenities encompassed within them.\textsuperscript{20}

\textsuperscript{18} PwH 1352 London June 8 1807.
\textsuperscript{20} Daniels, *Repton*, p. 155.
One noticeable adaptation to the landscape which appears in much of the early surviving archive relating to Welbeck Abbey was the sheer amount of timber planting that was undertaken. By the end of the eighteenth century descriptions of Welbeck commented on the sensitivity undertaken when felling some of the older trees. Its usage as timber for ship building was perceived as a ‘patriotic act’.\(^\text{21}\) William Gould’s late eighteenth century diaries make reference to: Brick Kiln Plantation, Bulstrode Hill Plantation, Cat Hills Plantation, Clown Hill Plantation, Cowclose Woods, Ganabrig Wood, Hillclose Wood and Plantation, Long Valley Plantation, Mill Wood, Standclose Plantation, Tile Kiln Wood, Whinney Hill Plantation and Windy Hill Plantation.\(^\text{22}\) All in all more than two thousand acres were planted over a twenty-five year period and included oak saplings, beech, birch, larch, Spanish chestnut, Weymouth pine, firs, American oak and the Virginian tulip tree. A Cedar of Lebanon was planted by Speechley the gardener on the highest hill and he promised the Duke it would ‘top the rest of the planting and have a Noble and Beautiful appearance all around the County’.\(^\text{23}\) It was not simply a matter of planting trees and then leaving them to their own devices, young trees were susceptible to damage from a variety of animals and livestock. The agent’s role necessitated managing these economically and visually important areas. In January 1785 William Gould appointed one Michael Woodward one of the Duke of Newcastle’s keepers to ‘hunt the Clown Hill Plantation’ for a second time and to destroy the hares within it. All in all they caught 12½ brace of hares and one rabbit. A Mr Stevenson and a Mr Dawson visited Gould from Retford. Stevenson appeared to approve of the plan and manner in which planting on the estate had been undertaken. He had planted a considerable quantity of ash and other woods chiefly for the purpose of providing hop poles and had cut down the ash in parts twice over a 31 year period. Stevenson estimated that approximately 8500 plants would grow on an acre until the first cutting and after that not more than 5500 will grow. This equated to approximately one plant in every square yard.\(^\text{24}\) The planting at Welbeck and the advice of Stevenson illuminate the density of planting which the land on the estate would sustain; this would vary from locality to locality according to the soil type. The aim within this thesis was to demonstrate the extent to which the landscape at Welbeck changed during the period under discussion. When managing the woodlands it was essential to maintain an

\(^{21}\) *Ibid*, p. 156.
\(^{22}\) Hanson, *The Diary of William Gould*, p. 221.
\(^{23}\) Daniels, *Repton*, p. 156.
\(^{24}\) Hanson, *The Diary of William Gould*, p. 66.
ascetically pleasing vista. In April 1787 William Gould recorded in his diary ‘went into Cowclose Wood … and set out thirty one trees to be taken down this spring, viz. twenty-two on the south and nine on the north side of the road. From thence we went into Wren Park … I found that we could take down but a very small number without injuring the beauty of the place’. Even so Gould was not prepared to fell any in the latter place until the Duke had viewed the area himself and given his own directions.\(^{25}\)

Planting continued over a long period of time and was continued by the fourth Duke. In 1840 he sent a note to George Kelk stating that 50 sacks of acorns had left London and an arrival time. Fifty more were to follow a few days later and 60 more were to follow from Warwick. The cost of carriage was handled by the Duke in London.\(^{26}\)

The formation of the various plantations around the estate must have had an immense impact on the landscape. Ultimately the responsibility of planting these woodlands and their maintenance fell within the agent’s remit. The plantations were a large investment of both time and money and William Gould made use of Kennedy’s treatise on planting forest trees from which he gathered some ‘little hints that may be useful’ and Evelyn’s *Silva* with notes by Dr Hunter which he stated was a ‘sensible treatise upon all kinds of forest trees’ and the management thereof.\(^{27}\)

By the latter part of the nineteenth century plantations were still important. The estate looked to purchase Heyton Castle Estates which lay between Gringley and Grove Woods, however one problem with this was the woodland. Cripwell had been told that the hounds ‘frequently cross it’ but in reality it appears that the plantations were too small being little more than five acres split into two pieces to ‘hold foxes for any length of time’.\(^{28}\)

Woodlands were important then on a number of levels the timber had a monetary value but they were vital places for the shelter of game. Management of woodland continued throughout the period under study to be of vital importance it could not be left to itself. In December 1872 Cripwell consulted Swift regarding a plantation which had been purchased from Sir Edward Walker. It appeared that the larch were not thriving and Swift suggested that the best way forward was to remove those that were in the poorest condition and to plant chestnut in their place. Once the chestnuts had become established Swift proposed that the remaining larch be removed and the

\(^{25}\) *Ibid*, p. 133.

\(^{26}\) PwK 4560/2 Friday November 13 1840.

\(^{27}\) Hanson, *The Diary of William Gould*, p. 7.

\(^{28}\) PwK 956 Letter from William Cripwell 23 April 1872.
chestnuts then left to grow into usable timber. Woodland management ensured that any timber plantation constantly changed and modified the landscape as some trees were removed, others planted and the remainder being left to grow into maturity. This chapter will now examine a number of the changes that were made at Holkham.

The park at Holkham Hall by 1850 consisted of some 3000 acres. The development of parkland into rolling hills with ascetically planted trees and the creating of artificial lakes has to be one of the most ‘pleasing’ ways in which large estates made their impact upon the landscape. The park surrounding Holkham like many others in the late eighteenth century was typical of many which started from small beginnings. Here as at Welbeck both house and grounds were changed and altered by a succession of owners and architects. When he inherited Thomas Coke carried out very few alterations to the house but the park was a different matter. ‘Capability’ Brown had been employed to tidy up but there still remained plenty of scope for improvement. Trees were in short supply and the lake was little more than a muddy tidal creek. The original garden had been designed by William Kent but by the turn of the nineteenth century this was perceived as being outdated, old fashioned and too formal. Unlike at Welbeck Repton was called in to deal with just one section of the park at Holkham. Holkham was open to the public one day a week and visitors especially singled out the pleasure ground as it was from here that the best view of the church was afforded. Repton himself recognised that the strategy he put forward for this section of the estate was unrelated to Coke’s overall plan of improvement. This area was part of ‘a perfect place being peculiar to the Ladies’ and thus it required ‘a minute correctness of design which I trust will justify my detail’. Holkham was already classed as having a certain ‘magnificence’ it possessed ‘a vast expanse of lawn, an immense sheet of water & woods of such extent as to leave the parts of the Landscape too large for painting to express’. Instead Repton laid out a complex of paths which passed through the woods and along the edge of the lake. He created a crossing over the lake by the means of a small ferry which he ‘so contrived as to be navigated with the greatest ease by any Lady, without more trouble than that of turning a winch’. In this instance Repton created a landscape which was in reality an

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30 Ibid.
32 Ibid.
illusion, he suggested the creation of a new boat house, cottage and cave. The walks were intended to expose a number of views both within and beyond the woods and this included a vista across the lake and to the sea. At Holkham the plan was to create a landscape that resembled the west-country rather than that of Norfolk. However little of the work beyond the laying out of a system of paths seems to have been carried out. The red book for Holkham is indicative of just how far Repton and other landowners were prepared to manipulate the landscape to meet current fashion trends.

**Water**

At Welbeck and elsewhere water played a large part in the manner through which the landscape was altered and changed by those who had the money to spend. However it was also used in the form of water meadows to encourage the growth of grass which could be used as an early feed for livestock. For more than 400 years in southern England this type of meadow formed an integral and important feature of intensive agricultural farming systems. It combined soil and water management in such a way that it irrigated grass and triggered growth. By creating an even flow of water across a field the theory suggested the grass underneath was warmed. Furthermore it prevented frost and provided the roots with nutrients. "Flood Dykes were another form of irrigation system and worked on the same principle whereby streams and spring water could be diverted into these systems along the contours of the land from the seventeenth century onwards. The system at Clipstone was important because of its sheer size, its northerly situation and its position within an integrated farming system." In 1841 the *Journal of the Royal Agricultural Society* described water meadows as being artificially formed but importantly they were perceived as turning neglected districts into areas which were incredibly valuable. The contemporary nineteenth century agricultural writer Duncan George Forbes McDonald stated that the water meadows belonging to the Duke of Portland called Clipstone Water Meadows near Mansfield in Nottinghamshire were perhaps the most important and without exception some of the finest engineering works of their kind in England. However these meadows did not simply use water but

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33 www.kingsclipstone.files.wordpress.com accessed 15/03/2014.
also utilised the sewage water which ran into the river from the town of Mansfield. It was believed this would add extra nutrients and improve the soil fertility.35

The most complete description of the Portland water meadows can be found in the first volume of the *Journal of the Royal Agricultural Society*. The 4th Duke of Portland took an active interest in the management of his estate; however the 1,487 acre at Clipstone only created a revenue stream of £346 per year. The Duke wanted to increase the number of sheep on the estate but in order to achieve this he needed to overcome the problems created by a shortage of winter feed. One way round this was the establishment of water meadows on this unprofitable section of the estate. Trials were undertaken at Clumber, Thoresby and Welbeck and on the strength of these experiments the scheme to convert the wastelands at Clipstone began. Under Tebbet large numbers of unemployed soldiers who had been demobbed after the Napoleonic Wars alongside the navvies were put to work.36 The first of the flood dykes was five and a half miles long and the second around two miles all in all they watered around 300 acres.37 The worth of the water meadows could not be assessed purely on the basis of their produce alone. The water rich in the sewage of Mansfield, meant that the fields covered required no extra manure or fertilizer. However because they produced fodder for a greater number of livestock, considerably more manure was produced which could be used elsewhere and thus brought other areas into profitable cultivation.38 Likewise by producing an early feed for the sheep in particular it was possible to keep the flocks off of any newly seeded areas until the grass seeds had become established and would not be damaged by the grazing animals during periods of wet weather. During dry summers this protected the grassland. The map at Fig 9 shows the extent of the water meadows as they ran through Clipstone Park. This is an emblematic illustration of how the integrated relationships on the estate sought to alter the landscape. The Duke used about £40,000 of his capital to invest in the scheme and it is estimated that the return was around £3600 per annum or close to ten per cent.39 Even when the water meadow was not of a high quality it could still add to the value of any farm land. William Cripwell

36 www.kingsclipstone.files.wordpress.com
39 Kingsclipstone.files.
recorded that the rent for a farm at Lindhurst on re-letting should not be less than £700. The main reasoning behind this valuation was the presence at Lindhurst of 48 acres of water meadow which although of ‘middling quality’ was ‘still … very useful to the farm’.\(^{40}\)

When the water was run over the land the transformation of the landscape must have been dramatic. The agent himself would have required knowledge of this form of cultivation and a certain level of understanding relating to the engineering inherent in its construction and usage. A letter from Charles Neale in 1865 suggested that understanding the behaviour of local watercourses was vital for he wrote ‘About sixty acres can be watered at one time now, but in dry weather not more than forty and during the extreme dry weather of last summer not more than ten acres could be irrigated at one time’.\(^{41}\) The water used on the higher meadows was recycled for the lower ones. The frequency of floating the water was according to Neale usually done once in every nine weeks throughout the year. The water was kept on the meadow on average for two days at a time. However this could be more frequent in times of flooding.\(^{42}\) In some ways these water meadows embody the ethos of this thesis, they embody the changing technology of the period and how changes to farming techniques affected the landscape. The role of the agent had to adapt accordingly. Agriculture was just one way in which water was used to alter the landscape the other was for aesthetic purposes and changes in this manner could have unknown consequences many years later.

