

An investigation into the eighteenth-century land surveyors of Essex and an analysis of the Estate maps they produced.

Including a case study of a manorial map that illustrates a mapmakers skills and associated material that provides evidence of the surveyors map accuracy

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Abstract

This investigation examines the value of old estate maps, in today's world when modern technology can be employed to seemingly answer the questions we have about the past history of an area of land. Asking how the land was used, changes made to boundaries and the sources of water. The focus of this investigation has been on the two parties to a land survey, the landowner and the independent surveyor chosen to make the survey.

In 1947 the Essex Record Office published a *Catalogue* of the maps held in its collection. This investigation has shown that by publishing the *Catalogue* they brought maps, particularly estate maps to public attention. The *Catalogue* describes each estate map and, where known, gives the name of the surveyor that drew the map and the landowner that commissioned the survey. In 1952 and 1968 the *Catalogue* was brought up to date with the publication of two supplements. Essex remained the only county to publish in such detail its collection of maps, and to make them available for inspection and study. In 1990 Essex Record Office published a work *Essex on the Map* seen as a continuation to the *Catalogue* but with a focus on the estate maps drawn in the eighteenth century that represent the lands of private estates in Essex. The author of this work included what he was able to discover about the background of each surveyor, and the alternative occupations that many of them had. Thus, suggesting that estate land surveying was not always seen as a full-time occupation.

In 1997 the *Dictionary of Land Surveyors* was published, the focus of this work, as its title suggests was the *Land surveyors and Local Map Makers of Great Britain and Ireland 1530 – 1850*. The *Dictionary* aimed to include all persons likely to have measured or made land in areas of less than a complete county. It was realised

that the format of the entries makes no distinction between the commissioned surveyor who took full financial responsibility for the survey of a private estate and who treated the work as a business and any assistant surveyor whose only responsibility was to fulfil the task he had been assigned.

This investigation makes the claim that the *Dictionary* requires a separate index that gives direct access to the names of the surveyors commissioned to make an estate survey. These are the surveyors who accepted all the responsibilities of such a survey. The significance of the *Catalogue* is that it draws attention to the fact that landed estates are lands that are privately owned, the landowner being a private person who commissioned and financed any survey. Therefore, any communication and instruction between landowner and surveyor is estate property. However, with the aid of the data set out in the *Dictionary* and the naming of the sources and persons that have supplied the information used to compile each entry the problem of the privacy of the records has been overcome. The *Dictionary* gives us access to what in the past were private documents, the consequence being we now can follow the process by which private surveys were made. In addition, estate papers, other estate records, and of course the maps themselves now in the public domain, can be scrutinised to extract any information found that indicates the skills required by a commissioned surveyor, skills that set him apart from any surveyor hired only to complete a specific task. The skills he has that support the claim for a separate index of commissioned surveyors. An index that would also include his biographical details that would assist in the analysis of his maps. The maps indicating cartographic development, the inclusion of new ideas, new ways in which features can be represented on a map. The influence of a surveyors alternative occupations might also be found in his maps has been discussed.

The importance of a surveyors biography has been discussed as it suggests contacts with other surveyors, possibly through his alternative occupations. The contribution of this investigation is that it gives an insight into the work of a commissioned estate surveyor. An analysis of his maps indicates cartographic development; the influence of a surveyor's work on other mapmakers and the influence of their work on him. This investigation has shown that estate maps as stand-alone items still have a relevance and importance in modern times and that careful scrutiny of the maps can yield information about the land they represent that cannot be discovered by the use of modern technology.

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List of Abbreviations

Abbreviation	Definition
BL	British Library
<i>Catalogue</i>	<i>Catalogue of Maps in the Essex Record Office 1566-1860 By F. G. Emmison</i>
Counties of England	See Appendix 1
<i>Dictionary</i>	Dictionary of Land Surveyors and Local Map Makers of Great Britain and Ireland 1530-1850 (2 nd edition) Volumes 1 & 2 *
<i>DNB</i>	(Oxford) <i>Dictionary of National Biography 1885 to 23/09/2004</i>
ERO	Essex Record Office. (Chelmsford Essex)
NRO	NORCAT Norfolk Record Office Catalogue (Online)
SRO b: i: l: .	Suffolk Record Offices b= Bury St Edmunds I = Ipswich: L = Lowestoft.
Table of Counties	Abbreviations of Counties of England Appendix 1.

The *Dictionary of Land Surveyors*: Volume II; each entry is indicated by a code. Entries are in alphabetical order; persons with the same name are listed chronological order. Each has a unique code.

These codes remain the same from the first edition, except in a very few cases. Where changes have been unavoidable, they have been indicated in the text. New entries are inserted using decimal numbering.

Each code commences with the initial letter of their surname – cross references are given from variant spellings. Expansions of abbreviated forms of names are given in brackets. For instance, the entry for Ralph Agas is A043 AGAS Ralph. The dates given are the earliest and latest that are known for each individual.

Introduction

The objective of this thesis is to investigate the estate surveyors active in the County of Essex between 1700 and 1800. The investigation will include the maps they made and the private landowners that employed them

The focus of this dissertation are the estates of landed property belonging to 'private individuals', a definition which also includes land belonging to an institution, such as the colleges of Oxford and Cambridge Universities.¹ Private estate maps, are the first to fall into this category, and are described as maps of various degrees of complexity and function. A full analysis of these definitions is to be found in *English Maps a History*.²

By the 18th century the term surveyor was synonymous with map-making. It was therefore taken for granted that when a landowner asked for a survey, the surveyor would create a map as the end product.³ However, written surveys (without maps) continued to be used in some cases, such as the estates of Christ Church Oxford, where Fletcher's investigations showed that having a map made remained a 'relatively minor phenomenon well into the late 1700s.'⁴ The evidence presented by Fletcher from the Christ Church archives relating to this large institutional landowner contrasts with that of single private landed estate owners. This point will be discussed in Chapter 2.

¹ David Fletcher, "Map or Terrier? The Example of Christ Church, Oxford, Estate Management, 1600-1840" *Transactions of the Institute of British Geographers* Vol. 23, No. 2 (1998) 221. Published by The Royal Geographical Society (with the Institute of British Geographer)

² Catherine Delano-Smith and Roger J. P. Kain *English Maps A History* (London: The British Library 1999) 112-113.

³ P. D. A. Harvey, *Maps in Tudor England*. (London: The British Library, Great Russel St. London and the Public Record Office London.

⁴ Fletcher, 1993) 222. Christ Church was the largest landowner among the Oxford colleges. ap or Terrier? 1998. 222.

The first aim of this dissertation is to argue that a distinction should be made between the land surveyor commissioned to make a survey of a private estate, and any land surveyor hired to assist the commissioned surveyor in the measuring of land. A commissioned surveyor would need to demonstrate that he had some business acumen, he had to ensure that the project would be completed within the agreed time and ensure that the map, fulfilled the purpose of the survey, to the satisfaction of the landowner. He also had to ensure that the agreed charges made for the survey would cover his expenses and leave him with a profit. Any hired assistant would only need to ensure that he completed the tasks assigned to him. A detailed analysis of the commissioned land surveyors' responsibilities compared to that of any assistant land surveyor will be set out in Chapter 2.

The second aim is to argue that a significant number of all land surveyors, commissioned or otherwise found it necessary to engage in additional occupations to make ends meet. The alternative occupations of land surveyors will be investigated in Chapter 2

The *Dictionary* is the only comprehensive record of land surveyors active in Great Britain and Ireland between 1500 and 1857.⁵ In Volume II, of the *Dictionary*, the types of survey made by each surveyor are listed: of interest to this investigation are the surveyors shown to have made estate surveys.⁶ However, the *Dictionary* entry makes no distinction between the surveyors that were commissioned by a private landowner and those that were engaged as assistants. For inclusion in the *Dictionary*, it was only necessary for there to be evidence that an individual had measured land, therefore further research was necessary to determine if a named

⁵ Sarah Bendall, ed., *Dictionary of Land Surveyors and Local Mapmakers of Great Britain and Ireland 1600 -1836*. (London: The British Library 1997) Index to surveyors by date. Vol 1.141-154.

⁶ Ibid Vol. II.

surveyor was commissioned to make a land survey, or, was merely an assistant to a commissioned surveyor. This point will be investigated in Chapter 2. The name of the commissioned surveyor can usually be found on the estate map that was made as the end product of the survey. (Plate 1.1.).

Plate 1.1. Cartouche by William Cole (C339) Dated 1720 ⁷ The commissioned surveyor.



The map this cartouche was taken from is dated 1720. William Cole was active between 1687 and 1732 in Essex, Suffolk and Surrey.

Cartouche by William Cole of Ramsden Belhus (see p. 54), 1720 showing his characteristic style of decoration: a single pen line filled with blocks of bold colour (cf. illus. p. 129).

The definition of a land surveyor suggested by the *Dictionary* is made in the following terms; 'it aims to include all persons likely to have measured or made maps of land in areas of less than a complete county in Great Britain and Ireland'.⁸ In defining land surveyors in this way, the *Dictionary* makes no distinction between the independent estate surveyor commissioned by a private landowner, and any persons employed as an assistant. It is a matter of status and recognition. A surveyor known to have had made a survey that was carried out successfully and to the satisfaction of the landowner was likely to be employed in that capacity again. In the absence of any register of land surveyors, and in the absence of any

⁷ A. S. Mason, *Essex on the Map: The 18th century Land Surveyors of Essex*. (Chelmsford, Essex: Essex Record Office 1990, Essex Record Office Publication No 105. 27.

⁸ Bendall, ed., *Dictionary of Land Surveyors* 1997. Vol., 1. 67.

professional institution for surveyors, it was left to an individual surveyor to earn his own reputation.

The *Dictionary* is the only work that records the names of all known land surveyors active in the counties and regions of Great Britain and Ireland between 1530 and 1850. The importance to this dissertation is that the *Dictionary* names its sources of information relative to each surveyor. This list enables further research to be undertaken of an individual surveyor. In his review of the *Dictionary*, Paul Laxton suggests the work is 'a comprehensive handbook on where to go to find things'.⁹ There is no other comparable source where such evidence can be found. The *Dictionary* is, therefore, central to this investigation.

Cartographic Innovations: An International Handbook of Mapping Terms to 1900; offers only a brief definition of an estate map: 'a map of land property'.¹⁰ In the same work it is suggested that when estate maps were first introduced into England it was usually to illustrate some point that was in dispute. This probably remained true up to the mid-16th century, but in the second half of that century, estate maps came into use in the normal running of a landed estates, particularly in replacing the written descriptions that had hitherto been the end product of an estate survey.¹¹ The origin of the now accepted definition of an estate map can be found in the *Catalogue of Maps in the Essex Record Office 1566-1860*.¹² . The *Catalogue* was the first publication of its kind to classify maps according to type, and how they each might be described, that is to say, as, Private Estate Maps, Manorial Maps,

⁹ Paul Laxton, Review; "The Dictionary of Land Surveyors and Local Map-Makers of Great Britain and Ireland 1530-1850 by Sarah Bendall, ed: in *Imago Mundi*, Vol. 50 (1998), 216.

¹⁰ Helen M Wallis and Arthur H. Robinson eds., *Cartographic Innovations An International Handbook of Mapping Terms to 1900* (Tring Hertfordshire: Published by Map Collector Publications (1982) Ltd. in association with the International Cartographic Association, 1987) 2.2021C 97.

¹¹ Ibid. 97-98.

¹² F. G. Emmison, ed., *Catalogue of Maps in the Essex Record Office 1566-1860* (Chelmsford, Essex: Essex County Council, 1947) Publication No. 3. Contents page.

Enclosure Awards and Maps, Private Enclosure Maps, Courts of Sewers Maps, Plans of Public Schemes and other maps.¹³ The significance of the *Catalogue*, compiled by Emmison, indirectly suggests that an estate survey starts with a private meeting between the landowner and a land surveyor.¹⁴ Harvey makes the point that 'every map has two parents:- the map-maker who drew it: and the customer or patron who commissioned and paid for it.'¹⁵ It is reasonable to suggest that, as the private landowner was financing the project, it was only of interest to the landowner's estate officials and the tenants living on the estate.

In her review of the *Catalogue* written shortly after its publication in 1947, Taylor firstly describes the general feeling towards maps at that time. She writes that 'for too long old estate maps have been nobody's business.... they have lain neglected in muniment rooms and estate offices, or tossed away into solicitors' cupboards, except where they occasionally became the prize of some antiquary.'¹⁶ The significance of the publication of the *Catalogue* is seen by Taylor as putting every map-lover in Emmison's debt. 'He has made the collection of maps available for inspection and study, and gives notes on the careers, methods and styles of the more noted surveyors and cartographers who worked in Essex.'¹⁷

To help us make sense of Emmison's reference to the 'private character of estate maps' in the *Catalogue*, and to unravel the complexities of an estate survey, definitions are required of the parties involved, and the terms associated with the process of an estate survey. The definitions of the terms help us to make sense of

¹³ Emmison, *Catalogue of Maps in the Essex Record Office* 1947. XX.

¹⁴ *Ibid.*, 1.

¹⁵ P. D. A. Harvey, *Maps in Tudor England* (London: Published jointly by the British Library, and Public record Office, Chancery Lane, London. 1993) 43.

¹⁶ E. G. R Taylor, Review, "Catalogue of Maps in the Essex Record Office 1566-1855" by F. G. Emmison in *The Geographical Journal* Vol. 110, No. 4/6 (Oct – Dec. , 1947), 228.

¹⁷ Taylor, Review, "Catalogue of Maps in the Essex Record Office" by F. G. Emmison 1947. 228-229.

the process by which an estate survey is made, and why apparently so little documentary evidence is available relating to the process. The definitions also gives an insight into the role, status and relationship between the private landowner and his surveyor.

Estate maps vary as regards the extent of territory covered. 'A straightforward case would be a map that portrays all the land owned by a particular individual or institution; such an estate might comprise of a handful of scattered strips in open fields, or a small group of land parcels worked as a single farm unit, or a much larger territory, comprised of a few separate farms.'¹⁸ In their discussion of estate maps Delano-Smith and Kain stress the key point that the land represented on any map 'belongs to a single private individual (or institution or community)', and therefore, is the concern only of the landowner, his officials and the tenants who reside on the estate¹⁹ This will be fully discussed in Chapters 1,2 and 3.

Documentary evidence is scarce relating to agreements reached between landowner and surveyors. An estate survey being a private affair, what was, or was not, represented on the final map would be the result of a private discussion between landowner and surveyor. Any notes or letters or other records of their meeting, if made, would all become part of the estate papers. They were never intended for public scrutiny.

The authors of *English Maps*, point out that 'the need for a landowner to know his own' (that is to have a survey) was felt strongly in the seventeenth century... landlords and tenants were encouraged to alter their appreciation of 'one's own' and to learn to maximise production, ...this demand for agricultural improvement, it is

¹⁸ Delano-Smith and Kain *English Maps a History* 1999. 114.

¹⁹ Ibid.

argued, also generated commissions for estate maps²⁰. Any survey might therefore be seen to fulfil at least two purposes:- the first to resolve a current issue regarding the better management of the estate:- the second, having a map of the estate showing boundaries and features that would be useful for any future discussions concerning the estate.

The description of estate maps provided by Wallis (in the Forward to *Essex on the Map*), and Harvey (in *Maps in Tudor England*) are also significant in that they draw attention to key points. Wallis argues that and quotes from Edward Worsop's who commented 'Everie man knoweth that land is our riches in the hyest nature and yet true surveying and valuing thereof is shoufled up, as though it were a matter of small importance.'²¹

Harvey's observations on map consciousness are that by the end of the sixteenth century, no one group emerges as especially favouring maps and the decision whether or not to have them mapped may have rested in the funds available, on individual opinions of their value or on simple chance²²

Evidence that land measurement was not a solitary occupation is suggested by, A. S Mason who comments that 'land measurement cannot be done by one pair of hands' all land surveyors need an assistant or assistants to help him complete the task.²³ This would include the 'carrying and setting up of apparatus and staking out the points from which measurements were to be made, all of which took time and manpower, chain measurement obviously needed a man at either end of the chain'.²⁴

²⁰ Delano-Smith and Kain *english Maps a History* 1999. 118-119.

²¹²¹ Edwards Worsop. *A Discoverie of Sundrie Errors and Faults daily Committed by Landmeters, Ignorant of the Arithmetic and Geometrie...* (London: Printed by Henrie Middleton for Gregorie Seton. 1582

²² Harvey, *Maps in Tudor England* . 1983. 93

²³ Mason, *Essex on the Map in The 18th Century* 1990. 17.

²⁴ Mason, *Essex on the Map* 1990. 17.

The commissioned surveyor needed to have the ability to understand and manage all the various aspects of a commission to make a survey. His priority being to ensure that the survey was completed within the agreed time, and the map fulfilled the owner's demands. The charges the commissioned surveyor makes for the surveying of the estate must cover all his expenses and leave a profit. The expenses would include the employment of assistants, the purchase or hire of specialist surveying instruments, the sourcing locally of material, such as pens, pencils, ink and pigments, parchment or, paper for the map and for making notes.

In *Maps Land and Society*, Bendall discusses the cost and availability of equipment. Her analysis indicates what equipment was in use, and the methods of surveying in the eighteenth century.²⁵ Evidence suggests that 'sometimes surveyors were helped by their employers, who either lent them or paid for their tools.'²⁶ The cost of surveying tools and instruments will be discussed in Chapter 2.

Bendall also emphasised the importance of local knowledge to a commissioned surveyor.²⁷ The advantages and disadvantages of the reliance of local knowledge will be discussed in Chapters 2 and 3.

Bendall provides a rare example of a contemporary agreement between a landowner and commissioned surveyor that illustrates the complex nature of a commission. See Figure 1-1.

²⁵ Sarah Bendall, *Maps, Land and Society: A history with a CARTO-BIBLIOGRAPHY of CAMBRIDGESHIRE estate maps c1600 – 1836*. (Cambridge: Cambridge University Press, 1992) 135.

²⁶ *Ibid.*

²⁷ *Ibid.*, 135,137.

Figure 1.1 Copy of the Articles of Agreement between Her Grace the Duchess of Buckingham and Edward Laurence.²⁸

Articles of Agreement between Her Grace the Dutchess of Buckingham and Edward Laurence on Accountt of Surveying Measureing and Mapping of Lordships &c.

1st For Every Lordship or Mannor of Inclosed Land Surveyed and Drawn into a Fair Draught with a Terrier of the Several Sorts of Lands belonging to Each Tenant, and also the yearly value of Each Parcel of Land to be Expressed in the said Terrier, and when the same is Compleated by being made up into Books or otherways to be Paid after the Rate of Sixpence for Every Acre, and According to the Usuall Custome the said Edward Laurence is to be Boarded so Long as he is Performing the said work, also to have his Expences Paid him to & From London and to have proper Assistance of a Man and a Boy to lead the Chain and Carry His Instruments in the Field. But if the said Edward Laurence is to be at his own Expençe for the aforementioned Articles to be Paid after the Rate of Eight pence for Every Acre.

2d For Any Quantity of Common Field Land Surveyed Measured &c as above Mentioned, to be Paid after the Rate of Nine Pence for Every Acre; but if the said Edward Laurence is to be at His own Expences as above Mentioned, to be Paid after the Rate of Twelve pence for Every Acre.

3d For Any Quantity of Large Commons Exceeding an Hundred Acres or More to be as Accurately Surveyed as the Abovementioned Lands (which ought to be so don in Case of its being Inclosed,) to be Paid after the Rate of three Pence for Every Acre but if the said Edward Laurence is to be at his own Expençe in Performing the said work, to be Paid after the Rate of Four Pence for Every Acre.

4th For any Time the Said Edward Laurence shall spend in Measureing and Takeing an Exact Account of the Number of the severall sorts of Timber Trees and Pollards &c and to make the same into a Terrier, Expressing the Quantity in the Hedge Rows as well as within the Inclosures; to be Paid after the Rate of Ten Shillings a Day but if the said Edward Laurence is to be at the Expençe of Assistance &c as abovementioned, to be Paid after the Rate of Thirteen shillings a Day.

The process of the making of an estate land survey would surely start with the surveyor being taken to view the area of land to surveyed. His charges would then be based on the type of land to be surveyed, and modified to suit a landowner's preferences. Once the surveyor had all the information he needed, he would then make the decision as to whether to accept or decline the commission. Laurence's agreement specifically states that 'if the said Edward Laurence is to be at his own expence... having the proper Assistance of a Man and a Boy to lead the Chain and Carry His Instruments in the Field' his charges will be at the rate of Eight pence for every Acre (and not the six pence according to the usual custom), confirming that a surveyor did not work alone measuring land he required assistants.²⁹

²⁸ Sarah Bendall, *Maps. Land and Society: A History with a Carto-Bibliography of Cambridgeshire estate maps c1600-1836*. (Cambridge: Cambridge University Press 1992) 109.

²⁹ Bendall, *Maps Land and Society* 1992. 109.

Three illustrated maps have been found that suggest a land surveyor did not work alone, he measured land with an assistant or assistants.

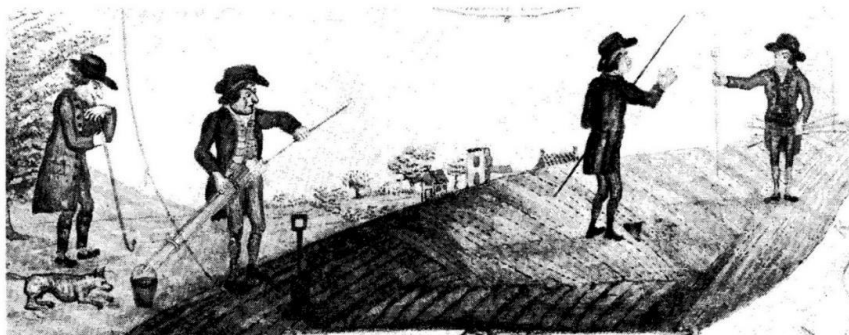
Plate 2.1 Monks measuring land. ³⁰



Elizabethan manuscript illustration of monks measuring land, intended to portray a link between the former monastic estates and rapacious economic practices (Huntington Library MS. HM 160, fol. 35r). The supporting quotation is Isaiah 57:17: "For the iniquity of his covetousness was I wroth, and smote him."

The figure shown holding one end of the measuring cord is clearly not monk, he is more than likely to be an assistant. This illustration of a monk measuring land dates to Elizabeth I, and is an early piece of documentary evidence that suggests land surveying is not a solitary occupation.

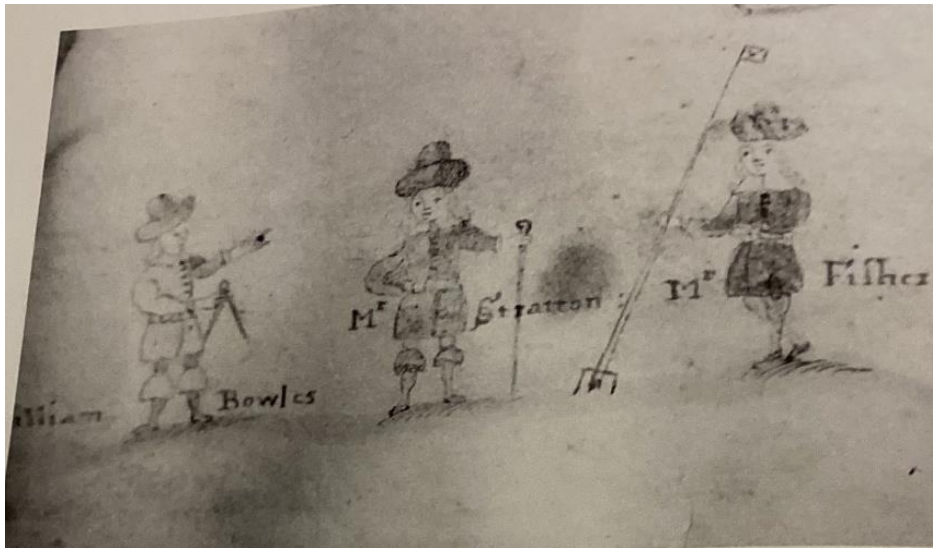
Plate 3.1 Cartouche from the enclosure of Henlow Bedfordshire, c 1795 showing the surveyor and his assistants at work in the field. ³¹



³⁰ Andrew McRae, To Know One's Own: Estate Surveying and the Representation of Land in Early Modern England. In *The Huntington Library Quarterly*, Vol. 56, No. 4 (Autumn 1993). Illustration between 333 and 334. Plate 2.1.

³¹ Catherine Delano-Smith and Roger J. P. Kain, *English Maps A History* (London: The British Library 1999) 129. Plate 3.1.

Plate 4.1 N(orth) Stratton Bryanston (Dorset) 1659



A surveyor's team in action. Mr Stratton the surveyor stands in the centre with his stick, supervising the operation. Mr Fisher to his right is holding a pole. Another assistant to Mr Stratton's left, is holding what appears to be a large telescope on a tripod.

Harvey suggests that 'some estate maps include pictures of the surveyor at work in the field, underlining their origin in the careful measurement of land.'³³ The benefit to a local community of having an independent visiting surveyor in their midst, is that it would be cheaper for him to employ men who lived near the estate to be mapped. The number of assistants employed in each survey is difficult to determine.³⁴ Bendall's data that gives some indication of the numbers locally recruited is taken from Cambridgeshire newspapers. Further evidence is provided that suggests most commissioned surveyors advertised for assistants in the newspapers published in the area in which they are about to survey land³⁵ The first local newspaper in Essex was not published until 1764, the *Chelmsford Chronicle*, which means it is difficult to determine where and how commissioned land surveyors found their assistants when engaged in Essex. Details of the payments made to an assistant surveyor living close to the area to be surveyed are given by Bendall, 'a John Jackson, a tenant of the Duke of Bedford at Thorney, was paid £2 10s 9d, for assisting Mr Thomas Ponton in his survey of that parish in 1751-2.

Edward Lancaster, the local schoolteacher, was also paid for surveying at that time and Abraham Quince was paid £1 5s 8d for leading the chain'. Quince's entry in the *Dictionary* indicates that he was only ever involved in the making of one land survey. This is evidence that the *Dictionary* regarded Quince as an equal to a commissioned surveyor, no distinction is made between the two surveyors – the commissioned surveyor and the locally hired surveyor. Quince only had the task of leading out a measuring chain whilst his employer, Thomas Ponton's entry in the *Dictionary* indicates that he made surveys in four different counties. It is likely therefore, that in each case he was a commissioned surveyor. Bendall's final word on the topic of how surveyors learned their skills is that surveying manuals were available and affordable to the seventeenth- and eighteenth-century land surveyor, but it is likely that most surveyors learnt their skills through other means including being recruited to assist a more experienced surveyor commissioned to make a survey in the locality.³²

This investigation into the estate land surveyor has presented the opportunity to provide evidence that illustrates that a commissioned land estate surveyor should be recognised as being of a higher status than any hired assistant surveyor. The case will be argued in Chapter 2 of this investigation.

The commissioned surveyors work involved much more than measuring land, and the map he produced. The landowner and his estate manager and other officials must be able to find in the map the solution to the problem or issue the map was commissioned to resolve. The map was left to speak for itself once the survey was complete and the surveyor had moved on to other commissions. Each commission was also an opportunity for the surveyor to advertise his skills and to increase his

³² Bendall, *Maps, land and Society* 1992. 125.

reputation. The purpose of the map may have been a straightforward estate management problem, or the valuing of land to maximise production in a changing world. Delano-Smith highlighted the importance of this in the sixteenth-century when the transition from feudalism to capitalism changed both the social and economic valuation of land, land was now worth mapping and could be used as a tool in the development of new systems of exclusive (private) rights to land.³³ But the map needed to be well drawn as well as accurate, as Emmison noted with reference to the estate maps produced by John Walker of Essex, the map had to be 'a delight to the eye... be of absorbing interest and remarkable accuracy' and of course fulfil the purpose for which they were made.³⁴

In 1947 Emmison had been the first person to place maps centre stage by compiling the *Catalogue*. His task must have been made all the more difficult as many of the estate maps had been separated from associated material that perhaps explained the purpose of the map. Associated material would have also determined who influenced the content of the map the landowner, or the surveyor. This point will also be discussed in the chapters relating to the landowner (chapter 1) the surveyor (chapter 2) and the map (chapter 3).

To reinforce the significance of the *Catalogue* compiled by Emmison, it was the first of its kind to give maps a voice and to show how they might be described, defined, and classified. The detail taken from the maps also tells us who the important landowners were in Essex and in some cases the purpose of the survey.

Maps, Land and Society by Bendall, a work already mentioned, is an important work in relation to this investigation. It is seen as far more than the authors

³³ Delano-Smith and Kain, *English Maps A History*, 1999. 116.

³⁴ F. G. Emmison, ed., *Catalogue of Maps in the Essex Record Office 1566 – 1866 1860* (Chelmsford, Essex: The Essex County Council, Chelmsford Record Office Publications, No. 3. 1947). Viii.

statement that its' concern is with rural estate maps, which were primarily drawn to show landownership, the surveyors who drew the maps and the landowners that commissioned them.' ³⁵ In a review of the book, Ravenhill highlighted the additional importance of useful material on the training of surveyors, and the textbooks available to them over the period considered (1600-1836).³⁶

The biographies of individual landowners and land surveyors are useful in determining which party had the stronger voice. A wise landowner might wait to see what the surveyor advised. For instance, what needed to be shown on the final map and what could be left out. A surveyor might hold back until a judgement could be made on just how well informed the landowner was, only gradually introducing what he thought, in his surveying experience it was necessary to represent on the map. On this issue, Mason writes that a letter of 1771 attached to a map sets out exactly what a well- informed landowner wanted to see represented on the final map.³⁷

"The surveyor is desired drawing out the map in the table casting up the number of acres to make two columns at the top of which putting their proper titles One the content of the land belonging to each field, the other the contents of the improvable arable land exclusive of the fence's ponds etc. To get the proper and most usual name of every field of the tenant and sett down the names to note which part of the land or part of a field is copyhold and how much.

Colour all the parishes all different so that by a view of the mapp may be seen in what parish each is in or if any lies in two the exact bounds.
of each parish. ⁴²

An experienced land surveyor would, in all likelihood, find a way
to include all the necessary information to fulfil the purpose of the

³⁵ Bendall, *Maps, Land and Society*, 1992. Frontispiece.

³⁶ Ibid., 119.

³⁷ Mason., *Essex on the Map*. 1990. 10 ⁴² Ibid.

map, without the landowner realising what he had done. An analysis will be made of estate maps and their content in Chapter 3.

Mason's *Essex on the Map* also discusses the lives, social status and incomes of the local estate land surveyor's active in Essex.³⁸ Three notable examples are the brothers, John Kendall II (K064); Joseph (K067); and William (K070) active between 1702 – 1737; all schoolmasters. Also, Edward Laurence (L071) active between 1694 and 1739, agriculturalist, antiquary, dialist, and teacher of maths; and William Cole (C340) active between 1755 – 1824, astronomer, composer, and schoolmaster.³⁹ This investigation into the lives and status of commissioned land surveyors is of some significance, as the investigation unfolds information relating to the socioeconomics of the day and the potential significance of an individual surveyors' religion will be shown to be a factor in their employment.

(Chapters 1, and 2)

A useful introduction into the daily lives of land surveyors relative to others in the newly emerging professions, such as architecture, engineering, and teaching, is to be found in an article by Peter Eden, *Land Surveyor in Norfolk 1550-1850*.⁴⁰ Eden usefully gives as an

³⁸ Mason., *Essex on the Map*. 1990 . 6 and passim.

³⁹ Bendall, ed., *Dictionary of Land Surveyors and Local Mapmakers* 1997. (The letter code in parenthesis being the surveyors unique letter code in the *Dictionary*) 106; 291; 307.

⁴⁰ Peter Eden, *Land surveyors in Norfolk 1550-1850*. (Norwich: Reprinted from the Norfolk and Norwich Archaeological Society Journal 19730 Vol. XXXV Part IV 474-481.

example an investigation he made of James Osborn, an estate land surveyor in Norfolk 1766 – 1773.

‘the charges made by Osborn in 1770 of an average of 4d. an acre or half-a-guinea a day for surveying and mapping and the ‘indicated quotient of 31 ½ acres may be accepted as a reasonable daily stint...but on that basis, to keep himself going by surveying alone allowing for the upkeep of his horse, assistance in the field, materials

and other outgoings, orders, (commissions) in the region of 3,000 to 4,000 acres annually would be needed.’⁴¹

Eden’s investigation into the land surveyors of Norfolk examines all that is involved in the surveying of a landed estate. His findings explain why an alternative occupation was necessary. Eden mentions the upkeep of a horse which is something not mentioned by any other writers on the subject.⁴² Eden also argues that ‘allowance should be made for the likelihood that assistance in the field, the heaviest of the outgoings, might be supplied by a son or other close relative. And that such a solution would tend to reinforce the tendency for land surveying to become a hereditary occupation.’⁴⁸ This can be interpreted to mean a son or other close relatives would be treated as would an apprentice; they would be learning the skills required for surveying by experience and paid very little for the work they were doing. Osborn is also listed in the Dictionary. He was a teacher of land surveying in 1773 and was

⁴¹ Eden, *Land surveyors in Norfolk 1550-1850* 1973. 479.

⁴² Eden, *Land surveyors in Norfolk 1550-1850* 1973, ⁴⁸
Ibid. 479-480.

employed by a Joseph Rumball a successful local surveyor, active in both Norfolk and Suffolk. In 1733 Osborn trained John Copland and had links to Thomas Nelson, also a surveyor who was only active in Norfolk.

There is no doubt that the assistants would acquire valuable experience of the complexities of a commissioned survey, and that by watching others set up apparatus, and seeing the way the measurements of irregular shaped parcels of land can be made, will add to a hired surveyors learning experience. That experience, it might be argued, cannot easily be acquired by the study of surveyors' texts. The commissioned surveyor may also source locally, the materials required, such as pens, pencils, paper, any new instruments he may need, together with inks,

pigments and other tools required to make the map, as a result contributing to the local economy. It is of interest that the name of any assistant rarely appears on any of the documentary evidence associated with the making of the map.

Between 1975 and 1979 the first *Dictionary of Land Surveyors and Local Cartographers of Great Britain and Ireland* was published.

⁴⁹ A number of problems were experienced in the compilation of the first edition of the *Dictionary* to the extent that it was only ever seen as 'an interim statement.'⁵⁰ In 1997, in Part I of the second edition of the *Dictionary*, it is acknowledged that the 'new edition (1997) has had to adhere to the same basic format and principles as its predecessor', although some changes have been incorporated.⁵¹ In

the second edition of the *Dictionary*, as with the first, information about the location and number of relevant maps has in general been omitted.⁵² One analytical problem that Paul Laxton observed about the *Dictionary* is that the reader needs to be reminded the data relates to surveyors and not maps. Both editions of the *Dictionary*, omit details as to the location and number of maps made by a surveyor. .⁴³ The surveyor's biography in the *Dictionary* records only in which counties he made maps, but not how many or where the maps are located. Mason's work, bridges the gap to some extent, as all the maps made by an Essex estate land surveyor are listed in his work, including the location of a map if it is now not in the Essex Record Office (ERO). For example, of the seventeen maps made by the Essex Surveyor, Joseph Dawson 1754-87, his map dated 1760, of a farm in Widford, Chelmsford, Essex, is to be found in the British Library.⁴⁴ It is

⁴⁹ Peter Eden, ed., *Dictionary of Land Surveyors and Local Cartographers of Great Britain and Ireland 1550-1850* (Kent: Dawson & Sons Ltd., Cannon House, Folkston, Kent, 1975) Part 1.

⁵⁰ Bendall, *Dictionary of Land Surveyors* 1997. Vol., 1. 1.

⁵¹ Eden, *Dictionary of Land Surveyors and Local Cartographers* 1975. 5.

⁵² *Ibid.*

considered essential to this dissertation to view the original of a map where possible, as additional information may be found in the margins of the map and on the reverse. From the examination of an

⁴³ Paul Laxton, Review *The Dictionary of Land Surveyors and Local Map-Makers of Great Britain and Ireland 1530-1850* Sarah Bendall. In *Imago Mundi*, 1998, Vol. 50 (1998) 216.

⁴⁴ British Library London.

original manuscript map it may also be possible to determine how the map was surveyed and more can be learned about the author of the map than from a photograph or copy. This issue will be discussed in Chapter 3.

It was not until 9 November 1868 that the newly formed Institution of Surveyors opened its first annual session and significantly ‘came up with a ‘Definition of a land Surveyor’.⁴⁵ The Land Surveyor was ‘one who has learnt the art of admeasuring and delineating the surface of a country, is capable of dividing, allotting and arranging for enclosure, commons and wasteland, or dividing or allotting the interests of those holding as joint tenants, co-parceners, or tenants in common, versed in the knowledge of the various products of agriculture their values and comparative advantages,’⁴⁶

The seven essays by J. B. Harley published in *The New Nature of Maps: Essays in the History of Cartography* have influenced the questions asked of the maps that have been examined for this dissertation. Harley’s essay Deconstructing the Map ‘urges us to read between the lines of the map “in the margins of the text” – and through its tropes to discover the silences and contradictions that challenge the apparent honesty of the image’.⁴⁷

⁴⁵ F. M. L. Thompson, *Chartered Surveyors the Growth of the Profession*. (London: Routledge & Kegan Paul 1968) 96.

⁴⁶ Ibid.

⁴⁷ J. B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, ed Paul Laxton. (Baltimore/London: Johns Hopkins University Press 2001) 153.

Where difficulties occur in the reading and interpretation of a map Harley presents a way of overcoming these problems. The idea that silences and to some extent contradictions can be found in a map is not

new.⁴⁸ In the Explanatory Notes on the *Catalogue* Emmison wrote ‘that the chief aim of the catalogue is to give clear concise particulars of what the original map shows, and to some extent what it does not show, the latter is almost as important as the former...’⁴⁹ Emmison unlike Harley offers no indication of how this is to be achieved only that the latter (what the map does not show) is almost as important as the former, because the amount of detail varies greatly.⁵⁰

Chapter 5 is a case study of the Maps by William Tampon to illustrate the value of Harley’s essays and his approaches to the interpretation of estate maps.⁵¹ Evidence relating to case studies of independent Essex estate surveyors, active in the eighteen century are also included in this investigation. They illustrate the complexity of the daily lives of the ordinary people of Essex and where the land surveyor fitted in, his status and standing in the community. The

⁴⁸ Ibid., 84-85.

⁴⁹ Emission, *Catalogue of Maps in the Essex Record Office*. 1947, XX.

⁵⁰ Emission, *Catalogue of Maps in the Essex Record Office*. 1947, XX

⁵¹ J. B. Harley, *The New Nature Of Maps: Essays in the History of Cartography* Edited by Paul Laxton. (Baltimore: Johns Hopkins University Press 2002) 83. ⁶² Ibid., 24.

story of estate maps and the surveyors that created them is a complex one.

Harley's essays in *The New Nature of Maps*, will be discussed in chapters 3 and 6. In an earlier work Harley comments that 'in the late sixteenth century estate maps began to develop a uniformity of design and differences in date and place but not always obscuring the idiosyncrasies of individual presentation'.⁶² Harley is suggesting that mapmakers found a way of complying with landowner's instructions, on what was wanted from the survey of his land but also managed to incorporate decoration and features that identified the map having been drawn by a particular surveyor.⁵² In his later works Harley says nothing about the land surveyors

who created the maps and their innovative design features that made the map his own.

Harvey's *Maps in Tudor England* 'sets estate maps in the context of the general development of mapping in the sixteenth century.'⁵³ In a discussion on map development, Harvey argues 'the figures speak for themselves, from the second half of the fifteenth century there existed about a dozen maps ...from the first half of the sixteenth century we have about 200, from the second half 800'.⁵⁴

⁵² J. B. Harley, *Maps for the historian: A guide to the British sources*. (London: Bedford Square Press for the Standing Conference for Local History). 1972). 24.

⁵³ P. D. A. Harvey "English Estate Maps: Their early history and their use as Historical Evidence" in *Rural Images 1996*, ed David Buisseret (London: The University Chicago Press, Ltd., London fn. 1. 59.

⁵⁴ P. D. A. Harvey, *Maps in Tudor England* (London: The Public Record Office and The British Library 1993) 7. See also Rose

In 1581 Agas drew a map of Lord Cheney's manor of Toddington in Bedfordshire. It is the earliest estate map that completely replaced the written survey, setting out all the information either on the map itself or in the panels around the edge. his map will be discussed in Chapter 3.⁶⁶ (Plate 1.6) A map made six years earlier in 1575 by Agas of West Lexham, Norfolk, includes a note of manorial customs and a list of tenants with their rents that illustrates Agas's early attempt to have a map replace a written survey.⁵⁵

Harvey maintains that estate maps were not drawn for a particular occasion, or defined purpose, but for general reference: such maps appeared quite suddenly on the English scene' in the mid-1570s.⁵⁶ The estate map of Long Melford Hall, Suffolk 1580 by Israel Amyce, (Plate 1.5) would seem to support Harvey's suggestion. It is over 8 feet (2.4 metres) high, and 6 feet (1.8 metres) wide. At the bottom tables listing the tenants, their fields and acreages, which was useful for

useful for general reference. The map greets visitors on their arrival at the Hall, Bendall suggests however, that the map demonstrates to visitors 'pride of ownership and power over his land and tenants

Mitchell and Andrew Janes *Maps their untold stories Map treasures from The National Archives* (London: Bloomsbury Publishing Plc, The National Archives Kew. 2014) 16⁶⁶
Ibid., 85, 88-9.

