

Putting mud and stud in its place:
rediscovering the culture of Lincolnshire's
indigenous buildings, and exploring their
dwellingscapes

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Abstract

This research explores the indigenous building culture of Lincolnshire (UK), which is characterised by a vernacular building tradition known as ‘mud and stud’. This differs from conventional UK timber framing traditions, both in the techniques of building construction and in the mindset with which these buildings were approached in the past and the recent present. An interdisciplinary approach allows a conversation between the historical evidence and the archaeology, offering a new insight into this under-valued, often-ignored but fascinating tradition.

Mud and stud buildings are poorly-understood, due to a lack of previous research and the ways in which mud and stud buildings have been concealed behind more recent facades. By combining techniques of standing building survey, documentary research and landscape study, this thesis addresses the knowledge-gap, asking the fundamental question “what *is* ‘mud and stud’?” and argues that a closer, archaeological engagement with the evidence challenges existing assumptions, provoking further questions and research which are not just academic, but also crucial to recognising and valuing the buildings that preserve this vernacular tradition.

A single-parish case study forms an in-depth exploration of these issues, complicating existing typologies and revealing that mud and stud does not conform to the ‘grammar of carpentry’ found in most parts of the UK. Instead, a more nuanced and localised approach to ‘ways of building’ using local, natural resources arising from the particular settlement and landscape contexts of Lincolnshire is revealed. The concept of ‘dwelling-scapes’ is proposed as means of connecting building traditions with their social, environmental and economic contexts. Finally, in the light of the radically different building philosophy encountered, questions are raised about the criteria by which buildings are considered for statutory protection, and the need for further research is emphasised.

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Abbreviations

CUCAP – Cambridge University Collection of Aerial Photographs

EBUKI – Earth Building UK and Ireland

HER – Historic Environment Record

HLC – Historic Landscape Characterisation

HLCA – Historic Landscape Characterisation Area

HLCZ - Historic Landscape Characterisation Zone

LAO – Lincolnshire Archives

PRO – Public Record Office (The National Archives)

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I can do all things through Christ, who strengthens me.

Author's declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for a degree or other qualification at this University or elsewhere. All sources are acknowledged as references. The views in this thesis are my own and do not represent that of the University of York.

I co-published some early thoughts about mud and stud in

Field, N. and Pape, J. (2016). Mainly mud and stud. In: *Vernacular Architecture Group spring conference 2016 - Lincolnshire*. Lincoln: Society for Lincolnshire History and Archaeology. pp.60–78.

Introduction

In the second largest county in England, a distinctive style of vernacular architecture developed and dominated the rural landscape over the course of hundreds of years, before being abandoned in the early decades of the nineteenth century (Fig. 1). Something in the order of 700 examples of ‘mud and stud’ buildings survive today, yet there has been almost no academic examination of this building culture. Consequently, the buildings are very poorly understood, and lack suitable statutory protection; hundreds of examples were lost in the twentieth century and they remain almost unprotected today.



Fig. 1. A comparatively unaltered example of a mud and stud cottage (White Cottage, Thimbleby)

Interest in mud and stud is not restricted to Britain. American archaeologists have emphasised a perceived connection with the buildings of the early settlers at Jamestown, Virginia. The excavated evidence for Lincolnshire mud and stud in Virginia is scant but, as we will discover, the connection between the county’s buildings and the early American settlers may be more complex and interesting than has been previously argued.

Structure

The thesis begins with a short introduction to mud and stud in Lincolnshire, mapping known examples onto the topography and geology to understand the scale and distribution of this building culture. The research then zooms in on a case study, the combined settlements of Toynton All Saints and Toynton St Peter.

Documentary and landscape history are explored with relation to the buildings of the settlement, before analysing a group of three standing examples. These three strands of evidence – documentary, landscape and standing buildings – are then drawn together to re-formulate larger questions about the tradition as a whole.

Mud and stud has proved challenging for previous scholars. Its variability defies conventional categories of building, while its adaptability has often disguised the buildings themselves beyond recognition. By conducting a holistic survey of a single settlement, the variety of ‘ways of building’ in one place is highlighted, revealing that mud and stud is more usefully thought of as a mindset – responding with inventive solutions to the circumstances in which each building is constructed – than a set of rules by which buildings were designed and erected. The study then explores the reasons for this different approach to building, considering the implications for the buildings archaeologist trying to understand what they are seeing in surviving or documented examples. The thesis then moves towards a characterisation of mud and stud, exploring the potential of existing concepts such as the *pays* model of landscape characterisation when applied to Lincolnshire’s vernacular architecture, but also developing an alternative approach. This uses Ingold’s concept of *dwelling* (2021, 234) to frame the influences which shape the form of mud and stud used in a given place, leading to the proposal of a new way of considering the context of any vernacular building – the dwellingscape – and the impact this has on its form. A concluding chapter reviews the wider impact of the study, highlighting the need for a different approach to investigating mud and stud, the scale of research still waiting to be undertaken and the urgency of the work in the light of the threats to surviving buildings. Finally, five appendices provide supporting evidence, intended as a resource for Toynton’s current inhabitants and to support future research. These comprise;

1. A spreadsheet of surviving probate inventories for Toynton
2. An exploration of the reliability of seventeenth century estate maps in Lincolnshire
3. A gazetteer of mud and stud buildings in Toynton
4. The listing text for Chestnut Cottage
5. Prompts for considering the characterisation of a dwellingscape

Review of previous literature

Lincolnshire has always been a marginal county. Physically, it sits on the east coast, almost entirely surrounded by water – to the north the Humber, west the Trent, while south-east the Wash and the Fens once constituted formidable barriers, meaning Lincolnshire was not ‘on the way to’ anywhere. Perhaps consequently, Lincolnshire remains on the margin of public consciousness, not least amongst archaeologists; *The Medieval Peasant House in Midland England* (Alcock and Miles 2013) entirely ignores the largest county in the midlands, for example. Within this marginal county, the study of mud and stud as

a building tradition is itself marginalised, both in terms of physical characteristics and in understanding the 'whys' of the technique. While many excellent books on vernacular building in stone, timber, brick or earth exist, as a technique mud and stud is rarely granted more than a brief, dismissive paragraph, even in volumes such as *Historic England's handbook on earth building* (Henry *et al.* (Eds) 2015). This apathy is illustrated by Brunskill's differentiation of it from both timber framing and cob;

'the flimsy construction being quite inferior to the sophisticated carpentry work of the one and the heavy solidity of the other.' (2009, 209)

There appear to be two factors at play here; firstly, as Brunskill accurately – but cruelly – observes, mud and stud is neither timber framing nor earth walling but a blend of the two, defying the neat categories which appear to work in other parts of the country – a theme to which we will return. Secondly, the limited geographical range of known examples has led to them being assigned late dates and dismissed as a minor local tradition of little interest beyond Lincolnshire's borders.

A degenerate technique?

To a greater or lesser degree, almost all of the authors who have written about mud and stud have reflected an idea that it represents an inferior means of constructing a house, executed in substandard materials, although few have been that explicit. Inevitably, comparison with the timber framed buildings of, say, Cheshire highlights the irregularity of the timber and consequent idiosyncrasies of the framing, leading to an assumption that the buildings are being copied from earlier, orthodox, examples by people who do not understand the principles behind their construction.

In direct opposition to this is the idea that mud and stud is an enormously ancient tradition which may have once been ubiquitous but is now otherwise lost. Brunskill himself (2009, 208) associates it with prehistoric earth-walling techniques, while Gardiner (2014, 17) identifies it as the inspiration for Beresford's (1987, 25) interpretation of excavated remains at Goltho. Beresford's timber-laced mud wall is far closer to mud and stud than Brunskill's wattle-enclosed turf but, as Gardiner points out, the earliest references to mud and stud postdate Goltho by several hundred years. Clearly mud and stud cannot be both an ancient relic and a late, degenerate technique.

Twenty-five years ago, Jane Grenville wrote

'While the interpretation of excavated evidence of houses has proceeded in step with wider developments in the discipline of archaeology...the study of standing buildings remained in what might be seen as a formative, data-gathering and data-classifying stage until relatively recently.'
(1997, 14)

In Lincolnshire the study of mud and stud has yet to proceed far beyond Grenville's 'data-gathering' stage. Nevertheless, there have been a few archaeologists who have worked hard to catalogue and describe

Lincolnshire's mud and stud buildings, setting a solid foundation for investigation and interpretation in the future. Three principle archaeologists have published on them; MW Barley, Rodney Cousins and DL Roberts.

Maurice Barley – early recording

Barley wrote extensively about Lincolnshire's buildings, although never exclusively about mud and stud. However, he photographed many mud and stud buildings, while his work on probate inventories and glebe terriers also highlighted the potential of these sources for earlier periods; he even wrote briefly about Toynton (1961, 88–89). This combination of documents and buildings produces a more varied picture of mud and stud than is to be found in most texts. He treats it equitably with other techniques, although he views it as an inferior way to build, commenting

‘it is clear then that a timber-frame was the beginning of house building, but that the poorer the owner, the slighter and flimsier the wood he could afford to use’ (1961, 81).

He clearly viewed the technique through the lens of comparison with other places, rather than the perspective of the people of Lincolnshire, but the survey work he did ensured that many examples which are now lost were recorded in detail.

Rodney Cousins – the champion of mud and stud

In 1980, Rodney Cousins was part of a team which rescued a mud and stud cottage from Withern and reconstructed it at Church Farm Museum, Skegness (Cousins 2000, 18–27). This led to a survey in 1983–4, attempting to establish how many more examples survived in the county (LAO 26 MLL 1984), eventually cataloguing c.200 examples with one or more images, and brief notes on observed features. The survey appears to have been opportunistic; some villages were thoroughly surveyed, while well-known examples from other villages were omitted. Cousins continued this work until his death in 2015, collecting as many examples as he could, albeit with very brief details of each site.

Cousins' 2000 book *Lincolnshire Buildings in the Mud and Stud Tradition*, the only volume dedicated to mud and stud, was written to highlight the rapid loss of many examples of this local tradition in the late-twentieth century. Formatted as a 'coffee table' book for an interested local audience, it seeks to give a broad overview of the technique, rather than attempting an academic survey or analysis. As such, Cousins describes a stereotypical mud and stud building; although there is generous use of words like 'most', 'often' and 'usually', there is little discussion of the breadth of solutions to various design and construction questions. It is unlikely to be coincidental that Cousins' archetype is very similar to Withern Cottage, but this has led to confusion; as a late example, thought to date to the late eighteenth century, a number of features are seen (e.g. nailed joints, deal roof timbers) which are not commonly found, particularly among ones thought to be earlier in date (Field 1984, 95). The ubiquity of Withern Cottage amongst mentions of mud and stud (for example, Kořakowski and Baborska-Narožny) has encouraged the impression that the

technique belongs to the late eighteenth century, and that the framing is degenerate (for example, D. Stocker 2013, personal communication, 5 January).

Nevertheless, Cousins' book gazetteers surviving and demolished examples, providing a large and varied collection of external photographs which tacitly demonstrate the diversity encountered. The volume has an antiquarian air; it is concerned with collecting examples and assigning them dates. Cousins' later work, an unpublished expansion of his gazetteer (2015) makes no attempt at categorisation beyond survival and geographical distribution.

Unfortunately, as the only dedicated volume, other authors have heavily relied upon Cousins' book, with little apparent acknowledgement of the limitations of the source. For example, Kelso (2006, 85), writing about the early buildings at Jamestown, quotes just two sources for his assertion that the buildings were made of mud and stud; Cousins' book and an unpublished MA thesis (Deetz 2002), which was itself heavily influenced by the same volume. It is perhaps less surprising that the volume has influenced local attitudes; on several occasions, the author has encountered homeowners and professionals who insisted on interpreting buildings as representing Cousins' archetype, regardless of features, and were reluctant to acknowledge diversity within the tradition.

David Roberts – an academic view

A handful of other, academic texts have been published about mud and stud; of these, perhaps the best synthesis of the technique and associated building forms is DL Roberts' (1989) contribution to the second edition of Pevsner's *The Buildings of England – Lincolnshire*. Roberts' introductory chapter on 'Lesser rural building' – built on his detailed archaeological survey of a number of examples in his MA and PhD theses (1972, 1980) – includes a detailed description of the range of framing options he had observed (1989, 33–39). He considers details like bay width, scantling and the presence of mid-posts, along with roof and plan forms, and has a more sympathetic tone; he concludes the common trapped purlin roof is 'ideally suited to such economical carpentry' (1989, 34) and argues that the loss of so many agricultural buildings in the 20th Century reflects changes in farming, rather than the irredeemable decay of their structures (1989, 35). Roberts' studies may have allowed him to see mud and stud in its wider context; not just as a peculiar technique, but a response to the realities of the environments and social structures which were to be found in large parts of the county. His posthumously-published *Lincolnshire Houses* (2018) may have developed these thoughts further, had he been able to complete it before his untimely death.

A more embodied approach – pays, taskscape and dwelling

All of the above authors focussed on descriptions of how mud and stud is constructed, without paying great attention to the wider contexts of individual buildings. The geographer's concept of *pays* – 'definable cultural areas marked by broadly similar characteristics' (Lake 2007, 36) – allows us to think beyond the purely structural, and begin to consider building cultures, but the model very quickly encounters a problem.

Toynnton sits at the boundary of two very distinct *pays* – fen and wold – yet its identity is defined by embracing both. The concept is unpacked and problematised in relation to Historic Landscape Characterisation in Chapter 5.

Ingold's concept of the *taskscape* (1993, 158–159) – an array of interrelated activities which individuals inhabit – allows us to borrow from prehistory and anthropology to explore the temporal aspects of the landscape, but it is his *dwelling* model which offers a framework to explore the complete range of stimuli shaping mud and stud. He describes a place's character as depending on the sensory experiences a person has when they are there, identifying that these, in turn, depend on the activities in which the inhabitants are engaged.

'It is from this relational context of people's engagement with the world, in the business of dwelling, that each place draws its unique significance.' (2021, 238)

He goes on (2021, 244) to reject the differentiation between 'work' and social interactions identified by Durkheim and others, highlighting that our carrying out of tasks is inextricably linked to the interactions we have with others – even in the modern world of home working. This interconnectedness is central to his notion of dwelling –

'the forms people build, whether in the imagination or on the ground, only arise within the current of their involved activity, in the specific relational contexts of their practical engagement with their surroundings. Building, then, cannot be understood as a simple process of transcription, of a pre-existing design of the final product onto a raw material substrate.' (2021, 230)

This practical engagement with their surroundings is all the more intimate when the source of the materials with which people are constructing forms (in our case, buildings) are derived immediately from those surroundings, as is the case in mud and stud.

Other disciplines

Interest in mud and stud is not restricted exclusively to archaeologists and buildings historians. Marcin Kołakowski, an architect focussing on sustainable building, has explored the experience of living in mud and stud buildings in the present day, in the light of the potential of mud and stud as a sustainable technique for the future. His work highlights a disparity between occupants' perceptions of the houses as being 'cosy', and objective data on the warmth and humidity of a sample of standing mud and stud buildings.

Kołakowski emphasises how poor thermal performance of the properties is often less important to their occupiers than the sense of wellbeing experienced (Kołakowski 2019, 6-10). The work is firmly focussed on the present and future, so does not consider how the thermal qualities of the buildings may have changed with different ways of living. Nevertheless, it highlights the continuing relevance of mud and stud in conversations about sustainable architecture.

Roberts', Barley's and Cousins' work therefore helped to shape the research aims for this project, while Ingold's dwelling and taskscape models provided a framework for exploring the responsiveness and connection to the landscape which emerged as a significant motif. Kotakowski's investigations of modern occupation of mud and stud highlight both the potential of mud and stud as a building technique for the future, and the importance of understanding how the structure and use of these buildings has changed over time.

Research aims and objectives

Mud and stud is an enigmatic technique, and one where many basic questions – such as 'when was it used?', 'who used it?', even 'what constitutes mud and stud?' – are as-yet unanswered. The questions are important ones, but the scale of the county and the longevity of the technique make simple answers elusive. Cousins' collection of examples of mud and stud help us to identify how widespread the technique was; much more detailed analysis offers the opportunity to understand *what* it was.

This thesis therefore has a simple aim; to understand the building tradition, by asking the simple question 'what *is* mud and stud?'

In order to achieve this aim, the study has four objectives;

- To characterise mud and stud as it is seen in Toynton, grounded in close examination of standing buildings
- To integrate documentary and landscape evidence, giving a more holistic picture of the context in which the buildings were constructed, occupied and modified
- To interrogate the building methods used, and understand the reasoning behind design and construction choices
- To formulate questions about the characteristics of mud and stud in other locations, informing future opportunities for study and conservation

Why Toynton?

The scope of an MA by Research is clearly insufficient to conduct a thorough exploration of mud and stud. Therefore, a single parish was selected as a case study, enabling the development of an investigation methodology which can be applied to other places in the future. The twin villages of Toynton All Saints and Toynton St Peter (formerly one manor) offer an outstanding combination of standing mud and stud buildings, a landscape substantially unchanged since the seventeenth century, and a wealth of documentary sources.

The author was already familiar with Toynton, having family connections to the village, and had previously conducted a survey project on one of the subject buildings (Pape 2009b). This familiarity meant that

houses which had no outward sign of mud and stud were included, leading to a significant re-evaluation of mud and stud survival, and clarification of the challenges to conservation posed by the buildings' later histories. During the course of the study, the urgency of the work was highlighted when planning permission was given to significantly alter one of the surveyed buildings.

Asking the question 'What is mud and stud?'

The study of mud and stud has hitherto been characterised by the application of comparative methods of standing buildings archaeology; buildings were investigated and compared with examples in other counties, almost invariably resulting in being deemed inferior. By applying a combination of techniques to a study of one place, and beginning from a hypothesis that the buildings must have been 'good enough' as they survived in large numbers into the twentieth century, this thesis explores the reality of building in mud and stud in Toynton, the factors which influenced design choices, and seeks to recover the (conscious or unconscious) world-view behind the decisions which builders made. The study synthesises the breadth of information available from standing buildings, landscape and documentary sources to build a picture not only of the structural characteristics of Toynton's mud and stud buildings, but also the social, economic and environmental contexts in which they were constructed and occupied. In doing so, a fundamental difference from the conventional approach to building is identified.

At one level, mud and stud is characterised by a timber frame covered with laths and encased in daub, generally paired with a thatched roof. One could be much more specific, describing the manner in which joints were formed, types of roof employed, the different ways in which laths were shaped, and even the 'recipes' for daub. Such a characterisation would be very long, and full of 'sometimes' and 'either... or... or...'. However, this does not really get to the heart of what mud and stud is. Instead, it is more helpful to think of mud and stud's mindset; its responsiveness to the available materials, their quality, abundance or scarcity. It is inventive in the solutions found to specific problems, and adaptable to the needs of the initial and subsequent occupiers. As a result, the technique is far from static, evolving in response to changes in society, circumstance and the landscape. As we will discover, the philosophy of construction which emerges is not one where a building is designed and the materials moulded to fit, but one where the form is determined by the resources (labour, material, skill) available. It is, to use Ingold's phrase, a 'dwelling perspective', rather than a controlling one (2021, 186).

Brunskill's dismissal of mud and stud as 'quite inferior' to both earth walling and timber framing (see above, pg. 17) highlights another important problem; the question of terminology. Earth-based structures have a long and varied history in England, as does building in timber, meaning that phrases such as 'earth building' and 'timber framed' are susceptible to many interpretations. For example, EBUKI sees earth building as a continuum from 'mass earth' (for example cob) to 'framed earth' (for example wattle and daub panels).

Others, such as Mercer, see a clear boundary, with wattle and daub, and mud and stud, belonging to a timber framing tradition, albeit a 'poor quality' one in the case of mud and stud (1975, 113).

Figure 2 illustrates mud and stud's position at the interface of both earth building and timber framing, regardless of whether, or where, one perceives a boundary. It is indeed neither quite one thing nor the other. It is perhaps most helpful to think of it as a timber framing technique, because the frame is self-supporting – albeit one where the earth walls also contribute to the solidity of the building, rather than simply filling the gaps in the frame¹.

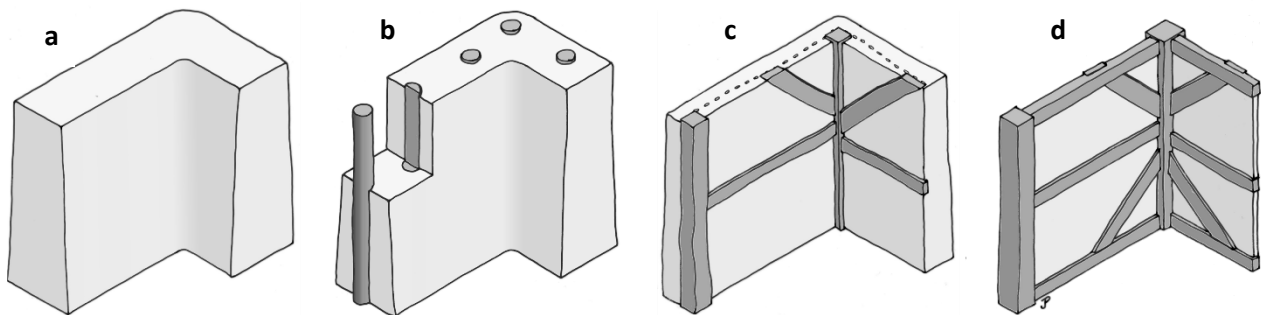


Fig. 2. A continuum of building in timber and earth
(a) mass earth – cob, (b) timber-laced earth (after Beresford 1987, 25), (c) mud and stud,
(d) framed earth - wattle and daub. (Drawings are simplified for clarity)

While it is difficult to precisely define what mud and stud *is*, it is easier to define some things which it *is not*. As seen in Figure 2, mud and stud does not employ solid earth walling; there is always a supporting frame. Thus, it is not closely related to the 'clay lump' tradition of neighbouring Norfolk, nor even to the cruck-framed clay dabbins of the Solway Plain (Longcroft 2006; Jennings 2003, 143). Equally, 'infill panels' of daub, as seen in wattle and daub in counties like Shropshire or Kent, have not been recorded²; laths are nailed to the outside rather than woven within the frame, while externally the 'mud' encases all the timbers (Fig. 3).

¹ Richard Harris' definition of a timber frame (that the joints are independent of gravity such that it could be picked up by a giant, turned upside down and put back down in one piece) stands true for mud and stud, except in cases where the rafters are not pegged to the wallplate (Harris, 1993, 5).

² Although see below, pg. 108, for an instance of something similar at Lincoln Lane Farmhouse, Sixhills

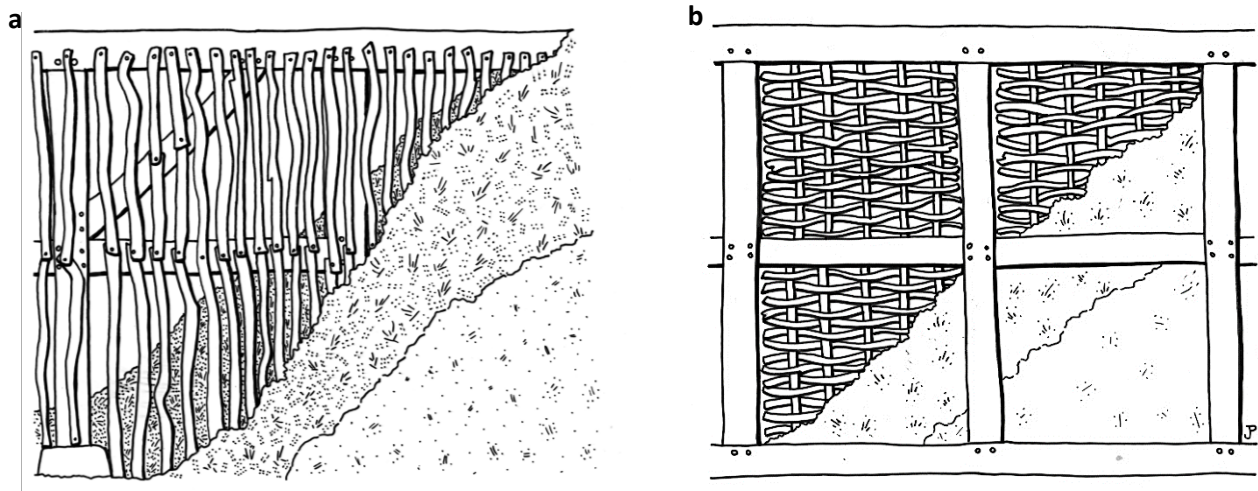


Fig. 3. Earth daubing traditions, viewed externally.

- (a) Mud and stud, showing laths nailed to timber frame with daub and waterproof coating
- (b) Wattle and daub, showing wattles sprung into the frame, daubed and waterproofed (daub omitted from interior for clarity). Redrawn and adapted from a drawing by David Hopkins (Cousins 2000, 6)

Mud and stud is unusual for occupying this liminal space between timber framing and earth building, but it is not the only English technique to do so. In Leicestershire, the 'mud and frame' technique found in the area south of Leicester shares a number of characteristics, particularly in the slight and simple framing used and the general character, of single storey, single-pile buildings with attics. There are, however, important differences, most notably the mass-built walling employed below the mid-rail, which is contained within the frame so as to retain visible timbers externally, but is 350-400mm thick inside the building. Above the mid-rail, vertical staves have horizontal riven laths nailed to them, onto which straw-tempered mud is daubed, again more thickly on the inner face than the outer, while roof forms are generally more complex and heavily scantled (Finn 2009, 64). This technique, therefore, appears to utilise a very similar set of resources to solve the same challenges as encountered in mud and stud, but finds a different solution to the problems. Little research has been done into mud and frame; future work might further illuminate the similarities and differences between it and mud and stud. There is also some evidence of a medieval tradition of earth and timber walling in Norwich (Atkin 1991, 245, 250), but this is only known from excavation so the precise interaction of the framing with the earth wall is unclear.

Methodology

Mud and stud buildings literally come from the landscape; their resources come from hedgerows, fields or fen and the earth in the garden. They must therefore be understood in that context. The conventional, comparative approach to buildings archaeology has proved unfruitful as mud and stud does not conform to the norms seen in other places. Therefore, the thesis approaches the evidence through the lens of the location and people to which the building belonged, exploring why they made their choices and how these

worked in practice. Nevertheless, the thesis utilises three principal conventional techniques; standing building survey, documentary research and landscape study.

Standing building survey

Three buildings were selected for non-destructive survey, representing a cross-section of the surviving buildings in the village in terms of type, apparent date and subsequent treatment. Of these, one had been previously surveyed (Pape 2009b) and then monitored until 2021³, one was inaccessible but had been briefly visited and photographed in 2018 and one was subject to a measured building survey as part of the MA. The fabric of all three buildings was investigated, with the earlier survey work reviewed and updated in the light of observations made over the subsequent 12 years. In each case, the form of the frame was established, along with the roof structure (where it survived) and the changing layout of the building. Additional work was carried out to characterise the wall fabric, where this was discernible in non-destructive ways⁴. For Mill Cottage and The Cottage, a measured survey was taken; this was not possible at Chestnut Cottage, although general dimensions were established. This allowed the chronology of each building to be constructed. Each was then interpreted in conjunction with documentary sources, illuminating the social context of the construction techniques observed and tracing and contextualising the physical and social changes to each building through to the present day. The buildings were then compared with each other, enabling the identification of continuity of a philosophy of building amongst the changes in construction methods over time.

Documentary research

Documentary research, particularly in a place as well-sourced as Toynton, provides the historical context which allows us to understand the surviving built evidence. However, because mud and stud buildings were largely constructed by their occupants, not wealthy landlords, it is rare for sources which describe individual buildings to survive. While Toynton is particularly fortunate that one early source does survive (LAO 5-ANC/4/A/14 1614), this study utilised a very wide range of sources and a number of methods.

Map regression was carried out for each of the buildings studied, as well as for the manor as a whole, providing spatial and chronological context for each building. Valentine's survey and maps of Toynton – the earliest surviving – provide a snapshot of the village at the beginning of the seventeenth century, accurately depicting the landscape and describing the buildings, as well as illustrating the nature of the manor at that time. The fourteen individual maps were georectified and combined into a single image of Toynton in 1614 (Fig. 12), enabling more detailed comparison with later maps. A detailed discussion of the reliability of the

³ The building in question belonged to a family member, so the author was able to maintain a watching brief on it until it was sold.

⁴ It is very difficult to ascertain the exact internal nature of an earth and timber wall, without damaging it. However, in the cases of Chestnut Cottage and Mill Cottage areas of daub and laths were exposed (see pp. 85 and 93). At The Cottage no laths were visible, but the distinctive character of the daub could be seen in the cupboard under the stairs (see pp. 68-9)

maps as sources was not possible within the word count, yet their exceptional nature and value for the individual buildings is clear; Appendix 2 contains this discussion, while Appendix 3, a gazetteer of mud and stud in Toynton, relates the standing buildings to the map depictions.

Statistical analysis was carried out on Toynton's probate inventories (Appendix 1). Sufficient numbers survive from between c.1540 and 1700 that patterns in room descriptions and uses could be discerned; coupled with evidence from the standing buildings, this illuminated the development in house plan and room use. The few cases where inventories could be positively linked with buildings – standing or demolished – further enhanced their utility.

A wide variety of other sources were consulted; these ranged from medieval court roll evidence for the role of women in Toynton's society to nineteenth century newspaper reports. By taking such a broad look at life in Toynton, the buildings could be placed in their societal contexts; through this lens, the idiosyncrasies and creativity of mud and stud can be understood as a pragmatic response to life in a very particular place.

Landscape study

As the study progressed, the role of the landscape in shaping the buildings and the lives of their inhabitants became increasingly apparent. While the landscape of the manor was crucial, the wider landscape shaped the particular way that mud and stud was expressed in Toynton. The geographers' *pays* model was evaluated as a possible method for characterising local expressions of mud and stud, but found too narrow in scope. Instead, Ingold's *dwelling* model (2021, 234) provided the lens through which an understanding of the connection between landscape and buildings could be gained, leading to a new characterisation model, the 'dwellingscape'.

By combining these three major techniques, a rounded picture of Toynton's mud and stud emerges. In the future, it will be possible to apply (and inevitably refine) the characterisation model to other settlements in different parts of the county, to better understand whether Toynton is exceptional, or a typical example of a Lincolnshire mud and stud village. As an MA thesis, there is inevitably insufficient space here to fully explore a tradition with spans over 7000 square kilometres and at least 500 years – let alone the Atlantic Ocean – but if a journey towards understanding is to be made, then the first step is significant.

Chapter 1 – Mud and Stud – a brief introduction

Mud and stud is indigenous to Lincolnshire, although the technique is occasionally identified beyond the county's boundaries. While – as this study demonstrates – there is great variety in the execution of the technique, it generally consists of a simple frame, usually constructed of waney, lightly-converted hedgerow timbers. Applied to this are laths (usually vertical), with the whole building then daubed with a mud mix so that no timber is visible externally. Roofs are of similarly waney timbers, and were originally thatched. There is much variety in building layout (Fig. 4), although floor plans are generally single pile, with any first floor being wholly or largely within the roof space. Roofs may be hipped, half-hipped or gabled, and are simple, often of common rafters.

Outshut extensions are common, as are later encasement in brick and re-roofing in pantile. Extant chimneystacks are generally axial and often associated with lobby entries, although gable stacks are also seen. In many buildings except those of late date, stacks are likely to be replacements for mud and stud smokehoods, which are attested into the eighteenth century (LAO DIOC/TER BUNDLE/LINCS/TOINTON ALL SAINTS 1707), with a few surviving today (pg. 67).



Fig. 4. Variety in mud and stud buildings in Lincolnshire
(a) Hop Hill Cottage, Aubourn, (b) The Cottage, Beesby, (c) White Cottage, Thimbleby,
(d) The Forge, South Willingham

When do they date from?

Archaeological dating of mud and stud is challenging, but there is some documentary evidence. The latest evidence for mud and stud in use is a newspaper advert from 1856 for a contractor to build four houses of 'wood and clay walls' (Stamford Mercury 1856, 2). The earliest yet-discovered reference to earth and timber building in the county is a court roll for Ormsby with Ketsby from 1458, which reports that a barn is 'defective in carpenter's work, stowering, walling, roofing and rigging' (Massingberd 1893, 253). Stowering appears to relate to stowers – poles cut from pollarded trees – (Sims-Kimbrey 1995, 294), a common source of laths for mud and stud walls in later periods. This short account thus chronologically describes the processes of building a mud and stud building; constructing the frame, adding laths, daubing, thatching the roof and ridging it.⁵

The nature of the timber used, fast-grown and waney, means that dendrochronology has yet to be successfully applied to a mud and stud building. Stable isotope dating, developed out of dendrochronology, offers a possible alternative as it requires fewer rings, but is not quite mainstream yet, and has not been tried on mud and stud (Miles et al. 2019, 85).

The other usual dating methods used by buildings archaeologists depend on typologies – chronologies of development tied to dated examples. These clearly rely on particular features being present. While some features which have established typologies, such as scarf joints, are common in these buildings, the simple techniques used (common rafter roofs, few mouldings and simple bracing schemes, for example) rarely lend themselves to typological dating. Furthermore, where diagnostic features *are* found in dated buildings in Lincolnshire (for example the staggered butt-purlin roof at Lincoln Lane Farmhouse, Sixhills, dendrochronologically dated to 1530-1555 (Field et al. 2022, 23, 27)) the date frequently falls outside the 'normal' range for the feature.

A further challenge to dating Lincolnshire buildings is the recycling of timbers. Lincolnshire has long been a county with few trees; at Domesday Rackham calculates that Lindsey and Kesteven were 4.0% woodland, whereas Holland was the least wooded part of the country, with just two individual woods. In contrast, the average across the Domesday survey was 15%. By 1895, Rackham (2001, 50–51) calculates that Lindsey and Kesteven had dropped to 3.0%, while Holland's coverage was '0.0%'. In 2023, Lindsey and Kesteven's coverage was calculated as 6.2% and 6.3% respectively, with Holland rejoicing in 2.2% (Friends of the Earth 2023). Clearly, timber, especially in large woodlands, was always a scarce resource for all levels of society. This is reflected in the ubiquity of recycling, which also appears in fully framed and later brick and stone buildings (e.g. Manor Farm House, Thorpe on the Hill (Stocker et al 2015), and even polite structures such as Aubourn Hall (Franklin et al. 2002)).

⁵ With thanks to Mark Gardiner for bringing this source to my attention.

'Hovels'⁶ were ubiquitous in Lincolnshire, including in the fens where buildings had to be removed before Michaelmas each year (Brears 1929, 75–76). They are often listed in probate inventories, where they are seen as chattals rather than buildings (for example, Thomas Martin of Aubourn's inventory included 'the hay and the hovell under it' (LAO INV/79/15 1590)). If people took a similar attitude to their dwellings, seeing them as a kit of parts as much as a completed structure, then this propensity to reuse timbers may be driven by more than a lack of suitable green timber.

A spectrum, not a stereotype

The above description may appear vague but, as we saw in Cousins' work, attempts to list the features of mud and stud buildings have resulted in over-simplification. Mud and stud buildings display a remarkable flexibility of form (Fig. 4). Some examples closely resemble orthodox timber frames with a complete covering of mud, while others have extremely waney timbers, with poorly-formed joints relying on bolts. Barley (1961, 81) even refers to 'a few mud-walled houses [which] have escaped rebuilding', although he does not give examples, and these would not fall within the category of mud and stud. Equally, almost everything can be achieved in several ways (for example, laths can be attached to the frame with nails, lashed on, or even be unattached).

This spectrum of expression occurs geographically and chronologically. Examples of mud and stud buildings survive from most areas of Lincolnshire (Fig. 5)⁷, although the distribution of features is unstudied. Equally, as a technique, mud and stud declines in status over time. In the middle of the sixteenth century the Duchy of Lancaster commissioned a new courthouse for the Honour of Bolingbroke in mud and stud (White 1984, 89), but by the end of the eighteenth century it was only considered suitable for cheap labourers' housing and farm buildings (Young 1799, 56–58).

It appears that an increasing availability of brick (and, in some areas, stone) underpinned this decline. Brick appeared surprisingly early, with buildings like Thornton Abbey (1382) and Tattershall Castle (1432-48), followed in the sixteenth century by houses like Doddington and Aubourn Halls (Robinson et al. 1999, 13–16). The 'Fen Artisan Mannerist' style flourished in the county c.1615-1675, and this trend of expanding access to bricks continued through the eighteenth century. By the dying days of building in mud and stud, brick cottages were ubiquitous in all areas of Lincolnshire outside the stone belt (Fig. 6).

⁶ Impermanent farmyard shelters or raised granaries which were taken down when not in use.

⁷ Some of the gaps in distribution, especially in Axholme, are likely to represent replacement before the age of photography, rather than absence.

Mud and stud is, therefore, a simple technique, which can be applied in a wide variety of ways in a huge variety of contexts. This thesis will explore how the ways it was used were intimately connected with the landscape and society.

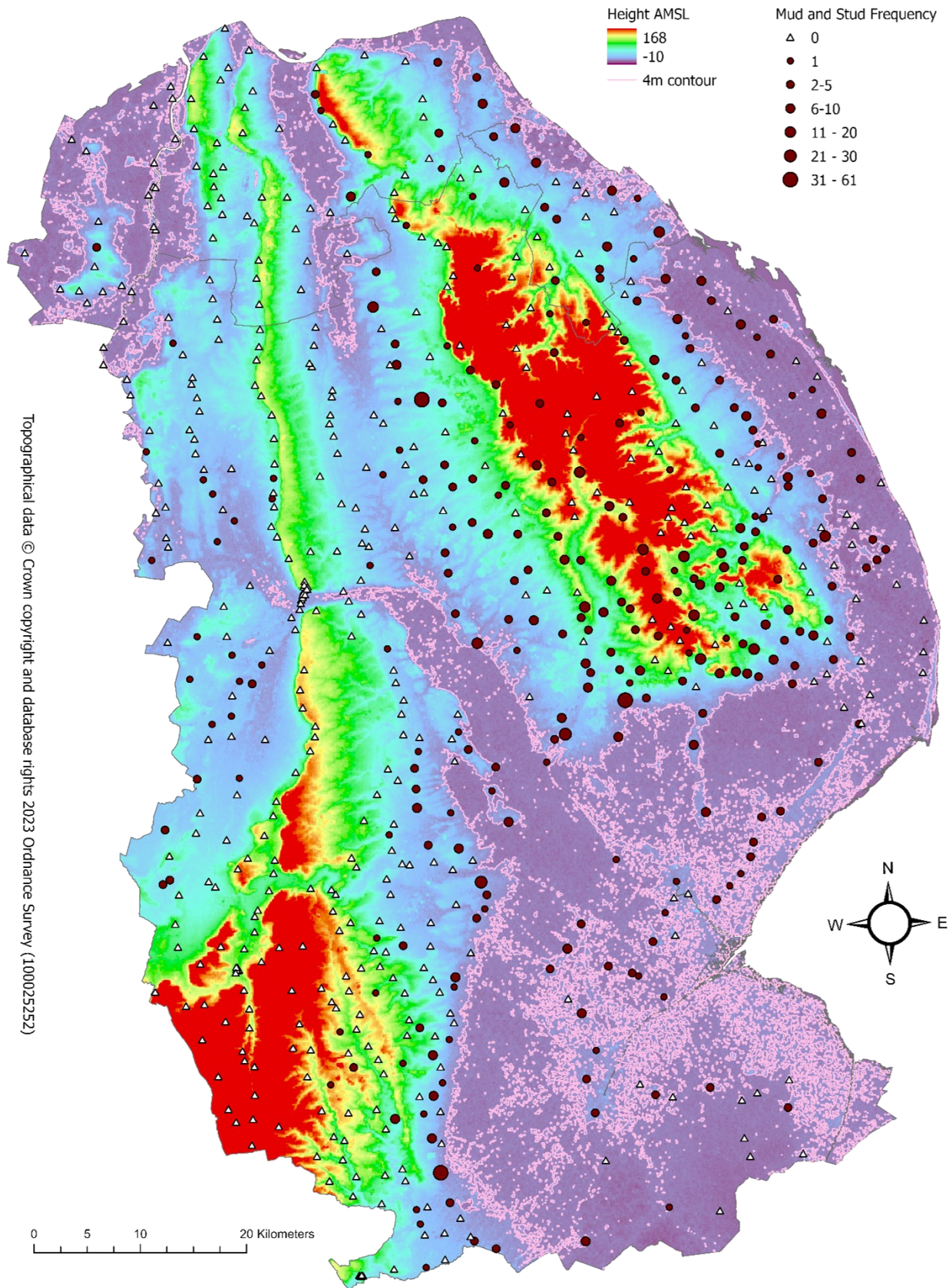


Fig. 5. Topographical map of the frequency and distribution of known mud and stud buildings

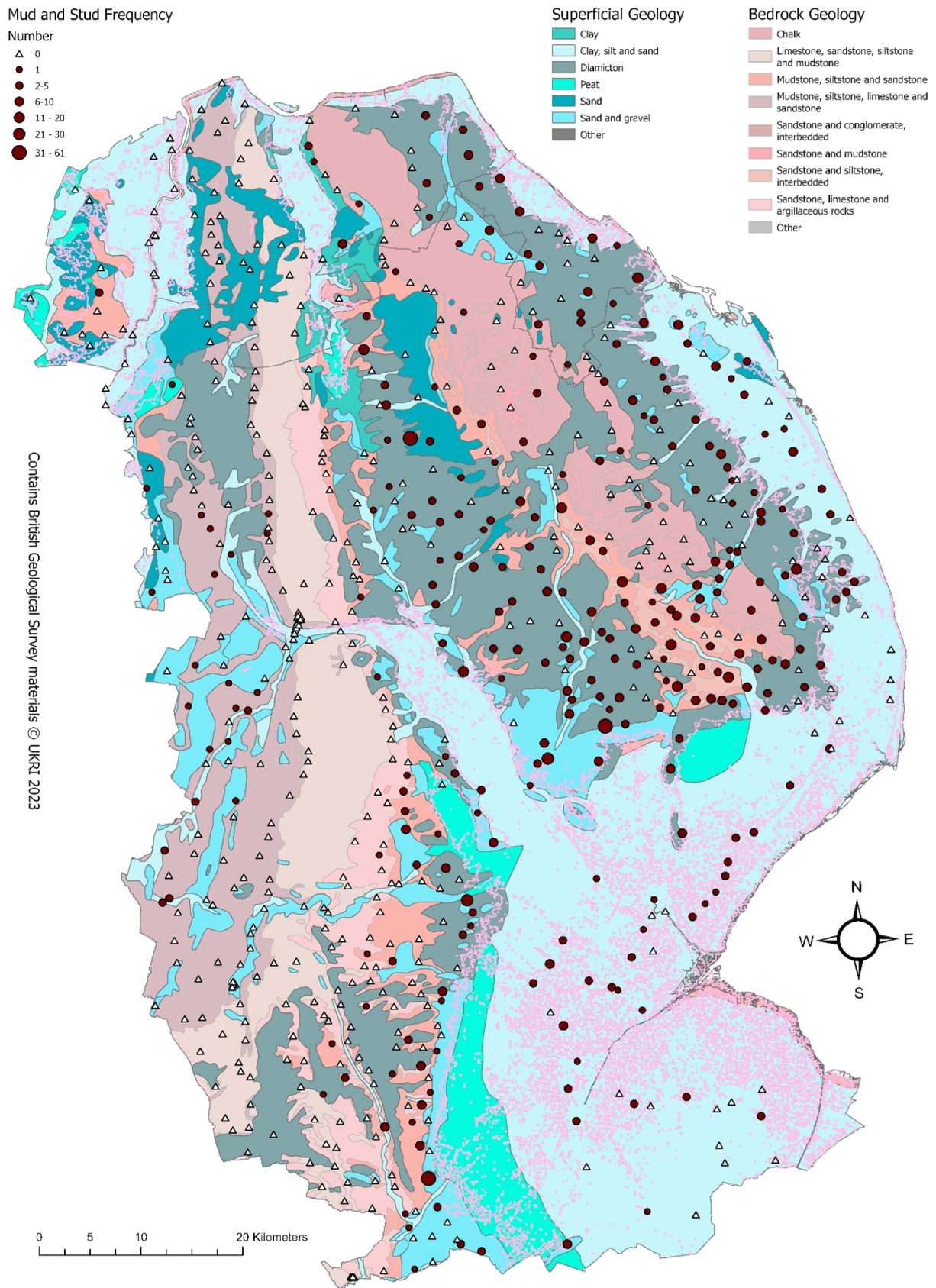


Fig. 6. Surface geological map of the frequency and distribution of known mud and stud buildings

Chapter 2 – Case Study – Toynton All Saints and St Peter

In 1614, Robert, Lord Willoughby de Eresby, commissioned Henry Valentine to survey his manor of Toynton. He was interested in the resources on his property, who held them and where they all were, and dwellings were an important part of his enquiry (LAO 5-ANC/4/A/14 1614). The manor was just one of a large number held by the Willoughbys, who were just one of a large number of landowning families in seventeenth century Lincolnshire. Toynton was not apparently particularly special at the time, although Willoughby was prepared to invest in a beautiful document to display his findings (Fig. 7). Today, however, Toynton is important for the variety and richness of its evidence for what it was like from the medieval period onwards – in the landscape, documents and standing buildings – allowing us to contextualise



Fig. 7. Title page of Henry Valentine's 'The Surveighe of the Mannour of Toynton in the Countie of Lincoln' (LAO 5-ANC/4/A/14 1614, 1)

both the physical evidence and the documentary. This fossilised landscape allows the 1614 survey's maps to be read and understood in a way not possible in other places.