\(^{40}\) PwK 987 Letter from William Cripwell 7 October 1872.
\(^{42}\) Ibid.
Fig 9

Sanderson Map (1835) – shaded section shows the extent of the Flood Dykes water meadows.\textsuperscript{43}

\textsuperscript{43} www.kingsclipstone.files.wordpress.com accessed 15/03/2014.
Engineering and the Landscape

The mile long lake at Welbeck had been created when the 900 acre park had been restyled by Francis Richardson in the 1740s. The 3rd Duke extended and deepened the lake and constructed a number of new bridges. As Repton drew up the plans for both Welbeck and Holkham it is possible to ascertain similarities within the landscape of both parks. What is evident from Welbeck is the impact of these changes. In 1787 William Gould ordered that the shuttle which controlled the water in the great lake be drawn so that repairs might be carried out and the level of weeds checked. However when the shuttle was removed it was found that the trunk which conveyed the water into the basin was rotten and consequently a large quantity of earth was washed away. This situation was beyond the scope of Gould’s knowledge and consequently an expert was called in. When Gould had arrived at the scene the labourers were already moving earth into the breach and although the level of the lake was much reduced it appeared the fish stock was intact and had not been washed into the River Poulter. The men were kept working late and watchmen were set to observe the situation overnight. Fortunately the incident occurred in the summer when the lake levels were at their lowest as Gould feared that if the problem had occurred during the winter the torrent would have impacted greatly on Carburton Forge Dam ‘with very bad consequences’.

The 5th Duke in turn carried out a large number of alterations at Welbeck and it is his changes which have perhaps captured the public’s imagination the most. He created a huge kitchen garden which covered some twenty-two acres; which was surrounded by high walls with purpose built recesses within which braziers might be placed to force the ripening of fruit. The peach wall alone extended for more than a thousand feet. One of the most famous buildings erected by the Duke was the new riding house and which at the time was the second largest in Europe. Its dimensions are truly enormous being 396 feet long, 108 wide and 50 high. If that was not expense enough it was lit by the use of some 4000 gas jets. However the works the Duke is best remembered for occurred underground. He constructed a number of tunnels one more than a 1000 yards long which led from the house to the riding school, this was sufficiently wide for several men to walk comfortably side by side in. Another tunnel was constructed that ran parallel but which was more roughly built and was intended for

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44 Daniels, Repton, p. 155.
45 Hanson, The Diary of William Gould, Entry for 11 August 1787, p. 145.
use by the workmen on the estate. A longer tunnel of some mile and a half in length went to Worksop, this was considerably grander and intended as a carriage drive. In fact it was wide enough to allow two carriages to pass each other. Besides these building works he excavated a great hall 160 feet long and 63 feet wide which ran under the lake, it had been intended to use this room as a chapel although it occasionally did service as a ball room. Provision was also made for an underground library. At the time of his death the Duke had already begun further rooms underground and these eventually became a sunken garden. However earlier works on the lakes at Welbeck caused considerable problems for the Duke’s schemes and left William Cripwell with a number of engineering nightmares.

One of the problems with the 5th Duke’s underground works was that they were often affected by work which had previously been undertaken. In May 1872 Cripwell had discussed with Mr Tebbet the cost of a brick culvert from below the lake head at the old turnpike road to Welbeck. The projected size was to be 3 foot six inches high by two foot six inches wide and elliptical in shape. The cost was estimated to be £2080 including ‘all materials, carriage and excavators work’. To put the size of this culvert into context Cripwell suggested that a moderately sized man would be able to get up it easily. In this instance it was hoped to solve the problem by laying a line of drain pipes parallel with the tunnel, at a depth of three feet. The aim was to drain off any surface water before it had chance to cause any future flooding. Tebbet stated that it would be possible to achieve a fall in the drain of some ten feet from Welbeck and of a sufficient depth which would consequently stop the new library from filling with water without the need for pumping. At the same time it was intended to build a new culvert under the great lake. Tebbet reckoned that ‘40 good excavators’ would manage ‘100 yards per week’ or the whole length of approximately 2700 yards in around 27 weeks. However to achieve this progress and to secure the services of ‘good men’ Cripwell assumed it would be necessary to pay a higher rate of wages. He felt that this might be achieved by measuring the amount dug and remunerating the men for the work undertaken on a frequent basis, thus avoiding any interference with the usual scale of weekly wages. It would appear that the estate did not want the men to perceive a general pay rise was being granted but that instead they were simply being rewarded for the extra work carried out. Any good agent would bear in mind the expense of any grand

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46 Pwk 916 Letter from William Cripwell 8 June 1872.
project and this occasion was no exception. Cripwell worried that the cost of ‘barrow lime and sulphate’ would prove to be more expensive than the cost of excavation on the higher ground. However this material was vital in protecting the culvert as it passed under the lake. Even if the culvert was constructed outside the lakes Cripwell guessed there would be a need to place a number of manholes in order to allow access. Tebbet’s proposed the entire cost to be around £78 per 100 yards or £2106 but this did not include either the barrow lime or concrete foundation which would be essential when crossing the arm of the lake and would certainly cost extra. The man holes too would also be extra and when coupled with the cast iron coverings would come to around £4 each.47 Tebbet had investigated the possibility of drawing off the water from the upper lake and ‘doing away with the Pumps at the Shrubbery Lake’ via the use of iron pipes. However the cost of this was prohibitive, the quote obtained was £5,544 per mile or the £3 3s per yard, this did not include either the cost of excavation and fitting.48 Hardly surprising the estate sought an alternative method.

There were problems in manipulating the landscape because subsequent works often impacted on previous schemes and vice versa. Cripwell came to the conclusion that there were insurmountable difficulties for three reasons, firstly ‘doing ‘any thing below the head of the great Lake’ in order to draw off any of the waters from there or Carburton Joye Lake would have a serious effect on the lakes below. On top of this there was the immense volume of water to deal with from the Cuckney River and which was more than any culvert could deal with. Secondly at the lower end of Joye lake the ground rose abruptly so that in some places there was just enough room between the water and the high bank and this Cripwell deemed would make the construction of an open carrier or culvert very ‘difficult and costly’. Finally, it was decided that the substratum along the side of Carburton Lakes was for most of the length constructed of loose gravel and running sand and this would make it not just problematic but also dangerous to excavate for any length. The landscape allowed for a reasonable fall for any drainage and the Shrubbery Lake would prevent water from the proposed culvert draining the new library and passages backing up it. In turn the upper lake and tunnels would be drained without the need for pumps and the culvert could empty into the Great

47 PwK 919/1 Letter from William Cripwell 13 June 1872.
48 Ibid.
The construction of the culvert would have a two-fold effect, firstly, the depth at which it would be situated at some 12 or 14 foot deep meant it would also improve the land-drainage of the ‘Shrubbery’. Secondly it would serve as an outlet for any old drains and culverts from the house, the pressure from the water in the upper lake could be used to flush the pipe and the new culvert quickly.

A series of letters in July of the same year dealt with flooding problems in the tunnel, although they appear to have been written slightly out of chronological order. Cripwell had reported that the water in the tunnel at the Lakehead had still not subsided. Mr Tebbet and the agent attempted to ascertain where the water originated from, and it was concluded that

The water from the surface in the unusually heavy rains had made its way into the vacuum between the Brick and Stone Walls of the Tunnel which had acted as a drain to the lowest point at the lake head and then it had percolated through the Brick Walls into the Tunnel. They do not believe any part of the water in the Tunnel came from the Upper Lake.

Further enquiry into the flooding concluded that the bricks of the wall had not been puddled at all. Cripwell wanted the puddling commenced across the lake head on the upper side but the workmen were stopped because it was felt by the engineers that this would cause more problems. Instead Cripwell intimated that perhaps it would be more prudent to lay a parallel drain on each side of the tunnel but at a sufficient distance so that it might be done on firm ground. It was intended that the surface over the tunnel should be made to slope towards the new drains. A sump would be created with a grate over it and in the case of heavy rains this would allow the excess water to quickly disperse. The tunnel continued to be a matter of concern and in August Cripwell was again assessing different methods of preventing it flooding. Any new puddling it was feared would be liable to crack in dry weather and thus when it rained heavily or for prolonged periods would no longer be impervious to water. Strangely though Cripwell’s theory was not based on a set of technical information but instead he stated, ‘I have seen strong clay land with cracks several feet deep in very dry weather and great complaints are made of the loss of young partridge getting down the cracks’. Perhaps

PwK 922/1 Letter from William Cripwell 18 June 1872.
50 Ibid.
51 PwK 938 Letter from William Cripwell 30 July 1872.
52 PwK 939 29 July 1872.
53 PwK 941 Letter from William Cripwell 2 August 1872.
54 Ibid.
the most important observation concerning the integrity of the tunnel was made on this visit. Cripwell suggested that the drain throughout the tunnel ‘is not a good one’ and in the one or two places where it was open the water did not appear to clear as it ought. His worry was that during construction sufficient care had not been taken to keep it clear. Despite all the toing and froing cost eventually came into the equation. The Duke of Portland finally decided that they ought to try the efficacy of the large culvert first. If this failed then the estate could revert to the iron pipe for the flood water which could be laid inside the culvert and negate the need for further excavation. It would also be open to inspection at all times and should anything be amiss quickly sortable. Cripwell believed the culvert was the answer if well made. 55 Although the landed aristocracy were able to manipulate the landscape for their own pleasure or quirks of character farm buildings also changed in this period.