⁵⁵ NRO., Ref., Code MC 21128, 179 x 4. Photostat copy.

⁵⁶ P. D. A. Harvey "English Estate Maps: Their Early History and Their use as Historical Evidence" in *Rural Images Estate Maps of the Old and New Worlds* by David Buisseret ed., (London: The University Chicago Press, Ltd., London. 1996) 27.

(with the manor house carefully drawn in the centre) but, had the map been drawn simply for administrative purposes it need not have been so decorative.' ⁵⁷

⁵⁷ Sarah Bendall, Pride of Ownership ,in *Tales from the Map Room Fact and Fiction about Maps and their makers*. By Peter Brber and Christopher Board. (London: Publishedby BBC Books , Woodlands London. 1993) 94.

Plate 5.I Long Melford Hall Suffolk, by Israel Amyce. 1580. 'Pride of Ownership' ⁵⁸

⁵⁸ Sarah Bendall, "Pride Of Ownership" , in *Tales from the Map Room Fact and Fiction about Maps and their makers* Peter Barber and Christopher Board (London: BBC Books a division of BBC Enterprises Limited, London 1993). 94-5.



A larger estate map by Ralph Agas, of Lord Cheney's estate at Toddington, 1581, (Plates 6.1 a & 6.1 b.) measures more than 11.5 by 8.5 feet. (3.50 metres x 2.59 metres). The map indicates who owned every house and the area of every patch of ground that makes up the estate. The map is described by Harvey as 'one of the most remarkable of all English Estate maps, and it is interesting that so ambitious and so sophisticated a map was produced while the genre

was still in its infancy.’⁵⁹ The whole map can be seen ‘as a written survey set out in a graphic form that not only told him more than any description solely in writing could do but, also sets out the size and value of his estate for all to behold.’ The maps by Agas are dual-purpose maps in much the same way as Plate 1.5, the map of Long Melford

Hall by Amyce. The map by Amyce, and Agas’s map will be discussed in Chapter 3.

Plate 6.1 a Part of Lord Cheney’s estate Toddington, Bedfordshire by Ralph Agas 1581⁶⁰



⁵⁹ Harvey, *Maps in Tudor England* 1993) 88.

⁶⁰ *Ibid.*, Plate 60, 88.

Plate 6.1 b. The name of the tenant of each field is named on the map as in a written survey.⁶¹



The available evidence suggests that prior to 1575 only written surveys were made of a landed estates. Harvey notes that ‘the earliest (estate maps) known seem to be Ralph Agas’s map of West Lexham in Norfolk in 1575 and two sets of maps by Israel Ames of properties in Essex; the manor of the Dean and Chapter of St Paul’s Cathedral, London, at Belchamp St Paul in 1576 and several manors and other lands of Edmunds Tirrell in 1579.⁶² An investigation by Mitchell provides evidence that ‘the earliest date that a map was shown in a court of law is 1515, when a map of the area around Huntingdon affected the outcome of a dispute over the

⁶¹ Harvey, *Maps in Tudor England* 1993) Plate 61. 88.

⁶² | Harvey, *Maps in Tudor England* 1993) 80-81

damming of the River Ouse to feed the water mills of the Abbot of Ramsey'.⁶³ This case was seen as significant by Mitchell 'if maps could influence a verdict representing the points of the case to the court as here, there was good reason to use them.'⁷⁶

In another case dating from 1571, concerning fishing rights on Sturmer Mere, Essex, a note below the map explicitly states that two maps were made, one for

each side in the case.⁶⁴ The two map-makers had different views about what should be shown on the map. The first mapmaker John Huntte disagreed with Thomas Larke, who made the second map, 'in some points of smale wayght, not so much materiall to cause now in question' however, since the second map is missing it is impossible to verify the claim.⁷⁸ Mitchell has discovered that the mapmaker John Huntte said in a note that he was a 'commissioner' in the case. This meant that he had been commissioned by a written court order from the London law courts to visit the disputed land, gathering evidence from the parties and local people and send his findings back to London. This provides evidence that the lawyers and officials who sat in the major law courts in London were familiar

⁶³ Rose Mitchell, "Maps in Sixteenth-Century English Law Courts" in *Imago Mundi*, Vol., 58, No. 2 (2006), 213. ⁷⁶ *Ibid.*

⁶⁴ Mitchell, "Maps in Sixteenth-Century English Law Courts" in *Imago Mundi*, Vol., 58, No. 2 (2006), 213.

⁷⁸ *Ibid.*

with maps, even if they could not draw maps themselves. Mitchell adds that 'the commissioners could be drawn from the aristocracy or from the ranks of provincial clergy and gentry... but had no special training in making maps, just a knowledge of the land in question and a presumed impartiality; Mitchell found no instance where it was recorded that commissioners questioned their mapmaking orders, and at least some of these men had a go at making maps, which suggests that awareness of maps was percolating down at least to this level.

An account that suggests maps were treated seriously by courts of law as early as 1530 is given by Mitchell. 'In about 1530 ... a map of Marton in Lancashire was drawn to support the case of villagers against the local Priory of Lytham St Anne's. The written documents show that the argument was heated, the villagers claiming that the Prior had ... enclosed a common to which they had pasture rights. In retaliation the villagers had smashed the new fences. Two maps were presented and

court officials pronounced both maps 'much variant and doubtful'.

The outcome was that the prior won his case, and the judgement was awarded in view not just on the strength of the written evidence he produced but also 'by the sight of the platt'.⁶⁵ Mitchell only identifies one map in her paper, from a case dating to 1571.

⁶⁵ Mitchell, "Maps in Sixteenth-Century English Law Courts" in *Imago Mundi*, Vol., 58, No. 2 (2006), 213.

This involves a dispute over fishing rights on Sturmer Mere in Essex.

Plate 7.1 a 'Summer of the Lake,' Sturmer Mere Essex 1571 by John (le) Hunte
66

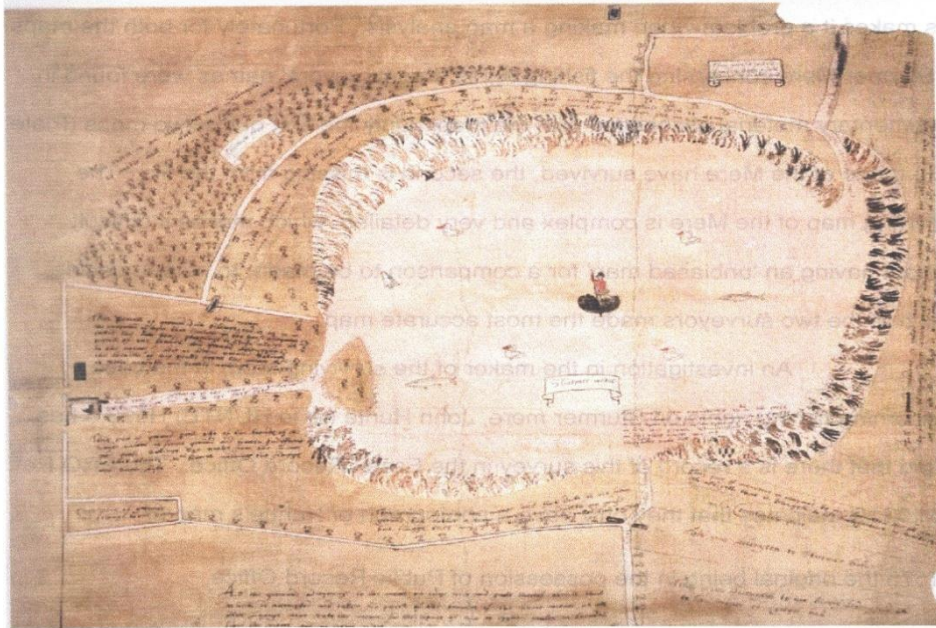
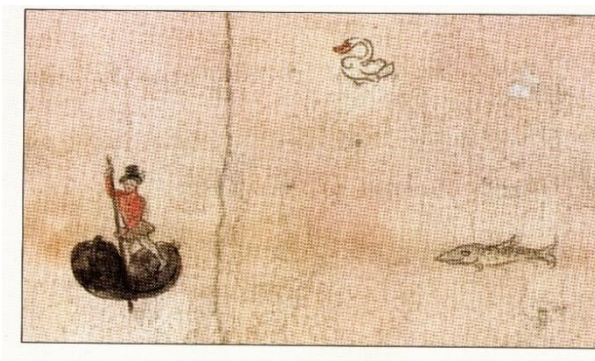


Plate 7.1 b Boatman in Breeches



The caption to the picture of the man in a boat reads 'depictions of humans are rare of early maps: This boatman among the fish and swans may have been drawn because a boat was mentioned in court papers, as crucial to enable fishing on the lake: The defendant had no boat.⁸¹

⁶⁶ Rose Mitchell and Andrew Janes, *Maps their Untold stories: Map treasures from the National Archives* (London: The National Archives Bloomsbury, London & New Delhi. 2014) 36-37.

⁸¹ Ibid, 36.

A comparison of the two maps of 1515 and 1571 used as evidence in a court of law compared to the maps drawn in 1580 and 1581 by Amyce and Agas illustrate the development of map drawing within the space of 10 years. The early maps of Sturmer Mere, closely resemble pictures, whereas the maps by Amyce and Agas are decorative but have all the hall marks of the estate maps drawn in the seventeenth and eighteen centuries. The maps by Amyce and Agas may have been drawn in the last quarter of the sixteenth century, early in the history of estate maps, but incorporated into the map is all the information required that makes the need for a written survey redundant.⁶⁷

Further enquiries into the background of Amyce, Agas, and John Walker, an estate land surveyor active in the late sixteenth century will be discussed in Chapter 3. The focus on the backgrounds of these and other early estate surveyors was to establish what influenced the high standard of their work. The possible influence of surveyors' text will be examined. The gaps that have been found in the documentary evidence relating to the story of map consciousness and the ability to draw maps to a high standard will also be discussed in Chapter 3. The high standard of Agas's map as previously stated prompted Harvey to note that Agas's estate map of Toddington, Bedfordshire (Plates 1.6a & b) 'is ... an outstanding cartographic monument of the sixteenth

⁶⁷ Bendall, "Pride Of Ownership", in *Tales from the Map Room Fact and Fiction* 1993. 94.

century... and the most remarkable of all English estate maps.⁶⁸

Buisseret comments that in 1400 few people in Europe used maps, ... but by 1600 maps were essential to a wide variety of professions.⁶⁹

Surveyors may have been influenced by the use of maps in law courts, as Mitchell

notes that when maps were shown to quite ordinary villagers, 'they must have understood what they were seeing when they looked at the map and gave their replies under oath, maps were becoming part of the language by which legal evidence was communicated and this was not just courtly language, but extended into the vernacular in an era when formal literacy could not be assumed.'⁷⁰

A multidisciplinary approach allows a rounded picture of the complex history of cartography to be written. Once the making of a map as a means of communicating ideas that improved daily life was realised many strands of society took an interest. Maps were used by all the professions, from attorneys, auctioneers, farmers, land agents, instrument makers, and of course the law courts that treated maps in the same way as documentary evidence. Lynam argues that the impact of historical events such as Henry VIII's break with Rome led

⁶⁸ Harcey, *Maps in Tudor England* 1993, 89.

⁶⁹ David Buisseret, ed, *Monarchs Ministers and Maps: The Emergence of Cartography as a Tool of Government in Early Modern Europe* (London & Chicago: The University of Chicago Press, Chicago & London 1992) 1.

⁷⁰ Mitchell, "Maps in Sixteenth-Century English Law Courts" in *Imago Mundi*, Vol., 58, No. 2 (2006), 216, 217.

to monastic estates being sold to the new landed gentry which 'gradually brought into existence a body of independent professional lay surveyors, as distinct from the manorial stewards in the employment of the Lord of the Manor.⁷¹

The first three chapters of this investigation will discuss the landowner, the surveyor and the map-maker, and the complex relationship between the landowner and the surveyor. Chapter 2 will demonstrate that a hierarchy existed within the land surveying community of the sixteenth and nineteenth century. It was not until 23rd March 1868 that the Institute of Surveyors was founded and defined a land surveyor, gave him recognition, and set the standards of his craft. Chapter 4 is an analysis of Essex Estate Map 1700-1800. Chapter 5 focuses on the work of the

surveyor William Tampon (T020) with the objective of illustrating an estate surveyors

skills.

⁷¹ Edward Lynam, *British Maps and Map-Makers* (London: Willaim Collins of London 1944) 14.

Chapter 1

Landed estate Owners

The landowner's
relationship with the
surveyor
commissioned to
make a survey of their estate.

The owner of a landed estate has from the very earliest times been encouraged to know the extent of his estate and to know the estate's income from rents and leases. It was considered necessary

for the landowner to have this information in order to achieve his objective, that being to 'render the estate as far as may be, selfsufficient.'⁷²

The need to do this is suggested by Emmison in his introduction to his *Catalogue*; 'land time out of mind, has been one of the most treasured possessions of Man and he has for almost as long taken great care to see that adequate evidence existed to his right for what he claimed as his own.'⁷³ He might have added that 'as feudalism was overtaken by capitalism so specific parcels of land acquired monetary, and symbolical, value; land was now worth mapping'.⁷⁴ This was when it might be seen as the time to have a land survey made by a professional surveyor an accurate map was required of one's land to asses its worth, for setting rent values and leases.

Prior to 1947 and the publication of the *Catalogue* any investigation into who owned the land, what estate surveys were made and who made them was impossible as there was no known source of this information. In her review of the *Catalogue* written soon after its publication in 1947 Taylor suggests that students, historians and those investigating the history of land surveying now knew where to

⁷² Elizabeth Lamond, *Walter of Henley's Husbandry together with An Anonymous Husbandry, Seneschaucie and Rober Grosseteste's Rules* (London: Longmans, Green, and Co. and New York: 1890) xix.

⁷³ Emmison,. Ed., *Catalogue of Maps* 1947. Introduction vii.

⁷⁴ Delano-Smith and Kain, *English Maps a History*. 1999. 116.

look for source material.⁷⁵ She observes that a 'scholarly introduction to the *Catalogue* (the book under review) deals with the provenance of the maps, which date from 1566 to 1860, and gives notes on the careers methods, and styles of the more noted surveyors and cartographers'.⁷⁶ The *Catalogue* became the primary source of information when searching for the names of local landowners. Close inspection of an estate map will usually reveal the names of the owners of land adjoining the land represented. The *Catalogue* demonstrates that estate maps are much more than historical documents, they are the primary sources of information for anyone making an investigation into land use at the time the map was drawn or interested in the state of agriculture. Having access to a collection of estate maps in a record office or library would mean all the required information was in one place. In the foreword to the *Catalogue* Lynam suggests that English estate and manorial plans 'differ from all other kinds of maps; they were drawn and decorated by county surveyors for the information and pleasure of country squires.'⁷⁷ This description can be seen to apply only to maps that usually represented an entire estate, however maps representing only a few fields might have a decorative border. This point will be discussed later.

⁷⁵ Taylor Review of *Catalogue of Maps in the Essex Record Office 1947*. 228.

⁷⁶ Ibid., 228-9.

⁷⁷ Edward Lynam, "Forward" in *Catalogue of Maps in the Essex Record Office 1566-1860* by F. G. Emmison (Chelmsford: Essex County Council 1947) Publication No., 3. V.

The significance of Emmison's statement is that 'landed estates are described as private places' which suggests that any record of meetings between the landowner and the surveyor commissioned to make a map would be the concern only of the landowner, his officials and his tenants that reside on the estate.⁷⁸

Landowners of private estates, large or small, often employed independent land surveyors to make surveys of their private lands. Mason comments that 'landowners remained silent on what they wanted from a survey of their farmlands, suggesting that 'the survey of farms was too much of a routine of estate management to deserve specific comment.'⁷⁹ He is suggesting that having a survey of farmlands was a frequent occurrence. An 'investigation into landowners family archives' made by Mason indicated that surveys relating to the planning of a park or garden were of greater interest than a routine survey for the purpose of estate management.⁸⁰

An analysis of the key terms relating to an estate survey helps us to make sense of the meaning of Emmison's words in his section on private estate maps that is 'to their private character.'⁸¹

⁷⁸ Ibid, 1.

⁷⁹ Mason, *Essex On The Map* 1990. 10.

⁸⁰ Ibid.

⁸¹ Emmison, *Catalogue of Maps in the Essex Record Office* 1947. 1.

The key characteristics for a map to qualify as an estate map, is that provided that the ground represented on the map is owned by a single person (or institution) then it is an estate map.⁸²

The definition of estate lands being 'lands that belong to private individuals, to institutions, or to communities.'⁸³ An example of an institution having estate lands being one of the Cambridge or Oxford University colleges. The landowner is a single private individual who both commissioned and financed the whole project, therefore any documentary records such as instructions to the surveyor will, if any are made, automatically become part of the estate papers or be placed in the family archives.

(For an example of an agreement dated 1772, between landowner and surveyor

see Fig 1.1 in the Introduction). This explains Mason's comment that 'landowners remained silent on what they wanted from a survey', the explanation being that as the meeting was a private meeting any records relating to a survey would be with the estate papers, or family records.⁸⁴

Mason did however find one estate map dated 1771, that had a letter attached to it written by the landowner, explaining what he wanted the map of his land to record.⁸⁵ The letter affords us an

⁸² Delano-Smith & Kain, *English Estate Maps*. 1999, 113-114.

⁸³ Ibid.

⁸⁴ Mason, *Essex on the Map*. 1990. 10.

⁸⁵ Ibid.

insight into what the landowner George de Horne wanted to see on the final map of the survey he had commissioned.

‘The surveyor is desired drawing out the map in the table casting up the number of acres to make two columns at the top of which putting in their proper titles. One the contents of the land belonging to each field, the other the contents of the improvable arable land exclusive of the fences pond etc. To get the proper and most usual name of every field of the tenant and sett down the names to note which part of the land or which part of a field is copyhold and how much. Colour all the parishes all different so that by a view of the mapp may be seen in what parish each is in or if any lies in two the exact bounds of each parish.’⁸⁶

The letter gives instructions as to what scale was to be used when drawing the map, and the demand for accuracy in the drawing of every curve in the hedge row and true form of every field and finally to note the timbers or trees, also in an accurate and neat manner.⁸⁷

These two documents, created within a year of each other that have found their way into the public domain, the copy of Laurence’s agreement dated 1722; (see Fig 1.1 Introduction) and the letter dated 1771 from George de Horne the landowner,

⁸⁶ Ibid., 10-11.

⁸⁷ Ibid, 10-11.

addressed to his surveyor, give us an insight into the matters discussed at an initial private meeting between a landowner and a surveyor.

The surveyors first objective was to ensure that the agreed charges made for the survey would cover his expenses and leave him with a profit. His second objective was to ensure that the project will be completed within the agreed time and that the map he makes fulfils the purpose of the survey, all to the satisfaction of the landowner. The landowner's objective being firstly to ensure the surveyor has a full understanding of the area of the estate he is required to survey, that he is given every assistance he needs and all the usual issues as to the surveyor's charges, accommodation, assistants and possibly help in obtaining the instruments required are resolved.

Taken together, these two documents are primary source evidence for the claim (the first aim of this dissertation) that 'a commissioned estate surveyors responsibilities differ widely from those of any assistant surveyor he will engage,' this should be acknowledged by there being a separate index or record of established estate land surveyors.⁸⁸ Something the *Dictionary* does not make clear.

Mason points out that

'land measurement could not be done by one
pair of hands, carrying and setting up
apparatus and staking out the points from which

⁸⁸ Introduction page 2 *The first aim of this dissertation*.

measurements were to be made took time and manpower ... the commissioned surveyor Skynner's charges for assistance were so varies that it is probable that some assistants were more skilled than others.' ⁸⁹

If this was the case generally, this suggests there was also a differentiation between assistants. To have the *Dictionary* listing all for whom there is evidence of a

person having measured land as equals, making no distinction between commissioned estate land surveyors and assistants, is to lower the status of the commissioned surveyor, and to disregard the contribution he made to the development of map making, the training new land surveyors by giving them firsthand land surveying experience, as well as his contribution to the rural economy by employing local people. Any assistant (there appears to be a ranking between assistants, who need only to carry out the task for which he was employed). The assistants required to be directly involved in the measuring of land, perhaps assisting to pay out Gunter's chain, would not require the same skills as the assistants that set up technical pieces of apparatus such as a theodolite or the geometrical square by Digges or any of his other instruments. This is discussed in chapter 3. To set up the apparatus correctly you would need to know how it was used.

⁸⁹ Mason, *Essex on the Map*. 1990. 17.

The employment record of established estate land surveyors and the high regard landowners had for individual land surveyors commissioned to make surveys of their lands can be determined by an investigation into the landowners that employed them.

Between 1700 and 1800 the names of forty-two of the most important Essex landowners that had surveys made of their estates have been identified along with a number of minor landowners..

These statistics are based on Mason's *Essex on the Map* 1990; a name search of the Essex Record Office Archives; and a search of the British Library; the National Archives; Bendall's *Maps, Land and Society* 1992 and The *Dictionary of Land Surveyors* 1997. Vol., 1 & 2. Index of Names.

For an overall analysis of the landowners of Essex and the surveyors they commissioned see Table 1.3 and Appendix 2.1.

The following list gives additional evidence relating to the map production of the commissioned surveyors that sets them apart from the land surveyors hired as assistants.

This is in support of the first aim of this thesis that they should be named in a separate index and given the recognition they deserve recognition for their contribution to map development, map consciousness and the setting of cartographic standards. Finally for the opportunities they offered to local assistants, that is training through hands on experience and observation.

1771, MARSH Thomas, 1747-1749 and James CROW 1731-1786, for Lord Grimston made a survey of about 1,070 acres, map 305 x 455 mm. ERO Ref: T/M 60/6.

1776, MARSH Thomas for Lord Archer, made a survey of 421 acres, map on a roll, unrolled 560 x 750 mm. ERO Ref: D/DBz P1/1. Made commissioned surveys in 17 other counties of Great Britain. Considered to have had a successful career.⁹⁰

1747 SKYNNER Timothy (II) 1757-1770, had a long association with the Strutt family, Du Cane, Honeywood, the Round family, the Tyrrell family and the Mildmay family. Described by the Commissioners for Sewers who said they 'had full proof of the skill

⁹⁰ Mason, *Essex on the Map* 1990. 24.

and exactness of his surveys' ⁹¹ Maps ranging in size of 20 acres to 2,500 acres involving the employment of several assistants over time who names are not recorded.

1700-1724 COLE William 1687- 1732. Cole had a long association with not only for surveying his woods but also, with PARKER Robert 1729-46. Lord Petre: It is reported that in his library he had a copy of William Leybourne's *The Compleat Surveyor and A Platform for purchasers, a guide for builders and a mate for measurers*.⁹² This indicates some interest in land surveying and estate management and possibly on the merits of those he hired to make surveys of his estate. COLE made 22 estate surveys in Essex so must have some contribution towards the employment assistants in the areas he was working.

LORD PETRE as an employer of land surveyors was extensive .We know the extent, value and location of the Petre estate and his religion because after the Jacobite rebellion of 1715 all Roman Catholics had to register their estates. Stane (who made surveys for Petre) signed the necessary certificate which is in his papers. John Coffyn [C313] and James Parker [P055] with Lord Petre and other have their estates recorded in Register of Papists.⁹³ Between 1777 and 1779 a series of seven maps of lands belonging to Petre were made by an unknown surveyor, evidence suggests these surveyors were the work of BAINBRIDGE Thomas. The trade-mark signature made by him was of a man holding an axe and resting amongst trees. Bainbridge made surveys in 17 counties of England, he also would have given employment to local land measurers.⁹⁴ Petre also employed a number of other land surveyors namely PARKER Robert 1720-1746 who made surveys in 3 counties including Essex and had links to other surveyors. His cartography closely

followed that of

William COLE (above) and appears to have been acceptable. He also came from a Roman Catholic family. ¹¹⁰

⁹¹ Ibid, 84.

⁹² Ibid. 82-83.

⁹³ ERO Ref: Q/RPp *Essex Recusant 2*, 16 and later volumes for additional information on Roman Catholics.

⁹⁴ Mason, *Essex on the Map* 1990. 98.

Lord Braybrooke of Audley End: employed surveyors to make a survey of Audley End and Wenden and Wendens Ambo and Littlebury .¹¹¹

Her Grace the Duchess of Buckingham: employed Edward LAURENCE [L071]. Bellamy Humphrey: esq., surveyor George Hutson 1787; 689 acres.

1790 HUTSON George 1771 -1780 made surveys for R. Hust; R Sorrell; the Mildmay family Wadham College Oxford, the Tyrell estate, and the Round family. The survey for Hust comprised of 11 maps representing 957 acres bound in a book.¹¹²

1758 DAWSON Joseph 1754-1787 made a total of 18 estate surveys for the Wolfe family; Thomas Fytche esq; for Mr Ruggles and Pratts farm. His largest survey was 487 acres the smallest 56. Dawson was very much a local surveyor he had links to other surveyors. He had a long association with the landowner Richard Hoare of Boreham. His cartography is described as neat, explicit but not individualistic.¹¹³

1715 KENDALL John, Joseph and William 1702 – 1726 ; were employed by three large well-known landowners of Essex, the Creffield, Round, and the Wegg families.¹¹⁴

1727 WOOD John, 1727 – 1753 , made 7 estate surveys in Essex for Mrs Browne
(1727) for Prujean 1729, and Brock J. Brock Gentleman: Surveys of his estate by
John Wood 1750 and 1752. Details taken from the list of maps made by Wood.¹¹⁵ His cartography is described as 'crude and his plain maps very plain', when he did use decoration his imagination outran his dexterity.⁹⁵

1760 STORER John 1760-1803 for of Essex who mainly worked for the Du Cane family, Sir Thomas, S, Wilson Bart. He made 9 estate surveys in Essex and two estate maps in two other counties. Estate books indicate that Storer was surveying lands belonging to the Honeywood's in the 1780s and in 1795 Storer mapped a small farm in Feering for Filmer Honeywood. Storer appears to have been "on call" land surveyor for the Honeywood's throughout his career.⁹⁶ He had two alternative occupations as auctioneer and estate agent, both related to land surveying. Storer is said to have had a long career, eventually doing all the jobs that became the mark of the

⁹⁵ Ibid., 92.

⁹⁶ Mason, *Essex on the Map* 1990. 77-78. Table Eleven The Maps of John Wood.

chartered surveyor. His cartography was said to have continued to improve over

¹¹⁰ Ibid., 57.

¹¹¹ Emmison, *Catalogue of Maps in the Essex Record Office* 1947. 29 b * .

¹¹² ERO Ref: D/DDC P4 D/DE1 P67.

¹¹³ Mason, *Essex on the Map* 1990. 44.

¹¹⁴ Ibid., 80. .

¹¹⁵ Ibid., 92. Table Eleven The Maps of John Wood.

time. He made useful maps that showed land usage and land holding in terms of free- or copyhold. ¹¹⁸

The evidence relating to the maps of both WOOD and STORER suggests that they were not to the same high standard as those by Skynner or Hutson, as previously discussed. Nevertheless, they were both commissioned to make estate maps on several occasions, suggesting that were able to put a team together to meet the demands of an estate commission. That is making a survey that resulted in a profit, the hiring of local assistants, the sourcing of all the materials and equipment required and the completion of the project within the agreed time.

1780 COLE William 1755- 1824; estate surveys for a number of large landowners. He made two small surveys for the Smythies family; a significantly high number for the Round family; two very small surveys of 6 and 12 acres, for the Phillips family, and larger ones for the Mildmay's, Riley and Du Cane families. ⁹⁷

A note about the Round family who were large eighteenth century landowners in Essex. The Round family have records that show they were employing local surveyors in the last 20 years of the eighteenth century. In 1725 the Round family employed William Kendall [K070], and John Blyth [B411] who surveyed with William Cole [C340] a farm owned by the Round family. It was Blyth's last map Cole was later to do many more surveys for the Round family. As landowners through the highly qualified surveyors they employed helped to contribute to the development of cartography and the employment of local land measurers.

James Round: employed both George Hutson [H621] and William Cole [C340] to make surveys of his lands.

⁹⁷ Mason, *Essex on the Map* 1990, Table Twelve 114.

William Round: In 1746 William Round had lands he owned surveyed by Timothy Skynner ERO Ref; D/|DU 737/2/.

1746 TAYLOR Josiah made seven estate surveys in Essex for George Scott, Lord Archer, Thomas Scott and an unknown landowner.⁹⁸ Josiah Taylor's maps 'are all workmanlike in the clear outline of fields and of trees together with an indication of land use'. As well as the characteristic cartouche, the scale bar in all the maps is framed by decoration. Taylor's alternative or perhaps more secure occupation was that of schoolmaster and he is also described as a 'philomath'.⁹⁹ Surveying perhaps was an interest using his mathematical skills and his calligraphy appears to be of a higher standard than that of any assistant.

1731 PULLEN William 1727-1737. Surveyed for John Strutt: Pullen's alternative occupations being that of carpenter and 'philomath' and schoolmaster. Pullen's map of Springfield for James Smyth of 48 acres shows field -names , variety and number

¹¹⁸ Ibid., 77.

of trees in each field.¹⁰⁰ The map photograph faded, and not in good condition. A list of field names and sizes in the lower left corner of the map and a cartouche in the lower righthand corner of the map are too faded to read.

Thurstan Mary Mrs: A survey of her estate made in 1728 by Timothy Skynner who also made a survey of Mrs Mary Thurstan estate at Peldon. See copy saved as Mrs Mary Thurstan.

Tipping Lady: Full title: 'Description of parcell of [Childerditch, added] Fann situate lying and being in the parish of Childerditch in the county of Essex containing of arable land 18 acres 3 roods and 5 perches being parcell of the possession of the Honourable Lady [Tipping, added] and herein particularly discribed & measured in the year of our Lord 1719 by William Cole' Scale of 1 inch to 10 perches [1:1980 or 32 inches to 1 mile]. Scale bar ('The scale of perches 10 in the inch').

Blankets Farm (19 acres) in south-west corner of Childerditch. Shows field-names and acreages, gates, pond, 'new chase way

⁹⁸ Ibid., Table Ten the maps of Josiah Taylor.

⁹⁹ Bendall, *Dictionary of Land Surveyors* 1997 Vol.. II entry T059. 504.

¹⁰⁰ ERO Ref: D/DHt P6. 1735 Springfield Farm land of James Smyth now in the passion of Thomas Rolfe.

leading over Bulvane [corrected to 'Childerditch'] Fan to Oset', boundaries with Bulphan Fen to southeast and, to north-west, with 'the lands of John Adams being new inclosed'. Buildings shown in perspective view. Boldly coloured cartouches for title and scale bar. Compass points written in margin.

Tyrrell: in 1765, 193 acres of land in Wakering surveyed by Timothy Skynner.¹⁰¹

Way Lewis: Mason 1990 85, Way employed Skynner to survey his lands at Dunmow Essex in 1749.¹⁰²

Wegg Mason: 1990. 43 The busy surveyors John and Joseph and William Kendall with whom Daniel Halls was closely associated. Hayward Rush came into the end of the period. Their known work is tabulated and shows that they worked for the landed gentry of Colchester, the Creffield, Round and Wegg families.

Western family: Mason 1990. 49-50. Fallows active from 1714 to 1731 in CAM, ESX, HRE, MON, WOR: of Maldon ESX 1714 – 20, Of Purleigh ESX 1726; farmer, Quaker.

Wolfe: family employed surveyor Joseph Dawson 1754, 1756, total 420 acres approx. Nothing known of Wolfe family.

The main source of information relating to the landowners of Essex actively employing land surveyors in the eighteenth century comes directly from the maps

made by the surveyors they employed. Further information relating to a small number of the landowners was found in the Essex

Record Office Archives. The route to naming the landowners

¹⁰¹ ERO Ref: D/DGe P13

¹⁰² ERO Ref D/DU 234/82.

of Essex had to start with the maps listed by Emmison in his *Catalogue*. Local record offices, or Archives centres, do have basic lists of maps in their care but not always indexed in a way that makes them accessible. The start to any investigation into estate mapping, must be the maps the surveyors created. The names of landowners and the surveyors they commissioned were all found on the estate maps.

It is said every estate map, 'had two parents; the surveyor who gave it to the world and the landowner who was responsible for its conception.'¹⁰³ Accepting this to be the case, it is another piece of evidence towards the first aim of this thesis that is to argue that a distinction should be made between the estate land surveyor commissioned to make an estate survey and any hired assistant. A Surveyor took on a lot of responsibilities when accepting a commission to make an estate survey. For this his work should be recognised by his name being indexed in a separate section of the *Dictionary*.

This chapter, has set out the role of the landowner in the process of an estate survey, the opportunities they have for making a contribution to the survey and how each individual landowner saw his role in the project.

It is interesting to note that in an in-depth investigation of Skynner's career

¹⁰³ P. D. A. Harvey, "English Estate Maps: Their Early History and Their use as Historical Evidence" in *Rural Images Estate Maps in the Old and New Worlds* by David Buisseret. (London: The University of Chicago Press Ltd., London. 1996). 40.

Mason discovered evidence to suggest that he made many surveys that did not have a map as an end product. He also found evidence to show that he was called upon discuss other matters. One such being that in 1757 whilst in Bedfordshire working for

a Richard Ray (details of the survey are in the Bedfordshire Record Office) Skynner negotiated with the Turnpike Trust to ascertain the best route for the road that crossed Ray's boundaries. "I walked with the Chief Surveyor and set forth to him I thought that if the road were caried thro' sixteen acres it would be a vast deal less expensive to the Commissioners." He drew a plan to show Ray what he had suggested . Ray called him back for further surveying in 1765, also a year in which Skynner went to Suffolk , this time for a single survey,¹⁰⁴ This is just an illustration of how much more information is hidden away in archives, particularly in record offices, waiting to be discovered. Information that in some instances helps paint a different view of a person's land surveying career.

There is no record that Skynner had an alternative occupation. His career also shows that although he was regularly employed by some of the major Essex land surveyors to make surveys of a high number of acres of land his Will proved in 1771 showed that the

¹⁰⁴ 126 Mason,
Essex on the Map
1990. 83-84.

property he lived in had been bought with a mortgage lent to him by a friend.

In this chapter the names of the most prominent landowners have been named. The names of the surveyors they employed together with details of the maps they made. This can only be an overview, the estate records and family archives of each of the landowners more than likely will contain details of other surveys. An analysis can only be made of the maps that are now in the public domain. A search of family papers may also find account books, day books receipts and other documentary evidence that suggests other surveys were made of land they owned in another part of the country. A further investigation is required into the biographies of both the landowners and the surveyors they employed they may reveal a reference to surveys of lands belonging to the Essex landowners located in other parts of the country.

Chapter 2
An analysis of the
Land Surveyors of
Landed Estates in
Essex
1700 – 1800
An analysis of their Alternative
Occupations

The first aim of this dissertation is to argue that a distinction should be made between the land surveyor commissioned to make a survey of a private estate, and any person defined by the *Dictionary* as a land surveyor hired to assist in the project. This chapter will investigate the available evidence relating to this argument by first making an analysis of the entries in the *Dictionary* relating to each of the surveyors active in Essex between 1700 and 1800. The *Dictionary* is the first and only comprehensive record of the land surveyors and map-makers of Great Britain and Ireland active between 1530 and 1850. The biographical information that appears at the end of each entry includes a list of the sources from which the entry was compiled, thus enabling further investigations to be made relative to an individual surveyor where the information is sketchy. No discrimination is made between the land surveyors commissioned to make an estate survey and any assistant he may have hired to assist him in the measuring the land, all are deemed by the *Dictionary* as equal. This chapter will provide evidence to illustrate that the names of the commissioned surveyors should be in a separate list to differentiate them from the surveyors that were employed as assistants. The skills required by a commissioned surveyor sets them apart from any assistant whose only skill was the ability to carry out the task assigned to him.

The second aim of this investigation is to argue that a significant number of all land surveyors, commissioned to make a survey found

it necessary to engage in an alternative occupation to make ends meet.

An essential part of the management of a landed estate is to have the land regularly surveyed. In his treatise published in 1523 Fitzherbert, gives the reasons for the commissioning of an estate survey. 'Every man in possession of land' he advises 'should have a surveyor that can extende, butte, and bounde, and value them... know the content of their land'.¹⁰⁵ Fitzherbert is saying a landowner should 'know his own,' but not by means of a land survey as we understand it to mean today.

The need to 'know your own' was simply a reminder that land was precious, it was needed for the growing of crops, the grazing of animals, and all else necessary to life itself. Having a survey of your land was the best way of managing your estate. The survey was a record of the use being made of the land and indicated where improvements might be made, it was a record of the rents paid by tenants and the extent of their land holding.

Delano-Smith and Kain argue that 'to know his own' was a 'phrase that recurs like a motif from surveying manual to surveying manual and draws attention to the emergent desire to apportion objective rights ownership over goods and land.'¹⁰⁶ From the early sixteenth century onwards by having a land surveyor, a

¹⁰⁵ John Fitzherbert. *Here begynneth a right fruitfull matter: and hath to name the boke of Surveyinge and improvements*. (London: Richard Pynson. 1523) The Prologue 3.

¹⁰⁶ Delano-Smith and Kain, *English Maps A History* 1999. 117..

landowner no longer relied on the memory of twelve men to tell him the number of parcels of land in each Manor and the size of each parcel of land. Now a physical survey was made of the estate lands, and a written record was made for reference.

This was the birth of the modern professional surveyor as we understand the term. Delano-Smith and Kain also argue that 'professional land surveyors were themselves crucially important... in bringing about changes in attitude towards

graphic representation of topographical information within society in general, and its governing institutions in particular'.¹⁰⁷ The consequence of this change in attitude, saw the introduction of map consciousness, and the land surveyor was now seen as being of some stature and importance, his skills valued as both measurer of land, a surveyor and map-maker. At this time in the history of land surveying assistants were required to help in the collection of data for the map, a point that will be discussed later in this chapter.

The aim of this investigation as stated is to argue that a distinction should be made between this new body of professional land surveyors, that had emerged in the early sixteenth century and the assistants they hired. Surveyors' that had a 'national reputation' were the ones usually commissioned to make an estate land survey.

¹⁰⁷ Delano-Smith and Kain, *English Maps A History* 1999; 116.

He would need to demonstrate to the landowner that he had the ability to complete an estate survey within an agreed budget, and within a set time.

A commissioned surveyor had to make it a priority that at the end of the project the map he made fulfilled the purpose of the survey, all to the satisfaction of the landowner.¹⁰⁸ He also had to ensure that the agreed charges made for the survey would cover his expenses and leave him with a profit. It was necessary for a commissioned surveyor to have all these skills, whilst any hired assistants need only to ensure that they had completed the tasks assigned to them. The hired assistant would also want some reassurance that he would be paid for his services. The *Dictionary of Land Surveyors* makes no distinction in its indexing of the land surveyors, between those with a national reputation, the professional surveyors,

(With responsibilities for the surveying project) and someone employed as his assistant .

A summary of the professional surveyors first priority is that the agreed charges made for the survey would cover his expenses and leave him with a profit. Any hired assistants need only to ensure that they had completed the tasks assigned to them. Of course, the

¹⁰⁸ Bendall, *Maps, Land and Society*; 1992, 80.

hired assistant would also want some reassurance that he would be paid for his services and so would be relying on the professional surveyor having made a workable agreement.

The *Dictionary* gives no indication that there is a difference between a commissioned surveyor (one that had the responsibility for the surveying project) and someone employed as an assistant .

In the preface to her book on mathematical practitioners of Tudor and Stuart

England, Taylor describes mathematical practitioners as “a chronical of lesser men – teachers, textbook writers, technicians, craftsmen – but for whom great scientists would always be sterile in their generation”.¹⁰⁹ Willis suggests that ‘estate surveyors in a similar way were mainly “lesser men” some merely known as a name on a plan; only a few enjoyed a national reputation.’¹¹⁰ Wallis is, to some extent, also making the same point that surveyors (that have earned a national reputation as opposed to their assistants) are not given the recognition they deserve. Bendall provides evidence to show that ‘some Elizabethan surveyors, such as Ralph Agas, and Thomas Waterman were clerics: men who were highly educated: both Waterman and another important surveyor John Norden, had been to Cambridge, Thomas

¹⁰⁹ E. G. R. Taylor, *The Mathematical Practitioners of Tudor and Stuart England* (Cambridge: The Syndics of the Cambridge University Press 1954. (repr. 1964). Preface Xi.