In this chapter, I will explore the connectedness of Toynton's housing and people with the landscape they lived in through the documentary and landscape evidence. The following chapter zooms in on a small part of the village, the three surviving mud and stud buildings there, and the story they tell about the importance and development of mud and stud as a building technique in that place.

Toynton's context

The twin villages of All Saints and St Peter lie 2km south-south-west of the market town of Spilsby, in East Lindsey, Lincolnshire (Fig. 8). The parish, which almost exactly coincides with the manor of 1614, spans the liminal area between the Wolds and the Fens. At its highest, most northerly point the land rises to 50m, while at its lowest, southern edge, it drops a little below sea level. All Saints is built on a promontory of high land, between the steep-sided valley of Toynton Beck, marking the parish boundary with East Keal to the west, and the wider bay of low ground to the east, between Toynton, Spilsby and Halton Hologate. St Peter sits at the foot of the slope, close to the historic edge of the fen, adjoining Halton Hologate to the east. Running east-west, c.600m to the south of St Peter village, is the East Fen Catchwater Drain, dug in the early nineteenth century to drain the fenland (Bennett and Bennett (Eds) 2001, 72), but a much earlier attempt to protect marginal land from winter flooding by embanking Toynton Beck is also still visible (LAO 1-ANC/3/18/12 1339).

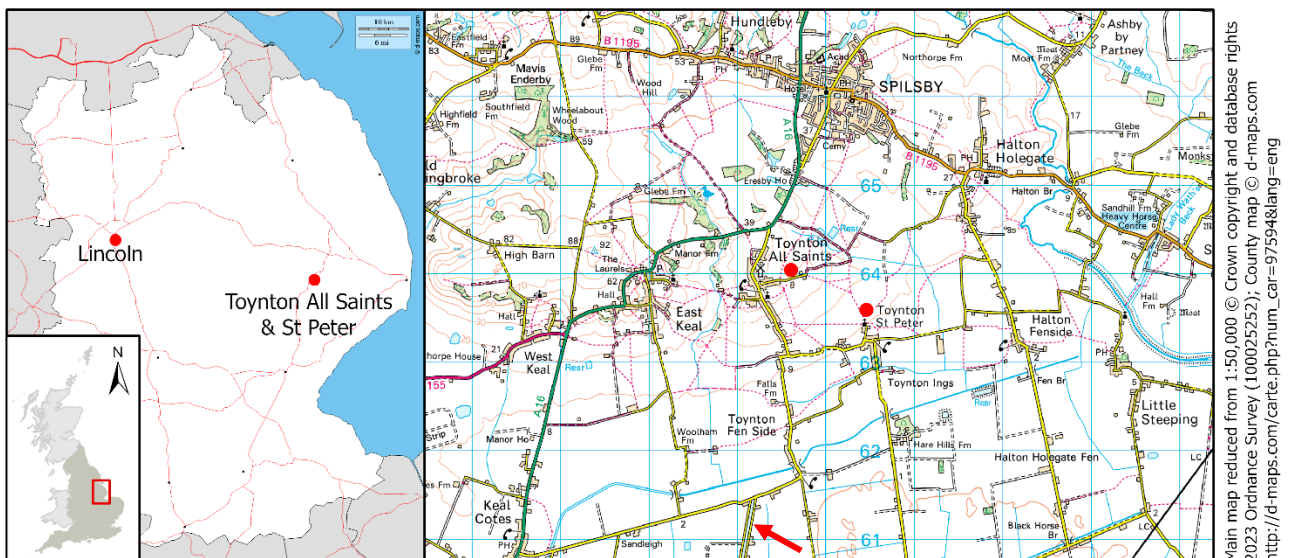


Fig. 8. Location of Toynton All Saints and St Peter

The Catchwater Drain runs east-west, south of Toynton Fenside. The red arrow indicates Hobhole Drain

This liminal position between fen and wold conveyed a number of advantages; there was plenty of land for arable in the northern part of the manor, along with a large number of small enclosures around each village, used for pasture from an early date. By the beginning of the seventeenth century there were seven open fields – four in St Peter (Witham, Haverham, Flaies and East Fields) and three in All Saints (North, Braygate and Woollam Fields), but lidar images (Fig. 9) reveal that many of the closes, especially those around Toynton St Peter, had formerly been part of the open fields. Further south in the manor, arable land gave way to fenland, with managed water meadows at Cowcrofts and Outcrofts as well as East and West Ings Meadows. Retting pits are evident in the lidar at the edge of the fen at TF397 619, and in the sixteenth century there were two water mills; one, the Tousemyln, on Toynton Beck to the north of Woollam Field (TF394 626), which had fallen out of use by the beginning of the seventeenth century, and the other, Peck Mill, upstream where the beck crossed the road from All Saints to East Keal (Rudkin 2001, 7) (TF388 638); this mill operated into the early years of the twentieth century. At the same time, the settlements enjoyed rights of common in the three local fens – East, West and Wildmore – with the modern parish including adjacent parts of East Fen, incorporated after the nineteenth century drainage. In the following section, we will explore what went on in this varied landscape.

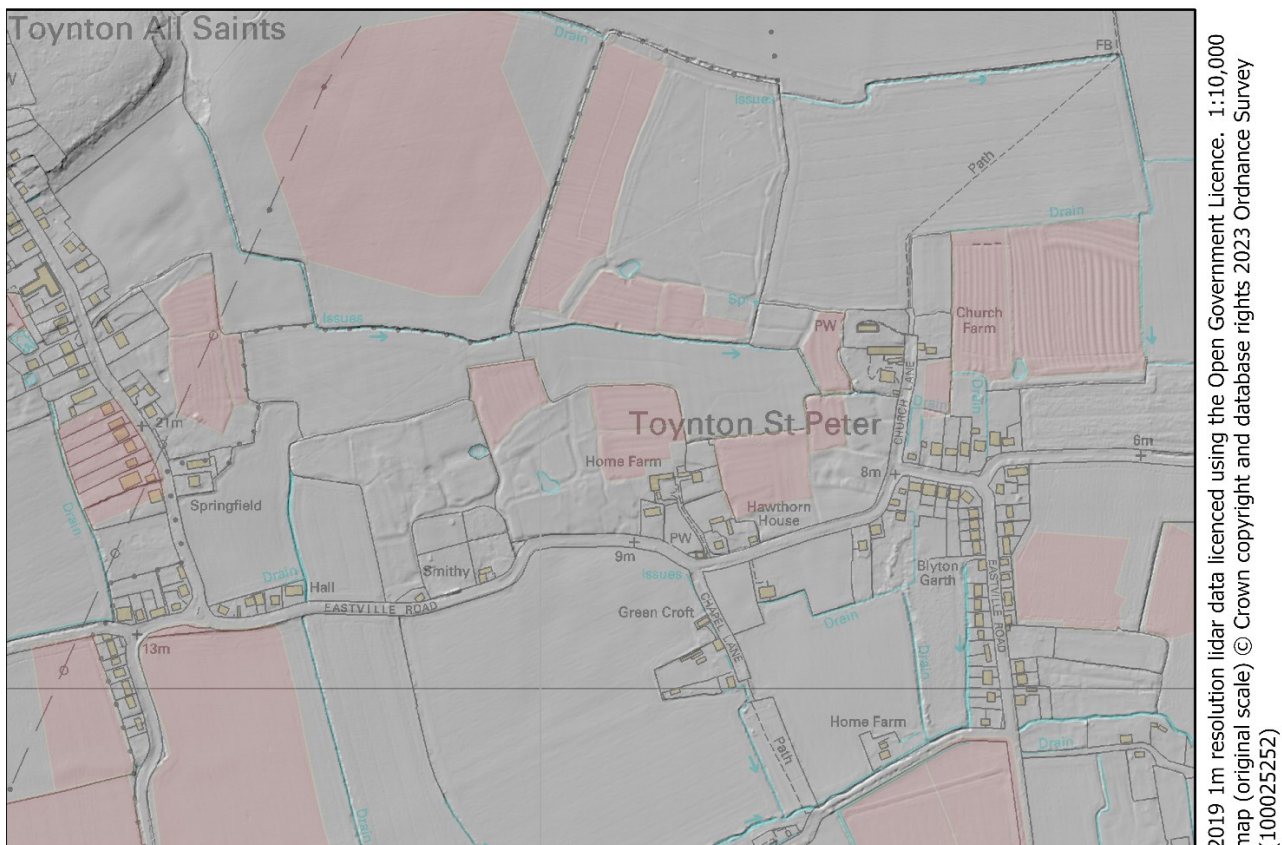


Fig. 9. Processed lidar image depicting Toynton St Peter village, showing areas of ridge and furrow in later enclosures. Areas shaded red indicate ridge and furrow visible on this lidar, or a 1978 aerial photograph (Fig. 83)

Documentary History

The Medieval period

People have lived in Toynton for a very long time. Evidence of human activity – from the Mesolithic onwards – tends to occur close to, but not at, the fen-edge. This pattern continued through the Roman period and is reflected in the position of St Peter village today, while All Saints' promontory may have been less heavily settled in prehistory (Lane et al. 1992, 37–67). Nevertheless, both locations had easy access to the resources available in the fens, as well as higher, drier land on which to grow crops. As we shall see, this access to the varied resources of fenland and dry land shaped the building techniques.

Domesday lists three manors at Totintun, in the Soke (wapentake) of Bolingbroke⁸, one held by Eskil and two held by Stori of Bolingbroke. Stori's two manors appear to have later been amalgamated into the single manor of Toynton, while Eskil's holding, sokeland of Spilsby, probably equates to the Manor of Bacon Hall, intermingled amongst the Toynton land. By the fourteenth century, Toynton was one of many manors held by the Willoughby de Eresby family. Eresby manor adjoined Toynton to the north-east, and was the seat of the Willoughby family from 1302 until the 1530s (Pacey 2010, 1). Toynton was, therefore, under the close control of the barons, with the Fulstowe family, described as 'of Toynton' from at least the 1450s, their trusted aides from the 1380s (LAO 2-ANC/3/A/4a 1380; PRO C 1/19/424 1452).

During the later medieval period, the Toyntons were prolific producers of pottery. Sometime after 1200 an industry developed and lasted into the early seventeenth century (Platts 1985, 130–131). At least 17 kiln sites are known in the villages, with several more suspected (Field 1996, 2). This industry appears to have been remarkably egalitarian; in 1364 one Juliana Tagg rented two crofts from the lord, negotiating a clause which said that

'neither the lord nor his heirs shall disturb the said Juliana from digging and selling clay in the said croft for cooking pots to whomsoever she pleases' (Le Patourel 1968, 114).

Forty-five years later, Alice Attwell was presented for digging clay to the detriment of the road (Rudkin 2001, 5–6). The industry was certainly influential, with Toynton-ware common in sites across the county and beyond. While the potters may not have been very wealthy - most of them probably also farmed - a significant proportion of the labour in the villages appears to have been available for pottery, indicating that farming was above subsistence level (Platts 1985, 130). There is also evidence of tile manufacture towards the end of the period (Healey 1992, 5), while at least three brick-built kilns (one archaeomagnetically dated to 1475-1525 (HER MLI41034 1967)) have been excavated. Although no evidence for brick-making has yet

⁸ There are, confusingly, four villages called Toynton in Lincolnshire. Another pair, High and Low Toynton, lie c.12km north-west of Toynton All Saints. Fortunately, they are in Horncastle wapentake, but confusion is common; both pairs were known as Upper and Lower Toynton (or Superior/Inferior) at times, and All Saints/St Peter were occasionally called High/Low Toynton.

been identified in the villages, it seems unlikely that this clay-working population would buy them from elsewhere. Early, but undated, bricks appear in the western gable of The Cottage (Fig. 10); *if* these are truly early, they may be an ostentatious adoption of a high-status building material, perhaps when some were available from the kiln excavated a few metres further along Chapel Lane (HER MLI41033 1978).



Fig. 10. The Cottage's western gable showing many repairs, but in early brick. Note the straight-line joint with the secondary outshut to the left (rear)

There are a few hints in the excavated record of what buildings were like in Toynton in the later medieval period. Three buildings from before the sixteenth century have been excavated, all of which displayed features consistent with techniques used in the extant buildings in the village; padstones, postholes and stone plinths with no evidence of wall fabric reflect the use of the surrounding soil and hedgerow timber (Healey 1992, 3–5; Field 1996, 6; Parker 2014, 4).

The glimpses we get of the individuals who called Toynton their home during the medieval period are not, however, of subservient serfs; rather they are independent, entrepreneurial, and not always inclined to comply with the wishes of their Lords. When, in 1339, there were attempts to reclaim the southern part of St Peter from seasonal flooding, a list had to be compiled of those who had refused to help (LAO 1-ANC/3/18/12 1339). Juliana Tagg, and her clay-digging business, appears to have belonged to a society where women could be independent and even shrewd in their dealings with 'the hierarchy' (Le Patourel 1968, 114), while the sheer number of pottery kilns found in Toynton, and the hints that they were also being supplied by potters in East Keal (Rudkin 2001, 4–5) suggest that a significant proportion of Toynton's population were engaged in an economy based on more than agriculture. Rudkin also cites cases from the fifteenth century court rolls where individuals were presented for digging clay pits on villein land without licences; clearly the landowners were keen to profit from the industry too (Rudkin 2001, 5–6).

Toynton's soil was far more than just figuratively important to its people; fired, it was the fabric of their commercial potteries and tile-making, unfired it fed their animals, sustained their crops and provided the shell of the buildings they lived and worked in. The fenland was equally vital, providing peat to fire the kilns, fuel and thatch for their homes, grazing for their livestock and rich variety for their diets. This connection to the land around them permeates their lives; when, much later in the Elizabethan period, the

Fen Laws of Common were codified they described almost every aspect of life, from the keeping of livestock to rules around fishing and fowling; the harvesting of seasonal resources to the digging of peat and clay (Brears 1929, 58–64, 74–77). In the following sections we will see the importance of this connectedness between their ways of living, buildings and the landscape; to the extent that they were prepared to defend them violently when threatened.

The Reformation

The early post-medieval period was an unsettled time in Toynton. During the Lincolnshire Rising it seems the inhabitants (including the parson) were quick to respond to the call to arms, with grievances against the lord of the manor – who had fined her tenants and raised rents – in addition to wider concerns about their church treasures (Gairdner (Ed) 1888, 400; Gunn 1989, 60–61). The protest against Mary, dowager Lady Willoughby appears to have been successful, with profits from the estates declining, suggesting that a compromise was made on rents. Her daughter, Katherine, inherited Toynton when she married the Duke of Suffolk, moving from Eresby to Grimsthorpe in the south-west of the county. She retained Eresby Place and Toynton Park but appears to have been a more sympathetic landlord (LAO 3/ANC/8/1/3 1571, 95; Leland and Smith 1907, 34 (folio 50); Pacey 2010, 2).

There is little concrete evidence for the nature of housing in Toynton in this early post-medieval period. Probate inventories of the mid-sixteenth century paint a picture of small houses, generally with two to six rooms – hall and parlour might be augmented by chamber, milkhouse, buttery and/or kitchen (Appendix 1). In all but the wealthiest households beds are found in the parlour, with chambers used primarily for storage. The method of construction of these buildings is not mentioned, but the construction at Bolingbroke in 1559 of the Duchy of Lancaster's new courthouse is documented (White 1984, 89–90). This building, 40' by 20'6" (c.12.1m by 6.25m), is larger than most mud and stud dwellings, but clearly recorded as being of that fabric. This was a prestigious building, administering the rents and fines of the Duchy's tenantry over a wide area (albeit none in Toynton), and involved considerable expense. Yet it was also a construction technique indigenous to its area. It is almost inevitable that, while the execution might not be as polished, the housing of Bolingbroke Soke used similar techniques.

In the years around 1590, several of the settlements around the south-eastern edge of the Wolds suffered catastrophic crashes in their populations (Hodgett 1975, 194–195). In Toynton, 1587–88 was disastrous; 78 burials were recorded, with only 15 baptisms and four marriages (LAO Bishops' Transcripts). Taking the 1563 Bishops' Census figure of 88 households as an assumed population, and using a multiplier of 4.9 persons per household (as suggested by Dyer (1992, 25)), this represents around 18% of the total population dying. Even worse years were recorded in Halton Hologate (c.24%) and Little Steeping in 1590–2 (c.30%) and Great Steeping in 1591–3 (c.30%) (LAO MF4/314; LAO MF4/428; LAO MF4/497). Bizarrely, though, East Keal does not show signs of experiencing a similar crisis.

Whatever caused this crash, it inevitably affected the housing in Toynton as demand reduced. In a number of closes – particularly in St Peter – surviving ridge and furrow shows that the land had originally been part of the open fields (Fig. 11). It is possible that, with the reduced population, some of the land nearest the village was quietly enclosed to reduce the burden of cultivation.⁹ Equally, the housing stock in Toynton reduced dramatically, from 127 houses recorded in 1614 down to 73 occupied at the 1663 Hearth Tax assessment; perhaps, even in 1614, many of the houses were unoccupied as a result of the 1590s’ population crash (PRO E179/333 1663).



Fig. 11. 1978 aerial view of Toynton St Peter, overlaid with ridge and furrow visible on this image or the 2019 1m resolution Lidar. Also marked are the open fields as they were in 1614, and areas of former open field with their date of enclosure

⁹ Some of this enclosure close to the settlement certainly happened between 1614 and the Enclosure map of 1774.

At the start of the seventeenth century, therefore, Toynton's housing was reducing in number, but there is far greater clarity about what it was like. The occupants of the buildings were no less independently-minded than their forebears, and there is evidence that in this period their landlords did not play a part in the building or maintenance of their houses. In the next section, we will see that construction techniques remained conservative, as we step inside some of these houses to explore the way that the buildings were used and adapted.

The seventeenth century

When he commissioned the 1614 Survey, Katherine Willoughby's grandson Robert had an ancient connection to Toynton, but not the same familiarity as his grandmother. The document Valentine produced is a beautifully-presented record of all of the land and tenants in the villages of the Manor of Toynton, illuminated by fourteen detailed maps of its subdivisions (Fig. 12) (LAO 5-ANC/4/A/14 1614). Sir Robert was interested in the housing stock and some of the houses were described in detail, including distinguishing between boarded chamber floors and earthen ones. Twenty five residents of Toynton acted as jurors for the survey, which also asked questions about whether any of the tenants or freeholders had encroached on the Lord's waste, whether there were any bondmen or -women (and, if so, what their yearly value was) and whether the Lord had any turves, broom etc which could be harvested and sold.¹⁰ The survey was clearly made for display (Fig.7), but was also a practical record of Robert's assets. As such, it provides a clear picture of the housing stock in Toynton at the beginning of the seventeenth century. One hundred and twenty-seven houses are recorded in the survey, all apparently of mud and stud, but not all the same. The images of the buildings appear to be little portraits of the structures,¹¹ creating an impression of two spacious villages with neat houses surrounded by old-enclosed closes, set in their open fields, with resources of meadow, pasture and fenland beyond.

The catalyst for the survey was probably Robert's acquisition of a moiety of the manor of Bacon Hall, constituting all the land in Toynton which did not already belong to him.¹² Apparently this process had taken some time as since 1612 the manor court rolls had been for 'Toynton and half of Bacon Hall' (LAO 1-ANC/3/26/19 1612).¹³

¹⁰ The answer to all of these questions was 'no', with the exception of two small encroachments, one of which was by a tenant of the King and had been paid for already.

¹¹ Appendix 2 discusses the reliability of the maps as a visual representation of the buildings.

¹² The details of the acquisition are sparse; this moiety had been held before 1614 by William Pearsall, in the right of his father, Ralph, but was then granted to Robert, Lord Willoughby (PRO PROB/11/49/297 1567; LAO MONSON/7/43 1641) The other moiety seems to have been retained by the monarchy.

¹³ Willoughby surveyed several of his manors in the early years of the seventeenth century, but they are working documents without maps, title page or the introductory material explaining the survey process. In 1609-10 he made a survey of 'all his estates', although Toynton is not included; he also surveyed East and West Keal (1615), Great and Little Steeping (1615) and Hasthorpe (1616).



Fig. 12. Composite, georectified plan of Toynton in 1614 using Henry Valentine's fourteen individual drawings. Toynton Beck, embanked in 1339, may be seen crossing the lower middle of the map, flowing west to east. While the houses are rather small at this scale, the two churches may be discerned

This unification of lands seems to have done little for the co-operativeness of the inhabitants. Three years later, the tenantry at Toynton were still difficult – an attempt to raise rents locally led to the comment that the tenants were ‘very tractable, only some of Toynton stand the hardest with me’ (LAO 8-ANC/8/9 1617) – and they were still making trouble when Sir Anthony Thomas attempted to drain East and West Fens in 1636 (Bruce (Ed) 1867, 32). However, this opposition to the drainage of the fens was not merely trouble-making. The fens were, as we will see, crucial to the survival of villages along the fen-edge and perhaps even further inland. In a period where the fens provided the resources for building, grazing, fishing, fowling, collection of turves and fodder, clay- and sod-digging (Brears 1929), the inhabitants of the fen-edge were genuinely fighting for survival. With the fens, the population could live above subsistence level; without them, they would be reliant on generating enough surplus to purchase the resources they no longer had access to, or on the generosity of their Lords to provide them.

The danger is highlighted by the lack of involvement of the Willoughbys in housing their tenants. The 1614 survey records the terms under which the Indenture-holders held their land. In each case, there is a clause requiring that the messuage be left in ‘good and sufficient repair’ (LAO 5-ANC/4/A/14 1614, 11–19); there is equally no surviving evidence of the Willoughbys carrying out any repairs on their tenants’ houses. It appears that houses were the tenants’ responsibility; Maurice Barley (1961, 87) interpreted the fact Henry Valentine had noted the rooms in some of the houses (but not all) as evidence of the lord’s interest in the potential to raise rents on tenant-improved properties – perhaps these were the residents who ‘stood the hardest’ in 1617. With the fens gone, and the Willoughbys so disengaged from the housing situation, the population would be hard-pressed to maintain their buildings, let alone build new ones. The failure of the attempts to completely drain the fens in the 1630s must have been an enormous relief to the people of Toynton, but it did not signal a new era of stability.

The picture of Toynton in the middle and later seventeenth century is one of decline. Many of the tenantry’s grievances against the draining of the fens were, by 1640, directed against Sir Robert, now the Earl of Lindsey. In about that year, eighteen Toynton men and seven Steeping men signed a declaration that they had never been consulted, nor given consent for the improving of the East Fen, on which seven thousand acres of the best land ‘have beine & are with held from us’ (LAO HILL/22/1/7/18 1640). While Lindsey raised a force for the King in the areas he controlled at the outset of the Civil War, Clive Holmes (1980, 158–160) suggests that he may have concentrated on his manors in Kesteven. Certainly, it seems unlikely that the population of Toynton would have willingly answered his call.

The parish records peter out during the Commonwealth, so it is not possible to distinguish emigration from the manor from internal population decline, but it seems that Holmes’ observation (1980, 19) that the population of the southern wolds declined by c.25% in the seventeenth century holds true for Toynton. As seen above, by the 1663 Michaelmas Hearth Tax collection the population had diminished considerably

from its 1614 level; only 73 buildings were still occupied, of which 88% had a single hearth (PRO E179/333 1663). That same year, just one marriage and 10 births were recorded, but 13 burials occurred in Toynton (LAO Bishops' Transcripts).

Nevertheless, some families were clearly maintaining or gaining wealth; in 1569 William Courtis' probate inventory was valued at £11-5-0, in a house with just hall and parlour (LAO INV/49/70 1569). By 1614, John Curteys held 16 dwellings, one of which was described as 'one close called High Bragate Close wherein his house standeth'. The picture (Fig. 13) implies a two-storey building, apparently of similar materials to the others. Ten years later, Richard Curteise, gent, left an inventory worth £374-14-0, in a house consisting of at least eight rooms, including the 'new lodging chamber' (LAO INV/130/435 1624). By 1679, another John Curtis, gent, left an inventory worth £345-8-2 with twelve rooms (LAO INV/180/589 1678). Whether or not these individuals were living in the same building, the family's wealth and material goods clearly improved during the early seventeenth century.

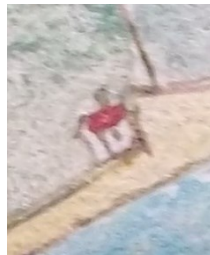


Fig. 13. John Curteys' house on the 1614 map

At the same time, the average number of rooms in Toynton houses remained remarkably consistent.¹⁴ Figure 14 depicts the number of domestic rooms per inventory, over time, from the earliest inventory until 1700, after which very few survive.¹⁵ While the size of the largest houses follows an upward trend through the period, few houses ever have more than five rooms. The smallest dwellings, of one or two rooms, remain common until the very end of the seventeenth century; these buildings almost invariably consisted of a hall and a parlour. In buildings of three rooms, the extra room was most likely to be a chamber, until the end of the 1620s when it became much more common that the third room was a service room, almost always for dairying.

Houses of four rooms almost always had a hall, parlour and chamber, with the fourth room being a service room – before the late 1620s, this might be a milkhouse, buttery or kitchen, after that date, it was generally a dairy. It is not until houses have six rooms that a second chamber becomes common; five-roomed houses

¹⁴ See Appendix 1 for summaries of each inventory.

¹⁵ The 'single room' houses include those where only one room is mentioned, as well as inventories which record the possessions of someone living with relatives, unless the number of rooms was explicit. Thus, the number of one-room houses is inflated, but reflects the experience of the individuals who were living in a small part of a larger house.

tend to be hall, parlour, chamber and two service rooms – often milkhouse/dairy and kitchen or buttery, although ‘backends’ are also mentioned (outshut rooms to the rear – see Appendix 2). These patterns reflect the rooms seen in surviving buildings (although clearly these will have experienced further alteration later on). What all these descriptions mask, however, is the fact that a house with hall, parlour, two chambers and a couple of service rooms could very easily be a two-bay cottage with outshuts – and thus look fundamentally similar to a two-roomed cottage of considerably lower social status.

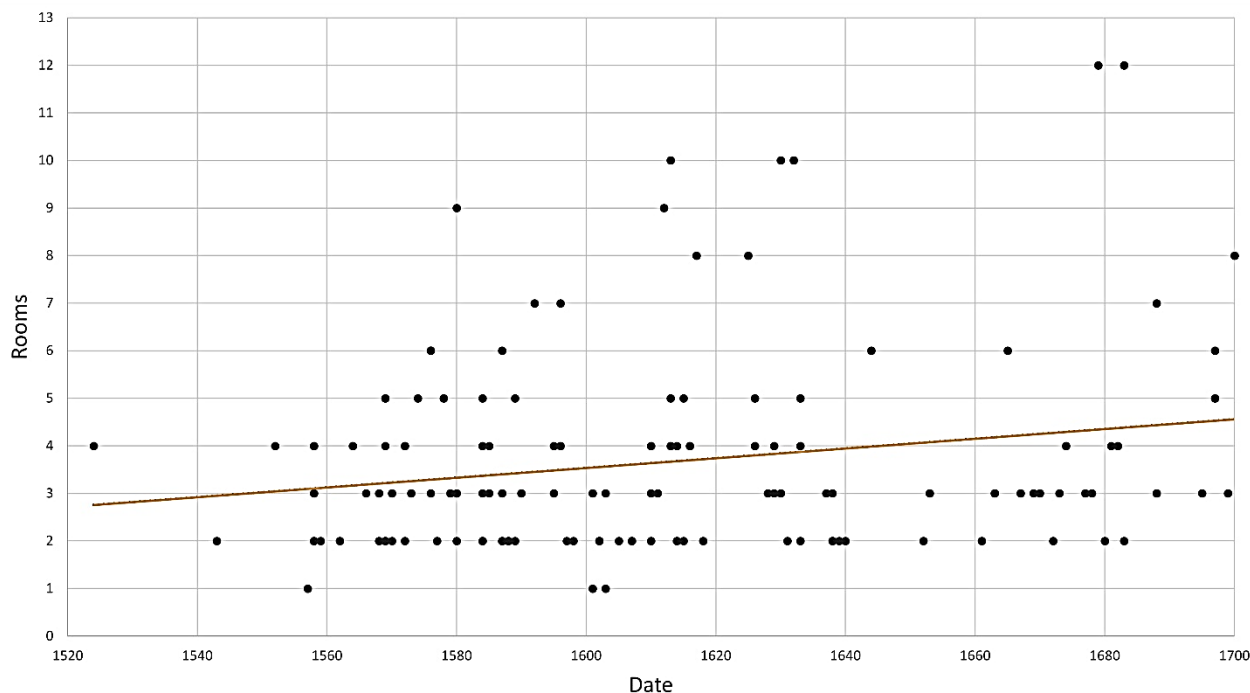


Fig. 14. Number of domestic rooms recorded in Toynton inventories over time, with linear trendline

Although the data is patchy, and the usable surviving inventories number just 144, some more general patterns are visible. After the 1620s, several things change; the most noticeable is the shift from referring to the dairying room as a ‘milkhouse’ – as it was consistently in the 1614 survey, and in inventories from 1570 – to a ‘dairy’. The first instance of ‘dairy’ occurs in Richard Curteis, gent’s inventory from 1624, in a house of at least eight rooms (LAO INV/130/435 1624), while the last instance of ‘milkhouse’ occurs in 1632 in Richard Pearsall, gent’s inventory of 10 rooms (LAO Adm. LCC 1632:128 B.I. Axii 92 1632). The two terms appear to be describing the same room, in which equipment for milk processing – from pails for its collection to cheese presses – was found, although the cheeses themselves were stored elsewhere. No house has both a milkhouse and a dairy; the shift appears to be a linguistic one, rather than evidence of a new industry in the village.¹⁶ At the same time, there is a suggestion that further down the social scale, two-roomed houses were gaining a service room; it is certainly unlikely that hall-parlour-chamber houses

¹⁶ It is possible that the change of name represents a change of location - from a separate structure to an integral part of the house, perhaps mirroring a change in fashion from detached to integrated kitchens, although other villages appear to retain detached kitchens much later (e.g. Great Limber (LAO YARB/4/18/1 1676)).

before the 1620s were having their chambers converted into butteries or dairies after that date. This addition of service rooms seems to be the most common improvement to houses across the spectrum of sizes. However, if the two-roomed houses were being extended in this manner in the early years of the seventeenth century, new two-roomed houses must still have been built, as their number does not diminish until much later.

It seems, however, that where several inventories share a surname, suggesting kinship, the number of rooms described was as likely to reduce as to increase. For example, John Hammond (d.1587) had hall, parlour, chamber, buttery, kitchen, milkhouse and a number of agricultural buildings (LAO INV/71/36 1587). In 1628 another John Hamond had hall, buttery and chamber (LAO INV/135/84 1628), while in 1702 Robert Hammon had only a hall and parlour, although by that date, the Hammonds appear to have moved from St Peter to All Saints (LAO INV/196/146 1702).

There is little therefore to suggest that there was a Great Rebuilding in Toynton around the turn of the seventeenth century. Housing improved, certainly, and it seems that Lord Willoughby was keen to maximise his income by charging the tenants who had improved their houses higher rents. However, the improvements appear to be slow, and the general character of the housing did not change greatly before the end of the seventeenth century. The apparent drop in population through the first half of the seventeenth century, following the traumatic years around 1590, may provide one explanation; with less demand for housing, there may have been more opportunity to (for example) house elderly relatives outside the main house, rather than living in multi-generational households which required extensions or upgrades to the housing stock.

At the end of the seventeenth century, the built landscape of Toynton appears to have changed little from the situation a hundred years before, beyond a decline in the number of houses. Those which survived were a little bigger, on average, but these increases appear to have been slow evolutions of standing buildings, rather than a wholesale rebuilding. Consequently, the standard of living tended to improve more slowly than is seen elsewhere. As we shall see in Chapter 3.3, construction techniques remained conservative into the following century, although the agricultural and then industrial revolutions would lead to new innovations towards the end of the eighteenth century.

The Eighteenth Century

There is less information about Toynton between the late seventeenth century and the second half of the eighteenth. However, the glebe terriers for 1707 shed a little light on the state of church housing; in All Saints there was 'Noe House belonging to the Church', while St Peter had

'One parsonage house 30 foot long and 14 foot wide with 5 foot part and 6 foot west. Two bays of building. The materials are Wood and Mud walls, the Chimney and walls and floor the same. It

stands in the middle of two roods of Pasture more or less. It is thatched with a sort of starr thatch in some places called sedge' (LAO DIOC/TER BUNDLE/LINCS/TOINTON ALL SAINTS 1707).

This description is of a building no different from the survey of 100 years before, and is a surprising testament to the continued use of mud and stud smokehoods, often assumed to have been abandoned by the early years of the seventeenth century. The reference to sedge is an uncommon one, although whether it was unusual for Toynton is impossible to know. Certainly, it would be readily available on the fen, albeit a harder material to work with than either straw or reed. While there was apparently little money or will in 1707 to modernise the parsonage, a major project in the second half of the century was the rebuilding of All Saints church, producing a Georgian brick building. In 1904 it was discovered that the medieval greenstone nave arcades had merely been encased in brick, a foreshadowing of the treatment of so many of the mud and stud dwellings in the following century (LAO DIOC/FB/1 1759; Rudkin 2001, 17).

By the time of Enclosure, in 1774, the map of Toynton had changed in the patterns of ownership, although not visibly in land use. The Willoughbys had sold large parts of the manor; Figure 15 – which appears to be



Fig. 15. Extract from the 1771 estate map (LAO 5-ANC/5/A/1 1771)

a survey ahead of enclosure, and depicts and numbers every individual strip in the open fields – has large areas where even the roads are barely sketched in and buildings and field boundaries are omitted because they do not abut Willoughby holdings (LAO 5-ANC/5/A/1 1771). The family remained the largest landowners, but by Enclosure there were two other landowners who received over 100a – Varnham, Roberts & Roberts, descendants of the Curteis family and Thomas Sharpe, whose family had purchased the Fulstowes' estate in 1701 (LAO LINDSEY AWARD/87 1774; Russell and Russell 1985, 78–81). By this date, though, the major landowners were absentee; none of the Willoughbys had been resident since 1711, Ann Varnham and her nieces Ann and Frances Roberts all lived in London, and the Sharpe family were based at Elkesley in Nottinghamshire (Pacey 2010, 2).

Perhaps due to these absentee landlords, the landscape itself shows little alteration from that mapped in 1614. At that date at least 116a of former open fields had been enclosed, while the remaining open fields covered c.1252a of the 2295a in the manor (55%). Between the survey of 1614 and the act of Enclosure in 1774, less than a further 120a were enclosed (LAO 5-ANC/4/A/14 1614; LAO LINDSEY AWARD/87 1774). The 1771 map depicts some elements of the landscape in great detail, differentiating between fencing and hedges,¹⁷ and marking the few discrete bodies of water (Fig. 15). No areas of woodland are noted though, and it appears that the only source of timber in the manor remained the hedgerows.

There was one significant change in the landscape, however. Whereas on the 1614 map there is no obvious route through North Field other than the path to Eresby, by 1771 a wide road crossed east-west from Eresby into East Keal. This had been turnpiked in 1765, with a toll bar close to the boundary with Eresby (Bennett and Bennett (Eds) 2001, 78). The road, now the A16, linked Alford and Spilsby with Boston.

A number of new mud and stud buildings appear to have been erected in the eighteenth century. The toll bar was sited with a three bay cottage which stands today, very close to the A16. Meanwhile, as we will see in Chapter 3.3, a new post mill was erected in All Saints, with a mud and stud cottage replacing an older example seen on the 1614 map. This last example appears to date to the last two decades of the century and, while it utilises some novel approaches to the technique, the fundamental combination of lightly scantled, locally sourced timbers with laths and mud daub remained. The end of the eighteenth century, however, appears to have also seen the end of mud and stud's ubiquity in Toynton. A handful of large, brick farmhouses such as The Lilacs and Church Farmhouse (both St Peter) were built in the eighteenth century; the nineteenth would see brick come to dominate the built landscape, both for new buildings and for the surviving mud and stud.

¹⁷ Of the 58km or more of field boundaries in the parish, less than 1km is marked as bounded by fencing.

The Nineteenth Century

The early years of the nineteenth century saw a development which, for Toynton, probably eclipsed Enclosure in terms of its impact on the population's ways of living; the digging of the East Fen Catchwater and Hobhole Drains (Fig. 8). These watercourses not only enabled the fenland to be fully and reliably drained for agriculture, but also provided direct routes for boat traffic, allowing larger packet-boats to regularly travel between Boston and a wharf at the top of Hobhole. While easier access to Boston (and beyond) no doubt improved the range of products available in Toynton and widened the market for their produce, the consequent loss of the fenland radically altered the availability of resources, whether reed for thatching, fish and fowl for food, or summer grazing for livestock. However, the situation was not quite what it had been in the 1630s. The presence by c.1800 of a brickworks in next-door East Keal meant that – in terms of buildings, at least – there was an alternative to the lost resources (Lawie and Richardson 1996, 1).¹⁸

The draining of the fens marks a fundamental shift in Toynton from a way of life based around the available natural and cultivated resources to one reliant on the production of goods which could be sold, so that other resources could be bought. This is illustrated by a report in the Stamford Mercury of 4th February 1820;

‘In the course of Wednesday night the 26th ult. some person broke into the shop of Mr William Dunnington, grocer, of Toynton St Peter, by taking down part of a mud wall, and opening the inner shutter of the shop window, and stole a quantity of stockings, sugar and other articles.’ (Stamford Mercury 1820, 3)

This was by no means an isolated incident; reports of burglary in this way are common in the nineteenth century records of the Stamford Mercury. The tone of these articles increasingly indicate that mud and stud was considered an inferior building material out of step with modern society, while the description of the goods stolen in this case illustrates the ‘imported’ nature of the products on sale at Dunnington’s shop.

This increase in consumer goods does not appear to mirror an upturn in the fortunes of the inhabitants of Toynton, nor to represent a shift in the nature of the accommodation in the village; in an 1821 letter to Rev. J. Dupre, the new, absentee incumbent, John Benniworth wrote

‘Your Tenants all paid up at the rent Day except one who paid me at Boston Fair...we were all very thankful for your kindness in your generous abatements of our respective rents, but as was observed it was nothing equal to suit the present distressing Times... the general Abatements in our

¹⁸ Nevertheless, it appears that mud and stud did not die out completely when the brickworks opened; Highland Farm in East Keal was built in 1831 and revealed in 1950 to be ‘of mud and straw and roughly hewn branches of trees’ (Lawie and Richardson (Eds) 2000, 24).

Neighbourhood has been from 10 to 25 per cent. I know several Tenants near me who are a whole Year in arrears with their Landlord and some more and some others quite at the brink of ruin.' (LAO 3-ANC/7/23/6/1 1821)

Rev. Dupre rarely visited Toynton, but when he did, he is unlikely to have stayed in the church accommodation – none of the incumbents had lived in the rectory since at least 1708, and his predecessor had described it as 'a mere thatched cottage' (Bennett 2013, 400–402). An undated early nineteenth century terrier for St Peter demonstrates that the rectory had hardly changed since 1707;

'One Rectory House Built of Mud and Stud and covered with Thatch. There are two Rooms on the Ground floor, one fourteen feet three inches by thirteen feet six inches the other fourteen feet three inches by Nine feet nine inches with mud floors. Dairy on the west end fourteen feet 3 inches by 4 feet six inches. The house and dairy ceiled with mud, the parlour with boards. Cow stall adjoining the west end of the House built with mud and stud and covered with thatch.' (LAO DIOC/TER BUNDLE/LINCS/TOINTON ALL SAINTS)

It seems that, while the chamber now had a boarded floor and a cow stall had been added, the general character of the building was unchanged. Toynton had a stipendiary curate shared by the two churches,¹⁹ but even he did not live in the rectory; in 1820 he was renting Twentylands Farm from John Benniworth, at £14-0-0 per annum (LAO ORMISTON/23 1820). Clearly the rectory was not deemed suitable, and was probably rented out for perhaps £4-0-0 per year, the cost of Benniworth's other cottages, although Hussey Chapman and John Barker paid £5-10-0 between them for the two halves of 'Lane Cottage', which can be identified as The Cottage, in All Saints. This subdivision of cottages appears to have been common in the nineteenth century; Chestnut Cottage experienced the same division, as perhaps did a cottage at the end of Peasgate Lane, now known as Far Cottage and End View.