Farm Buildings

Considerable research on the changing farm buildings at Holkham has been undertaken by Wade Martins. Farmsteads built by ‘improving’ landowners embodied the philosophy ‘beauty, utility and profit ‘which were the central ideas of the Enlightenment. By the beginning of the eighteenth century considerable interest in such buildings was becoming apparent. In 1747 Daniel Garrett, an established country house architect, published one of the first books on the subject. In the main Garrett’s designs were intended as a template for the new farms which were being created as a result of enclosure. His layouts tended to be of a functional nature and the aim was that they might be built in ‘as regular, cheap and convenient manner as possible’. 56 Between 1790 and 1900 the majority of farms at Holkham underwent at least one major phase or improvement. A large percentage of this work took place during two main periods the first 1790 to 1840 and the second in 1868 to 1890. The initial round of building works saw the complete remodelling of fifteen farm houses and premises. The work on each cost the estate around £1500 to £3500. Those at Waterden are the earliest set of ‘model buildings’ to survive and Blaikie was most impressed when he started to work for the estate in 1816. Between 1818 and 1836 Holkham permanently employed a person who was described in the records as an ‘architect’. However it is not clear what was meant by

55 PwK 993 Letter from William Cripwell 13 October 1872.
this term. Emerson and Savage are the names of the men mentioned. Their salary was only £100 - £120 per annum and as a clerk was paid £155 they were probably little more than draughtsman. It is thought by Wade Martins that they simply drew up suitable plans from specifications given to them by the agent.\textsuperscript{57} At Welbeck there are plenty of references to agricultural improvements, landscaping the grounds, water meadows and alterations to the Abbey itself but no reference to rebuilding of the farm houses in the same way as happened at Holkham.

**Railways**

As the Dukes of Portland spent large sums of money landscaping the grounds of their estate it is hardly surprising that when it appeared to be threatened by the coming of the railway they were determined to protect it. In this they were not alone, some landowners did indeed encourage the building of railways close to or even through their park lands but they were the exception. Parks which had been planted by Brown or Repton were in the nineteenth century just reaching maturity and the railway thus imperilled this rural idyll. The success or failure of a railway company in obtaining the necessary bills in the face of strong aristocratic opposition could have significant and ‘symbolic’ connotations. It should be remembered that the men who opposed the applications were invariably those responsible for the passing of laws. They had strong parliamentary influence and thus any victories by a railway company where a number of convincing petitions were seen as evidence of the defiance of the un-landed, urban, industrial classes. One of the fictional characters in Benjamin Disraeli’s novel *Sybil* condemned the construction of the railways as producing ‘a dangerous tendency to equality’.\textsuperscript{58}

The period immediately after the fifth Duke inherited witnessed extensive expansion of the railway network across the country. New schemes were challenging because they often endangered both ‘irritation and profit’. Railway lines were apt to break up hunting fields, interfere with game coverts, spoil beauty spots, and split farmlands.\textsuperscript{59} Warner has produced a diagram of the projected schemes across the Duke


\textsuperscript{59} Tuberville, *The History of Welbeck Abbey*, pp. 412-413.
of Portland’s land and it must be said that he objected to all five. The three schemes
which created the most cohesive overall plan are demonstrated in fig 9. These were the
Manchester, Sheffield and Lincolnshire railway (MS & LR), the Midland Railway
Companies and a plan to connect Mansfield with Retford. However as can be seen none
of the railways actually pass through Welbeck Park and therefore it might have been
assumed that the Duke might not have objected or any problems would have been slight.
Instead the opposite occurred and all three of the outlined schemes affected specific
features of the landscape. Although these areas were not part of the immediate parkland
they were all valued for their aesthetic values. The Duke of Portland’s petition against
the latter plan stated that the ‘railway proposed by the Bill will for a very large part of
its whole length pass throughout the land of your Petitioner and seriously affect his
enjoyment of his property.’

The Cresswell Craggs are located approximately one mile to the west of
Welbeck and even in current times are still classed as one of the county’s top beauty
spots. Today they are distinguished not just as an area of outstanding scenery but also as
a place of huge paleontological and archaeological importance. The MS & LR route
crossed the eastern end of the Crags and this was the cheaper option to build because it
was more direct. The Midland Company in anticipation of objections had proposed an
alternative although this had added about £15000 worth of additional expenses to the
proposal. The advantage to the Duke of this route was not simply that it bypassed the
Craggs but because it was shorter it would carry passengers. The Duke preferred the
second of these schemes for two reasons, firstly its obvious distance from the Craggs
and secondly because it afforded the opportunity of closing or diverting part of a
turnpike between Worksop and Norton Cuckney. The Duke needed the approval of his
neighbour the Duke of Newcastle to privatise this road and it appeared this would only
be forthcoming if Portland gave his approval to the MS & LR. The Midland Railway
route gave according to Newcastle an unfair advantage to rival collieries.

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The Duke of Portland’s objection to the MS & LR was simply that when it passed the Welbeck end of the Craggs it completely shut out the view from all approaches to the estate. The railway company in an attempt to placate the Duke offered to change the route in order to solve the problem. This still did not pacify Portland and he refused to allow any of the company’s representatives to enter the estate around the Craggs to complete their survey. In order to prevent any form of trespass a number of estate employers were sent to the area to watch and monitor the surveyors. The problem was not that simple as Charles Neale reported to E. S. Bailey the Duke’s solicitor.

The surveyors having been kept off the Duke of Portland’s lands, keep on the turnpike roads and highway where they set their spirit levels and take their views across adjoining lands.\(^{64}\)

\(^{63}\) Ibid, p. 36.
Neale had ordered the estate employers to obstruct the surveyors by standing in front of them as soon as they set up their levels. The railway company attempted to threaten the Duke stating that if they were unable to complete their survey it was likely that the Craggs would consequently suffer more than was desirable. The hostilities continued for some 2 – 3 months, during this period the Duke remained very much involved and personally ordered countermoves when necessary. In addition to the above problems the Duke also had to deal with further complications when a number of the inhabitants of Worksop decided to campaign against the petition to divert the road. Ultimately after much negotiation those who did not want the road re-routed were persuaded to drop their petition and the MS & LR and Midland railways joined forces to prevent the construction of the Retford line. However before this happened they came to an agreement whereby the Midland should build the Mansfield – Workshop line and the other would enjoy running rights over it.

The route of the Retford line was designed in such a way so as not to trespass on the parks at Rufford and Thoresby and to avoid the large woodlands of Clipstone Forest, Birklands, Bilhaugh, Budby Forest and Wellow Park (fig11). These wooded areas were the remains of the once vast Sherwood Forest and had been enclosed to form royal or ducal hunting parks from the Tudor period onwards. Under the Dukes of Portland they had been preserved as areas of ‘wild natural’ forest scenery but in reality carefully managed as timber was a useful source of income. They were also used as a leisure facility and were criss-crossed with wide drives and gallops. The locality of Birklands fitted into this pattern. It had been acquired from the Crown in 1806 in order to preserve its ancient oaks. One of the most famous of these trees was the ‘Major Great Oak’, it was treasured because of its connections with Robin Hood. The Duke of Portland opposed on visual grounds to the Retford line because he feared the noise and smoke from the locomotives would have a detrimental effect on the beauty of the landscape. He had been informed that the sulphurous smoke emitted was highly dangerous to the health of these oaks. However Warner states that the trees were at least one and a half miles from the track and while the information given to the Duke was correct it is

65 Ibid.
unlikely that the small, intermittent effects of railway smoke would have had this effect.\textsuperscript{67}

However there would seem to be a monetary aspect to the Duke’s objections for under the pecuniary observations in the petition it was stated

Immediately he got it he set about improving it and opening out its great natural beauties. He made amongst other improvements a magnificent grass ride 150 feet

wide and upwards of 2 miles in length passing through the most picturesque parts of the forest with woods on either side and ending with a beautiful Gateway erected at great cost (some thousands) decorated with statues of Robin Hood, Friar Tuck, Alan-a Dale, Maid Marion, Richard Cour-de-Lion & other persons of historical & local interest.  

Other reasons for the Duke’s opposition are contained within the petition and included the suggestion that the proposed railway would divide the farms and the roads which connected the estate, interfere with the drainage of the estate’s land and the course of the rivers, streams and the coach road. Importantly it was judged the railway would separate a large portion of the land both arable and pastoral from the associated homesteads. It was ascertained that that the proposed route would serve a scanty population who already had easy access to an existing railway. However the correspondence gives little indication as to what if any action the Duke intended to take in order to deter the railway. However the combined opposition of the MS & LR and Midland Railway Companies meant that there was little reason to pass a bill to allow yet another company to set up. Approximately four months after these two companies agreed on a joint route and plan the scheme was ‘sanctioned’ by Parliament. The result was both the Creswell Craggs and the Sherwood Oaks had been saved.

Warner suggests that the Duke of Portland’s concern for landscape which lay outside of his own parkland and to which the general public had access was exceptional. Kaye Dowland a land agent from Mansfield described the part of Sherwood Forest under threat in the final scheme as ‘highly picturesque & ornamental in character & on that Account is the pride of the Country & it is constantly visited by numerous Strangers from different parts of the world’. It has been suggested that the attitude of the Duke defined the areas that he sought so hard to protect was more akin to that of public parks rather than private pleasure grounds. Warner proposed that the Duke’s motives cannot have been wholly self-centred, however it is suggested here that there was certainly a fair amount of concern for past investment and the ruination of a ‘view’ from his own property. However there is little doubt that he saved some of the most notable assets of the Nottinghamshire countryside for prosterity.

68 PI E12/11/7/3 Petition against the Retford railway, pecuniary observations, p. 13.  
69 Ibid, p. 4.  
71 Ibid.  
72 PI E12/11/7/17 Statement of Mr Kaye Dowland of Mansfield Land Agent.  
Conclusion

This chapter has sought to examine how estates and agents altered and changed the landscape. All in all this is a matter of great complexity, for the landscape has been manipulated for many thousands of years and only a minute number of observations are discussed here. Historians have tended to contain the debate on this matter to the impact of enclosure but the situation was more complex and did not simply revolve around the changing of field sizes or the enclosing of waste and commons. The aristocracy shaped the environment in a number of ways, by altering, expanding and renovating their large country houses, through the development of their country parks and by changing agricultural practices. Some landowners moved and rebuilt entire villages because they impacted on the view from their country house. Practically every Duke of Portland added something to Welbeck Abbey. Thomas Coke did little to the house but both estates used the services of Repton and similarities in the plans derived for the parkland of both localities are discernible.