¹¹⁰ Helen Wallis Foreword in *Essex on the Map The 18th century land Surveyors of Essex*. by A. S. Mason (Chelmsford: Essex County Council Chelmsford; Essex Record Office ,1990) ix.

Langdon New College , Oxford.¹¹¹ Their respective biographies to be found in the *Dictionary* confirms their status, they all made surveys of different types of land, and were recognised as having a national reputation, they trained and worked with their own family members and other surveyors .¹¹² There is no evidence that Agas, Waterman and Norden were known to each other, but their maps show a high standard of cartographic development, and their named assistants and associates indicate links with other surveyors, with whom they would exchange ideas and ensure the maintenance of standards of the profession. For this their names should be in a separate index and those that assisted indexed in another way. As a surveyor's career progressed from apprentice, or assistant he might then appear in both indices, the dates they were so engaged indicating their status at the time. In defence of the *Dictionary*, it states that its purpose was 'to include all persons likely to have measured land, or, made maps of land in areas of less than a complete county'.¹¹³ This definition does not allow for a distinction to be made between the two groups of surveyors. In many instances the evidence that a person had measured land was sound, but their role in a land surveying project could not be verified. Was it to assist in measuring land or to help set up apparatus, in which case he

¹¹¹ Bendall, *Maps, Land and Society* 1992. 114.

¹¹² Bendall, , *Dictionary of Land Surveyors and Local Map-Makers of Great Britain and Ireland 1530-1850*. (London: The British Library 1997) entries (A043) Agas: (L047) Langdon: (N113) Norden: (W135) Waterman (I). 4, 304, 379, 538.

¹¹³ Sarah Bendall, *Dictionary of Land Surveyors and Local Map-Makers of Great Britain and Ireland 1530-1850*. (London: The British Library 1997) 67.

would need a scientific instrument? An assistant as has been discussed, needed little or no skill, whereas the surveyor who was given the commission to make the survey, required business acumen and an understanding of the needs of the whole process of an estate survey. Surveying estates was the commissioned

surveyor's livelihood, in the sense that every survey had to make a profit, he was surveying for financial gain.

The distinction between the commissioned surveyor and his assistant cannot always be determined by reference to the surveyor's biography that forms the body of his entry in the *Dictionary*. This only gives the sources of the information used in the compilation of each entry, but by using this information additional research can be made to determine the role he played in the survey. Answering the question was he the commissioned surveyor that had experience in the making of an estate survey or was he his assistant?

The *Catalogue of Maps in the Essex Record Office 1566- 1860* first published in 1947 focuses on the importance of maps, only mentioning the name of the surveyor, if it was found on a map. In a sense downplaying the importance of the surveyor. The *Catalogue* was compiled and edited by Emmison, the record offices' chief archivist and includes a detailed index of the names of the landowners, who commissioned the maps. Each map is fully

described giving details of size of area of the land surveyed, and quality of each map. A further two supplements were published in 1952 and 1968. In 1990 Mason published *Essex on the Map*. This work brought the *Catalogue* and supplements up to date. The book contains a detailed study of the maps and their creators. Mason gives us details of searches made in the Essex archives for the names of other surveyors who had worked in Essex. He also makes an analysis of the 'additional occupations' held by surveyors to make ends meet. Mason also gives us additional information relating to the maps they made.¹¹⁴ This information allows the assistants hired by the commissioned

surveyors to be identified. Mason, unwittingly perhaps, making a distinction between the surveyors that had earned a reputation as estate land surveyors and the rest who were assistants.

A detailed analysis of the commissioned land surveyors' responsibilities compared to those of his assistants, focuses on those that were active in Essex County between 1700 and 1800. There is a wealth of evidence in the Essex record office to allow a meaningful and accurate investigation to be made of the land surveyors of this period, including their assistants and of the maps they made. In his *Catalogue* Emmison refers to the 'private character of estate maps and to the relationship between client and

¹¹⁴ Helen Willis, Foreword *Essex on the Map, The 18th century Land Surveyors of Essex* by A. S. Mason (Chelmsford, Essex: Essex Record Office, Chelmsford, Essex 1990) viii.

surveyor or draughtsman'.¹¹⁵ An investigation into the private character of estate maps tells us that the process whereby an estate survey is commissioned, is a private estate matter that the survey is of private land, and is financed by the private landowner, which to some extent explains why so little documentary material is available relating to a survey.¹¹⁶ Any notes made at the first meeting (if any) would form part of the estate records or were usually put together with other documents into the estate family archives.

The significance of the publication of the *Catalogue* (by Emmerson) and its value to any investigation of commissioned estate surveyors is given in a review of the *Catalogue* by Taylor. The review was written soon after its publication in 1947, and her first comment places maps in the context of the time.

'For too long old estate maps have been nobody's business. The regional geographer has not been interested, since they represent only small and discontinuous areas, while they were of too late a date to attract the student of the manor, who in any case was concerned with the legal system than with the spread of the actual fields. To the historical geographer and the economic historian,

they held more promise, but where were they to be found? The ordinary librarian naturally considered books to be his province, not maps, and had no wish to give them a home. Hence they have lain neglected in muniment rooms and estate offices, or tossed away into solicitors' cupboards, except where they occasionally became the prize of some antiquary.... Emmison, has put every

¹¹⁵ F. G. Emmison, ed., *Catalogue of Maps in the Essex Record Office 1566-1860* (Chelmsford, Essex: The Essex County Council, Chelmsford Essex Record Office 1947) Publications, No. 3.

¹¹⁶ Emmison, , *Catalogue of Maps in the Essex Record Office* 1947. 1.

map-lover in his debt.... It is much hoped that other counties will make haste to follow the example of Essex before their old maps are irretrievably lost'.¹¹⁷

Taylor makes no mention of the surveyors', the authors of the maps, nor their contribution to the development of cartography. This point will be discussed in a later chapter. Taylor's review does however provide evidence that it was not until 1947 that there was any recognition of the value of maps. The names of the authors of the maps came much later.

The *Catalogue* compiled by Emmison and published in 1947 plays a significant role in any investigation concerning maps and their authors. The format used to describe all the different types of map in the Essex collection, was the first of its kind, and its success can be measured by the fact that it is still in use today.¹¹⁸ The significance of the differences between particularly estate maps and all other types of map is discussed at length by the authors of *English Maps a History*. They suggest that not all the owner's property needs to be shown on a map for it to qualify as an estate map, provided the land represented is owned by a single person (or institution) then it is an estate map.¹¹⁹ This provides us with the key points that define an estate map, that is it represents land owned by

¹¹⁷ E. G. R. Taylor, "Catalogue of Maps in the Essex Record Office, 1566-1850" by F. G. .Emmison (1947) In *The Geographical Journal (with the Institute of British Geographers)* Vol. 110. No. 4/6 (Oct, - Dec. 1947) , pp 228-229.

¹¹⁸ Emmison, , *Catalogue of Maps in the Essex Record Office* 1947. XX.

¹¹⁹ Delano -Smith and Kain, *English Maps a History* 1999, 115-116.

a private individual (or institution) and that the whole of the estate need not be represented for it to be deemed to be an estate map.

Thompson makes the point that 'leading surveyors could not live by making estate maps alone; 'the estate map was but a tool of estate management, its purpose was to facilitate the fixing and collection of rents, and to prevent their suppression or concealment through nibbling encroachments and surreptitious lapses which might otherwise go undetected.'¹²⁰ Maps do much more than this, but the first purpose of the maps remains as tools of estate management. Therefore, the list of skills required by a commissioned land surveyor must include his ability to not only produce a map that represents the land he was instructed to survey, but that it also contains sufficient information that would indicate where an adjustment of a tenants rent could be made, and where the boundaries lay between the lords own private land, his demesne land, and that of each tenant.

However skilled a surveyor might be, land measurement and map making could not be done by one pair of hands. Mason points out that even the most experienced surveyors after being commissioned to make a survey, made it a priority, to find an 'assistant to help in carrying and setting up apparatus and staking

¹²⁰ F. M. L. Thompson, *Chartered Surveyors; the growth of the profession* (London: Routledge & Kegan Paul, Carter Lane, London. 1968) 16.

out points from which measurements were to be made, this took time, and manpower, furthermore, chain measurement obviously needed a man at either end of the chain.’¹²¹

The ‘surveying chain’ that was first in use from c1620, was invented by Edmund Gunter, a clergyman. The chain scale shown on maps refers to the measurement of land having been made using Gunter’s measurement chain.

It became the most common standard of measurement after about 1680¹⁴⁴

Evidence that suggests that very little skill was needed to ‘set up a measuring chain and to do other things to assist a surveyor’ is made by a Thomas Carter who was himself called upon to assist an experienced commissioned land surveyor to set up land surveying apparatus. In his *Memoirs of a working man*, Carter recalls how between 1800-1801, as a schoolboy, aged just nine and a half years, he became assistant to William Cole (C340), at this time a very experienced land surveyor of Essex. In an extract from his *Memoirs*, Carter recalls the following encounter with William Cole, and the circumstances that led to his becoming his assistant.

¹²¹ A. S. Mason, *Essex on the Map The 18th century Land Surveyors of Essex* (Chelmsford, Essex: Essex Record Office County, Hall Chelmsford Essex 1990) Essex Record Publication No. 105. 17.

¹⁴⁴ Emmerson, ed. *Catalogue of Maps in the Essex Record Office 1947*) Viii. And H. K. Higton “Gunter Edmund (1581-1626) mathematician” *Oxford Dictionary of National Biography* (23 Sept. 2004.) 2. Accessed 14 Oct 2025.

He was a pupil at a school run by two schoolmasters, but the senior of the two masters was rarely seen as his other interests called him away from home. He recalls a meeting with the senior master, a William Cole, whom he describes as 'a very worthy man, having considerable talent, with much literary and scientific knowledge; among other acquirements he had learnt the art of surveying land and buildings; and was much employed in measuring estates, within a circle of about twenty miles from his residence'.¹²² One day, William Cole (the senior schoolmaster) visited the school. He wanted someone to draw the measuring-chain, and to do other little things which a boy could easily perform when making a survey. Carter writes 'To my great delight his choice fell upon myself'.¹⁴⁶ To 'draw' out the measuring chain, is to pull out or lay out the chain. It can be seen from Plate 2.1 that laying out the measuring chain would be a difficult task to perform for a nine-and-a-half-year-old, assistance would be needed just to carry it about the land.

¹²² Thomas Carter, *Memoirs of a Working Man*. (London: Charles Knight, 1845) 48 (#52) This file was downloaded from HathiTrust Digital Library, <https://www.hathitrust.org>.¹⁴⁶ Carter, *Memoirs of a Working Man*. 48 (#52)

Plate 2.1 Gunter's measuring chain. ¹⁴⁷



A typical image of a Gunter's land measuring chain.

The chain is described as being 20 meters (66 feet) in length, and is made of 100 links, . Markers are placed at regular intervals. The chain is made with links of varying length to suit the area of land to be measured. It is believed to have been made c1620, just before Gunter's death. This description suggests that it would require two men to lay out the chain, it was more than a schoolboy could do on his own.

Further evidence that the measuring chain required two people to set it up for use is suggested by Bendall.¹²³ 'The first a leader with ten arrows which he places in the ground every ten links, and a follower at the end of the chain who picks them up again.'¹²⁴ This description of the chain does not suggest that it would be easy for a boy to draw out the chain, Cole must have had other local

¹²³ Bendall, *Maps, Land and Society* 1992. 131.

¹²⁴ Ibid.

assistants who were not named by Carter. The image of the chain suggests that men of considerable strength would be needed to draw it out, and some skill would be required to keep it

¹⁴⁷ Science Museum Group. Gunter type measuring chain. 1872-78 Science Museum Group Collection Online. Accessed 30 September 2024.

<https://collection.sciencemuseumgroup.org.uk/objects/co52806/gunter-typemeasuring-chain>.

in a straight line, so as to eliminate errors in the measurements.

That the drawing out of the chain required some skill and knowledge of its use explains why 'chain bearers' and 'chain carriers or the man who was leading the chain' were the only named assistants in accounts books and other records. One entry in an account book tells us that 'Abraham Quince was paid £1 5s 8d, for leading the chain 17512.'¹²⁵ The *Dictionary* records Quince, (Q007.5) as being an assistant for the one survey.¹²⁶ Bendall notes that 'almost the only reference in surveyors' bills to their methods of survey are the charges made by chain leaders': John Davis was paid £75 in 1741 for mapping the Duke of Bedford's Drayton estate and this sum included 'chain carriers'.¹²⁷ There is a John Davis indexed in the *Dictionary* (D080) active as a surveyor 1735-1785 who was steward and agent to 4th and 5th Dukes of Bedford who was also related to John Lambe, Samuel, and William Davis (D085,

¹²⁵ *Ibid.*, 97.

¹²⁶ Bendall, *Dictionary of Land Surveyors*. 1997. Entry [Q007.5] 419.

¹²⁷ Bendall, *Maps, Land and Society* 1992. 131.

D091 and D096) all employed as stewards and agents to the Dukes of Bedford. Land surveying for the stewards and agents to the Dukes of Bedford was possibly seen as part of their duty - an extension to their roles as steward or agent. Their employment as occasional land measurers would save the cost of hiring someone from outside of the estate. This account illustrates that assistants, in this instance chain bearers, or chain leaders, had a specific role and that was their only responsibility. They were minor players compared to the commissioned surveyor. This account of what was required of a commissioned estate surveyor, and the contribution he made to the development of land surveying and cartography is hopefully enough to support the first aim of this dissertation. That they should be given recognition of their status by having documentary recognition in the form of an

index of their names in *Dictionaries*, record offices and libraries that are quite separate from any index relating to their assistants. Harley argues that maps can serve three functions.

... first it allows us to challenge the cumulative progress of an objective science; second deconstructionist argument allows us to redefine the historical importance of maps: third, a deconstructive turn of mind may allow map history to take a fuller place in the interdisciplinary study of text and knowledge. ¹²⁸

¹²⁸ J. B. Harley. *The New Nature of Maps: Essays in the History of Cartography* Editor Paul Laxton. (Baltimore USA: Johns Hopkins University Press 2001) 168.

Further investigation into the biography of an individual estate land surveyor gives us a better understanding of his maps. In addition what influenced his work, the source of his innovative mapping ideas may be evident in his maps. The conventions of the time that he felt obliged to conform to may be clear, and his links with surveyors that may have influenced his work. A surveyors biography places the maps he made in the context of the times in which they were created. Reference to the surveyor who created the map is it seems, always absent in any analysis of maps.

Table Fig 2.1 is an analysis of the eighteenth-century estate land surveyors active in Essex between 1700 and 1799. The table is based on the biographies of each surveyor and suggests that in some instances surveying was a necessary part of their main occupation.¹²⁹ The evidence also suggests that where a land agent, auctioneer or attorney has made a map of estate lands it was to facilitate a sale, they did not view estate land surveying as a separate occupation, it was more of an extension to their main occupation. Mason argues that ‘the eighteenth century was the heyday of Essex schoolmasters’ making ends meet by surveying and mapping

¹²⁹ Mason., *Essex on The Map* 1990. 6.

land'.¹³⁰ This gives us some indication as to why so many schoolmasters made land surveys. In all probability they recognised that they had all the necessary skills required in making a land survey, so this was an easy choice.

The main source of information for this investigation is the list of the repositories linked to each entry in the *Dictionary*. This information enables further investigations to be made where this is found to be necessary. The surveyor's biographical details enable an argument to be constructed to test the first aim of this dissertation that a distinction should be made between the land surveyor commissioned to make a private estate survey and his assistant(s). Biographical details indicate the estate surveyed, his status, education, alternative occupations and his links to other surveyors.

The first of the two tables below, Fig 2.1, was compiled by Mason. The search for information for Fig 2.2 and Appendix 2.1, like Mason also began with a reading of all the maps created in the 18th century held by the Essex Record Office. The maps 'being the primary source of information on who did or did not measure land.'¹³¹ Once the names of the surveyors had been established from the maps, Mason tells us that he then 'examined every scrap of archival evidence, that it was felt might provide evidence as to any alternative occupations a surveyor may have had. Newspaper advertisements often proved fruitful, and a further investigation of

¹³⁰ Ibid., 8.

¹³¹ Mason., *Essex on The Map* 1990. 7.

the maps themselves'¹³². For example, 'an unusual cartouche of a hand and pen motif on a map by Thomas Alefounder suggests that he may have been a writing master, this was a motif they often used'.¹³³

In his early investigation into the alternative occupations held by land surveyors during the eighteenth century he refers to the profession of land surveying being relatively undeveloped. His research made in 1973 revealed the extent to which a reliance on the agricultural alternative, was made by the land surveyor to supplement his income.¹³⁴ In some instances, this was a small holding that cushioned against variations in the demand for a land surveyor.¹³⁵ Recent research has found that land surveyors from the earliest times through to the 1800s still relied on having an alternative occupation, most being occupations that were either closely linked in some way to land surveying. The following figs; 2.1; and 2.2 illustrate the link.

¹³² Ibid.

¹³³ Ibid., 97.

¹³⁴ Peter Eden, *Land Surveyors of Norfolk 1550-1850*. (Norwich: Reprinted from the Norfolk and Norwich Archaeology Society 1973)
Vol. xxxv Part iv. 477.

¹³⁵ Ibid.

Fig 2.1 A list of the alternative occupations held by estate land
surveyors active in Essex in the eighteenth century.¹³⁶

¹³⁶ Mason, *Essex on the Map* 1990. 6.

ALTERNATIVE OCCUPATIONS OF LAND SURVEYORS

(excluding land valuation and sale, by treaty or auction)

Auctioneer

J. Storer (Halstead); S. Harvey (Kelvedon); G. Sangster (Brentwood) J. Dew (Brentwood); R. Mundel (Billericay)

Brewer

A. F. Gibson (Saffron Walden)

Carpenter (& timber seller)

W. Jupp (London); L. Searles (London); W. Moore, Snr & Jnr (Ongar) D. Warner (Bishops Stortford); M. Hall Jnr. (Maldon)

Chart Maker

J. Gascoyne (London); J. Friend (London)

Estate agent/bailiff (to a family)

P. Whittington (Brentwood); S. Harvey (Kelvedon); J. Storer (Halstead) J. Wiggins Jnr (Danbury); Hurrell (Boreham); J. Cadman (Aveley)

Excise Officer

J. Wood (Romford)

Farmer

B. Agnis (Colchester); R. Parker (Runwell); B. Fallows (Purleigh); M. Dayles (Buttsbury); J. Lee (Baddow); G. Hutson (Hutton); E. Plume (Lexden)

Gardeners (Nursery)

S. Driver (London); A. Driver (London); W. Driver (London); G. Sangster, and son, (Brentwood); J. Golding (Brentwood)

Instrument Maker

R. Cushee (London); J. Warner (London); N. Hill (London); T. Heath (London)

Military Engineer

J. Thomas

Painter (of signs)

T. Fort (Witham)

Stationer

J. Dew (Brentwood)

Teacher

J. Fitchatt (Brentwood); J. Vevers Jnr (Romford); W. Pullen (Chelmsford); T. Grout (Fyfield); R. Baker (Terling & Witham); J. Davey (Tolleshunt D'Arcy); E. Laurence (Northants); John Kendall (Colchester); Joseph Kendall (Colchester) (of mathematics); J. Warner (London); J. Ham (London); P. Kingsman (London); W. Kendall (Colchester); J. Nelson (Colchester); M. Martin (Epping); R. Wenham (Wivenhoe); W. Cole (Colchester); J. Taylor (Brentwood); H. Rush (Colchester); D. Halls (Colchester); R. Dallinger (Witham)

Figure 2.2 is an overview of the sixty-six estate land surveyors active in Essex in the eighteenth century and that they fall into five groups. The first group are those that have a national reputation as estate land surveyors, and their career evidence suggests that that

they had a full- time occupation as land surveyors with no additional occupation .They number eighteen, although the evidence in some instances is slender.

The second group are the career surveyors that had additional occupations, they number twenty-eight.

The third group are the occasional estate land surveyors that have related occupations that arguably might be seen as extension of their main occupation. Occupations such as Land agent, auctioneer, or attorney, to have a map of the land they were selling they would argue, might facilitate a quicker sale. They are eight in total.

The fourth group are the occasional estate land surveyors with alternative occupations not directly related to land surveying. They number five. The fifth group are the occasional estate land surveyors with no known alternative occupation. They number seven.

The total number of land surveyors active in Essex in the eighteenth century is 66. See Appendix 2.1 for an analysis of the total number of estate land surveyors

Fig: 2.2 Analysis of Landed Estate Surveyors active in Essex 1700 - 1799.

Abbreviations:

Col: 1 List No. in table.

Col: 2 UC: unique letter code number in *Dictionary of Land Surveyors*.

Col: 3 Name of Surveyor

Col: 4 Number of Counties Surveyed in England including Essex **Col: 5** Family Links : Links to other surveyors.

Col: 6 Surveyors Alternative Occupation(s)

Col: 7 Career Surveyors with no alternative occupation unless listed.
Surveyor in many counties or had made a number of surveys in
Essex, additional occupation(s) listed.

Fig 2.2 The alternative occupations held by land surveyors of Essex

1 No	2 UC	3 Name	4 No of Counties Surveyed inc. Essex	5 Fam Links Links with Other Surveyors.	6 Alternative Occupation(s)	7 Career Surveyor No additional Occupation.
1	A044.	Benjamin AGNIS	2	One survey With son A044.3	Farmer	Occasional Surveyor
2	A044.3	John AGNIS	1	One Survey In Essex i/c father	Gardner	Occasional Surveyor
3	A058	Thomas ALEFOUNDER	2	Family Link Son A058.1	Possibly Schoolmaster	Occasional Surveyor
4	A058.1	Thomas ALEFOUNDER	2	Father	Auctioneer	Occasional surveyor
5		Richard ARNOLD	2			Occasional Surveyor One estate surveyed That straddled Two counties ERO Ref D/Dsa 152: 1770
6	A178	James ASSER	10	Links to Other Surveyors	Estate Agent	Career Surveyor with an Additional occupation
7	B014	Thomas BADESLADE or BADSLADE	10	Links to Other surveyors	Cartographer Engineer Draughtsman	Career Surveyor with an Additional occupation
8	B050.8	Robert BAKER (I)	2	Family and Links	Schoolmaster	Occasional surveyor
9	B051	Robert BAKER (II)	1	Family only	Estate Agent Farmer	Occasional Surveyor
10	B107.5	Charles BARNARD	8	Link Employed J Teal (T081) A well established Surveyor	None known	Surveyed for Trinity College Cambridge ⁴⁶ Career Surveyor.
11	B166	Thomas 'BATEMAN	9		Engraver Globe-Maker	Career Surveyor With additional Occupation
12	B211	Thomas BECKET	1	----- ----	-----	Occasional surveyor ERO Ref: D/DR P8 1734
13	B287	James BERMINGHAM	4	Link John Noble [N102.8]	None Known	Career Surveyor ERO Ref: D/DSt P4
14	B337	Bailey BIRD	5	Many Links Trained Others	Steward to Norfolk and Norwich Hospital	Career Surveyor
15	B361	William BLACK	3	Links	Estate valuer, gardener	Career Surveyor; More of a valuer Said by Nat. KENT [K088] A well established Surveyor: to be 'one of the best judges ... of land, who practises surveying.
16	B387	Joseph BLAND	4	Links	Dialist	Occasional Surveyor
17	B411	John BLYTH	2	Links	None Known	Occasional Surveyor

⁴⁶ Bendall, *Dictionary of Land Surveyors* 1997. Vol., 1. Ref: 136 trince surveyed for Trinity College Cambridge.

1	2	3	4	5	7
18	B498	John BOWRA	3	Link	Occasional Surveyor E. G. R. Taylor The Mathematical Practitioners Of Hanoverian England 171.
19	C134	Benjamin CHAMBERS	7	Links	Career Surveyor gave it all up to become a Cotton Mill Engineer.
20	C340	William COLE Of Colchester Essex	4	Links	Career Surveyor map 38 surveys In Essex alone, for one survey made 16 maps in one volume ERO D/DCw P13. All types of surveys,
21	C339	William COLE Of Ramsden Bellus Essex	3	Links	Career Surveyor
22	C577	James CROW or CREW	23	Links	Career Surveyor
23	C606	Samuel CUNN	2	Links	Career Surveyor Was commended for his accuracy in taking measurements Career surveyor. Short career as surveyor died early in career. Occasional Surveyor Career Surveyor Surveyor Career Surveyor Career Surveyor Occasional Surveyor Career Surveyor Was a surveyor than a fulltime farmer Occasional Surveyor Career Surveyor With additional Occupations Career surveyor With additional occupation Occasional Survey made 1 map ERO D/DBr P3 Map in GLC Record Office
24	C623	Richard CUSHEE	5	Links Father of Elizabeth Cushee [C621] who was a globe maker: surveyed with [W609.4] and father [C623] and [H371] No Essex Surveys	
25	D016	Robert DALLINGER	1	Links	
26	D123	Mathew DAYLES	1	No links	
27	D323	Samuel DRIVER	7	Father of dynasty of Surveyors	
28	E074	James ELLIS	9	Links	
29	F010	William FAIRBANK (II)	6	Fathe William Fairbank (I) did not make survey in Essex William Fairbank son (III) Did not survey in Essex Other links	
30	F016	William FAIRCHILD	5	None Known	
31	F021	Benjamin FALLOWES	5	None known	
32	F084	John FITCHET FITCHATT	1	None Known	
33	F209	Joseph FREEMAN	15	Links detailed in Dictionary entry and their role defined	Career Surveyor With additional Occupations Career surveyor With additional occupation Occasional Survey made 1 map ERO D/DBr P3 Map in GLC Record Office
34	G025	William GARDINER Or GARDNER	7	Links (L071)	
35	G097	A(tkinson) F(rancis) GIBSON	1	Link	
36	G214	James GOULD Or GOLD	3		
37	H185	Samuel HARVEY	1	No Links	Auctioneer Estate agent ERO Ref: D/DU 893/1 Made one map
38	H264	Thomas HEATH	3		Book Seller Mathematical Instrument maker the best known ERO Ref: D/DCw P8 Occasional Map maker
39	H429	Henry HOGBEN	2	Family of surveyors Links with others	Later in career Land agent with father Career Surveyor

40	H455	John (I) HOLLING(S)W ORTH	4	Link family and Hollingworth and Landers (L031.5)	None known	Career Surveyor
41	H621	George HUTSON	8	None Known	Farmer	Career Surveyor 20 surveys in Essex
42	J120	Isaac JOHNSON	13	Links Family and Others	Collector of antiquities	Career Surveyor
43	K064	John (II) KENDALL	2	Family of surveyors K067 and K070	Schoolmaster nonconformist	Career Surveyor with alternative occupation
44	K067	Joseph KENDALL	1	Family of surveyors K064 and K070	Schoolmaster Nonconformist	Career Surveyor with alternative occupation
45	K070	William KENDALL	1	Family of surveyors K064 and K067	Schoolmaster And algebraist	Career Surveyor with Alternative occupation
46	L121	John LEE	2	None known	Farmer	Career surveyor
47	M085	J(ohn) MACKOUN or MACKOAN or MACKOWN	3	Non known	Engraver	ERO Ref: D/DZn 4 Evidence suggests Occasional surveyor
48	M188	Thomas MARSH or MARCH	17	Link to J Crow (C577) Worked extensively ' With Crow	None Known	Career Surveyor
49	M349	John MILLER	4	None Known	None Known	Occasional Surveyor
50	P355	Benjamin PRYCE	5	Link	Inclosure cr	Career Surveyor
51	P369	William PULLEN	1	None Known	?Schoolmaster	Short Career As Surveyor
52	S303	Edward SMITH	10	Link	Almanac Maker Teacher of Mathematics	Career Surveyor With alternative Occupation.
53	S342	Payler SMITH or SMYTH	5	Links	None known	Career Surveyor 1720-7. Short career
54	T048.8	Isaac TAYLOR	2	None Known	Engraver	Career Surveyor Alternative occupation
55	W116	Samuel WARNER	5	Link family (Brothers who did not survey in Essex) and others	Instrument maker, Teacher of mathematics valuer	Career surveyor With alternative occupations
56	W119	Francis WARREN	3	Links family (W123) Warren family Made surveys Mainly in Suffolk	None known	Career Surveyor
57	W123	Thomas (II) WARREN	4	Links family and (W119)	Headmaster of school where land surveying taught	Career Surveyor With alternative occupation.
58	W235	Richard WENHAM	1	None known	Schoolmaster taught surveying	Occasional surveyor
59	W519.3	John WOOD	1	None known	Excise officer	Made 7 maps (other maps may be missing) Cartography described as crude made only small surveys.
60	W550	Richard WOODS	19	Links	Landscape gardener	Career Surveyor
61	W557	William WOODWARD	8	Links	Agent to 2 nd Earl Stanhope	Career Surveyor
62	W588	James WRIGHT	1	None known	Left son oyster Layering business Land agent	ERO Ref: D/DBe E8 Made estate surveys for New College Oxford..
63	W630	James WYBURD	6	Links Partnership Jacques (J029.3) and Wyburd in 1788-93.	None Known Jacques's and Wyburd, partnership advertised as offering services of surveyor, broker, appraiser and auctioneer.	ERO Ref: D/DW P5 Career Surveyor Closer to occasional Surveyor

64	Y005	George YATES	6	Links family Father William [Y010]. Brothers Joseph and Thomas [Y008]	Inclosure cr	Career Surveyor With family
65	Y010	William YATES	8	Links family Son George [Y005] And sons Joseph and Thomas [Y008] who did not survey in Essex	Customs Officer ⁴⁷ Note Thomas Yates [Y008] was a churchwarden and map-seller,	Career surveyor with family
66	Y012.1	Thomas YEAKELL	11	Family links Salaried in the service of the Duke of Richmond ... continued in private Practice until the Duke became Master of Ordnance and in 1782 secured him in post of Chief Draughtsman in the Tower (of London office). ⁴⁸	None known	Salaried Surveyor in the service of the Duke of Richmond but continued in private practice .Later became Chief draughtsman in Tower of London.

The fragile fragmentary nature of the data relating to estate land surveyors means any analysis can only be seen as an overview of the lives and careers of estate land surveyors. The data the maps yield is 'fragile and fragmentary' in the sense that, in many instances, it cannot be tested and validated. Surnames that today may seem unique, were in the past common. A search of parish registers, manorial court records, the account books kept by the larger estates, rent rolls lists of prisoner releases and other related material, is evidence that there appeared to be a small number of surnames shared by a large number of families. Forenames were also common, William, Thomas, John, James, Benjamin and Mathew crop up most often. First born sons all shared their father's forename, making it even more problematic to say with certainty who made what map and when. In the absence of any professional register and any index or list of their names in local record offices ,

libraries or museums, the starting point for the collection of data has to be the maps made and usually signed by the surveyor.

Laurence's agreement that he made with the Duchess of Buckingham Fig 1.1

(see Introduction) details only a fraction of the responsibilities of a commissioned estate surveyor. At an initial meeting between landowner and surveyor they would have discussed the time allowed for the project, an overall budget, and the final sum agreed must be one that covers all the surveyors expenses. These will include his board and lodgings, travel expenses, payments to assistants, material and instruments and his must be in profit at the end of the project. From this summary of a commissioned surveyor's responsibilities, it can be seen that they differ markedly from that of any assistant, who was engaged on the survey for a specific purpose, most usually as a land measurer or to carry the chain, the *Dictionary* makes no distinction.

Maps are important, but to fully appreciate all aspects of a map, the man behind it is just as important as the map itself. In an investigation into the history of cartography, the development of agriculture, the names of the leading estate land surveyors all make a useful starting point. Mason's work *Essex on the Map* stands alone as an example of how useful having the names of surveyors that made maps can be for anyone investigating any aspect of

cartography. The same needs to be done for all counties of Great Britain and Ireland.¹³⁷

A separate Index of estate land surveyors who took on the responsibility of making a survey of the privately owned lands of an estate would identify the surveyors that in the process of their work, made a contribution in financial terms into the area in which they were working, their main contribution being the hiring of 'land measurers' and other assistants from the local community, thereby giving work and possibly training to assistants. The assistant would be experiencing firsthand what was involved in the organising of an estate survey. Having a land surveyor working in the area, for those involved in supplying materials and instruments and

for those needing employment a surveyor would have been welcomed. An index of the names of the commissioned surveyors would enable further research to be made to establish the contribution the visiting surveyor made to the local economy and the training they received to give credit where it is due, to this group of surveyors.

The second aim of this investigation is to argue that a significant number of all land surveyors, commissioned to make a survey found it necessary to engage in an alternative occupation to make ends meet. The evidence suggests that a surveyor could not expect land surveying to be his only occupation. The primary sources of the

¹³⁷ Mason, *Essex on the Map* 1990. ERO Publication No. 105.

evidence are *Essex on the Map* by Mason (1990): *The Dictionary of Land Surveyors* by Bendall (1997). The *Catalogue of Maps* by Emmison (1947) and two supplements to the *Catalogue*, the First 1952 and the Third 1968, the Norfolk, Suffolk and Essex Record Offices, local libraries, and museums.

The secondary sources of evidence being the British Library, National Archives, and other major museums. An analysis of Appendix 2.1 discussed below, is inconclusive.

Appendix 2.1 An Analysis of the estate Land Surveyors active in Essex In the eighteenth Century, the maps they made, their alternative occupations and links to other surveyors. Appendix 2.1 records the names of 140 eighteenth century estate land surveyors who were active in Essex making land surveys of privately owned estates.

Data Analysis of Essex Eighteenth Century land Surveyors **Appendix 2.1**

Total No. Estate Surveyors in Essex Who also surveyed in other counties	140	% of totals 77 engaged in Essex and other counties = 44% of the total number.
No. of estate surveyors active only in Essex	63	= 45% of total 140.
No. of surveyors active in Essex and Other counties with alternative occupations	61	= 43% of total 140
No. of estate surveyors active only in Essex With alternative occupations. .	28	= 45% of total of 28 = 20% of overall total of 140.

Appendix 2.1 gives details of the links surveyors they had with other surveyors. The links may be with other family members who were themselves independent surveyors, business associates, or other independent surveyors. The data in Fig 2.1 (above) indicates that 53% the alternative occupations held by the independent land surveyors would directly benefit from a land survey. The Brewer, Carpenter, Chartmaker Excise Officer Stationer and Painter of signs, all had the ability to work with numbers and therefore they would be recognised as someone that could 'measure land'.¹³⁸

Figure 2.1 lists the alternative occupations held by the Essex County estate land surveyors of the 18th century. Figure 2.2 takes the analysis a stage further and lists the name of each of the eighteenth-century estate surveyors and in a separate column his links with other surveyors, his alternative occupation(s) and whether, he was a career surveyors with or without an additional occupation.

There is some circumstantial evidence of a correlation between the alternative occupations and land surveying. Fig. 2.1 lists those with alternative occupations such as land agent, auctioneer, or attorney, the assumption being that having a map, the usual end product of a survey, in their view, might facilitate a quicker sale.

¹³⁸ Bendall, *Dictionary of Land Surveyors* 1997. Entries all defined as land measurers. (Pizzey, P247, . 409): (Rush, R296, 445): (Urquhart, U017.8, 525).

The explanation for the alternative occupation of farmer not being of a high number in Fig: 2.1; and in Fig: 2.2, (four out of 66 surveyors were farmers) is that there is evidence to show that in the eighteenth century there was a large increase in the number of books on farming and kindred subjects.¹³⁹ *'A new System of Practical Husbandry* by John Mills was said by reviewers to deal with all branches of agriculture within one work.¹⁴⁰ Another farming book by the Rev, Dr. John Trusler *Practical Husbandry: or the art of farming with a certainty of gain*, was first published in 1780. It was so popular a second, third, ... and fifth edition was published. It contained 'correct practical knowledge and much sober sense'.¹⁶⁶ Charles Ley's text *The Noblemen, Gentlemen, Land Steward and Surveyor's Complete Guide* (printed and sold by the author 1786) also found its way onto the list of publications read by farmers.¹⁴¹ Bendall writes of this publication that Ley claimed to have been practising for 15 years and said that he had 'made use of every instrument commonly applied to the purpose of land measuring', having this publication suggests there was no need to engage a land surveyor.¹⁴²

¹³⁹ G. E. Fussell, *More Old English Farming Books from Tull to the Board OF Agriculture 1731 to 1993*. (London: Crosby Lockwood & Son Ltd. 39 Thurloe Street , S. W. 7 1950) V.

¹⁴⁰ Fussell, *More Old English Farming Books from Tull to the Board OF Agriculture 1731 to 1993*. 48 ¹⁶⁶ *Ibid.*, 123.

¹⁴¹ *Ibid.*, 130

¹⁴² Bendall, *Maps Land and Society* 1992. 123-124.

An investigation into whether land surveying, as a primary occupation came first, or whether it was their alternative occupation that qualified them to occasionally to earn extra money as a land surveyor is a matter discussed by Eden. His conclusion was (made in 1973) was that

The profession of land surveyor during the eighteenth century, like that of architect, was relatively undeveloped. Research into the emergence of non-professional specialist occupations... has revealed the extent to which these were initially cushioned against variations in demand by reliance on the agricultural alternative.¹⁴³

This suggests that surveying was considered as a primary occupation but because the demands for estate surveys, were in Eden's words 'bound to be spasmodic in their incidence' farming was often seen as an alternative.¹⁴⁴ However, the sparsity of the available data relating to estate land surveyors means any analysis can only be seen as an overview of the lives and careers of estate land surveyors. The starting point for the collection of the necessary data are the maps they made.

The essential differences between the responsibilities of a commissioned land surveyor and any assistant has previously been discussed. There is however, one more difference, that is the commissioned surveyor is responsible for the production of a map at the end of the survey. The map needs to be accurate, and to show

¹⁴³ Eden, *Land Surveyors in Norfolk 1550-1850* 1973. 474.

¹⁴⁴ *Ibid.*, 475.

boundaries and other features. The merits of an estate map will be discussed in chapter 3.

‘Surveying was partly a seasonal activity’ and for that reason alone having an alternative occupation that was more secure was a necessity. Securing that alternative occupation had to come first, then, you were in a position to accept instruction to make an estate land survey. The statistics suggest that in eighteenth century Essex a total of 139 estate surveys were made.¹⁴⁵ In the *Dictionary* (Vol., 1) the *Index to Types of Map that were produced* suggests that the number of estate surveys made, far exceeds that of any other type of survey.¹⁴⁶ Eden writes that ‘there can have been few surveyors ... who were not at one time or another making surveys on a landed estate’ however, only a few would be asked to survey a whole

estate.¹⁴⁷ Between the major surveys came minor acquisitions and exchanges, boundary and other disputes, and the redrafting of existing surveys for periodic revaluation, this was their bread and butter’. Significantly Eden adds that ‘in the rough and tumble of the eighteenth-century commercialism the *soi-disant* land surveyor turns out on occasion to be something perilously close to a jack-of

¹⁴⁵ Sarah Bendall, ed., *Dictionary of Land Surveyors and Local Map -Makers of Great Britain and Ireland 1530-1850* (London: The British Library 1997) Vol., I. 143-148. An analysis of the statistics: and other material see introduction to Appendix 1.

¹⁴⁶ *Ibid.*, 180 – 186.

¹⁴⁷ Peter Eden, *Land Surveyors in Norfolk 1550-1850* (Norwich: Reprinted from the Norfolk and Norwich Archaeology Society Vol. XXXV Part IV 1973) 474.

alltrades¹⁴⁸. Eden's conclusion that a significant number of the estate surveys were of very small areas of an estate, perhaps explains why so few of the smaller surveys have any map as an end product. The area surveyed and the reason for the survey may not have warranted a map. Eden gives as an example a surveyor (based in Norfolk) a Henry Keymer (I) [K103] as an example of a jack- of -all-trades. Keymer's entry in the *Dictionary* records that at one time he acted as an agent, he was also an auctioneer, general dealer, and schoolmaster. No mention is made of Eden's claim that he also sold books and stationery and an antidote for the bite of mad dogs.¹⁷⁵ Keymer appeared to have several occupations, as did many other surveyors, but in reality they were all linked by the fact that he had an understanding of arithmetic and numbers, and could read and write. A knowledge of arithmetic ties all these occupations together. This is the case for many surveyors who are listed as having several occupations. The surveyor William Cole [C340] an active surveyor in many counties from 1780 to 1800 who made 38 surveys in Essex alone and others in Norfolk, Suffolk, and Sussex was also an astronomer, composer, and schoolmaster. Mathematics is a fundamental link connecting all these occupations.