If one walked through Toynton in 1820, the impression would have been of a thatched mud and stud village, with a few larger brick houses. A century later, however, the view was one of tiled, brick cottages. This was not, however, due to the wholesale destruction and rebuilding of the housing stock. There were new, brick buildings in Toynton in the nineteenth century; Hilltop Cottage in All Saints, and Bacon Hall Cottage in St Peter date to this period, although both display facades which could plausibly conceal mud and stud origins. The number, though, is remarkably low, reflecting the lack of impetus for new building. The Benniworths' rent book, which runs (with gaps) from 1820 to 1942 shows that during the middle years of the nineteenth century rents stagnated, or even reduced, as economic hardships continued (LAO ORMISTON/23 1820). There was clearly little money, nor market, for large improvement projects, but the cottages needed to be

¹⁹ All Saints and St Peter had shared clergy since at least 1689, although the benefices were only unified in 1842. The two moieties of St Peter's church had been united in 1662 (Bennett 2013, 389, 400).

maintained; the population rose dramatically in the 1820s and '30s; from a combined figure of 474 for both villages in the 1801 census it peaked at 1001 in 1851 but then fell steadily, dropping below 600 by 1901 (GB Historical GIS and University of Portsmouth 2017a, 2017b). This rapid growth may have driven the subdivision of cottages, and their extension and upgrading. Encasement appears to have extended the life of the buildings, while outshuts to side or rear increased the useful space, allowing domestic functions to be removed from the main living rooms. Another approach, although one which is equally hard to date, was to extend buildings upward, by adding a few courses of bricks on top of the wallplate, and then building a new roof – as seen at Mill Cottage.

It appears that these alterations, while improving the standard of living in the buildings, had the additional benefit of disguising the origins of the building. When, in 1912, the Willoughbys auctioned off most of their remaining land in Toynton, the descriptions of the buildings are telling; of the six known mud and stud buildings sold, two are described as 'brick built', two omit the walling material, one is 'a small thatched cottage', and only one gives any real indication of its construction – 'a quaint, old style thatched farmhouse' – unusually, this entry lists the rooms (parlour, two sitting rooms, kitchen, pantry, dairy and four bedrooms) This appealing marketing clearly worked as it sold for £450, whereas the cottages sold for between £25 and £75 (LAO 5-ANC/7/B/2/35/2 1912).²⁰ Mud and stud was clearly still deeply unfashionable – even this 'quaint farmhouse' had been encased in brick by the time it was photographed in the early years of the twentieth century (Fig. 16).



Fig. 16. The 'quaint old farmhouse' of the 1912 sale brochure, photographed before it burned down in 1959. (Photograph courtesy of Phyllis Pape)

²⁰ The reference is to the copy at LAO; the author's copy, which remained in Toynton until 2021, has pencilled-in sale prices.

The Twentieth Century

At least twenty mud and stud houses survived in Toynton long enough to be recorded or photographed (Appendix 3). Rodney Cousins (2015) identified fourteen, although one of these (Fall Farm) has no visible surviving evidence for a frame, despite the layout being entirely consistent with mud and stud buildings.²¹ David Roberts (2018, 165, 301) identified a further building, although it is possible that it represents one of Cousins' examples. An additional five have since been identified, one of which (Mill Cottage) is standing, while there are three further standing buildings which display characteristics suggestive of mud and stud origins. They are clustered in the cores of the two villages, with a few in more outlying locations (Fig. 86). Although varying in layout and degree to which they were altered, none of the standing buildings retain any visible external mud and stud – all are brick-encased. At least two of the now-demolished buildings retained thatched roofs, while two standing examples have some or all of their under-thatch below later tiled roofs. At least one has been raised to two full storeys, and several have been extended significantly since the nineteenth century. It is telling that only Chestnut Cottage – the only example which remains visually similar to the stereotypical lobby entry, two room plan – was thought worthy of listing.

These mud and stud buildings vary in design and apparent date of construction, but share their use of locally-available resources and adaptation to changing demands. As was always the case, those which were deemed unsuitable for modernisation were demolished, or simply abandoned and a new building erected on the same plot; Saville's Cottage is an unusually late survival of this latter (see Appendix 3). Other buildings, like Mill Cottage (Chapter 3.3), have been continually adapted as the needs of the inhabitants have evolved. In the late-nineteenth and twentieth centuries, it appears that even buildings which could have been adapted were demolished, as their very fabric was deemed intolerable.

A survey of Lincolnshire's rural housing began in 1946.²² This resulted in many buildings being condemned or classified as 'requiring reconstruction', leading to a huge number of mud and stud – and other – buildings being demolished in the 1950s and 1960s,²³ to be replaced by brick and tile bungalows. As will be seen in Chapter 3.1, owners were threatened with action if buildings continued to be lived in without modernisation; for many, the cost would outstrip the value of the buildings and it was easier to demolish them; this appears to have been the fate of several cottages in Toynton (see Appendix 3).

It was not until the last decades of the twentieth century that mud and stud began to be appreciated for its historical, aesthetic and environmental characteristics. In Toynton, where none of the cottages retain their original outward appearance, this has meant owners preserving the internal structure, and occasionally

²¹ Site visit 25/06/2021 with the owner, Jane Allen.

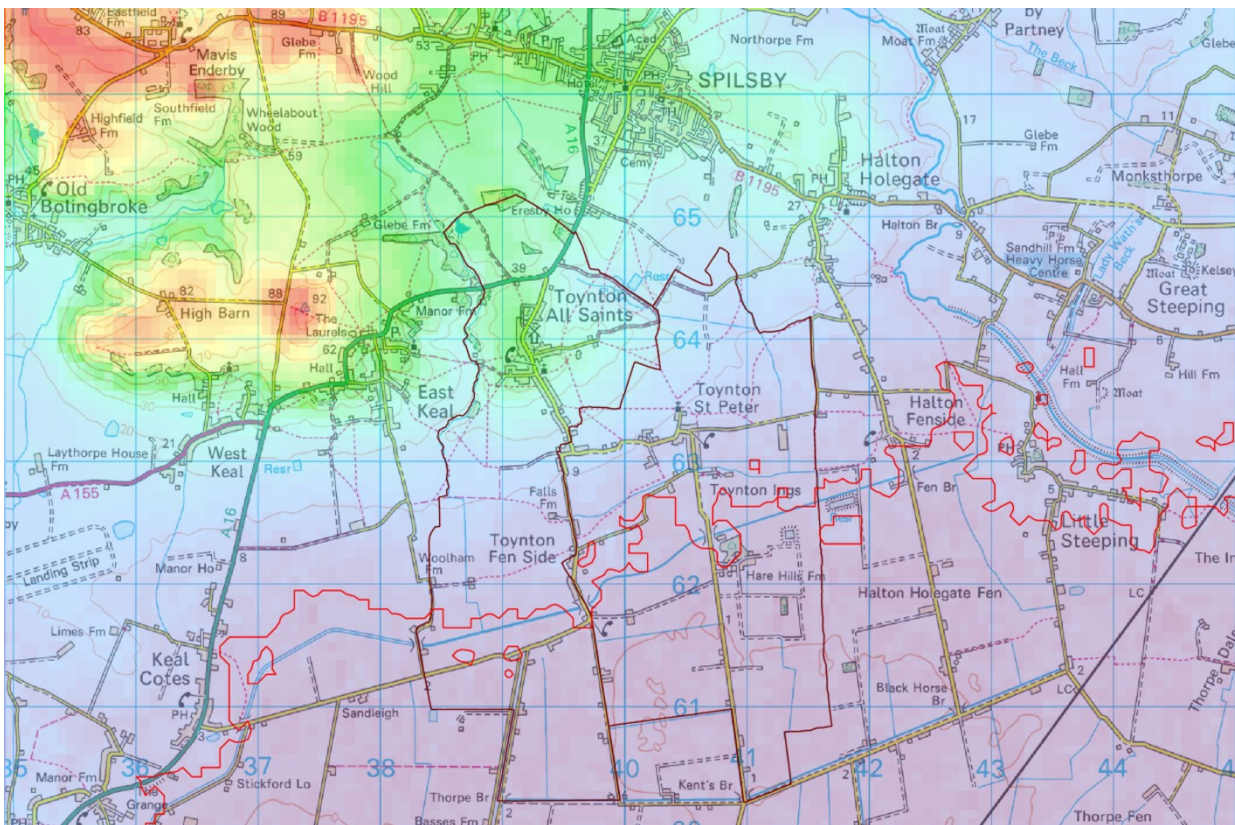
²² Unfortunately most of the records have been lost, including those for Spilsby Rural District.

²³ Not all mud and stud buildings were given low grades; those which were well-maintained and/or had already been modernised were graded accordingly, although the wording of the entries indicates that modern fabrics were preferred (e.g. LAO LOUTH RDC HS 19/006 1946).

exposing parts of frames which had previously been covered. Other villages such as Thimbleby, which have thatched and daubed examples, celebrate their built heritage; Toynton's may be less overt, but the buildings which survive today tell the story of the inextricable links between the settlement, its people and the land they inhabited. The following section explores the character of that landscape, its boundaries, and the ways it shaped the lives of its inhabitants.

Toynton's Landscape

As we have seen, Tointon sits in the liminal area between wolds and fen, relying on the resources of both. They were neither a wolden society nor a fenland society, but blended. This distinction between wold and fen appears obvious; a description of each landscape type would clearly be radically different. However, while it is possible to indicate both on a map, the exact location of that boundary is subjective; while people in the past (as now) would be very aware of the difference between the two, it is impossible to precisely demarcate the boundary, unless one uses an arbitrary human construct like the Catchwater Drain or, as in Figure 17, selects a particular contour line.



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Fig. 17. Tointon's landscape – defining the fen-edge

1:50,000 Ordnance Survey map overlaid onto height shading, with 4m contour highlighted in red and Tointon's parish boundaries in maroon. Note the Catchwater Drain roughly following this contour.

If we are to understand the ways in which the people of Tointon lived their lives and built their houses from the resources in the fields and fens, we must come down from our bird's-eye view and explore them on foot, as the inhabitants would. At this height things, including boundaries, inevitably blur into each other. In some places, beating the bounds was an important part of the annual rhythm of society – in Tointon, there never was a continuous circuit of bounds; even on the 1614 maps, the roads onto the fen just widen and peter out, despite much of the southernmost parts of the parish being fairly clearly defined by ditches, and the fen laws being clear on the importance of maintaining the boundaries. The southernmost fields of

Toynton are water meadows – they were not considered part of the fen but a carefully managed landscape, yet their cycle of wet and dry times must have closely reflected the natural cycle of the wild fen-edges.

The road network in Toynton provides another clue to the places which were important to people. In 1614, as now, the major routes through the villages ran from the high ground down to the fenland (Fig. 17). Other roads provided access to East Keal to the west and Halton Hologate to the east. There is, however, no evidence of a route directly to Spilsby on the line of the modern A16, perhaps due to the presence of Eresby Park to the north, for which no mapping appears to survive. Spilsby was a market town with a charter granted in 1302; to the west Bolingbroke, as well as being the centre of the soke and a royal castle until the Civil War, was also granted a market around Domesday which was probably still active in 1600 (Walker 1898, 105; Letters 2013).

The road network was not, however, the only way Toynton's inhabitants moved around their landscape. At least five of the surviving inventories list boats, and there were a series of interconnected pools or 'deeps' to the south of Toynton and Keal, dating from at least the Elizabethan period, which lasted until the draining of the fens (Padley 1882, 72). Through these, it was possible to travel year-round as far as Boston, c.20km away, although the route was circuitous. In winter, travel by boat would have been possible around much of the fen.

Agricultural or subsistence activities

There were, therefore, opportunities for travel over a wide area, but how far did a Toynton resident *need* to travel, in the course of their routine? Toynton had rights of pasture in East, West and Wildmore Fens, with Wildmore Fen being c.20km from the villages; further work on the Duchy of Lancaster's archive may elicit how much use the residents made of these rights, and how often they travelled there in person. As we have seen, closer to home both All Saints and St Peter had, before Enclosure, a balance of arable land in the open fields and pasture in the old enclosures and the fen. The water mill served both Toynton and Keal, while the beck and the more minor watercourse which gave Washdyke Lane (now Chapel Lane) its name distributed water throughout the manor. The 1887 25" Ordnance Survey map shows that almost every house in the villages had a pump or well; fresh water would have been equally available in earlier centuries, if dug for. The old enclosures were hedged (LAO 5-ANC/5/A/1 1771), providing more than just security for livestock; no doubt the edible produce of the hedges was exploited, while hedgerow trees appear to have been the major source of timber for building. Mud for daubing appears to have been available almost everywhere; the abundance of small ponds seen in St Peter's on the 1887 map may be the remnants of clay-digging for daubing.

The other materials required for building – laths and withies – were available at certain times of the year in the fen (Brears 1929, 74–76), as was thatch, both reed and starr. The fens also provided fuel, in the form of

tures in West and Wildmore Fens and peat in East Fen (Padley 1882, 49, 65). Grazing on the fens supplemented the enclosed pasture, while fodder could be mown after Midsummer to supplement winter feeding (Brears 1929, 76). There was a huge variety of food available from the fen too – fish, wildfowl, eggs and wild plants were available to all the inhabitants of Bolingbroke Soke and Holland with very few restrictions (Brears 1929, 59–60).

Non-agricultural activities

As we have seen, some of Toynton’s residents were engaged in pottery production. The resources for this – clay, fuel, transport – were available within this same area. The markets at Bolingbroke and Spilsby were likely outlets for much of the pottery, although some travelled much further through trade; in 1368/9 John Huy sued William son of Richard for breaking 20 shillings-worth of pots, which he was supposed to be transporting to Whaplode, in the far south-east of the county (HER Toynton All Saints 1955, 5). Another activity which appears to have been important in some periods was linen-making, although there is less documentary evidence for this. There were restrictions on where flax could be retted in the fens (Brears 1929, 62), but there is evidence of retting pits (of at least two phases, but unknown age) in the south of St Peter’s, outside the influence of the fen laws (Fig. 18).



Fig. 18. Flax retting

(L) Location of probable retting pits in the south of St Peter, cut by the later Catchwater Drain, (R) The small 1614 enclosures of Johnson, Widow Pinder and Robert Knight all retain traces of pits. To the west, in an area not covered by the 1614 map, is evidence of possible earlier retting.

Toynton as part of wider society

The centres of formal life in Toynton were the manor court, the Soke (Bolingbroke) and inevitably Eresby, which appears to have remained a centre of administration even after the Willoughbys moved to Grimsthorpe (His Majesty's Stationery Office 1906, 232). It is not clear where the manor court was held; it appears sometimes to have been held at Eresby, as the court rolls often include several manors (e.g. LAO 2-ANC/2/23/5 1625) although others are solely for the manor of Toynton (e.g. LAO 1-ANC/3/18/100, 1605) or include Bacon Hall too. There is no record of a manorial centre in Toynton; it may be that all of their courts took place at Eresby, as it was so close by.

Family bonds and land holdings elsewhere will also have influenced where Toynton's residents were familiar with. While it is beyond the scope of this study to reconstruct all of these, many connections with the villages surrounding Toynton have been noted (for instance, the Fulstowe and Pearsall families' connections to the Kirkmans of East Keal).

Mobility in Toynton

The lives of the people of Toynton were not, however, permanently static. It is notable that there is remarkably little overlap between the 120 surnames mentioned in the 1614 survey and the 65 in the Hearth Tax; only 16 surnames are found on both lists,²⁴ although it must be remembered that the lists record different things; the Survey lists the tenants (some of whom are clearly sub-letting, and are not resident in Toynton), while the Hearth Tax records the actual occupants of the houses. Nevertheless, it is clear that there was a high level of mobility over the course of a lifetime in the seventeenth century, even if the sphere in which an individual operated on a daily basis was more restricted.

So what was the 'home patch' for Toynton's inhabitants?

From this information, we can begin to approximate the 'horizons' of the average Toynton inhabitant, although clearly this will have altered over time. They would have been intimately familiar with the whole of the manor, the adjacent manors – especially the Keals, with their involvement in (and eventual inheritance of) the pottery industry – and at least that part of the fen nearest to the villages. Attendance at the manor court would have made Eresby a familiar place – at least for the men – while occasional business at Bolingbroke necessitated a c.5km walk via East Keal and Mardon Hill (Fig. 19).

²⁴ These are Atkyn, Bolland, Clayton, **Curties**, Day, **Hickes**, Howard, Johnson, *Key*, Mawer/Mawre, **Pearsall**, Richardson, Robinson, Rooke, **Smith** and *Trewe*. Among these names are some of the wealthiest inhabitants (in bold), but also some of the families represented by widows in 1614 (italicised).

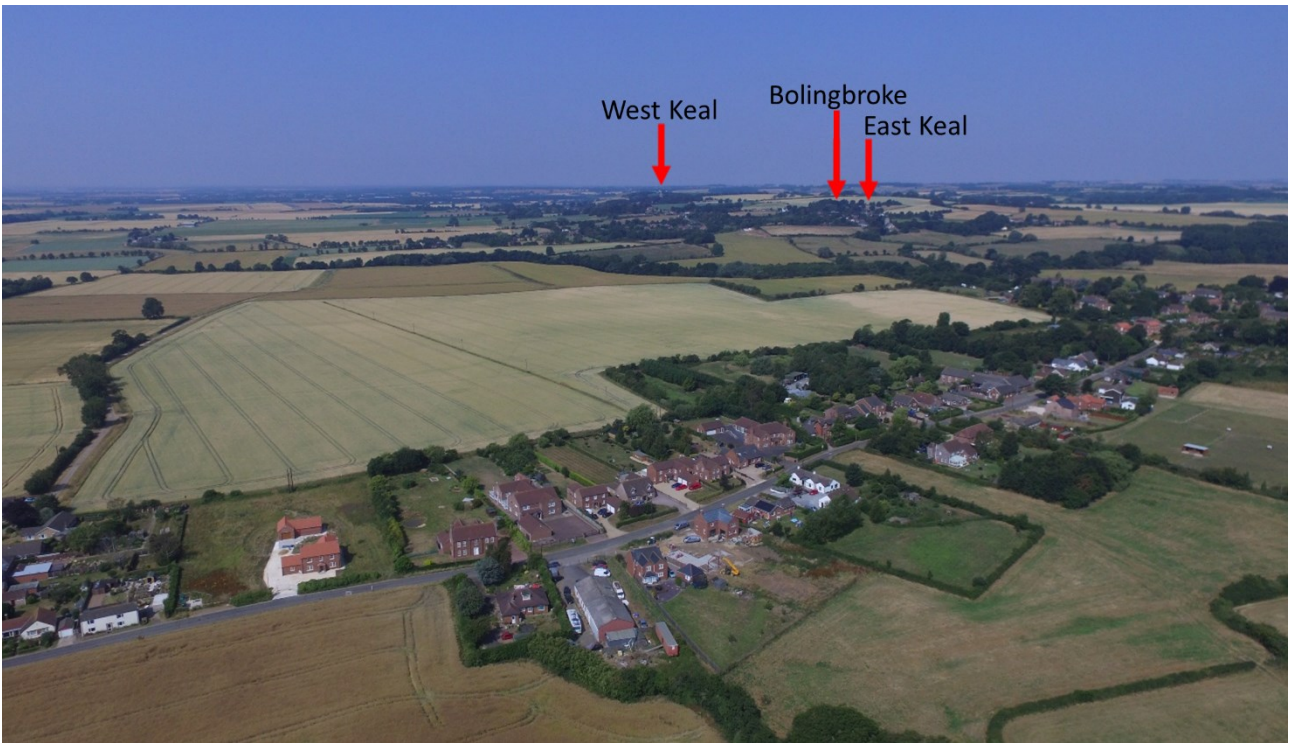


Fig. 19. Looking north-west from Toynton towards the Keals with Bolingbroke over Mardon Hill and Horncastle on the horizon beyond

Spilsby, with its market, was 2.5km to the north; although there appears to have been no direct route in 1614, the creation of the toll road improved access in the eighteenth century (Fig. 20).



Fig. 20. Looking north-east across Toynton Park (foreground) towards the site of Eresby Hall, Spilsby and Hundleby

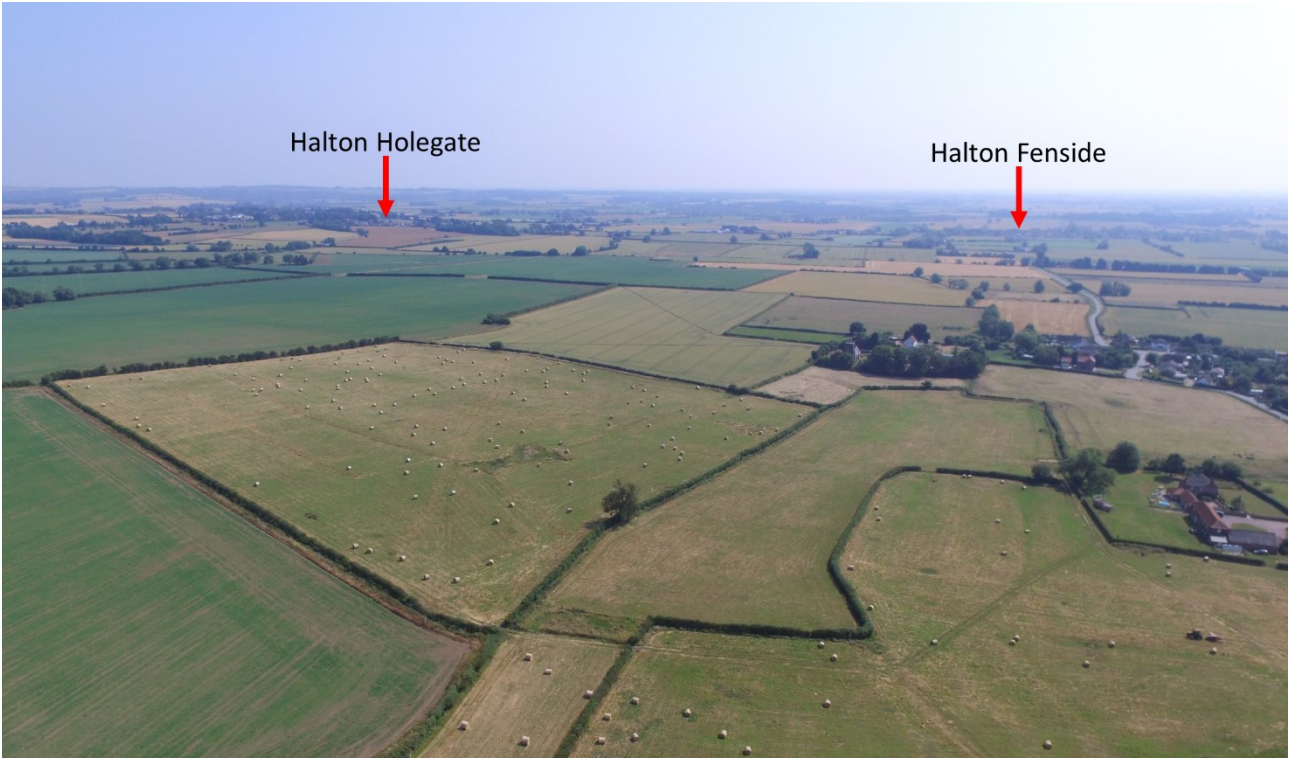


Fig. 21. Looking east towards Halton Hologate and Halton Fenside. Wainfleet is out of shot to the right. Managing livestock in the fens might entail travel as far as Coningsby, Wainfleet or Anton's Gowt (Fig. 21).²⁵



Fig. 22. Looking south-west across the fen towards Boston and Coningsby

²⁵ Unfortunately, the draining of the fens mean that these images do not capture the variety of landscape present before the turn of the nineteenth century, but the modern fenland fields' regularity contrasts with the variability of the wolds' fields.

Some members of the community would have been more familiar with the journey to Boston, either through the fen or along the causeway from West Keal through Stickford, Stickney and Sibsey (Fig. 22), while Horncastle was c.16km to the north-west, via Bolingbroke and either Winceby and High Toynton, or Hameringham and Mareham on the Hill. Inevitably Toynton's gentlemen would have had more cause to travel for business, marriage or pleasure than the labourers, and ranged further afield too; Ralph Persall appears to have belonged to a family with its origins in Staffordshire, for example, and to have maintained connections with them and a London branch of the family, as well as acting as Lady Tailboys' steward (PRO C 1/1234/30 1544). Figure 23 depicts a possible 'home patch' for a Toynton inhabitant in schematic form.

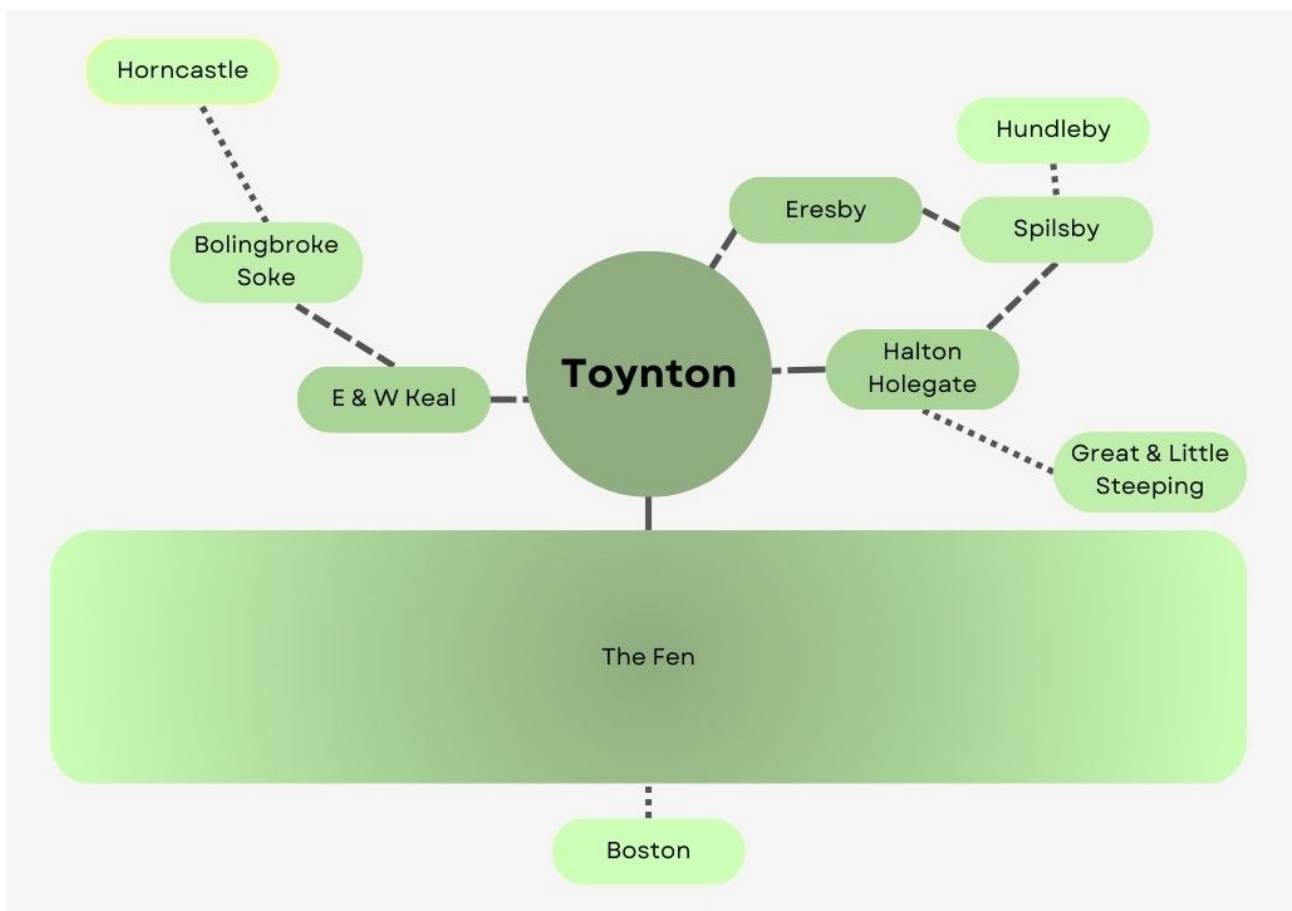
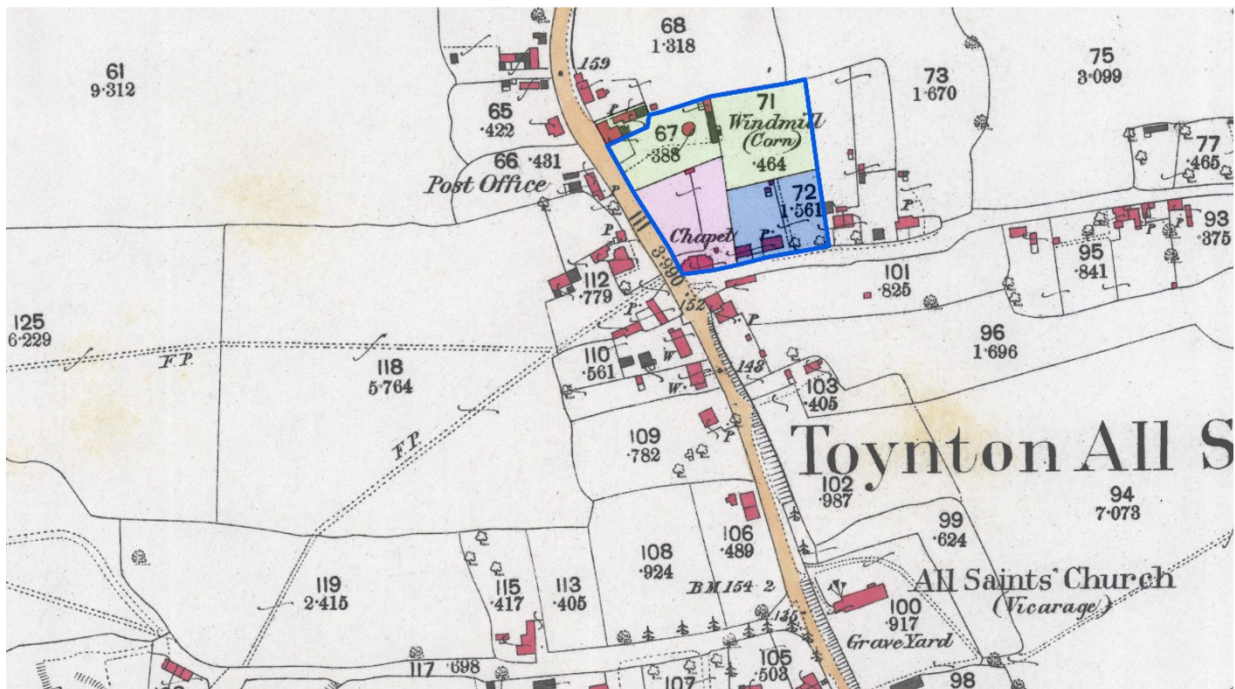


Fig. 23. Schematic drawing illustrating a simplified typical 'home patch' for Toynton's inhabitants. Heavier lines indicate more common journeys, darker colours indicate greater familiarity.

Toynton therefore sat at the centre of a landscape which was, in some directions, well-populated and neatly divided into manors (later parishes). In other directions, however, the landscape appeared wild and unorganised, although in truth there were strict rules about the exploitation of the land, and the inhabitants would have been intimately familiar with its creeks and divisions. But how did the buildings in the villages reflect and relate to this unusual position? Having explored Toynton through the documentary and landscape evidence, in the next chapter we will explore a very small part of the village, looking at three standing mud and stud buildings which offer some answers to this question.

Chapter 3 – The Buildings of Toynton All Saints and St Peter



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Fig. 24. Toynton on the 1887 25" Ordnance Survey map. The Cottage's plot is shaded blue, Chestnut Cottage pink and Mill Cottage is green. The dark blue line indicates the boundary of The Cottage's plot in 1614.

Introduction

In order to understand the complexity of building in Toynton, three buildings will be examined in more detail. These happen to sit within almost a single plot of land, c.70m by 80m, at the core of Toynton All Saints (Fig.s 24 & 25). The buildings, despite having no concrete dating evidence, appear to represent examples from the late sixteenth, late seventeenth and late eighteenth centuries, and to belong to different places in the social structure.

- 1 Chapel Lane is not immediately obviously a mud and stud cottage; it has an unusual plan, and outwardly appears to be a brick and tile cottage. Nevertheless, despite later alterations and encasement it retains a significant portion of its high-quality frame - dating from perhaps the late sixteenth century - and records the adaptation of the building from a medieval plan to a modern one.
- Chestnut Cottage is a 'conventional' mud and stud cottage, from its plan form and the quality of its timbers to its later history of encasement and extension. It is the only listed example in Toynton, and appears to date to the late-seventeenth century or early eighteenth century. However, despite its conventional frame, the roofing technique is very unusual, and appears to reflect a local solution to a technical challenge.

- Mill Cottage is a surprise. Externally it is a brick-built, two storey Victorian house, closely associated with the brick tower mill. However, internal inspection reveals a complete mud and stud frame, of an unusual and innovative design, dating to the last decades of the eighteenth century.



Fig. 25. Aerial view of the three cottages from the north; (a) The Cottage, (b) Chestnut Cottage, (c) Mill Cottage. The windmill is at (d). The 1614 plot is outlined in blue. (Author's image)

By exploring these three examples, differences in technique, chronology and philosophy of building and living become apparent, even within such a tiny area (Fig. 26).



Fig. 26. Looking east down Chapel Lane. Chestnut Cottage is in the foreground, with The Cottage beyond the Methodist Chapel. Mill Cottage is out of shot to the left.

Chapter 3.1 – Building 1 – The Cottage, 1 Chapel Lane

Introduction

The building known as The Cottage²⁶ is the oldest of the three studied, first appearing in the written record on the 1614 survey (LAO 5-ANC/4/A/14 1614). It sits on a south-facing plot at the centre of the village, in a prominent position adjacent to the main road junction. At the time of the 1614 survey, the building layout conformed to a medieval plan of hall, cross-passage, parlour and service rooms, and both its owner and its occupier were gentlemen from families of long standing within the village. By the middle of the nineteenth century the house had been reduced, reordered and subdivided into two small dwellings; in the middle of the twentieth it was assessed as unsanitary and needing reconstruction. Nevertheless, the building stands today, having successfully adapted to the changing needs of every generation over 400 years. In the following sections, I will explore this descent in status, and the building's inherent adaptability, through both the documentary sources and the fabric of the building.

In Valentine's survey, the building and its land is described as

‘one tenement of the heirs of Fulstowe in Richard Pearsall's tenure with a yard and backside lying between the high street west and Widdow Hutton east, containing 1a 2r 24p’.

The land was held in freehold, and was one of many plots held by Fulstowe, but was the only one in the entire survey where the sub-tenant was also named. Richard Fulstowe had died in 1601 with three children, but the question of his estate would only be solved a generation later, when his younger daughter's son inherited (PRO WARD 7/26/77a 1601). The Fulstowe family had been retainers of the Willoughbys since the fourteenth century, and had held freehold land in Toynton since at least the fifteenth (PRO C 1/19/424 1452). Richard was clearly a dependable confidante; he had been entrusted with the receipt of rents for many of the Willoughbys' estates, and a £4000 dowry for Lord Willoughby's daughter which was in his possession at the time of his death (His Majesty's Stationery Office 1906, 242).

The Pearsall family had been resident in Toynton since at least the 1560s, when Ralph Pearsall made his will (PRO PROB/11/49/297 1567). Ralph had been Margaret, Lady Tailboys' steward, and was probably Richard Fulstowe's brother in law (PRO C 1/1234/30 1544). His relationship with Richard Pearsall is not clear, but he may have been Richard's uncle or cousin. Neither is it clear where in Toynton Ralph lived, although he left all his copyhold and freehold property in Upper and Lower Toynton to his elder son, William (PRO PROB/11/49/297 1567).

²⁶ The building is referred to as The Cottage throughout this text for simplicity, although its postal address is now The Cottage, 1 Chapel Lane.

The Cottage in Richard Pearsall's tenure

By 1614, Richard Pearsall was renting a property which was distinguished on the survey map as having two chimneys, and a different layout from the vast majority of the buildings depicted. The building appears to have been constructed as a two and a half bay tenement, of mud and stud. Its layout is not hugely common in the county although several other examples, of varying probable construction dates, are known (for example Nursery Farm, Mareham le Fen, or the now-demolished example at 15 Bedehouse Bank, Bourne (Cousins 2000, 13)).



Fig. 27. Enlargement of Richard Pearsall's house (5ANC4/A/14)



Fig. 28. The Cottage as it stands

The exact original extent cannot be confirmed by the surviving structure as both ends of the building have been rebuilt in brick, at different times. However, the 1614 survey illustration indicates that the building was then of a very similar form to its current one (Figs 27 & 28). On the survey it is depicted as gabled, with a chimney close to each gable. Both gables are apparently depicted – one of only 3 examples of the 127 houses illustrated where this is the case – and each appears to have a window in it, suggesting an upper floor. The door is central in the south elevation, flanked by windows. However, the detachment of the roof from the right-hand (east) gable suggests that this is a separate wing, indicating an L-shape. See Appendix 2 for further discussion of the 'double-gabled' examples.

The Cottage before Richard Pearsall's tenure?

The earliest phase of the extant building stands on a series of large, flat boulders used as padstones, but which also form an apparently-continuous plinth as a type of 'damp proof course'. These are most visible at the western gable, but also survive along the length of the original (now internal) northern wall (Fig. 29). A further padstone is present in the south-east corner of the building, under the surviving post, although it is not visible externally. The frame of the building sits on these padstones, although this appears to have been replaced or encased in brick in the western gable (Fig. 30).

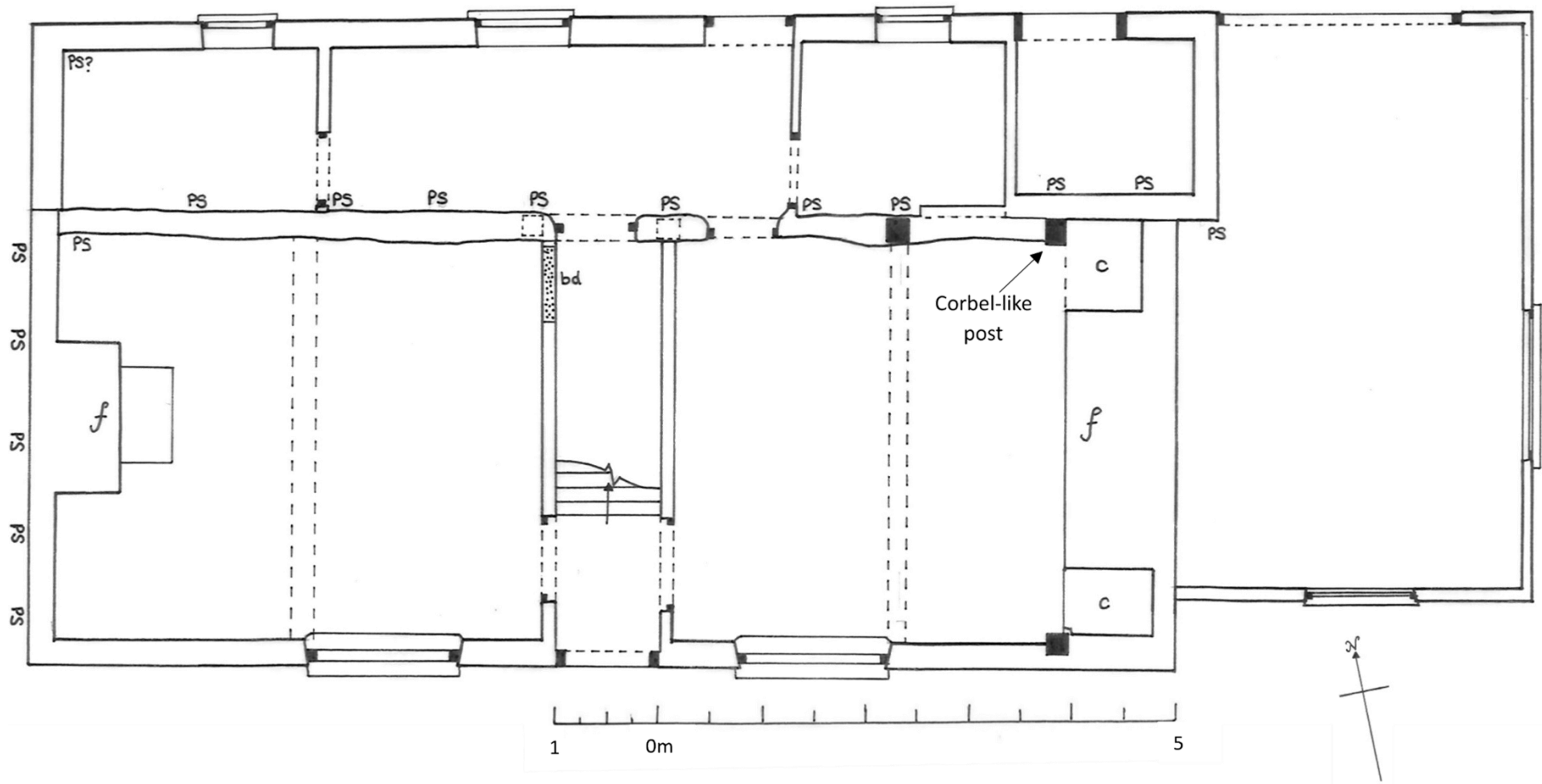


Fig. 29. Ground floor plan showing location of padstones (marked 'PS')

Note the added outshut rooms to the north, and the brick-built shed to the east on the site of the earlier extension; the easternmost padstone indicating the former extent of the original frame. Plan updated and redrawn from Pape 2009b, 22



Fig. 30. Row of padstones/plinth below western gable wall

The frame is almost entirely obscured by later treatments of the internal walls, with plasterboard covering the walls and roof of the chambers, as well as the north wall of the parlour. Render and wallpaper obscure most of the details in the former hall, although a post in the south-east corner is discernible, and a mid-post



Fig. 31. Northern wall of the former hall. Note the undercut 'corbel-like' post in the top right corner, and visible mid-post, centre, supporting the binder. The door leads to the outshut, now the kitchen.

in the north wall can be detected under layers of wallpaper (Fig. 31). Furthermore, the post in the north-east corner of the room is partially visible, although it has been cut back, or perhaps undercut, to resemble a corbel. In the outshut kitchen the shadow of at least one post may be seen under the surviving daub, with another visible in the bathroom to the east.