Agricultural developments impacted visually on the landscape and the water meadows at Clipstone must have turned the landscape into a moving sheet of water when flooded. The idea behind this principle was to provide an early spring fodder for livestock particularly sheep. Understanding the methods and engineering of these works was probably beyond the scope of most land agents. While the complicated mechanics may well have required expert advice the agent would have to estimate how deep to let the water run, for how long and how quickly could the animals be released on to the land once the water had been removed. At the beginning of the nineteenth century great imput was provided by the Duke but this lessened as the agents became more proficient. Perhaps the biggest changes in both landscapes in were the result of the construction of artificial lakes and although this was done in both cases outside of the timeframe of this thesis they were adapted and changed continuously. The importance of understanding the problems created by these artificial waterways was apparent when Gould ordered the shuttle on the great lake to be removed and the trough which carried the water away was found to be rotten. This put at risk land and property and if the procedure had been undertaken when the water levels were high might have proved disastrous to the life of beasts and people. Throughout all of these processes the land agent had to become increasingly knowledgeable in engineering and legal matters so that he might with advise and consult where appropriate.
One element which all land agents whether Gould or Cripwell would have understood was the planting and maintenance of new and established plantations. At Welbeck in particular comments were made regarding the sensitivity with which some of the older trees were felled. It was the planting of more than 2000 acres of new woodland that would have had the most visual impact. Once planted the young saplings could not be left and they were susceptible to damage from wild animals and livestock as well as disease and might not thrive in the wrong soils. Plantations needed to be managed and Gould’s diary contains numerous examples of removing trees to allow the rest to grow into usable timber or the destruction of rabbits and hares which threatened the viability of young woodlands. It was to prevent the destruction of landscapes within which the estate had invested money that the 5th Duke sought to thwart when he protested against the different companies who wanted to extend their lines across his land.

Railways were a highly visual disturbance to the landscape and might cause extra problems by cutting through farm land, water courses, and hunting covets as well as ruining perceived beauty spots. The 5th Duke has been hailed as one of the first modern guardians of the landscape. However due to his reclusive nature it was his agents and stewards who dealt with the bureaucracy of his petition to parliament. In planning the route of the railway it was essential that it proved beneficial to the estate in getting its coal to market. Too far away or the wrong side of a river with no bridge could add significantly to transport costs. The opposition to these schemes took great skill, it was essential to understand the plans of the different railway companies and the wishes of the Duke in trying to come to an amicable solution. These new responsibilities brought the land agent into contact with other developing professions and in perfecting a discourse which allowed for arbitration and collaboration this helped to forward professionalisation. This thesis has sought to explore the myriad of different circumstances but each changed and altered both the way in which the land was managed and the agent’s perception of their role within it
Chapter 7

Conclusion

This conclusion is somewhat extensive because it incorporates considerable observations on land management and had serious implications for future socio-economic practice. The aim of the research which was undertaken for this thesis was to explore the professionalisation of estate management and how it developed from the eighteenth century onwards. It has used the extensive archive of Welbeck Abbey which apart from the research undertaken by Tuberville just before the Second World War has remained relatively un-researched. One of the most iconic and extensively studied estates of Holkham was used as a comparison where the archives allowed. Holkham was chosen for two reasons. Firstly despite the volume of research undertaken by Parker and Wade Martins only a small amount of the material produced related specifically to estate management. Both historians have taken more interest in the owner Thomas Coke and paid rather less attention to those who managed the land and estate. Despite its problems this secondary literature has created a base against which to compare new knowledge and information and to detect local, national and regional trends. Secondly this earlier material identified just how little is still known about the patterns of land-management, or the role of the land agent in forging change. At Welbeck there are two main bodies of data, the first is created from the diary of William Gould and the second by the extensive diurnal correspondence of William Cripwell. These two sources were written approximately a century apart and have provided and in depth view of the changes which took place relating to the role of the agent. They empirically record the working lives of these two agents and form a substantive record to be explored.

Susannah Wade Martins argued that ‘the age of improvement’ held certain connotations when applied to agriculture in the period under study in this thesis. Controlling, subjugating and managing nature were perceived to be an integrated part of human civilisation. The evidence from both Welbeck and Holkham suggests that the landowners on these two estates were frequently at the core of the drive towards improvements and mechanisations. This meant that their agents had to combine the practicalities of adapting to changing weather, technological improvements, farm prices and farming methods which included improving husbandry and soil quality. The rate of
change necessitated acquiring a new range of skills very quickly. Considerable debate has taken place over the timing of the agricultural revolution and this thesis falls into the end of Kerridge’s perceived time frame and the entire period of Chambers and Mingay.

Overton suggested that the question of whether or not an agricultural revolution took place is both a conceptual and empirical issue. He argued that three factors had to be present in the literature to ‘implicitly or explicitly’ establish the criteria for an agrarian revolution. Firstly there had to be a number of diverse changes in farming methods, incorporating the introduction of new fodder crops and crop rotations, the floating of meadows, improved husbandry techniques and the beginnings of mechanisation. Secondly English agriculture had to meet the challenge of a rapidly expanding and increasingly urban proletarianized population. Finally it has been proposed that an agricultural revolution was characterised by an increase in output brought about by improvements.\(^1\) The first time the population reached five to six million was during the eighteenth century and this resulted in a rise in food prices, a definitive sign that production could not keep up with demand. However, after this date even though the population expanded rapidly, the link between this growth and prices was broken. Simultaneously the numbers involved in agriculture fell from around 80 per cent of the population in 1500 to around 20 per cent in 1850.\(^2\)

Agricultural historians have argued that one of the fundamental changes in eighteenth century farming was the spread of more flexible rotations of crops which incorporated roots, legumes and improved grasses. A greater amount of winter fodder available allowed the over wintering of larger amounts of livestock and the production of greater amounts of manure. The consequence of this more intensive fertilization was increased crop productivity and hence the even heavier stocking of animals. Advances in the cultivation of turnips, legumes and grasses like sainfoin, clover and ryegrass raised the levels of animal nutrition. Turnips despite their fame as the most important and innovative of crops were actually considerably lower in nutritional value than the legumes and new grasses.\(^3\) Both the estates under discussion undertook different forms

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2 Ibid.
of the above. Holkham Hall was perhaps most famous for the husbandry clauses within its long leases which laid down crop rotations and which Blaikie adjusted as more information and knowledge became available. At Welbeck while little information has come to light on the way in which land was held the correspondence between the different Dukes and their agents has revealed the extent to which they experimented with both new crops and fertilizers. It is unlikely that the landowners were aware of an agricultural revolution but were interested in improving the profitability and productivity of their estates. It might instead be described as the age of improvement, which ultimately created a new type of owner.

The Patriotic Landowner

Agriculture in England was affected by two external sources which had a dramatic effect on its agriculture. The first of these was the English Civil War, and during the reign of Oliver Cromwell many of the aristocracy emigrated to the Low Countries. On their return they brought with them new ideas and methods of farming which they then applied to their own lands and estates. The second was the Grand Tour which highlighted the ideas of the philosophies and those of the Enlightenment. This brought the landowning classes into contact with a renewed interest in classical civilisations and the theory that the cultivation of land was a symbol of civilisation. It gave rise to the idea of the patriotic landowner. Wade Martins had concluded that changes in farming practices were very much the preserve of the individual farmer but at both Welbeck and Holkham the landowners took a great interest in the way in which their estates were farmed. At Welbeck although frequently absent the surviving correspondence of the Dukes of Portland illustrated not just the interest they continued to take in their estates but how they drove forward change at least until the 5th Duke inherited. This thesis has made five key contributions to the debates which have taken place on the idea of agricultural patriotism and include: changing agricultural practices, the application of science to farming, the effects of the agricultural revolution and high farming, the creation of agricultural societies and the introduction of mechanisation. These factors ultimately began to lead to the professionalisation of estate management as the skills required to successfully manage an estate expanded.

Firstly this research sought to ascertain which dynamics and considerations contributed to the idea of controlling nature and the steps which the great landowners
took to disseminate changing theories amongst the tenantry. Change and improvement incorporated technological innovations. The land agent needed to acquire a whole range of new skills which allowed him to adapt to the new conditions and it is argued that this formed part of the professionalisation of estate management. From the late eighteenth century onwards science was increasingly applied to farming. The need for greater productivity and ultimately the desire for higher estate revenue required improved estate management. Although a good local knowledge remained essential as did an understanding of what crops might thrive and where this was no longer sufficient. Caird believed that an integrated landowner/tenant relationship was essential and wrote that it was only ‘through an enlightened Tenantry’ that an estate could be permanently and profitably improved.\footnote{S. Wade Martins, \textit{A Great Estate At Work: The Holkham Estate and its Inhabitants in the Nineteenth Century} (Cambridge, 1980), p. 108.}

Secondly the period of change might be better described as a scientific revolution. The extent to which the 4\textsuperscript{th} Duke of Portland embraced improving instrumentation was illustrated in his purchase of a ‘therm’ presumably thermometer to measure the temperature within haystacks. William Cripwell used a barometer but still trusted his own judgement to guess what the weather might do and how it might affect harvest or growing conditions. Change was slow but this thesis has added an extra layer of knowledge to that already in existence, it has taken the general assumptions of those historians who have written about the agricultural revolution and provided depth and detail albeit local. More studies are urgently needed to survey and explore how the agricultural revolution worked in practice. It is only through a significant number of micro-studies that the timing of an agricultural or indeed a scientific revolution might be determined.

Early agricultural historians have argued that that science was a particularly important component of the agricultural revolution. The formation of agricultural societies brought with them a passion for small scale experimentation, however it should be remembered that this did not take place in modern controlled conditions. Perhaps the most important aspect of agricultural science was the developing knowledge of fertilizers and especially the development of those which could be manufactured artificially. There can be little doubt that farmers and especially improving landowners and agents understood the importance of replenishing the soils
fertility. Throughout both archives there are many - too numerous to mention – examples of the different types of manure used. The idea of adding farmyard manure to the soil had been practised for hundreds of years and sheep folded on land over winter was an ancient practice. One major difficulty with this source was if for some reason the livestock became ill, killed in floods, did not thrive or died, the supply of manure was interrupted. However the period at the end of the eighteenth and throughout the nineteenth century was different, men experimented with a whole range of fertilizers which have been discussed in greater detail in the section ‘Increasing Profitability’, in Chapter 4. These materials altered the procedures of cultivation in the same way that specific processes altered and improved the manufacture of steel or iron. Finally in 1842 a patent was filed for using sulphuric acid to decompose bones and this was the beginnings of the manufacture of artificial fertilizers. While historians have discussed and debated these changing methods the correspondence particularly of the Portland family and their agents describe in detail the experiments undertaken and the types of manures that they tried. This adds to our understanding and knowledge of the agricultural revolution by providing a local and regional perspective which was missing from any of the recognised texts on the agricultural revolution.