¹⁴⁸ Eden, *Land Surveyors in Norfolk 1550-1850* (Norwich: Reprinted from the Norfolk and Norwich Archaeology Society Vol. XXXV Part IV 1973) 475. ¹⁷⁵ Ibid.,

¹⁷⁶ Mathematics during the seventeenth century, Taylor argues 'became increasingly refined, and specialisations increased, the categories of practitioners became differentiated... there were astronomers, surveyors, military engineers, computers of tables, navigators,, schoolmasters, instructors. Nevertheless, one and all remained in close touch with instrument makers; there was an exchange of ideas about new designs and new methods on equal terms. ¹⁷⁷ This being evidence of how the spread of the development of mathematics and its use was made. For the compilers of the *Dictionary* evidence that someone had a knowledge of simple arithmetic was all that was really needed to prove he could measure land and so his name would appear in the *Dictionary* confirmation that he was a land surveyor. The profession of surveying was not fully recognised until 23 March 1868 with the foundation of the Institution of Surveyors.¹⁴⁹ Surveyors now had an institution that set standards and gave support to those that could show they had the right qualifications. Prior to that date you could call yourself a surveyor as Agas observed in 1596, 'they are termed Surueighors, if they but once shoue forth a plaine table: and are content to arrogate and challenge that name to them selves ¹⁵⁰

In the eighteenth century if you were deemed able to measure land or, make a map then you were a surveyor.¹⁵¹ It was left to

¹⁴⁹ Thompson, *Chartered Surveyors; the growth of the profession* 1968 . 128.

¹⁵⁰ Bendall. *Maps, Land and Society* 1992. 78.

¹⁵¹ Ibid 67.

individuals to earn a reputation for themselves as a land surveyor, each survey being regarded as an opportunity to demonstrate their skill, the survey acting as an advertisement. An analysis of the statistics (Fig. 2.2 Chapter 2) indicates that of the 66 estate surveyors active in

¹⁷⁶ E. G. R. Taylor, *The Mathematical Practitioners of Hanoverian England 1714-1840* (Cambridge: for the Institute of Navigation at the University (repr. 1964). 4.

¹⁷⁷ Taylor, *The Mathematical Practitioners of Hanoverian England 1714-1840* .
1964. 4.

Essex in the eighteenth century 17 had no additional occupation, 28 had additional occupations, a third group of 8 made land surveys as an extension to their main occupation; a fourth group of 5 had occupations not directly linked to surveying but all involved a knowledge of and use of mathematics; a fifth group were occasional land surveyors, known only for the making of one or perhaps two surveys. (Fig. 2.3 in Appendix 1) presents a detailed analysis of the 142 land surveyors known to have made surveys in Essex in the eighteenth century. Of the 142 surveyors 66 were surveyors of private estates, the balance of 76 were either employed by the Crown or made other types of surveys such as town and county, they were exclusively navigation, woodland, or military surveyors. One was deemed to be a 'copyist' and for one or two others the evidence is fragile.

The conclusion being that the commissioned land estate surveyor, that took on the responsibility of an estate survey, to make

it within budget and within a time frame should be given recognition by having their own index. An index that reflects his contribution to the training of local surveyors, by giving them work experience and the setting of the standards required and in addition allowing all involved an insight into the responsibilities of a commissioned surveyor. The commissioned surveyors contributed to the development of the mapping, maintained and set a high standard of the profession, and were in the process of each survey, giving training and work experience, for which they deserve recognition. Historical researchers would be quickly directed to the commissioned surveyors and not have to wade through records of those that were assistants and did not make maps.

The second aim of this investigation has been to argue that a significant number of all land surveyors, commissioned to make a survey found it necessary to engage in alternative occupations to make ends meet. An analysis of the evidence is not clear cut. See appendix 2.1 for a full analysis. Out of a total of 142 surveyors engaged in Essex in the eighteenth century 66 were found to be estate surveyors. Further investigation into the names of all found to have made surveys in Essex, is needed, searching rent rolls, parish records, estate records, local newspapers, and other material so that perhaps a more accurate picture could be made of life in the eighteenth century from the land surveyors perspective.

Chapter 3 discusses the maps made by the commissioned surveyors, the number of maps made, and the absence of

information relative to the size of the average surveys. The names of the landowners that commissioned the surveys and their relationship to their surveyor is also discussed.

See Appendix 2.1 An analysis of all the Estate Land Surveyors active in Essex in the eighteenth-century. Their maps, alternative occupations and links to other surveyors **Chapter 3**

**An analysis of the maps created by the
Commissioned Eighteenth-Century
Estate Mapmakers of lands in Essex.**

The focus of this chapter is the Essex eighteenth-century land surveyors commissioned by private landowners to map their private landed estates. By the eighteenth-century, maps had totally replaced the written description that had hitherto been the end product of an estate survey.¹⁵² Estate maps therefore were of greater significance as they now contained all the information required for the day-to-day management of a landed estate. The estate map in picturesque form could be said to eliminate any ambiguity in any discussion concerning a part of an estate. By pointing to the area on the map that was of concern all participants to the conversation would be left in no doubt which part of the estate was under discussion. The picturesque qualities made it much easier to explain the consequences of any changes that were envisaged; for example, where profits might be increased or otherwise as a consequence of proposed changes. Changes to internal roadways, or tracks, or in

¹⁵² Wallis and Robinson, *Cartographical Innovations* 1987. 97-98.

land use would also be better understood by reference to an estate map. Any attempt to describe the area of a landed estate had the potential to be misunderstood.

There is evidence to suggest that it was mainly individual private single estate landowners that routinely had a map as an end product of a survey, institutional landowners preferred a written survey. Fletcher observes in his case study of the history of mapmaking for the estates of Christ Church, Oxford, that they preferred documentary records, that is a written survey as an end product, maps it seems

were of no interest.¹⁵³ The significance of this being that ‘for a long time, Christ Church was the largest landowner among the Oxford colleges, owning 29,698 acres of mainly rural land dispersed over nineteen English counties and one Welsh county, Montgomeryshire’.¹⁵⁴ The main reason for this difference between the private individual landowners and Christ Church College in particular, was that the prime consideration of the estate managers of the College lands had to protect the main source of revenue of the estate, that is the rents and entry fines. The reason being that the Dean and Chapter were entitled to take for themselves approximately twothirds of the vast annual estate income and thus

¹⁵³ David Fletcher, “ Map or Terrier? The Example of Christ Church, Oxford, Estate Management, 1600-1840 “ in *Transactions of the Institute of British Geographers*, Vol. 23, No. 2 (1998) 223.

¹⁵⁴ *Ibid.*, Footnotes 9 and 10. 235.

had a direct incentive to ensure that the true value of the lands was reflected in the entry fines.¹⁵⁵ Rents were fixed sums, and the College had no incentive to do more than ensure their collection in full. Entry fines, on the other hand 'could be raised to reflect the increasing agricultural productivity or some other aspect of improved value.'¹⁵⁶

Wood suggests that in the mid-sixteenth century ... 'as inflation bit into their rent rolls, lords increasingly looked into ways of raising increased revenue: selling off assets such as woodland, enclosing common land and (of greater significance) increasing rents and dues upon tenants.'¹⁵⁷ This often resulted in a dispute, local custom, the tenants insisted, 'had since "time immemorial" fixed their rents at a low level;' 'Lords therefore turned to surveyors to provide a detailed overview of their present assets and to search into medieval documentation (most typically manor court rolls) in order to demonstrate that they were entitled to much higher rents and

fines from their tenants.'¹⁵⁷ That this was the case can be found in Norden's *Surveyors Dialogue* first published in 1607.¹⁵⁸ In Book 1 of the *Dialogue* there is a meeting between the Surveyor and a farmer.

¹⁵⁵ Ibid.

¹⁵⁶ Ibid., 223

¹⁵⁷ Andy Wood, *The Memory of the People. Custom and Popular Senses of the Past in Early Modern England* (Cambridge: Cambridge University Press, 2013) 191.

¹⁵⁸ Mark Netzloff, *John Norden's The Surveyor's Dialogue (1618) A Critical Edition*. (London: Routledge Taylor and Francis

The farmer, after confirming that the stranger on the estate was a surveyor says, 'I have heard much evil of the Profession, ... you 'pry into men's estates... you look into the value of men's Lands, whereby the Lords of Manors do rack up their tenants to a higher rent and rate than ever before.'. ¹⁵⁹ The significance of the *Dialogue* is that it is evidence for Wood's assertion that surveyors, were employed by landowners for the sole purpose of finding ways to increase their income of their estate. Norden also suggests that a land survey started with an examination of the estate documentary archives for evidence of the 'rights' of those of the landowner and of equal importance of the tenants.

This is further evidence towards the first aim of this investigation for saying that commissioned surveyors should have a separate index giving them the recognition their skills merit. The information on the map provides indicators on how an estate might be better managed, and in turn could provide a greater income, with the map suggesting where changes might be made to entry fees and lease renewals,. Therefore, the surveyors first task after having seen the land to be surveyed and having accepted the commission was to ask to see the estate archives. In his *Dialogue*, Norden has the Bailiff showing the surveyor the documentary archives of the Manor, saying that 'some of the *Evidences* of this Manor are in *French* and

¹⁵⁹ Ibid., 15-16.

some in *Latin*, so ancient as few can read them.’¹⁶⁰ The Surveyor’s reply is, ‘It is a great

¹⁸⁷

I Wood, *The Memory of the People* 2013. 191.

defect in a Surveyor, if he cannot understand the French deeds, nor read, nor understand the most ancient Records.’¹⁶¹ An understanding of ancient languages particularly *French* and *Latin* is, Norden suggests, another skill the surveyor requires. Evidence here provides that Norden himself was a well-educated man who had the necessary skills to be able to read ancient French and Latin. On the matter of local customs further evidence suggests that where Norden ‘repeatedly encountered loose customary formulation, correcting (as he saw it) plebeian wilful error’ the written records and the hard evidence of empirical investigation.¹⁶² Fletcher’s investigation into the Christ Church estate administration discovered that there was a note on their records saying, ‘the overriding rationale for the continuing predominance of written surveys over maps lay in the potential of the former to cover a wider range of subjects fundamental to the efficient running of the properties.’¹⁶³ This explains their reluctance to have maps made. In particular, estate maps were generally based on information compiled for

¹⁶⁰ Ibid., 80.

¹⁶¹ Netzloff, ed. *John Norden’s The Surveyor’s Dialogue (1618)*. 2024. 80.

¹⁶² Wood, *The Memory of the People*. 2013. 136.

¹⁶³ Fletcher, “Map or Terrier? in *Transactions of the Institute of British Geographers*, 1988. 225.

¹⁹⁴ Ibid.

written surveys, hence map production was usually an additional to the cost of making a written survey.¹⁹⁴ In a footnote Fletcher admits that 'very little data could be found in the Christ Church muniments to indicate the relative costs of maps and written surveys, however, the fact that 'the cost of maps was usually additional to the cost of a terrier probably in itself acted as a brake on map production'.¹⁶⁴ The importance the Dean and Chapter attached to written surveys is evident from the Dean and Chapter's policy and in their specific requests for such information, suggesting a concern on their part with

keeping a tight rein on their landed property endowment. This was the policy in 1551... in 1567, further evidence emerges of a desire to keep a close rein on property. This was found in the

'Memorandum for the progress to be made by

Christ's Church in the north partes in March 1567'.¹⁹⁶ The battle to convince Christ

Church that mapping was a rational tool in decision-making was still not won by 1798. In that year the surveyor Mr. Dugmore, wrote to the Dean and Chapter about their estate at Woodnorton (Wood Norton) in Norfolk.¹⁶⁵ Mr Dugmore wrote that 'It is needless, I am sure to state that no description can convey such clear and

¹⁶⁴ Ibid., 235, In Footnote 21 Fletcher writes that 'Unfortunately very little data could be found in the Christ Church muniments to indicate the relative costs of maps and written surveys. However, the fact that the cost of maps was usually additional to the cost of a terrier probably in itself acted as a brake on map production.

¹⁶⁵ Ibid 233

comprehensive information respecting their property as may be done by the assistance of maps'.¹⁶⁶ The significance of Mr Dugmore's letter is that he, all-be -it briefly, defines the merits and intention of an estate map over and above the written survey. His definition of an estate maps merits, suggest, that skill would be required to draw such a map so that it fulfilled its intention, conveying 'such clear and comprehensive information respecting their properties as may be done by the assistance of maps'.¹⁶⁷ Dugmore does not say anything about the fact that 'by the eighteenth - century, maps had totally replaced the written description that had hitherto been the end product of an estate survey'.¹⁶⁸ That the map now contained all the detail formerly found in a written description, lists of tenants, the size of their land holding, the use made of land and other detail, was now something you could expect to see incorporated onto a map that represented the lands of a private estate.

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, Fletcher, "Map or Terrier? in *Transactions of the Institute of British Geographers* Footnote 61 of Fletcher's papers See Christ Church Manuscript Estates (Rostherne) Folio 32, 1767/68.

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Ibid., (Taken from notes made in the notebooks made during the progress of the Colleges Properties. The surveyor John Dugmore *Dictionary entry (D344) b. 1756, d. 1844) who by 1798 when this letter to Christ Church College was written was an experienced surveyor of 22 years who had made surveys (and maps) in a total of six English counties had trained surveyors and worked with other well-known and respected surveyors. 232-233

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Fletcher, "Map or Terrier? in *Transactions of the Institute of British Geographers*, 1988. -233..

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Wallis and Robinson, *Cartographical Innovations* 1987. 97-98.

The years 1700 to 1850 were said by Harley to be 'the golden age of the local land surveyor.'¹⁶⁹ The evidence for this is that 'a prosperous landed gentry was eager to have estates managed by modern methods'.²⁰² To put this into context, when the *Catalogue* of maps was published by the Essex Record Office in 1947, it was considered the best documented record of local maps in England and remains so to this day. The *Catalogue* gives a description of each estate map, and where this information is available the name of the surveyor and the landowner. There are 73 estate maps indexed in the *Catalogue* that date from between 1566 and 1696, a period of one hundred and thirty years. From between 1700 and 1800 (inclusive) a period of one hundred years 258 estate surveys were made in Essex. Of the 258 maps, 188, bear the name of the surveyor, and in some instances the owner of the land represented on the map. This indicates that in Essex this was a 'golden age for the estate land surveyor'.²⁰³ Harley suggests that the explanation for this was that 'changes in country and town required maps in unprecedented number and variety'.¹⁷⁰ The number of private estate maps that Essex Record Office hold that from between 1700 and 1800 (inclusive) are greater in number than for any other period

¹⁶⁹ John Brian Harley, *Maps for the Local historian a guide to the British sources*. (London: National Council for the Social Service for the Standing Conference for Local History, 1972) (reprint for the Local Historian 1977) 24. ²⁰² John Brian Harley, *Maps for the Local historian* 1972) (reprint for the Local Historian 1977) 24.

²⁰³ Ibid.

¹⁷⁰ Ibid.,

between 1566 and 1850, the end date of the *Catalogue*, a golden age of mapping in Essex.

It seems appropriate at this point to explain the choice of the estate maps of Essex County, an analysis has been made of the available statistical data relating to the number of surveyors active in England between 1530 and 1850.¹⁷¹ It was found

that Essex county had the greater number of active land surveyors than any other county in England. A table records the number of surveyors active in each county between 1530 and 1850 (excluding London and The Ridings of Yorkshire). Out a total number of 53 counties and regions Essex had 833, active land surveyors, ranking them number one: Kent had 736 ranking them number two: Norfolk 573, ranking them number three: Suffolk 544, ranking them number four: Gloucestershire 503, ranking them number five. (See Appendix 1.5). The data used to create this table was taken from the *Dictionary* (Vol., 1 (Index to Areas in Which Surveyors Practised)¹⁷² The explanation as to why Essex had the highest number of active land surveyors is perhaps because of their close proximity to London. Mason has identified a number of London based surveyors that regularly made estate surveys in Essex in the eighteenth-century.¹⁷³ He has divided them into two groups, the first whose

¹⁷¹ Bendall, *Dictionary of Land Surveyors*, 1997, Vol., 1, Index to Areas in Which Surveyors Practised. 158, 163 & 165.

¹⁷² Bendall, *Dictionary Of Land Surveyors* Vol., 1. 158, 163, & 165.

¹⁷³ Mason, *Essex on the Map* 1990. 32.

prime business was land surveying and a second group that also had another occupation, such as instrument maker, or teacher of mathematics.¹⁷⁴ Mason also found evidence that in the year 1700, ‘several Kent surveyors crossed the Thames to work in Essex’, they were later followed by a number of other surveyors from Kent between 1709 and 1735.¹⁷⁵ The significance of this information is that it suggests how information relating to then current surveying techniques was passed on to other surveyors, be they established surveyors or hired assistants.

That the measurement of land was in disarray to the extent that, as in Norden’s *Dialogue*, the tenants were afraid of surveyors measuring their land, can be attributed to the fact that there was no universally accepted standard of units of

measurement until the early nineteenth century. It was not until 1824 that ‘An Act for ascertaining the establishing Uniformity of Weights and Measures came into force. This will be discussed later in this chapter.¹⁷⁶ Wood suggests that ‘custom perhaps more than any other early modern concept was the epitome of this vernacular

¹⁷⁴ Ibid.

¹⁷⁵ Ibid., 37-38.

¹⁷⁶ An Act for ascertaining and establishing Uniformity of Weights and Measures. 17th June 1824 George IV. United Kingdom of Great Britain and Ireland. This will be discussed in full later in this chapter.

country mentality.¹⁷⁷ This did not sit well with the 'gentry and middling sorts, the

1700s the gentry felt themselves drawn into the world of politeness and commerce, They were adopting the metropolitan styles of dress and speech.'¹⁷⁸ The gentry and middling sorts now had nothing but contempt for the poor, and custom was associated with the poor. One revealing document that sums up the attitude to custom is the judgement made by a Derbyshire Court in 1767. That 'baldly stated no degree of antiquity can give sanction to usage bad itself'.¹⁷⁹ Here the court in Derbyshire is suggesting that custom had no exact meaning, 'it was not a form of implicit knowledge, its exact meaning was not shared by all.'¹⁸⁰

That custom, particularly customary measurement was a significant problem in the absence of any universally accepted standard is to be found in an Act of Parliament that came into force on 17th June 1824. The title 'An Act for Ascertaining and Establishing Uniformity of Weights and Measures . C A P. LXXIV. George IV. REGIS. This act 'is necessary for the Security of Commerce and for the Good of the

¹⁷⁷ Wood, *The Memory of the People*. 2013. 13.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid. The document that records the judgement of a court held in Derbyshire 1767 is now held by The British Library Ref:

BL Add MS 6676, fol. 144 v. The real significance of this document is that reveals the attitude of a court that is 147 miles away from London, where trends and new fashions were set. Illustrating how changes in fashion and attitudes spread quickly from London to other parts of the country,

¹⁸⁰ Ibid, discussion on the impact of Custom. 13-14.

Community.¹⁸¹ The first paragraph states that a straight line or distance between the

Centres of two points in the Gold Studs in the Straight Brass Rod, now in the Custody

of the Clerk of the House of Commons...shall be called a Yard; ...

hereby denominated the "Imperial Standard Yard" and is the only

Standard Measure of Extension, wherefrom or whereby all other

Measurers of Extension whatsoever... that the yard shall be of three

portions ... each portion called a foot and a Twelfth Part of such Foot

shall be an Inch; that a Pole or Perch in Length shall contain Five

such Yards and a Half, the Furlong Two hundred and twenty such

Yards, and the

Mile One thousand seven hundred and sixty such Yards. A significant part of the

Statute specifically looks at 'a Measure established by local Custom,

The Ratio, or Proportion which every such local Weight or

Measure shall bear to any of the said Standard Weights or

Measures, shall be expressed, declared, and specified in Such Agreement, or otherwise such Agreement shall be null and void.

The statute is mindful that in many areas customary

Measurers and Weights will exist. Chapter XIV of the Statute says

that where such weights and measures are still used they must have

painted or marked upon such customary Weights and

¹⁸¹ An Act for ascertaining and establishing Uniformity of Weights and Measures. [17th June 1824].

Measures their relation ship to the standard in conformity to the Act.¹⁸²

The Statute of 1824 puts into context the problems caused by the continued use of local customary measure, and the little interest taken of the Sixty- Two Acts of Parliament and regulations made to try and standardise weights and measures between Edward III's reign 1327-1377 and the end of George III's reign 1820. (1738-1820). The Act of 1824 lists all the statutes and regulations that are to be repealed. Chapter XXIII states 'And be it further enacted that after the First Day of May One thousand eight hundred and twenty-five (one year after the major act of 1824) they all shall be repealed. The regulations and Acts are then listed; their brief title and

purpose is given with the date they were enacted. These individual statutes only addressed specific issues as they arose, the 1824 Act looks at all aspects of weights and measures and of interest defines a yard as a unit of measurement and the names and proportion of its different parts, leaving little in doubt.

In Cambridge, throughout the early modern period (1500 – 1750) Bendall found that customary measures continued to be used until the turn of the eighteenth century, but it was difficult to determine

¹⁸² An Act for ascertaining and establishing Uniformity of Weights and Measures. [17th June 1824]. Chapters 1, XV, XV, XV; 637,643.

what the customary measure was and where and when it was used.¹⁸³

No mention is made by Emmison in his *Catalogue of Maps* of where local customary measurements or scales might have been used. In his 'Explanatory notes' Emmerson states that in his description of a map the scale is always given in inches to the mile, irrespective of scale on the original (map); if the original map has none, it has been calculated.¹⁸⁴ The assumption being that where an estate map does not indicate any scale, Emmison has made a comparison of the manuscript estate map with a modern Ordnance Survey map that represents the same area of land which does give some indication of scale.

The purpose of this investigation into the estate land surveyors of Essex and the maps they made is firstly to obtain sufficient evidence to argue that a distinction should be made in the *Dictionary* between the land surveyor commissioned to make a survey of a private estate and any land surveyor hired to assist the commissioned surveyor. An index of surveyors that had successfully demonstrated they had all the skills required to make a private landed estate survey would save time and ensure the names of only the experienced estate land surveyors were named. The Historian

¹⁸³ Bendall, *Maps, Land and Society* 1992. 39.

¹⁸⁴ Emmison, *Catalogue of Maps* 1947.

having discovered the name of a person who was known to have these skills that set him apart from the surveyor for whom his entry in the *Dictionary* suggests that he is only 'likely to have measured land' and so could rightfully call himself a land surveyor.¹⁸⁵ With regards the surveyor that had in the past been commissioned to make estate surveys his *Dictionary* entry would confirm this and possibly give details of the landowners that had employed them and other biographical information that the researcher would find useful. His biographical details providing useful information and the sources of the information contained in his *Dictionary* entry. The second aim of this investigation is to discuss the possible reasons why a significant number of the commissioned estate land surveyors active in Essex in the eighteenth century found it necessary to have an alternative occupation, or occupations to their land surveying commissions.

The estate map made by the commissioned surveyor is key to assessing his skills as a surveyor and mapmaker. A close look at the surveyors map (especially where the original can be viewed) might reveal clues as to his method of survey, such as triangulation. Triangulation involves the 'accurate measuring of a base line and of a great many angles to construct a framework of points, accurately defined in relation to one another.'¹⁸⁶ This is based on Euclid's theorem of triangulation, in his surveyors text In his treatise *The*

¹⁸⁵ Bendall, *Dictionary of Land Surveyors* 1997. 67.

¹⁸⁶ Delano Smith and Kain, *English Maps A History*. 1999. 58-59.

Cosmographical Glasse, William Cuninghame explains the method of triangulation that he had learnt from another surveyor.¹⁸⁷ A view of an original manuscript estate map may bear pencil marks and small holes where the base line of the triangle was set out. Wallis and Robinson in a discussion

on the method of measurement known as triangulation suggest that it 'became indispensable in the early 16th century, for accurate large-scale mapping'.¹⁸⁸ 'A good map reveals the skill of the cartographer who made the map and is a factual statement about geographical reality'.¹⁸⁹ Accuracy leads to scale, and can be said to give the user of the map (land estate manager, or bailiff) confidence to advise on what the rent should be, or the value of a lease. The commissioned estate surveyor has to initially, as previously stated, to manage the work as a business; this would be evident from his initial meeting with the landowner. He had to bear all the responsibility for setting his charges for the survey that were both acceptable to the landowner and would cover all his expenses, leaving him with a profit, his map being the only evidence there is of his surveying activities. The hired assistant might be deemed to be seen as an equal as his name also appears in the *Dictionary* this is evidence

¹⁸⁷ William Cuninghame, *The Topographical Glasse Conteyning the Pleasant Principles of Cosmographical Geographical Hydrographical or Navigation*. (London: John Day, 1559) Folio 139 -140= (pages).

¹⁸⁸ Wallis and Robinson, *Cartographical Innovations*, 1987, 74.

¹⁸⁹ J. B. Harley, *The New Nature of Maps* edited by J. H. Andrews 2001. 35.

that he had measured land and is therefore given a place in the book. This is understandable as ‘the *Dictionary* aims to include all persons likely to have measured or made maps of land in areas of less than a complete county in Great Britain and Ireland 1530-1850. The compilers of the *Dictionary* had no way based on the evidence they had of determining the exact part played by a surveyor in the making of a land survey.

The following estate maps of lands in Essex created in the eighteenth-century, have been explored with the aim of revealing the creators mapmaking skills. The skills that a commissioned estate land surveyor had which set him apart from any hired assistant surveyor. A map usually that provides the surveyors name, and in some instances other useful biographical detail. The estate maps used in this

investigation are where possible the original manuscript estate maps that were available at the Essex Record Office.

Mason describes estate maps as being the prime source of information on who did and who did not measure land’.¹⁹⁰ A document that best summarises the matters involved in the making of an estate land survey is ‘the Articles of Agreement between Her Grace the Duchess of Buckingham and Edward Laurence on Account of

¹⁹⁰ Mason, *Essex on the Map*. 1990. 4.

Surveying Measuring and Mapping of Lordships (lands), 1722'.¹⁹¹

(For a full copy of the agreement see page 9 in the Introduction to this Thesis). The significance of the Articles of Agreement is that the author Laurence (L071) is that it acts as an Aid Memoir when in discussion with the land owner on the matter of his charges for land surveying. The articles make reference to the 'Usual Custom' concerning board and lodgings and the arrangement for payment. Laurence is ensuring that his personal expenses will be paid as part of the agreement to make the survey suggesting that this is customary.

1700 to 1850 was said to be 'the golden age of the local land surveyor'.¹⁹² The evidence for this is that 'a prosperous landed gentry was eager to have estates managed by modern methods'.¹⁹³ To put this into context, when the *Catalogue* of maps was published by the Essex Record Office (the ERO) in 1947, was considered the best documented record of local maps in England and remains so to date. The *Catalogue* gives a description of each estate map, the name of the surveyor and the landowner - where this information is known, as has been stated elsewhere in this thesis there are 73 estate maps indexed in the *Catalogue* that date between 1566 and 1696. Between 1700 and 1800 (inclusive) the number is 258. Of the 258, 188 bear the name of the surveyor, and in some instances the owner of the land represented on the map. This indicates that in Essex there is evidence that this was

¹⁹¹ Introduction to this Thesis page 9. A full copy of the Articles of Agreement for the making of a private landed estate survey between Heer Grace the Duchess of Buckingham and Edward Laurence 8th May 1722

¹⁹² John Brian Harley, *Maps for the Local historian a guide to the British sources*. (London: National Council for the Social Service for the Standing Conference for Local History, 1972) (reprint for the Local Historian 1977) 24.

¹⁹³ *Ibid.*,

the 'golden age for the estate land surveyor.'¹⁹⁴ Harley suggests that the explanation for this was that 'changes in country and town required maps in unprecedented number and variety.'¹⁹⁵ The number of private estate maps in the ERO that date from between 1700 and 1800 (inclusive), are greater in number than for any other period between 1566 and 1850, the end date of the *Catalogue*. Evidence that between

1700 and 1800 it was a good time to have been an estate land surveyor in Essex. The estate maps of lands in Essex created in the eighteenth-century, have been explored with the aim of revealing the creators map-making skills. The skills that as a commissioned estate land surveyor set him apart from any assistant or hired surveyor, a map being the only evidence that provides details of a land surveyor, that evidence being his name, if he signed the map. Mason points out that a number of Essex surveyors made it clear that they had both surveyor and cartographer.¹⁹⁶

That this is clear Mason argues 'from formulas like " Surveyed and delineated by James Craddok" (C507). "Surveyed and plotted by Richard Sherwood" or "Surveyed and mapt by me John Lee" (L121).¹⁹⁷ This action by Craddock, Sherwood and Lee, that Mason interprets as suggesting that they were both surveyor and cartographer, is also evidence that sets them apart from any

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

¹⁹⁶ Maso, *Essex on the Map* 1990. 4.

¹⁹⁷ Ibid., 4: (Michael Sherwood is not listed in the *Dictionary*. No Trace ERO. Mason does not give and map reference).

assistant surveyor. This is a significant point as all that is needed to draw the map are the measurements that were taken and any additional description of the land surveyed. Craddock, Sherwood and Lee have made it clear by their endorsement on the map that they were both surveyor and mapmaker. This *Dictionary* does not suggest any alternative term to

distinguish the commissioned estate land surveyor from the assistant or person that may have been asked to draw the map from the measurements taken of the land. At the beginning of the eighteenth-century the busy surveyors active in Essex were the three brothers, John Joseph and William Kendell. (K064; K067; and K070). Their father John Kendall (I) (K065) had been an active in Essex as an estate land surveyor between 1676 and 1697.¹⁹⁸ Mason makes the comments that ‘trying to place the Kendalls as a family is difficult because (in the early eighteenth-century) Colchester had a plethora of Kendalls, many of them Non-conformists.’¹⁹⁹ The biographies of John Kendall (I) and (II) (K064 and K065), Joseph (K067) and William (K070) in the *Dictionary* suggest that there all members of the same family. Their respective entries in the *Dictionary* indicates that they were all living in Colchester, and all are

¹⁹⁸ Bendall, *Dictionary of Land Surveyors* 1997. Entries K064; K065; K067; and K070), 291.

¹⁹⁹ Mason, *Essex on the Map* 1990. 43.

shown to have been schoolmasters.²⁰⁰ Mason also suggests that the surveying maps made by the Kendall family and their associates Daniel Halls (H057) and Hayward Rush (R296) may only be a proportion of the work.²⁰¹

In 1689 a John Kendall (I) (K065) made a survey of 139 acres of the Langleys Estate, Great Waltham.²⁰² (See Appendix 1.4 Table 3) The estate was not mapped until 1765 by a John Storer (S542) we only know this because Storer wrote on the reverse of his map of the estate 'drawn by J Storer 1765 from a survey made in 1689 by John Kendall (I).²⁰³ Mason has compiled a table of the surveys made by the Kendall brothers and their two associates Daniel Halls (H057) and Hayward Rush (296). (See Appendix 1.4 Table Three Work of the North Essex Schoolmasters)

The table indicates that this group of schoolmasters were all active within the same time period in north Essex. John Kendall (I) was active as a land surveyor and schoolmaster between 1676 to 1697.²⁰⁴ Further evidence of the life of John Kendall (I) is given by Taylor in *The Mathematical Practitioners of Tudor and Stuart*

²⁰⁰ Bendall, *Dictionary of Land Surveyors* 1997., 291.

²⁰¹ Mason, *Essex on the Map* 1990. 43.

²⁰² ERO Ref: D/DTu 201. Surveyed by John Kendall.

²⁰³ Ibid., and Mason, *Essex on the Map* 1990, 77.

²⁰⁴ Bendall, *Dictionary of Land Surveyors* 1997. John Kendall (I) (K065) 291.

England. Entry 393 tells us that John Kendall was a schoolmaster of Colchester (Essex) was a practical *surveyor* and student of astrology and astronomy.²⁰⁵ John Kendall's (I) three sons, John (II), Joseph and William were land surveyors in Essex and schoolmasters in Colchester.²⁰⁶ Based on his entry in the *Dictionary* John Kendall (I) made his final survey in 1697 well before the first of his sons John (II) began his surveying career. There can be no doubt that he influenced his three sons John (II) Joseph and William to take up surveying as an alternative to their main occupation that of schoolmaster, common to all members of the Kendall family.²⁰⁷

With regard to the maps made by the Kendall family Lynam makes an interesting point. He argues that there was a general uniformity of design among estate plans after 1551, his explanation for this being that by then all but the humblest draughtsmen had begun to imitate closely the style of the published maps of large areas. This it can be seen applies to a map created in 1726 by William

Kendall (K070) the youngest of the three Kendall brothers all estate land surveyors.

His estate map 'A true survey of Moys Hall in the parish of Ardley in the county of

Essex is an illustration of his understanding of what an estate map should contain. The entire estate of 125 acres in south-west

²⁰⁵ Taylor *The Mathematical Practitioners of Tudor and Stuart England*. (Cambridge: for the Institute of Navigation 1954 (reprint 1968). Entry 393. 271.

²⁰⁶ Bendall, *Dictionary of Land Surveyors* 1997 entries John Kendall (II) (K064): Joseph Kendall (K067): William Kendall (K070) 291.

²⁰⁷ *Ibid*.

Ardleigh is represented on a map that is 23 x 22 inches. Information in a cartouche gives the date of the map as 1726.

William Kendall signs himself off in the cartouche of his map Moys Hall, Ardleigh

Essex, as an 'algebraist' . In *The Mathematical Practitioners* for his father John Kendall (I) Taylor confirms this, adding to John Kendall's entry, 'a generation later his son William Kendall, terming himself 'algebraist' and practising as a surveyor in Essex.'²⁰⁸ John (I) (the father or William) was a practical surveyor although none of his work survives.²⁰⁹ William's understanding of, and his application of algebra to his surveying projects elevates him to a position above that of any hired surveyor, his map of Moys Hall is further evidence of his surveying abilities. His name should useful be in a separate index in the *Dictionary* allowing historians immediate access to the qualified commissioned land surveyors. As it stands all entries need to read through carefully before it can be determined who were the commissioned or skilled surveyors and who were assistants.

Plate 1.5 Estate Map of Moys Hall Ardleigh Essex 1726 by William Kendall. ²¹⁰

²⁰⁸ Taylor, *The Mathematical Practitioners of Tudor and Stuart England*

²⁰⁹ Bendall, *Dictionary of Land Surveyors* 1997. John Kendall (I) entry (K065) 291

²¹⁰ ERO Ref: D/DR P7. 'A true survey of Moys Hall in the parish of Ardley in the county of Essex 1726 by the surveyor William Kendall.

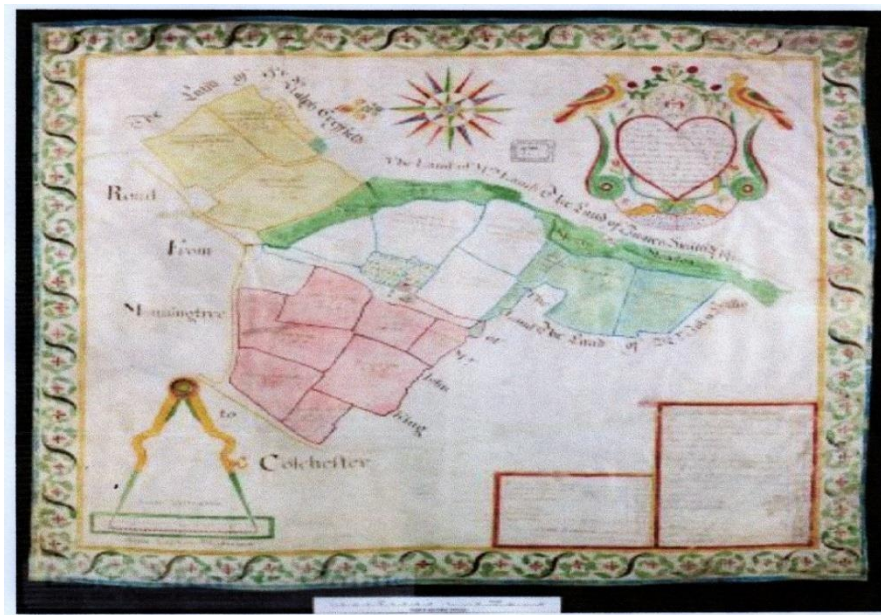


Plate 2.5 Detail of the Cartouche on William Kendall's estate map of Moys Hall

Ardliegh Essex. Primary source evidence of his calling himself an 'Alegerist'.²¹¹



Plate 3.5. Detail of the heavily patterned border from William Kendall's estate map of Moys Hall

Ardleigh Essex.



²¹¹ Ibid.

Emmison describes the cartouches of both Joseph and William Kendall's maps as 'all highly coloured and tend to be simple although grotesque; they introduce birds, flowers and masks into their designs, which bear little or no resemblance to the decorative features employed by other surveyors of the period.'²¹² The map by Joseph and William, dated 1724 is only available as a (reduced) photograph. It is described as showing strips in open meadow: and gravel pit, church and Berwick Hall and numerous houses and farm-buildings drawn in elevation or perspective view.²¹³ The decoration is similar (but rather more elaborate) to Ardleigh 1726 (Plates 1.5 and 2.5) by William Kendall. The map by Joseph and William Kendall 'shows the family style of decoration at its flamboyant best. Broad heavily patterned borders, lyre-shaped sides to the cartouches with a lion mask or arrogant birds, together with

bright colour make these instantly recognisable as Kendalls' and a pleasure to view.'²¹⁴ The Kendall family have established a mapping style of their own making. Records show that they worked with Daniel Halls. Halls (H057), he made one survey in 1720 with William Kendall of an estate in Coggeshall Essex, which was in the

²¹² F. G Emmison, *The Art of the Map-Maker in Essex 1566-1860*. (Chelmsford: Essex County Council, Chelmsford: Essex Record Office Publication No. 4. 1947., xiv.

²¹³ ERO Ref: T/M 266/1 Reduced photograph of map Not available digitally.

²¹⁴ Mason, *Essex on the Map*. 1990. 45.

Wheley Passmore Edwards Museum which closed in 1994.²¹⁵ A survey made in by Daniel Halls in 1723 of Mowden- Hall together with a paper mill, does not show any influence with his meeting and surveying with William Kendall.

What the Table of surveys (Appendix 1.4) does indicate is the communication between surveyors, in this instance the link was that the Kendalls, Hall and Rush were all schoolmasters. It also might be argued that such links may have influenced map development, Rush (296) was also a writing master and a teacher of navigation. and the possible influence of the Kendall family members.

See Plate 4.5.

Plate 4.5 Map of Land Belonging to Mowden-Hall Essex in 1723 by Daniel Hall.²¹⁶

Plate 4.5 A True map of Lands belonging to Mowden-Hall together with a paper mill surveyed and drawn by Daniel Halls.



²¹⁵ The Contents of the Wheley Passmore Edwards Museum were transferred to the Newham Heritage Service accessed through the Newham Council Libraries page. (Halls map not trace).

²¹⁶ ERO Ref: D/DBd P1 A tracing on linen of an estate map of the lands belonging to Mowden-Hall, by unknown hand. The original map by Daniel Halls dated 1723. See also F. G. Emmison *Catalogue of Maps in the Essex Record Office First Supplement 1952*. (Chelmsford: Essex County Council. Essex Record Office. 1952. 9b.

The map by Halls Plate 4.5 is of lands in several parishes, 262 acres in S. and SW. of Hatfield Peverel... names of fields and lanes: names of some adjacent farms and owners. Buildings including the watermill drawn in elevation or perspective view. (This is a copy of the original map and is only available as a modern tracing on linen location of original unknown 1939). The reproduction is of poor quality.²¹⁷

Daniel Halls (H057) was active from 1715 to his death in 1730, He made surveys only in Essex, one with William Kendall (previously discussed). His only other known survey was in 1723, the Essex Record Office only have the tracing on linen made in 1939 the location of the original map is unknown. Halls was a teacher in Colchester at the same time as members of the Kendall family, and this is probably how he came to make a survey with William Kendall.²¹⁸

Mason discovered Halls name in the 1715 "Oath Book" wherein he is registered as a schoolmaster in Halstead. His map of 1723 (Plate 4.5) is drawn in the style of William Kendall's map of Moys Hall (Plate 1.5) He was "of Colchester, and a Philomath" his career was cut short by his death in 1730.²¹⁹ This evidence relating to Kendall again elevates him above any hired assistant. It demonstrates that he was in contact with other surveyors one of

²¹⁷ Ibid.

²¹⁸ Mason, *Essex on the Map* 1990. 6. (under sub heading Teacher).

²¹⁹ Ibid., 45.

whom at least was influenced by his work. Hayward Rush (R296) made a map with William Kendall, Kendall styled himself as an “Algebraist” and like Rush was a Colchester Schoolmaster perhaps a few years earlier.²²⁰ Mason writes the style of their individual maps is similar enough to suggest a link between the two men.²²¹ This indicates that William Kendall’s mapping style influenced the work of Rush. Emmison, as previously stated describes the

cartouches on the maps of both Joseph and William Kendall as ‘all highly coloured and tend to be simple although grotesque’²²².

Another similarity between the Kendall maps and the maps made by Rush is highlighted by Mason, he writes that the Rush map of Wegg’s estate in Asheldam ‘is a colourful affair, from the cartouche and coat of arms to the compass rose.’²²³

Mason notes that the style of the Kendall family of schoolmaster/surveyors was copied by James Simpson (S238) in 1742 on his map of four farms (total 3340 acres) in Great Clacton. His cartouche is almost identical with that on Joseph Kendall’s map (1730) of another farm in Great Clacton. Both have a heart shaped space for the title, lyre-shaped side decorations, a grotesque lion mask at the top and the scale bar set within the bottom of the

²²⁰ Bendall, *Dictionary of Land Surveyors* 1997, entry (R296) 445.