In the eastern chamber, however, some gaps in the plasterboard allow glimpses of the timbers in the north-eastern corner of the building, including the 'corbel-like' post, although it is again covered in wallpaper. These reveal the timber to be well-squared, and apparently oak of good quality, but with some of the characteristic 'mud and stud waniness'; Figure 32 is a close-up of the top of the corbel-like post pegged into the wallplate. This image clearly shows the grain of the wood at a different angle to the squared timber, indicating a building of some status, where a larger timber could be cut down to achieve a higher degree of straightness, rather than using the smallest timber possible, although there is still a greater degree of curve on the wallplate than might be expected in other building traditions. As may be seen from Figure 33, the wallplate continues beyond the post, which is clearly therefore an intermediate post, rather than the original corner of the building. The east wall visible on the right of the figure is a false wall; the current (brick) gable is a further 0.40m beyond the plank wall. The wallplate continues, and is embedded in the gable wall, with no further visible joints.



Fig. 32. North-eastern corner of the chamber above the former hall
The wallplate is visible, along with the 'now corbel-like', unjewelled post, with double-pegged tenon.



Fig. 33. North-east corner of the eastern chamber

Note the plank wall to the right, with holes for water pipes, and access hatch. The northern wallplate is just visible, and the 'corbel-like' mid-post may be discerned under the earlier wallpaper.

The original building probably extended a little way beyond the current eastern gable. As well as the evidence of the wallplate, the line of padstones on the north wall continues beyond the current limit of the gable (marked as 'PS' on the floor plan, Fig. 29), suggesting that at some point the building was truncated.

Early heating of the building

What can be said about the experience of living in The Cottage in its early form? Some clues as to the original heating arrangements are found in the visible mortices in the surviving post in the southern wall. The presence of a rail to the west but no brace, and a brace to a (now-lost) tie beam but no rail, suggests this is not a bay-post (the eastern face is not visible). The 1614 survey shows 'chimneys' (Fig. 27) which are not positioned at the gable ends, as might be expected, suggesting that the smoke control was a mud and stud hood, rather than a brick chimney. No Lincolnshire smokehoods have been identified in gables, but several axial ones are known²⁷, all pyramidal in shape (Fig. 34). Building a pyramidal smokehood against a gable wall (even if it only had one flue) would lead to the hood emerging a short distance from the gable wall, exactly as depicted on the survey. A tie beam c.1.5m from the gable would allow the smokehood to be anchored into the structure of the building, but would almost inevitably be removed when the hood was later replaced with a brick stack, improving access within the chamber. The 1614 illustration shows that

²⁷ Surviving examples include The White Cottage, Thimbleby (Field and Pape 2016, 63) and The Royal Oak, Mareham le Fen (Field and Pape 2016, 77), although neither survives above the roofline.

both main rooms were heated; presumably the arrangement was mirrored in the western room, although no evidence is visible.



Fig. 34. Surviving smokehood at The Royal Oak, Mareham le Fen. This axial hood served two fireplaces, and is divided internally.

Early fabric of the building

Having explored the heating of the building, what can be said about its original layout and construction techniques? While there are few places where the frame is visible, the daub may be seen in the cupboard under the stairs (Fig. 35(a)). Its structure is clear, with straw inclusions, but the surface finish is very smooth. The colour is characteristic of local un-treated mud daub – Figs. 35(b) and (c) show two further examples – but the finish is unusually fine. Figure 35(b) is an internal partition wall in an attic, clearly intended only to be viewed from the far side. Figure 35(c), however, is the internal face of an external wall, and was clearly originally intended to be seen, although it was later covered by a battened plaster wall. The daub at The Cottage is smoother, and has been carefully finished, perhaps with linseed oil, indicating that it was in a space intended to be seen. This is somewhat surprising for an under-stairs cupboard, latterly used as a coal cellar.



Fig. 35. Untreated daub

- (a) The Cottage, Toynton All Saints – wall to the east of the doorway into the cupboard under the stairs. Note the straw inclusions visible, and the curve of the daub towards the door frame to the left.
- (b) Hawthorn Cottage, Mareham le Fen – unused attic space above the former hall.
- (c) Hop Hill Cottage, Aubourn – internal view of gable wall.

The floor plan, however, offers a clue as to the original use of the space (Figs 29 & 36). The doorway in question is directly opposite the front door which, although rebuilt when the south wall was replaced in brick, remains in the same position as on the 1614 survey. These opposed doorways may be the remnant of a cross-passage, later blocked with an inserted staircase. This doorway, then, would not be a cupboard door, but the major entry from the northern side of the building.

Supporting evidence is to be found in the 1632 inventory of Richard Pearsall (LAO Adm. LCC 1632:128 B.I. Axii 92 1632). This lists two parlours (old and new), both with chambers, a buttery 'next to the [new] parlour', the hall and a series of service rooms; milk house, brewhouse, cheese chamber and kitchen. There is also 'one ould house', with a bedstead and bedding, perhaps associated with the service rooms. The implication is that there is no chamber over the hall, suggesting an older style of building, and one which would sit comfortably with a cross-passage. Few cross-passages have been identified in rural Lincolnshire, but Lincoln Lane Farmhouse at Sixhills may provide a comparator. The building is much grander, consisting of three bays of two-storey timber framing of a nationally conventional scantling and character. However, the bay length is almost identical to The Cottage, with the width of the putative cross-passage at The

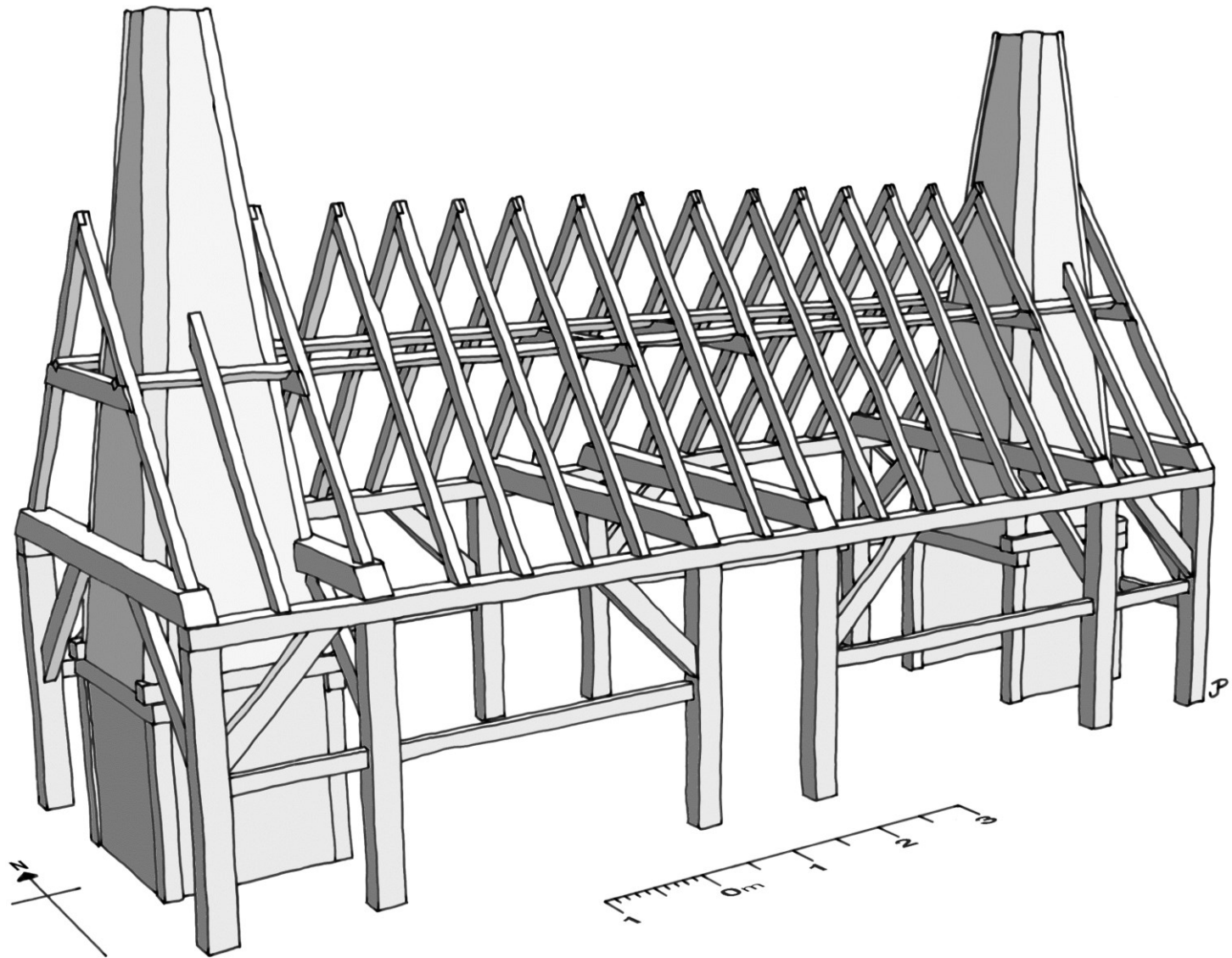


Fig. 36. Reconstruction of The Cottage's original frame, incorporating smokehoods in both rooms but omitting padstones and any upper floor for clarity

Cottage matching the one at Lincoln Lane Farmhouse closely too.²⁸ The steepness and idiosyncrasy of The Cottage's staircase also supports the suggestion that it is inserted (Fig. 37); similarly, the applied beam on the mud and stud north wall, on which the boards of the landing rest, appears to somehow be secured with bolts into the daub.



Fig. 37. The extremely steep staircase

Further evidence for medieval house plans in Toynton

There is evidence for another house of similar, medieval plan in Toynton. In 1614 John Cooke's house was described in detail, listing hall, parlour with boarded chamber over, another parlour with a milkhouse and an earth-floored chamber over, a kitchen 'below the entrie' and a cook house at the back of the kitchen. The house description appears to conform to a medieval plan of open hall with cross-passage (entry) with kitchen at the low end and parlour(s) at the high end, with chambers. Cooke appears to have died in 1613, leaving an inventory which matches the described rooms almost exactly, although it also mentions a little buttery with the hall, and describes the parlours as new and old (LAO INV/114/22 1613). Presumably the chimney has been inserted into the former cross-passage (Fig. 38(a)), creating a lobby-entry, perhaps suggesting that the house may not even have had a smokehood. Alternatively, perhaps this house represents a transitional design, retaining the open hall and the concept of a low end with service rooms, but adopting a fully-formed lobby-entry, again indicating that the medieval way of living had not died out completely. When Cooke died in 1613 his inventory was valued at £317-5-0, although he was described by

²⁸ It must be acknowledged that the bays at Lincoln Lane Farmhouse are c.1.5m deeper, making them almost as deep as The Cottage including its outshuts. A comparison of mud and stud plans indicates that the depth of buildings vary but that, generally, domestic buildings are either c.4m (13') deep or c.5m (16'), with few being significantly larger or smaller, and most clustering around these two measurements.

his peers as a yeoman; this was clearly a substantial dwelling, which appears to have survived largely unaltered until it burned down in 1959. When the Willoughbys sold it in 1912, the description is almost identical, albeit using modern room names; parlour, two sitting rooms, kitchen, pantry, dairy and now four bedrooms – presumably the hall had been ceiled over to create more sleeping accommodation (LAO 5-ANC/7/B/2/35/2 1912).

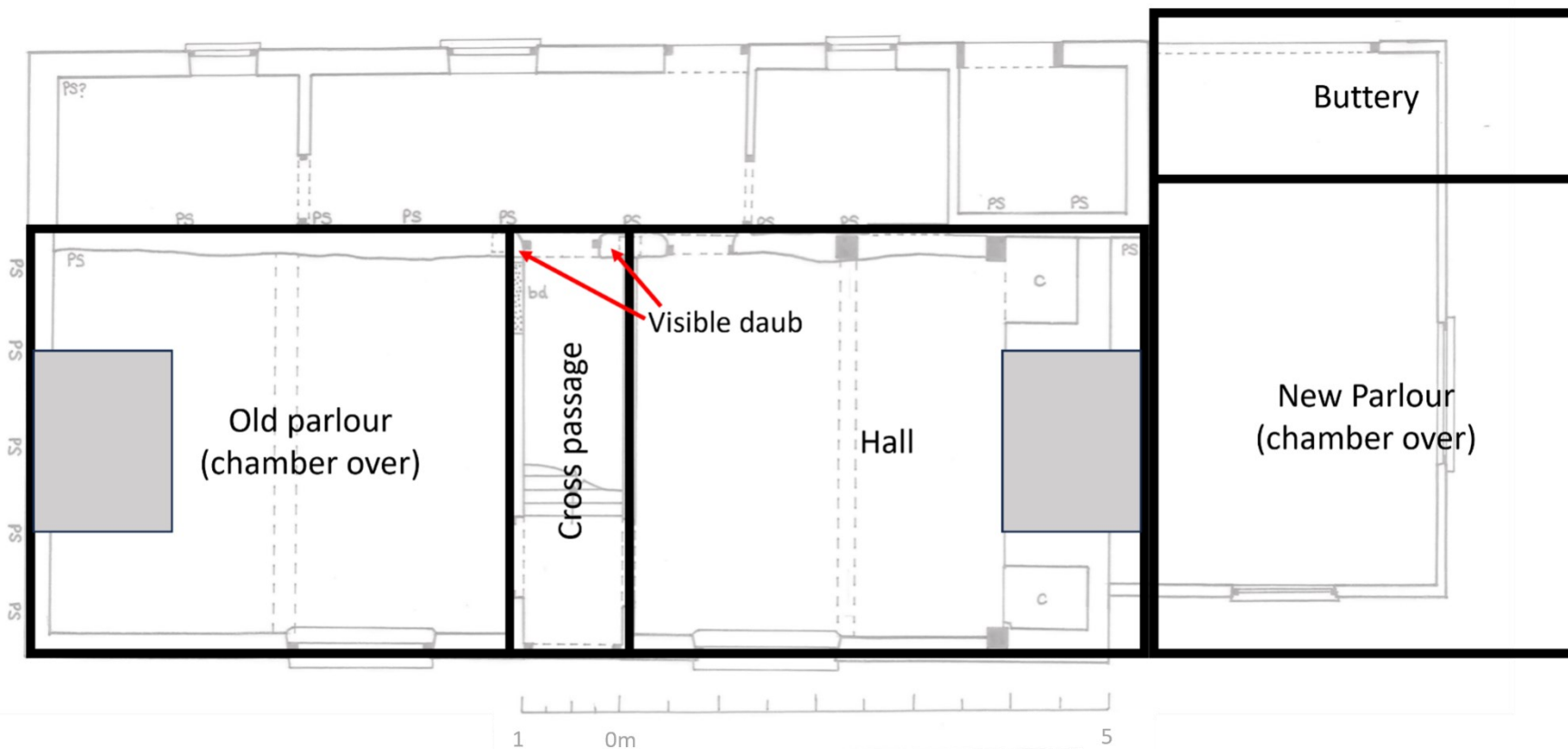
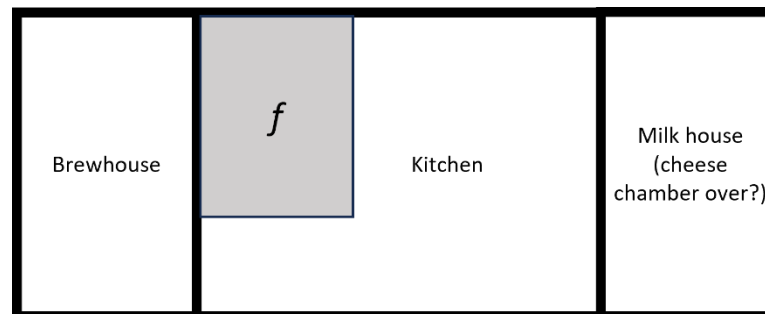


Fig. 38. John Cooke's house
(a) on the 1614 survey and (b) in the early twentieth century (photo courtesy of Phyllis Pape)

A further, circumstantial, piece of evidence lies in the inventories for Toynton as a whole. The use of the word 'milkhouse' in Richard Pearsall's will is the last use of the word in Toynton's inventories (see pg. 44). Does this again suggest that an older way of living was still in use in The Cottage?

This evidence that The Cottage's staircase is inserted, probably into a former cross-passage, suggests that while the 1614 survey may depict a single range of building with chambers at either end, it is more likely to show an L-shaped house, with an original wing of open hall, cross-passage and parlour, and an added wing to the east (Fig.s 39 & 40). This is strongly suggestive of the plan indicated by the 1632 inventory with the extension consisting of the new parlour and buttery, chambered over. Some or all of the service rooms may have been associated with a detached kitchen, or alternatively may have been outshut at the rear.

Fig. 39. Reconstruction of Richard Pearsall's house in 1632, overlaid on the current floor plan. Service rooms interpreted as a detached kitchen block, location unknown



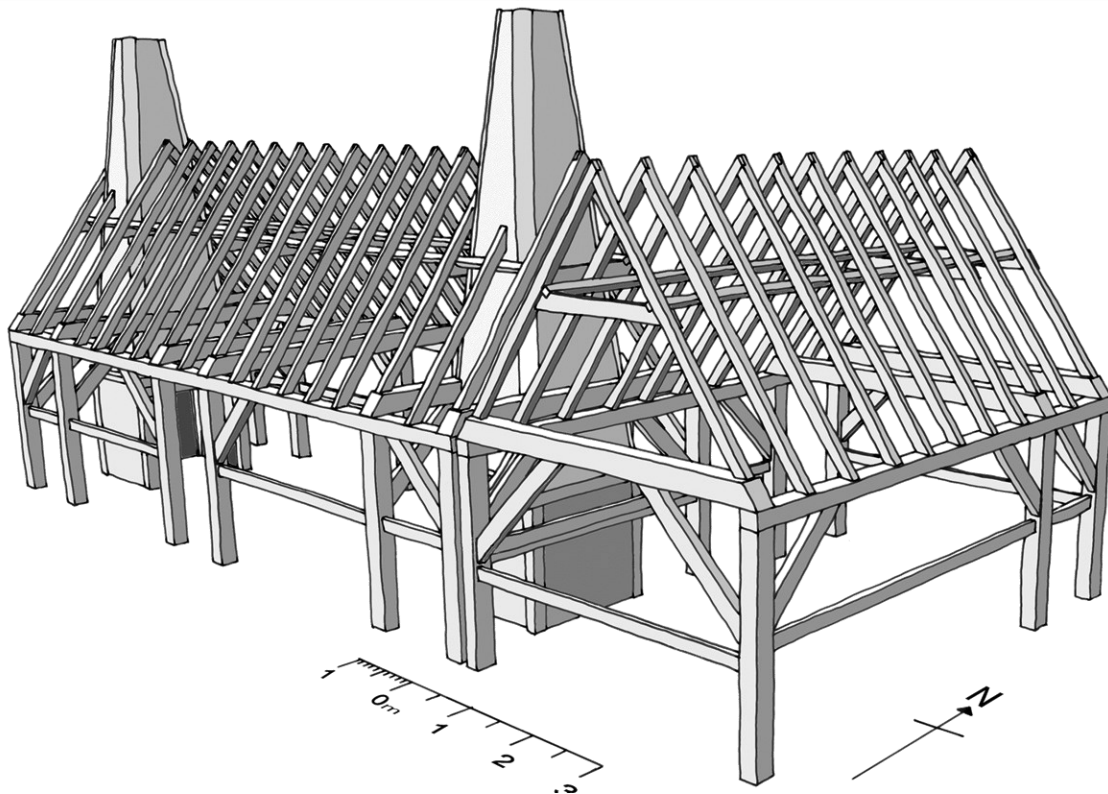


Fig. 40. Reconstruction of the extension as a separate frame, as seen at Lavender Cottage, Thimbleby; it may have instead been jointed into the original frame

Detached kitchens

Detached kitchens are well-known from the villages around Toynton; David Roberts (2018, 578–580) identified them in glebe terriers dating between 1570 and 1610, from East Keal, Great Steeping (specifically built ‘of earth and covered with straw’), West Keal and East Kirkby, and it may be that John Cooke’s house, above, had one – the ‘cook house at the back of the kitchen’. The greatest advantage of having a separate building for cooking – reducing the risk of fire to the main dwelling – may have been particularly attractive in a building tradition where even the chimneys were made of flammable material. The grouping of milkhouse, brewhouse, cheese chamber and kitchen at The Cottage may suggest a building of multiple bays.

It is, of course, also possible that the house had not been extended by 1614, but the hall was chambered over. The omission of a hall chamber in the 1632 inventory may be due to a lack of goods with value in that space. While this would change the chronology of the development of the building, it is similarly consistent with the evidence for an open hall with cross-passage which was later floored over and extended. An extension date after 1614 (and therefore within 18 years of the inventory) would also more comfortably explain the use of the phrase ‘new parlour’, although this may simply have been a legacy descriptor.

Who would live in a house like this?

It is clear that the building depicted in the 1614 survey and inventoried in 1632 belonged to a gentleman of some local standing (Fig. 41). An open hall house with cross-passage, parlour and detached kitchen providing service functions suggests that he had maintained a medieval mode of living, with public space in the open hall and private space in the parlour. Older ways of living are evident from the inventory too – there were still beds in the old parlour, and cobirons and reckon hooks in the hall for cooking. However, the house appears to be in a transitional phase; there were also beds in both chambers, more fire irons in the kitchen, and the new parlour may have been a dining room, furnished with a long framed table, a framed chair and eight ‘buffit stools’, and with cushions and a carpet. The later ceiling-in of the hall and insertion of the staircase, erasing the cross-passage, along with the eventual moving of cooking into service rooms, removed the last vestiges of the medieval house layout, finally bringing the building into the early modern period. While there are no records to date these alterations, it is possible they were made in the last three decades of the seventeenth century, once the descent of the Fulstowe estate had been settled and Richard’s son John Pearsall had died, meaning they needed to find a new tenant. A similar process was observed in the development of Lincoln Lane Farmhouse, Sixhills, where the ceiling-in of the open hall and blocking of the cross-passage happened between 1660 and 1692, successfully attracting a wealthy tenant (Field et al. 2022, 32–33).

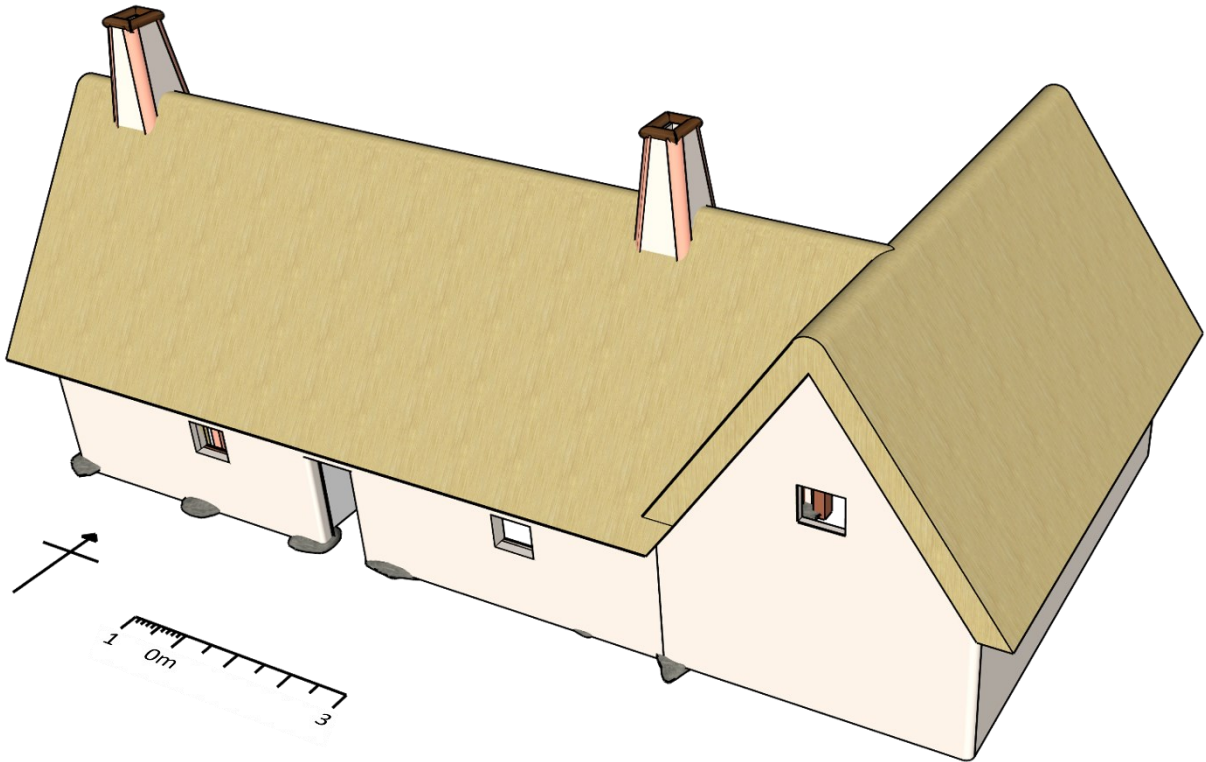


Fig. 41. Visualisation of the extended house, with windows as illustrated in the 1614 survey

That Richard Pearsall was a gentleman is evident, too, in the contents of the house. Along with cushions, wall- and bed-hangings, there was 30s-worth of pewter along with £9-6-4 of linen, while the lease of the house – an uncommon inclusion – was worth £10. Whereas in many Toynton inventories the rooms seem to contain a mix of domestic, farming and employment equipment, Pearsall's inventory shows surprisingly little blurring between domestic and farming spaces; his corn and oats are in the guildhall (valued at £35) with some more corn ('thrished and unthrished') in the laith (£23), while the household's corn is in the cheese chamber. Pearsall was buried on 27th September 1632 (LAO Bishops' Transcripts); his ninety sheep were long-ago shorn, and the fleeces presumably sold. It appears that all his harvest was in, and there was £10 of hay in the yard too, which must have been plenty to sustain his seven cattle, four calves, two horses, swine and sheep over the winter. An unusual inclusion, again suggesting wealth, is turkeys amongst his poultry.

The later seventeenth and eighteenth centuries – adaptation and decline

The Pearsall family continued as residents of Toynton for a generation after Richard's death. His elder son, also Richard, died in Toynton in 1653, and while his probate inventory does not survive, his will indicates that he bequeathed over £975 (PRO PROB 11/230/447 1653). Dying less than ten months after writing his will, this was probably a reasonable estimate of his wealth. While The Cottage had been an acceptable home for his father, it is unlikely that Richard Jr lived there, as he was married and in his mid-thirties when his father died. Instead, the 1663 Hearth Tax names Richard's younger brother John Pearsall as resident in Toynton, and it appears that he had taken over the family home (PRO E179/333 1663).²⁹ John, however, was not a rich man. The Hearth Tax returns record that although he had two hearths, he was exempt from paying the tax, indicating that his rent was less than 20s per year, or that he was already excused from paying church and poor rates (Barnwell and Airs (Eds) 2006, 8). The building was clearly already less valuable than it had formerly been; perhaps this indicates that even in the 1660s little had been done to modernise it.

The building, of course, belonged to the Fulstowe estate – the inheritance of which was still to be settled when Pearsall Sr died. It would eventually descend, via the Middlemore/Booth family to John Booth, who sold the estate to Edward Sharpe in April 1701 (LAO ORMISTON/6 1746, 16–17). By 1783 Edward Young had bought the estate from the Sharpes, and in 1805 John Benniworth bought it from Young's descendant, John Lill (LAO ORMISTON/21 1746, 10–11, 28–29).

²⁹ John was born about 10 years after his brother Richard, in April 1605, and died – apparently unmarried – in November 1669; he was probably living at home, aged 27, when his father died. The 1663 Hearth Tax records him occupying the only two-hearth house in All Saints, suggesting that he is still at The Cottage. This does raise questions about the few other two-hearth houses on the 1614 map though; had they been extended, reduced or demolished?

The exact sequence of development of the building during this period is unclear. Besides the ceiling-in of the hall and insertion of the staircase, the mud and stud smokehoods were replaced in brick. At the western end this appears to have coincided with the rebuilding (or encasement) of the whole gable in brick; the tumbling on the gable and the very small size of these bricks, suggests that this was an early development. The location of cooking facilities on the property also appears to have shifted more than once – from hall to detached kitchen, and eventually back into the body of the house, perhaps when the smokehoods were replaced in brick and the fire risk diminished.

The 1774 Enclosure map depicts the building as a rectangle, suggesting that either the L-shaped extension has been removed, or that outshuts have filled the gap. Whenever the extension was removed, it seems to have been necessary to reduce the length of the hall a little, perhaps to find sound timber to rebuild onto. Whether the extension survived until 1774 or not, it appears that some or all of the outshuts were built before it was demolished, as they respect the old extent of the hall frame, and have preserved the end padstone. Whether they were initially in mud and stud and later rebuilt in brick is equally unclear; the standing outshuts are of several distinct phases of brickwork, including machine-made bricks which are no earlier than the late Victorian period. The initial outshuts may be an early, seventeenth century, alteration bringing the functions of a detached kitchen/buttery/dairy indoors. The reconstructed eastern gable incorporates a cupboard of late-eighteenth or early-nineteenth century character, providing a possible date for the demolition of the extension. The following section traces the division of the holding, as the status of Pearsall's dwelling diminished.

The nineteenth and twentieth centuries

There is little record of the occupants of The Cottage between Pearsall and the nineteenth century. By the time of the 1774 Enclosure map, the plot had been developed and Chestnut Cottage built, although it remained as a single holding. Between 1774 and 1805, Chestnut Cottage was allocated its own garden and then sold off. By 1820, The Cottage itself had been subdivided, with John Barker and Hussey Chapman renting half each, paying £2-10-0 and £3-0-0 respectively (LAO ORMISTON/23 1820). The memory of the building having been two cottages survived into the twenty-first century, although the fabric of the building does not make it clear how it was divided (Pape 2009a). A blocked door from below the stairs into the western room suggests that access was required independently between each ground floor room and its service rooms.

There is a gap in the rent book, meaning that the next certain occupier of the building was Joseph Parker, an agricultural labourer, who took on the tenancy of the whole building in or before 1855. He paid £7-0-0 per annum, but by 1881 he was sub-letting the cottage to George Pocklington, another agricultural labourer, and his family ('George Pocklington' 1881). The tenancy passed to James Pykett in 1892 – by 1901 he was widowed and a jobbing gardener ('James Pykett' 1901). Two years later, coal carter William Ranson took

over the tenancy. In the 1911 census the Ransons reported having four rooms (excluding sculleries, landings, lobbies, closets and bathrooms), suggesting that the eastern room, with its range, was their kitchen and that the outshut rooms at the back of the house fell into the excluded categories ('William Ranson' 1911). Before World War Two, the entire southern wall of the building appears to have been rebuilt in modern bricks and rendered. This may have coincided with the replacement of the thatched roof with pantiles; PD Pape recalled having seen a photograph of the building with its thatch, suggesting that its replacement happened in or after the later nineteenth century (Fig. 42).



Fig. 42. The Cottage c.1952. Note the rendered front wall and pantiled roof (courtesy of Phyllis Pape)

When CP Pape bought the cottage from the Benniworth estate in 1951 he was informed that the Rural Housing Survey of 1946 had classified it as category 4 – 'needing reconstruction' (Cottell 1951). There was no running water, although the pump was just outside the back door (Fig. 43). He quickly applied to have a water supply in the house, and also arranged for a cesspit and indoor toilet. The copper in the outhouse survived into the 1970s, and the range in the eastern room was removed in the early 1990s. In 1951 the outshut room at the western end of the north elevation was derelict, and was renovated using a Yorkshire slider from another mud and stud building in the village, Jack Street's house, which was being demolished at the time (Pape 2009a).



Fig. 43. Rear of The Cottage soon after purchase in 1951, with water pump and chimney for the copper visible (courtesy of Phyllis Pape)

Conclusion

By the 1950s The Cottage had clearly slid a long way down the social ladder from its gentlemanly origins (Fig. 44). The elegantly-furnished residence of the early seventeenth century had become home to generations of labourers and even subdivided to accommodate two families. But it had survived; the building bears testament to its adaptability and resilience in the layers of alterations readable in its fabric. In 1951 CP Pape bought a house which was close to being condemned, but turned it into a family home and stayed for 70 years. Future owners will no doubt adjust it to their own needs, and the building will continue to evolve and adapt to the demands of the future.

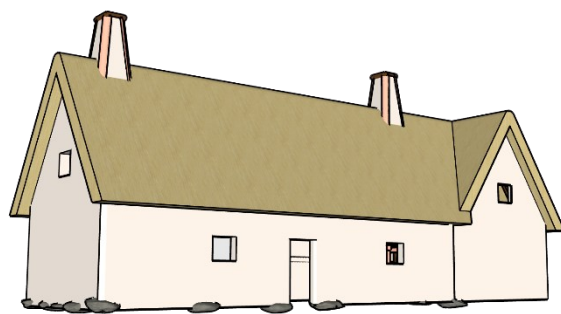


Fig. 44. Re-imagining the 1614 image of The Cottage using modern technology

The Cottage is a microcosm of the processes which happened to mud and stud cottages more widely; its construction was intimately connected to the landscape around it, before being modified to suit the needs of each generation which lived in it. It was extended, and then reduced, and as new materials like bricks became available they were incorporated into the alterations. Eventually it was completely encased, so that

little evidence of its origins is visible, allowing it to survive the purging of mud and stud as unsanitary and dangerous in the early years of the twentieth century.

However, this process of adaptation and evolution means that at first glance, the building gives up few of its secrets. It is only when the building is studied in detail – in parallel with a detailed reading of Toynton's particularly rich documentary sources – that the original structure can be untangled. The written sources are invaluable, particularly the inventory evidence, which not only names rooms, but fills them with their contents, allowing the *way* the building was used to be understood too. This building is significantly more complex than the 'lobby-entry hall and parlour with chamber(s) for poor rural tenants' stereotype allows for, and must be understood in the context of the gentlemanly status of the earliest occupier we know of. While it may not stand up to comparison, to modern eyes, with other gentry houses of similar status and age in other parts of the country, viewing it through the lens of Toynton society and its neighbours allows us to recognise the quality of the building, and begin to understand the social cues which the people of Toynton would have recognised in it. Those cues were quite different for the next building we will explore.

Chapter 3.2 – Building 2 – Chestnut Cottage

Introduction

Chestnut Cottage – the only listed mud and stud building in Toynton (Appendix 4) – occupies a prominent position in the village, at the junction of Main Road and Chapel Lane and in the corner of the same plot of land which belonged to The Cottage in 1614. The building is not only an example of a largely-intact cottage of perhaps the turn of the eighteenth century; details of its structure expand the recognised techniques, raising questions about the validity of mud and stud stereotypes and highlighting the confirmation bias found in the building listing process.

The building, albeit with later extensions, conforms to Cousins' mud and stud stereotype; single storey, with axial stack and half-hipped roof (Fig. 45). However, the stack is off-centre, with the room to the west larger than the one to the east. To the rear is a brick-built outshut with catslide roof, while the building is bookended by brick-built pent extensions. These three extensions have preserved the former external walls in mud and stud, with slightly battered profile and padstones evident in the eastern gable, but the south, front wall has been encased in brick.

The building was visited informally a number of years ago, when a small set of photographs of the roof was taken and some notes about the frame made. It was not possible to arrange a return visit to the building to expand the survey, the ownership having changed.



Fig. 45. Chestnut Cottage from the south-west

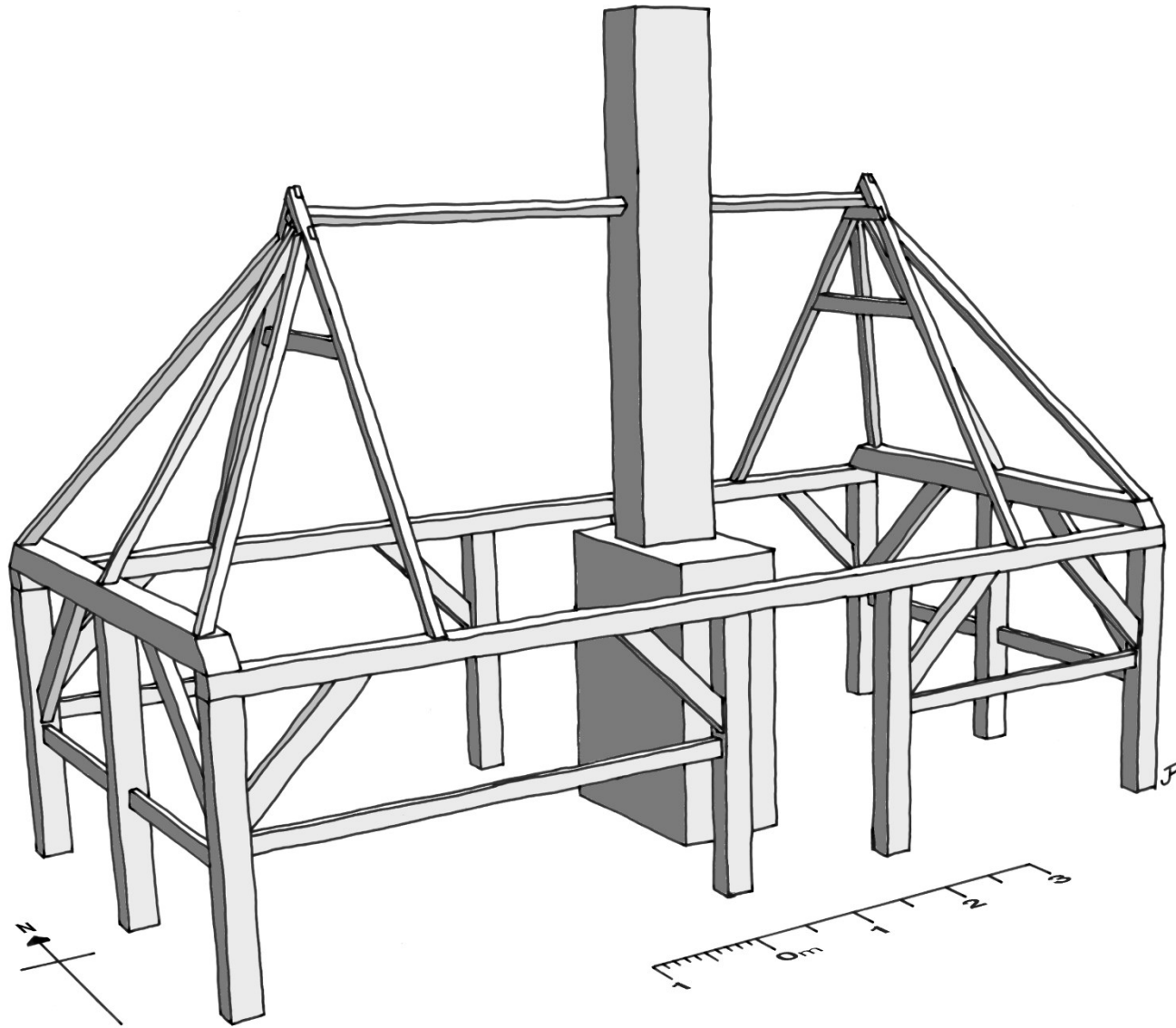


Fig. 46. Sketch reconstruction of Chestnut Cottage from the south-west. 'Basket-like' roof structure omitted for clarity.

Fabric of the building

Internally the simple frame survives, with posts, braces, wallplates and gable tie beams (Fig. 46). In the western room these elements have been boxed in, but this does not disguise the structure. The timbers used are waney; both wallplates are noticeably curved downwards at the eastern end and the posts are far from vertical. The ceilings are raised above the level of the wallplates, meaning that there are apparently no tie beams other than at the gables. This may reflect the initial construction, or perhaps be a later alteration, allowing greater height in the rooms. The posts stand on padstones, or possibly an almost-continuous sill, but these are heavily painted and do not project far beyond the mud of the walls so little detail is evident.

Roof structure

In the roof void, the structure, including surviving thatch, is remarkable (Fig. 47). It is constructed of coppiced poles, around 8cm in diameter, forming an extremely rough-and-ready structure. There is some evidence of joinery, with a collar morticed into a slightly more substantial 'principal rafter' (Fig.s 48 and 49),



Fig. 47. Roof structure looking up from the loft hatch in the eastern room. Note the woven horizontal poles



Fig. 48. Roof structure above eastern room, looking north. Note the morticed collar and principal rafter assembly (in red box). The underthatch appears to have been applied at random angles, with an area of darker coloured reeds laid horizontally in the top right hand corner.



Fig. 49. Enlarged view of principle rafter and collar. Note the nailed-on clasp piece trapping the purlin pole in the angle of the collar, and black string holding on the underthatch and possibly some of the poles

but the structure appears to largely rely on a series of woven split poles for rigidity (Fig. 47), interconnected across the structure by a series of light poles as collars, at different heights and seemingly not always perpendicular to the ridgeline. A clasped ridgepiece is presumably in two sections, either side of the stack. Despite its lightweight structure, the roof appears to support not only the surviving thatch, but also the modern tiled roof over the top. It is, however, possible that this is actually supported by an independent set of rafters, built over the top of the existing structure, out of sight. The stack, of handmade bricks, is flanked



Fig. 50. Looking west from the loft hatch, note the mud and stud partition and later ceiling joists

to the south by the remains of a mud and stud partition, again using coppiced wands (Fig. 50), indicating that the building was originally open to the rafters. There is some evidence that the smoke control may have been altered in the building, as a collar passes through the middle of the stack and the partition does not reach the stack.³⁰ Differences in the brickwork suggest that the eastern room's stack may have been added to the western at a later date.

The visible thatch is unusual in its application; rather than being laid as a horizontal base layer, or vertically over battens, the lowest layer of thatch runs in differing directions (Fig. 48). Much of it is fundamentally parallel to the wallplates or tie-beams, but in other places it is perpendicular, or diagonal. An area of the hip has horizontally-laid reeds, similar to those seen at The Cottage but in a thinner layer, with thatch on top.

³⁰ This may have been partially demolished to gain access to the other part of the roof space once the rooms below had been ceiled.

History of Chestnut Cottage

Not a great deal is known about the history of the building. There is no building in this position on the 1614 survey map (LAO 5-ANC/4/A/14 1614), the land being part of the plot held by Richard Fulstowe, which then passed to the Booth family. Its first appearance is on the Willoughby estate map of 1771 (LAO 5-ANC/5/A/1 1771), albeit not part of their estate; on the Enclosure map of 1774 (LAO LINDSEY AWARD/87 1774) it was still part of the old Fulstowe holding, which had passed into the hands of Thomas Sharpe (Fig. 51).