Thirdly Chambers and Mingay’s agricultural revolution was coming to an end as agriculture moved into the period known as ‘high farming’. However this thesis contends that rather than being a separate entity this was in actuality continuity rather than change. In the wake of the Napoleonic War it became apparent that agriculture had to become more efficient to be profitable. Progressive farmers and landowners invested in drainage, new building and machinery and stocked lighter soils more heavily. Historians have in the main suggested that from the mid-nineteenth century for a period of two decades or so this heralded a golden age. Collins alone has argued that this concept is in actual fact ‘rural folklore’ and it contained tales of huge profits and the standard of living gap between farmers and other middle class shrunk. There has been considerable discussion as to the characteristics of ‘high farming’ but it is proposed that even at the time it was a term which was well understood. Perry acknowledged that landowners in particular were more interested in long term investment and therefore did not expect a quick return on monies invested. The two estates examined here fall into this category and both continued to improve and build upon their investments throughout the period under study. Large landowners looked for sustainability rather
than a quick and fast profit. Welbeck and Holkham pursued tenants with suitable capital to invest, but at the same time the Dukes of Portland and Thomas Coke purchased high quality seed and used methods to improve tenant farming methods. More research is urgently needed into the investment made in the first half of the nineteenth century by the large landowners. This thesis suggests that this would illustrate that the ‘high farming’ period was actually the fruition of this early investment and was continuity rather than change.

Fourthly Webster argued that the professionalisation of estate management was an attempt to apply scientific and industrial management techniques to the land. It became necessary to replace his local and legal knowledge with technical expertise. However this thesis proposes that it was not just his own technological proficiency that had to be improved to be successful but the tenants and labourers too needed extra training and education. The most obvious of this movement is emblematically illustrated by the Welbeck Tenants Agricultural Show and is indicative of the Dukes of Portland and their agents to improve husbandry and farming methods upon the estate. It stemmed from an earlier horse show but the 6th Duke expanded it to include cattle, sheep and pigs as well as prizes for table poultry, shoeing competitions, long service and cottage garden produce. It was hoped that the ethos surrounding the show that the animals be shown in their natural condition in order to encourage the poorer tenants who had a ‘good looking beast’ to enter. More importantly because of this statute the poorest tenant would have an equal chance of winning a prize. This show exhibited all aspects of rural life and as well as providing an opportunity to improve cultivation and livestock husbandry it created a sense of estate identity.

The difference between the Welbeck Show and the Holkham Sheep Shearings is the attitude of the two landowners. Thomas Coke used the shearings to exhibit and stamp his own opinions on the tenantry and agriculture in the area as a whole. It was a showcase for his theories on the most suitable sheep to run on Norfolk pasturelands. By 1817 at the latest Coke had come to the conclusion that the best sheep for Norfolk were the South Downs and Parker argued that Coke used the shearings as a platform to phase out all other breeds. In 1808 he threatened those tenants on his estate who continued to keep an unprofitable breed of sheep upon their land with higher rents when their leases

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expired. The shearing contained a small number of other classes but it was not as comprehensive as the show at Welbeck and it has been proposed that these were in fact part of Coke’s egotistical temperament and an attempt to show him in the best light.

Research has generally concentrated on the larger agricultural shows and neglected the smaller, more local estate or village type. The detail provided at Welbeck indicates that these were important gatherings and places to exchange ideas and to monitor attempts to improve techniques upon the estate. The Duke asked for reports to be compiled by the judges so that he acquired an expert opinion of the work he and his agents were trying to achieve. This Nottinghamshire event seems a more genuine attempt to benefit the tenants and others who lived on the estate. However these shows also attracted criticism it was suggested by awarding prizes for specific farming practices, techniques, or methods such as ploughing or shepherding that this was anti-change. It rewarded skills using old methods not new technology. Of course not all farmers and landowners would yearly purchase the latest machinery. The Duke did encourage the improvement of the farm horse by donating one of his own stallions for breeding purposes. The show at Welbeck provides a sound base on which to build a more in-depth analysis of the impact of local shows. Only by further studies of this nature is it possible to ascertain the effect they had on local farming methods and their full contribution to the professionalisation of estate management.

Fifthly Overton has naturally suggested that many of the processes which led to higher productivity were considerably more labour intensive and this led to mechanisation. Higher crop yields needed a larger labour force to gather, store and thresh the harvest. In the south of England there was a surplus of agricultural workers and labour supply was not a problem but in the industrial midlands and north of England there was a choice of work and thus other methods had to be found. Overton estimated that the mechanisation of the harvest process reduced the need for human labour by around seventy per cent. However there has been considerable debate as to why full mechanisation took so long as it was not until after the Second World War that it became complete. Historians have argued that the expense of purchasing machinery remained out of the reach of most farmers. It is hard to establish when either Holkham or Welbeck began the process but certainly by the very early nineteenth century at

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Welbeck there are references to Thomas Wood working on the scarifyers and other machinery. In the south the Swing riots delayed the introduction of mechanisation and emphasised resistance to agricultural machinery in general. It was not until labour became short in the 1850s that mechanisation once again gathered pace. Certainly by the 1860s Welbeck was using steam ploughing and by the 1870s the labour question became one of pressing importance as demonstrated in chapter 5.

Finally mechanisation was an expensive process and the time and effort needed by the agent to purchase machinery suitable for the land to be cultivated was demonstrated by Cripwell’s experiment with reapers. However this was important on a secondary level because the correspondence detailed the names, characteristics and qualities of the different machines on the market. It was no longer simply a matter of purchasing the first one available; each had its own dynamics and covered a slightly different angle of the harvest process. The case study which Cripwell organised was emblematic of the changing role of the land agent. It illustrated the increasing professionalisation of decision making. The purchase of this new piece of equipment was approached in a scientific manner, the stringent tests were carried out on the same piece of land and the results carefully evaluated. The meticulous detailed study of the archive has revealed and confirmed that estates did not slide into mechanisation but it was a deliberate and calculated policy. Cripwell’s diurnal correspondence displays both the reticence and determination to ensure that any monies spent produced value for money. The archives of Welbeck and Holkham act as an historical prism into agricultural and estate mechanisation and reveal how both estates approached agricultural change. Even though Cripwell organised the demonstration day, his report was fully written for the Duke’s consideration and it appears that the influence of landowner intervention into estate improvements continued into the late 1870s.

From the mid-eighteenth century onwards there was a growing need for expert men to take over the management of landed estates. Many landowners were spending more time away either in parliament or pursuing the increasing range of leisure activities available. While this did not mean that they lost interest in their estates it meant that it left the land agent to drive forward change and at the forefront of the development of new techniques and methods. The ideas of the Enlightenment and the

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7 PwK 1316.
moral duty of the patriotic duty to improve productivity and exert control over his environment all added to the professionalisation of land management. While some debate has occurred as to the timing of this it appears from this thesis that this is less important than the form it took. As yet no research has sought to establish whether this was a local, regional or national phenomenon or whether it was slower or faster in some areas and why. There is no doubt that by the beginning of the twentieth century the land agent was classed as a professional and this thesis is the first study to try and ascertain the factors that caused this shift in attitude. Most historians agree that any profession need a corpus of literature dedicated and specific to their field and this conclusion will now consider the establishment of an agricultural press.

**Estate Management and the Written Word**

A large amount of contemporary literature has survived but it has attracted surprisingly little research with most of the work being undertaken by Fussell and Goddard. However both of these have taken a narrative approach and reveal little of the type of information that these works contained. Historians have always found it difficult to differentiate between the non-professional and the professional and discussions have tended to concentrate on those roles which are traditionally viewed in this way: medicine, law and the clergy. The difficulties lie in trying to identify the boundaries of the professional and it has been argued that control of a specialist corpus of knowledge was an essential characteristic. Professions might arise from the ‘complexification’ and ‘specialisation’ of knowledge, to this should be added autonomy, monopoly and a service ideal. Each land agent had to tailor the service they provided to the individual landowner and it was this characteristic that makes the exact timing of professionalisation so hard to judge. Chapter 4 for the first time set out to survey whether the growth of an agricultural press began to form the all-important corpus of specific knowledge out of which professionalisation grew.

Arthur Young and William Marshall might be classed as the fathers of the agricultural press. Young was a prolific writer but he was most famous for his *Annals of Agriculture*. Fussell claimed that it was Young’s method of collecting information that made the *Annals* both new and innovative in its approach. The importance of the work

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of these two early contemporary writers is often overshadowed by the rivalry between them. It seems the Duke of Portland owned a set of the *Annals* and would point his agent towards certain editions and articles which related to problems on the estate. Historians have attempted to discover readership numbers which vary significantly from actual circulation numbers. In order to facilitate readership numbers for periodicals such as the *Farmer’s Journal* free copies were left at prominent inns, hotels and other hostelries. These periodicals not only provided a vessel through ideas and information could be exchanged but they were also forums in which current political topics which pertained to agriculture might be discussed.

Francis Blaikie was an author in his own right and the interest he took in agricultural literature is apparent from the Holkham letter books. In 1841 he recorded one way to control wire worms which appeared in the *Farmer’s Magazine* and illustrates the power of the written word in disseminating knowledge and standardising agriculture in general. Agents like Blaikie sought to share both their experience and knowledge of tried and tested methods of farming; this distribution of knowledge created a process which ended in professionalisation. The collecting together of a corpus of information began to provide the monopoly of specialised and complex knowledge that was an important component of this movement. This study has sought to explore the information available and uniquely to apply this to the practices that were being used on the estates under study.

Writing about agriculture was not new, one of the oldest surviving manuscripts is the *Gerefa* which is a late Anglo-Saxon text and although a literary overview of the duties of an estate overseer certainly at the beginning of the period under study here there were many recognizable similarities in the role of estate agent. Even William Cripwell although his duties often took him far from his agricultural roots he still needed some of the same basic skills. Holmes argued that the growth in genres and rise of books which dealt with certain aspects of estate management and farming were a sign of the desire for more specialised knowledge. This expansion of the material available reflects the complexification which led to professionalisation. One of the problems faced by the agricultural press was that many farmers simply did not trust the written word. Even land agents had tended to learn their trade either from their fathers or practically on the job. The attraction of the *Annals* may well have stemmed from the
way Young had collected his information through travelling and conversing with local gentlemen and farmers as he worked his way across the countryside.

By concentrating on the narrative of who published what and when, historians have neglected to observe that the expansion of agricultural literature expanded at the same time as they needed to acquire new skills. The attributes required by William Cripwell were far more extensive than those needed and illustrated in William Gould’s diary. One proficiency common to both men was the compilation of extensive and adequate accounts. It has been suggested that the system of charge and discharge accounts date back to the twelfth century and was the method adopted by many estate managers. There was no shortage of advice available from the mid-nineteenth century onwards. When it is considered that Cripwell was compiling accounts not just for the farms, house, estate but also for the mines scattered across the estate it is apparent why such advice on the best type to use was essential. Although some attention has been given to the adoption of double entry book keeping during the industrial revolution more research is needed to establish how estate administration fitted into the explosion of statistical material.