²²¹ Mason, *Essex on the Map* 1990.4.

²²² Emmison, *The Art of the Map-Maker in Essex 1566-1860*. 1947, xiv.

²²³ Mason, *Essex on the Map* 1990. 46.

cartouche²²⁴. Nothing else is known of Simpson, however, to Mason the fact that he also put on his one map a drawing of a tripod holding up a plane table suggests that he was a land surveyor as a full-time occupation.²²⁵

In 1947 Emison in his foreword to his *Catalogue* of maps suggested that the general uniformity of design among estate plans after 1591 was no accident, his argument being that by then all but the humblest draughtsmen had begun to imitate closely the style of the published maps of large areas, in other words they copied in manuscript the delicate art of the copper engravers.²²⁶ Harley's observations on this subject in 1972 was that yes 'estate maps began to develop a uniformity of design transcending differences in date and place but adding 'not always obscuring the

idiosyncrasies of individual presentation.'²²⁷ In the early eighteenth - century the Kendall brothers, the first group of estate surveyors of Essex, demonstrated that they fully understood the purpose of an estate map sufficiently to be able to introduce innovative ideas of their own. The one estate map available of Moys Hall, Ardleigh Essex, 1726 by William shows the family style of decoration at its flamboyant best. (Plate 2.5) The lyre -shaped sides to the

²²⁴ Mason, *Essex on the Map* 1990. 76.

²²⁵ Ibid.

²²⁶ Lynam, Foreword in *Catalogue of Maps in the Essex Records Office* 1947. V.

²²⁷ Harley, *Maps for the local historian* 1972 Reprint 1977. 24.

cartouches with a lion mask or arrogant birds, together with the bright colour make all their map instantly recognisable.²²⁸ There is very little evidence available that tells us what landowners wanted from a survey they had commissioned. The difficulty being that 'many surviving manuscript maps have been plucked from their original documentary context... only a full consideration of documents which accompany maps may establish the purpose of the map.'²²⁹ The information relating to each of the 448 estate maps given by Emmison in his *Catalogue* of 1947 gives the historian useful information to allow further research.²³⁰ Further investigation into the reasons for individual surveys of private estates in Essex has in some instances established a possible or probable reason, that allows greater accuracy of the evaluation of the accompanying map. Knowing the intended purpose of a map may affect the features represented or omitted and the scale of a map. When drawing his map of Moys Hall in Ardleigh, Essex, Kendall had to take account of the fact that the information formerly only found in a written survey now needed to be incorporated. The entire Ardleigh estate which is represented on the map is 125 acres in extent, the size of the original map 23" x 22" (inches) the scale 26.6 inches to 1 mile. As previously discussed local

²²⁸ Mason, *Essex on the Map* 1990, 45.

²²⁹ Harley. The Evaluation of Early Maps: in *Imago Mundi, Ltd.* 1968. 67.

²³⁰ Emmison, *Catalogue of Maps in the Essex Record Office* 1947. 1-37.

custom in relation to measurement had to be noted. As Wood advises 'custom was not paradigmatic, that is typical, in the sense that its meaning was exact.'²³¹ The length of a rod, rood, pole or perch might vary from village to village. The landowner may not subscribe to local custom with regards to measurement, the landowner would need to have been consulted on this point.

It would be of great assistance to any researcher in time and effort to be able to go straight to an index of commissioned land surveyors. That is the surveyors that had been commissioned to make an estate survey, as they were the ones that had managed the whole of a surveying project as a business, focusing on the financial aspect, that is making a profit. In addition to the employment of local assistants, the sourcing and purchasing of materials, and of balancing the landowners directives with local customs re land measurement that could not be ignored. The map of Bagg Wood (1703) in Aldham, Essex, as discussed in Chapter 4, is the only example found where a mapmaker of an eighteenth-century map informs us that a customary scale was used, albeit on the reverse side of his map. (Plate 1.4 chapter 4) wherein a pole was 18 feet, compared with 16 ½ feet for the usual pole. It is attention to this kind of detail that sets the commissioned surveyor apart from any assistant and it would therefore be useful to have the names of commissioned estate land surveyors indexed separately.

²³¹ 265 Wood, *The Memory of the People* 2013. 341.

The second group of estate land surveyors active in Essex in the middle years of the eighteenth century, were active mainly in the northern area of Essex. Joseph Dawson (D108) 1754 – 87, his surveying career confined to Essex. Timothy Skynner (II) (S261.1) 1747/8 – 1770, he is known to have made 61 estate surveys in Essex and a small number in neighbouring counties. George Sangster (S039) 1755-94 made 8 surveys in Essex and one in Suffolk. Josiah Taylor (T059) 1746-1760, worked only in Essex making 7 surveys ²³² Plate 5.5 Detail from a survey of the Manor Farm and demean lands called Brockhalls Radwinter 1756. By Jos Dawson ²³³

Plate 5.5 Cartouche detail from a map of Great Brockhalls By Joseph Dawson (D108) ²³⁴

²³² Bendall, *Dictionary of Land Surveyors*, 1997. Vol., 1 entry (D108), 137: entry (S261.1), 467: entry (S309) 472: entry (T059), 504.

²³³ ERO Ref: D/DQ 5. Survey of the manor farm and demean lands called Great Brockhalls... Radwinter, by Joseph Dawson 1756.

²³⁴ ERO Ref: D/DQy/5 Estate Map detail from a map of Great Brockhalls by Joseph Dawson 1756.



Decoration

Border Two narrow lines in yellow creating a frame round the map
 Title Cartouche: Title of the Survey signed Jos; Dawson 1756.
 Places at the top of the map in a central position. Small cartouche top right of map. Scale: Bar lower edge of the map in the centre. 16 inches to 1 mile.

In a description his survey of Little Newarks (ERO Ref: D/DTu 237) the ERO suggest that the scale bar on Dawsons maps in usually of Rods, showing 80 units – 124 mm, or 4.0 inches [1:3,233, which is probably 80 units = 5 inches (1:3.168), being 1 inch to 4 chains or 20 inches to 1 mile).²³⁵

In his Explanatory Notes on the *Catalogue* Emmison writes that the Scale of maps is always given in inches to the mile,

²³⁵ Ibid., Mason, *Essex on the Map* 1990 . 62, 80. ²⁷⁰
 Emmison , *Catalogue of Maps* 1947. XX.

irrespective of the scale on the original, If (however) the original has none it has been calculated.²⁷⁰ It would appear therefore, that where Dawson was using the unit of measurement he was most familiar with, a scale of rods, Emmison calculated the scale to be 20 inches to the mile. It is difficult to determine how many maps Emmison added a scale in inches to the mile.

Decoration Cont'd.

Compass rose A small simple star burst with North indicated (pointing to the west) by a fleur-de-lis, placed lower left quarter of the map. The same compass design appears on most of his maps.

Table of Contents; Tenants/field names/acreages. Left had area of map.

Buildings described by Emmison as 'roughly drawn in perspective view'.²³⁶ Central cartouche coloured, outline of fields in green Adjacent landowners noted in very neat handwriting.

Contrasts with the highly coloured estate maps created by the Kendall family in the first quarter of the eighteenth-century, Dawsons maps muted colour pallet. No unique design features.

Joseph Dawson (D108) was active as land surveyor between 1754-1787. His 24-year career is probably not fully represented by his surveying maps as there are some blank years from 1764 to 1771 and from 1775 to his last map in 1787. His cartography is described by Mason as neat, explicit but not individualistic. His style remained unchanged throughout his career. Mason suggests that Dawson may have been influenced by the estate land surveyors active in the central part of

Essex in the mid to late 1700s.²³⁷ Evidence for possible links with other estate land

Surveyors active at this time, such as George Sangster (S309):

Timothy Skinner (S261.1): and Josiah Taylor (T059), will be

²³⁶ Emmison, *Catalogue of Maps* 1947. 18a.

²³⁷ Mason, *Essex on the Map* 1990 .,80.

investigated. There are no clues as to any additional occupation Dawson may have had. Dawson was a fairly common surname in Essex in the eighteenth -century.

The next group of landed estate maps are by Timoth Skynner (II) (S261.1) born

1727/8 d. by 1770, of Moulsham, Chelmsford Essex. Active as a surveyor 1747/8 to 1770. Maps by T Skynner or Timothy Skynner date from between 1713 to 1767. The dates given for Timothy Skynner's career Mason argues strongly suggests, that they support a father and son succession rather than just one Timothy Skinner.²³⁸ The *Dictionary* indexes Timothy Skynner senior (S261) (variation on name given as Skinner) was active as a land surveyor between 1713 and his death in c1743. Timothy Skynner (II) (261.1) Junior (Without variation to surname spelling) was born c1727/8 and his death recorded as 1770) this does not suggest a link between the two men.

The *Dictionary* states that where the birth date is known of a surveyor, (as is the case with Timothy Skynner (II) (S261.1) then he will have been deemed to have started work at the age of 20.²³⁹ In the absence of evidence to the contrary Timothy Skynner (II) therefore, became active as a land surveyor in 1747 at the age of 20 years. The list of maps signed T. Skynner and Timothy Skinner

²³⁸ Ibid.,

²³⁹ Bendall, *Dictionary of Land Surveyors* 1997. 141.

suggests six maps were made after the death of Skynner (I) and the start of the career of Skynner (II).²⁴⁰

The evidence for there being two Timothy Skynner's active as land surveyors in the 1770s are the estate maps themselves. A cartouche copied from a map of Manor Farm called Houchins ... dated 1764 by a T. Skynner that is semi-classical in style can be seen to be different for the cartouches drawn on the maps by Skynner (II).

Plate 6.5

Monochrome cartouche 1764 by T Skynner
Farm Lexden

Plate 7.5

Cartouche on map of Cooper's
Farm Lexden

Manor Farm called Houchins ²⁴¹



1736 ²⁴²



The

cartouches in plates 6.5 and 7.5 each signed T Skynner, Mason argues that they are evidence that they were drawn by two different mapmakers both named Timothy Skynner, saying they could not be

²⁴⁰ Mason, *Essex on the Map* 1990. 85-86.

²⁴¹ Ibid., 13. ERO Ref: D/DHt P11

²⁴² Ibid., Inside Front Cover. Of *Essex on the Map* 1990. ERO Ref: D/Dpa P1 Map of Far called Coopers .

more dissimilar. Placed side by side the similarities can be seen, especially at the top of each cartouche the style of writing of 'A Survey', is almost identical. Further investigation into the Essex Archive collection has discovered that there was a third *Timothy Skinner* who was active in Essex as a land surveyor. This information was found on a bill from T. *Skinner* to William Mildmay for surveying work done between September 1756 and December 1761.

The bill was discovered in the Mildmay family records in the Hampshire Record

Office, as it referred to lands owned in Essex it was transferred from the Hampshire Record Office to the Essex Record Office.²⁴³ In addition, useful information has been found relating to a firm of surveyors and auctioneers that had taken out a oneyear lease on lands in Essex. The lease is dated 19th and 20th July 1805, the lessees were co-partners of a firm of auctioneers and land surveyors based in Aldersgate

St. London. There were four co-partners in the firm, Thomas Skinner, Thomas Dyke,

Thomas Tuchin, and Tomas Lister Forrest. An entry for Thomas Skinner (S257.8)

1788, of Aldersgate St. London is to be found in the *Dictionary*, this provides evidence to suggest he was a land surveyor. Thomas

²⁴³ ERO Ref: D/DMY 15M50/90. This information taken from a bill from T. Skinner for surveying work found in the Mildmay family records.

Dyke (D380.3) is indexed in the *Dictionary* his address is also given as Aldersgate St. London (date 18(?00)-44. Tuchin and Forrest are not indexed in the *Dictionary* it is probable therefore, that they were involved in the auctioneering side of the business. All the estate land maps drawn in the eighteenth-century, signed T. Skynner or Skinner have become detached from any accompanying documentary evidence that may have given us additional biographical information. This makes it a problem when trying to match the names to one of the estates surveyed and mapped in the eighteenth-century by a surveyor with the surname Skynner or Skinner. The style of the cartouche in Plate 6.5 is outdated. All other available maps signed Skynner or Skinner have been linked to a survey.

Mason presents evidence that the absence of any accompanying documentary evidence attached to the maps, particularly any written survey, 'bothered the Commissioner of Sewers for the East Greenwich level in 1743.²⁴⁴ They "observed with great regret" that the only map of the level that they possessed was dated 1697 and that the accompanying field book was lost. "A great inconvenience attending the plan of the old map and which rendered it almost useless, the marks on the map could not be understood without the field book. With the book lost, the map was valueless. When the Commissioner of Sewers employed Skynner to make a survey they emphasised that the detail usually recorded in a field

²⁴⁴ Mason, *Essex on the Map*, 1990., fn 37 = from the Minute Book of the Commissioners of Sewers Greenwich, in the GLC Record Office .

book should be included on the map. They wanted to see long tables of the contents placed below the map.²⁴⁵ When the survey was complete of the Essex marshlands 'his clients (the

Commissioners of Sewers) checked the accuracy of his survey by getting another surveyor to measure a sample marsh it would seem all was found to be accurate.²⁴⁶ There is evidence that suggests, as previously discussed, that it was as early in the 'mid-16th century;... that saw maps ... replacing the written descriptions that had hitherto been the end product of an estate survey.²⁴⁷ In 1743 the Commissioner of Sewers had had experience of written surveys being mislaid or lost rendering the maps made to go with the survey redundant. Therefore in 1743 when the commissioned Skynner to make a survey of their lands they specifically asked Skynner to combine the written survey with the map.

Plate 8.5 Is a map of Danbury, Sandon, and Little Baddow, 1758. By Timothy Skinner

The map Is an example of how neatly the information in a written survey could be incorporated into an estate map. Map size 23 x 34 inches. Scale used was in perches, each perch 16 ½ feet which approximates to 10 inches to 1 mile. Size of the land surveyed, 305 acres. All field names are shown on the map. The table at the bottom

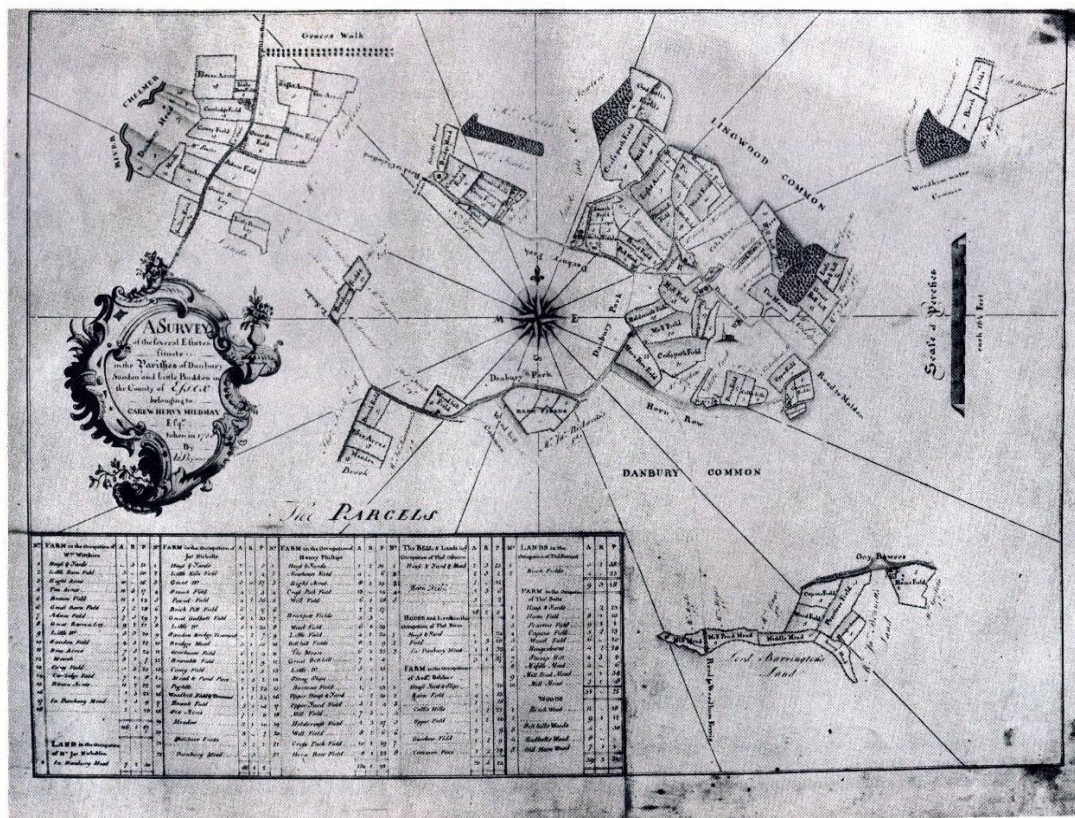
²⁴⁵ Ibid., 11.

²⁴⁶ Ibid.,

²⁴⁷ Wallis and Robinson, *Cartographical Innovations* 1987. 97-98.

on the map gives details of the field sizes.. This map has all the characteristics of a skilled land surveyor.

Plate 8.5 Danbury, Sandon and Little Baddow 1758 by Timothy Skinner
 Plate XVII in *Catalogue on Maps* 1947 by Emmison ed. ²⁴⁸



DANBURY, SANDON AND LITTLE BADDOW, 1758

TIMOTHY SKYNNER, AN ACTIVE ESSEX SURVEYOR, MAPPED THESE ESTATES OF CAREW HERVEY MILDMA. GRACE'S WALK, AT THE TOP LEFT-HAND CORNER, PROVIDED THE TITLE FOR THE NOVEL BY CANON JESSE BERRIDGE RECTOR OF LITTLE BADDOW. [See p. 18.]

²⁴⁸ F. G. Emmison ed., *Catalogue of Maps* 1947. Plate XVII. See page 18b of Catalogue for full description.

The official written descriptions of the eighteenth-century maps drawn by a T. or Timothy Skynner or Skinner has enabled an appreciation of the cartographic skills required by estate land surveyor. In addition, it has enabled a comparison to be made with the written description of the map drawn by Joseph Dawson. (Plate 5.5). The maps they drew are evidence of the skills required by an estate land surveyor. Both surveyors have successfully incorporated all the information previously found in a written description. The map is the result of the successful gathering and interpretation of data collected relating to both the land represented on the map the tenants land holding, and other estate buildings and residents. The production of the maps sets them apart from any hired surveyor assistants and for this reason should useful be indexed in the *Dictionary* or other information retrieval system.

George Sangter (S039) active as an estate land surveyor in Essex and Suffolk 1755-1794 had alternative occupations as an auctioneer, estate agent and nurseryman.²⁴⁹ Mason notes that Sangster 'is ill -represented by the handful of his surviving maps... his primary occupation ...was the running of a nursery garden'²⁵⁰. The evidence that Sangster had a nursery garden comes from an advertisement he had placed in the *Chelmsford Chronicle* " 'All the gentlemen, ladies and others, lovers of the most rational amusement

²⁴⁹ Bendall, *Dictionary of Land Surveyors* 1997. Entry S039.

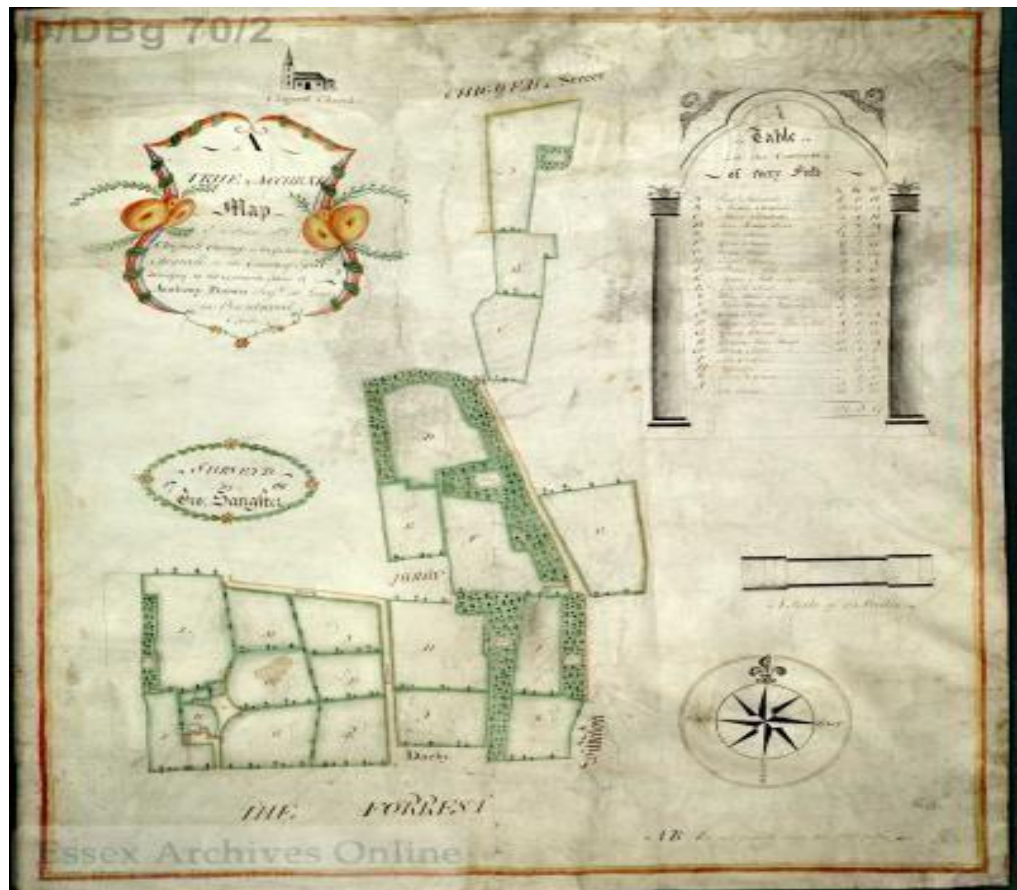
²⁵⁰ Mason, *Essex on the Map* 1990, 86.

of planting and gardening” could buy a variety of plants, shrubs and trees.’²⁵¹

Plate 9.5 Map of a farm called Chigwell Grange belonging to the
 Grammer School 1769 by George Sangster. 129 acres: Scale
 of 1 inch to 4 chains or 20 inches to 1 mile. Size 27 x 22
 inches.²⁵²

²⁵¹ Ibid.

²⁵² ERO Ref: D/DBg 70/2 Map of a farm called Chigwell Grange by George Sangster 1769 .



The significance of the map 1769 (Plate 9.5) it is evidence that Sangster was the first to introduce the “stepped” scale bar. This innovation was adopted by George Hutson (Jnr) (H621) and the “stepped” scale bar design became Hutson’s trademark and can be found on all his maps. Mason adds that ‘the remarkable thing is that the style of Sangster’s 1769 map was faithfully copied by Hutson on his first map of 1772, it is so close a copy that Hutson must have had Sangster’s map before him as he drew.’²⁵³ The “stepped” scale bar was later adopted by Robert Baker Witham. Both Baker (B051) of Witham (and of Writtle) and Hutson became successful surveyors. This is evidence of a link between surveyors and the influence of

²⁵³ Mason, *Essex on the Map* 1990. 88

Sangster on his fellow surveyors. Sangster's map (Plate 9.5) illustrates that he had some understanding of estate maps and their characteristics. The land represented

is an awkward shape, but he has filled in the gaps with necessary information. The cartouche is described as 'Simple but elegant, with peaches and leaves'.

See plate 10.5

Plate 10.5 Cartouche from Sangster's Map of a farm called Chigwell Grange belonging to the Grammar School 1769. (See Plate 9.5 above).



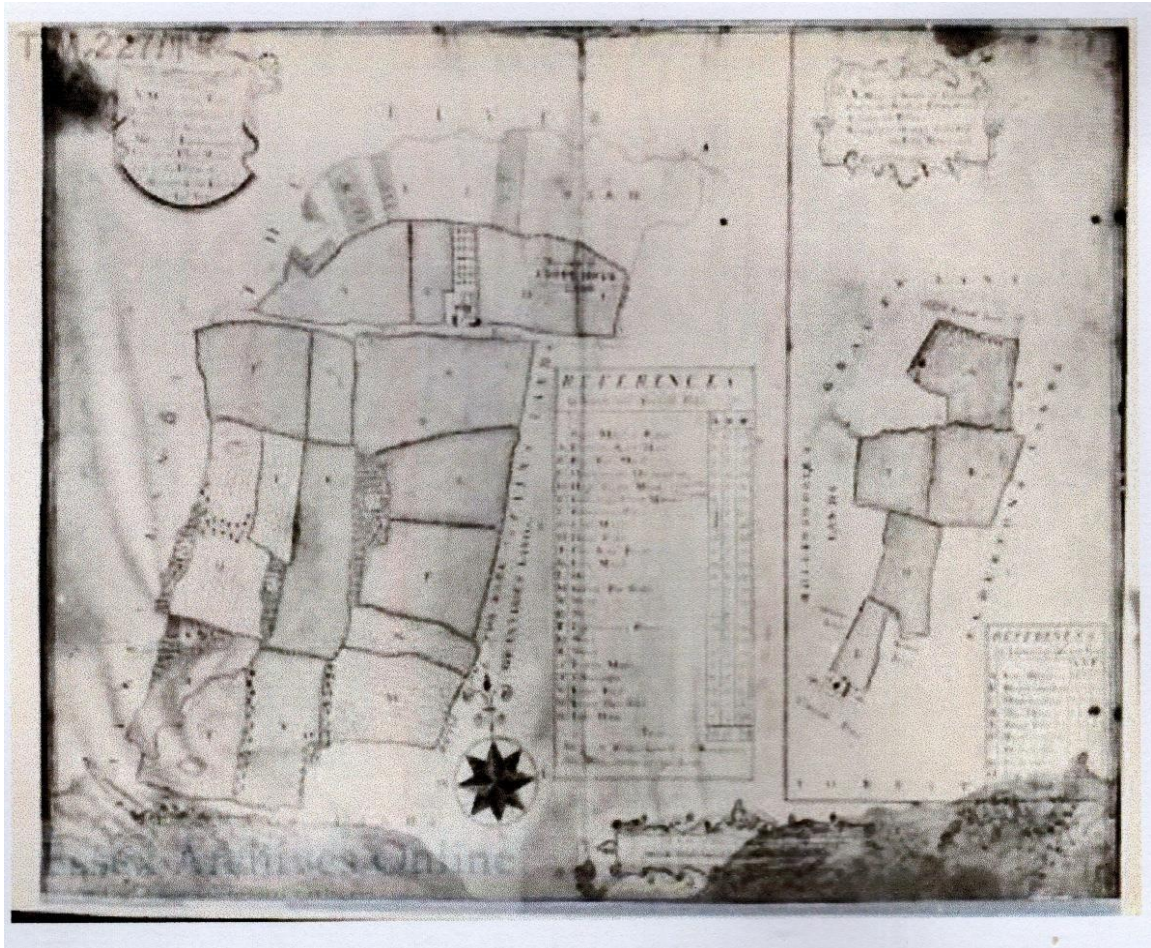
Plate 10.5
Cartouche taken from Sangster's map of 1769 of Chigwell Grange. (Plate 9.5) Mason describes the cartouche as having 'a light frame wrapped in leaves and on either side, a beautifully painted peach sliced to show the stone.'²⁵⁴

²⁵⁴ ERO Ref: D/DBg 70/2. Cartouche taken from map by George Sangster (S039) Chigwell Grange 1769 See Plate 9.5

This analysis of the maps by Sangster illustrates how his mapping skills developed. His biography does not indicate that he had links with any other surveyors but features of his maps like the “stepped” scale bar, as discussed, were copied by other surveyors. This indicated that he not only had a link to other surveyors but also influenced their work. His maps and the fact that they were copied are evidence of his mapping skills.

Plate 11.5 Black and White Photograph of a map of Lambourne and Chigwell 1746 by Josiah Taylor²⁵⁵

²⁵⁵ ERO Ref. T/M 227/1 a Photograph of map of Lambourne and Chigwell. Original deposited in Essex Record Office and Catalogued as D/DU 666, now withdrawn



Josiah Taylor (T059) 1746 – (?60) of Brentwood Essex's biographical details state that his alternative occupation was that of Schoolmaster in Brentwood.²⁵⁶ On his two maps he styled himself as a 'philomath'. The photograph is of one of his maps (Plate 11.5).

The sampler in the Victoria and Albert Museum London is recorded as being by an unknown embroider in 1790 of a Farm called Arnold's located in Essex. Mason

²⁵⁶ Bendall, *Dictionary of Land Surveyors* 1997. 504.

links the sampler to the map by Josiah Taylor of Lambourne and Chigwell Plate 11.5. The photograph of the map that inspired the sampler may be of poor quality but it can be seen that the drawing of the outline of the fields and compass exactly match the sampler.

Plate 12.5 A sampler worked by an unknown embroider in 1790 The Farm is called Arnolds' In Essex.²⁵⁷



Josiah Taylor's maps are described as all workmanlike in the clear outline of fields and of trees together with an indication of land use. As well as the characteristic cartouche, the scale bar in all the maps is framed by decoration.

A further investigation into Taylor's background by Mason has discovered that in 1791 a James Taylor of Chancery Lane London

²⁵⁷ Victoria and Albert Museum Website. Eighteenth -Century Sampler by Unknown Child. Title 'The Farm called Arnolds' a property in Essex .<https://collections.vam.ac.uk/item/O355538/the-farm-called-arnolds-in-sampler-unknown/>

copied Josiah Taylor's 1752 map of the oyster grounds at Southchurch. The map has a nice Adam medallion above the scale bar but is notable for the watercolour picture of men and boats on the

foreshore that was pasted on to a blank space on the map. This makes it unlikely that Taylor painted the picture, which is a composition on its own.²⁵⁸ The map unrolled is 520 x 590 mm. (20.47 inches by 23.23 inches. The map is discoloured and foxed; watercolour damaged by splitting.

The maps of each of the surveyors named in this chapter can be seen as a evidence of their ability to collect information, accurately measure land, and to deliver a map that fulfils the requirements of the landowner. All appear to be hand drawn, and well executed. The maps they created distinguish them from the surveyors that they may have employed to assist. For there to be a similarity between the maps, or as Lynam says 'a general uniformity of design among estate plans after 1591' this indicates links between surveyors. They must also have seen the work of other map-makers whose name remain unknown that also made a contribution to the development of mapping; no separate index of their names must lead towards their work being overlooked in any search of records. The problem occurs partly because the process that led to the

²⁵⁸ ERO Ref: D/DBz P2 A survey of the oyster ground bounding upon the parish of Southchurch in the county of Essex. Copied from a plan drawn in the year 1752 by Jas Taylor 1791.

making of the maps was between a private landowner and the surveyor he commissioned to make the survey of his estate. The whole affair being a private matter was it can be assumed that they would never be exposed to public scrutiny. There would be other perhaps more demanding matters needing attention on a busy estate, so having a surveyor may on some occasions have been of lesser importance. Mason makes an important observation on this point. He suggests that 'the catalogue of people involved in a major survey is obviously easier to find in official records than in family archives, however, it is likely that the land surveyor would have the estate manager with him

and both would interview tenant farmers.²⁵⁹ It would also make sense to have the tenants and others employed on the estate as they would be the ones that would eventually carry out the changes the surveyor recommended. The tenants input to discussions that would take place would be useful. They knew the land, where the hidden hazards were located and features, perhaps such as springs, marshy ground, and culverts.

It would be useful for Historians now, and in the future, to be directed straight to the names of the experienced commissioned surveyors and not have to read through all the separate entries in

²⁵⁹ 294 Mason,
Essex on the Map
1990. 19.

the *Dictionary* to find the names of this more important group of surveyors. As historical documents their maps are a record of the features in the landscape, land use at the time a particular map was created, and the location of rivers, streams and other water courses. Rivers and streams are not fixed features in a landscape as they may change course or dry-up. If they were used as boundary markers then it is important to know where they were once located.

Mason's observations illustrate the value of old estate maps, the features shown on the map may have long since disappeared, but they leave evidence of how an area of land once looked and are evidence of the use made of land on a particular part of an estate. Another reason why knowing the author of the map is useful as he may have had a unique way of representing certain features. This makes any unsigned map by him easily identified and it becomes a useful document once it can be attributed to a known author.

Chapter 4

An

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This chapter will investigate the specialised skill set required by a surveyor that has been commissioned to make a survey of a privately owned landed estate. It will investigate the skills that set him apart from the land surveyor hired to assist in the making of an estate survey, in order to build on the evidence presented in Chapter 2 that examined the distinction between the commissioned estate surveyor and any hired surveyor assistant.

This chapter's objective being to support the first aim of this thesis that there needs to be a separate index of land surveyors for whom there is evidence to show that they possessed the necessary skills to manage a private landed estate survey, and had managed the project as a business, and bearing financial responsibility for its success. In so doing demonstrating that they had the necessary skill set to manage the survey within the terms and conditions agreed with the landowner, that is to complete the survey within a specified time, with the result being that both parties would be in profit. That is the surveyor directly financially, and the landowner through the better management of his estate by following the surveyor's recommendations.

The *Dictionary* in its current form includes the names of 'all persons likely to have measured or made maps of land of an area of less than a complete county'.²⁶⁰ No differentiation is made between the surveyor that took on all the responsibilities required of a commissioned surveyor and those of any assistant whose only

²⁶⁰ Bendall. *Dictionary of Land Surveyors*, 1997 Vol., 1., 67.

responsibility was to perform the task assigned to him. That there is a hierarchy

among land surveyors was recognised by Mason. He argues, that the work of a land measurer 'could not be done by one pair of hands'.²⁶¹ 'Carrying and setting up apparatus and staking out points from which measurements were to be made took time and manpower; chain measurement ... needed a man at either end of the chain.'²⁶² The commissioned surveyor that had the responsibility of overseeing the assistants he had hired, is currently indexed in the *Dictionary* as a land surveyor in the same way as any assistant, no differentiation being made between the commissioned surveyors that evidence shows have many skills and the hired assistant who needed only to demonstrate the skill to measure land. Mason cites a quote from Laurence's *Surveyors Text* published in 1726 in which Laurence argues that surveying and the handling of the necessary instruments ... could not be taught from a book'.²⁶³ The significance of Laurence's text is that it gives us an insight into how a surveyor might have learned his profession in the eighteenth -century. Laurence is saying yes, books and texts were but that surveying could not be taught from a book, he needed hands on experience. This also suggests that when a commissioned surveyor in the

²⁶¹ Mason, *Essex on the Map* 1990. 17.

²⁶² Ibid.

²⁶³ Ibid., 15. (Edward Kaurence's text *The Young Surveyor's Guide, OR, A new introduction to the whole art of surveying land, by both the chain, and all instruments no in use.* (London: Printed by James Knapton at the Crown Inn St Pauls Church Yard 1717) The Second Edition with tables carefully corrected.

eighteenth-century hired a man to assist in the project of an estate he was also giving the assistant hands-on experience in the measuring of land and how to use the surveying instruments of the day thereby also giving him training as a land surveyor. However, when those that had measured land are named in such publications as the *Dictionary* it needs to be made clear who are the surveyors that possess 'a specialised body of knowledge' on surveying and those that were, at the time, assistant surveyors in the process of learning their craft.²⁶⁴ A

specialised index of experienced surveyors for use by those with an interest in the work of an experienced map-maker would save time and effort, and being presented with the names of only the experienced skilled surveyors and mapmakers would make research easier.

The underlying problem, particularly for surveyors in the eighteenth-century, was that they had no professional register and no corporate identity. Membership of an institution would have been a recognition of their professional competence and ethical standards. This of course was also the case in the previous three centuries; a surveyor has always had to earn a reputation for himself, his maps being the only evidence we have of his competence as a surveyor during his lifetime. It can be seen that in

²⁶⁴ Mark Netzloff ed., *John Norden's The Surveyor's Dialogue (1618) A Critical Edition*. (London and New York: Routledge Taylor and Francis Group, 2024). XIII.

the absence of an institution personal recommendations for a surveyor were important; it was a way of acquiring a commission. Another way of finding surveying work was to advertise their skills in newspapers.²⁶⁵ The maps they made if on display on the premises they represented also acted as an advertisement of an individual mapmakers work. A surveyor's reputation had to be earned, by becoming well known in his community for his skill as a surveyor.

It can be assumed from the inspection of many of the maps that the surveying project to which the maps refer was successful. Emmison's *Catalogue* and the *Dictionary* both published in the second half of the twentieth-century, the first documentary record of the names of all those involved in landed estate surveying, whether as the commissioned surveyor or his assistant. An that listed only the skilled surveyors, would save time and effort for those researching their names.

An account of the stages involved in the making of a private estate survey is perhaps the best way of illustrating the variety and range of skills required by an estate land surveyor. The skills that set him apart from any surveyor hired to assist in a survey, the skills that would make a separate index of their names a valuable resource. In addition, definitions of the parties involved, particularly 'a private landowner', 'estate', and 'map' are necessary to an understanding of the process. Added to these definitions any documentary evidence

²⁶⁵ 300 Bendall,
*Maps, Land and
Society*, 1992, 99.

related to a private estate land survey, such as surveyors agreements (to be discussed later) or estate letters and diaries might give further insight into individual surveys.

The definitions can also be seen to explain why there is so little documentary evidence available of the stages of the making of a land survey. The first definition is of an estate, that is, the landed property belonging to a private individual, to an institution, or to communities. The definition of the landowner, in this instance, is a private individual, who will be financing the survey out of his own pocket. The final definition of a map of an estate, be it of the whole, or only a few square yards on which a single house or building is sited, is an estate map, as long as the land represented is owned by a single person (or institution).³⁰¹ Delano-Smith and Kain in their discussion relating to the definition of an estate, make the point that an estate map, as discussed, may be one that shows only a few fields, which is valid as long as the land represented belongs to a single private individual, (or institution) although such maps have usually been ignored, in searches (in record offices and libraries)' a point to remember when making a search of record office or library archives for an estate map.³⁰²

It is interesting to note that the author of the *Catalogue* (of estate maps in the Essex Record Office published in 1947) makes no distinction between estate maps that represents only a few fields etc., and one that represents the whole of an estate,

²⁶⁶Delano-Smith and Kain, *English Maps a History* 1999, 113-114. ³⁰²
Ibid. 114.

it would seem that so long as the land represented was found to belong to a private landowner (the accepted definition of an estate map) it is recorded in the *Catalogue*.²⁶⁶

The first stage of any estate survey will involve the landowner or his representative (usually an Estate manager or his Bailiff) who will show the surveyor the land to be the subject of the survey along with the purpose of the survey. The surveyor, now aware of the type of land to be surveyed and the purpose of the survey (which will determine what is to be featured on the map to achieve that purpose) is now in a position to discuss his terms and conditions (charges and expenses). An experienced surveyor would at this stage be able to determine how many assistants he might need and what instruments and apparatus he may need to purchase. The surveyor must make additional charges for the number of assistants he may need, to add to the final charge. Also, as an experienced surveyor he would wait to hear the landowners terms and conditions before setting out his charges and expenses. This is because, as Bendall suggests, 'sometimes surveyors were helped by their employers, who either lent them or paid for their tools'.²⁶⁷ In such cases where the landowner offers such assistance the surveyor would of course make the necessary adjustment to his charges and

²⁶⁶ Emmison, *The Catalogue of Maps in the Essex Record Office*. 1947.

²⁶⁷ Bendall, *Maps, Land and Society*, 1992, 135.

expenses. Once charges and expenses have been agreed between landowner and surveyor, and the surveyor accepts the commission on the agreed terms, he then becomes a commissioned surveyor. The important point to be made is that as the land represented on any estate map is privately owned, and it is a private landowner who is financing the making of the survey. This means that, any documentary record of the meetings between

landowner and surveyor will be considered private papers and would become the property of his estate office or may be kept in the family archives.

A copy of an agreement to make a land survey between a landowner and a surveyor, would perhaps provide a better understanding of the complexities involved relating to the surveyors skills and his terms and conditions charges and expenses. That the estate is privately owned explains the absence of available evidence relating to the meetings between landowner and surveyor, it is a private affair of no concern to the public, only to the landowners estate manager, other estate officials and his tenants.

An example of such an agreement is one that was made between Her Grace the Duchess of Buckingham and (surveyor) Edward Laurence' n 1722.²⁶⁸ The agreement itemises the charges he makes for the surveying of different types of land and how they

268 Bendall, *Maps. Land and Society*: 1992, 109. ³⁰⁶ Ibid. 109.

might vary if an assistant is required. Laurence also states charges for board and lodging will be made in the following term; 'According to the Usual Custom the said Edward Laurence is to be Boarded so Long as he is Performing the said work, also to have his Expenses Paid him to & From London and to have proper Assistance of a Man and a Boy to lead the Chain and Carry His Instruments in the Field'.³⁰⁶

The significance of the agreement between Laurence and the Dutchess of Buckingham is that it shows the skills required in this instance by the surveyor active in the early eighteenth century in order to make a successful estate survey. Firstly, he is required to make a written Terrier. ('a list of tenants with details of their various holding, rents and duties; and by the eighteenth -century it became a detailed record

of boundaries and acreages)'.²⁶⁹ The records (Terriers) of each Manor on the estate to be bound into a book. A list of all his charges and expenses (which vary dependant on his needing an assistant) For the survey of woods, an account of Timber Trees and Pollards &c to make the same into a written terrier.