Fig. 51. Chestnut Cottage on the 1774 Enclosure Map

By the end of the eighteenth century, it was owned by the Cartwright family, millers, as part of a larger holding which had been separated from The Cottage by 1805 and joined with the windmill to the north (LAO ORMISTON/9 1839). This passed eventually to John Benniworth in 1838, by which time the cottage had probably been subdivided, with the almost-symmetrical rear brick outshuts perhaps dating from those alterations. Certainly, the census records suggest that by 1861 the cottage was occupied by two individuals – Ann Pocklington, a labourer’s widow, and Ann Parrott, a dressmaker, each paying John Benniworth £1-11-6 per half year (LAO ORMISTON/23 1820; ‘Ann Pocklington’ 1861; ‘Ann Parrott’ 1861). This dual occupancy continued until the late twentieth century, when the two halves were reconverted into a single property, by which time each half had acquired a second ground floor room at their gable end. In 1939 the neighbouring Methodist Chapel was enlarged, with a schoolroom built on part of the eastern cottage’s plot, and then sometime after 1956 much of the cottages’ land was sold off to build two bungalows on.

Interpretation

Internally, then, the frame is fairly conventional, but this roof structure is extremely unusual. It may, however, be a rare survival of a once-common solution to the problem of having sufficient timber to roof a

building which has already required 14 major timbers (posts, wallplates and tie beams) and perhaps 20-25 minor timbers (braces, rails). The use of such a lightweight structure may also have allowed the omission of tie beams across the shell of the building, with the large number of collars restricting the spread of the roof. It is certainly common to find mud and stud buildings whose roofs have been replaced; perhaps some of them shared this type of structure, later judged to be inadequate or difficult to insert an upper floor into. The structure at Chestnut Cottage has, perhaps surprisingly, proven strong enough to support several tons of thatch for many decades, suggesting that – for well-made examples, at least – this is a viable method of roof construction, albeit one which either failed to spread in popularity or which was generally deemed insufficient at a later date and replaced. Whatever the genesis of the technique, and however common or otherwise it was, the structure displays the creative use of locally-available materials to achieve the desired outcome, expanding – but sitting firmly within – the vocabulary of mud and stud.

The building appears to belong to a class of buildings erected by and for agricultural labourers from the materials available to them in Toynton. There is little evidence of landlord involvement in its erection, although its subdivision in the nineteenth century must have been sanctioned by Cartwright or Benniworth as the rent was paid individually.

Chestnut Cottage, therefore, outwardly represents a ‘classic’ example of the kind of building which is recognised as mud and stud; it conforms to a familiar plan and, while it has been altered in later years, the encasement in brick and tiled roof over the thatch follow the usual trajectory of these buildings. Even the white paint on the brickwork contributes to its appearance as a listable survival. It is notable that Chestnut Cottage is the only listed mud and stud in Toynton; this conformity to the expected norm allows it to be recognised, but simultaneously contributes to a somewhat circular argument. The building is listed precisely *because* it appears to conform to the expected stereotype, yet if that is the criteria for listing, the selected buildings will inevitably look alike. Therefore, when one looks at the listed mud and stud properties, the stereotype is reinforced, reducing the probability that an atypical example will be recognised, much less be considered for listing. Ironically, Chestnut Cottage’s most interesting features are precisely those which are rarely seen in mud and stud buildings; these are barely mentioned in the listing (Appendix 4), despite the roof clearly having been inspected. If the surviving mud and stud buildings around Lincolnshire are to receive appropriate protection, a more complicated typology must be established, to counter this confirmation bias.

Conclusion

Chestnut Cottage, therefore, probably dates from the last years of the seventeenth century or first half of the eighteenth. It is clearly not a building constructed by the lords of the manor, who seem never to have controlled that land, but was probably built by a tenant of the Booth or Sharpe families. It is possible that it was erected in 1699, when Thomas Booth reunited the various shares of the property which had descended

through the Middlemore family, or after 1701 when Edward Sharpe bought the estate, although the quality of timber in the building does not suggest a wealthy landlord's involvement. More probably, a tenant holding the larger plot built an extra dwelling on it, possibly for a relative, and at a later date it became an independent holding before being incorporated into the windmill's curtilage. Nineteenth and twentieth century alterations and extensions preserved a significant amount of the building's original fabric, and may have acted as buttressing, allowing the unorthodox roof structure to not only survive, but have a tiled roof added on top.

The building, with its unorthodox roofing, allows a glimpse at what may have been common among mud and stud buildings of relatively low status, introducing the possibility that other buildings, now re-roofed in conventional style, may have also employed methods which appear more akin to basketry than carpentry. If further fieldwork were to identify other examples (either surviving, or with evidence for a previous roof of similar type), then it would be possible to say more about the roof's uniqueness or ubiquity. However, the building also presents a dichotomy – as a listed building, it has been recognised as significant, but its significance is not expressed in the listing text. Rather, the listing suppresses its distinctiveness and conforms it to the modern stereotyped, thus reinforcing it. Therefore, the current probability of other examples being identified and linked to Chestnut Cottage is low.

The building successfully adapted to changing circumstances, accommodating some of the poorest members of Toynton's population in the nineteenth century, and weathering the gaze of the Rural Housing Survey inspector in the post-war period. Although a small building, now shorn of most of its land, the cottage continues to provide affordable and attractive accommodation to a modern audience, having sold in good condition in 2020 for just £132,000. The next section will demonstrate how mud and stud 'technology' developed in the eighteenth century.

Chapter 3.3 – Building 3 – Mill Cottage, Main Road

Introduction

The significance of Mill Cottage lies both in its novelty of construction technique, and in its later history, demonstrating both the adaptability of mud and stud buildings and their subsequent vulnerability. The history of the building is by no means unique, although its survival in such a complete state is probably unusual; as the chapter will illustrate, the challenge is to identify other examples before they are demolished or altered beyond recognition.

Mill Cottage sits on Main Road in Toynton All Saints, a little north of Chapel Lane. The core of the building is at right-angles to the road, facing roughly south, although extensions to the north present a long, low, brick elevation to the passer-by, while later encasement and alteration mean that the original mud and stud cottage now appears to be a two storey Victorian brick house (Fig. 52).



Fig. 52. Mill Cottage from the south

The cottage's name refers to the brick tower mill which still stands in the field behind; census evidence suggests that the millers resided at the cottage during the nineteenth century, which remained a bakery and then village shop until the late twentieth century³¹. The cottage conforms to a familiar lobby-entry plan;

³¹ The mill itself remained in use until 1945. It was converted into a house in the early 1980s, with the surviving gear transferred to Lincoln Mill.

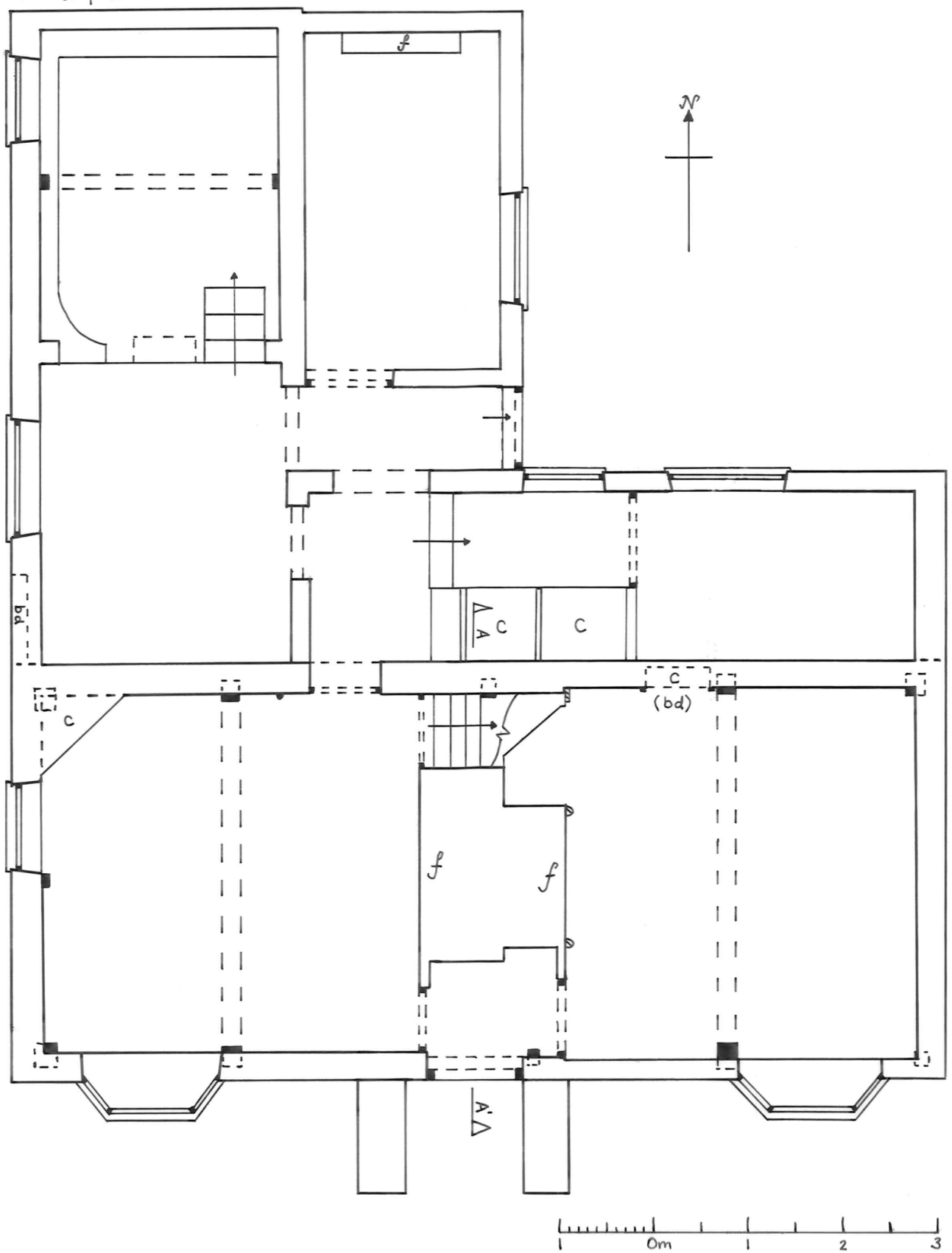


Fig. 53. Ground floor plan of Mill Cottage

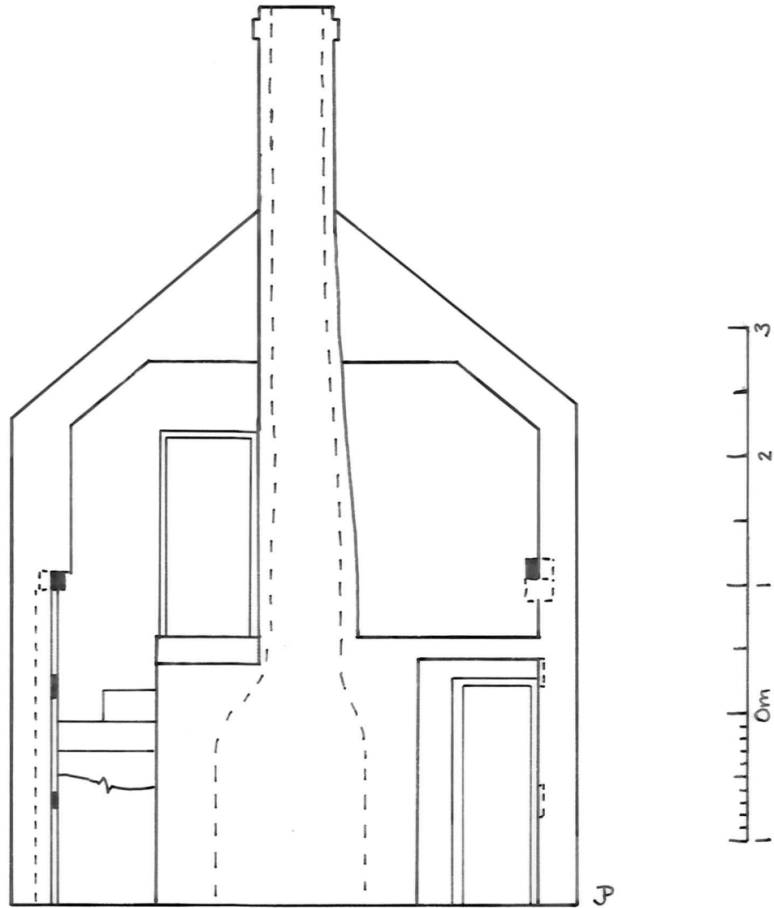


Fig. 54. Cross section A-A' through the original cottage, looking east. Note the difference between first floor level and wallplates

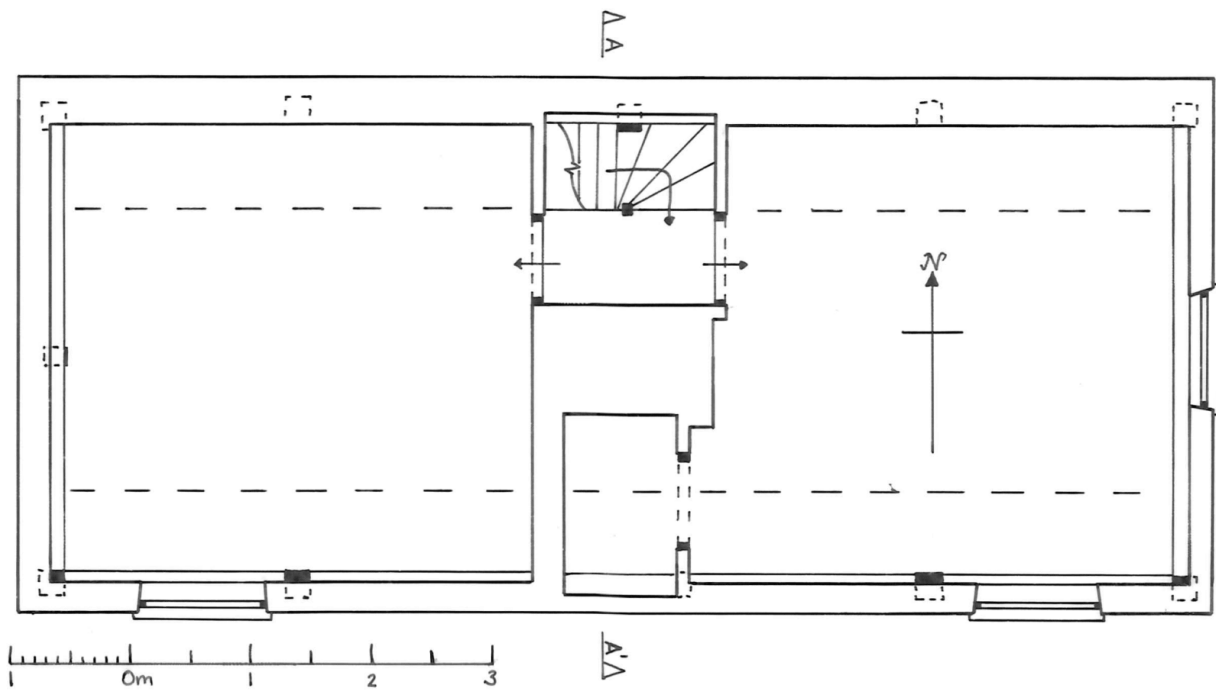


Fig. 55. First floor plan of Mill Cottage

the central front door opening into a small entrance space against the back-to-back stacks, beyond which is the winding staircase (Fig.s 53 & 54). To the left and right are similarly-sized living spaces, with the stair accessed from the western room. On the upper floor, two bedrooms open off a small landing - the eastern has a small cupboard occupying the space above the entry, but otherwise the rooms mirror the layout below (Fig. 55). Encasement and raising the level of the eaves, while radically altering the external appearance, did not – of themselves – alter the layout of the building, although three brick extensions to the north expanded the accommodation and provided work space.

Fabric of the building

Much of the original fabric of the building survives within the encasement, although everything above the level of the wallplate was lost when the roof was raised. The frame consists of well-squared, adze-hewn posts, wallplates and tie beams. Most timbers appear to be in the position they were originally shaped for, although several posts are reused and significantly wanier (Fig. 56). Braces and mid-rails are straight-sawn, showing no signs of reuse. They are relatively well-shaped for mud and stud; the braces are gently convex, and more regular than is sometimes seen.



Fig. 56. Post showing rafter seats, evidence of reuse.

As is common in mud and stud buildings, there is no evidence for a sole plate, nor therefore any downward bracing. The cladding of the frame – the lighter timbers visible in Figure 57 and the laths revealed in Figure 58 – are very different in character to the major timbers; they are waney, and a mixture of roughly shaped

timber and coppiced rods, some retaining their bark. The visible posts are not jowelled, and are seated on padstones, albeit of differing characters; the stone in the south-west corner of the building is large and extends beyond the encasement, while other stones are small, squarish and only slightly larger than their post.



Fig. 57. Mid-rails and intermediate timbers. Note exposed laths in unplastered section. North wall of western room (photo courtesy of Richard & Janice Locke-Wheaton, taken 1997)



Fig. 58. North-eastern brace in eastern room, with laths exposed from the inside by the current owners. Note also the mid-rail

Abandonment of bays in favour of usable attic rooms

All of the above is within the usual range of expressions of mud and stud. However, the construction of the frame takes a very unusual form. Commonly, a lobby-entry cottage of two rooms is framed with each room as a bay, creating a narrow half-bay in the centre to accommodate the stack(s) (Fig. 59(a)). A few small examples (such as Lee's Cottage, Beckingham) adopted a similar plan, but apparently without the lobby entry, instead using a single truss in the middle of the building to create a truly two-bay plan, with the doorway placed away from the stack (Fig. 59(b)) (Roberts 2018, 148). At Mill Cottage, neither of these is present; indeed the usual grammar of bays defined by trusses formed of posts and tie beam is abandoned in favour of a design which allows the wallplate to be lifted above the upper floor level, without having inconvenient tie beams causing access problems (Fig. 59(c)).

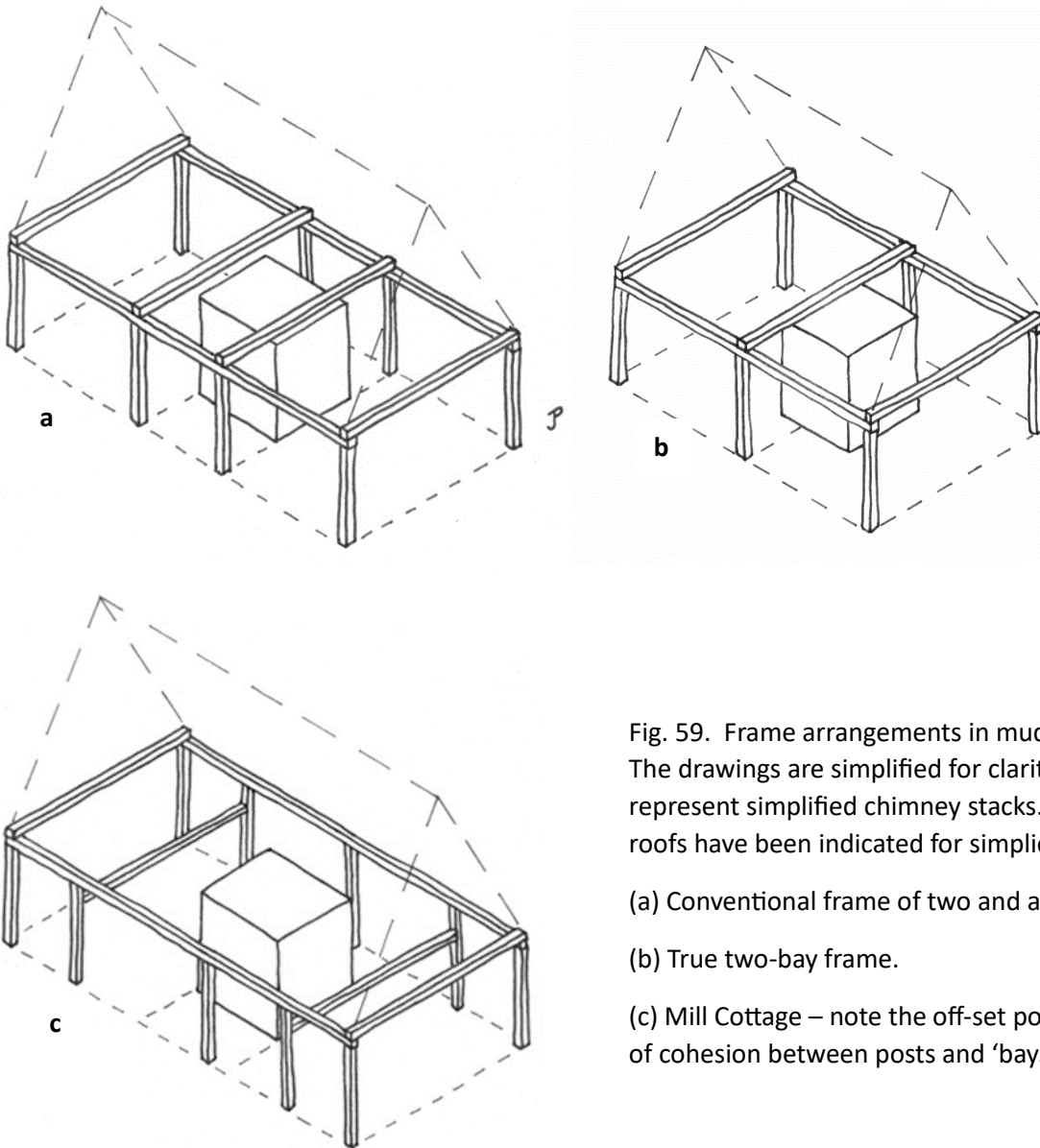


Fig. 59. Frame arrangements in mud and stud. The drawings are simplified for clarity - cubes represent simplified chimney stacks. Gabled roofs have been indicated for simplicity.

(a) Conventional frame of two and a half bays.

(b) True two-bay frame.

(c) Mill Cottage – note the off-set posts, and lack of cohesion between posts and ‘bays’.

The footprint of Mill Cottage is defined by four posts in the corners. These are connected by wallplates to north and south, and by tie beams forming trusses at either gable end; the posts are braced to both. Each gable end appears to have been further supported by a mid-post, although the eastern gable has been largely rebuilt below the tie beam. There are, however, no intermediate trusses, and therefore no true bays of framing. Instead, each long wall has a single intermediate post, apparently positioned to support the wallplate’s scarf joint, meaning they are off-set. The northern intermediate post is braced to the wallplate to the east, but there is no evidence for a matching brace to the west; this post sits in the stairwell, almost exactly half-way along the north wall. The southern intermediate post is off-set to the east and has no visible bracing – an eastern brace may survive under the plaster, but the post’s position very close to the door suggests there was never a western brace. Therefore, these posts are neither bay-posts (which would have an associated tie beam and usually be braced three ways, to wallplate and tie beam), nor true mid-

posts (common in many mud and stud, they are usually found paired across the frame but are unbraced), although their function appears to be similar, in supporting the wallplate.

There are further posts in each long wall, centred in each of the ground floor rooms. These apparent mid-posts are unbraced and have no tie beam, as is usual, but rather than providing support to the span of the wallplate (although they inevitably do this too), their main purpose appears to be to support a binder which carries the upper floor in each room, c.0.5m below the level of the wallplate (Fig. 54). The binders appear to replicate the function of tie beams in preventing the wallplates from spreading under the weight of the roof, as well as providing a means by which the floor level can maximise the usable space in the rooms in the roof. In the former they are clearly successful; there is no evidence of spread in the joints whatsoever, even though the later encasement of the south elevation did start to bulge outwards, necessitating the erection of the buttressing porch in the early 2000s. The exact form of the joint between post and binder is unknown (although a possibility is discussed below), but in the northern 'binder post' in the eastern room, a very large (c.5cm diameter) peg is just visible, apparently fixing the binder into the post (Fig. 62). No such peg was observed in any of the other posts.

Mill Cottage, therefore, was clearly designed to have a fully usable first floor from first construction (Fig. 60). With the exception of Withern Cottage, also tentatively dated to the end of the eighteenth century, no mud and stud buildings have been identified with primary first floors, making this a significant example (Field 1984, 95).³² However, this innovation did not involve raising the wallplate's height. Both wallplates are c.2.5m above the internal ground floor. This is comparable with other mud and stud buildings (for example Hop Hill Cottage, Aurbourn; White Cottage, Thimbleby and Withern Cottage, now at Skegness), although other examples cluster around a post height of 2m (The Cabin, Thimbleby; Hawthorn Cottage, Mareham le Fen). The result at Mill Cottage is that headroom on the ground floor is sacrificed for usable attic space; the centre of the slightly-bowed binder in the eastern room is 1.65m from the ground (slightly less than the height of the author!), with the western room a little higher.

While it is very common for mud and stud buildings to have low ground floor ceilings, this has usually been understood as being at least partly from an upper floor inserted at a later date. Other cottages (such as White Cottage, Thimbleby) circumvent the problem by inserting the upper floor at wallplate level, restricting usable space in the attic but maintaining height downstairs and eliminating trip hazards from the tie beams. The presence of such a low ceiling in a building which could easily have been designed to be a more convenient height suggests that timber supply remained a constraining factor, as do the reused timbers.

³² Roberts (2018, 177-178) illustrated a similar-looking arrangement at Old Rectory Cottage, Old Bolingbroke, but interpreted it as a seventeenth century inserted 'binder' within a partition wall, allowing a corseted door frame to cut the earlier tie beam above.

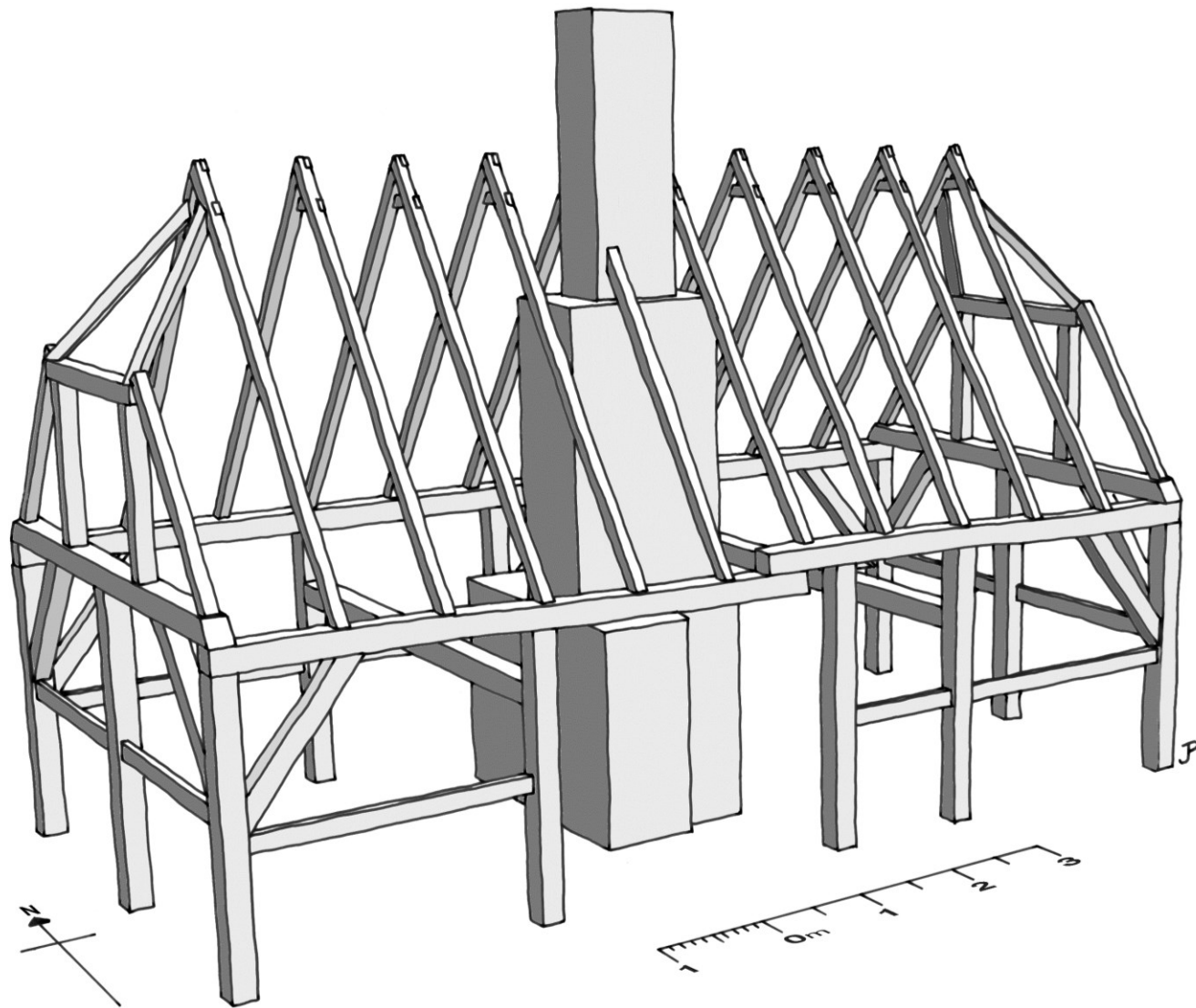


Fig. 60. Reconstruction of Mill Cottage from the south-west, with conjectural half-hipped roof

The significance of an original upper floor at Mill Cottage

Buildings in Toynton had included first floor rooms for many generations before Mill Cottage was built. As early as 1564, the inventory of Robert Franches specified that the chamber was above the parlour (LAO INV/44/44 1564),³³ and the earliest surviving inventory, of John Gelle from forty years before Franches, had listed a chamber, along with the hall, buttery and kitchen (LAO INV/5/66 1524). However, none of the surveyed mud and stud houses in the county (apart from Withern Cottage) display evidence of their upper floors being integral to the frame.

A usable upper floor un-cluttered with tie beams is clearly desirable, but comes with challenges. Placing the floor below wallplate height allows more headroom, but tie beams must then be either negotiated as one moves around the space, or cut through, risking the failure of the entire frame (Fig. 61). This may be minimised by incorporating the tie beam into a partition, and inserting a corseted door frame, but this is clearly not a fail-safe arrangement.



Fig. 61. Two solutions to awkward tie beams, both in the same room at the Blue Bell Inn, Tattershall Thorpe. (L) Tie beam left in place close to doorway. (R) Tie beam cut, and corseted doorway inserted – cut beam indicated by arrow

³³ His house also had a hall and a 'kitchen house', implying a detached kitchen.

The solution seen at Mill Cottage overcomes all of these shortcomings. It is therefore surprising that it is not found more widely. The only other tentative example is known from a single, grainy photograph showing a similar arrangement of binder and post in a partly-demolished building; this happens to also be in Toynton All Saints, in an unknown location on Peasegate Lane (Fig. 97) (Rudkin, 2001, 17).

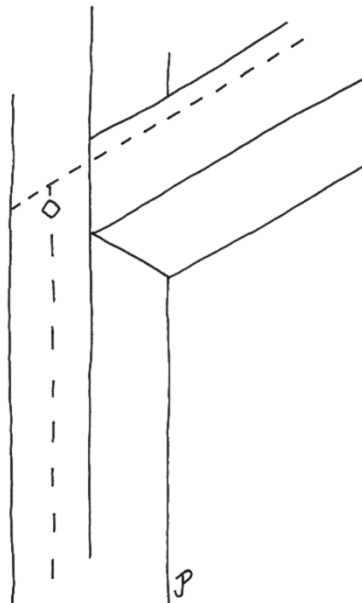


Fig. 62. Sketch looking up at the interface between north-east binder post and binder. Dotted lines indicate position of plastered surfaces

Mill Cottage's arrangement of binder and posts, however, creates a new challenge; how to make a joint strong enough to resist the tension on the binder from the weight of the roof transmitted into the wallplates. Unlike the lapped dovetail assembly found at the interface of the tie beam with the wallplate in most mud and stud buildings, a normal pegged mortice and tenon into the post here would be likely to fail under the tensile load (National Park Service 2000, 1). Therefore, a new type of joint is required.

Unfortunately, at Mill Cottage it is not possible to be certain what kind of joint is used in the binder-post assembly as the thickness of the daub, plus the brick encasement, obscures any indication of structure. The only visible evidence for how the timbers are connected is the large peg in the northern post in the eastern room; otherwise, the timbers appear to simply abut each other (Fig. 62). A possible solution to this framing problem is proposed below.

Innovation in joint techniques

A further unusual, and somewhat enigmatic, feature of the building is the scarfing of the southern wallplate, as supported by the post next to the front door. This unfortunately sits within the cupboard above the entrance, and was not accessible during the survey. The owner later took some photographs of the timber (Fig. 63), which appear to show the underside of the wallplate, with a keyed, apparently-free-tenoned joint. Figure 64 contains two possible reconstructions of this assembly as a scarf joint; 64(a) is

based on the stop-splayed scarf visible in the northern wallplate, while 64(b) explores the possibility that the timbers are barely, or not at all, scarfed but simply lapped and joined with the free-tenon. This would be very unusual indeed, but is suggested by the difference in height above the floor where the wallplate is visible in either bedroom; to the east, the wallplate is 0.16m higher than in the western room – equivalent to the height of the wallplate.



Fig. 63. Joint in the southern wallplate (courtesy of Richard Locke-Wheaton)

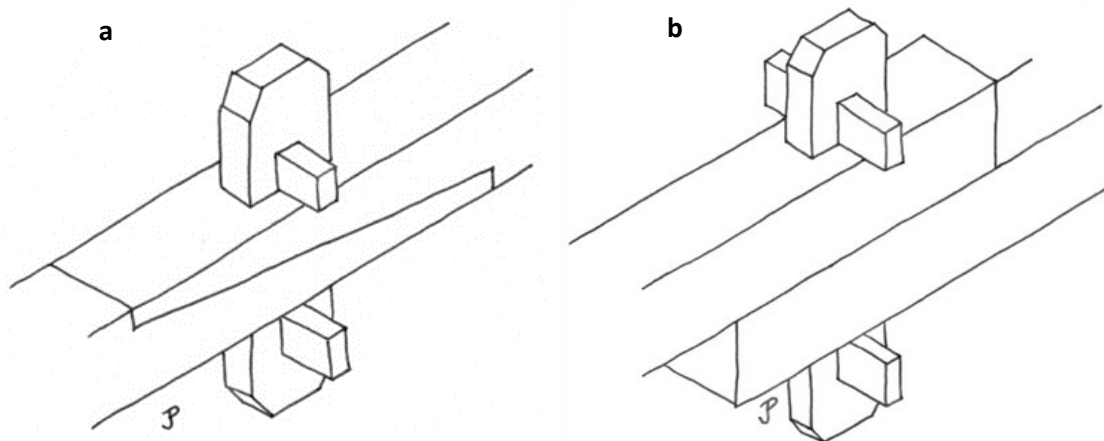


Fig. 64. Possible reconstructions of Figure 60

(a) scarf joint tapered in a similar way to the northern wallplate (b) parts of the wallplate simply lapped

While mud and stud buildings are often dismissed as not being ‘proper framing’, it is common to find well-made and even complex scarfs (for example, at The Forge, South Willingham, or Barn Holt, Bag Enderby). At Mill Cottage the northern wallplate is fairly typical; a long stop-splayed scarf with at least one face-peg, supported by a vertical timber. However, no other examples of face-pegged tenons – let alone free-tenoned scarfs – have been identified in mud and stud buildings. A face-pegged through tenon is, however, an ideal choice for attaching the binders to the posts, being much stronger in tension than a conventional pegged

tenon (Shields and Hindman 2018, 1–2). Without demolishing the encasing walls, though, there is no way to ascertain whether this was adopted.

Innovation and conservatism

The presence of this unusual joint, in conjunction with the dropped binders replacing tie beams, suggests that a different approach to framing had been adopted; rather than responding to the available timbers' characteristics, it appears to be more engineering-based. Nevertheless, the building clearly belongs to the mud and stud tradition, with laths and daubing which are entirely conventional and a layout very similar to hundreds of earlier examples in the village and elsewhere. The frame, while innovative, is not radically different to earlier frames; the posts may be arranged differently, and the lateral ties are a creative response to a long-known problem, but the arrangement of rails and braces is familiar, as are the use of padstones, lack of sole plate, and the general proportions. Therefore, the traditional covering to the frame needed no alteration. The mixture of coppiced rods and riven laths supporting the daub suggest that, while the major timbers may have been sourced from beyond the village (as suggested by their comparative uniformity), the laths and daubing are likely to be as local as ever.

This building is not therefore a new invention, rather it is an evolution of a technique which had always responded to its external stimuli. The fundamental character of the building remains true to the mud and stud tradition; it uses locally-available resources to produce a building which provides the accommodation needed for life in rural Lincolnshire at that date.

The question, then, is 'where did this new external stimulus come from?' The use of these dropped binders is unusual in the British Isles, but is a common technique in continental Europe, and (through emigration) the United States (Yeomans 2003, 17). Harris, who terms them anchor beams, comments (1989, 3–4) that 'as far as I know they were never adopted by English carpenters as a tying joint'. There is no obvious source of overseas influence on Toynton in the later years of the eighteenth century, although this cannot be ruled out altogether.

It cannot be proven, but the building's association with the mill offers a potential source for the new technology observed; Cecil Hewett (1968, 71) identified face-pegged through tenons³⁴ on the collar of a post mill at Aythorpe Roding in Essex, commenting that 'this collar has corner joints of great rarity, which undoubtedly reflect the normal practice of millwrights during the sub-medieval period' and dating the mill to the early seventeenth century. While it must remain speculation, it is possible that Toynton's millwright, commissioned to erect the post mill in the last decades of the eighteenth century, might have been prevailed upon to frame a more innovative design of cottage to go with it. His understanding of the forces

³⁴ Hewett labelled this joint a 'tusk-tenon' (which he illustrated), a usage discouraged by Meeson (2016) and therefore not adopted here.

exerted on a mill by the wind would enable him to dispense with tie beams, confident that his jointing techniques would be more than sufficient for the task.

The adaptability of mud and stud

The standing building is not the first structure to have stood on this plot. The 1614 Survey of Toynton identifies the plot as 'one little cottage with a backside lying between John Sutton north and the heirs of Fulstowe south', a very small freeholding of one Richard Todd extending to just 12 perches (c.300m²). The map depicts a small, single storey cottage with gables and axial stack, parallel with the road. It has a central entry, and a gable window, and is of a form similar to most of the cottages depicted.

This cottage appears to still be standing on the 1771 Willoughby Estate map (LAO 5-ANC/5/A/1 1771), with a small additional building to the north. The Enclosure Map (LAO LINDSEY AWARD/87 1774) is less clear, but identifies the owner as a Mrs Chester, while the plot to the east, which would later be the site of the windmill, was owned by the third largest landowner in Toynton, Thomas Sharpe. Within a few years, both cottage and mill field had been acquired by George Cartwright (LAO ORMISTON/9 1839). Certainly by 1801, and possibly before 1793 (when Cartwright died) a post mill had been constructed and was leased to William Wright.

Fifty years after Enclosure, a Willoughby estate map of 1825 (LAO 2-ANC/5/19/4 1825) indicates that the old cottage had been demolished and replaced with the current cottage in its modern orientation, which had also had time to gain small extension to the north alongside the road, although the small building to the north remained. It is unclear whether this extension is the standing brick one, and if not whether it was in brick or mud and stud. It is possible that the reused timbers in Mill Cottage (including a section of wallplate now the southern intermediate post, and a section of binder now the northern intermediate post) came from the earlier cottage, with the jumbled types of timbers reclaimed suggesting that the building had reached the end of its usable life. This must, of course, remain speculation.

In 1801, William Wright was described as a miller and baker, and this description is found for the various incumbents in the census returns for 1851 to 1911. It may be that the small building to the north was a bakehouse; the current extension, which covers both the 1825 extension and the site of this small building, contains the remains of what appears to be a very large oven, presumably for bread.

The lack of evidence in the last decades of the eighteenth century make it impossible to be precise about Mill Cottage's construction date, but it certainly originates between 1771 and 1825, making it a very late example of a mud and stud cottage. Replacement of the old cottage may have coincided with the building of the post mill, either as a home for the Cartwrights, or creating an attractive offering to a tenant miller like Wright. Either way, with its accessible first floor rooms and south-facing elevation it was inevitably an

improvement over the previous building, although externally it probably looked very little different to its predecessor.

The building continued to be adapted to the needs of its occupiers (Fig. 65). At around the time of the construction of the current northern extension, the mud and stud was encased in brick. The date of this is unclear, but a similar fate befell the post mill, which collapsed and was replaced with a brick tower mill in 1833 (LAO ORMISTON/9 1839). There are several reasons why encasement may have taken place; daubed walls require regular maintenance if they are to remain waterproof and insulating, and are vulnerable to burglary. Mud walls therefore became deeply unfashionable, but were easily disguised by building an extra brick 'skin' on the outside. This also provided further insulation, and made the enlargement or insertion of windows and doors simpler than trying to support them on the frame and laths. The presence of significant surviving mud and a very solid frame at Mill Cottage suggests that aesthetic concerns may have been the greatest factor, although there may also have been areas where the mud had failed.

A door was inserted between the new extension (which, after the retirement of the oven, functioned as the village shop) and the cottage, giving easy access from public to private space. Later, an outshut was added along the back, followed by a further northern extension. This final extension has a sunken floor, c.0.3m below the rest of the cottage, with a fireplace in the northern gable (the chimney has since been removed). Until the 1990s, the room had an unusual, croglofft-like platform across most of it, accessed by ladder but too low for an adult to stand underneath (Locke-Wheaton and Locke-Wheaton 2022). With no photographic evidence, the function of this space is unknown, but it was clearly designed for a very particular purpose.

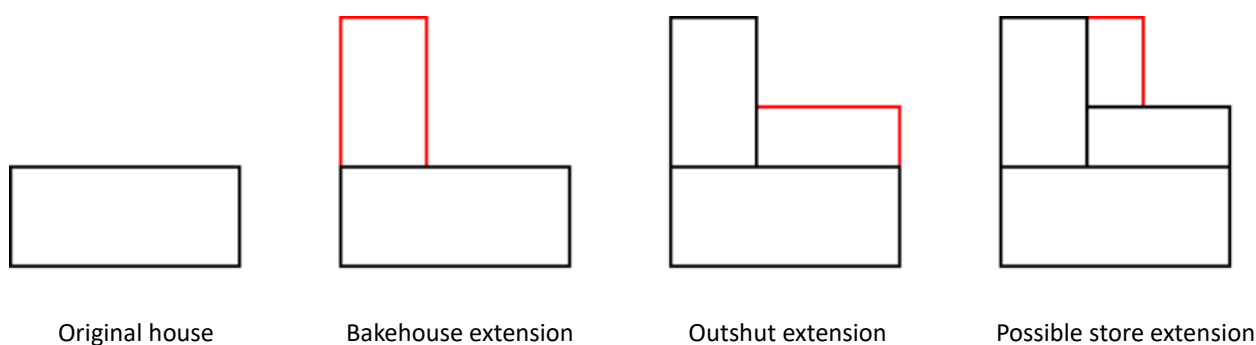


Fig. 65. Development of Mill Cottage

At a date before c.1900, the cottage was adapted once again, and changed beyond recognition by having its roof removed and a full first floor in brick added. The traditional, low, probably-thatched cottage became a modern, Victorian, two-storey house. Twelve courses of bricks were added above the existing wallplate, creating spacious first floor rooms with much higher ceilings than the ground floor (2.1m, dropping to 1.6m at the eaves). New first floor windows were installed and a shallow, tiled roof added. Thus, the innovative building of the last years of the eighteenth century was brought up-to-date in time for the beginning of the

twentieth. In 1911 Henry Eno, his wife and three children, were living with two of his employees (bakers) in six rooms in the cottage ('Henry Eno' 1911); Figure 66 depicts the cottage at this time. Exactly which rooms were domestic, and which were commercial at that date is uncertain, but it represents a house at the larger end of the scale for Toynton; at this date 1 Chapel Lane was counted as 4 rooms, while Chestnut Cottage was two dwellings, each of two rooms. The building continued to be adapted to its circumstances.