Part of the growth of numerical information was the improvement in accounting practices, which incorporated a greater understanding of good working practices and a growing sense of responsibility. Accounting was not a new phenomenon and the charge and discharge system had been used by many of the monasteries in medieval England from the thirteenth century onwards. Agents handled large amounts of cash every year and they were expected to be able to know where it had been collected from, which bills had been paid and the exact remittance which should be deposited. Charles Neale at Welbeck believed that when all the receipts including rents, trusts and collieries had been collected he dealt with close to £40,000 per annum. Contemporary agricultural writers had their own ideas as to which compromised the best and most efficient system. Lawrence for example had an aversion to a multiplicity of books whereas at Holkham according to Parker a somewhat complicated method was used which divided the estate into parishes. Whatever version was used the statistical information produced allowed estates to plan for the future and to forecast annual potential income. As landowners sought to diversify their estates a landowner needed accurate and up to date

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9 DD/4/P/33/94.
information. The land agent was usually responsible for the compilation of the accounts and needed to be both diligent and practical in his approach and as the role became more professional he was expected to have a firm grasp of the finances of his employer.

Alongside diversification came the need to increase productivity and efficiency. Although using good quality seed was essential and maybe even using greater quantities in certain areas the soil needed its nutrients replenished. The most common way to achieve this was through the application of manure or other substances. Agricultural writers were verbose on their advice as to the best material to use and Welbeck experimented with a large number of different substances including: whale blubber, guano, pigeon manure, fish, rape dust, lime and bones. Many of these chemicals were expensive and the agent needed to be aware of the properties of each and where it might do the most good. Besides these additional substances, new clover and legume crops helped to fix the nitrogen in the soil. A basic knowledge of science as it pertained to agriculture became an important asset in any agent and continued to widen the gap between the medieval bailiff and the modern agent.

Chapter 4 highlighted the dislike and mistrust of the agrarian community to ‘book-learning’ but the explosion of literature would suggest that as the nineteenth century progressed and the number of books increased this aversion was overcome. Ernle had proposed that some of the early authors did not inspire confidence in their readership. However land agency was in line with the more recognised specialisms of medicine, science, law and the church moving towards professional status. This equated to a rapid expansion of printed material which was specific to this occupation and began to constitute a specialised literature peculiar to its specifications and thus contributed in no small way to professionalism. While historians have in the past produced a narrative of the books, treatises and pamphlets produced and their authors this study has sought to approach the subject matter through a different methodology. It has instead surveyed the topics contemporary writers considered worthy of publishing and explored what was happening in estate management alongside this advice. More research is needed over a greater number of farming and great estates to fully assess the impact of this written material but it appears that unless there was a market for the books published they would simply have stopped. The expansion of the written word was taking place as land management was becoming both more complicated and diverse and the role of the agent more complex.
The Changing Role of the Land Agent

The diary of William Gould and the extensive correspondence of William Cripwell are both extensive archives and because they are written approximately a century apart and cover the same estate allow a unique comparison of the changing role of the land agent during the nineteenth century. The majority if not all agents at the beginning of the period under study in this thesis had no formal training and even for the more well-known like Blaikie little is known of their lives except for the brief period while they were in the public eye. In order to differentiate and delineate the changes to the role of the land agent this thesis has made six key observations.

Firstly, Marshall stated that estate management required the whole of man’s attention during the hours of work his duties lay in the fields. However this thesis has proposed that by the end of the nineteenth century this concept was no longer true. Cripwell’s correspondence acknowledged the full extent of this professional role, while a large proportion of his time was still spent dealing with the tenants he also dealt with the colliery leases, increasing legislation, large engineering projects and labour issues.

Secondly, despite the lack of a professional or institutional body agents themselves were fully aware of their common interests. Francis Blaikie illustrated that agents wrote to each other to share both ideas and the results of their experiments. The landowners studied in this thesis were all forces for change but this could not have been achieved without a land agent who supported their ideas and improvements. The dynamics of the changing role of the land agent is apparent in the Gould/Cripwell archives. Gould referred all major decisions to either Heaton the agent-in-chief or to the Duke whereas many of the day to day problems Cripwell dealt with independently of the Portland family. It has been argued that the growing importance of the agricultural steward was reflected in their annual remuneration. Thompson maintained that by the end of the eighteenth century a number of agents were already being paid more than a £1000 per year. The average pay was generally closer to £300 or £400 even on the larger estates. Sometimes salaries were ‘topped up’ with some form of commission which was usually three to five per cent of the gross rental. Evidence from the research undertaken for this thesis suggests that whilst a very small minority of agents may have been paid the above salary this was in fact a rarity. Blaikie one of the most well-known of nineteenth century agents was paid considerably less at £650 per annum. High
remunerations were not secure and in the financial crisis created by Britain’s return to the gold standard his annual pay fell by almost sixteen per cent to £550. At Welbeck salaries were even lower and in the end Charles Neale was forced to ask for a pay rise. The struggle that ensued was hardly commensurate with Thompson’s theory that growing professionalisation was demonstrated by higher financial rewards. In this and most instances it is proposed that salaries were driven as much by market forces as by the status and standing of the agent.

Thirdly, William Gould’s world in the 1780s was almost entirely agricultural but Cripwell’s encompassed coal mining, railways, mechanisation and extensive building projects and rapidly changing methods of farming. This thesis used the archives of the above two agents to illuminate the differences in working practice. Above all there is a different feel to the letters written by Cripwell his voice is more commanding and less deferential. He comes across as a man who is in command of both his role and the environment in which he found himself. The earlier agents responded to requests for information from the Dukes but Cripwell even when commanded to undertake a particular action was not above making his voice heard. This was almost unthinkable for Gould. The changing role of the agent was best demonstrated through the labour questions at Welbeck.

As far back as William Gould the agent had always been involved with the house staff taking an interest in their well-being. In 1788 when the housemaids had threatened to leave because of the treatment they received from the housekeeper he had had to step in and sort out the situation. However by 1870 it was the whole financial viability of the estate that was at stake. Young male single labourers were finding it easy to obtain work elsewhere and therefore part of the changing role of the land agent was to try and keep these young men in the employ of the estate. Historical discussion has concentrated on the de-population of the countryside to urban areas to fulfil the need for industrial workers. However this thesis advocates that the movement of men away from traditional agrarian employment did not necessarily mean that they left the countryside. At Welbeck work could be found in mining, building and the railways but this meant that many were able to stay in their traditional homes and parishes. Some historians have argued that the falling labour supply was matched by falling labour demand but at Welbeck the concern was that supply would be become inadequate and those who were left would demand higher wages. In an attempt to keep those labourers
already in employment the estate did raise the daily rate. In this instance Cripwell undertook all the negotiations, as the 5th Duke was an eccentric recluse. However by taking advantage of changing circumstances men were able to create opportunities and to drive forward professionalisation.

Fourthly, in order to counteract the declining numbers of men coming into farming large estates began to mechanise. At Welbeck attempts to introduce steam power into its agricultural processes was hampered by a lack of education. An accident whereby the steam pan exploded on the ploughing machine was blamed on human error. It appeared that the men had been instructed to leave a gap in the chamber space but instead a new employee overfilled it with cut straw thus causing the blast. As machinery became more technical the agent needed to understand its operation and then to ensure the labourers were well versed how it worked. Young men would have been taught how to look after horses and the more traditional machinery but this was new and it might be argued that the skills in handling men became less important than those which engulfed technological change.

It was not just agriculture which became more mechanised but the increasing demand for certain commodities necessitated further investment. The 5th Duke undertook a number of extensive building works during his period at Welbeck. This required a large amount of building works and as a result local and even regional suppliers could not keep up with demand. In order to correct this deficit the brickyard on the estate was mechanised and it was expected that the new machinery would turn out around 1000 bricks per hour. This had a secondary benefit in that Cripwell estimated that it would require less skilled men in its operation than making by hand. Both Welbeck and Holkham founded their own gas works and thus additional responsibilities for the agent in ensuring its safe and efficient management.

Fifthly, even by the latter quarter of the eighteenth century mineral extraction at Welbeck was developing rapidly. Almost a century later not only did Cripwell have to safeguard the financial position of the estate through the drawing up of beneficial leases he had to estimate how much the estate might expect to obtain through coal royalties. As the estate mined different types of coal this was not an easy matter and would have proved somewhat time consuming. It might though be argued that estimating royalties was not that much different to working out the average price of wheat or corn. Although
the estate was keen to capitalise on its assets it did appear that a gap was developing between the royalties received and the impact on the landscape around the family’s properties. While historians have discussed and debated how the role of the land agent might have changed over the course of the nineteenth century this is the first study which has sought to add detail and a descriptive discourse to this process. The widening of the attributes required to run an estate meant that it was no longer the preserve of the amateur but necessitated a highly skilled individual and this consequently contributed towards the move to professionalism. This thesis has already narrated on how the Holkham estate sold off its interests in land in Lancashire without securing benefit from the utterly huge reserves of coal that transpired to be under it. Actions of this kind might have been prevented by the intervention of a skilled land agent. Thomas William Coke undertook the above during the period when he ran the estate himself without an agent. Upon the arrival of Blaikie, and this all being identified, remedy proved impossible retrospectively.

Finally, towards the end of the nineteenth century legislation began to impact on estate management. At Welbeck the Education Act of 1870 embroiled Cripwell as the 5th Duke’s representative into sorting out the problems created. The Duke was staunchly pro-Anglican and was against any school board involvement in the administration of any educational establishment on the estate. Cripwell suddenly needed to understand the tenets of the new act and its impact on the schools within the estate’s parishes. The school at Whitwell was particularly problematic because it relied on support from Welbeck for almost all of its costs. Until 1872 it provided free places for most of the girls and some of the boys, in return the girls had carried out the needlework for the house but in an attempt to change the situation Cripwell decreed that all gratis places would end. However the Duke would continue to personally support the school but at a lower rate. Gringley school was even more troublesome, although this time the problems were created by the local vicar. In this case Cripwell used his contacts in London to bring pressure on the Reverend Scott but in the end the school managers had to force entry to take control. Legislation of this kind brought the agent increasing into contact with an expanding governmental bureaucracy and ultimately made them more accountable to their employers and the residents of the estate. The Public Health Act of 1848 was the beginning of a responsibility for the health, housing and working conditions of those who lived and worked on the estate. It slowly but steadily became a
force for change and improvement of housing conditions. Gradually during the period under study tenants began to expect certain property standards and would complain if their accommodation did not match these levels. The final piece of legislation to affect Cripwell was the Mines Regulation Act which became law in 1872 and he found himself once again having to explore how this would affect the working practices of the estate employees.