²⁶⁹ Christopher Corédon with Ann Williams, *A Dictionary of Medieval Terms & Phrases* (Cambridge : D. S. Brewer, 2004: Reprint D. S. Brewer Reprint: Woodbridge Suffolk: Boydell & Brewer Ltd. Suffolk 2011) 273.

For the valuing of timber and hedgerows Laurence's charges are by the day, for his expertise in valuing and measuring timber, woods and hedges.

Appendix 4.1. Reproduced in full. ²⁷⁰ **'Articles of Agreement to make an estate survey in 1722 between Her Grace the Duchess of Buckingham and Edward**

Articles of Agreement between Her Grace the Dutchess of Buckingham and Edward Laurence on Accountt of Surveying Measureing and Mapping of Lordships &c.

1st For Every Lordship or Mannor of Inclosed Land Surveyed and Drawn into a Fair Draught with a Terrier of the Several Sorts of Lands belonging to Each Tenant, and also the yearly value of Each Parcel of Land to be Expressed in the said Terrier, and when the same is Completed by being made up into Books or otherways to be Paid after the Rate of Sixpence for Every Acre, and According to the Usuell Custome the said Edward Laurence is to be Boarded so Long as he is Performing the said work, also to have his Expences Paid him to & From London and to have proper Assistance of a Man and a Boy to lead the Chain and Carry His Instruments in the Field. But if the said Edward Laurence is to be at his own Expençe for the aforementioned Articles to be Paid after the Rate of Eight pence for Every Acre.

2d For Any Quantity of Common Field Land Surveyed Measured &c as above Mentioned, to be Paid after the Rate of Nine Pence for Every Acre; but if the said Edward Laurence is to be at His own Expences as above Mentioned, to be Paid after the Rate of Twelve pence for Every Acre.

3d For Any Quantity of Large Commons Exceeding an Hundred Acres or More to be as Accurately Surveyed as the Abovementioned Lands (which ought to be so don in Case of its being Inclosed,) to be Paid after the Rate of three Pence for Every Acre but if the said Edward Laurence is to be at his own Expençe in Performing the said work, to be Paid after the Rate of Four Pence for Every Acre.

4th For any Time the Said Edward Laurence shall spend in Measureing and Takeing an Exact Account of the Number of the severall sorts of Timber Trees and Pollards &c and to make the same into a Terrier, Expressing the Quantity in the Hedge Rows as well as within the Inclosures; to be Paid after the Rate of Ten Shillings a Day but if the said Edward Laurence is to be at the Expençe of Assistance &c as abovementioned, to be Paid after the Rate of Thirteen shillings a Day.

Laurence.

The agreement gives an insight into the critical issues relating to a land survey. There is also the matter of the 'Assistance of a Man and a Boy to lead the

²⁷⁰ Corédon with Williams, *A Dictionary of Medieval Terms & Phrases* reprint 2011. 273.

Chain and Carry His Instruments in the Field'.²⁷¹ All involved in the survey need to be

paid.

Bendall suggests that the 'social standing (of a surveyor) can be demonstrated in an examination of the amount he was paid and in relation to other professions.²⁷² An investigation made by Eden into the surveying profession suggests that 'in the eighteenth-century the profession of surveyor like that of architect, was relatively undeveloped; the same man who was a surveyor might also be in business as an appraiser, gauger, carpenter, or instrument maker'.²⁷³

Plate: Table 4.1 Extract from Table of charges made for land surveying by surveyors active in Essex between 1714-1785. Allowing a comparison to be made of surveyors charges²⁷⁴

	Date &Area of Practice	Charge	Employer	Source
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²⁷¹ Bendall, *Maps. Land and Society*: 1992, 109.

²⁷² Ibid., 104.

²⁷³ Peter Eden, *Land Surveyors in Norfolk 1550-1850* Reprinted from the Norfolk and Norwich Archaeological Society Vol. XXXV Part IV 1973.

475.

²⁷⁴ Ibid., 105-106. Figures in () *Dictionary* unique reference code. P. G. Eden (personal communication to *Dictionary* compilers: Mason, *Essex on the Map* 1990. 24, 68. QCC Box 92 Queens College Cambridge Documents in Box 92 Copy of Bill Paid.

Edward LAURENCE (L071)* Farmer, Teacher Antiquary	1722 Essex Lincolnshire Yorkshire	6d/acre inclosed land including Assistance: 9d/acre open field Land or 12d/acre including assistance: 3d/acre if >100 a commons or: 4d/acre including Assistance	Duchess of Buckingham	P. G. Eden * Personal Communication
James BERMINGHAM (B287) *	1737 Essex	6d/acre	Guy's Hospital London	Mason, 1990. 68. *
James BERMINGHAM (B287) *	1741 Essex	7d/acre	Commissioners of Sewers	Mason 1990. 68. *
Thomas YEOMAN (Y014) *	1765 Essex	£1/day	-----	Mason 1990. 24 *

Inventor Millwright				
Joseph FREEMAN (F209) * Land Agent Tith surveyor Copyist of portraits	1769 Essex	7d/acre 15s/day	Queens College Cambridge	QCC Box 92. Bill pd 9 Oct. 1769 *
Mathew HALL (H044.9)* Timber Merchant	1785 Essex	4d/acre	-----	Mason 1990. 24.*
George HUTSON (H621) * Farmer	1785 Essex	4d/acre	----- -	Mason 1990. 24.*

Plate Table 4.1 setting out the charges made by land surveyors
active in Essex during the eighteenth-century has been compiled

using data to be found in *Maps, Land and Society*.²⁷⁵ The charges made by Laurence would seem to be standard charges although he goes into more detail relating to the type of land, and assistants required.

Eden's additional comments provides further insight to his description of a landed surveyor. 'In the rough and tumble of eighteenth-century commercialism the *soi-disant* land surveyor turns out on occasion to be something perilously close to a jack-of-all-trades.²⁷⁶ Eden suggests that the Norfolk surveyor Henry Keymer (I) is an example of such a person. Evidence suggests he dealt in second-hand books as well as teaching English, writing, arithmetic, surveying and mapping, as his alternative occupations.²⁷⁷ His *Dictionary* entry (K103) lists his alternative

occupations as agent, auctioneer, general dealer, and schoolmaster.²⁷⁸ It suggests that land surveying was not a full-time occupation but in Keymer's case might be seen as related to his alternative occupations as listed in the *Dictionary*. An agent and auctioneer (particularly of land), would see having a map (the end production of a survey) for a client to view as a useful document that would help to facilitate the selling of a piece of land.

²⁷⁵ Bendall, *Maps, Land and Society*: 1992, 109

²⁷⁶ Eden, *Land Surveyors in Norfolk* Reprinted from the Norfolk and Norwich Archaeological Society Vol. XXXV Part IV 1973. 475.

²⁷⁷ Ibid.

²⁷⁸ Bendall, *Dictionary of Land Surveyors* 1997, entry K103, 294.

In his 'Articles of Agreement between himself and the Duchess of Buckingham' in 1722 Laurence suggests that it is his intention to produce a 'Terrier of the Several Sorts of Land belonging to Each Tenant, ... and when the same is Completed by being made up into Books'...suggesting that in this instance a written Terrier will be made as an end product to the survey and not an estate map.²⁷⁹ This may explain why Laurence made no mention in his agreement of his charges for the making an estate map, that is for items such as inks, coloured pigments, quill pens, and parchment or paper. An explanation for this is that perhaps a map was not required on this occasion.

The key to understanding this set of circumstances can be found in the words of Mason in *Essex on the Map*; 'too many land measurers remain but a name on a map'.²⁸⁰ Mason is suggesting that we only know the name of land surveyors by the maps they made. However, as Laurence's agreement suggests not all estate land surveyors, were required to make maps.

Fletcher had access to the Christ Church Oxford Colleges archives , which indicate that choices were made between having a map or a written survey as an end product to a survey. The land owned by Christ Church Oxford comes within the

²⁷⁹ Ibid.

²⁸⁰ Mason, *Essex on the Map*, 1990, 7.

definition of an estate, in that it is a privately owned landed estate the college being considered as an individual, with the owners of the Christ Church estates speaking with one voice through their estate managers. This is similar to the way an institution that holds land in trust for the poor speaks in one voice.. For a long time 'the College owned 29,698 acres of mainly rural land dispersed over nineteen English counties and one Welsh county, Montgomeryshire. Fletcher argues that 'the archives relating to these extensive holdings were investigated to determine what governed the choices being made between maps and written surveys. To this end the main documents examined were the maps and written surveys of the College's estates'.²⁸¹

From the Colleges archives Fletcher was able to determine the names of all the Christ Church estate land surveyors. He also found associated with the maps a record of the instruction they received, the purpose of the surveys and other matters, whereas estate maps made by the surveyors of private estates owned by a single landowner, are now to be found in the public domain, in a local or the National

Record Office, local library, or the British Library, or in some instances a local or National Museum'.³²⁰ The documents will now in all likely hood have been separated from any other documents that suggest the purpose of the survey, or instructions from the

²⁸¹ Fletcher, Map or Terrier? in *Transactions of the Institute of British Geographers*, 1998. 222-223. ³²⁰ Mason, *Essex on the Map*, 1990, 7.

landowner as to what he expected to see represented on his map. Fletcher's access to the University archive meant he was able to find all the information required, the surveyor's name, the specific aim of the survey and whether a map or only a written survey was required. Fletcher writes that the College estate papers also contained many other kinds of documents including notes on properties rentals and valuation and correspondences. He was therefore able to conform to Harley's 'golden rule' that 'we should be catholic in our search for external

sources, although careful scrutiny of the actual maps can tell us a great deal this is seldom enough'.²⁸² In other words, Fletcher had all the documentary material available that allowed him to construct the story behind the making of the surveys. Emmison is quoted by Fletcher as saying that the *raison d'être* of maps and written surveys was essentially different. Maps were principally concerned with problems where spatial location and disposition were central... the roles of surveys were far more diverse and general.²⁸³ Emmison is here making a distinction between maps and written surveys suggesting that as each fulfilled a different purpose, they could be examined as independent from each other.

Emmison's statement in full perhaps clarifies his ideas.

'a **survey** may be amplified by a map; if so the latter is either a separate document, or is sewn into the survey roll

²⁸² Harley, The Evaluation of Early Maps in *Imago Mundi Ltd* Vol., 22 (1968) 67. 68.

²⁸³ . Harley, The Evaluation of Early Maps in *Imago Mundi Ltd* Vol., 22 (1968) 233.

or book, or is in the form several or many small maps of farms ... A **map** *may* be amplified by a written description, varying from the reference table (to numbers on the map) giving ... field-names and acreages to elaborate detail such as the state of cultivation of every field, But, although related in their contents, surveys and maps do not usually accompany each other and in some respects may differ in their *raison d'être*.²⁸⁴

The significance of Emmison's analysis of surveys and estate maps is that he is not saying they are mutually exclusive, but that maps can tell us in far greater detail than any written survey, the location of buildings, names and acreages and boundaries of fields, road and lanes, and rivers and streams. A fair proportion of maps indicate by colour and shading, or in the words the distinction between deciduous and coniferous woods and between meadow and pasture although this is much rarer. The many distinctive characteristics of open and common fields and meadows is usually shown. Another feature of estate maps over surveys is that apparent anomalies in field boundaries or road systems may be explained, details

that can be checked in the records of the Clerk of the Peace.²⁸⁵ 'The investigation of a written survey involved patient work, (helped by manor court records, estate maps at other dates and deeds) with its counterpart on ordnance survey maps and tithe maps'.²⁸⁶

²⁸⁴ F. G. Emmison, *Estate Maps and Surveys in History*, 1953, Vol. 48, No. 162 (1963), pp. 35, 36, 37.

²⁸⁵ *Ibid.*, 36-37.

²⁸⁶ Emmison, *Estate Maps and Surveys in History*, 1953, Vol. 48, No. 162 (1963), 36, 37.

Emmison gives historians the confidence to be able to research estate maps independent of any written survey as they have so much more to give which can be validated by reference to Ordnance Survey maps and other readily available records. To return to the skills required by a commissioned estate land surveyor and the agreement to make a survey between Edward Laurence and the Duchess of Buckingham. His reference to the making of a Terrier which he will make up into a book suggests that there will be no estate map. This explains the absence of any reference to the charges and expenses relating to the making of an estate map. When it is agreed that a commissioned surveyor is to make an estate map as the end product to a survey, then the second stage of the discussions between landowner and surveyor will take place. The making of the map will be discussed noting what the landowner expects to see represented on the map and the costs of materials required to create a map. If a map was not seen as necessary this would present an opportunity for the surveyor to suggest that 'no description (that is written survey alone) can convey such clear and comprehensive information respecting their property as may be done by the assistance of a map'.²⁸⁷

Harley suggests that 'estate maps began to develop a uniformity of design transcending differences in date and place but not always

²⁸⁷ Fletcher, Map or Terrier? in *Transactions of the Institute of British Geographers*, 1998. 233. Quote from Mr Dugmore surveyor to Christ Church Oxford College in 1798.

obscuring the idiosyncrasies of individual presentation'.²⁸⁸ This indicates that surveyors had links

with other surveyors and had seen other estate maps from which he could copy or had learnt mapmaking from another surveyor.

However, although there appeared to be rules in place as to how land was to be represented there was still scope for him to represent a feature in an original and new way or to add some decorative feature, such as a family crest, or coat of arms, cartouche or decorative border the design of which often became the surveyor's signature. Indications of the skills required by a commissioned surveyor but not required by any hired assistant.

This discussion relating to the making of an estate survey highlights the range of skills required by an estate surveyor, the opportunities there were for him to show his creative flare but first and foremost that he had a detailed understanding of the making of an estate survey. He must ensure that at first meeting between himself and the landowner, he fully understood the landowners 'particular and immediate purpose of the survey' this being the definition of an estate survey suggested by Harvey.²⁸⁹

In the absence of documentary evidence, it has to be assumed as to what a landowner wanted from a survey and that the estate maps that are the only evidence we have of a survey met the

²⁸⁸ Harley, *Maps for the local historian* 1972, 24.

²⁸⁹ Harvey, *English Estate Maps: in Rural Images*. David Buisseret ed. 1996.

requirements of the landowner. The explanation for the absence of documentary evidence in relation to what a landowners wanted from a survey is that notes relating to the discussion between the landowner and surveyor as previously stated would be placed with all other estate papers or put in the family archives.

The second stage of a surveying project involves discussions relating to the map, usually the end product of a survey. In his investigation into what landowners wanted from their maps in the Essex Record Office Mason found a letter addressed

to the surveyor giving specific instructions. The letter is dated 1771 and was found attached to a map explaining what he wanted. The map was made by Samuel

Harvey, a local surveyor for George de Horne. The letter states:-

‘The surveyor is desired drawing out the map in the table casting up the number of acres to make two columns at the top of which putting their proper titles. One of the contents of the land belonging to each field, the other the contents of the improvable arable land exclusive of the fences ponds etc. To get the proper and most usual name of every field of the tenant and sett down the names to note which part of the land or part of a field is copyhold and how much. Colour all the parishes all different so that by a view of the mapp may be seen in what parish each is in or if any lies in two the exact bounds of each parish.

I would not choose to have the map on a large scale but as compact as the accuracy of delineating every curve in the hedge rows and roads and giving the exact and true form of each field will admit – and in each hedge row or anywhere else if any to note the timbers or trees like for timber therein and I hope that it will be done not only in a very accurate bur a neat manner’.²⁹⁰

²⁹⁰ Mason, *Essex on the Map* 1990 . 10 (Gives map Ref. ERO Ref: D/DU 893/1 not found).

The significance of the full text of the letter from George de Horne to his surveyor Sameul Harvey is that it suggests the skills Harvey needed to have in order to fulfil the landowners wishes. The instruction to place in the first column of a table 'the land belonging to each field, should not be too difficult. However, the instruction to place in the second column, 'the contents of the improvable arable land exclusive of the fences ponds etc., suggests that he would need to measure each fence line and all the ponds and subtract his findings from the overall measurement of the improvable arable land. The instructions to his surveyor by de Horne, would challenge any surveyor. It also highlights some of the issues that would be discussed between landowner and surveyor once the surveyor had accepted the commission to make the survey. The first being that the landowner, wanted to see the information that formerly was to be found in a written survey, to be included on the map. That is, a table that records the size of the land held by each tenant, the table must also note

how the land is held, if by copyhold, then how much rent is paid.

The definition of copyhold being 'land held of the lord of a manor but according to local custom- custom being defined and recorded in the manorial court records. The copy referred to the manorial record of which a copy might be held; or referral could be made to the original'.³³⁰ (It was in the late 14th century, that services owed by villeins were commuted into money payments, named today as

rents). Wood suggests that the interest of de Horne in how much land was held by each 'copyhold tenant' and the rent paid is based on the fact that in the latter part of the sixteenth century ...when it was 'still possible for lords to commission surveys with the intention of protecting the interests of 'poor men as well husbandmen artyfycers' keeping the rents and charges low.'²⁹¹ But, Wood argues this changed when 'inflation bit into their rent rolls, lords increasingly looked into ways of raising increased revenue; ... selling off assets... increasing rents and dues upon tenants, which often entailed disputes over local custom, as tenants insisted ... rents that 'since time immemorial' had been fixed at a low level'.²⁹² The result being that landowners 'turned to surveyors both to provide a detailed overview of their present assets and to search into medieval documentation (most typically manor court rolls) in order to demonstrate that they were entitled to much higher rents and fines from their tenants than they were receiving'.²⁹³ The commissioned surveyor needed to produce tables that immediately informed the landowner, his estate manager, and other estate officials the names of the copyholders of land, how much land they held and rent paid,

²⁹¹ Andy Wood, *The Memory of the People: Custom and Popular Senses of the Past in Early Modern England*. (Cambridge: Cambridge University Press 2013) 191.

²⁹² Wood, *The Memory of the People: Custom* 2013. 191.

²⁹³ Ibid.

³³⁰ Corèdon and Williams, *Dictionary of Medieval Terms & Phrases*, reprint 2011, 86.

Delano-Smith and Kain in addition suggests that landowners from the late sixteenth century took a fresh look at their landholdings. The 'complex process known as the transition from feudalism to capitalism occurred in England in the sixteenth century', the consequence being that specific parcels of land acquired a monetary and symbolical value, land itself, rather than its produce, became a commodity, ... land was now worth mapping'.³³⁴

Significant to this thesis is that in the eighteenth-century there is evidence to show that there was growing concern about the accuracy of estate surveys. It was 'the rising rents which made imperative the accuracy of maps that they delineated accurately the estate boundaries'.³³⁵ Maps were considered to be better than a written Terrier. A map might reveal a tenant's 'concealments' and infringements, matters which the owner could no longer afford to ignore.³³⁶ Wood takes the need felt by landowners to have an accurate estate map to the mid-16th century. 'As inflation bit into their rent rolls, lords increasingly looked into ways of raising increased revenue: selling off assets such as woodland enclosing common land and increasing rents and dues upon tenants'.³³⁷ The consequence was that Lords turned to surveyors both to provide a detailed overview of their present assets and to search into medieval documentation ... in order to demonstrate that they were entitled to much higher rents and fines from their tenants than they were

receiving or to restrict access to resources hitherto held in common.²⁹⁴ The result of this was a dispute with tenants, claiming that since ‘time immemorial’ their rents had been fixed

³³⁴ Delano-Smith and Kain, *English Maps a History* 1999. 116. ³³⁵ Ibid., 121-122.

³³⁶ Delano-Smith and Kain, *English Maps a History* 1999. 122

³³⁷ Andy Wood, *The Memory of the People: Custom and Popular Senses of the Past in Early Modern England*. (Cambridge: Cambridge University Press 2013) 191.

at a low level by local custom’ a knowledge of local customs being another strand of information required by a commissioned surveyor.

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A discussion with the landowner about local customs can be seen as the third stage in the process of gathering the information required to make a successful estate survey. Further investigations have established that ‘custom more than any other early modern concept, was the epitome of this vernacular, country mentality. The gentry and urban middling sorts increasingly felt themselves drawn into the world of politeness and commerce, they wanted to adopt the metropolitan style of dress, speech, diet, reading and housing, and wanted to distance themselves from the culture of the lower classes, the poor.’²⁹⁶ The courts in the eighteenth- century, were found to be

²⁹⁴ Ibid.

²⁹⁵ Ibid.

²⁹⁶ Wood, *The Memory of the People*: 2013. 13.

very much on the side of the gentry. When in a court of law the claim was made that certain 'rights had existed for time immemorial' the response of the jurors was that to claim that 'unbroken assertion conferred legitimacy upon a customary right' 'however long and without interruption, would confer no legal title to such right'.²⁹⁷ A further investigation into the place of customary rights being valid because they had existed since time immemorial found in the case of *Money and others v Leach*, a landmark case in which the final judgment was quoted in a judgment of 1767 'stated baldly that 'no degree of antiquity can give sanction to usage bad in itself'.²⁹⁸

As R. H Tawney put it in 1912

'If the peasantry [by which he meant copyhold tenants] are on the whole uninterested in the larger problems of government to which the world has agreed to confine the word politics, this is not because they are incapable of self-help ... it is because the framework of their lives has for ages been different from that of freeholders, because what matters to them most is not the law of the land but the custom of the manor ... it is the custom of the

manor which gives them their social environment and their concept of public order.²⁹⁹

Copyhold tenants felt they had protection from rent rises, but as previously discussed in this chapter, as inflation bit into their rent rolls, lords increasingly looked into ways of raising revenue and one way of doing this was to commission a survey. The landlord looked to the surveyor to both provide a detailed overview of their present

²⁹⁷ Wood, *The Memory of the People*: 2013. 13. 341.

²⁹⁸ www. English Reports Citations 96 E. R. 320 Courts of Westminster Hall *Money and Others and Leach*.
<https://vlex.co.uk>libraries>caselaw-788>.

²⁹⁹ Wood, *The Memory of the People*: 2013. 11.

assets and to search into medieval documentation (most typically manor court rolls) in order to demonstrate that they were entitled to much higher rents and fines from their tenants than they were receiving hitherto held in common.³⁰⁰ In other words the landowners were searching for a way round the fact that copyhold tenants relied on a custom that said from time immemorial rents were fixed low for copyhold tenants. The landowner accepting that this belief was valid but hoped that the surveyor after a reading of all the estate manorial court documents and other papers would find a way round this custom in order to increase the revenue of the estate.

This investigation has identified two ways in which landowners looked to land surveyors to find ways in which the estates income might be increased. In his text *The Surveyor's Dialogue* first published in 1607, Norden has the surveyor defending his request to view the manorial records, saying that 'For a manor can never be aptly or truly surveyed without the view of the evidence, which discover from whence the original interest is derived, how it is holden by what tenure, the Customs, and other necessary points as not being known (though in some things may be perfect) cannot be absolute'.³⁰¹ The Bailiff then informs the surveyor that some of the documents are in French and some in Latin so ancient as few can read them; the surveyors reply is

³⁰⁰ Ibid., 191.

³⁰¹ Netzloff, *John Norden's Surveyor's Dialogue (1618)*. 2024. 80.

that it is a great defect in a surveyor, if he cannot understand the most ancient

Record.³⁰² Language skills were another requirement of a commissioned surveyor.

From this short extract of the analysis of the *Surveyors Dialogue* by Netzloff it can be determined that a commissioned surveyor's skills should include a knowledge of where to find documentary evidence relating to local customs, and the ability to read and understand ancient estate records that were written in French or Latin. The list of a surveyors skills requires a full understanding of all the issues involved In the process of the making of an estate survey and the ability to know when and how to tactfully introduce matters into a discussion with the landowner if the landowner fails to do so. It can be seen that a commissioned surveyors skills extend far beyond that of any assistant surveyors skill, the ability to measure land. The surveyor also needs to be a good communicator in order to firstly establish as accurately as possible the landowners requirements and to communicate with all his assistants getting the best out of them by teaching them new skills, how to use surveyors instruments as well as giving them firsthand experience of the estate surveying process. An innovative surveyor will also be able to introduce new ideas into his maps and any other documents he creates that are associated with the survey perhaps showing an ability to introduce into the survey features the landowner might expect to see but failed to mention, thereby reading his mind. (Sowing the seeds of his abilities in the mind of the landowner). Also introducing new ways of representing features in the landscape as well as additional decoration'

For example decoration such as ornate cartouches , borders, and other features. The surveyor must be at all times an opportunist,

³⁰² Ibid.

looking for ways to advertise his skills decoration on the map is another way of doing this. Demonstrating that he has

all these skills and possibly more, is what separates him by definition from any assistant surveyor and is evidence of the need to have the separate index of commissioned surveyor, they deserve it.

The second aim of this chapter is to add to the evidence so far presented suggesting that an additional occupation appeared to be a necessity to make ends meet. In his paper *Land Surveyors in Norfolk 1550-1850* Eden investigates the profession of land surveying during the eighteenth century, the focus of this thesis.

He argues that

‘the profession of land surveyor during the eighteenth - century like that of architect, was relatively undeveloped. Recent research into the emergence of non-professional specialist occupations during the proto-industrial age has revealed the extent to which these were initially cushioned against variations in demand by reliance on the agricultural alternative. This applied to not only Parsons with their long tradition of farming interest, but doctors, lawyers, bankers and schoolmasters were slow to deprive themselves of their links with the land, for reasons which might be conventional or sentimental, but which could be prudential also.’³⁰³

Eden is suggesting that the available evidence indicates that it was land surveyors that needed to have an alternative occupation in the eighteenth -century this applied to all non-professional specialists, including architects, lawyers, bankers, and

³⁰³ Eden, *Land Surveyors in Norfolk*, 1973, Vol XXXV Part IV 474. ³⁴⁸ Eden, *Land Surveyors in Norfolk*, 1973, Vol XXXV Part IV 475.

schoolmasters, adding that Land surveyors had an advantage over those in other professions as they were the first to know when leases were being renewed and small parcels of land were coming on the market for sale. Their modest status however, meant that they were not able to buy extensive areas of land. There is also evidence to indicate that teachers of mathematics whose instruction was geared to practical applications, inevitably practised surveying as a side-line.³⁴⁸

Mason suggests that the eighteenth -century was the heyday of Essex schoolmasters' making ends meet by surveying and mapping land.

The question arises could land surveying ever be a full-time occupation? . The terms surveyor and cartographer and (map-maker) are not synonymous or interchangeable, however concerning estate maps one man was usually both surveyor and cartographer.³⁰⁴ On estate maps that the surveyor and the maker of the map was one and the same person is made clear from formulas like "Surveyed and plotted by Richard Sherwood" or "Surveyed and mapt by me, John Lee". An estate map, therefore, sometimes makes it clear that the author of the map was both the surveyor and cartographer, but the terms are not

³⁰⁴ Mason, *Essex on the Map*, 1990. 4

synonymous. Of interest to the chapter is whether the surveyor had any alternative or additional occupation.

The aim of the second edition of the *Dictionary* remained the same as the first edition that is to include all persons likely to have measured or made maps of land in areas of less than a complete county in Great Britain and Ireland 1530-1850. This 2nd edition of the *Dictionary* is, and remains, the only comprehensive publication that indexes all persons for whom there is evidence that they measured land or made a map of land in Great Britain and Ireland 1530-1850. One entry that is an illustration of establishing if a surveyor had any additional or alternative occupations is that of Francis London (L247). Further enquiries were needed to establish if London was an assistant or the commissioned surveyor and if the commissioned surveyor if he had any additional or alternative occupation. His entry in the *Dictionary* suggests that he made one survey of an estate 1650 with a James Hunt [H594].

The information relating to London's entry is to be found in the first edition of the *Dictionary* (1975-9).³⁰⁵ This first edition of the *Dictionary* did not include any biographical information relating to London [L247]. His entry in the second edition makes reference back to the first edition.

³⁰⁵ Peter Eden, ed., *Dictionary of Land Surveyors and Local Cartographers of Great Britain and Ireland 1550-1850*. (Folkstone, Kent: Dawsons & Sons Ltd., Cannon House Folkstone, Kent, England. Part II 1975). Entry 247. 139.

An investigation into the sources of information relating to James Hunt [H594] in the second edition of the *Dictionary* suggests that Hunt and London [L247] made a survey together on the Holkham estate. The Holkham Hall estate account book of 1659, the year Hunt was surveying on the Holkham estate with London records that Hunt was paid for his surveying work on the estate.³⁰⁶ This suggests that Hunt was the commissioned surveyor and London the assistant. However, this does not bring us any closer to determining if Hunt had any alternative or other occupation. Mason's *Essex on the Map* in which he makes an analysis relating to the alternative occupations held by the eighteenth-century estate land surveyors, remains the best authority on the subject. It is interesting to note that Mason uses the term 'alternative' in his table of other occupations held by surveyors³⁰⁷. Bendall in her analysis of other occupations held by a commissioned surveyor uses the term 'additional'.³⁰⁸ The available information on the topic of alternative or additional occupation make it difficult to determine whether an established land surveyor who is shown to have other occupations such as auctioneer, land agent, estate agent, or attorney, made surveys in order to facilitate a sale. The alternative might be he was first and foremost a land surveyor but had other related occupations

³⁰⁶ Christine Hiskey, *Holkham: The social, architectural and Landscape history of a great England country house* (Norwich: Unicorn Press, Bracondale Norwich, 2016). 436-7.

³⁰⁷ Mason, *Essex on the Map* 1990. 6.

³⁰⁸ Bendall, *Maps, Land and Society* 1992, 114.

that in turn might lead to obtaining commissions to make surveys. In cases where he persuaded a landowner

to pay for a survey (map) in order to promote a sale. Eden as previously discussed suggests that those in non-professional specialist occupations like that of architect ... doctors, lawyers, bankers and schoolmasters, also found it necessary to have another source of income, more usually related to farming. This evidence suggests that it was necessary for most to have some alternative income to make ends meet. In her discussion on the subject of other occupations Bendall suggests that it was not unusual for over half the surveyors of Cambridge in the early part of the eighteenth century to have other occupations.³⁰⁹ The conclusion being that a further investigation of documentary records housed in record office archives, libraries and museums and elsewhere is necessary in order to establish the percentage of those involved in land surveying if it was their first choice. There is a sense that in the eighteenth century most in the emerging professions, required a number of occupations in order to make ends meet.

³⁰⁹ Bendall, , *Maps, Land and Society* 1992, 114.

Chapter 5

Case Study: The Maps of William Tampon

This chapter examines a number of key issues explored elsewhere in the thesis through the focus of one specific surveyor that is William Tampon, (T020)

1637– 1653. His first map, the *Diss Manorial Map 1637* shows the whole Manor, of

Diss in Norfolk from Heywood down to the Waveney and from Roydon to the edge of Frenze.³¹⁰

An analysis of Tampon's maps provides evidence to support the first aim of this thesis, that is to argue that in the *Dictionary of Land Surveyors* a distinction should be made between the land surveyor commissioned to make a survey of a private estate and any surveyor hired to assist in the project.³⁵⁶ Currently the

³¹⁰ NRO. Ref: MC 2382/1 Title *An Exacte and Perfect plate of the Manor of Disse in the County of Norfolk 1637.* by William Tampon ³⁵⁶ Bendall, *Dictionary of Land Surveyors*,. 1997. Vol., II ³⁵⁷ Ibid., Vol., I. 67.

Dictionary gives the names of all known land surveyors and mapmakers active in Great Britain and Ireland between 1530 and 1850, making no distinction between experienced land surveyors that have managed a survey as a business, bearing financial responsibility for its success and someone hired to assist in a land surveying project. The aim of the coverage of the *Dictionary* 'is to include all persons likely to have measured or made maps of land in areas of less than a complete county in Great Britain and Ireland 1530-1850'.³⁵⁷ It is only by reading the surveyors biographical notes and the other information included that a surveyors skill and experience can be properly assessed. A distinction can be made between an experienced commissioned surveyor and an assistant.

The first priority was to find a map that illustrates that its author had the necessary skills that extended beyond those required by any assistant land surveyor

hired to carry out tasks assigned to him.. It will be shown that Tampon's manorial map is evidence that he had the required skills and a full understanding of the purpose of an estate survey. The significance of this map choice is that there is contemporary independent documentary evidence with which to test Tampon's his cartographic skills.

In the top left-hand corner of the map is a large decorative cartouche, written within the cartouche are in effect full instructions on how to read his map of the Manorial estate of Diss. His instructions also suggest his map making skills. The first point he

makes however is that the estate is in the possession of a John Duke Esq.

The map is 'a true scituacon, description, and delineacon therof, & every part and parcell thereof, as well as of the Towne & Borough, as of the houses Lands and tenements, Mere, highways, greenes, Commons, abuttals, bounds and other Remarkable things within upon and aboute the same, together also with true measure by standard of the said lands and tenements & every of them, with their Content, as by the booke of entries thereof made and the severall & Respective figures of reference. in the severall fields and parcells of ground herein set down at large may appear.³¹¹

Tampon claims that his map is a perfect representation of the Manorial estate now in the possession of John Duke Esq., and that the map indicates both free and copyhold land holders. He then goes on to describe the colouring of the map in every detail. As previously suggested Tampon uses the decorative cartouche to draw attention to what it is in effect a guide on how to read the map. Tampon guides the reader through every necessary detail relating to the estate. In so doing he is making a summary of his skills, the map being the only evidence we have of his ability to make an estate survey. The map leaves little room for doubt that he has included every detail. He tells us that the way to find the names of the tenant of each

numbered plot is by reference to an index in the beginning of the survey book. Although the survey book has been lost there was

³¹¹ See Appendix 1.5 Part transcription of Cartouche on William Tampo'n's Diss Manorial Map 1637.

attached to the map a list of all the tenants and the numbered plot they hold. The information in the cartouche gives a detailed description of the colours used and their purpose. The novel use of the cartouche in this way perhaps can be seen as an indication that he felt that the map may appear complex but his instructions that guide you through the many layers of information on the map would be seen as useful to all that needed to make reference to it in the course of the running of the estate.

Plate 5.1

Cartouche from William Tampon's Manorial Map of Diss reproduced in full.³¹²

³¹² Alison Molnoa, *Diss Manorial Map 1637* (Diss Norfolk: Diss Branch of the Decorative and Fine Arts Society 2014 See Appendix 5.1 for full transcription of the Cartouche.



By accepting the commission and managing the work as a business, bearing fiscal responsibility for its success, this is further evidence that he had an understanding of the complexities of an estate survey. This gives the reader confidence in the map, both of its accuracy, and that it fulfils the purpose for which it was created. The information written within the cartouche shows his knowledge and understanding of the composition of an estate map. It also evidence of his ability to manage every aspect of an estate survey, further evidence that sets him apart from any assistant hired to carry

out a specific task. The full range of Tampon's skills will be discussed later in this chapter.

Tampon also leaves the reader in no doubt as to his use of colour, and how to find the owner of each piece of land albeit that the book containing the index has sadly been lost. However, there is sufficient detail on the map which together with a separate list of the names of tenants and the number of their landholdings that was found with the map allows for further research. Having the names of the tenants and the number of the plot they hold has also enabled his map to be checked for accuracy.

The significance of the map by Tampon is that there are two works which give accounts (fully referenced) of events that took place in Diss both prior to and shortly after 1637, the date of Tampon's map. The first work is by Blomfield, *An Essay Towards a Topographical History of the County of Norfolk*.³¹³ The second is a work by Pursehouse, *Waveney Valley Studies*.³¹⁴ It will be appreciated that the description of both events makes reference to the streets of the town and the location of and damage caused to properties that resulted in them being completely obliterated.

The significance of both works is that the authors each give (fully referenced) accounts of events that took place in Diss prior to or

³¹³ Francis Blomfield, *An Essay Towards a Topographical History of the County of Norfolk*, Vol., 1 (Norfolk Heritage Centre; Extract taken from Publication at Norfolk Heritage Centre 1739). And Norfolk Millenium Library Reference Control Number 000072923).

³¹⁴ Eric Pursehouse, *Waveney Valley Studies Gleaning from Local History* (Diss: Diss Publishing Co. Ltd. Mere Street Diss Norfolk. 1966, Reprinted 1983).

after 1637, the date of Tampon's manorial map of Diss and which identifies the skills required by a commissioned estate surveyor that we look for in a map that is found on Tampon's map. The first requirement (or skill) that a surveyor needs to demonstrate is that he has a full understanding of all that an estate survey entails .

Evidence of this understanding should become apparent to the landowner during his first meeting with his chosen surveyor. This may be by the questions asked by the surveyor and the surveyors ability to listen. to the landowners requirements. On discovering the purpose of the survey, and having been shown the area of the land to be surveyed, he would then be in a position to set out the charges he would need to make for the surveying of the diverse types of land. He would have a clear idea of the number of assistants he may need and the materials, instruments and apparatus required. His final objective being that at the end of the estate survey, both he and the landowner are in profit the surveyor financially, the landowner by being in possession of a map that satisfies the 'particular and immediate purpose' it was designed to serve it would also be a guide to the better management of his estate and so in turn increase the profits he might make from his estate. The changes suggested by the surveyor, leading to that better management of his land.³¹⁵

The charges made by the surveyor for surveying the diverse types of land would be dependent on the number of assistants

³¹⁵ Harvey, English Estate Maps: in *Rural Images Estate Maps in the Old and New Worlds*. 1996. 27.

required. The surveyor would wait to see if the landowner made any offer of help with the finding of assistants, and any offer to purchase instruments as discussed in the previous chapter. Once terms and conditions have been agreed by surveyor and landowner relating to all aspects of the

survey, such as time scale, charges and expenses for travel and lodgings, the surveyor on agreeing them with the landowner becomes the commissioned surveyor. In volume 1 of a 3-volume work published between 1739 and 1775 by Blomefield he gives us a history of the Hundred of Diss. In volume 1 Blomefield gives us a history of the owners of Diss Manor, a Francis Shute held the Manor from 1622 to 1635, and then it was bought by John Duke Esq., of Worlingham Suffolk.³¹⁶ There is evidence that suggests that Duke was not in residence in Diss, he lived in Worlingham Hall in Suffolk. An investigation into Duke's link with Worlingham Hall has established that the Hall is located just a mile east of Beccles. It is a Grade 1 listed Georgian Manor. The estate was owned by the ancient Duke family for several generations. A John Duke married Pamel Rous in the early 1600s and the date matches with what is known of the John Duke that purchased the Manor of Diss suggesting they are one and the same person.³¹⁷ The possible absence of Duke from his Diss Manorial estate could explain

³¹⁶ Blomefield, *An Essay Towards a Topographical History of the County of Norfolk*, Vol., 1739. 11.

³¹⁷ British Online. <https://www.britishhistory.ac.uk/no-series>vol.1>.

Tampon's detailed instructions on how to read the map, he perhaps had in mind that the estate management and other officials and residents on the estate would be using the map in their day to day management of the estate.³¹⁸

In his *Topographical History* Blomefield ends his introduction saying, 'As to what I have related beyond the present age, I have the originals, or my authorities are always quoted'.³⁶⁶ In relation to Diss town the main sources of information cited by Blomefield are the records of 'A General Court of Survey, there held on the 13th of September 1636'. However, this reference is followed by a note stating '*are as follow, as appear by the original, now [1736] in the Churchwardens hands*'. This suggests

that perhaps a transcript of the court records was used which was written in 1736 by the Churchwarden. Blomefield also makes reference to local church records and other documents, all dating to the early seventeenth century. These documents give details of the location of the different properties, and are found to be accurately located on Tampon's manorial map.

The second book by Pursehouse gives two accounts of the great fire of Diss that occurred in 1645, this event being nine years after Tampon had drawn his manorial map of Diss. The accounts Pursehouse gives of the fire are based on newspaper accounts and

³¹⁸ Alison Molbos *Diss Manorial Map 1637*. Diss: Diss Decorative and Fine Arts Society (Private Publishers 2009). ³⁶⁶ Blomefield, *An Essay Towards a Topographical History of the County of Norfolk*, Vol., 1739. XVI.

on a copy of a 'brief' or petition that was sent to Parliament asking for permission to have a collection throughout Eastern England for the

"suffering inhabitants of Dysse".³¹⁹

The significance of both Blomefield's work and that of Pursehouse is that from the descriptions they give of the roads, streets and the location of properties most can be accurately located on Tampon's map as evidence of his cartographic skills. The map is also evidence that he had a good understanding of the general purpose of a map that is to clearly illustrate the land belonging to the estate, the extent of the boundaries of the estate and its main features.