Fig. 66. Mill Cottage c.1912 (courtesy of Richard & Janice Locke-Wheaton)

At the beginning of the twenty-first century the building remains in use, with the commercial space having been adapted into further accommodation. The current owners of Mill Cottage are very proud of their home, and its long history. They have carefully preserved as much of its various phases as possible, while also adapting the building to suit the changing needs of a growing family. This work, entailing small repairs to the frame and internal daub, along with more major repairs to the brick fireplaces, buttressing the south wall and remodelling the shop area and rear outshut, provided opportunities for the family to discover more about their home, exciting further curiosity and increased determination to treat the building sympathetically. Once again, the building has been adapted to suit the needs of its occupants; there is nothing to suggest this adaptability will not allow the building to be occupied indefinitely.

A Question of Survival

One question must be addressed; why, if they wished to create a modern, two storey house with attached work space, did the late-Victorians not simply pull down the old mud and thatch cottage and build from scratch? We will never know the motivation of particular individuals, but there are several facets to the answer.

Firstly, Mill Cottage was not transformed from a thatched mud and stud cottage to a smart two-storey brick cottage as a single development. The building was altered iteratively; different extensions added space, while encasement changed its appearance before the second storey was added. It must be remembered that the building was not owned by its occupiers until the late twentieth century; almost all of the alterations were either done by non-resident owners, or by tenants. While it is possible that some of these alterations were part of a long-term vision by an owner, there is no evidence of planning for the next stage when carrying out an alteration – for example, the low height of the bakery chimney (and added seven courses of bricks) suggests it was built before the roof was raised, without consideration for what might come next.

The layout of the original building was a popular one; examples of two-roomed lobby-entry cottages are seen in brick and stone around the county. With the attic rooms already fully usable (if, presumably, a little dark and low-ceilinged) and space at the rear for workspace extensions, there was no need to alter the layout. The cost of demolition and rebuilding from scratch would have been significantly higher than removing the old roof and raising the new, and there is little evidence that this particular alteration changed anything but the experience of living in the building. It is plausible that the raising of the building to two storeys was done in order to attract a new tenant miller; there was a high turnover of millers in the second half of the nineteenth century³⁵ so the accommodation may have been updated to attract and keep a more committed tenant.

While there is, no doubt, an element of chance that Mill Cottage retained its mud and stud core and was not replaced wholesale as the windmill was, it is not surprising that there was never a catalytic moment for wholesale change. Nineteenth century Toynton appears to have been a very typical farming community, shorn of the former pottery industry's influence. The mill was clearly an important village asset, but the millers all supplemented their income, mostly by baking or grocery, suggesting that the mill itself was not tremendously profitable. One of the former millers, Joel Atkin, even appears to have given up the mill between 1861 and 1871 but remained in the village as an agricultural labourer until after 1881 ('Joel Atkin'

³⁵ Every census between 1851 and 1881 recorded a different miller, although Blyth Banes then stayed until after 1891, and from the 1901 census until the 1970s the Eno family were in residence. In comparison, the water mill in Toynton was worked by the Barker family from before 1841; Robert Barker, the last miller, was still living there in 1939.

1861, 1871, 1881). The building was good enough, and adaptable enough to its changing demands, that there was never good enough reason to start again from scratch.

Vulnerability

Mill Cottage is in safe hands, but it is not known how many more mundane 'nineteenth century' houses in Lincolnshire contain similarly preserved earlier buildings. In Toynton All Saints alone there are at least two other potential candidates, Valentine Cottage and Harboro House, which display similarities in layout, proportions or irregularities in the brickwork, hinting that a timber frame may survive internally (Appendix 3). These buildings are, therefore, very vulnerable to unwitting damage. One of East Lindsey District's Planning Officers, when shown a photograph of Mill Cottage, admitted he would never have considered whether a recording condition should be placed on a planning application for the building but, when shown the interior, confirmed that it would certainly require further investigation and recording (S. Milson 2022, personal communication 17 August). We will return to the implications of this in Chapter 5.

Conclusion

Mill Cottage is a late example of a mud and stud building, dating to the last decades of the eighteenth century. With Enclosure and the agricultural revolution transforming the rural landscape, and the industrial revolution bringing innovation in many forms, the new approaches seen in this building are, perhaps, the logical evolution of the technique. In earlier generations, the ability to build a cottage with significant usable space in the roof, but using timbers of familiar scantling and quality, would have represented a huge leap forward in mud and stud's utility; coming, as it did, at the moment when brick was about to become ubiquitous, it appears to have had little impact on buildings of this type in Lincolnshire. One cannot help wondering, however, what 'might have been'?

The building is an excellent example of the adaptability of both the technique of building in mud and stud, and of the buildings themselves. While the novel framing technique opened new opportunities for building organisation and utility, a new technique was not required to make the walls weather-proof. Thus, the materials required were still those which were locally available. The building has proved itself similarly adaptable, both in terms of extension to suit the needs of the occupants, and alteration of its appearance to a more modern (and socially-acceptable) form. While this building's immediate future is secure, it illustrates the difficulty of identifying other examples, and highlights the vulnerability which comes from adaptability.

Chapter 4 – Discussion

For a building tradition which produces notably uniform structures – fully-daubed buildings with thatched roofs – the variation seen in just three of Toynton’s buildings is remarkable. Taking *Recording Timber Framed Buildings: An Illustrated Glossary* as a guide to English framing techniques (Alcock et al. 1996), we find a far wider range of techniques in Toynton than previous literature would suggest. However, more surprisingly, we also find techniques (such as the basket-like roof at Chestnut Cottage, and the use of through tenons at Mill Cottage) which are not even recognised as native to this country. It seems that the ‘grammar’ of English carpentry identified by Harris (1989), and which is tacitly presumed by almost all the authors who have written on mud and stud, does not belong to the language of Lincolnshire’s mud and stud buildings. A further consequence of this is that typologies are also of little use for dating the buildings, as demonstrated below.

As a sample of mud and stud in Lincolnshire, surveying three houses in one of the 727 settlements recorded in the Hearth Tax seems woefully inadequate, but it is enough to demonstrate that there is great breadth of expression within the vocabulary of mud and stud. This breadth is underpinned by a coherent set of values – or perhaps a mindset – which, rather than being concerned with rules about how to construct buildings ‘correctly’, prioritised the utilisation of the resources available in the environment through creative and adaptable methods, to produce or update buildings which suited their way of living.

Chestnut Cottage, Mill Cottage and The Cottage

The three buildings described in this study each have a clear character, despite each sitting firmly within the mud and stud tradition, and having originally shared a very similar outward appearance of daubed walls and thatched roof. At first glance today, only Chestnut Cottage clearly displays its mud and stud origins, although it is only in Mill Cottage that the structure of the applied laths is visible, and in The Cottage that the original surface of the daub is visible. The differences in character reflect the contexts in which they were constructed; the medieval ‘hall with cross-passage’ layout in carefully shaped timber at The Cottage reflected the gentlemanly status of its early occupiers, as did the extension evident from the written sources. The wanier timbers and light-weight roof at Chestnut Cottage speak of a building erected by a tenant with fewer resources, while the innovative use of through-tenons at Mill Cottage, a building of around 1800, reflects changing expectations of room utility, alongside an approach to building which appears to be influenced by the engineering mind-set of the industrial revolution.

Creativity in construction

Perhaps the most striking similarity between the three buildings, however, is not their external homogeneity, but the ingenuity displayed in the construction methods used. Even in such a superficially conventional building as Chestnut Cottage, the specific challenges, apparently brought about by the available resources, were overcome in creative ways. The light, almost joinery-free roof suggests that timber was hard to come by, but that hedgerow resources were available and that the builder had an excellent understanding of their properties and how to exploit them in this unusual way. The apparent survival of this roof for several hundred years suggests that this was not a unique construction, and that the technique was not new when Chestnut Cottage was built. This structure suggests that the building was constructed by and for inhabitants of the village; it is interesting to wonder whether a carpenter would have been required to cut the mortice and tenon joints for the frame, or whether sufficient skills existed within the general population of the village. Whoever constructed the frame, they seem content to dispense with tie beams – usually considered essential – presumably because the roof structure they adopted was significantly lighter than the common rafter roof more commonly found.

The builders of Mill Cottage were equally content to dispense with conventional tie beams, but for very different reasons and by different means. While the roof structure no longer survives, the rafter seats visible in the southern wallplate are substantial, indicating a roof of similar scantling to the common rafters at The Cottage. The builder was clearly aware of the need to prevent the wallplates from spreading, but was determined to provide usable attic rooms. The apparent adoption of through-tenons to attach dropped binders to the 'binder posts' is an innovative solution to this problem, and one for which the inspiration is not clear, although its association with the mill may provide a clue. The house frame as a whole, however, is a distinctive mix of conventional mud and stud – in the scantling of timbers and the cladding of the frame – with an unexpected abandonment of bays, which otherwise appear to be almost ubiquitous within mud and stud. It is not quite the only building in which this has been identified, but at Mill Cottage it is taken to the extreme; although the layout of the cottage is an entirely conventional 'lobby-entry house of 2.5 bays', the frame does not relate to the floorplan in a conventional way. Nevertheless, it is clearly a successful solution to the problem of 'how do I build a house which meets my specification, using the materials available to me?' – the same question which the builders of Chestnut Cottage must have asked, although the answer was very different.

Asking a slightly different question

How, then, do these two buildings relate to The Cottage? Once again, the builders must have asked the same question, 'how do I build a house which does what I want it to do, using the resources I have access to?', and again the answer they arrived at sat firmly in the mud and stud tradition. Their frame of reference,

however, appears to have belonged to a different era, and their list of requirements for what the house must 'do' reflected a different position within village society.

While there is clearly a difference of at least 50 to 150 years in the date of The Cottage's construction from even Chestnut Cottage, a more fundamental difference in expectation from the building is apparent. The original layout, of hall and parlour divided by a cross-passage, with service rooms elsewhere, is an unusual one, but it appears to be paralleled at Lincoln Lane Farmhouse, Sixhills, although the hall there seems to have been flanked by two parlours from the beginning (Field et al. 2022, 23)³⁶ – something which was achieved a little later at The Cottage with the addition of the 'new parlour'. It may be, of course, that this apparent addition was in fact a rebuild, replacing some earlier room(s). In both cases, however, it is also just possible that the parlour below the cross-passage was originally a service room(s), but was converted to a parlour when cooking functions were moved to a detached building; David Martin (2000, 26-28) describes a similar process in Sussex at the end of the sixteenth century, a plausible date for The Cottage.

The apparent retention of an open hall beyond Richard Pearsall's inventory of 1632, despite the addition of the 'new parlour', was clearly not driven by a lack of money to modernise. Instead, the hall itself must have been valued. Open halls were associated with tradition and ancient custom (Johnson 2010, 70); presumably these things remained important in Toynton at a time when new threats, not least via the draining of the fens, were perceived. For some, the value of retaining a full-height room must have outweighed the extra living space gained by ceiling it over, apparently into the eighteenth century³⁷. The activities which took place in the hall may have been social, trade- or commerce-related, or connected to roles which the inhabitants held within the community like churchwardens, manor court positions or the post-Dissolution remnants of earlier guilds, but they were clearly important. Indeed, it is likely that the impetuses for retaining the hall varied widely between houses. Whether these halls retained the symbolism of upper and lower ends throughout the seventeenth century is not clear, and may also have been driven by the factors at play; at The Cottage, Richard Pearsall, gentleman, might have viewed himself as sufficiently important to organise his hall in this manner – he was often churchwarden (e.g. in 1611 (LAO Bishops' Transcripts)), and regularly heads the list of jurors of the manor court (e.g. LAO 1-ANC/3/26/21 1613). Conversely, John Holland, labourer, who died the year after Pearsall but whose inventory was worth just £22-18-4, may not have had such pretensions; he was probably living in the same cottage as Anthony Holland had been in 1614, on the edge of the fen at Harehills, which had only recently gained a single

³⁶ Lincoln Lane Farmhouse dates to 1530-55. While it is a much grander, fully two-storey structure (with a more conventional timber frame) it sits within the same gentry category of building, and utilised a technique similar to mud and stud in its original internal noggin at least (Field et al. 2022, 27–30).

³⁷ Elizabeth Gunnis' inventory of 1737 mentions 'dwelling house' (the context clearly indicating a room, not the whole building), parlour, dairy and single chamber (LAO INV/210/132).

chamber. His inventory suggests he was a fenman, with a boat and thatch drying in the fields close to his house (LAO INV/141/113 1633), and there is no sign of him serving on the manor court jury.

The layout seen at The Cottage also appears to be reflected in inventories in other settlements, where we find rooms such as parlours 'below the entry', and where the entry is clearly larger than a simple lobby entry³⁸; houses in Thimbleby (1596), Mareham le Fen (1584, 1588, 1625), Toynton All Saints and St Peter (1580, 1613, 1677), East and West Keal (1597, 1614) and Haddington (1605, 1606) all record the term³⁹ – it is notable that, with the exception of Thomas Watson's inventory of 1677 (LAO INV/219A/20 1677), all of these examples date to 1625 or earlier. While the term may have remained in use for lobby entry houses, it appears that these spaces were not large enough to store goods worth recording in inventories. Could this provide an insight into the date around which time cross-passages went out of fashion in parts of Lincolnshire? It certainly suggests a date when they stopped being used for the storage of large goods, as there is no alternative term in later inventories.

Evidence of change in Toynton in the early decades of the seventeenth century

A number of small pieces of evidence suggest that the early decades of the seventeenth century were a time of change in buildings in Toynton. The almost-complete disappearance of 'entries' from the inventories coincides with the switch from 'milkhouse' to 'dairy' (see Chapter 2). At the same time, the terms 'outend' and 'backend' also disappear (Appendix 1). The survival of outshut rooms at the rear and gable ends of many mud and stud buildings in Toynton and beyond suggests that this does not represent the abandonment of a physical structure, but perhaps a growing specificity in either the naming or use of space; it is no longer a general-purpose 'backend', but a buttery, dairy, or brewhouse. Both the milkhouse-dairy shift and the loss of out/backends appear to be linguistic changes, rather than structural, but the disappearance of 'entries' as storage spaces suggests that there are also some physical changes happening in buildings. There is a suggestion that these linguistic shifts may represent a conceptual shift too, in the way that the house was thought about. Further research in other settlements would clarify whether these developments are unique to Toynton, or indicative of more widespread changes.

Convergence of status

As lobby-entry houses, with very similar ground plans, Chestnut Cottage and Mill Cottage do not share the same social expectations as The Cottage's cross-passage arrangement. Although both buildings post-date the 1614 survey, they closely resemble the layout seen in most of the cottages represented on the maps – and to the modal cottage described in Toynton's inventories between 1540 and 1740. Like Chestnut and

³⁸ For example, Thomas Hygham, who died in Toynton in c.1580, had wood and a pair of malt querns in his entry (LAO INV/65/223 1579), while Thomas Watson (d. c.1677, Toynton All Saints) had a saddle, bridle, strike skep (large basket), kinnell (large trough) and other things in his (LAO INV/219A/20 1677).

³⁹ There are, conversely, no surviving records of examples in High or Low Toynton, Aubourn, Sixhills or South Willingham.

Mill Cottages, this two-roomed model – hall and parlour – very often gained a service room at a later date. The Cottage equally gained a suite of service rooms at the rear of the house, suggesting that by the time these rooms were added, the way of living in the building was closer to that found in most of Toynton's houses.

The description of The Cottage in Pearsall's 1632 inventory clearly still views the building as belonging to a man of gentry status, although the family's fortunes (at least in Toynton) appear to then decline dramatically during the Commonwealth period. By the time of the Hearth Tax, The Cottage remained one of the largest houses in the village but was exempted from paying due to the poverty of its occupant. By this date, then, The Cottage had no higher status than Chestnut Cottage (if built by then), despite the significant differences in their construction techniques and, presumably, costs. This parity in status continues through the nineteenth century, when both cottages were subdivided into very small dwellings.

This descent in status appears to be characteristic of mud and stud buildings, both individually and as a class of building. Whereas, in the sixteenth century, mud and stud was deemed appropriate for a building as important as the Duchy of Lancaster's Courthouse in Bolingbroke, by the eighteenth century, and perhaps earlier, it is only fit for cottages. By the time that Arthur Young was writing about the county's agriculture in the 1790s, it was clear that mud and stud was the cheap option for farm labourers' houses – costing about 1/3 less than in brick – although he seems to have viewed them as essentially equal to the brick cottages. Young (1799, 35-36) gives an example where a farmer had built two pairs of cottages, identical except for materials, but makes no comment on either being superior, although he emphasises three times (apparently approvingly) that mud and stud is cheaper. Into the nineteenth century, as we have seen in Toynton, the technique is abandoned for dwellings, although there are suggestions that farm buildings continued to use mud and stud (see pg. 175).

Buildings as an expression of community

While there is great variety within these three buildings, there is little to suggest that this variety was used as an outward display of individuality in Toynton, nor even of wealth or status, although clearly some buildings were larger than others. The buildings were all daubed and thatched – even if different materials were used for this, the overall impression from any distance will have been more influenced by the age of the thatch than its material. The presence or absence of a brick chimney may have been the most visible difference. Similarly, as we have seen in Chapter 3.1, the size or layout of a house was not always a safe predictor of wealth. Perhaps, then, these buildings were an outward display of community. We have seen that there was an independence of thought in Toynton throughout the medieval and post-medieval period, but on few occasions was that expressed individualistically – Juliana Tagg may have been an independent businesswoman, but she was entirely reliant on her pottery-making neighbours for her livelihood, and probably for ensuring there was food for her to buy or barter. The outward uniformity of the buildings may

have served to underpin community cohesion, particularly at times when the community as a whole felt threatened. Maurice Barley (1952, 108), writing about a later period, observed ‘When brick was used in place of mud or clunch, it was very properly whitewashed, to give it the same finish as all the other houses’; community cohesion clearly lasted beyond the introduction of other building techniques. This emphasis on unity and community may explain the way that Valentine depicted the houses on the map; at first glance, they appear almost as uniform as symbols but, when looked at closely, they have many variations. Whether this was a conscious choice on his part, or the outworking of what he observed as he surveyed the manor, is harder to ascertain.

What can we learn from Toynton about the end of the mud and stud era?

By the early nineteenth century, mud and stud had successfully adapted to Toynton’s population’s changing requirements throughout several centuries. However, new ways of thinking and building, born of the industrial revolution with its emphasis on engineering and precision, stood in direct contrast to the technique’s iterative, responsive approach. It is, perhaps, this changing mind-set at the turn of the nineteenth century, along with the enormous change in the landscape brought about by Enclosure and – especially – the draining of East Fen, which sounded the death-knell for mud and stud in Toynton. As road- and water-borne communications improved and easy access to markets for buying and selling opened beyond Spilsby, importation of consumer goods and building materials such as Welsh slate became easier. Simultaneously, the wealth of resources previously available in the fen was removed, along with the rights of common. With the fen resources no longer available, and the opening of a commercial brickworks in East Keal (Lawie and Richardson 1996, 1), the balance had clearly shifted away from the traditional ways of building towards a more modern approach.

Ironically, the tendency from the nineteenth century onwards to do everything possible to disguise the mud and stud origins of buildings has contributed to their survival into the twenty-first century. While the Rural Housing Survey led to the demolition of many examples, it is noticeable in the surviving records for Louth Rural District that fewer buildings were noted as being mud and stud than one would expect, given the surviving examples known in the area. It seems that the ‘disguises’ were good enough to prevent their identification at that date, and, for the standing examples, the updates made to them sufficient for the inspectors’ requirements. Many unidentified mud and stud buildings were inevitably condemned, regardless of their fabric, but numerous buildings of more modern fabrics also appear to have been judged equally unsuitable.

What, then, can we say about mud and stud in Toynton?

It is clear that mud and stud has a long history in the village, and continued to be used as a building technique until at least the end of the eighteenth century. The excavated evidence for early buildings with padstones or stone sills is paralleled in the use of a stone sill at 1 Chapel Lane, dating to before the end of

the sixteenth century, and padstones at Mill Cottage, dating to the very end of the eighteenth. The technique also appears to have been used for everyone from the houses of gentlemen, down to landless labourers. However, the technique does not appear to have been frozen in time, nor applied uniformly across all social groups. In the sixteenth century, houses for wealthy men such as Richard Pearsall and John Cooke might be built in mud and stud, using well-shaped, substantial timbers and to plans which conformed to medieval ideas about the way a gentleman should live. At the same time, their poorer neighbours were using similar materials to construct simpler buildings out of wanier timbers, which nevertheless shared a remarkably uniform outward appearance. They would continue to do so long after the wealthier members of society looked to other building materials and house forms.

Toynton does not retain the 'chocolate box' appearance of villages like Thimbleby; a series of nineteenth century landowners seem to have changed the face of Toynton from the whitewashed, thatched village of the mid-eighteenth century to a brick and tile village. Nevertheless, it is one where a significant number of houses retain remnants (or more) of the mud and stud buildings they started out as. None of the surveyed buildings conform to Rodney Cousins' stereotype (2000, 9); each is a unique response to the question 'how do I build a house which does what I want it to do, using the resources I have access to?'

In the following chapter, we will consider how the things learned in Toynton might be applied over a wider area, and suggest a future research methodology to more fully understand the breadth and longevity of mud and stud as a technique.

Chapter 5 – Towards a characterisation of mud and stud

Matthew Johnson (2005, 120–121), critiquing the tendency of English landscape archaeologists towards particularism rather than generalism, identifies a tension between a trend towards straitjacketing local cultures into a wider generalism, and being so focussed on a particular place that the interaction between localities and the wider world are lost. While the focus of this thesis so far has been a very particular place, its value lies in being the beginning of a wider understanding of an understudied technique, indigenous to Lincolnshire, but whose fundamental approach might be detected more widely across the country, and whose influence is perceived across the Atlantic.

Perhaps a clear example of this ‘straitjacketing’ of mud and stud lies in Brunskill’s dismissal of mud and stud as ‘quite inferior’ to more orthodox techniques of both timber framing and earth walling (2009, 209). We have seen in Chapter 4 that Harris’ ‘grammar of carpentry’ does not sit comfortably with the approach to timber conversion and framing found in mud and stud; Brunskill has no other frame of reference, and thus dismisses the technique as inadequate. If we are to understand it, we need to reframe our expectation of the ‘rules of mud and stud’ to acknowledge a more embodied way of building, encompassing a close relationship with the materials and a responsiveness to the particular, but which could therefore be applied in widely varied contexts.

We have seen that Toynton’s mud and stud buildings depend on the landscape around them, so it is natural to turn to landscape archaeology, in the hope that we may be able to find some ‘rules’ which determine what expression of mud and stud will appear in a given settlement. In the next section, we will explore how Toynton’s relationship with the landscape mirrors that of other settlements.

Spatial characterisation – the limitations of *pays*

As we have seen, Toynton’s liminality illustrates the limitations of landscape characterisation into *pays*, when considering the influences on mud and stud. While these limitations may be invisible for villages which sit at the centre of a particular *pays*, there are surprisingly few of these in Lincolnshire; Figure 67 depicts Lincolnshire’s parish boundaries overlaid with the landscape character areas defined by Lord, MacIntosh and Partington (2011), who have published the most detailed landscape characterisation of Lincolnshire. A remarkable number span two Historic Landscape Character Areas (HLCAs), let alone those which span multiple of the more granular Historic Landscape Character Zones (HLCZs).

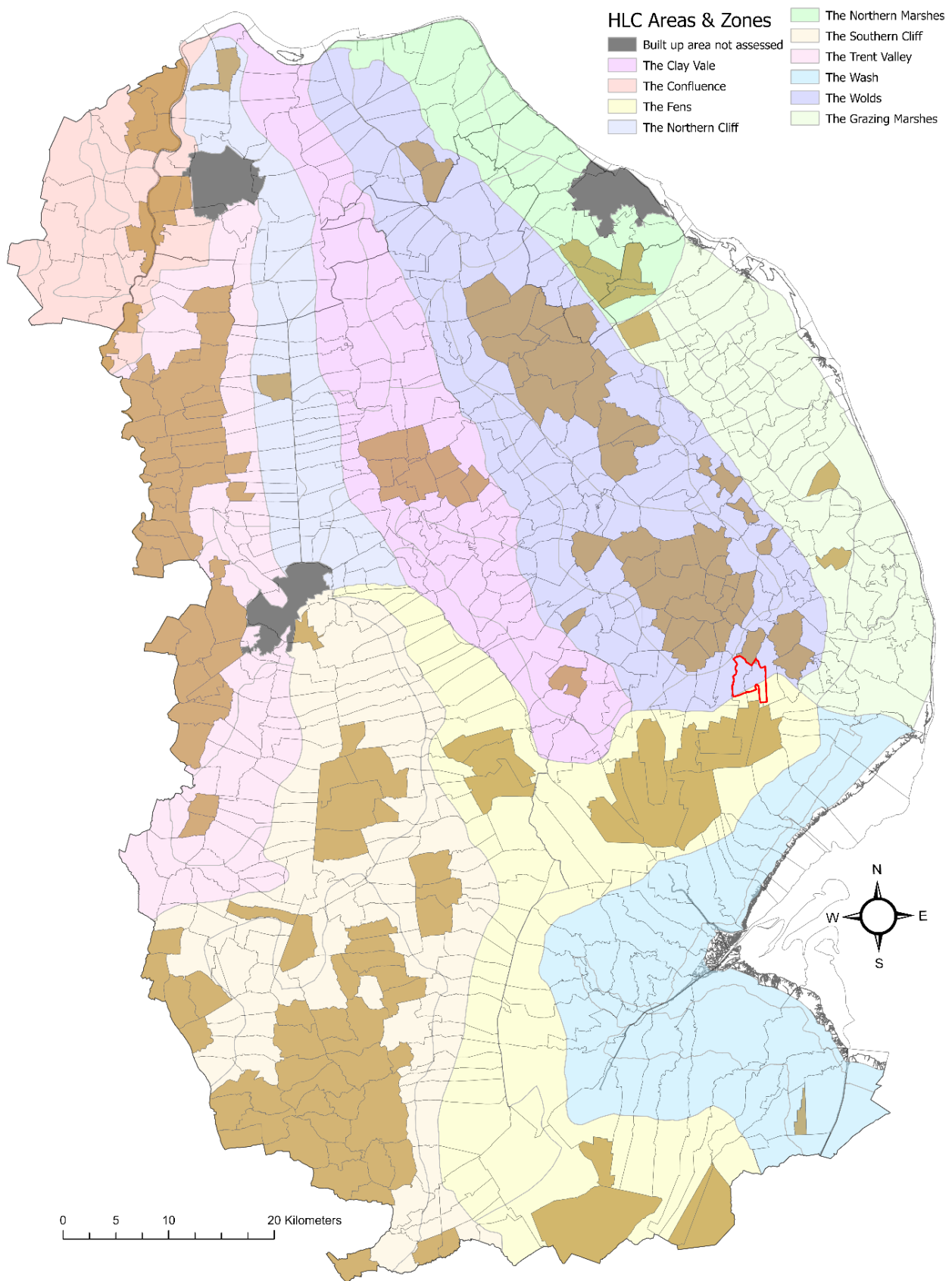


Fig. 67. Liminality in Lincolnshire

Modern parish boundaries are overlaid on Lord et al.'s Historic Landscape Character Areas (coloured) and Zones (grey subdivisions of the Areas). The parishes which are wholly contained within a single HLCZ are shaded ochre, 37 of which nevertheless adjoin the county boundary.

Toynton is not, therefore, unusual for the county; as such, it provides a lens through which we can consider both the usefulness of *pays* and their limitations.

Of the 596 modern parishes in Lincolnshire (excluding the conurbations of Lincoln, Grimsby and Scunthorpe), 229 occupy more than one HLCA, while only 170 are contained within a single HLCZ.⁴⁰ 72% of parishes, therefore, straddle at least two HLCZs, which are defined by Lord et al as having ‘a distinct character’ when considering topography, land use, settlement patterns, communications and above-ground heritage assets (Lord et al. 2011, 5).

Clearly, access to a variety of land types has been important in Lincolnshire for a very long time. It seems that, while it is possible to identify *pays* within the landscape, these do not map onto the divisions of human geography – manors and later parishes – which equally defined the inhabitants’ lived experience and influenced their decision-making when it came to building homes (Fig. 68). Furthermore, as we will see, the character of mud and stud in a place depends on far more than just the landscape it sits within.

How, then, *can* we zoom out from Toynton to understand the wider picture?

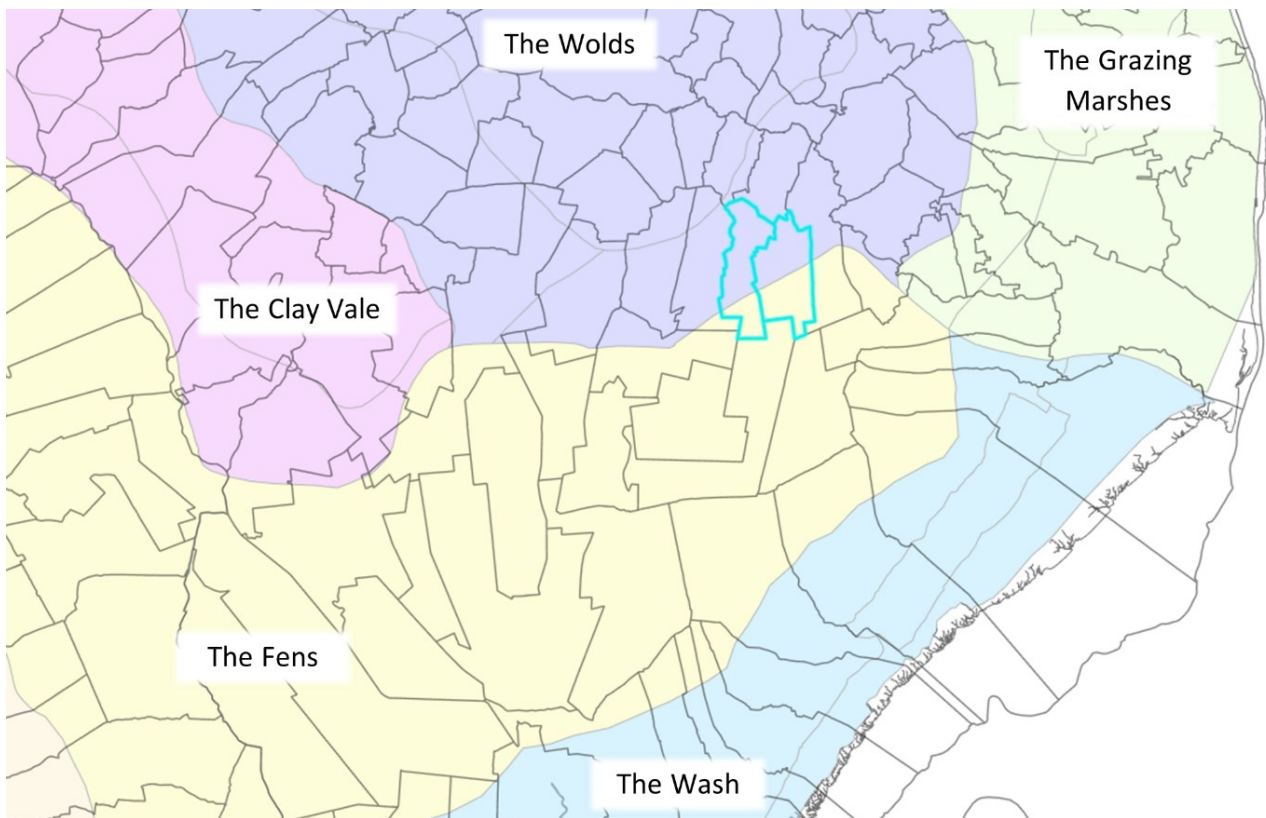


Fig. 68. Historic Landscape Character Areas overlaid on parish boundaries
The highlighted parishes are Toynton All Saints and St Peter. Faint grey lines demarcate the Character Zones within the Areas (Lord et al. 2011).

⁴⁰ If parishes which border the county boundary – occupying an equally liminal position – are excluded, this number is reduced to 132.

Dwelling

Ingold's dwelling concept (2021, 234) allows buildings to be shaped by the relationship between people and their surroundings. As we have seen, with mud and stud the characteristics of the materials (especially the available size and waneyness) determine the final form of the building, as opposed to the desired form shaping the materials, as is seen in other traditions of timber building. This is reminiscent of Ingold's *co-option*, where an object may be barely altered, but become a tool;

'In co-optive making an already existing object is fitted to a conceptual image of an intended future use in the mind of a user. In constructive making this procedure is reversed, in that the object is physically remodelled to conform more closely to the pre-existing image.' (Ingold 2021, 218)

Equally, the collaborative nature of building, allied with the need to renew elements of the building and opportunities for alteration and extension, meant that building was part of the seasonal cycle of activity, and never complete. Dwelling in Lincolnshire, therefore, involves a different attitude to resources and permanence, and an ongoing relationship between occupants, structure and landscape.

Dwelling in a particular place – the 'dwelling-scape'

The space in which people dwelt within a given place – Ingold's 'relational context of people's engagement with the world' (2021, 238) – was therefore an interconnected 'web' of all the interactions they had – with other people, with the landscape and its resources, and with the other places they visited⁴¹. A place's 'web' is therefore comprised of the interactions of each individual in it; in the past, these were a lot more similar to each other than they are now, although occupation, status and familial connections caused variations. There is no commonly-used term for this 'web' as it applies to a particular place; I would like to suggest that 'dwelling-scape', recalling Ingold's 'taskscape' discussed in the literature review, may provide a convenient shorthand.

As we have seen in Chapter 2, Toynton's dwelling-scape overlapped with those of the places around it to a greater or lesser extent; it interacted with the fen and the other settlements in the Soke in a similar manner to East Keal, but Keal was less connected with Eresby, as the Willoughbys were not the dominant landlords. Conversely, Toynton shared its interactions with Eresby and the Willoughbys with places as far afield as their manors in Hundleby, Theddlethorpe and even Edenham. In the next section, we will explore what shaped the way buildings were constructed in a given place.

⁴¹ This remains true, although modern communications and media mean that each person's interactions will almost certainly differ greatly from their neighbours'.

What characteristics of the dwellingscape influence the expression of mud and stud?

While Ingold argues that relational and landscape contexts are inseparable if we are to fully understand the place we are interested in (2021, 238), if we are to look for patterns it is useful to categorise the influences on choices made in building as either relational (or social) or landscape-derived (spatial). Figure 69, while not an exhaustive list, illustrates the variety of these factors. It is worth noting that they affected far more than simply the form of the buildings, although this is the main focus of the study.

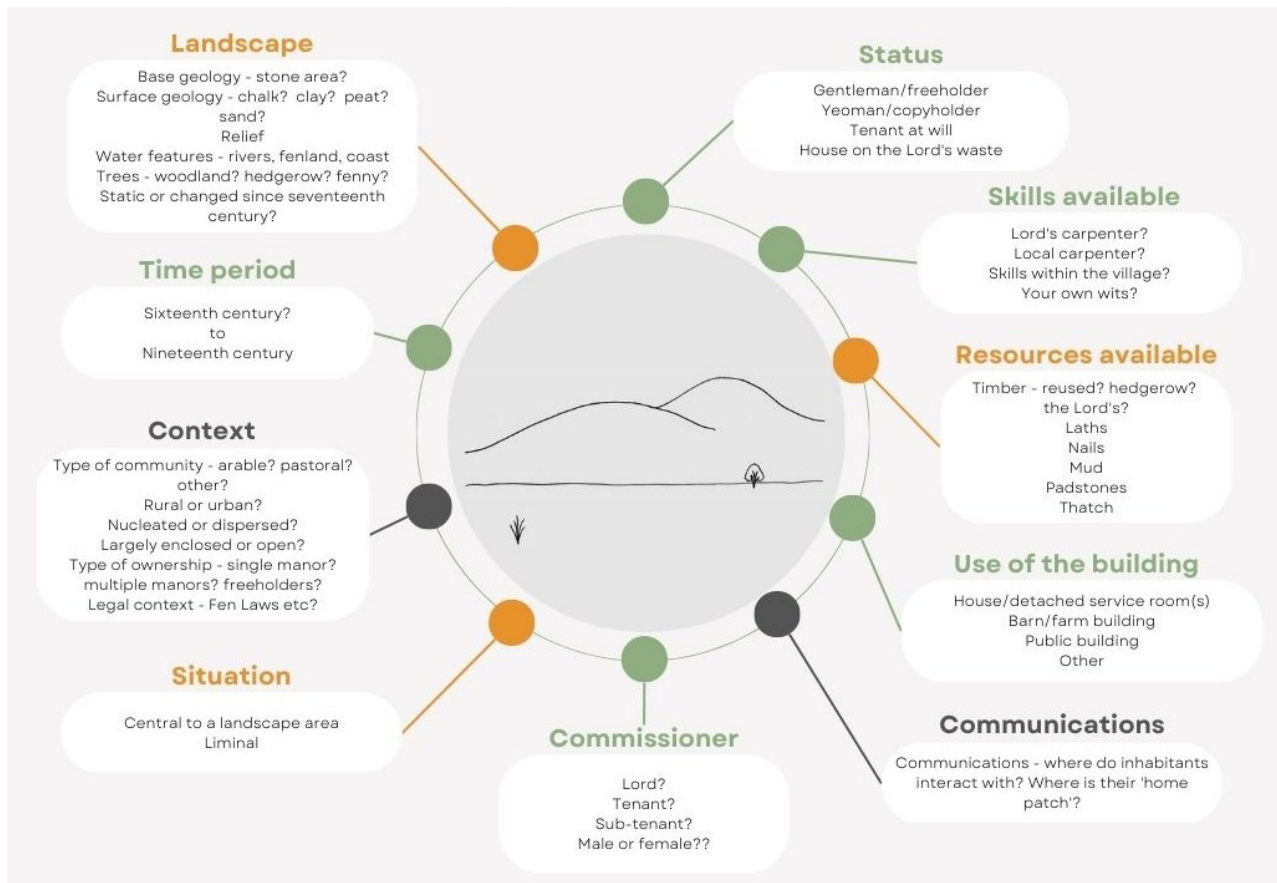


Fig. 69. Factors affecting the form of mud and stud in a particular place

The social context of a building (use, commissioner, status, time period, skills available) may be wildly different in neighbouring settlements, although the spatial setting (landscape, situation, resources available) is likely to be more similar. The context category is the point at which this artificial separation into social and spatial fails. For example, the type of farming practised in a settlement is as influenced by the nature of the soil or the gradient, as it is by the whim of a landlord. Similarly, the presence (or lack) of freeholders in a settlement may be as much to do with the productivity of the land as it is with the social structure of the manor. Within a given settlement, social factors will have a greater influence on whether a particular building is typical of the settlement. Spatial characteristics are more likely to be largely the same for any buildings within a settlement while, clearly, a scheme of categorisation for spatial features will be little

predictor of the social influences. Inevitably, the exact combination of social and spatial contexts will be unique to each building, and will vary over time within the same building, although the chronological shifts are likely to occur in a broadly similar pattern across or even between settlements.

How do we assess the dwellingscape of a place?

Once we have identified the characteristics which appear to influence how mud and stud is used, based on the Toynton case study, we can evaluate whether these coincide with those of other places. Once a few settlements have been assessed in this manner, the magnitude of each characteristics' influence on the buildings may be identified, and the criteria refined. While a study of this type is beyond the scope of this thesis, a methodology for assessing the dwellingscape of a settlement may be suggested. Figure 70 depicts a proposed methodology for this, while Appendix 5 contains a draft assessment structure based on Toynton's dwellingscape.

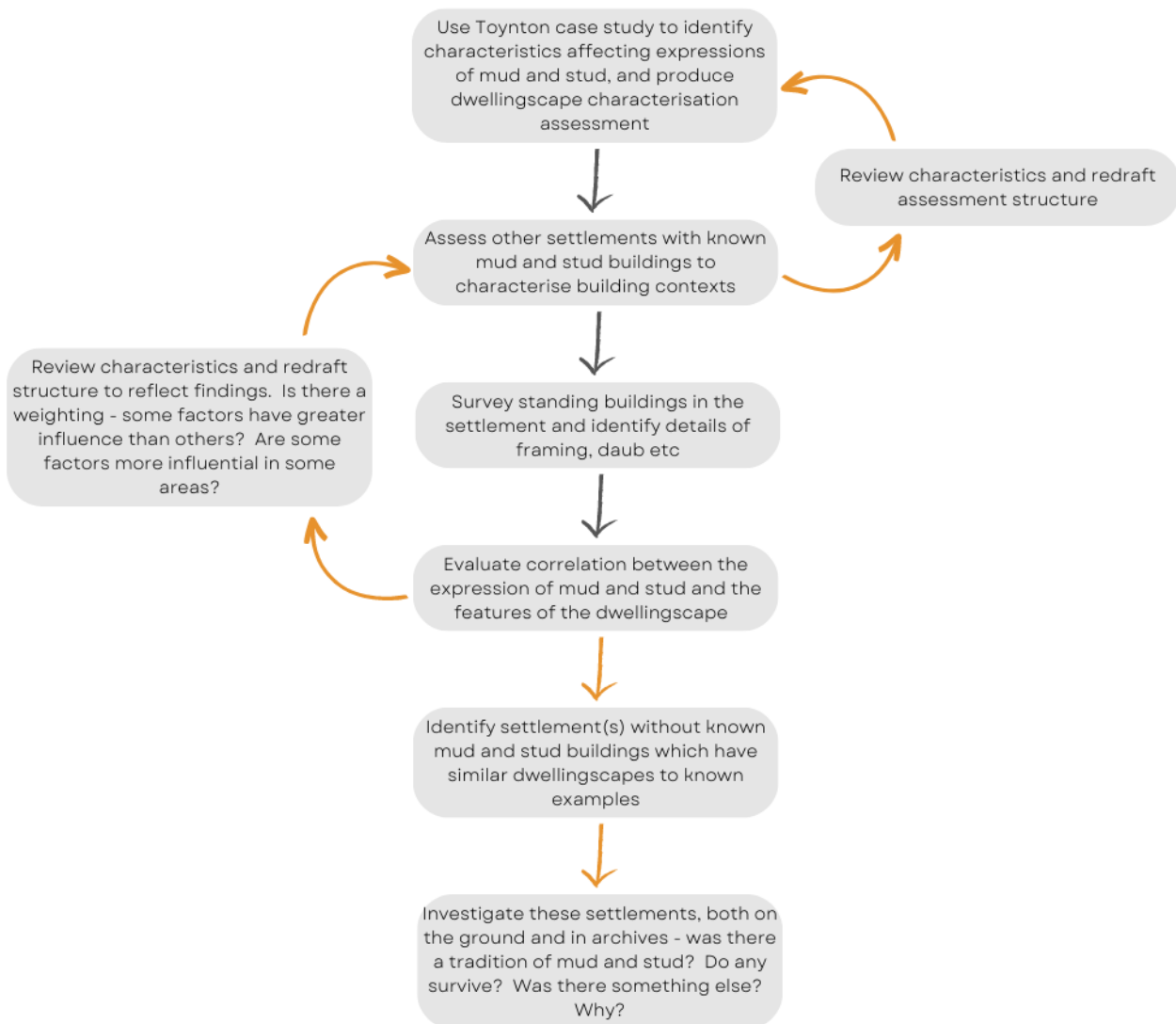


Fig. 70. Flowchart of methodology for investigating the impact of dwellingscape on the form of mud and stud in a settlement

What do we stand to gain?