At the beginning of this research it had been difficult to propose exactly what factors had been responsible for the changing role of the land agent. Historians in the past have proposed that the establishment of the Agricultural College at Cirencester in 1848 and the Institute of Surveyors twenty years later were the principal factors in professionalisation. However this thesis contends that this is too simple a conclusion and this movement was in fact multi-faceted. Increasing mechanisation, technological change, the growth of scientific farming, increasing bureaucracy and legislation were all equally important causes of change. Each added to the skills required by the land agent and although his managerial tasks moved far beyond the agricultural skills of his predecessors the roots of the role still remained concentrated in the rural and agrarian economy.

**Estate, Agents and Landscape**

Although enclosure affected the appearance of the countryside and despite the amount of research which it has attracted, it was not the only change occurring in the landscape during the late eighteenth and nineteenth centuries. Successive owners of large country houses carried out various alterations but the main change was the landscaping of the parkland. This process was ongoing and Gould records a number of the conversations he had personally with the Duke. In 1789 the Duke of Portland consulted with Humphrey Repton to design a plan for the house and grounds, although it appeared that in the end the work on the house mainly concentrated on essential repairs. Like the rise of the patriotic landowner, ideas of improvement to the parkland at the beginning of the nineteenth century also reflected the ideas of the Enlightenment. Many landowners did not differentiate between the improving of their agricultural land and the laying out of their parks both were classed as a symbol of civilisation. Consequently by the end of the eighteenth century transforming their personal
landscape was as much a part of estate improvement as anything that involved agriculture.

As much as enclosure the planting of trees and woodland must have had a dramatic effect on the vista. Descriptions of Welbeck in the eighteenth century described the empathy which had been used when felling some of the older trees. The biggest change though was in the planting of new woodlands some 2000 acres were created over a twenty-five year period and included a wide variety of trees not all native to the midlands of England. As young trees were vulnerable to damage the agent had to watch over and tend these new plantations. Coke at Holkham did little work on the house but the parkland was another matter. Originally William Kent had designed the garden but Coke found this too old fashioned and Rempton was called in to deal with one area of the park and he set about creating an illusion. Ultimately his plan had been to create a landscape which resembled the west-country rather than Norfolk.

Water altered the landscape in a number of ways the most obvious being in the creation of lakes, artificial rivers and canals. At Welbeck it altered the vista in another way when it was used to increase productivity of early grass feed. Water meadows encouraged growth by creating an even flow of water across an expanse of meadow land. The water meadows at Clipstone belonging to the Duke of Portland were classed by contemporary writers as some of the most important and finest engineering works of their kind in England. However they did not just use water but utilised the sewage water which ran into the river from Mansfield. Not surprisingly it was believed that this would add extra nutrients to the growing grass. The first of the flood dykes constructed was approximately five and a half miles long and the second around two miles and they watered around 300 acres. There can be little doubt that when the water was flowing across the land it must have created an entirely different landscape. An understanding of the science and the practicalities of engineering became a necessity for the land agent. He had to understand the mechanics of the process and the problems and difficulties created if not maintained correctly.

At large estates like Welbeck each successive owner had stamped his own characteristics on the house and estate. Perhaps the most well-known of these was the tunnels which the 5th Duke had constructed to satisfy his reclusive nature. Having to deal with the problems which arose from landscaping works was an ongoing process. A
mile long lake at been created at Welbeck in the 1740s but some thirty years later Gould had the ‘shuttle’ removed so the lake could be drained and repairs carried out. However removing the shuttle had caused further damage and in this case Gould did not have the skills or knowledge so called in an expert to advise on the best way to proceed. As much of the 5th Duke’s work took place underground it frequently impacted on previous projects. Plans to draw off the water from the Great Lake or those at Carburton Joye were eventually rejected because Cripwell thought that this process would affect the lakes below. In the end the scheme devised helped to drain another boggy part of the parkland, while maintaining the drainage of the tunnels. Although eventually the Duke made the final decision Cripwell provided all the knowledge necessary to make an informed decision.

Almost as soon as the 5th Duke of Portland inherited, areas on which the family had spent many thousands landscaping were threatened by the expansion of the railways. It is therefore understandable that he was determined to protect these areas wherever possible. New railway schemes were challenging; not only did they visually affect the landscape but could break up hunting fields, game covets and split farmlands. This thesis has revealed the problems and animosities caused with neighbours and other family members. Portland objected to just about every plan that was proposed for one reason or another and ultimately he refused to allow the surveyors onto his land. The railway company threatened the very existence of Cresswell Craggs an area of outstanding beauty. However the Duke remained adamant and hostilities continued for two to three months. There is little doubt that he saved many of the most notable aspects of the Nottinghamshire countryside. It has been suggested that his attitude was more akin with that relating to public parks rather than private pleasure grounds. Landowners continually changed the landscape around them and were willing to protect their works even from powerful new companies. The land agent would have again needed to have understood the law, and the dynamics in which new companies, even large ones, operated. By the end of the nineteenth century not only were they still managing the tenants and the estate farms but now required skills which encompassed new legislation, mechanisation, the functionality of new crops, the education of farm labourers, human resource skills and an understanding of engineering projects to name but a few.
The Future

The aim of this thesis was to explore the underlying forces which contributed to the professionalisation of estate management. This has attracted very few, if any, in-depth close textual studies and that which does exist tends to cover just a short time frame. The extensive archives of William Gould and William Cripwell presented an opportunity to study one estate over a long period of time which made identifying change easier. However in order to understand whether Welbeck was unique Holkham was used as a comparison. This highlighted the huge differences that existed within different estates and helps to explain why it took so long for land agents to form a single professional body. Holkham concentrated almost solely on agriculture while Welbeck diversified its assets both by moving into mineral extraction and in the development of areas of London and in Troon Scotland. In fact Coke’s decision not to employ an agent after the departure of Cauldwell may have resulted in the signing away of the mineral rights under lands outside of Norfolk. In reality by the time Cripwell became agent the skills required at Welbeck had extended far beyond the management of an agricultural estate. Looking forwards and outwards from the research undertaken here this thesis makes three quintessential observations.

Firstly the main focus of this entire study has been to assess how and when did estate management move to being a professional form of employment. During the nineteenth century it was not only land agents who were in the process of attaining professional status others included, surgeons, the clergy, surveyors and the civil service. Therefore this research has connotations not just for other historians researching the rise of professionalism but to modern observers and policy makers as new forms of employment begin to work towards this elite ranking. One of the problems faced by land agents was the diverse and individualistic nature of their function; each man tailored his approach to meet the needs of his employer. Little has changed for the modern land agent. Literature and in particular legislation ultimately began to standardise management practices but it was not until 1902 that The Land Agent’s Society was formed. The difficulties of creating a unified identity will continue to affect the creation of professional bodies as different trades and forms of employment adapt to the changing economics of globalisation, climate change and rapidly evolving technology. This also affects agriculture and estate management. One of the tenets of professionalism was the creation of a specialised corpus of literature and information.
which was specific to the role. This helped the development of a unique group of experts who were able to advise on matters outside the remit of the untrained and the unprepared. This is intertwined with the second observation relating to education.

Agriculture and estate management face as many challenges in the twenty first century as in the period discussed within this thesis. It has been argued that one of the essential factors in the development of the professional land agent was the creation of a complex and specialist literary knowledge. Education and the diversification of knowledge remain an important element in maintaining professional standards. For agriculture as precision farming through the use of satellite monitored tractors, combine harvesters and even livestock itself becomes more prevalent the question arises as to who owns the intellectual property of the information gained. The information gathered in this way has many implications not just for farmers but for the government in the future planning of food sustainability and security. This raises the profile of professional bodies for example the Central Association of Agricultural Valuers who seek to maintain standards and to liaise between government and landowner. By encouraging and ensuring that the body of detailed, focussed and conceptual knowledge is kept up to date and training provided professionalism will continue to raise individuals above the untrained. Modern communications ensure easy access to large amounts of information to an ever growing number of people and therefore it is essential that government and professional bodies are able to provide accurate and precise information to all concerned. However the land agent of the future still retains many of the features of his forebears and this includes a respect for the farming and agricultural landscape.

The final observation looking forward into the future relates to the preservation of the landscape. Hoskins stated that since the nineteenth century every single change in the landscape has either ‘uglified or destroyed’ its meaning. However the 5th Duke of Portland through his attitude towards the extension of the railway network prevented the destruction of some of the most scenic areas of Nottinghamshire. Part of the responsibilities of the professional landowner and agent is to promote productivity while protecting the quality of the soil and the landscape. As government policy seeks to provide sufficient housing for future generations and to guarantee supplies of energy

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it still remains that those who most understand the rural landscape are those who live and work within it. Therefore these two groups have a responsibility to advise governmental policy drafting. As land remains in the hands of the great landowners they will continue to remain its guardians.

The comparative nature of this thesis has explored the development of professional estate management during a period of great change. As estates diversified into other income streams this called for new information and knowledge to be established. Agriculture and by its connection estate management are continuing to evolve and the problems of adjusting to this change remain as much part of the land agents modus operandi now as in this thesis.
Appendix 1

Entries to Welbeck Show.¹

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¹ DD/P/6/18/1-33 papers relating to the Tenants Agricultural Show at Welbeck.
Appendix 2

Report from Cripwell on the Trial of Different Reaping Machines¹

The following six Machines were on the ground and we got them all fairly to work shortly before 10 o’clock

1. Howards International
2. Hornsby’s from Clipston Park
3. Samuelsons Royal from Mr Forrest
4. Samuelsons Old Machine (the one which had been hired from Mr Forrest)
5. Woods American, which had been sold by Mr Forrest to Mr Parkin of Goldthorpe
6. Our own Burgess and Keys

Nos 4 & 6 worked contrary way to the other four and in the first trial 1,2,3 & 5 were set to follow each other and 4 and 6 on another piece. Afterwards another separate piece was set out for each and when one was found to have difficult work others which worked the same way were invited to take a turn at the same to which they cheerfully complied and all seemed well satisfied that had fair play. The land was very light so much so, that if the machines had not been in very good order the barley would have pulled out rather than stood the cut and this gave the lighter machines an advantage over the heavy one in draught. All the competitors pronounced the test a most sever and difficult one. When the corn is laid flat the same way the machine goes all of them passed over some of the corn closest to the ground and I believe it is impossible for any machine to make good work in that case but when it was standing or laid to face the knife all cleared the ground well and made good work and I believe is cutting with the machine it is customary to run idle along the side when the corn is badly laid from the machines. Your Grace is right the Barley would have been much better cut a week or 10 days ago.

I will now write on each machine separately

1. Howards International This is a heavy strongly made Machine weighing 12 cwt and although it made very fair work I considered it the heaviest draught of any. I

¹ Pw K 972 and Pw k 974 September 1872.
think it would stand a much better chance in a trial on strong land and no doubt it being quite new would cause it to work heavier.