The majority of Tampon's manorial map is remarkably accurate, when tested against the location of buildings given both by Blomefield and Pursehouse, but there is one area in the lower half of the map where there is an absence of information. The first piece of documentary evidence that suggests features are missing is an account of the great fire of Diss that occurred on the night of April 23rd, 1645. The fire occurred approximately eight years after Tampon made his survey, there were no other significant events between the making of his map and the great fire that might

explain the absence of some detail. On the night of the fire, Thomas Baylye, junior of Nicholas Street. and Robert Lancaster of Cox

³¹⁹ Eric Pursehouse, *Waveney Valley Studies* (Diss: Diss Publishing Co. Ltd. Mere Street Diss, Norfolk 1966, Reprinted 1983) 292-293.

Street, Constables of Diss, had completed their rounds. The night watchmen Henry Kett of Nicholas Street and Roger Spinck of Market Street were making their final check on the town when, from Market Place at the top of Mere Street they saw 'flames leaping high into the night sky from the vicinity of the 'Ship' Inn. (An ale house then at the lower end of Mere Street opposite the Mere), 'Spinck hurried to fetch Edmund Tolver, the Sexton from "Smyth Street" to clash the five church bells and arouse the town, while Kett, armed with a "crone" from the church porch, rushed to the scene of the fire – a group of thatched cottages behind the "Ship".³²⁰ The exact location of the thatched houses is thought to have been in the lower end of Mere Street on the opposite side of the road to the Mere. In another account of the fire, it is said that a 'chain of buckets of water from the Mere nearby was organised'.³⁶⁹ That is the inhabitants formed a human chain passing buckets of water to be used to extinguish the fire that was raging. The houses, therefore, must have been in the lower part of Mere Street on the opposite side to the Mere.³²¹ In spite of their collective

³²⁰ Eric Pursehouse, *Waveney Valley Studies* (Diss: Diss Publishing Co. Ltd. 1966 : Reprint 1983) 291-294. (Pieces written for local newspaper). ³⁶⁹ Ibid ., 292

³²¹

efforts the fire raged for four hours before the flames were extinguished. A scene of desolation was revealed at sunrise on April 24th, with Temes Street. and Mere Green cluttered with household effects of the 21 homeless families. So, this was not an insignificant event, it made a large number of people homeless. The value of the damage caused was said to be £2,090 not an inconsiderable sum of money in 1645.³⁷¹

The leading townsmen, backed by the County Justices, petitioned Parliament for help. The petition (or “brief” as it was known) was ‘of some thousand words seeking permission to have a general Collection throughout the Citties, Townes, Villages, ... within the Counties of Middlesex, Kent, Essex, Suffolke, Norfolke and Cambridge, for reliefe of the Town of Disse’.³²² ‘The Lords and Commons in Parliament assembled, ordered a Brief (Collection) throughout Eastern England for the suffering inhabitants of Dysse’.³²³ Not a single county gave any money. This can be

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³²² Pursehouse, *Waveney Valley Studies* 1966 : Reprint 1983. 293.

³²³ *Ibid.*, 295.

explained by the fact that the long Parliament (in session is 1640) had actually inhibited collection upon the brief...because the proceeds of such could be (and had been) diverted from their intended use, to support the King against Parliament. At this time in East Anglia loyalties were divided between King and Parliament'.³²⁴

This may seem to be a lengthy account of the Great Fire, but it shows the gravity of the affair, that the fire was extensive, affecting a large number of houses and people. The petition that was sent to Parliament is very detailed and might be seen as accurate. However, the houses that were destroyed are not represented on the Manorial map of the town drawn by Tampon in 1637, some eight years before the fire. The petition being an official document would have been an accurate account giving the exact location of the affected properties. There does not appear to be an explanation as to why the houses are not represented on the map, unless the presence of a stranger making measurements of the land would have caused alarm. Or it may be, that access to that part of the town was difficult and it was not felt necessary to record the houses in any detail.

The rest of the map is accurate, with perhaps just one other exception. In an area on the opposite side of the Mere to where the fire occurred, the names of John Turner, Samuel Folsor, Thomas

³²⁴ Ibid.. 293,295.

Sherve, Reginald Shuckforth and Henry Turner are shown on the Diss Manorial map as being tenants of land on the lower western and southern side of the Great Mere.³²⁵ These names are of interest because in the *General Court of Survey* records dated 1636 that sets out the customs of the manor, and written out originally by the Churchwarden (it is assumed in 1636) the names of these five people are listed. The part of the entry concerning them reads 'and it is returned that (all five names are listed), have and maintain certain pits in their yards and grounds, with inlets from them to the Great Mere, as by custom can justify.

Plate 5.2 The lower half of the southern part of the Great Mere showing plots 11 and 12.

Shreve, W. Turner, and Shuckford

Plate 5.3 The western half of the Great Mere showing plots 13, 14 and 15

J. Turner and Folser. ³²⁶

³²⁵ NRO Ref: MC 2382/1 portion of the *Diss Manorial Map 1637* drawn by William Tampon.

³²⁶ Ibid., Plates 5.2 and 5.3 showing the lower western half and southern part of the Great Mere a portion of the *Diss Manorial Map 1637* drawn by William Tampon.



The entry that relates to these tenants and their permission 'to have and maintain certain pits in their yards and grounds with inlets from them to the Great Mere as by custom they can justify is not dated' access to the rear of these properties when he was making his survey may have been difficult and the pits may have been established for some time and along with all the other activity round the edge of the mere did not stand out as features to be recorded. This may explain Tampon's omission of the pits and the inlets to the mere. Blomefield later in his description of what he calls the village of Diss, describes the Mere in the following terms

'on its south part which they call the Mere, ... is composed about half round with houses and gardens, which look pleasantly from the water; but it being almost a standing lake, having only a small run or two into it and only one out, and all the filth of the town centring here, besides the many conveniences

that are placed over it, make the water very bad and altogether useless; and so foul that when it purges itself, which it does once a year, it stinks exceedingly and sometimes the fish rise in great numbers, so thick that they are easily taken.³²⁷

Blomefield adds to this description to say that a tanner owns land at the southern end of the Mere and he has been warned that if he does not keep the outlet clear it might cause great damage by overflowing into the yards that lie around. Blomefield dates this observation to 1639 close in time to the making of Tampon's survey.³⁷⁸

The historian Blomefield writing this account in 1739 (over one hundred years later) but his description of the southern end of the Mere suggests that it may have been difficult for Tampon to make a survey accurately measuring the land. What the extract from Blomefield's writing does tell us is that conforming to the customs of the manor was a priority and the customs were recorded and repeated in the records of

the *Court of Survey*. Whatever the explanation we have to be grateful to Blomfield for providing us with this information about the occupations of the inhabitants living on the western and southern part of the Mere that we would otherwise not have known about. The information being that they were granted the 'liberty of having and maintaining certain (hemp) pits for the processing of flax, in their yards and ground, with inlets from them to the *Great Mere* as by

³²⁷ Blomefield, *An Essay Towards a Topographical History of the County of Norfolk*, Vol., 1739. 37-38 ³⁷⁸ *Ibid.*, 38.

custom they can justify'.³²⁸ It is not known what customs were associated with the use of the Mere

The significance of the hemp pits was that the soils and the climate of the Waveney Valley were ideal for hemp, and it became a regular crop on thousands of holdings and cottage gardens with south Norfolk alone producing one eighth of the country's output of hemp. As the growing and processing of hemp was so important to the Diss area this suggests that Tampon must have been aware of the pits and the runoffs into the Mere but perhaps did not have access to the rear of the properties. The Diss Manorial Map which was created just a few years before the great fire of Diss and Pursehouse's account of the event allows us to place the night watchmen where they would have been standing when they first witnessed the flames on the skyline at the lower end of Mere Street; and we are able to compare the street layout as it was in 1637 with the street layout in the twenty-first century. When this comparison is made it can be seen that very little has changed since 1637. The road layout is the same, as are the footprint of all the houses and other properties' except those in a narrow strip along the bottom of the map, where the fire occurred and is evidence that Tampon drew his map to a scale putting into practice what was said in Norden's *Dialogue* published in 1607; 'A plot rightly drawne by

³²⁸ 379 Ibid.,
14.

true information, describeth so the lively image of a mannor, and every branch and member of the same, as the lord sitting in his chayre, may see what he hath, where and how it lyeth, and in whose use and occupation every particular is, upon sudden view'...³²⁹ This could only be accomplished if the plan was drawn to scale, allowing properties to be shown in their relative positions to one another.

Evidence of Tampon's cartographic skills are evident when his map is compared to the descriptions of the town of Diss by Blomefield and Pursehouse. That his map was drawn strictly to a scale ensured that all the roads, properties and features were accurately placed on the map. The absence of certain properties and features may never be explained but it would not have been an enviable task making a survey of the area around the southern end of the Mere having to adjust to the smells and filth. His access to where the poor were living when the Great Fire occurred must also have been difficult, but in every other regard Tampon's map is accurate and is evidence of his many skills as a surveyor and cartographer. The manorial map of Diss 1637 is pentangular in shape (five angles) the shape favoured by Tampon for all his major surveys, the survey of smaller areas shown on paper as being rectangular in shape- the two examples found that fall into this category might more properly be described as sketches, or discussion documents. The Essex record office holds a large

³²⁹ Netzloff, *John Norden's Dialogue (1618)* 2024, 25.

collection of early estates maps, but out of a total of 296 drawn between 1566 and 1637, none are pentangular in shape. 'The best-known medieval map, the Hereford *mappamundi* ascribed to Richard of Haldingham, (c1300) is wholly traditional in concept and content'... it is drawn on a single sheet of vellum in its natural pentangular shape filled to the patterned edges with a circular world and a number of flanking drawings.³³⁰ Suggesting that this was the natural shape of the vellum, it follows the natural shape, neck and shoulders of

the single calf skin from which it was made. The borders on all Tampon's decorative maps have a narrow border with a single floral motif. His style is not unique,.

Plate 5.4 the *Mappamundi* for comparison.

Plate 5.4 The Hereford *Mappamundi* (c1300) The largest surviving map of the medieval world map.³³¹

³³⁰ Delano-Smith and Kain, *English Maps a History* 1999, 17.

³³¹ Peter Barber. *The Map Book* (London: Weidenfeld & Nicolson, The Orion Publishing Group Strand London 2005) 60.



The earliest map by William Tampon is dated 1637 and is the most detailed and complex of all his maps. The story behind the maps creation is that in 1635 John Duke Esq, of Worlingham, Suffolk, bought the Lordship of the Manor of Diss. In 1637 he commissioned William Tampon, a mapmakers working in East Anglia to produce

a map and survey book of his new acquisition. The survey book that once accompanied the map has since been lost however other material attached to the map includes a list (Key) of numbered land areas that are to be found on the map. The numbers have been

matched up to each relevant copyholder or freeholder 221 in total.

Both the list of names and details of their land holdings (copyhold or freehold) would have been duplicated in an associated survey book.

Some local land area names are also indicated. Some of the wording is unreadable the ink having faded, after all it is almost 400 years since the map was created.

It is possible there are many more maps by Tampon, that have not been located. The Diss manorial map dated 1637 was in private hands from the time it was drawn until 2006 when it was advertised as being for sale. This map is a fine illustration of the skills required by a mapmaker. It differs in appearance to all other maps of its type.

Plate 5.5 Border detail for the Hereford *Mappamundi* (c1300) ³³²



³³² Barber. *The Map Book* 2005. Detail from the Hereford *Mappamundi* For comparison with William Tampon's Diss Manorial Map 1637.

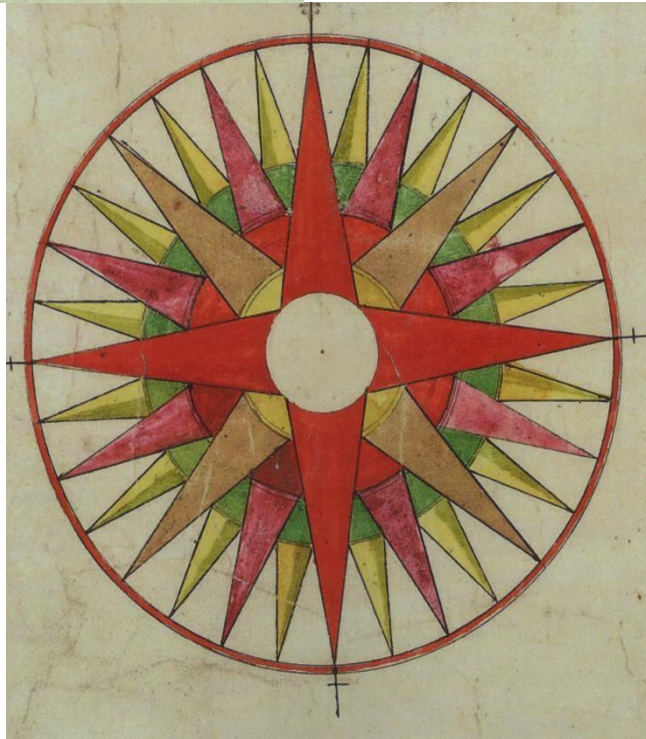
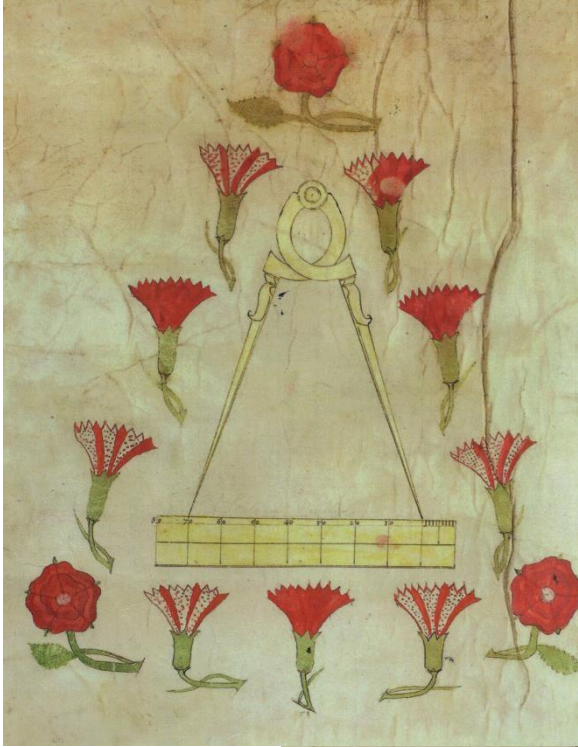
Plate 5.6 ³³³

Cartouche on Tampon's Map showing
indicating North at scale in perches or quarters of a chain.
the top with Fleur-de-Lise Motif.

Plate 5.7 ³⁸⁵

Compass Rose

³³³ NRO Ref: MC 2382/1 Details taken from the Diss Manorial Map 1637 by William
Tampon. Plate 5.6 Scale Cartouche ³⁸⁵ Ibid., Plate 5.7 Compass Rose.



No other estate map drawn prior to Tampon's manorial map of 1637 has been found that compares to the Diss Manorial Map. For style and use of colour and detail.



Plate 5.8 Detail taken from Tampon's

Manorial Map showing the location of the

Marl Pit (plate 20)³³⁴

Detail from the centre of the map, figure 20 indicates a Marl Pitt. It would seem to be accessible by road with a cart from Cock street. The road names have been changed and a B Road, Denmark Road

now running north through the area where the Marl Pitt was one situated. This part of the original Manorial Map shows how detailed it is. The map overall is easy to read and suggests it was drawn by a competent mapmaker.

The skills that can be seen in this small area include writing, and colour coding the different parcels of land plus the use of a number reference system that enables the tenant of a parcel of land to be quickly identified. Further evidence for an index of the commissioned map makers.

Harley, in his essays that are now placed together in *The New Nature of Maps* argues that 'we should encourage an

³³⁴ Ibid. Detail from the Diss Manorial Map showing the location of the Marl Pit. Plate 5.8.

epistemological shift in the way we interpret the nature of cartography'.³³⁵ Harley is suggesting that cartography is seldom what cartographers say it is, that we should deconstruct a map by 'reading between the lines of the map – "in the margins of the text"- and through its tropes to discover the silences and contradictions'.³⁸⁸

Tampon presents us with a complex map that tells the landowner John Duke Esq, all that he might need to know about the town, the tenants and features.. Further enquiries into the Duke family at the Norfolk Record Office revealed that they were a distinct local gentry family, not to be confused with the illustrious

Ducal family of Norfolk (the Howards). The Duke family held the Frenze estate, and the advowson of St Andrew's Church from the late 15th century until the 17th century. The Duke family maintained the Frenze estate until around 1636, when Samuel Blennerhassett (of the Blennerhassett line) rebuilt Frenze Hall and sold the property taking it out of the Duke family hands. It was in 1635, just one year before that John Duke bought the Lordship of the Manor of Diss. It seems probable that John Duke requested the survey in order to get to know the value of his new estate and of course the tenants, The Norfolk Duke family records suggest that he held a general Court of Survey the year after purchasing the Manor where his tenants confirmed his position, their allegiance and the extent and customs

³³⁵ John Brian Harley, *The New Nature of Maps Essays in the History of cartography* Paul Laxton Ed., (Baltimore and London: The John Hopkins University Press,, Baltimore, Maryland 2001) 150. ³⁸⁸ Ibid, 153.

of the manor. The map had a great deal of work to do, and it explains why there was a list made of all the tenants and a note made relating to each tenant recording whether they held land as freehold tenants or copyhold.

Deconstructing the map as Harley suggests would involve taking a close look at the estate papers, in order to establish the exact nature of the extent and particularly the customs of the manor. “To deconstruct” it is argued “is to reinscribe and resituate meanings, events and objects within broader movements and structures.”³³⁶ Tampon would have a difficult task as Duke the landowner, it is suggested, would not be residing on the estate but would expect the three officials, the Steward, Bailiff and Hayward to implement any recommendations put forward by the surveyor Mr Tampon. This may mean that Tampon was left to contact the three estate officials if he recommended that there were changes that could be made to the way they managed the estate. Changes that would perhaps make the estate more profitable.

Harley sees the map as having the power to say where the boundaries are and the

consequence of changes, all of which Tampon would need to explain to the three estate officials by Tampon, would need all his surveyors skills to successfully manage the end of the survey something no hired assistant would have to face. A summary of the skills of a

³³⁶ Harley, *The New Nature of Maps*, 159.

competent land surveyor, might start with knowledge that a surveyor will have an understanding of an estate survey and what it can achieve, being a good listener knowing when to suggest changes and how they can be accommodated. In this instance Tampon may have found himself seeing the three estate officials as landowners and having to assure three people that had no doubt worked on the estate for many years and did not see that changes need to be made from time to time.

Bendall argues that from the mid-eighteenth century, ... as estate business grew in complexity and owners were absent from their properties for longer periods, it became even more common to employ a professional steward or land agent' to carry on the day-to-day business of the estate.³³⁷

Tampons other maps are evidence that not all his commissioned land surveyors were on such a grand scale as the Diss Manorial commission. However, all his work illustrates that he had the ability to make a map that fulfilled some particular purpose. The undecorated maps may have been interim maps sketches drawn for use in discussions with the landowners estate official. It is hoped that a commissioned land surveyor will be viewed as an important, intelligent, multi-faceted skilled person, his many diverse skills being brought together to assist in making the introduction of agricultural changes, or a new way of doing things, easier for all.

³³⁷ 390 Bendall,
*Maps, Land and
Society* 1992. 161.

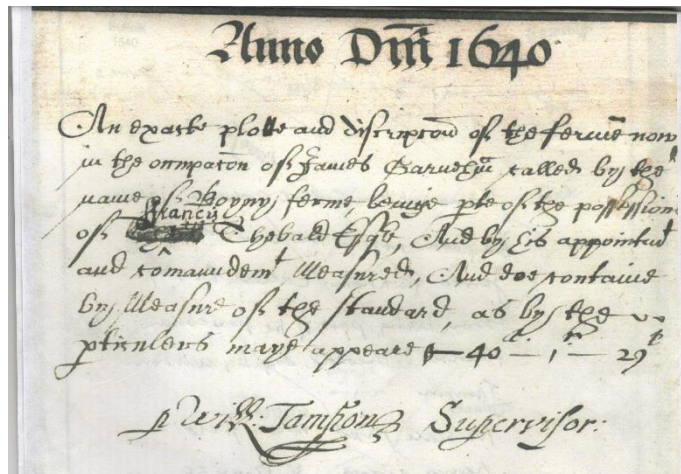
Table Figure 5.1 showing the known maps by Tampon, their size and location

Date	Title	Ref:	Size	Material
1637	Diss Manorial Map Pentangular in Shape Narrow border Of flower heads and Foliage. Highly decorated	NRO: MC 2382/1	2.64 meters x 1.17 meters 8 ft 8" x 3 ft 10"	Six sheep skins Sewn together
1640	Boyny Farm: Boyny Wood Suffolk Plain pen and ink Sketch	Suffolk Archives HA 1/8/6/1/1	38.1 cm x 30.48 cm 15 inch. X 12 inch.	Black and White Manuscript Ink sketch on paper
1641	Survey of the Manor of Naughton Suffolk Pentangular in shape Narrow border strapwork Cartouche typical of his Early 1637 Manorial map Of Diss and his other estate Maps. Very colourful.	Christe's Auctioneers sales Catalogue June 2000 King St. St James London	845 mm x 685 mm 33.27 ins. X 26.97 ins.	Colourful on Vellum
1649	Leeds Castle in Kent County Manor of the site of Leeds Castle	Document order # U825/P6. Kent Archives	848mm x 550mm 33.38 ins x 21.65 ins.	Decorated as other Tampon estate maps.
1651	Site of manor of Clopton Hall And Clopton Woode	Suffolk Archives Ref: 2120/19	45 cm x 63 cm 17.71 ins x 24..80.ins.	Paper Green and Red basic colours

Tampon's second map that of Boyny Farm: Boyny Wood Suffolk is in contrast to his Manorial Map of Diss; it is a plain pen and ink sketch with a plain black frame cartouche.

Plate 5.9 Cartouche from Tampon's map of Boyny Farm 1640

Suffolk ³³⁸



Detail of
Cartouche of
Tampon's Boyny
Farm and
Wood.

A sample of his
signature as it
appears on all of
his maps.
Usually followed
by the term

Supervisor. Taken to mean that he supervised the survey not that he supervised the drawing of the map.

Plate 5.10 Map of Boyny Farm 1640 by William Tampon ³³⁹

³³⁸ SRO (Suffolk archives) Ref: HA 1/8/6/1/1 Cartouche from Map of Boyny Wood 1640 by William Tampon.

³³⁹ Ibid. Full Map of Boyny Farm.

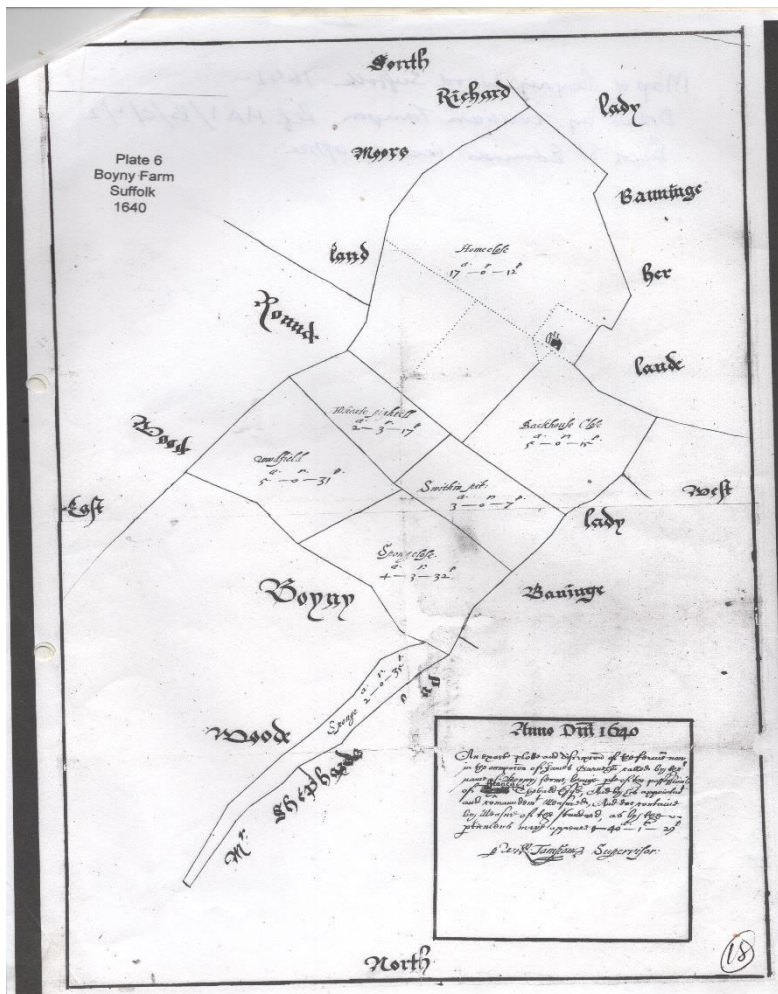
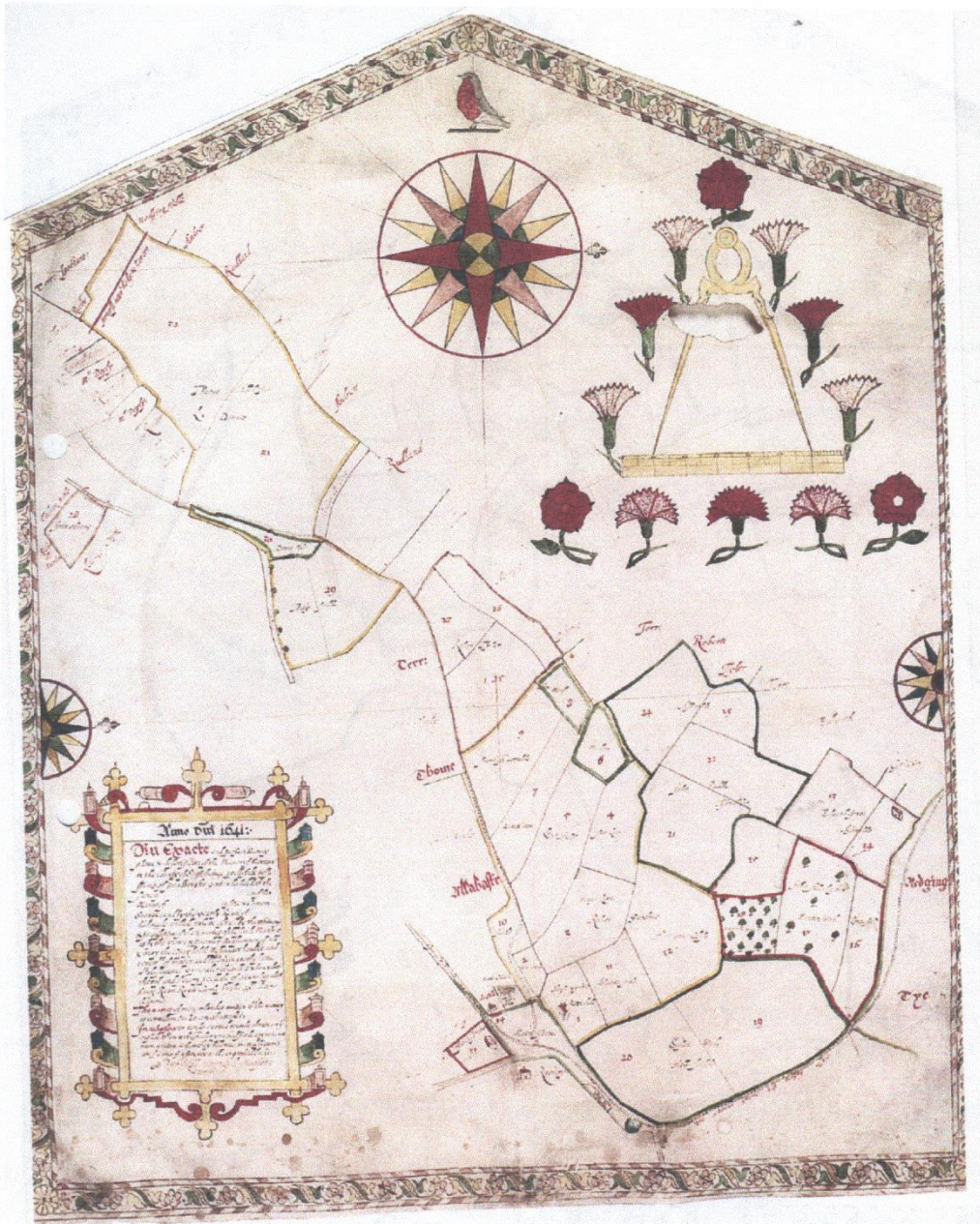


Plate 5.11 Survey of the Manor of Naughton 1641 by William Tampon ³⁴⁰

³⁴⁰ The Manor of Naughton (Norton) Suffolk 1641 The Cartouche in the lower left corner is Tampon's usual signature. The shape of the map and decorative cartouche similar to Tampon's other estate maps. Sold at Christie's Auction House London 5th June 2000



Described by Christie's auction house as an important and attractive estate map showing land belonging to John Bright in Naughton, near Stowmarket in Suffolk, by

one of the most prolific East Anglian estate surveyors of the 17th century.

Characteristic of Tampon's fine estate maps, the earliest known example being in 1637, are the highly decorative flowers and

emblems which adorn his plans. He principally worked in Suffolk and Norfolk but is recorded in Canterbury, Kent in 1653

(Ref: T020).

The Ref: T020 is Tampons unique letter code reference in the *Dictionary of land surveyors* 1997).

One notable difference, the compass rose has a robin above, the other maps have a fleur-de-lys.

The next map in the sequence by William Tampon is Leeds Castle in Kent

1649³⁴¹

Plate 5.12 Map of the manor site of Leeds Castle parte of the possessions of Sir, Cheney Culpeper
By William Tampon 1649.

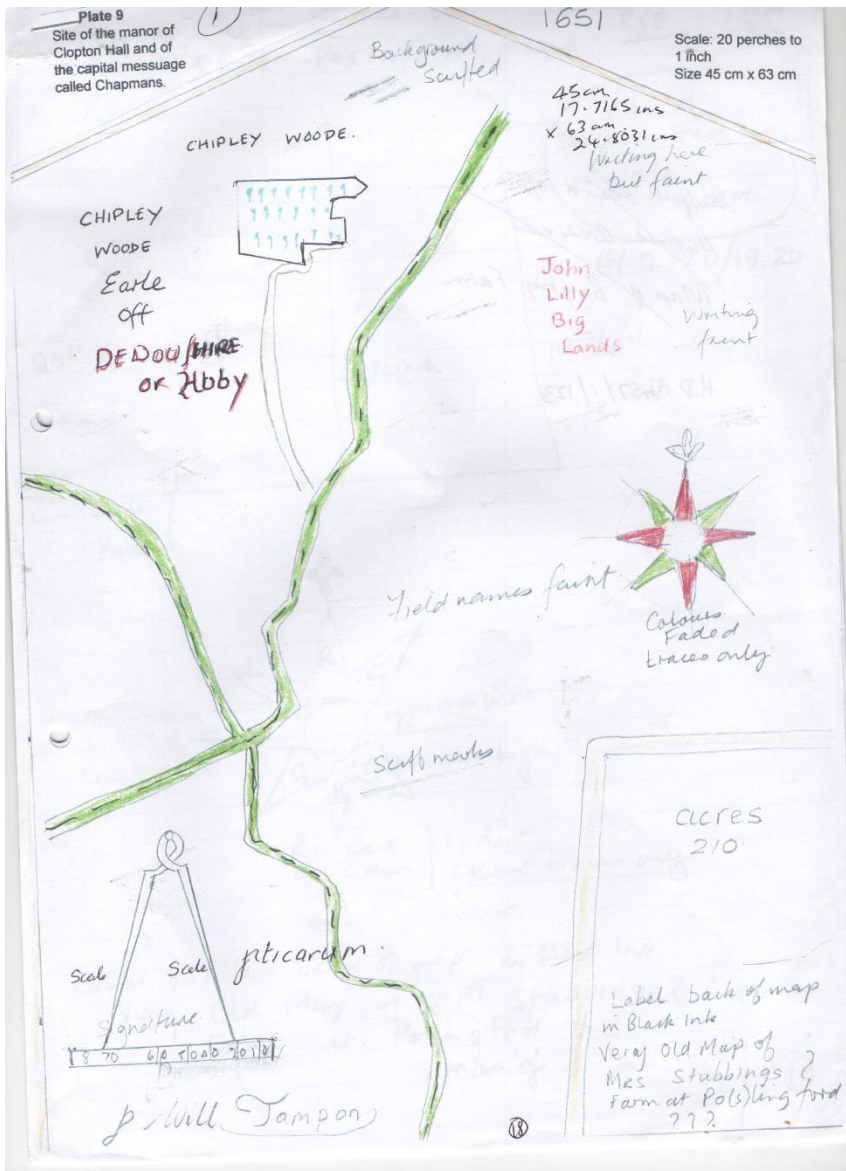
³⁴¹ Kent Archives Ref: U825/P6 Leeds Castle Kent 1649 by William Tampon.

The style of this estate map of Leeds Castle is a little different to his other maps. The shape of the map and the decorative cartouche is in the same style as the cartouches on the Diss Manorial Map, and the map of the manor of Naughten Plate 5.9. There are four compass roses on his estate map of Leeds Castle joined by lines point to point. See part of a compass rose in the left and right margins and in the border at the base of the map. Tampon has also made clear the scale used on this map, 16 inches to 1 mile. [1:3960]. The map covers 638 acres of Leeds and northwest of Broomfield. It gives the field name and names of adjacent owners.

Buildings including water mills, Broomfield church, and Parkgate Inn, are shown in perspective. It has a large and fictitious drawing of the front of a castle in elevation.

Indicates water courses and ponds, has a stylised flowerhead and foliate border similar to his Diss manorial map and his map of the manor of Naughton, plate 5.9. **Plate 5.13** Site of the Manor of

Clopton Hall and Clopton Woods 1651 by



William
Tampon.³⁴²

This is a hand drawn copy. Map located in a bundle of maps, the signature in the lower left hand corner that of Will(iam) Tampon was recognised. The original map is in a distressed state.

³⁴² SRO [Suffolk Archives] Ref: 2120/19 Site of the Manor of Clopton Hall and Clopton Woods 1651.

The three estate maps by Tampon, The Diss Manorial Map, the Survey of the Manor of Naughton, and the Leeds Castle map are all drawn on vellum in his

signature pentangular shape. Details of the content of the map are framed in an elaborate strapwork titled cartouche. The description of the decoration and general appearance of each map has a large elaborate strapwork title cartouche and on both the Diss Manorial Map and the Map of the Manor of Naughton there is a large decorative compass rose. The third estate map has, as described above four compass roses, one in the central area of each of the four sides of the border. Tampons map style differs little between 1637, the date of the Diss Manorial Map and 1649 the date of his map of Leeds Castle.

The decision to focus on the work of William Tampon and mainly on one of his maps, the *Manorial Map of Diss 1637* was an easy decision to make. The work of Blomefield and Pursehouse

provides a wealth of documentary evidence relating to the town of Diss as it was both a few years prior to 1637 during 1637 and for a few years later. This evidence as has been shown has enabled Tampon's skills as an estate land surveyor and cartographer to be tested. Blomefield and Pursehouse's descriptions and accounts of events in the town of Diss enabled an investigation into Tampons map of the Manor of Diss to be made, with the sole purpose of establishing that he had the range of skills required by a landed estate surveyor, skills that set him apart from any hired land surveyor who acted only as an assistant. That in turn provided evidence that a separate index of experienced estate land surveyors would be a useful as it would only direct attention to the established land surveyors. The evidence acquired during the investigation also suggests that the definition of an estate land surveyor now needs to be re-written. It needs to includes the ability to manage the project as a business, and that he needs to be prepared to take on the responsibility of ensuring its success financially, as well as producing a map that suggests ways of improving the estates management and is 'so well performed, ...to be a neat ornament for the Lord of the Manor to hang in his study, or other private place so that at pleasure he may see his land before him, and the quantity of all or every parcel thereof, without any further trouble'.³⁴³

³⁴³ Bendall, *Maps, Land and Society* 1992, 179. A quite form William Lebourn's surveyors text *The Complete Surveyor* (London: R and W Leybourn for E Brewster and G Sawbridge. 274-275.

A summary of a land estate surveyors skills includes some seemingly unrelated skills to those of measuring land and drawing a map. A surveyor needs firstly to ensure, before he attends any meeting with a landowner that he fully understands all that an estate survey entails. He must be a good listener and be able to quickly assess what it is that the landowner expects of the survey, the surveyor making suggestions in such a way as to make the landowner feel they were his ideas. After having been shown the land to be surveyed, the surveyor must then be in a position to state his charges and expenses, the final sum being dependent on whether or not the landowner offers assistants to either lend him or to purchase surveying tools and instruments. In addition, whether or not the landowner offers to provide assistants from his estate or elsewhere. He must be able to talk with and reassure tenants of his fairness in the making of a survey and make them a part of the project. This could be done by discussing local customs and traditions, seeking their knowledge of the land to be surveyed and the sourcing of materials. Local customs and traditions relating specifically to the estate being surveyed would of course have been made with the landowner. Much of the information he needed would be found in the estate papers. This summary suggests that a surveyor would be a man of some education. Little has been said in this chapter about the additional occupations that many of even the experienced surveyors had. The subject of alternative surveyors has been part of the discussions in chapter 2. From a

reading of the biographies and life experiences of surveyors, many did not give up their alternative occupation to

become a surveyor. Having an alternative occupation that is possibly related to land surveying would, in the eighteenth century or indeed at any time in the past have been of some assistance in finding land surveying commissions. Such alternative occupations as land agent, auctioneer, or an estate manager, or teacher of particularly of mathematics, would have been a great advantage to anyone aspiring to be a land surveyor. Such occupations as have been mentioned suggests they had experience in dealing with people, they had business acumen, and they had the ability to manage the measurement of land, finding angles and working out areas. It has been difficult in some instances to be certain that land surveying was a full-time occupation or more of one that was a useful skill to have as it helped them to be a more efficient auctioneer of particularly land, or a teacher of mathematics, especially if he was able to make a survey and a map that would facilitate a sale or purchase of land. It is not known whether Tampon had an alternative occupation, but his maps are evidence that he had a knowledge of mathematics to the extent that he was able to measure land and had the skills that enabled him to write so persuasively as he did on his Diss Manorial map instructions on how to read his map. His order of colouring and numbering of the individual parcels of land so that the name of the tenant could be found by reference to a list that stated who tenanted which numbered plot may not been new, but it is skilfully employed.

Tampon's Manorial Map together with his other maps were evidence of his skill as a land surveyor. The maps are also evidence that a variety of skills were required by a landed estate surveyor.

Chapter 6

Conclusion

This investigation was concerned with the maps of landed property belonging to private individuals, to institutions or to communities. Private estate maps includes maps of varying degree of complexity and for this reason the first priority was to define and discuss the parties to a private estate survey, and the maps that were made.

The aim of the investigation has been to argue that in the *Dictionary of Land Surveyors* there needs to be a separate index that names only the land surveyors for whom there is evidence that in the past they have made private estate surveys . They are identified in this thesis as commissioned private estate surveyors who had managed a survey as a business, bearing financial responsibility for its success For the experienced commissioned surveyors having their names in a separate index sets them apart from surveyors that were only ever employed as assistants. Having such an index allows anyone with an interest only in the experienced surveyors to go directly to a named experienced surveyor. As discussed within the thesis the *Dictionary* in its current form makes no distinction between the commissioned estate surveyor that manages each commission as a business and an assistant surveyor. The distinction being that commissioned surveyors needed to have a varied range of skills and had a number of responsibilities whilst an

assistant surveyors only skill was his ability to measure land and his only responsibility was to fulfil the task assigned to him.

The investigation into the roles of both the landowner and commissioned surveyor in an estate survey found them to be interconnected. It was also emphasised that as the survey was of private lands and was financed by the private landowner any written records of meetings or instructions between landowner and surveyor, if any were created, they were never intended to be seen by anyone other than the landowner and his estate staff. They would be placed with estate papers or in the family archives. Many of the estate maps that were made as an end product to a survey although private documents have somehow found their way into the public domain. In 1947 the Essex Record Office was one of the first to publish a series of *Catalogues* that fully describes their vast collection of all types of maps. The first *Catalogue* pays particular attention to describing their vast collection of private estate maps that represent estate lands in Essex. This thesis has investigated this collection of eighteenth -century private estate maps, building on the further research published more recently by the Essex Record Office. To support the claim for a separate index of the commissioned estate surveyors it was deemed necessary to focus my analysis on a series of maps drawn by one surveyor as there is independent documentary evidence that makes this a relatively easy task to evaluate the focus map. The objective of the analysis was to check for overall accuracy of borders, and the relative positioning of

features such as roads, buildings and internal boundaries of parcels of land and finally evidence of his innovative skills, the use of cartouches to draw attention to information, and other decorative features such as a compass rose, or compasses/dividers indicating the scale used for the map.