The line of villages along the northern fen-edge, from Coningsby, via Mareham le Fen, East Kirkby, the Keals, and Toynton to Great Steeping, are all known to have had mud and stud dwellings into the age of photography, and exploited the resources of both low and higher ground; it would be illuminating to explore whether these villages and their buildings share distinctive characteristics with Toynton. Similarly, Bolingbroke, the centre of the soke and with equally extensive rights in the fens, sits at a similar altitude to Toynton All Saints, but lies in an embayment away from the fen itself, surrounded by much higher ground. Many mud and stud buildings survive there; do these belong to a similar context to Toynton, or do they have more in common with Hagworthingham and the wolds villages to their north? Is there even a significant distinction in buildings between the different areas? What about other settlements further away – do the fen-edge settlements from Heckington down to Market Deeping share similarities with these northern fen-edge settlements? Or do these share more features with the (admittedly fewer) villages further from the fen in South Kesteven? How different *are* all these buildings, anyway? Is Toynton unusual in its diversity, or is this commonplace?

As the study continues, it may become clear that particular factors have much stronger influences on mud and stud than others. If these are spatial features, then the characterisation of settlements' landscapes is likely to prove very useful in the prediction and identification of mud and stud in previously unknown settlements. However, if the strong influences are social, then it may be that the dwellingscape of an *individual building*, or a particular characteristic (e.g. a particular landowner) is the more informative. The insights gained will help us to rethink the boundaries which we draw around buildings and building traditions, about what is important and what should be protected.

Conclusion

The buildings surveyed in Toynton are by no means unique – hundreds of mud and stud buildings survive – but they are unusual for being studied using archaeological techniques, and unique in the correlation of documentary evidence with surviving fabric. Until we carry out similar studies on other buildings, we cannot know whether these examples are extraordinary, or whether there were even more creative solutions to the question ‘how can I build a house which does what I want it to do, using the resources I have access to?’

This study has, however, demonstrated that when we learn to ask the right questions, it is possible to understand the reasons *why* people built in a certain way, and the advantages they gained. This allows us to understand their embodied way of living and building.

The need for a different approach

In the past, there has often been a division of scholarship when buildings are studied; as archaeologists, the wealth of information available in a standing building is so much greater than for excavated examples that we can be overwhelmed by what can be understood just from the fabric, and never look at the wider picture. Equally, the ability to establish typologies of (e.g.) joints and roof structures can become ends in themselves, while the availability of scientific dating methods means that we can often give short factual answers to questions, and therefore pursue them no further.

Mud and stud does not afford us these luxuries; any dating is difficult, and precise dating is thus far impossible. Many of the buildings have been significantly altered, and are still lived in, meaning that investigations are opportunistic and ‘keyhole’. The act of daubing a building obscures much of the detail of its construction. Equally, the diversity of techniques seen in the three buildings explored above highlights the difficulties of attempting typologies, particularly in the light of the extremely small number of surveyed buildings.

This does not, however, make mud and stud a poor subject for study. In the same way that the creators of mud and stud buildings made use of the diverse array of resources available to them, the student of mud and stud has many ways to investigate the building in front of them. If we allow a building and its dwellingscape to show us the decisions the builders made, and even the reasons for them, then the closer we look, the more we can understand how *they* understood and communicated status and identity. Simultaneously, the documents flesh out this picture with the individuals and communities making the decisions. This fuller picture then counters previous preconceptions about the quality of the buildings and, by implication, the competence or otherwise of the people.

Mud and stud characteristics

Mud and stud's characteristics depend less on the details of exactly *how* buildings were constructed, than on *why* design choices were made. As this exploration of Toynton has highlighted, there were many ways to combine timber, laths and an encasing daub in the initial construction of a building, and even more ways to adapt it to the changing needs of the building's inhabitants. This variety demonstrates a responsiveness to resources (materials, labour and skills) and inventiveness in overcoming particular challenges. It is this 'mud and stud mindset' which is perhaps the most diagnostic characteristic of the technique.

One surprising characteristic is its utilisation across a wide social range, reflected in differences in layout and quality of materials used, but less-so in external appearance. As we have seen, the three surveyed buildings in Toynton had quite different social statuses, but would have in many ways looked superficially similar.

Details of layout and quality reveal subtle cues as to a building's status, which can sometimes be substantiated in the documents. How visible these cues were to contemporary neighbours or passers-by is less clear, although the inventory data (Appendix 1) demonstrates that social status was clearly important to the community.

The philosophy of building encountered – where form is subservient to resources, reflecting Ingold's 'dwelling perspective' (2021, 186) – elucidates the sometimes surprising decisions made in the construction of the buildings, and provides context for the observed trajectory of status, from courthouse to pig-house. To the modern eye the materials chosen may appear inadequate, used as we are to engineers determining numerical values for acceptable properties of building supplies. However, when approached from the perspective of 'how can I build a house which does what I want it to do, using the resources I have access to?', coupled with the testimony of buildings which remain solid several hundred years after construction, it becomes clear that this philosophy of building is a successful one, persisting for many generations and producing adaptable, practical dwellings. Furthermore, it did not cease with the advent of new building materials; by the end of the eighteenth century in Toynton social changes and the availability of bricks had shifted the focus away from the natural resources of the fens and towards the commercial resources of the brickyards, but there was no great rebuilding. The indigenous builders simply absorbed the new resources available, incorporating them into their existing buildings and exploring new ways to use bricks to build houses which did what they wanted them to do.

Limitations encountered

Inevitably there were elements of the study which were constrained by things beyond the author's control. Perhaps the greatest of these was the challenge of working with occupied buildings. The ongoing social effects of Covid in 2021/2 meant that there was a limited window during the project in which new indoor fieldwork could be undertaken. Similarly, if the buildings had been derelict then more destructive sampling techniques may well have been possible, which could have conclusively established the exact internal

structure of the mud and laths. The Cottage was difficult to work in due to it being very full of possessions; this meant that some areas of the building (especially the bedrooms) were only accessible briefly in the days before the sale of the house. This unfortunate timing, combined with a change in ownership at Chestnut Cottage since the initial visit, meant that it was not possible to return to these properties to answer some subsequent questions.

The final significant limitation for the project was the limited word count. Several areas which would have been useful to explore in greater depth had to be curtailed, most notably a comparison with earth and timber structures in other parts of the UK, and overseas, especially the early English colonies in the United States. Equally, it was not possible to explore how closely impermanent structures like hovels mirrored more permanent mud and stud buildings.

What next?

There is clearly much more to understand about mud and stud, both in the particular and the general. We simply don't know enough about it to be able to comment on what is normal and what is exceptional, either in a given place, or across the county as a whole. Is Toynton unusual, or is it a good case study for a 'normal' village? Is there such thing as a 'normal' village?

Much further work is needed to understand the dwellingscapes of other settlements, and how they influence buildings. If it were possible to understand the relationship between a dwellingscape and the way mud and stud is used, then our understanding – both of the history and detail of the technique and the way that its builders and occupiers understood their surroundings – will be hugely improved. This, in turn, will allow the buildings to be better stewarded in the future.

While the current inability to fit mud and stud buildings into typologies has led to many helpful questions, and some surprising answers, it may be possible – indeed useful – in the future to begin to organise our knowledge in such a way, even identifying distribution patterns and relating them to the dwellingscapes.⁴² Clearly this kind of work must not supersede the interdisciplinarity which has proved so fruitful. Within the study of mud and stud (and perhaps among other techniques?) Johnson's identified tension between the particular and the general is not a problem which needs to be resolved (2005, 120–121) – it is an equilibrium which must be maintained.

This thesis has barely scratched the surface of the documents available. Lincolnshire Archive holds tens of thousands of probate inventories, inviting investigation of room names and uses, along with glebe terriers, estate surveys, court rolls and myriad other documents illustrating the dwellingscapes of mud and stud over

⁴² Of course, the methodology must be tested against unlikely candidates too, to avoid the confirmation bias seen in earlier attempts to map the distribution of mud and stud.

the centuries. The long-awaited online publication of the probate inventories will transform these investigations.

At the same time, new techniques may allow us to assign scientific dates to buildings; oxygen isotope dating is proving successful on both oak and elm, and on examples where the speed of growth means there are too few growth rings for conventional dendrochronology (Loader et al. 2022, 1). In a tradition where timber is routinely reused, care must clearly be taken that the context of the sampled timbers is fully understood through detailed survey work, but it would be extremely useful to be able to assign *any* dates to buildings, and thus begin to answer some very basic questions, including ‘how far back does mud and stud occur?’

The future

During the course of this research, The Cottage was submitted for spot-listing by East Lindsey District Council. The application was turned down, despite the weight of evidence, because it was not considered to be ‘original’ enough to meet the listing criteria (Lincolnshire HER 2022). As we have seen, the distinctive character of mud and stud lies precisely in its persistence, adaptability and responsiveness to change – features which mitigate *against* a building being listed.

This is symptomatic of mud and stud’s greatest threat; obscurity. The technique, largely ignored by archaeologists, is therefore little-known by conservation officers and planners, let alone by the wider population, even within the parts of the county where it survives. The systems in place to protect our cultural heritage are unable to help, because the buildings do not conform to criteria written for a very different tradition.

This ignorance fuels a perfect storm of threats to these buildings. Their adaptability, leading to their disguise – coupled with ignorance – mean that there is little to prevent their alteration or wholesale destruction. In an age where expectations of dwellings tend towards open plan, light-filled living, their general proportions (especially low ceilings and few windows) make the buildings less attractive, but are not distinctive enough to highlight the heritage value which might otherwise invite further investigation. Often sited on generous plots, they are attractive targets for redevelopment.

Without significant fieldwork, the true extent of mud and stud’s survival cannot be known and appropriate safeguards put into place. A survey of this nature would also facilitate the education of property owners and relevant professionals in planning control, architecture and the building industry about the significance of these buildings. This would then enable conversations about ways to mitigate harm done by alterations, but also inform practitioners about construction techniques. Well-informed practitioners and owners might then enable the identification of further examples.

Mud and stud is clearly a significant part of the cultural landscape of much of the county. If the current rate of destruction is to be halted, we must find ways to engage all these groups. At the same time, statutory protection needs to be based on criteria which reflect *all* periods of a building's history, not just its original form. As Tim Ingold points out,

'Building, then, is a process that is continually going on, for as long as people dwell in an environment. It does not begin here, with a pre-formed plan, and end there, with a finished artefact. The 'final form' is but a fleeting moment in the life of any feature.' (Ingold 2021, 233)

Never was this more true than for mud and stud.

Causes for optimism

There is, however, much cause for hope for mud and stud. The author has been privileged to meet an increasing number of owners of these buildings who love their property deeply, and want to understand them better. Some of these individuals are from old County families, and some are very knowledgeable about Lincolnshire's past, but others knew nothing about mud and stud until they fell in love with a building and moved to the county to own it. Clearly, mud and stud has a wide appeal, when it is given a chance to shine.

The failure of the listing application for The Cottage has triggered conversations among statutory bodies about the state of mud and stud in the planning process. There are encouraging signs that a growing number of conservation officers are aware of the problems, and actively looking for solutions – particularly those in East Lindsey. They are already working with the heritage construction practitioners in the county, and engaging with other interested parties too, although all of these conversations are at an early stage.

There are, indeed, a number of 'traditional builders' in the county, including thatchers, mud masons and a timber framing specialist, and it is encouraging to see new ones arriving, and apprenticeships being taken up. With the growing interest in low carbon buildings, exploration of the application of a 'mud and stud mindset', responding to the dwellingscape of a particular place, could inform other environmentally-conscious architectural traditions too.

Lincolnshire folk are rightly proud of their heritage, with organisations like Heritage Lincolnshire and the Society for Lincolnshire History and Archaeology increasingly engaging with mud and stud. In the wake of Covid there are many smaller local interest groups hungry to learn new things. As well as increasing public awareness by speaking to these groups, there are many ways in which their members could participate in future research (with appropriate training), including reassessment of the state of listed examples, identifying previously unrecognised ones, or documentary research (for example, with the online probate inventories).

Perhaps the question we should be asking is ‘how can we build a secure future for mud and stud using the resources we have available to us?’ – resources including practitioners, statutory bodies, heritage organisations, owners and interested enthusiasts.

Wider implications

It is difficult to believe that this approach to building – in conventionally low-quality materials and in intimate response to the dwellingscape – is unique to Lincolnshire, although it may have survived longer and more visibly here than elsewhere. Perhaps, if we looked, similar techniques might be discovered in other areas, whether in standing buildings or through archival evidence.

It is often said that the early buildings in the English settlement at Jamestown, Virginia, were of mud and stud construction (Deetz 2002, 24; Kelso 2006, 84). While there is little excavated evidence that the buildings utilised mud and stud techniques – despite their variety – we must consider whether the builders instead exported their dwellingscape-led approach to buildings. The Virginian answer to the question ‘how can I build a house to suit my needs with what I have access to?’ was inevitably very different to anything in Lincolnshire; if we acknowledge the community’s creativity and competence, rather condemn their naivety and dogma, we give them an agency which they have rarely been afforded. Clearly there is much more research to be done in order to understand the depth of connection between Lincolnshire and Jamestown. Whether the question can also be heard from the mouths of colonisers in other parts of the globe remains to be seen.

Every place that a person lives has its own dwellingscape. They are not restricted to a particular time, place or form of architecture, although their impact may depend on the connectedness of people with the landscape. Equally, Lincolnshire is not unique in its documentary sources, and indeed lacks some resources which are available elsewhere. What could we learn about other communities and their building traditions by adopting a similarly inquisitive research technique in other places? What could we learn about Lincolnshire by comparison with other areas?

Mud and stud buildings have often been viewed as failed attempts to build ‘proper’ timber framed houses. During the course of this research, it has become clear that a level of cultural imperialism – ‘my timber framing technique is the valid one, yours is inadequate’ – has been levelled at this indigenous tradition. In this it is impossible not to hear echoes of the imperialism which drained the fens, removing the ability of the people of Toynton to build in their tradition. Perhaps the technique’s greatest need is for a process of decolonisation, allowing the people who created it to set the parameters by which it is evaluated.

Final thoughts

This thesis has been – at best – a dipping of a toe in the water. Toynton is one parish of hundreds, but it serves to demonstrate what might be achievable in the future. To return to Jane Grenville’s observation (1997, 14) about the development of buildings archaeology, there is admittedly much more data to collect. Perhaps there are now some means by which we can begin to classify and interpret the data, as a step towards a wider understanding of Lincolnshire’s indigenous buildings. The urgency of the work is clear; without appropriate education and protection, the opportunity to study standing examples will continue to decrease until only the few in the care of passionate owners remain.

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Appendix 1 – Toynton Inventories

This appendix consists of two spreadsheets, one containing the inventory data and a second containing explanatory notes. These are attached separately as Pape_207074396_Appendix_1.csv and Pape_207074396_Appendix_1_notes.csv.

Appendix 2 – How reliable are the 1614 survey's maps?

Mapping, as a way of defining and/or quantifying the land which an individual held, was very rare before the early sixteenth century. During the course of the next hundred years, more and more landowners adopted visual methods of recording their property, although initially these owed more to pictures or diagrams than to modern maps. At the same time, the popularity and accuracy of measured land surveys increased. By the last decades of the sixteenth century, these two activities had been brought together, and from the 1570s landowners began to commission maps depicting their surveyed lands (Harvey 1993, 79–80).

Estate maps of the sixteenth and seventeenth century were very variable; being made by surveyors, most were drawn to scale, but how this – and their orientation – was depicted varied. Most early estate maps illustrated buildings by drawing small pictures, some in 3D, some as flat elevations; other details (such as woodland, gates, local landmarks) might be included or omitted, apparently at the whim of either surveyor or commissioner. Some surveyors appear to have adopted a series of symbols – much as the Ordnance Survey uses – to represent features, while others appear to have drawn some or all buildings from life. There is, therefore, no consensus on how accurate early estate maps are in their depictions of buildings. To further complicate things, some surveyors using symbols chose to represent a house (for instance) with a generic drawing of a house which they could then replicate all over the map, rather than with a simple shape, as we would expect today. Some surveyors even chose to represent significant buildings like churches with drawings from life, but used symbolic drawings for more minor buildings.

Therefore, the accuracy of each map must be carefully considered, both for its planimetric accuracy, and for the accuracy of the depictions of buildings.

Maps in Lincolnshire

In Lincolnshire, the earliest surviving estate map appears to be that of Fulstow and Marshchapel, surveyed by William Haiwarde in 1595 (LAO MISC DON 1403/3/4 1595), which is accompanied by two volumes of written survey (LAO RA 2/B/1-2 1595). While there are many surveys – into the seventeenth century – which continued to be solely written, from that date onwards Lincolnshire retains a good number of maps and plans associated with estate surveys.⁴³ These range in complexity from sketched working documents such as the c.1667 'Saxby Towne in Platt Forme' (Fig. 71, LAO MISC DEP 115 1667) which simply depicts the core of the settlement (with the houses as 2D sketches) along with a key explaining who occupied each plot, through to the very elaborate map of Long Sutton (Fig. 72, LAO JACKSON/I 1706). The latter, in full colour,

⁴³ Due to the limitations of writing an MA, maps in archives beyond Lincolnshire were not consulted, although a good number do survive, particularly at the National Archives and in Nottingham University Library.

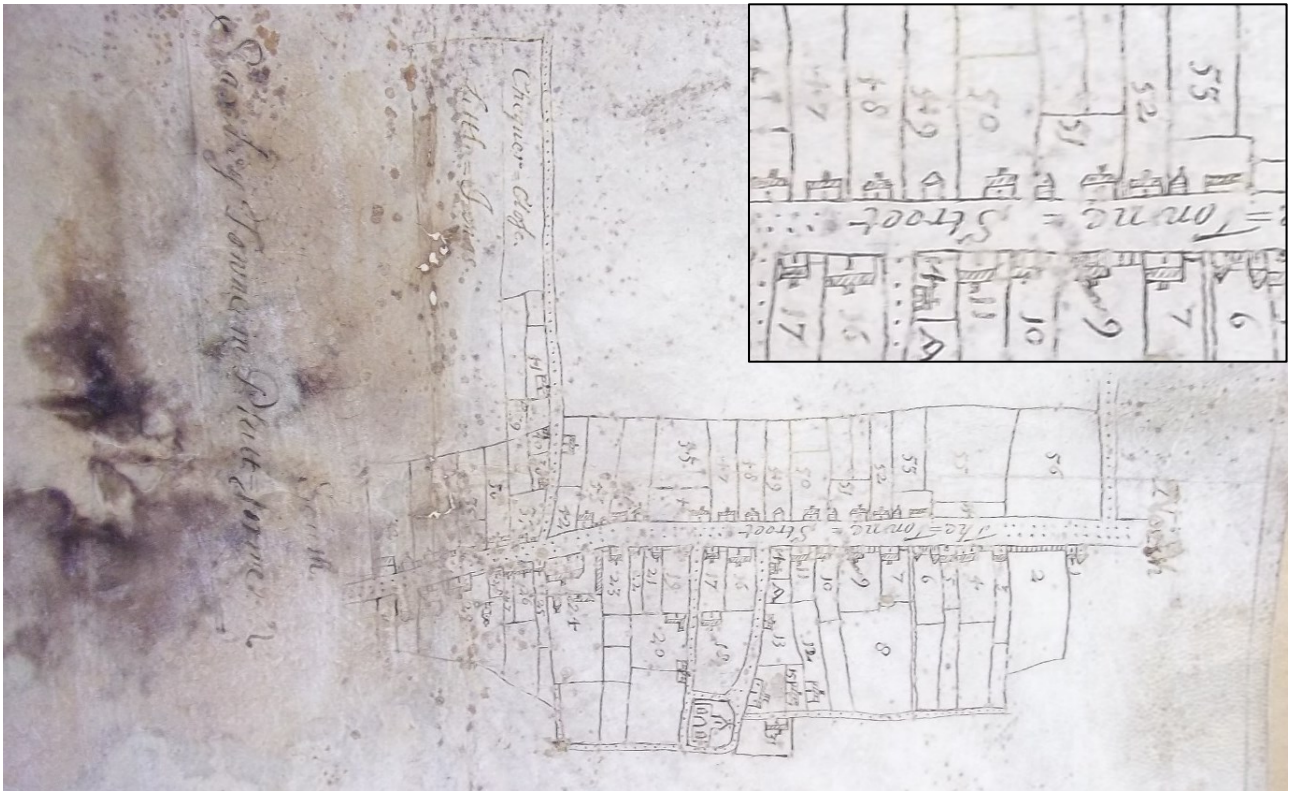


Fig. 71. 'Saxby Towne in Platt-forme', anonymous, c.1667 (LAO MISC DEP 115) with inset enlargement of part of the plan, showing differing building illustrations (e.g. roof forms, orientation)

gives more of the space over to coats of arms and the decorative cartouche than it does to the map itself, although this is also very detailed, with watercourses and roads marked, along with 3D sketches of the houses and other prominent buildings (such as the windmill and churches) and each field's owner annotated (Fig. 73).



Fig. 72. 'A Map of Sutton St Maries, St Nicholas, St James and St Edmunds in the parts of Holland and County of Lincoln Excluding the Commons and Salt Marshes' by Robert Hall, 1706 (LAO Jackson/I)



Fig. 73. Detail of Hall's map, showing a variety of house designs and sizes (LAO Jackson/I)

Despite the radical difference in production values, both maps appear to depict buildings in some detail; they are drawn in elevation (or semi-perspective) rather than plan, and there is little to suggest that they are merely symbols, as on a modern map. Neither map, however, is as detailed as the 1676 map of Great Limber produced for the Yarborough family (Fig. 74, LAO YARB/4/18/1 1676), showing not only houses, but barns, the windmill and even gates.



Fig. 74. Extract from 'The Map of Great Limber Belonging to The Worshipfull Charles Pelham Esquire Lord Thereof', Joseph Osbourne, 1676 (LAO YARB/4/18/1)

While it is impossible to *prove* that the depictions of the buildings are accurate, comparison with the Hearth Tax entry for Great Limber of 1662 (PRO E179/140/806 1662, m.31 col 4) reveals a high degree of correlation. Of the 53 houses assessed for tax (or exempted) in the village, 38 were assessed as having a single hearth, 10 with two hearths and 5 with three. The map depicts 55 plots with one or more buildings with a stack – extremely close to the Hearth Tax return, albeit fifteen years apart. Moreover, 47 of the plots on the map have a single stack, 6 have two, one has 5 and one has 3. Some of the plots clearly depict detached kitchens, with their own stacks. This apparent discrepancy belies the fact that all of the stacks are axial, and could therefore serve two (or potentially more, in the one multi-storey building) hearths. Thus, the 47 plots with a single stack could represent all 38 single-hearthed houses, plus 9 pairs of back-to-back hearths. The two-stack houses could equally serve two to four hearths, and so on. The outlying property, depicted on the map as having five stacks across three buildings, may represent a holding which had changed since the tax was assessed, or its central position may indicate that some of the stacks were for hearths exempted from the tax (for example, bread ovens or smithies).

While it is of course possible that the map was made specifically to communicate information about hearths or chimneys, there are other details which suggest that the buildings were drawn from life. Each is carefully orientated on the plot, and depicted in different ways; some have plain white walls, perhaps indicating daub, while others, like the church, have horizontal lines suggesting coursed stone. Some, but not all, have windows, and there are variations in proportions and roof shapes (Fig. 74). Several large buildings have wide, central doors, suggesting that these were barns. The balance of probability, therefore, appears to indicate that Osbourne’s map of Great Limber was drawn to not only plan the village, but to depict the buildings’ characters too.



Fig. 75. Extract from Vincent Grant’s 1665 map of Little Bytham showing the Hatcher estate (LAO Little Bytham PAR/23/1)

The level of accuracy of the Great Limber map is mirrored by a map from the opposite end of the county, of Little Bytham (Fig. 75, LAO LITTLE BYTHAM PAR/23/1 1665), dating to the same year as a surviving Hearth Tax record for Kesteven (PRO E179/140/754 1665, m.12r col.1). The map shows, perhaps, a little less detail for each building, although comparison with the handful of buildings which appear to still stand suggests they were carefully drawn; for example, building 77 is extremely similar to the building standing in the same spot today (Fig. 76), and the correlation between the depicted chimneys and recorded hearths is similar, especially as many of the buildings were in stone and could therefore include first floor fireplaces.



Fig. 76. Comparison between the map and a standing building (L) Building on plot 77 (west of the church) (LAO Little Bytham PAR/23/1) (R) The building standing on the plot today, both with two projecting wings, three stacks and central entry

There are further maps in similar styles for Winteringham in 1622 (complete with sea-going vessels, monstrous sea creatures, beacons and bridges, LAO MISC DON 1789/1), Dembleby in 1641 (LAO MISC DEP 683), Saxilby in 1648 (LAO TLE/23/8), an early Enclosure plan at Bassingham in 1654 (LAO BASSINGHAM PAR/17/1) and part of Crowland in 1676 (LAO BRACE/19/6). A little later, in 1693, Skellingthorpe was planned in a more modern style, with the footprints of the buildings recorded, but no elevation details (Fig. 77, LAO LD/71/14/6 1693), while a similar map of East Keal dates from 1757 (LAO MISC DEP 2/1), a style which increased in popularity from then on.

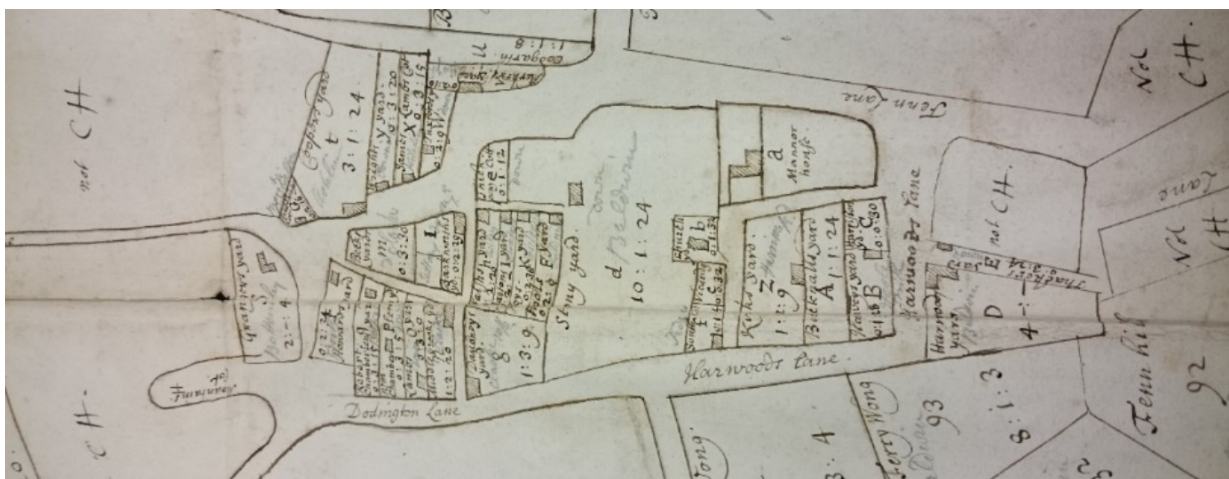


Fig. 77. 1693 map of Skellingthorpe (LAO LD/71/14/6 1693).

The accuracy of Lincolnshire's maps

It seems, therefore, that many Lincolnshire maps of the seventeenth century were drawn with attention to the accurate depiction of buildings, although the precise details varied from surveyor to surveyor. Unfortunately, there are no instances of two surveys known to be by the same surveyor, although stylistically it is very likely that Henry Valentine, who produced the 1614 Toynton survey, also produced a survey of Partney called the Acre Book, which is undated but ascribed to c.1630 (LAO 2-BRACK/2/1)⁴⁴. The treatment of the houses is similar in both surveys (Fig. 78), as are many other map details and the layout of the written survey.



Fig. 78. Henry Valentine's mapping style. (L) is unattributed (LAO 2-BRACK/2/1 1630), but extremely similar in style to (R), the 1614 Survey of Toynton (LAO 5-ANC/4/A/14 1614)

Valentine's 1614 mapping of Toynton

Robert Bertie, Lord Willoughby de Eresby, was clearly keen to embrace modern mapping of his estate at Toynton when he commissioned his survey of 1614. While we do not know the exact circumstances of the survey's production, it is clear that it was retained as a useful document for a number of years, with alterations to tenancies noted, and even additions to the maps (Fig. 79).

Unfortunately, equally little is known about his surveyor, Henry Valentine, although it is likely that he worked quite regularly for Lord Willoughby; in addition to the Partney survey mentioned above, written surveys of miscellaneous Willoughby Lindsey estates (LAO 5-ANC/4/A/1 1609), East and West Keal (LAO 5-ANC/4/A/9 1615) and Great and Little Steeping (LAO 5-ANC/4/A/13 1616) are all very similar to – albeit less beautifully presented than – the Toynton survey. Quite why Lord Willoughby valued Toynton more highly than these other places is, however, unclear.

⁴⁴ This survey may date to 1616; Oldfield (1829, 233–234) quotes a survey which revealed that Lord Willoughby held 212a of 876a in Partney at that date; the Acre Book depicts the whole of Partney on the maps, but only lists the tenants of the landowner, who is not named. If Valentine did carry out the survey, it is very likely to have also been carried out for Lord Willoughby, and thus be his tenants listed.

Planimetric accuracy of the maps

The most noticeable thing about Valentine's map, even at first glance, is how similar it is to a modern map of Toynton (Figs 81 and 82). The layout of roads is unchanged, as – largely – are the watercourses. An enormous number of the hedgerows are still visible, and most of the house plots are still legible, even where the buildings have been superseded. Valentine does display a tendency to over-emphasise curves – the road junction in the south west corner of the map exaggerates the bend, while at the top of the map the curve in Peasgate Lane around the top of Toynton Park is also over-emphasised. Nevertheless, the relationship between different features, and basic shape of the fields (for example) are very close to a modern representation.

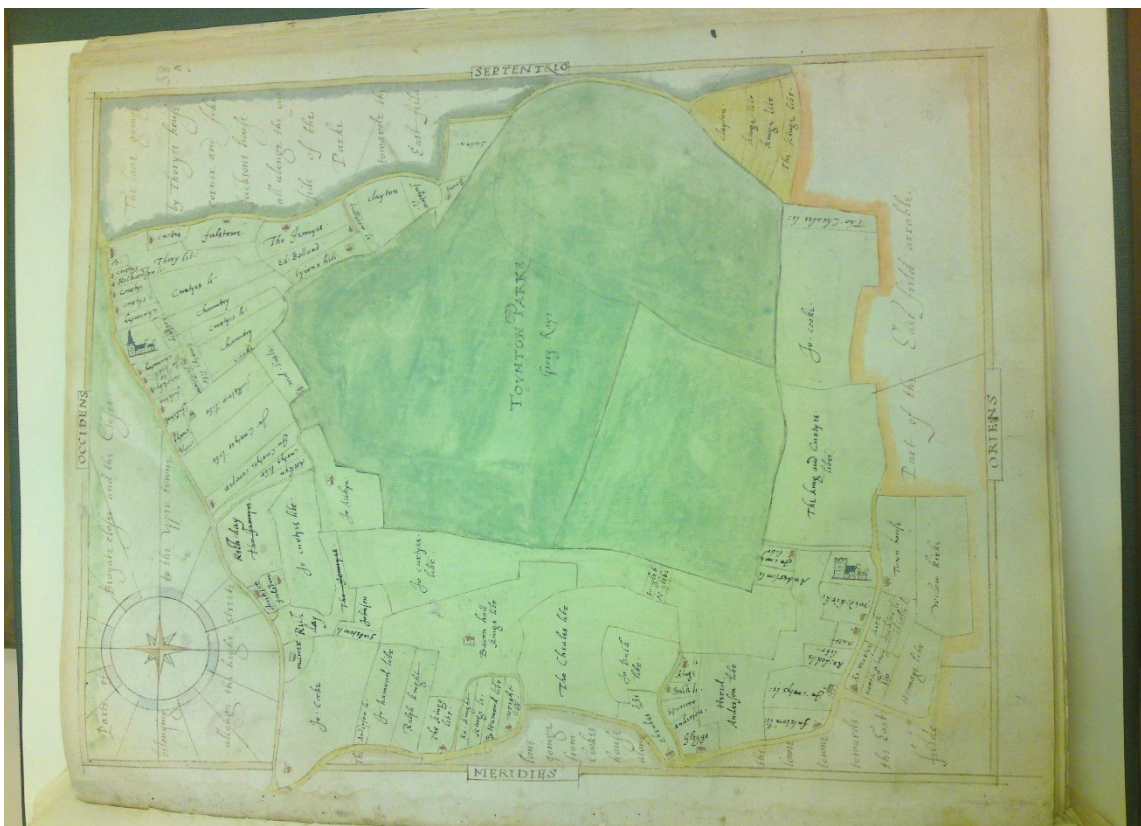


Fig. 81. Photograph of Valentine's map of Toynton Park and the surrounding area (LAO 5-ANC/4/A/14 1614)

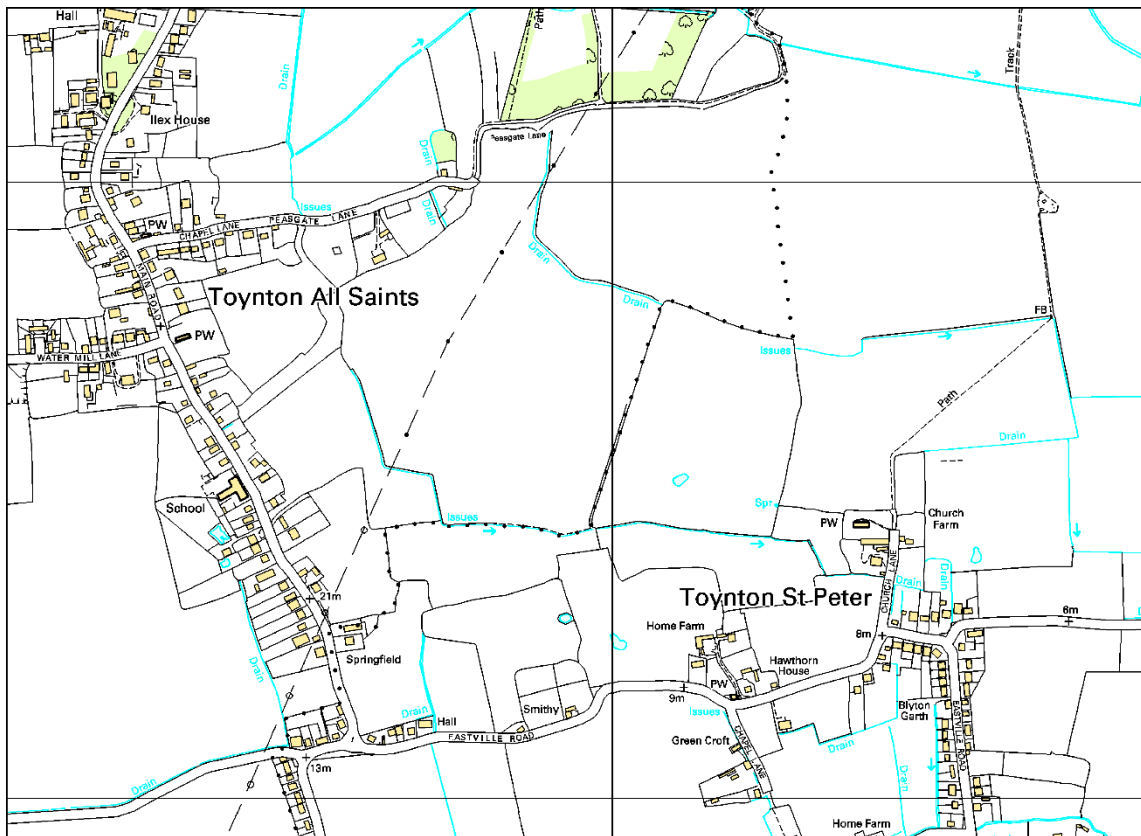


Fig. 82. 2013 1:10,000 Ordnance Survey map of the same area, rescaled to the same scale as Figure 80

In order to test the accuracy of the maps, the raw photograph of each page of Valentine’s map was georeferenced onto a modern vertical aerial photograph (CUCAP RC8CN034 1978, Fig. 83), using a spline transformation. (Fig. 84 shows the same image as Fig. 81, but georeferenced). This exactly places each reference point on its location, prioritising precision over the risk of skewing the map, to maximise the ‘match’ between Valentine’s map and the photograph (Fig. 85). Nevertheless, a remarkably low skew was produced; as may be seen, the overall shape of the page was not distorted enormously,⁴⁵ nor were the field boundaries.

This, allied with the usability of the maps for navigating around Toynton to this day, indicate that Valentine achieved a high degree of accuracy in the production of these maps, despite the lack of any indication of scale.

⁴⁵ It must also be noted that the original photograph of the map used was not in itself completely square to the document (Fig. 81).



Fig. 83. 1978 aerial photograph of Toynton (CUCAP RC8CN034 1978)



Fig. 84. Valentine's map georeferenced using a spline transformation (LAO 5-ANC/4/A/14 1614)



1:10,000 map (original scale) © Crown copyright and database rights 2023 Ordnance Survey (100025252)

Fig. 85. 2013 1:10,000 map overlaid on georeferenced 1614 map (as in Fig. 81) (LAO 5-ANC/4/A/14 1614)

Purpose of the survey

The opening pages of Valentine’s survey set out the questions (‘Articles’) which he required the Jury to answer. The first of these was

‘Inprimis you shall present who is the true Lord and owner of this manor and what rights, privileges and immunities belonging to the same’. (LAO 5-ANC/4/A/14 1614, 3)

He then went on to enquire about other manors or freeholders in Toynton, demesnes land, the names of the common fields, meadows etc, along with encroachments, loss of hedges and types of leases held, down to who farmed each land in each furlong. The jury produced a remarkably detailed response to the questions, including lists of all the freeholders, tenants by indenture, copyholders and tenants at the will of the Lord. They then set out each furlong’s position, listing each land in order, its size, who held it and whether it was freehold or not. When they came to a dwelling, it was listed as either a cottage, tenement, homestead or messuage, with or without a backside (yard). Presumably Valentine worked closely with the jury, surveying each plot while the jury established ownership.

The overall impression is that Robert Willoughby wished to know exactly what he owned in the manor, what he did not own, and who else had rights on the land. There is no mention in the Articles of any enquiry about the dwellings, although the survey does provide an abstract of 45 of the dwellings, including notes

about the internal layout. These seem to pay particular attention to additions to the buildings ('...and a back end newly built' or '...containing a hall and a parlour being newly built'), properties which had chambers (and the method by which the chamber was floored – either earthen or boarded) and the three properties built on the Lord's waste (two of which were held by copyhold). However, not all of the detailed descriptions suggest any changes – Anthony Holland's property is simply described as 'one cottage of two bays containing a hall and a parlour'. The 45 properties were a mixture of copyhold and indentured holdings. It is possible that, later in the process, the jury were asked to comment on alterations to particular buildings, but this does not seem to be the main focus of the survey.

More emphasis, however, is placed on the precise size, position and tenure of each plot, suggesting that the primary purpose of the survey was related to establishing what rights Willoughby had over his manor and tenants. The detailed and accurate maps reflect this prioritisation, with the name of the holder recorded in each enclosure, and the orientation of the lands indicated in each furlong.

Houses on Valentine's map

Of the hundred and twenty-seven houses depicted on the maps, thirty-six can be correlated with a detailed description in the abstract. Of these, two are explicitly single-bay cottages, while twenty-three are two-bay dwellings and eleven have three or more bays⁴⁶. However, there is more variety in the layouts of the houses than this simple division suggests. Some of the entries are explicit in describing the number of bays, especially when it is not as might be expected; for example, John Richmond's house is described as 'one tenement containing one bay, viz a hall and parlour', while John Bucknall's house is 'one tenement containing a hall a parlour of two bays with a piece at the west end'. Most, however, do not specify this detail, suggesting that in those properties, the bays equate to ground floor rooms. While the descriptions include details of detached kitchens and agricultural buildings, including sizes in bays, the maps do not show any ancillary buildings, whether agricultural or domestic.

Nine of the houses are simply described as 'containing a hall and a parlour', indicating two bays. Seven add an outshut 'backend' (as is seen in all of the case study's houses), but are clearly still two bays. The word backend, which is not common in Toynton's inventories and last appears in 1633 (LAO INV/141/113), seems to indicate a multi-purpose service room; perhaps the surveyors were uninterested in the exact use of the room, whereas the makers of inventories were concerned with the contents of a room, and thus its use, so were less likely to use a generic term. Most of the houses (although not quite all of them) with backends have two windows depicted in the gable walls, perhaps suggesting greater depth to the house; backends do not always span the width of the house, so it is plausible that the ones without this detail only had outshuts

⁴⁶ It appears that the surveyors did not consider the part of a house containing the fireplace and entry as a separate half-bay, although it seems unlikely – from the placement of chimneys and doors – that any of the buildings were truly two bays of framing.

at the far end. Other houses add one or two chambers, often – but again not always – indicated with a window higher up in the gable wall. These chambers, of course, do not alter the basic shape of the house, being contained within the roof. Other houses, at first glance, appear much bigger than a two bay building; Thomas Jennyes' house was described as 'one tenement containing a hall a parlour chambered over with boards one back end one kitchen built in the yard one barn of three bays and one other barn of three bays newly built'. However, with the kitchen clearly detached, this is once again a two bay hall and parlour, with outshut backend and a chamber over the parlour. Unfortunately the image of Jennye's house has a rather smudged roof, obscuring some of the detail of the gable wall.