2. **Hornsbys from Clipstone Park** This is also a heavy well made Machine and did its work well except making the sheaves too large which was the fault of H Woods in only buying one delivery rake instead of two. I did not consider the draught so heavy as No 1

3. **Samuelsons Royal** This is also a heavy Machine and worked very fairly but the draught is too heavy

4. **Samuelsons old Machine** The same Fields had hired from Mr Forrest. This is lighter and did its work well and distressed the Horses as little as any and I think did the badly laid work the best of any

5. **Woods American** which had been sold by Mr Forrest to Mr Parkin and worked by him all harvest. This is also a light Machine weighing only 8½ Cwt and appeared much the easiest draught of any which partly arises from the sole of the wheel being wider which causes it to sink less in the loose soil than the others. It cut its ground uncommonly well and laid the corn more even than any and I consider for light land it is the best in the competition. It is lightly made and it may be doubtful if it would bear the strain of a very heavy crop so well as some others, but Mr Parkin seems well pleased with it as appears from the enclosed letter which he sent to Mr Forrest with the machine this morning.

6. **Our own Burgess and Keys** This also cut its corn well but requiring 4 Horses and 3 Men to work it and doing little or no more work than the other 2 Horse Machines it must be considered far inferior to them. It worked much better today than when I saw it at Scotland Farm. I think it was in better order. It delivers the corn in Swathe not in Sheaf which I consider an advantage where there is so much clover as it will get dry quicker.

On the whole I consider 4 & 5 the most suitable machines for light land and 2 for strong land when the crops are very heavy.

**Woods American Reaper**

I asked Forrest on Wednesday how these were obtained when he told me they were sent to him direct from America carefully packed each in a strong Box probably through some shipping Agent in Liverpool or elsewhere but he did not say this. He said he got 6
this summer viz. the one tried at Cuckney Hill sold to Mr Parkin, one sold to Milner of Cresswell and the other four not getting customers at Worksop he sent to the Agricultural Meeting at Doncaster where he sold them all and could have sold more. The price is 30 Guineas each.

Before deciding upon any order I will enquire among the farmers at Cresswell after the performances of the one sold to Mr Milner as being a new machine they would be sure to all know of it and its performances and I will report to your Grace what I hear. I think Fields told me some days ago it was talked of as being first rate, I ought to add Mr Parkins man was well up to his work and knew his machine and its capabilities thoroughly.
Appendix 3

Necessary Works on Schools within Parishes which the Duke of Portland had an Interest

Cuckney – for Cuckney, Longwith, Holbeck and Norton some increased room to be obtained by enlarging the present school rooms as suggested by the Reverend B. W. Wright.

Carburton – I cannot hear that there is any school at all here and the case will require consideration.

Clipstone – The school room at the Archway is sufficient – but the water closets are defective and will require some alteration

Mansfield – It is hoped the requirements of the Act will now be met here.

Mansfield Woodhouse – Sufficient accommodation will be found here.

Sutton in Ashfield – What is now arranged is expected to be sufficient.

Kirkby – Additional room will have to be provided here. It is proposed to add an infant School to the present boys and girls rooms at the village – for which a small quantity of land will be required – And to build a new school room near the church erected a few years ago at Kirkby Woodhouse where a site was conveyed to the Rector and churchwardens when the church was built – This will be conveniently situate for that part of the parish and will accommodate nearly one third of the whole population who live near. The Rector W Vernon has offered £50 towards the cost of the infant school at the village and £50 for the Kirkby Woodhouse schools.

Hucknell Torkland – These schools have just been enlarged and it is expected will now be sufficient.

Sibthorpe, Cotham and Gringley – It is expected the present school accommodation will be sufficient on all these places.

Bolsover – Some addition will I believe be required here.

Whitwell – Now under consideration.

Elinton and Cresswell – There is no school in the parish of Elinton, Cresswell is the greatest part in that parish - all on the Whitwell side of the stream is in Whitwell parish and the cottages and the Crag in Holbeck.

1 U of N Pwk 833 William Cripwell 11 November 1870.
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DD/4P/62/70/1 May 4 1855 Mansfield Woodhouse.
DD4P/62/71/5 John Bradsaw 11 September 1861.
DD/4P/70/55-56.
DD/4P/33/94 Letter from Charles Neale to Charles Heaton April 6 1854.
DD/P6/7/2/11 The account book of James Brounton.
DD/P6/7/2/11 Entry for May 1764.
DDP6/13/22/209 June 24 1874.
DD/P/6/18/1-33 Details of the entries to The Welbeck Tenants Agricultural Show 1890-1897.
DD/P/6/18/1-33 Added on to the back of the Report on Shoeing at the 1896 Welbeck Show.
DD/P/6/18/1-33 Report on the judging of the classes at the Welbeck Tenants Show pertaining to horses.
DD/P/6/18/1-33 Report to the Duke of Portland by Clement Stephenson on the horse shoeing competition at the 1896 Welbeck Tenants Agricultural Show.
DD/P/6/18/1-33 List of judges and their expenses for the Welbeck Tenants Agricultural Show.
DD/P/6/P13/10 Letter dated 24 August 1863 from Mr Bennett to Charles Neale.
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PI E12/11/7/17 Statement of Mr Kaye Dowland of Mansfield Land Agent.


PI 21/9/10 Bond of Charles Neale and his Surety.

PwH 1132 Welbeck 24 August 1801 Letter written by Edward Turner.

PwH 1283 Letter sent from London on March 18 1798.

PwH 1298 3 September 1799 Letter from Lord Titchfield to his agent George Kelk.

PwH 1308 Letter to Edward Turner 1799.

PwH 1313 dated 1799, this is a letter from William Cavendish-Scott-Bentick who later became the fourth Duke of Portland to the agent Edward Turner.

PwH 1315 London February 15 1804 letter to Scott Titchfield to the agent Edward Turner.

PwH 1316 Letter from Scott Titchfield to Edward Turner dated London February 20 1804.


PwH 1324 March 1804.

PwH 1326 Letter to Edward Turner 20 March 1804.

PwH 1352 London June 8 1807.

PwH 1373 London April 8 1808 Letter to Edward Turner.

PwH 1435 Letter from the 4th Duke of Portland to Edward Turner 19 July 1812.


PwH 1514 Letter from Fullerton August 20 1818.

PwH 1923 from the Duke of Portland 12 June 1838.
PwH 1926 Letter from the Duke of Portland, Milford Haven June 20 1838.
PwH 1937/1 and 2 Letter to George Kelk dated May 27 1840.
PwK 261/1 Letter from Edward Bailey, London, November 1870.
PwK 833 William Cripwell 11 November 1830.
PwK 836 William Cripwell 15 November 1870.
PwK 837 Letter from William Cripwell 15 November 1870.
PwK 849 Letter from William Cripwell 31 January 1871.
PwK 855 Letter from William Cripwell 7 February 1871.
PwK 856 Mr Atkinson’s Report into the Failure of the Steaming Apparatus at Woodhouse Hale 7 February 1871.
PwK 881 Letter from William Cripwell 16 April 1872.
PwK 890 Letter from William Cripwell 28 April 1872.
PwK 914 Letter from William Cripwell dated 3 June 1872.
PwK 916 Letter from William Cripwell 8 June 1872.
PwK 919/1 Letter from William Cripwell 13 June 1872.
PwK 922/1 Letter from William Cripwell 18 June 1872.
PwK 926/2 Letter from William Cripwell to the Duke of Portland.
PwK 938 Letter from William Cripwell 30 July 1872.
PwK 941 Letter from William Cripwell 2 August 1872.
PwK 944 Letter from William Cripwell dated 10 August 1872.
PwK 945/1 Letter from William Cripwell 10 August 1872.
PwK 947 Letter from William Cripwell dated 12 August 1872.
PwK 956 Letter from William Cripwell 23 April 1872.
PwK 957/1 28 Letter from Cripwell 28 August 1872.
PwK 967 Letter from William Cripwell to the Duke of Portland dated 5 September 1872.
PwK 972 11 September 1872.
PwK 980 Letter from Mr William Cripwell to the Duke of Portland 27 September 1872.
PwK 987 Letter from William Cripwell 7 October 1872.
PwK 993 Letter from William Cripwell 13 October 1872.
Pwk 1022 Letter from William Cripwell 15 November 1872
PwK 1028 Letter from Cripwell 29 November 1872.
Pwk 1031 Letter from William Cripwell 30 November 1872.
Pwk 1035 Letter from William Castleman 4 December 1872.
Pwk 1052 26 December 1872.
Pwk 1040 Letter from William Cripwell 7 December 1872.
Pwk 1043/1 Letter from William Cripwell 11 December 1872.
Pwk 1045 Letter from William Cripwell 12 December 1872.
Pwk 1049 Letter from William Cripwell 18 December 1872.
Pwk 1052 Letter from William Cripwell dated 26 December 1872.
Pwk 1063 Letter from William Cripwell 13 January 1873.
Pwk 1069 Letter from William Cripwell 18 January 1873.
Pwk 1075 Labourers wages at Welbeck proposed arrangement from 1 February 1873.
Pwk 1091 Letter from William Cripwell 14 February 1873.
Pwk 1123 Letter from Edward Turner dated 6 August 1807.
Pwk 1158 Letter from William Cripwell dated 14 July 1873.
Pwk 1163 Letter from William Cripwell 5 August 1873.
Pwk 1166/1, Letter from William Cripwell, 20 August 1873.
Pwk 1191 Letter from William Cripwell 18 September 1873.
Pwk 1269 Letter from William Cripwell 20 April 1874.
PwH 1313 Letter from the 3rd Duke 1799.
PwH 1316 Letter from Lord Titchfield, dated London 20 February 1804.

PwK 1206 Letter from William Cripwell 25 November 1872.

PwK 1208/1 Letter from William Cripwell 11 October 1873.

PwK 1242 Letter from the 3rd Duke July 20 1799.

Pw K 1321 Letter from the 4th Duke of Portland March 3 1804.

PwK 1109 Letter from William Cripwell 14 March 1873.

Pwk 1164/1 both this and Pwk 1164/2 are a letter from William Cripwell dated 10 August 1873.

Pwk 1164/1.

Pwk 1164/2 Pwk 1873 Letter from William Cripwell 14 March 1873.

Pwk 1258 Letter from William Cripwell 15 April 1874.

Pwk 4558/1 Written by Lord Titchfield.

Pwk 4560/2 Friday November 13 1840.

Pwk 4585 Letter from the Marquis of Titchfield to George Kelk.

Pwk 4575 15 August 1844.

Pwk 4703 Letter from Lord Henry Bentinck 1850.

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Holkham Agricultural Letter Book volume 1, p. 21.

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