The second aim of this thesis has been an investigation into the role of the alternative occupations held by many of the estate land surveyors. The purpose of this investigation was to establish a reason for having an additional occupation. The findings relating to the alternative occupations of estate land surveyors was to some degree unexpected. This thesis has provided evidence to show that the reason for an alternative occupation was for the most for financial reasons to- make ends meet. The question addressed was were surveyors finding alternative occupations or were auctioneers, land agents, attorney's and schoolteachers all making surveys of land because they had the necessary skills and money was short? A table has been included that provides evidence to show that auctioneers (who were selling land) land agents that bought and sold land, and attorney's that were familiar with the law relating to land ownership were all from time to time engaged in the making of an estate survey. The assumption was made that they were making surveys to facilitate an early sale or purchase. A map would be of interest to the client purchasing the land, the map giving its location and an understanding of its composition.

The evidence suggests that especially for schoolteachers estate land surveying in itself was not a full-time occupation but, because they had the necessary skills land surveying was a way of earning extra money. Evidence has been presented that indicates schoolteachers were not well paid and land surveying was an occupation. An index that was confined to naming only the established estate land surveyors together with biographical information would be useful for researchers. References that indicate the sources from which an individual entry was compiled is also an aid to further research.

Evidence has been presented in this thesis suggesting that the profession of land surveyor during the eighteenth century, like that of architect was relatively undeveloped. Further research into the daily lives of ordinary people of the seventeenth and eighteenth centuries is necessary to allow a more accurate assessment to be made of the occupation of estate land surveying (and all other types of land surveys).

The objective of the focus on the maps of a single individual was to find evidence of the range, variety and accuracy of his surveying skills as a cartographer, skills that set him apart from a hired assistant, the map itself being evidence that he had taken responsibility for the survey's financial success.

The intention of this thesis was to investigate the role and place of the estate land surveyor from the viewpoint of the surveyor himself. However, it was soon discovered that his role was closely

bound up with that of the landowner. Information relating to his role and the process of the making of an estate survey was limited because the survey was of private land and the concern only of the landowner who would be financing the survey. The evidence available relating to what a landowner wanted from a survey, and the instructions he may have given to the surveyor has been discussed in this thesis. The evidence suggested that some landowners were not clear in what they wanted from a survey, therefore an experienced surveyor would be expected to provide what he felt was appropriate having been told the purpose of the survey. It has therefore been the intention of this thesis to suggest what was expected of an estate land surveyor, is that he had a full understanding of all the essential elements of a land survey and had the experience to ask the right questions to ensure a successful outcome.

The intention of this investigation was firstly to provide evidence that gives the reader an insight into the complex world of the estate land surveyor. Secondly to draw attention to the range of skills an estate land surveyor needs to make a successful estate survey. It has been argued that evidence of his employment of these skills can be determined from an analysis of his maps. The maps being key because the whole process of the making of an estate survey was, and remains, a private matter. Estate maps, records meetings between landowner and surveyor, a written survey and the estate map itself, were always a part of the private estate records and

never intended to be in the public domain. An estate map is, as evidence has shown, an important document that contains information about an estate lands that no written record, or other method of the investigation, gives credit for its value its author, the land surveyor commissioned to make the survey. Had this not been the case then any analysis of the process would have been made in very different way. In the future new technology may assist in a different approach to the unravelling the process of an estate survey, but as has been argued, an index of the commissioned estate surveyors remains the most useful starting point of the route to understanding these men. The index being evidence that a map was created as an end product to the survey.

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ERO Ref: D/DGe P13 Maps by Timothy Skynner for Tyrrell 1765.

ERO Ref: D/DU 234/82 Survey details by Skynner for Way Lewis 1749

ERO Ref: D/DR P7 Map *A true survey of Moys Hall in the Parish of Ardley in the County of Essex 1726* by the surveyor William Kendall.

ERO Ref: T/M 266/1 Reduced photograph of a map by Joseph and William Kendall

ERO Ref: D/DBd P1 A tracing on linen of an estate maps of the lands belonging to Mowden-Hall, by unknown hand, The original map by Daniel Halls (H057) 1723.

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ERO Ref: D/DMy 15M50/90 Copy of Bill from a surveyor Timothy Skinner to William Mildmay for surveying work done between September 1756 and December 1761, Timothy Skynner (S261.1)

ERO Ref: D/DBg 70/2 Cartouche taken from map by George Sangster (S039) 1769

ERO Ref: T/M 227/1 a photograph of a map of Lambourne and Chigwell. By Josiah Taylor (T059) Original Deposited in Essex Record Office, catalogued as D/DU 666 Now withdrawn.

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Science Museum Group. Gunter measuring chain. 1872-78 Science Museum Group Collection Online

<https://collection.sciencemuseumgroup.org.uk/objects/co52806/gunter-type-> **Appendix 1**

Table of the Counties, Regions and other areas of England showing number of surveyors active between 1530 and 1850.

Excluding London and The Ridings of Yorkshire.³⁹⁷

Bedfordshire	269	Hampshire	357	Northamptonshire	343
Bristol	2	Herefordshire	138	Northern England	1
Berkshire	299	Hertfordshire	361	Northumberland	239
Buckinghamshire	381	River Humber	2	Nottinghamshire	261
Cambridgeshire	350	Huntingdonshire	165	Oxford	311
Cheshire	260	Isle of Man	14	Rutland	66
Cornwall	256	Isle of Wight	45	River Seven	5
Cumberland	263	Kent	736	Shropshire	385
Derbyshire	396	Lake District	2	Somerset	330
Devon	353	Lancashire	467	Staffordshire	343
Lundy	2	Liverpool	3	SUFFOLK	496
Dorset	232	Leicestershire	299	Surrey	404
Durham	234	Lincolnshire	493	Sussex	544
Eastern England	1	River Mersey	2	Warwickshire	412
English Channel	1	Middlesex	294	Westmorland	157
ESSEX	833	Midlands	5	Wiltshire	300
Fens	44	Monmouthshire	147	Worcestershire	162
Gloucestershire	503	NORFOLK	573		

³⁹⁷ Sarah Bendall, ed., *Dictionary of Land Surveyors and Local Map-Makers of Great Britain and Ireland 1530 – 1850* (London: The British Library) 1997. See Table One **Appendix 1**. Compiled from number of surveyors listed as active in each of the counties, regions, and areas of England from 'Index to Area in Which Surveyors Practised'. 158,163 &165.

Appendix 2
 An Analysis of all the
 Estate Land Surveyors active in Essex
 In the Eighteenth Century
 Their maps, alternative
 occupations and
 links to other
 surveyors

(See Chapter 2)

No	URC Date	Name	ESSEX ONLY In RED	Other Counties Made	Links Family Other	Alternative Occupations	ERO Map Ref:
----	-------------	------	-------------------------	---------------------------	--------------------------	----------------------------	--------------

				Surveys			
1	A044 1728	AGNIS Benjamin	Essex	One Other County	Father of A044.3 John Agnis	Farmer	ERO D/DU 497/1
2	A058 1776	ALEFOUNDER Thomas (I)	Essex	One Other County	With son Thomas (II) A058.1	Writing Master (See cartouche On map ERO D/DOT P ³⁴⁴)	ERO. D/DOT P2: 1763. Together With D/DOT P3 1765: D/Ot P1. 1762
3	A058.1 1776	ALEFOUNDER Thomas (II)	Essex	One Other County	With father Thomas (I) A058	Auctioneer	Map Reference Unclear
4	A133.6 1716?	APPLEBY William (Snr)	ESSEX Only	-----	Details Not found	None Known	ERO (Copy by Unknown Draughtsman ERO Ref: D/DWe P15 1716
5	A141 1693- 1747	ARCHER Thomas	Essex	One Other County	None Found There was an Architect of This name	None Known	ERO Ref: D/DW P7
6	A164 1770	ARMITAGE Benjamin	Essex	One Other County	-----	None Known Active mainly In Yorkshire	ERO Ref: D/Dsa 152 ³⁴⁵
7	B058 1782	BAKER William	ESSEX Only	-----	With William Snell (S380)	None Known	ERO D/DU 158/1 1782 Plan in Memorandum Book
8	B186.4 1768	BAYNE Charles	ESSEX Only	-----	None found Name known Only from This map	-----	ERO Ref: D/DU 77/10 1768
9	B211 1730	BECKETT Thomas	Essex	One Other County		-----	ERO Ref: P8 1734
10	B287 1735	BERMINGHAM James	Essex	One Other County	Active with John Noble (N102.8) 1741	-----	ERO Ref: D/DSt P4
11	B411 1756	BLYTH John	ESSEX Only	-----	Active with William Cole (C340)		ERO Ref: D/DR P12 1781.
12	B467 1733	BOURGINION Peter (Sieur)	Essex	8 in other Counties	-----	Garden Designer	ERO Ref: D/DP P23/1 1733 D/DTw P1 1738
13	B537 1774	BRAND William	ESSEX Only	-----	-----	-----	ERO Ref: D/DK P4 1724 Brand made Only revisions to map Original by John Heather (H265)

³⁴⁴ Mason, *Essex on the Map* 1990. Cartouche from Map of Viness in Gt. And Lt. Horkesly 1765 ERO Ref: D/DOT P3

³⁴⁵ ERO Ref: D/Dsa 152: Map not available to view, too fragile.

No	URC Date	Name	ESSEX Only	Other Counties Made Surveys	Links Family Other	Alternative Occupations	ERO Map Ref:
14	B543 1689-1775	BRASIER Willaim	Essex	Other Counties Made Surveys	Made surveys Abroad: Military Service: Surveyor in Tower Of London	Employed by William Sutton (S612) As draughtsman With John Johnson (J125) and Richard Rountree (R263)	ERO Ref: DRb P1 1730 T/M472/1 1730
15	B634 1702 To 1780	BROWNE Thomas	Essex	8 other Counties	With Augustine Hale (H022) 1730 Assisted by James Crow (C577) and surveys With him	Herald: Progresses through The ranks College Of Arms, Finally to Garter in 1774 surveyor	ERO Ref: D/DU 2590//1/1 1751: D'DU431/1, 1733
16	B688 1788	BUDGEN Thomas (II)	Essex	22 in Other Counties	Employed By H Stevens (S491) Trained William Figg (F062) Trained by Henry Hogben (H429) and by Thomas Marchant (M171)	Employed by O S Bookseller, Stationer.	ERO Ref D/DWe P7
17	B716 1702	BURGES John	Essex	3 in other Counties	----- -----	----- ----	ERO D/DP P16 1710
18	C089 1775	CASE John	ESSEX Only	----- -	----- -----	A man of this name Was a minister of Witham	ERO Ref: T/M 103/1 1775.
19	C156 1738 To 1780	CHAPMAN Robert	Essex	1 in other County	----- --	----- -----	ERO Ref: T/M 103/1 1775
20	C228 1775	CLARKE John	Surveyed An estate that straddled the Suffolk Essex Border.	----- -	----- -----	----- -----	ERO D/DU 47/1 1722
21	C256 1779	CLAYTON Henry (I)	ESSEX Only	----- -	Surveyed on Lord Petre's estate	----- -----	ERO Ref: D/DP 31 1779

22	C340 1755- 1797	COLE William	Essex	38 in Other Counties	Active with John Blyth (B411): Thomas King (K149) and Grandson Tobert Hale (H026): as Cole And Hale. James Dunthorne (D370) as draughtsman	Astronomer Composer, Schoolmaster	ERO ³⁴⁶
23	C507 1725	CRADDOCK James	Essex	6 other Counties	Land surveyor of this name Practised in Jamaica	----- ---	ERO Ref: D/DCw p7b This map is unsigned.

N o	URC Date	Name	Essex Only In Red	Other Counties Made Surveys	Links Family Other	Alternative Occupation s	ERO Map Ref:
24	C53 0.1 1714	CREFFIEL D George	ESSE X Only	-----	Amateur Surveyor Mapped part of family Estate. Possible links To John and William Kendall (K064 and K070) Who made surveys on The Creffield estate Between 1702 and 1726	-----	D/DR P26 1714
25	C53 9 1723	CRIPPEN John	Essex	1 other County	Trained by Jared Hill H361	-----	Maps in Gonville & Caius College Cambridge. Photographs only ERO T/M 130, 131
26	C57 7 1731 - 1786	CROW (or Crew) James	Essex	22 in other Counties	Assistant to Thomas Browne (B634): also Worked extensively With Thomas Marsh (M188) And Thomas Davis (D092): Trained David McCool (M033)	None Known	ERO D/DNe P3
27	C62 3 1726 - 1748	CUSHEE Richard	Essex	4 in other Counties	With Joseph Harris (H148.8) John Senex (S139) with Thomas Wright (W609.5) Trained Nathaniel Hill (H371) apprenticed to Charles Price (P324)	Engraver, Instrument Maker, Globe Maker Teacher of Land Surveying	ERO Ref: D/DCy P3A Map of Leyton.: Later Copy only available Original too fragile.
28	D01 6 1768	DALLING ER Robert	ESSE X Only	----- -	Link to Timoth Skynner (S261) as schoolmaster	Schoolmast er Teacher of Mathematics	ERO Ref: D/DFg 7 1773

³⁴⁶ Mason, *Essex on the Map* Table of the Maps of William Cole to 1800 . 114.

29	D10 8 1754 - 1787	DAWSON Joseph	ESSEX X Only	-----	-----	Black yeas 1764 – 1771 Suggests that He may have Had another Occupation	ERO Ref: Made 18 surveys in Essex 401
30	D12 3 1723 - 1764	DAYLES Mathew	ESSEX X Only	-----	-----	Farmer	ERO Ref: D/DP P105 1739: D/DPo P2 1743: D/DMa P4 1746
31	D16 0 1790	DEW John (I)	ESSEX X Only	----- -	Active with son John (II) D160.1 in early 19 th century.	Auctioneer Bookseller Stationer Surveyor	ERO Ref: D/DKe 1799.
32	D24 8 1719	DONNELL Y Dominick	Essex	2 surveys In Ireland	----- ---	----- -	ERO D/DW P2 1719
33	D29 8 1794 - 184?	DOYLEY John	Essex	8 in other Counties	At start of Career was Assistant to Daniel Mumford (M517) 1794-8	-----	ERO Ref: T/M 134 Photostat Copy.
34	D33 2 1770	DUCKER Edward	ESSEX X Only	-----	Lands surveyed belonging to Wadham College Oxford		ERO Ref: T/A 890/7

401 Mason, *Essex on the Map* 1990. 81 The Maps of Joseph Dawson.

					Who hold original map T/M 309 1770 Map 2 in Essex Brasenose College Oxford 1773 ERO Ref: 890/7	----- - -	
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No	URC Date	Name	ESSEX Only In RED	Other Counties Made Surveys	Links Family Other	Alternative Occupations	ERO Map Ref:
35	D378.8 1766-7	DYER R.	ESSEX Only	-----	-----	-----	ERO Ref: T/M 317 1766 Comprises of 34 small Maps . In 1773 additions Made with lists of Tenants. Dyer not Listed
36	E083.1 1798	ELWYS Harvey	ESSEX Only	-----	-----	-----	Ref: Information Supplied by Queens College Cambridge
37	E088 1786	EMRY Henry	ESSEX Only	-----	-Father Schoolmaster	-----	Personal communication To compilers of <i>Dictionary</i>

38	E127 1781	EYRE Edward John	Essex	12 in other counties	Employed William Smith (S363.6) 1765-9 and William Woodward (W577) 1764	-----	ERO D/DU 268/15
39	F016 1743	FAIRCHILD William	Essex	4 in other counties	-----	-----	ERO Ref: D/DGo P1 1760
40	F021 1714- 1731	FALLOWES Benjamin	Essex	4 in Other County	-----	Farmer Quaker	ERO Ref: D/DP P18 1714: D/Ge P7 1726 ³⁴⁷
41	F069 1747	FINLEY Josiah	Essex	1 in other county	-----	-----	ERO D/DPo P1 1750 D/Dop P2 1743 D/DKe P1A 1747 D/DGe P9/1 1747
42	F084 1749- 1776	FITCHET or FITCHATT John	ESSEX Only	----- - ----	Owned his own School: Taught Land Surveying	Schoolmaster	ERO (1 st Map missing) D/DS: 1772 D/DHe P2 1768 D/DBe P1 1772
43	F152.2 1782	FORT Thomas	ESSEX Only	----- - ----	-----	-----	See fn ³⁴⁸
44	F157 1712	FOSTER John	ESSEX Only	----- - ----	-----	-----	ERO Ref: D/DB P20 1712
45	F228 1710	FRIEND John	Essex	3 in other counties	Apprenticed to Joel Gascoyne (G047)	Chart Maker Member of the Drapers' co.	ERO Ref: D/DU 64/1 1705 possibly a copy of An old map
46	F228 1724	FROGLEY Arthur	Essex	2 in other counties	None Known	There was a Joiner of this name In Oxford	ER) Ref: D/Det P6 1714 D/DQ 88/3 1714

47	G047 1705	GASCOYNE Joel	Essex	7 other counties	Trained John Friend F218 Employed Hugh Westlake W251	-----	ERO D/DXb 48 c1725
48	G097 1785	GIBSON Francis Atkinson	ESSEX Only	----- -	Quaker: apprenticed to William Fairbank (F010) 1785	----- -	ERO Ref: D/DBr P3 1739

No	URC Date	Name	ESSEX Only In RED	Other Counties Made surveys	Links Family Other	Alternative Occupations	ERO Map Ref:
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³⁴⁷ Mason. *Essex on the Map* 1990. Table of five Maps by Benjamin Fallowes 1716; 49.

³⁴⁸ Ibid., Thomas Fort (*Dictionary* entry F152.2) Information taken from an advertisement in the *Chelmsford Chronicle* 1782. Fort thanked his clients for giving him work and reminded them that he continued to survey and map ... Unfortunately no example of his work survives.

49	G314.8 1758	GRIMSEY Joseph	ESSEX Only	-----	-----	-----	ERO Ref: T/M 438/1
50	H051.2 1728- 1739	HALL Thomas	ESSEX	1 in other county	None known	-----	ERO Ref: D/DE1 P6 1739.
51	H063.7	HAM John	ESSEX Only	-----	None known	Teacher of Mathematics	ERO Ref: D/DBi P1 1727 2 nd Map in private hands
52	H143.75 1727- 1733	HARRIS John	ESSEX Only	-----	Survey made for Charter House School Surrey	-----	Information from Charter House School archives.
53	H185 1736- 1785	HARCEY Samuel	ESSEX Only	-----	None known	Auctioneer Estate Agent	ERO Ref: D/DBs P3 1752 ; D/DDW P4 1772: D/DE P11 1773: D/DCm P25 1774: D/DMa P9 1775 D/DU 893/1 1785?.
54	H292 1750- 1768	HATTON T.	Essex	3 in other counties	None known	None known	ERO Ref: D/DDQy 3 C1750
55	H213 1743	HAWKINS Richard	ESSEX only	-----	-----	-----	ERO D/Tw 1743 (crudely drawn)
56	H264 1773	HEATH Thomas	ESSEX	2 in other counties	Active with John Cunn (C606): Joseph Harris (H148.8): And trained Tycho Wing (W471.5) and with Heath And Wing 1752-19 Employed Thomas Wright (W609.5)	Bookseller Mathematical Instrument Maker	ERO D/DCw P8 1773.
57	H265 1715- 1725	HEATHER John	ESSEX Only	-----	----- - -----	-----	ERO Ref: D/DBr P12 1721-1724 T/A 225/17 1722/3: D/DMh P2 1717 – 1722 ³⁴⁹
58	H361 1687- 1745	HILL Jared	Essex	6 other Counties	Employed by Canterbury Cathedral 1717-36	Timber Surveyor	ERO Ref: TM 403/1 1739 T/M 436/1 1738: T/M 167/1 1739
59	H387.8 1792- 1804	HINDLEY John	ESSEX Only	-----	Assistant to William Yates (Y010) 1794	None known	ERO Ref: ³⁵⁰

³⁴⁹ ERO Ref: D/DMh P2, is a survey of Castle Hedingham estate by John Heather, 19 maps in one volume. Not available in ERO permanently withdrawn by depositor.

³⁵⁰ Mason, *Essex on the Map* 1990 fn 11. 26: ERO Ref: D/DPe M55 Loose in this book is a rough copy, made by J. James in 1753, of a 1624 map of a West Ham Manor. 4.

60	H455 1757	HOLLINGWORTH John (I)	Essex	3 in other countie	With Landers (L031.5) Succeeded by son John (H456.8)	None Known	ERO Ref: D/DB P37 1757: D/DPoP2 1776. A number of maps relating to one survey Bound together in a leather covered book D/DU 2963?1 1767:
61	H469 1721	HOLMES John (I)	Essex	3 in other counties	Father of John (II) H469.1	None known	ERO Ref: D/DQs 28 1709
62	H470.5 1700-6	HOLMES Thomas	Essex	2 in other counties	None known	None known	ERO Ref: T/M 170 1702 T/M 3/1 c1700

No	URC Date	Name	ESSEX Only In RED	Other Counties Made Surveys	Links Family Other	Alternative Occupations	ERO Map Ref:
63	H469.1 1723- 49	HOLMES John	Essex	3 in other counties	Son of John (I) H469	Headmaster Of the Public Grammer School Holt, Norfolk Mathematician	Map in Cambridge University Library No reference. Photograph in ERO' Ref: D/DQ 28/2 ? Dates Do not match.
64	H474 1743	HOLT Adam	ESSEX Only	-----	None known	Overseer of the Poor 1735	ERO Ref: D/Dsa 150 1723.: D/DW P4 1743
65	H546 1764	HOWARD Nicolas	ESSEX Only	-----	None known	None known	ERO Ref: T/M 91/2 1743
66	H621 1771	HUTSON George	Essex	7 other counties	Father George Not listed on <i>Dictionary</i>	Farmer	ERO Ref: D/DU 1775 19 in one small book
67	H619.2 1736	HUTCHINSON THOMAS	ESSEX Only	-----	None known	None known	ERO Ref: D/DS 512/1 1736
68	J001 1700	J. J.	ESSEX Only	-----	None known	None known	Estate map of Hornchurch Hackton Farm 1700 by J. J. ³⁵¹
69	J167 1713- 1714	JONES Hugh	ESSEX Only	-----	None known	Seller of Sundials Teacher of Land Surveying	ERO Ref: D/DCm P23

³⁵¹ Emmison *First Supplement Catalogue of Maps in the Essex Record Office* 1952. Publication 16. 6a.

70	J036.7 1742- 1753	JAMES John	ESSEX Only	-----	None known	Amateur Surveyor Map loose in a book Rough copy, made by James in 1753 of a 1624 Map. ³⁵²	ERO Ref: D/DPe M55 1753
71	K064 1702- 1741	KENDAL(L) John (?II) ³⁵³	Essex	1 in another County.	Father John (I) K065: Joseph and William, brothers K067 & K065	Schoolmaster Nonconformist	ERO Ref: D/DEIP3 1702; D/DWHw E14 1710 D/DR P4 1717

72	K067 1703- 1737	KENDALL Joseph	ESSEX Only	-----	With brother K070 1725. Son John K065? ?Brother of John K064	Schoolmaster Nonconformist	ERO Ref: T/M 445 1717: T/M 266 1724: T/M 284 1732
73	K070 1717- 1726	KENDALL William	ESSEX Only	-----	With brother K064	Schoolmaster (algebraist) Nonconformist	ERO Ref: D/DR P6 1718 D/DR P5 1725 D/DR P7 1726
74	K157 1794- 1798	KINGSBURY John	Essex	1 in other County	None Known	None Known	ERO Ref: D/DB P3 1786 D/DU 584 1796
75	L034 1738	LANDS Heber	Essex	2 in other counties	None Known	Military Engineer	ERO Ref: D/DB P32 1712 D/Ne P2 1720
76	L071 1684- 1739	LAURENCE (or LAWRENCE) Edward	Essex	12 in other Counties	Assisted by John Cook & Son C303.5	Maths teacher Writer of surveying texts.	ERO Ref: D/DU 583/ 1 & 2. Both 1722: D/Dmg P1 1730
77	L144 1786- 1823	LE NEVE Peter	ESSEX Only	-----	None Known	None Known	ERO Ref: D/Dop 1794 D/DR 1800. Other maps early in 19 th century

No	URC Date	Name	ESSEX ONLY In RED	Other Counties Made Surveys	Links Family Other	Alternative Occupations	ERO Map Ref:
78	L121 1713 1773	LEE John	Essex	1 in other county	None Known	Farmer	ERO Ref: D/DM 1745 D/DWV 1754: T/M 143 1724: T/M 191 1725: T/M 162 1729: T/M 65 1-14 1756- 1766. and others
79	1797- 1798 Not in <i>Dictionary</i>	LENS Ed. ³⁵⁴	ESSEX Only	-----	-----	Professional Artist.	ERO/Ref: DDU 186/2 In fragile state.

³⁵² Mason, *Essex on the Map* 1990. 26 fn 11.

³⁵³ Ibid., 44 Table of the work of The Kendall family.

³⁵⁴ Mason, *Essex on the Map* 1990. Ed Lens was a professional artist and does not figure as a surveyor. 4. (and fn 9. 26.

80	L184 1769- 1804	LEWIS Samuel	Essex	2 in other counties	None Known	None Known	ERO Ref: D/DR 1744 Together with a draft or copy, same scale as D/DPa 1781
81	M188 1747- 1804	MARSH (or March) Thomas	Essex	16 in other counties	Worked Extensively With James Crow C577 (a London Team).	Career Surveyor	ERO Ref: D/DBc P13 1767 D/D P4 1768. T/M 601.6: D/DE 1 P8; All with James Crow C577. Solo D/DB2 P1 1776: & D/DU P7 1777. & D/Cx P1 c1777.
82	M207 1700	MARTIN Michael	ESSEX Only	----- -	and	'practitioner in arts mathematical' (No evidence of this) ³⁵⁵	ERO Ref: T/M 127 1700 Original in British Library
83	M317.1 1747- 1754	MESSSEDER Isaac (?II)	Essex	8 in other counties	None Known	Teacher of surveying and drawing and undertakes smoaky	ERO Ref: D/DQ 3/2 1774 Original of D/DQ 3/2 and another map in Guildhall Library

						chimneys, no cure no pay.	Essex.
84	M327 1782	MIDDLETON John	Essex	2 in other counties	Joseph Hodskinson H419 and James Bailey B017 as Middleton and Bailey c1802.	Inclosure cr.	ERO Ref: D/DTw P3 1788-9: T/M 232 1788-89 (unsigned but in his Style).
85	M349 1718- 1757	MILLER John	Essex	2 in other counties	John Miller (maps similar) M349.1 ?	Receiving Rents Lord Petre's estate	ERO Ref: D/DR P9 1735 D/DE1 P8 1750 Unsigned maps assigned to him Tulip finial usage.
86	M439 1767	MOORE Willaim (I)	ESSEX Only	----- -	Father of William (II) M439.1	Carpenter	ERO Ref: D/AEW 38?1201; 1764. D/DHt P52 1769
87	M517 1778	MUMFORD (or MUNFORD) Daniel	Essex	13 in other Counties	Assisted by John Doyley D298 as his Pupil	None Known	EERO Ref: D/DCw P25 1796 D/DCw P58 1796 D/DCw P58 A 1796 D/DQy 7 1789 D/DCw P58B 1796 D/DCw P12 1796
88	M520 1782	MUNDEL Robert	ESSEX Only	----- -	Appraiser and Auctioneer. Sold Household goods And stock.	None Known Suggestion of Link to Lord Petre's estate	ERO Ref: D/Dar P8 1782.

³⁵⁵ E. G. R. Taylor *The Mathematical Practitioners of Tudor and Stuart England* (Cambridge: Cambridge University Press for the Institute of Navigation. 1968) entry 524: 297.

No	URC Date	Name	ESSEX Only In RED	Other Counties	Links Family Other	Alternative Occupations	ERO Map Ref:
89	N079 1730	NICHOLLS Jeremiah	Essex	2 in other Counties	None Known	Evidence to suggest May have been a carpenter Or a timber merchant	ERO Ref: T/A 469/19 1741 D/DDw P3 1734 D/DB P5 1737: D/DU 56/3 1737: D/DU 3190/3/1 1733: D/DU 155/1 11736: D/DFg P5 1732
90	N089 1777	NICHOLSON Thomas	ESSEX Only	-----	None Known	None Known	ERO Ref: D/DQy 6 1777
91	N110 1794	NOCKOLDS Martin (II)	Essex	6 in other counties	With Son? Martin (III) N110.2 Active outside Date range	Auctioneer Inclosure cr. Land agent Member of Land Surveyors Club	ERO Ref: D/DEs P3
92	P060 1720- 1746	PARKER Robert	Essex	2 in other Counties	Active with William Cole C339.	Farmer	ERO Ref:D/DGs P7 1722 with William Cole C339. D/DP P20 1724 with William Cole C339: D/DP 100/3/1 1732: D/DP P22 1728. Other maps in private hands
93	P257 1797	PLUME Edmund	ESSEX Only	----- -	None Known	Farmer	ERO Ref: D/DU 2425/25 References Plan of estate of Isaac Green Esq. Surveyed by Edmund Plume 1797 Whereabouts of Plan unknown.
94	P333 1775	PRICKETT John	Essex	9 in other counties	Joseph Prickett (son) P334 Assisted by Unidentified Prickett P331.	Carpenter Auctioneer Founder of a firm Of Estate Agents	ERO Ref: D/DWe 1792 T/M 119/121 (3 maps) 1737-8 T/M 169 c 1800.
95	P161 1769	PENNINGTON Joseph	Essex	7 in other Counties	Crown Employee Agent to 2 nd and 3 rd Earls of Ashburnham C1790 to 1833	Employed Samuel Baker B052 as draughtsman 1791-3.	ERO Ref@ T/M 83 1791 Photograph
96	P335 1758	PRIDE	Essex	10 in other Counties	Crown Employee By 4 th Duke Of Marlborough	No other occupation Known	ERO Ref: D/DGe P15 Mapped 1900 acre estate for Charles Raymond who was in the process of buying around Woodham Essex. Large map om a roller
97	P343 1746 - 1777	PRITTY (or PRETTY) John	ESSEX Only	----- -	None Known	None Known	ERO Ref: D/DBr P1 1759 D/DMb P5 1759
98	P369 1727- 1737	PULLEN William	ESSEX Only	----- -	None Known	Carpenter 'philomath ?schoolmaster	ERO Ref: D/DQ 71/2 1731: T/M 95/1 1734: D/Ht P6 1735: DNE 1/6/4 1733

99	R026.1 1793	RANDALL William	ESSEX Only	----- -	None Known	None Known	ERO Ref: D/DB P40 2793
100	R036 1771	RAVEN John	ESSEX Only	----- -	None Known	Bailiff to John Townend (of Pewsey) Wiltshire 1771-1773	ERO Ref: T/M/99/1 1774 T/M 96/1 1774: T/M 199/1 1774: T/M 209/1 1777: T/M 37/1 1778: Other map details not found.

No	URC Date	Name	ESSEX ONLY In RED	Other Counties Made Surveys	Links Family Other	Alternative Occupation	ERO Map Ref:
101	R148 1762	RICHARDSON Thomas	Essex	17 in other Counties	Crown Employee Links to Driver D316: King K152 Son ? George R140.2: 1790	-----	ERO hold Photostat copies: Originals in National Archives. ERO Ref; 173/1 1777.
102	R228 1725 1762	ROCQUE John	Essex	21 in other Counties	Assisted by B069: C171: Employed A127 and P303 And W580 and others In Ireland : Trained K070.	Cartographer Engineer Map-Seller	ERO Ref: D/DCw P46 1741: D/DBY P1 c 1725 3 rd Map in National Archives.
103	R296 1734- 1747	RUSH Hayward	ESSEX Only	----- - --	Made one survey with William Kendall K070.	Writing Master Teacher Of Navigation Land Measurer Teacher of Mathematics	ERO Ref: D/DU 27 & D/DU 27/1 1734: D/DP 24 1742 D/DP 246 1747.
104	S039 1755- 1794	SANGSTER George	Essex	1 other county	With Son S037.9	Auctioneer Estate agent Nurseryman	ERO Ref: D/DMa P5 1755; D/DQ 41/1 1767: D/DBg 70/2 1769: ; D/DGe P21 1785: D/DTw P5 1787: TS/M 12/1 1790: Two further maps of Suffolk 1787 in SRO and of Tolleshunt (Essex) 1766 in Guildhall Library Essex.
105	S025 1779	SANDERS J(ohn)	Essex	1 other county	None Known	None Known	ERO Ref: D/DHt E4 1789-1780.
106	S088 1759	SCALÉ (Peter) Bernard	Essex	26 in other Counties	Pupil Richards R137: Apprentices Asser A178: Browning B650: Sherrard S196: Business as Scale and Browning. Employed Williamson W404.8	Evidence Suggests Fully occupied with all aspects Of land surveying, valuing estates : negotiating their Leases.	ERO Ref: D/DF1 1 1778. A survey of the manor of Mistley In a book of 32 maps being the whole estate 6,723 acres. Map of Stifford Estate, Essex in the Guildhall Library Essex.

107	S202 1730	SHERWOOD Michael	ESSEX Only	-----	----- -	?School Teacher	DER Ref: D/DFa P4 1730: D/DHt P5 1731
108	S123 1779	SEARLS Leonard	ESSEX Only	-----	Father of Michael (S124) and trained his son.	?Carpenter	ERO Ref: D/DCw P59 1779.
109	S238 1742	SIMPSON James	ESSEX Only	-----	None Known	None Known	ERO Ref: D/DRb P2 1742
110	S261.1 1713	SKTNNER Timothy	Essex (59)	5 in other Counties	None Known	Length career suggests father and son succession Skynner was a juror at Mildmay's manorial court And he made many surveys for the family. ³⁵⁶	Known to have made 63 surveys . Maps of 7 in other record offices or in private hands ³⁵⁷
111	S228 1750	SIMMS Robert	ESSEX Only	-----	Draughtsman only ³⁵⁸	None Known	ERO Ref: D/DE1 P8 Further research required

No	URC Date	Name	ESSEX Only In RED	Other Counties Made Surveys	Links Family Other	Alternative Occupations	ERO Map Ref:
112	S273.1 1746- 1785	SLOANE (II) Charles	Essex	1 in other county	None Known	None Known	ERO Ref: D/DMa 914/1
113	S390 1794- 1798	SORRELL & HURRELL	ESSEX Only	-----	None Known	Estate Agents	ERO Ref: D/DMa 914/1 Map of Little Waltham 1798
114	S380 1782	SNELL William	ESSEX Only	-----	Baker (B058)	None Known	ERO Ref: D/DU 158/1 1782
115	S542 1760	STORER John	Essex	2 in other Counties	None known	Auctioneer With Richard Oakley Then with Woolman as Estate Agent	ERO Ref: D/DTu 201 1765 D/DK P10 1766: D/DU 19/11 1773: D/DDc P9/ 1-7 1789.
116	S617 1764	SWAN Owen	Essex	3 in other counties	None Known	Mathematical Instrument Maker	ERO Ref: D/DE1 P10
117	T048.8 1750	TAYLOR Isaac	Essex	1 in other Counties	None Known	Engraver School Teacher	ERO Ref: D/DGe 1755: C/TS 62

							1755: D/Ht P50 1755: D/DK 1755.
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³⁵⁶ Mason, *Essex on the Map* 1990. 83.

³⁵⁷ Ibid., 85.

³⁵⁸ Ibid, 26 fn. 9.

118	T052 1774	TAYLOR James	Essex	6 in other counties	With R. Dodd D219 (Dodd was a Surveyor but not Indexed as having made estate surveys)	Inclosure cr.	ERO Ref: D/DP P28 1776. (A Dengie Farm)
119	T059 1746 1760	TAYLOR Josiah	ESSEX only	-----	None known	Schoolmaster	ERO Ref: D/DU 666 1746; D/D C27/1110 1749 D/DU 461 1751: D/DS 53/1 1752: DLo P1 1752: D/D2b 5 1752: D/DGe P12 1769:
120	T069.5 1757	TAYLOR W.	ESSEX Only	-----	None Known	None Known	No Record ERO Common Name <i>Dictionary</i> record only.
121	T113 1739	THOMAS John	Essex	4 in other Counties Surveyed in Belgium & France	Tudor Fortification Duke of Cumberland 1726. Military Engineer Estate surveys	Father of John ?= I T or J. T [T002.6 or T003].	ERO Ref: D/DM P5 1723
122	T286 1770- 1790	TURNBULL James	ESSEX Only	-----	None Known	None Known	ERO D/DQs 29 1770: D/SH 24 1790.
123	W005.7 1769- 1776	WADDINGTON B	Essex	1 in other county	None Known	None Known	ERO Ref: D/DHt P58 1776.
124	W111 1780	WARNER Daniel	ESSEX Only	-----	None Known	Carpenter	ERO Ref: D/Nc2/13 c1780
125	W112.8 1717	WARNER John	ESSEX Only	-----	With Samuel Warner [W116] 1729 (Brother) Related to Henry (W1120 of London	Mathematical Instrument Maker. Teacher of Mathematics Valuer.	ERO Ref: T/M 154 1717. Photocopy only Available Original owned by New College Oxford the owners of the estate
126	W116 1723	WARNER Samuel	Essex	4 in other counties	With John Warner (W112.8) (brother) Related to Henry Warner [W122] of London	Instrument maker Teacher of Mathematics	ERO Ref: D/DQ 2 1733
127	W119 1752	WARREN Francis	Essex	2 in other county	With William [W124] 1729. Related to Thomas Warren (I) W122	With William (W112.8) 1729 Related to Thomas Warren (I) & (II).	ERO Ref: D/DQ 4 1752

No	URC Date	Name	ESSEX Only In Red	Other Counties Made Survey	Links Family Other	Alternative Occupations	ERO Map Ref:
128	W122 1774- 1783	WARREN Thomas (II)	Essex	3 in other Counties	Related To Francis Warren W119	Headmaster of School where Land survey Taught	ERO Ref: D/DBY E11 1783: D/DQ 1774
129	W132 1715	WASS(E) George	Essex	1 in other County	None Known	None Known	ERO Ref: D/DBh P1 1715

130	W193.8 1758	WEBB Thomas	ESSEX Only	-----	None Known	None Known	<i>Dictionary reference</i>
							<i>Emmison 1966</i> ³⁵⁹
131	W235 1722- 1724	WENHAM Richard	ESSEX Only	-----	None Known	Schoolmaster Widow Tax Collector (ERO D/DP 277/28/6)	ERO Ref: D/DE P66 1772. D/DE1 P82 1774
132	W330 1715	WICKSTEED John	ESSEX Only	-----	None Known	None Known	ERO Ref: D/DP 175/3/2 1737.
133	W384 1772	WILLIAMS Richard	Essex	2 in other Counties	None Known	Brother Samuel William [W386]	ERO Ref: D/DC 27/11222, 1772 D/DC 27/1119, 1772
134	W387 1795	WILLIAMS Samuel	Essex	2 in other counties	None Known	Brother Richard [W384	ERO Ref: TS/M 59/1 1795
135	W492 1787	WISE J.	ESSEX Only	-----	None Known	None Known	ERO Ref: D/DU 300/1 ³⁶⁰
136	W550 1784	WOODS Richard	Essex	17 in other counties	With Joseph Golding [G169.3] Employed Gooch [G171.2] as foreman. Sparrow [S405.4] 1764 as assistant Assisted by Ansell [A131.5]	Architect Landscape Gardener	ERO T/M 262/1 1784
137	W557 1789	WOODWARD William	Essex	7 in other counties	Trained by Eyre [E127] 1764	Agent to 2 nd Earl Stanhope 1785. Recognition, 3 years Running, by Society for the Encouragement of Arts'.	ERO Ref: D/DQ 3/1 1769
138	W588 1791	WRIGHT James	ESSEX Only	-----	None Known	Land Agent	Record in New College Oxford ³⁶¹
139	W631 1728- 1737	WYETH William	Essex	6 in other counties	Employed by William Sutton [S612 with Elizabeth CUSHEE {C621} NOTE Female Land Surveyor 17331739.	Draughtsman Mathematical Instrument Maker	ERO Ref: D/SH 14, 1735

³⁵⁹ ERO: Information discovered in supplement to *Catalogue of Essex Parish Records 1240 – 1894* The Supplement on Nonconformists Charities, Societies and School Records 1341-1903 edited by F. G. Emmison 1966. There is an entry that suggests a Thomas Webb made an estate survey that is not indexed separately in any other place. (No ERO Ref: Supplement not digitized).

³⁶⁰ Mason, *Essex on the Map* 1990 fn 9: 26 Mason suggests that the 'crude sketch of Ashingdon by J Wise ERO Ref: D/DU 300/1 ... and 'is an example of an amateur surveyor draftsman not being a surveyor'.

³⁶¹ Mason, *Essex on the Map* 1990. 28 fn 89.

140	W630 1794	WYBURD James	Essex	5 in other Counties	With Richard Jacques (J029) as Jacques and Wyburd	None Known	ERO Ref: D/DW P5 1794.
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