Five of the two-bay houses are described as also having 'outends'. This is probably an outshot service room like a backend, but at a gable end or even as a separate building, although there are no examples of outends associated with detached kitchens. It is also possible that the term describes a small room partitioned off the end of a bay of the structure; this is suggested by the survey's description of the mill; 'one watermill with a hall a parlour and an outend being in all two bays'⁴⁷. Whatever exact form an outend took, it appears not to have been counted as a separate bay on this occasion. The term also only appears infrequently in the Toynton inventories, for the final time in 1630 (LAO INV/136/86); none of the outends are depicted clearly on the maps.

Not all of the bays appear to be of equal size; William Palmer's house is described as 'one cottage of three bays containing a hall a parlour and a little milkhouse'. This suggests that the rooms were not of equal size; it may be that the room divisions do not closely match the bay divisions in this case (as is seen at The Forge, South Willingham), or that this would today be described as a 2½-bay building, as is seen at The Cottage, Fen Lane, Beesby. Similarly, Widow Keale's house is described as 'one tenement containing a hall with a chamber of earth [flooring] over it one parlour with the like floor one milkhouse one kitchen of a bay'; this appears to be hall and parlour (both chambered) with a milkhouse in line, and a detached single-bay kitchen. This may be a very similar layout to Palmer's house – the depictions of both show an offset stack suggesting a 2½ to 3-bay plan. John Bucknall's house, with a hall and a parlour of two bays, is equally shown with an offset stack, although William Johnson's – with the same description – is depicted with both gable ends visible.

Given the apparent attention to detail in the pictures, the fact that some of the three-plus bay buildings are harder to visually differentiate from the two-bay ones is surprising. Of the eleven buildings, John Jackson's has two stacks, and is very similar in depiction and layout to The Cottage (it was, in fact, located slightly further down Chapel Lane), with what appears to be a parlour extension at the far end in a very similar manner. William Johnson's double-gabled house is discussed above, as are Palmer, Bucknall and Widow

⁴⁷ Presumably the two bays are of accommodation, with the mill not included in the total.

Keale, with offset stacks clearly indicating a three-bay plan. The other six all resemble two-bay houses with central stacks and doors. How this relates to their plans is less clear. William Rooke's house is 'of three bays' and has hall, parlour and kitchen, while Cowper's tenement (in the hands of John Curteis) has hall, parlour and 'one room below the entry'. The other four, and John Jackson, all have a hall and two parlours with a varying number of chambers, kitchen and other service rooms. While it is possible that the kitchens may have been detached or outshot at the rear, it is unlikely that parlours were away from the axis of the building, except for Jackson's extension.

It is clear that there are aspects of Valentine's depictions and descriptions of the houses which are impossible to corroborate. However, the overall close correlation between the two suggest that Valentine intended to convey a visual representation of each building, even if he did not entirely succeed in every single case.

So just how accurate is Valentine's map?

It is impossible to be certain how accurately the maps depict Toynton as it was in 1614. However, the planimetric accuracy of features like roads and field boundaries, allied with the apparent accuracy of the buildings depicted, strongly suggest that they are useful as an accurate visual source of information about dwellings in the village at the beginning of the seventeenth century. If a similar depth of investigation could be carried out with some of the other maps mentioned above, more might be said about the accuracy – and intentions – of Lincolnshire's estate map-makers in the late-sixteenth and early-seventeenth centuries.

Appendix 3 – Gazetteer of mud and stud in Toynton

Twenty mud and stud houses are known to have survived in Toynton long enough to be photographed or otherwise recorded, with others suspected to originate in mud and stud. This appendix illustrates the diversity of surviving structures, both in terms of original form and subsequent alterations and encasement. Figure 86 gives the location of each property, and the status of each building. Incidental details about the buildings in the late twentieth century are courtesy of Peter, Phyllis and Dave Pape.

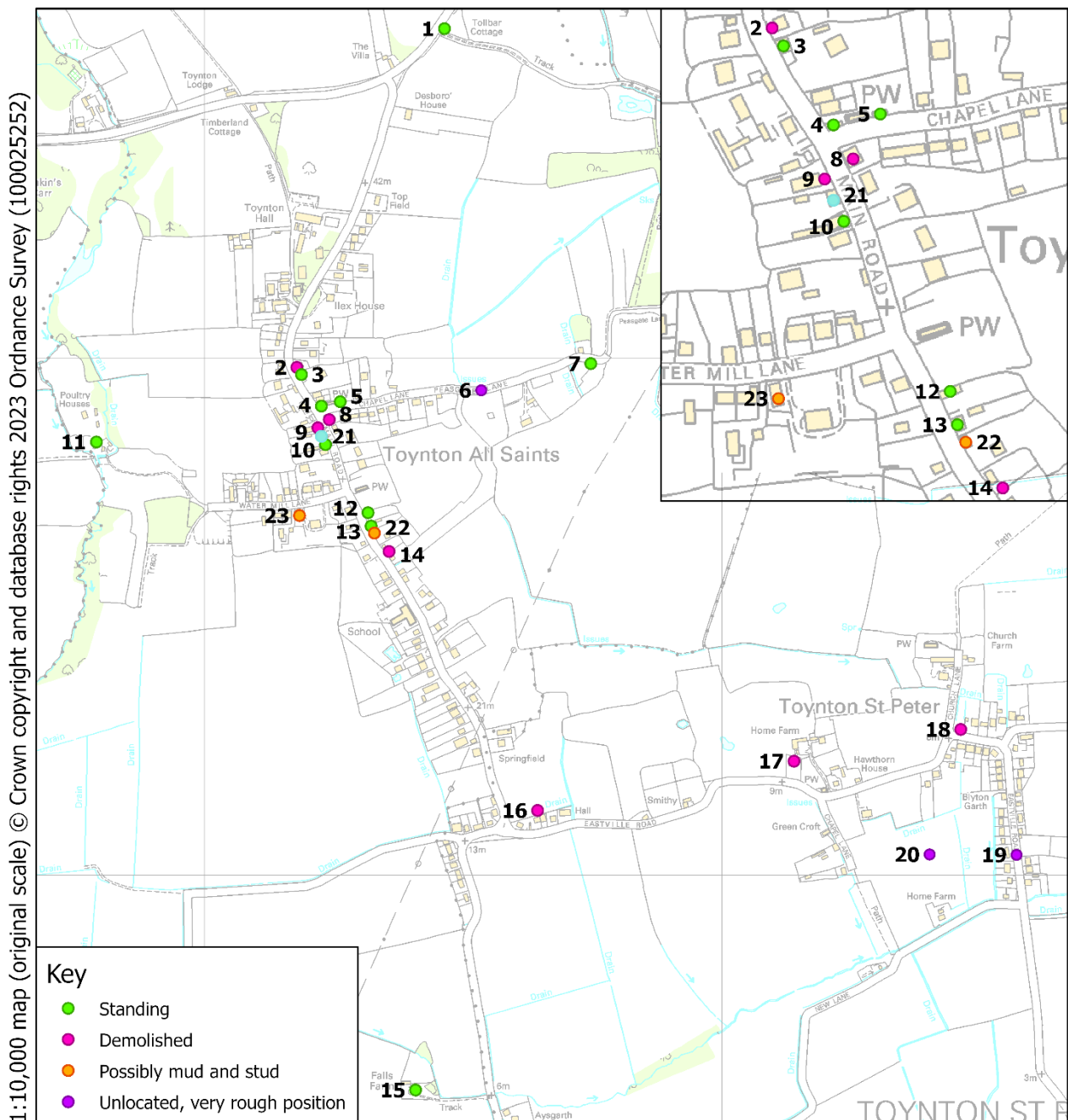


Fig. 86. Location and status of mud and stud buildings in Toynton known to have survived into the twentieth century. Numbers relate to entries in the gazetteer.

Houses believed to be constructed of mud and stud

1. Toll Bar Cottage (TF394 647)



Fig. 87. Difficult to photograph due to its proximity to the road, Toll Bar Cottage probably dates to the turnpiking of the Boston-Alford road in 1765

2½ bay single storey cottage parallel to the road, with central doorway, gable stacks and extension to east. Pent extension to west, with further extensions to the south, all rendered but apparently all brick externally. This property first appears on the 1771 Willoughby estate map and is still standing. Rodney Cousins noted it (2000, 37), and it was recorded on the Mud and Stud Survey as retaining all its walls in mud and stud (Fig. 89).



Fig. 88. Toll Bar Cottage from the south-west



Fig. 89. Toll Bar Cottage in 1983
(LAO 26 MLL 1984, 171)

2. 15 Main Road, Toynton All Saints (TF392 639)



Fig. 90. 15 Main Road, seen here to the rear of the shop/bakery extension to Mill Cottage (courtesy of Phyllis Pape)

Single storey lobby entry cottage with hipped, thatched, roof parallel to the road. Photographic evidence suggests it was not encased. A cottage appears in this location on the 1614 map (Fig. 91), but is depicted with a gabled roof, and possibly an outshut at the rear. This property appears on the 1771 map as part of the Willoughby estate, by which time it was L-shaped, although it is unclear if this is a change from the 1614 image (see Appendix 2). It was sold by the Willoughby estate for £70 in 1912 as 'A small thatched cottage with large garden' and was still standing in the 1950s, but was demolished soon after.



Fig. 91. 15 Main Road as it appears on the 1614 map (LAO 5-ANC/4/A/14 1614)

3. Mill Cottage, Main Road, Toynton All Saints (TF392 639)



Fig. 92. Mill Cottage from the south

2½ bay two storey cottage with gable stacks, at right angles to the road and facing south. Originated as single storey mud and stud of late character, then encased and extended. The frame and a significant proportion of the mud and laths survive. Later the roof was removed and raised to two storeys. A building parallel with the road appears on the 1614 survey (Fig. 93) and again on the 1771. By 1825 (and possibly by 1774) it has been rebuilt at right angles to the road.



Fig. 93. Cottage in the position of Mill Cottage on the 1614 map (LAO 5-ANC/4/A/14 1614)

4. Chestnut Cottage, Main Road, Toynton All Saints (TF392 638)



Fig. 94. Chestnut Cottage from the south-west

Single storey 'lobby entry' cottage parallel to Chapel Lane, although without surviving evidence for a door onto the lane as south wall rebuilt/encased in brick. Axial stack, with later outshut extensions to north, east and west. These enclose surviving mud and stud walls, along with a mostly-extant frame and surviving haphazard roof structure with thatch under the roof tiles. Appears from the 1771 map onwards. Grade II listed and standing. Cousins assessed it as 'Poss C17th' (Cousins 2000, 37), and it was recorded on the Mud and Stud Survey (LAO 26 MLL 1984, 167)

5. The Cottage, 1 Chapel Lane, Toynton All Saints (TF393 638)



Fig. 95. The Cottage from the south-east

2½ bay cottage with chambers in the roof space, parallel with the road. Originated as cross-passage house with gable smokehoods, later extended and encased. North wall retains mud and stud on padstones; padstones survive in west wall too, along with other elements of the frame, the roof structure and reed thatch base. Believed to have retained its thatch into the age of photography, although the image has been lost (Pape 2022). Appears on 1614 map in the occupation of Richard Pearsall. Apparently extended to the east before 1632, but later reduced in size before modern extension built in the same place. Standing, Cousins (2000, 37) assessed it as 'Poss C18th. Encased.' Also recorded on the Mud and Stud Survey (LAO 26 MLL 1984, 166).

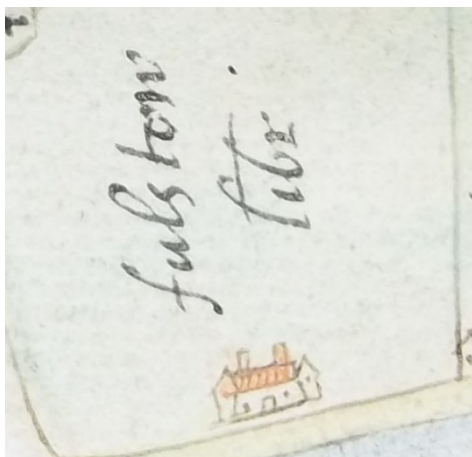


Fig. 96. The Cottage as it appears on the 1614 map

6. Unnamed Cottage, Peasgate Lane, Toynton All Saints (centred on TF395 638)



Fig. 97. Unnamed cottage in Peasgate Lane (Rudkin 2001, 17)

Small mud and stud cottage of late framing character (similar to Mill Cottage), suggesting it had attic bedrooms from first construction. Figure 97 shows the house during demolition, but neither specifies the exact location nor illustrates the layout of the building, merely captioning it 'An old cottage in Peasgate Lane'.

7. End View and Far Cottage, Peasgate Lane, Toynton All Saints (TF397 640)



Fig. 98. End View (L) and Far Cottage (R) from the north-west

Two semi-detached cottages parallel to the road which may have originated as a single cottage, but were more probably built as two. Single axial, shared stack, with half-hipped roof and attic windows to east and west. A small window under the high eaves of the south elevation suggests that they were of late framing character, with attic rooms from the start, similar to the unnamed cottage also in Peasgate Lane. PD Pape recalls visiting the cottage as a child, and confirmed that it was of mud and stud construction (Pape 2022).

Figure 99 shows the exterior of the cottages before they were rebuilt in the late twentieth century. Figure 100, from the Mud and Stud Survey, shows End View with an unchanged roof, while Far Cottage had already been altered. End View was re-roofed soon after the survey, which recorded that the north wall retained framing. Cousins (2000, 37) assessed it as 'Poss C18th. Encased.'



Fig. 99. The rear (south) of the same property during Ethel Rudkin's tenure (Rudkin 2001, 17)



Fig. 100. Viewed from the north-east in 1983 (LAO 26 MLL 1984, 168)

8. The Post Office, Chapel Lane, Toynton All Saints (TF392 638)



Fig. 101. The Post Office from the south-east, c.1975 (courtesy of Phyllis Pape)

Large two and a half-bay lobby entry cottage with half-hipped roof. At right angles to Main Road, but in its latter form facing south, away from Chapel Lane. Encased in brick, with outshut extension to the north and large extension beyond to the north. No evidence for windows below half hips, but two dormers to south. The northern extension was the village shop and post office in the post-WWII period.

There is a house on this plot on the 1614 survey, but it is orientated north-south, and has two stacks and possibly 3 bays (Fig. 102). The 1774 Enclosure map depicts a building in the current orientation, which has gained an extension to the north by the 1825 map. All but one wall was demolished in the late twentieth century, with a new bungalow built around the remaining wall (fabric of this wall is unknown).



Fig. 102. Cottage in the same position as the later Post Office on the 1614 map. Main Road is at the bottom of the image, with Chapel Lane to the left (LAO 5-ANC/4/A/14 1614)

9. Jack Streets' Cottage, Main Road, Toynton All Saints (TF392 638)



Fig. 103. Jack Streets' Cottage, painted by Kit Lawie

Low, two bay lobby-entry cottage with half-hipped roof. Parallel with the road, with gabled extension with second stack to the south.

A cottage appears on this plot on the 1614 map, in the same orientation and position, and with a central stack (Fig. 104). Buildings appear on subsequent maps, although the orientation or extensions are a little unclear. At least one of the Yorkshire slider windows was rescued in the early 1950s, when the cottage was demolished, and installed at 1 Chapel Lane. A modern bungalow now occupies the site.

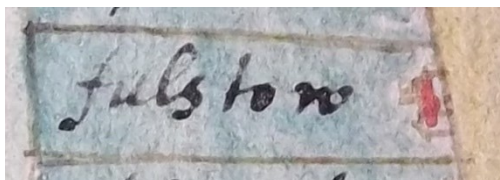


Fig. 104. Cottage in the same position as Jack Streets' cottage, on the 1614 map (LAO 5-ANC/4/A/14 1614)

10. Rosery Nook, Main Road, Toynton All Saints (TF392 637)



Fig. 105. Rosery Nook from the north-east

Identified during the Mud and Stud Survey as retaining 'a few' walls of mud and stud (LAO 26 MLL 1984, 169). Cousins (2000, 37) assessed it as 'Poss C18th encased'. Now a lobby entry bungalow with shallow-pitched, gabled roof, parallel with the road. Extended to the rear in several phases. Fundamental proportions of the front part appear plausible for a mud and stud building. An excellent illustration of how easy it is to completely obscure a mud and stud building.

A cottage appears on this plot on the 1614 map, in the same orientation and position, and with a central stack (Fig. 106). The plot appears to have a building on it on each subsequent map, although the orientation is not always apparently accurate.

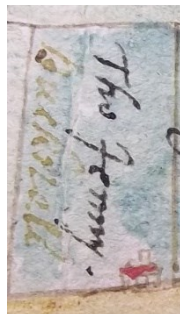


Fig. 106. Cottage in the same position and orientation as Rosery Nook, on the 1614 map (LAO 5-ANC/4/A/14 1614)

11. The Water Mill, Water Mill Lane, Toynton All Saints (TF388 638)



Fig. 107. The Watermill from the south-east. The mill building is the short pan-tiled building behind the stable, with the mud and stud mill cottage to the left (with modern roof)

Early photographs⁴⁸ show a long 3 bay lobby entry cottage with gabled roof running north-south, at right angles to, and detached from, the mill building (Fig. 108, Lawie 1962, 37). Dormer on the west elevation, with a small window in the northern gable. Extension to the south (the left in Fig. 107) had a higher roof. The building appears, in the early photographs, to be underbuilt in brick to the window sills, and then mud and stud above. The mill building appears to be a single storey in brick, but to have had its roof raised by a few courses (Fig. 108). The waterwheel, now removed, is overshot, on the eastern gable.

⁴⁸ Fig. 108, and six other images seen by the author at an exhibition in East Keal church on 3rd August 2014.



Fig. 108. The mill in 1907 (Lawie 1962, 37)

The water mill appears to be illustrated on the 1614 survey as a single lobby entry building, with the wheel at the east end (Fig. 109); it is possible, though, that this was intended to represent an L-shaped building, similar to the 1771 map (Fig. 110); this shape is repeated in all the subsequent estate maps.



Fig. 109. The mill in 1614 (LAO 5-ANC/4/A/14 1614)

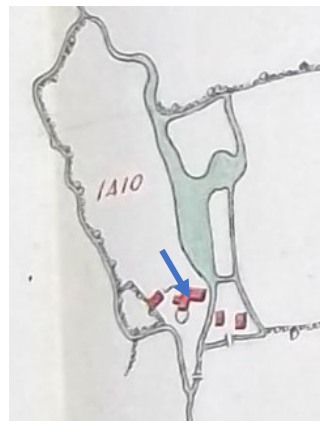


Fig. 110. The mill in 1771 (mill building indicated by blue arrow) (LAO 5-ANC/5/A/1 1771)

The 1887 25" Ordnance Survey map indicates a very narrow gap between the two buildings. Sold for £170 in 1912 as 'A brick built and tiled house known as Toynton Water Mill with...convenient buildings for a smallholding' and 4a 1r 10p. The buildings are standing, but Cousins (2015) assessed this building as 'Had M&S frame, most removed'.



Fig. 111. Viewed from the west, the long bank of the millpond survives, although the pond has been drained. The mill building is beyond the white dormer on the cottage, with the tail race beyond that.

12. Sunny Bank, Main Road, Toynton All Saints (TF393 637)



Fig. 112. Sunny Bank from the south-west

Long (3 bay), low half hipped cottage, at right angles to Main Road and high above the holloway. Extended to the right (east) in brick, with brick wing. A building marked 'Chantry' appears on the 1614 Survey (Fig. 113), orientated parallel with the road, and further south on the plot. Still in this orientation on the 1774 Enclosure map, but by 1825 the building is in its current position and orientation. Sold for £25 in 1912 as 'A small cottage and garden' with 1r 11p. Cousins (2000, 37) identified it as 'Possibly C18th', while the Mud and Stud Survey reported that the original cottage retained all its mud and stud walls, but they were plasterboarded over (Fig. 114). The current owners report surviving timber framing, but the property has not yet been visited.



Fig. 113. Cottage on the same plot as Sunny Bank, in 1614.
(LAO 5-ANC/4/A/14 1614)



Fig. 114. Sunny Bank from the south
(LAO 26 MLL 1984, 170)

13. Saville's Cottage, Main Road, Toynton All Saints (TF393 637)



Fig. 115. Two views of the remains of Saville's Cottage in 2011

The remains of a 2½-bay lobby entry cottage with low, gabled roof (latterly), parallel to Main Road. The building was partially encased, with no evidence of an upper floor, but the roof appears to have been remodelled. Some framing is now visible; post with conventional tenon, mid-post and wallplate. Timber is well-shaped, of sturdy scantling and not waney. It was reported to Cousins (2000, 37), but not visited.



Fig. 116. Cottage in the same position as Saville's Cottage, on the 1614 map. (LAO 5-ANC/4/A/14 1614)



Fig. 117. Saville's Cottage (LAO MLL 4260)

A cottage in this orientation and location appears on the 1614 survey (Fig. 116). The 1771 Willoughby survey indicates an extension behind the north end, although this is not evident on the Enclosure map or C19th maps. It was sold for £75 in 1912 as 'A brick built and tiled cottage' with 3r 3p. Two photographs (including Fig. 117) at Lincolnshire Archives show the building after it lost half of its roof (LAO MLL 4260).

14. Sewell's Cottage (located at 45 & 47 Main Road, Toynton All Saints)



Fig. 118. Sewell's Cottage (Roberts 2018, 301)

Lobby entry cottage with half-hipped roof, apparently early nineteenth century (according to DL Roberts) and partially in brick from first construction. Parlour and kitchen flank back-to-back hearths, with ladder access to garrets. Photograph shows it encased in brick to the tie-beam level, with mud and stud above; range of service rooms (latterly coal house, pantry, dairy and scullery-cum-entry) in an outshut behind. The dairy and kitchen were half-sunk, although the plan does not indicate how this worked with the rest of the cottage.

Notes taken from single photograph, plan and DL Roberts' notes (2018, 165). Photograph suggests that the outshuts *may* not have been contemporary, although Roberts indicates that they were. The building was ruinous when he surveyed it. Location ascertained from 1939 England and Wales Register ('George Thomas Sewell' 1939).

15. Fall Farm Cottage, Fenside Road, Toynton All Saints (TF394 625)



Fig. 119. Fall Farm Cottage from the west

2½-bay lobby entry cottage with gabled roof, facing south. Brick with tumbling at the gables, later porch and outshut extensions to rear and east. Chamber windows in gables and fairly shallow pitch to roof. No visible framing internally, but proportions suggest any frame may have been of late character, with chambers from the outset.

Close to the former water mill on the 1614 survey, possibly in the position of a cottage visible on the map (Fig. 120). Part of Curteis'/Varnham & Roberts' holding by the early eighteenth century, so not visible on any of the Willoughby maps, but a building appears in that position on the 1774 Enclosure map and nineteenth century Ordnance Survey maps. In the nineteenth century, the surrounding fields were an exclave of Toynton St Peter. Reported to Cousins (2000, 37) but not visited by him; the author visited in August 2021 at the invitation of the current owner, Jane Allen.



Fig. 120. Cottage in roughly the same position on the 1614 map
(LAO 5-ANC/4/A/14 1614)

16. Mrs Lusby's Cottage, Eastville Road, Toynton St Peter (TF396 632)



Fig. 121. Mrs Lusby's Cottage (courtesy of Phyllis Pape)

Also known as Mrs Wilson's Cottage but held by John Cooke in 1614. Large lobby entry cottage with hipped, thatched roof facing east, at right angles to Eastville Road, and set back from the road. Possibly more than 2½ bays, although only one window either side of the entry visible. Later extension at southern end was lower but in line, with axial stack and hipped roof. In the extant photograph, the building appears encased in brick, but the whole has a thatched roof. The 1912 sale catalogue listed its rooms as 'parlour, two sitting rooms, kitchen, pantry, dairy and four bedrooms' (LAO 5-ANC/7/B/2/35/2).

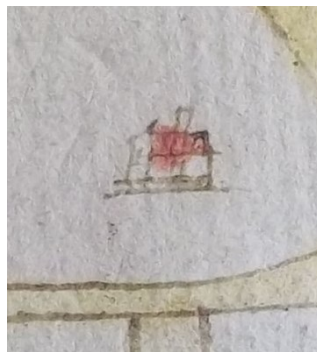


Fig. 122. John Cooke's house on the 1614 map (LAO 5-ANC/4/A/14 1614)

A house in the same position and unusual orientation appears on the 1614 survey (Fig. 122); the illustration implies a larger-than-usual building, with an upper floor in the roof space suggested. The 1771 survey suggests small extensions to the north and northern end of east elevations, along with the southern extension, although later maps show these intermittently. By the 1887 25" Ordnance Survey map, an outshot extension is visible to the rear. The building burned down in August 1959 (Pape 2022).

17. White House Cottage, Eastville Road, Toynton St Peter (TF402 632)



Fig. 123. White House Cottage (LAO MLL 4261)

Large, 3+ bay half hipped lobby entry. Two surviving photographs (LAO MLL 4261, including Fig. 123) depict it with one end demolished, so full length unknown, but map evidence suggests 3 bays. Several rooms in attic; window in gable end and two dormers in south elevation. Some daub apparently surviving in the photographs; PD Pape recalls it being 'a cottage with slopey walls' (Pape 2022). Length of straight wallplate visible at demolished end. Building appears to be quite a deep example front-back.

The earliest map depicting this building is the 1825 Willoughby survey, although it is not part of the estate. The Enclosure map depicts a building in this location, but rotated through c.135°. By the 1887 25" Ordnance Survey map it appears to be subdivided into two (perhaps two bays and one bay, although the stack is entirely within the larger part), but has been converted back to one dwelling by the 1904 25" map. Cousins (2000, 37) assessed it as 'Possibly C18th. Encased'. Demolished in late C20th.

18. Cottage 'past Church Lane', Toynton St Peter (?TF405 633)

Cousins (2000, 37) reports that a mud and stud cottage burnt down in this location c.1965. Possibly a cottage on the north-east side of the corner of Church Lane and Eastville Road; this was an empty plot with a small prefabricated building which survived until the early 2000s. If so, there had been a building on the plot, facing south and paralleling Eastville Road, on every map since the 1614 survey.

19. Mrs Emerson's Cottage, Toynton St Peter Fenside

Cousins (2000, 37) reports that a mud and stud cottage was demolished c.1960. This location is unknown, although there were Emersons in Toynton St Peter in the 1851 census.

20. Cottage 'behind Gretna', Toynton St Peter

Cousins (2000, 37) reports that this was an existing cottage, 'Poss C18th, Encased', but does not give the location. No house in St Peter is now called 'Gretna' so the location and survival of the cottage remain unknown.

Houses not confirmed as containing mud and stud

21. Valentine Cottage, Main Road, Toynton All Saints (TF392 638)



Fig. 124. Valentine Cottage from the south-east

Two-storey brick lobby entry cottage, parallel to the road. Very similar proportions and layout to Mill Cottage. No known evidence of mud and stud or frame surviving, but extremely similar to Mill Cottage, and displaying several phases of brickwork in the northern gable, suggesting a refacing of the front elevation. A cottage of similar proportions occupied the same position on the 1614 map (Fig. 125). Not visited.



Fig. 125. Cottage in the position of Valentine Cottage, on the 1614 map (LAO 5-ANC/4/A/14 1614)

22. Harboro House, Main Road, Toynton All Saints (TF394 637)



Fig. 126. Harboro House from the north-west

Brick cottage with blocked lobby entry plan (door behind ivy to the right of the bay window). Extended to the north, with multiple phases of brickwork suggestive of encasement and including at least one raising of the roofline to two full storeys. Core of the building similar to Mill Cottage. A similar cottage occupies the plot in 1614 (Fig. 127).

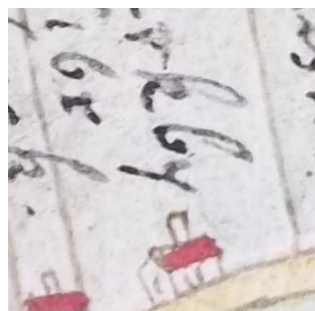


Fig. 127. Cottage in the position of Harboro House, in 1614
(LAO 5-ANC/4/A/14 1614)

The owners believe there is something unusual about the construction of the house, which was formerly a pub and retains its underground cellar. They report surviving timber framing. Not yet visited.

23. Barn at Toynton House



Fig. 128. Toynton House barn. The left-hand, taller part has visible remnants of timber framing in the gable wall

A recent discovery, one phase of the barn at Toynton House retains the visible remnants of a post, wallplate, tie beam and half-hip frame in the northern gable wall. The barn appears on the 1887 Ordnance Survey 6" map, and on the 25" map of the following year, but does not appear on any of the estate maps. However, few or no farm buildings appear on any of these maps, so this is not conclusive proof of a late date. Toynton House itself can be traced back to the 1774 Enclosure map (LAO LINDSEY AWARD/87), where it was part of the estate of Varnham and Roberts. In 1614, the plot was held by John Curtyes, although the building is indicated as being in a different position.

The framing itself appears to be weather-worn, but is noticeably not waney (Fig. 129). A tenon is visible between post and wallplate, and there may be two tie beams. It is possible that the frame is truncated at this truss (hence the exposed tenon), although the queen strut-like post (commonly found on half-hipped mud and stud gables) suggests this was the end of the building, at least at some point. Whether the building was ever mud and stud, or is some other form of timber framing, is as-yet unclear. Not visited.



Fig. 129. Close-up of remnant frame. Note the mortise and tenon for the post, and the possibly patched tie beam.

Appendix 4 – Official List Entry for Chestnut Cottage

The following list entry description is excerpted from The National Heritage List for England <https://historicengland.org.uk/listing/the-list/> [accessed 15/09/2023].

Heritage Category:	Listed Building
Grade:	II
List Entry Number:	1063557
Date first listed:	28-Oct-1987
Date of most recent amendment:	28-Jan-1988
List Entry Name:	CHESTNUT COTTAGE
Statutory Address:	CHESTNUT COTTAGE, 23, MAIN ROAD
County:	Lincolnshire
District:	East Lindsey (District Authority)
Parish:	Toynton All Saints
National Grid Reference:	TF 39226 63907

TF 36 SE TOYNTON ALL SAINTS MAIN ROAD (east side) 5/80 No. 23 (Chestnut Cottage) II

Originally 2 single roomed cottages, now single cottage. Mid C17, altered C20. Mud and stud, partly cased in whitewashed brick. Hipped concrete pantile roof over thatch, axial ridge stack. Single storey, 2 bay front with 2 C20 glazing bar casements. To left and right and rear are pent roofed extensions. Original mud and stud wall survives to rear and side within, and wall plate, earth fast posts with braces to corner posts are visible. The clasped purlin roof with larch poles and thatch survives beneath later roof. 2 planked doors with C18 latches and strap hinges.

Listing NGR: TF3922663907

Appendix 5- Dwellingsscape Characterisation

The design of buildings found in a particular place is influenced by many different factors; for example, in a modern urban housing estate, the architect who designed the whole estate will have a huge influence on what the estate looks like, but the size of the houses built may have been imposed by the council's planning department (think of the need for affordable housing, for example). In some areas, the local building style has a large influence on new developments, although in many places the houses make little reference to the surrounding architecture, and could be built anywhere.

For buildings of mud and stud, their situation is critical to the way that they are built. Locally available resources (timber, thatch, mud) define the styles of building which are possible, while the needs of the inhabitants – coupled with the fact that in many cases, it was the inhabitant who planned and built the structure – dictate the layout adopted. We can refer to the particular mix of influences on a given building or settlement as its 'dwellingsscape', and by establishing what that mix is, we can begin to understand the context in which a building was constructed.

If we are carrying out a dwellingsscape assessment, there are a number of categories of information we are interested in. Below you will find a series of questions or prompts, which will help you to think about these categories. You may find you can't answer all of the questions – or that there are more helpful questions to ask. That's fine!⁴⁹ Record anything which you discover, which might help us to understand the context in which mud and stud was used in this place.

Some of these things can be explored from home using online resources, other parts may need you to visit the place, or to do deeper research at (for example) Lincolnshire Archives.

Basic details

What is the settlement you are interested in called? Has it always been called that, or has the name changed? What parish is it in? Has that changed – have parishes merged or been split? Don't forget to make sure that the exact settlement is identifiable – Lincolnshire has a lot of repeated place names (Willingham, Thurlby, Toynton) and a lot of deserted and shrunken settlements. A grid reference for the church (for example) can help to ensure the information is associated with the correct place.

⁴⁹ If you do find that there's a particularly helpful question not listed here, please do let us know.

Landscape

Every place sits in a unique spot in the landscape, and the features of that landscape can have a big impact on the settlement. This is by no means an exhaustive list of questions, but hopefully it will prompt you to think of the ones relevant to this place.

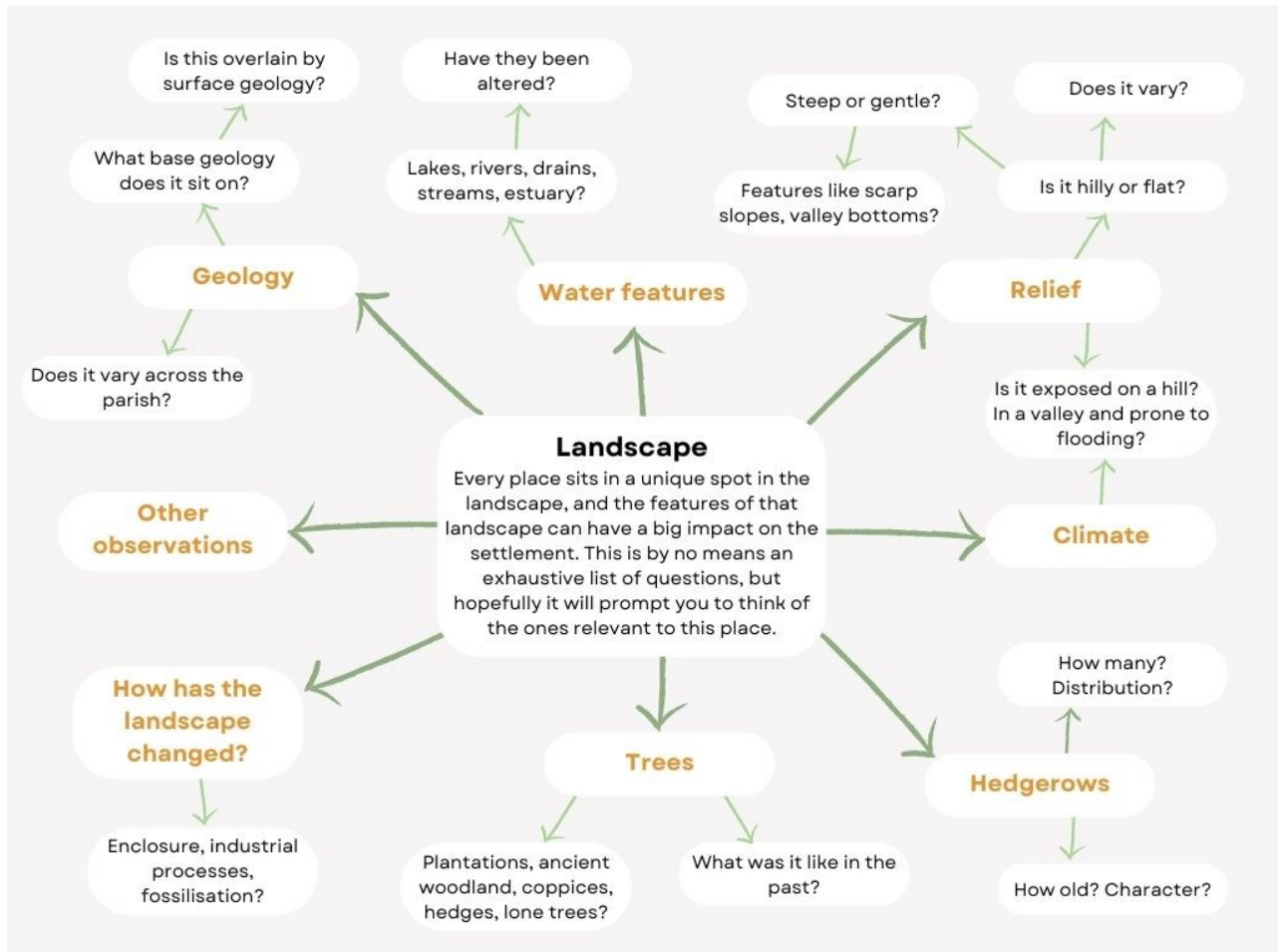


Fig. 130. Diagram exploring the different aspects of the landscape which could affect the dwellingscape. Similar diagrams could be created for the other factors, if they proved helpful to volunteers

Geology – what geology does the place sit on (you can use the British Geological Survey’s information to find this out - <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>)? Is the base geology overlaid by surface geology? Does it vary across the parish? What kind of relief is found in the parish – is it hilly, are they steep or shallow, is the parish on a feature such as a scarp slope or a valley bottom? What is the climate like – is it an exposed spot, and therefore windy, or in a valley bottom and sheltered but prone to flooding? What water features are present, have they been altered? What is there in the way of tree cover – plantations, ancient woodland, coppices, hedges, lone trees? What was this like in the past? What about hedgerows – how many, how old, character? Has the landscape changed significantly since the early modern period – impact of enclosure, industrial processes, fossilised landscapes? What else can you say about the landscape?

Situation

Historic Landscape Characterisation (HLC) helps us to split the county up into areas which have similar characteristics. These are HLC Areas (HLCA), such as 'The Trent Valley' or 'The Fens', which are split up into smaller, more granular HLC Zones (HLCZ). The report, and further background reading, can be found at <https://www.lincolnshire.gov.uk/historic-environment/historic-landscape-characterisation>.

Thinking about your place, is it central to an HLCA/HLCZ, or is it close to a boundary? Is it close to any other boundaries – coastline, county boundary, the Humber or Trent? How closely does the HLCA or HLCZ description match this place today?

Resources available

An important part of the dwellingscape is the material resources which are available to the inhabitants to build with. Some of this information will be available simply by exploring the place (are there old stone quarries, for example? What are the buildings made of?) but a lot will require a mix of current knowledge and historical research.

Timber – do the inhabitants have access to timber? What sort of resource is it – reused from older buildings, hedgerow timber, plantation-grown, imported? What quality is it – is it straight and slow-grown, or is it wonky and not really big enough for the job? Has it been carefully worked, or are there places where the bark is still on, and they're pretty-much still logs? What species is it (easier for trees than timber!)?

Soil – is it suitable for daubing buildings? Is this true in all parts of the settlement? Has it been used for that purpose? Is it clayey, sandy, or something else?

Stone – are there stone quarries in the local area? Who controlled these? Is the stone suitable for building in, or only suitable for padstones? Did the local population have access to using it? At all periods? Did they choose to do so?

Thatch – what plants are available for thatch? Straw as a by-product of arable farming? Reed or sedge harvested from the fens? Do pantiles take over? When?

Bricks – when does brickmaking arrive in the local area? How quickly do people adopt bricks, and what do they use them for – chimneys, encasing mud and stud buildings, building completely new structures?

What other resources are available to build dwellings (or other buildings) with?

Time period

No settlement remains the same for very long at all. While we don't yet know when mud and stud was first used, we know that it was before 1600, and that it continued in use in places after 1800. Therefore we need to think about the dwellingscape in '4D' – all three spatial dimensions, plus time.

Thinking about the place, when was it first recorded? Or last?! What records are there already of mud and stud in use, and when do they date from? What are the significant dates in the settlement's history – enclosure, fen draining, major change of landowner, dissolution of local monastic house? What other dates are notable?

Context

There are many facets to the nature of a community, which again affect the way buildings are constructed and used. Once again, these can change significantly over time – North Hykeham was once a rural village, but is now a suburb of Lincoln with little trace of its original core until you look closely!

Is the community rural or urban? Is it a market town? How close is it to a major settlement? What do the people spend their time doing – arable/pastoral farming, industry, commerce, something else? Is the settlement nucleated or dispersed? Has settlement spread out over time, or contracted? What is the agricultural space like – heathland, open fields, early enclosure, partially enclosed, fenland? Who owns the land at different times – single manor, powerful landowner, multiple manors, freeholders? What special legal context does it have (if any) – fen laws, church control? Are there any other context factors not mentioned above?

Communications

While communications have got easier since the nineteenth century, people have always needed to be able to get about. What are the communications like? How has this changed over time?

What is/was the road network like? Where can you get to easily, and how has this changed? What about water-borne communications – are water courses navigable, can you access the fens, where can you get to? Where do inhabitants have cause to interact with – where are the manor court/soke or wapentake centre/markets/mills/area with other natural resources? Where is their 'home patch'? (Diagrams can be particularly helpful here)

Use of the building

Thinking about a particular building, or the settlement generally, what is it being used for? Is it a house, or a detached domestic service room like a kitchen? Is it a barn or other farm building? Is it an industrial building like a bakery or forge? Is it a public building? Is it something else? Is it still being used for its original purpose?

Commissioner

Buildings can be commissioned by different people, but they can also be built by different people. A landowner might bring in a carpenter to build a house to his specification, but equally a tenant could decide to build a new house on his holding, enlisting other inhabitants to help with the heavy lifting.

Who caused the building to be built? For a settlement, is there one commissioner, or lots? Was it commissioned by the landlord, a tenant, a sub-tenant, a freeholder? Was it part of a monastic estate? Was the commissioner male or female? What stage of life were they at?

Status

Mud and stud may have been considered fit only for the cheapest labourers' houses by the end of the eighteenth century, but in earlier times it was used for high status buildings like the Duchy of Lancaster's courthouse at Bolingbroke. A building's status is, therefore, very likely to have changed over time.

What status did the occupier have at a given date – gentleman, yeoman, husbandman, labourer? What form of tenure did they have of the land – freehold, copyhold, tenant at the will of the Lord, squatter?

Skills available

The form of mud and stud employed was influenced by the skills available to the commissioner. Therefore, buildings of similar ages but quite different characters can be found in the same settlement.

What carpentry skills were available – the Lord's professional carpenter, a local specialist, skills within the community, your own wits and experience? What other skills are available, and how professional are they – mud mason, thatcher, tree felling, transportation?

Other factors, perhaps unique to this place

What else have you discovered during your research which might have a bearing on the dwellingscape of this place? Is this something which is common, and needs to be added to this prompt, or is it unique to this place?

Your relationship with the place

It is worth reflecting on your relationship with the place – do you know it intimately, do you know it casually, is it just somewhere you are studying for this research? What are your subjective observations about the place (this helps to identify biases we all have about places)?